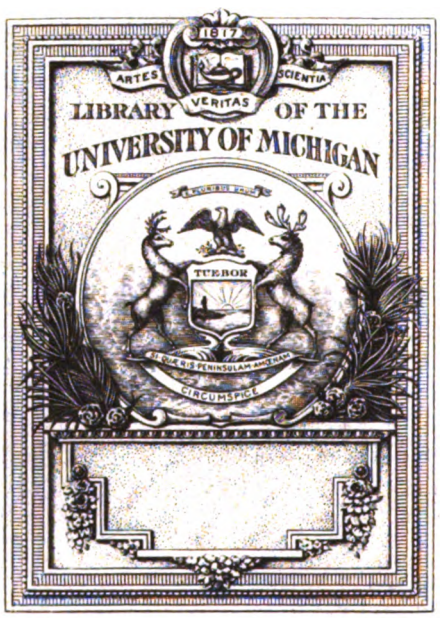
MERCHANT SAIL

WILLIAM ARMSTRONG FAIRBURN



MERCHANT SAIL

VOLUME V

MERCHANT SAIL

BY

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[1876–1947]

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University of Glasgow, 1897

IN SIX VOLUMES

Volume V

United States Wood Shipbuilders and Shipbuilding Centers during the Days of the Young Republic and Throughout the Nineteenth Century, with the Production of Sailing Vessels, Including Packets, Clippers, and Down Easters

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MERCHANT SAIL

I.

THE CHESAPEAKE, BALTIMORE, AND THE SOUTH

The Development of Five Geographical Areas of Population and Marine Activity in the New World

WHAT may be termed the Chesapeake territory, with Baltimore and environs standing out pre-eminently as the shipping metropolis of the geographical area, was from early colonial days an important shipbuilding center of the country. It supplied ships not only to the merchants of Maryland and Virginia but also, following the successful outcome of the Revolution and the War of 1812, to shippers in other parts of the country who were interested primarily in the ownership and operation of small, handy, and speedy sailers generally of the privateer type. The landed gentlemen settlers, after the attempt to found a settlement at Jamestown, Va., in May 1607, developed the slave-owning South (and part of the new land named Virginia, which at one time included the present New England), whose marine activities centered around the Chesapeake.

The Pilgrims and Puritans developed settlements in New England following the attempt in August 1607 of the George Popham and Raleigh Gilbert expedition to colonize the Kennebec River region. That river, Boston and Salem, Mass., and the Thames River, with nearby communities to the east and south of Cape Cod, became centers of marine activity, and around the middle of the nineteenth century this was concentrated at New York, Boston, and the Kennebec River, Maine, as the country's three prime Atlantic wood shipbuilding centers—all in the Northeast.

The Quakers and other settlers on the Delaware formed communities that collectively grew as a unit more or less apart from the rest of the country (as had the Dutch and others around New Amsterdam and New York). The result was the development of geographical sections in the New World. South of the Hudson River region, Philadelphia and the Delaware River was the center of population and marine activity of one group, and the Chesapeake, with Baltimore, still farther south, was the center of shipbuilding and shipping of another.

These areas, connected with each other, but, nevertheless, geographically separated and differing somewhat in the characteristics, thoughts, and habits of the settlers and their progeny, maintained themselves substantially as distinct and different territories throughout the period of the building of wood sail in the United States. As far as wood ship construction and operation are concerned, the activities can be divided into sections or zones consisting, from south to north and east, of (1) the Chesapeake, with Baltimore its shipbuilding metropolis; (2) the Delaware, with Philadelphia its center; (3) the Hudson and Long Island Sound, with New York (New Amsterdam) its capital and of such importance and influence that the territory can be considered the New York area; (4) the Cape Cod, Boston Bay, and Merrimac River section, with the environs of Boston gradually assuming such importance and leadership

that the geographic area became known as the Boston region; (5) the state of Maine (a good part of which in the eighteenth and early nineteenth century was included in Massachusetts), with its fine coast and multitudinous bays and long tidewater creeks and practically central thereof the finest river for shipbuilding in the United States—the Kennebec (or Sagadahock of old), where the first and last deep-sea sailing vessels were built on the Western Continent. This territory, which rightly should include the Piscataqua River Valley to the south and west, runs to the Canadian border and is known as the Maine area, with Bath, "The City of Ships," the natural center of historical importance and of the geographical setting.

Baltimore and the Chesapeake—the Historic Nursery of Small Fast Ships

Shipbuilding in a small way, with construction of only small craft, was well established in the Chesapeake territory as early as 1735. William Fell is known as "the father of shipbuilding at Baltimore," and he died in 1746, leaving a son to succeed him at Fell's Point, which had developed at that time into a town that rivaled Baltimore. Benjamin Nelson located there and built ships; also a marine railway for repairing all types of vessels. George Wells also established himself at the Point and in 1776 launched the 28-gun frigate *Virginia.*

No authenticated records are available of merchant shipbuilding on the Chesapeake and at Baltimore during the eighteenth and following into the nineteenth century. History tells us of the presence, agitation, and petitioning of shipwrights. When the sloop-of-war *Maryland* and the frigate *Chesapeake* were building at the Point closely following the turn of the century, these vessels, we are told, "gave employment to a class the wealthier citizens were beginning to regard as somewhat turbulent." It was this 36-gun American frigate *Chesapeake,* when new, with her guns not fitted to their carriages and her decks cluttered with gear, that in June 1807 suffered great humiliation from the 50-gun British frigate *Leopard,* and with a more forceful executive this would have led to an international situation of major import. Another *Chesapeake,* a merchantman, which should not be confused with the warship of the same name, had been built a little earlier evidently in one of the smaller yards down the bay. This vessel, it is said, "did in fact make India and flew the first American flag ever seen on the Ganges."

Baltimore was favorably known in colonial days for its small ships, used primarily for coastal work and trading with the West Indies. In 1778, during the Revolutionary War, a treaty was entered into between France and the young American nation, which had declared its independence of Britain. Soon afterwards, there appeared in American waters a number of fast French frigates and luggers of 200 or 250 tons that were of a Brittany privateer (also smuggler, etc.) type said to have been "a scourge upon every sea where the merchant flag of an enemy was to be found." These French vessels were admitted, even by the British, to be the fastest craft afloat. As they were docked and conditioned in America, their model lines were examined with care, their spar and sail plans studied, and from these splendidly designed French vessels America evidently received its first real outside lessons in naval architecture. Naturally, the excellent, fast French sailers were copied by American shipwrights for the building of craft that required speed. Chesapeake builders, responding to a demand for relatively small but fast and handy topsail schooner privateers—and for merchantmen that needed speed for protection—built a Chesapeake version of the Brittany lugger, and thus was born the much ballyhooed "Baltimore clipper."

During the War of Independence and, later, that of 1812 with Britain, the young country, with no navy, could not fight the Mistress of the Seas with weight of guns on the ocean. It was compelled to concentrate its ingenuity on speed and handiness as a means of both defense and attack. Again, in the early years of the republic, Britain was not the only enemy on the seas with which the United States had to contend. During the War of the Rebellion, the French had assisted the American colonists in revolt against the British, not because they were in sympathy with any idea of human liberty, favored American independence, or cared anything whatsoever for the principles for which Americans were fighting but solely because they hated the strong British nation and sought every means to injure it; in rendering assistance to the American colonists in revolt, France was fighting Britain.

When peace was made with Britain in 1783 and independence won, the government of the United States very shortsightedly sold or otherwise disposed of all its war vessels, a fact that made the young republic "a no account nation" with England and France and one that could be browbeaten, pushed around, and insulted on the seas, and the condition of no protection to American shipping and no punitive naval power was quickly taken advantage of by the Barbary corsairs. These pirates began to prey upon American merchant shipping not only in the Mediterranean but also in the eastern Atlantic and made slaves of the captured crews. The French and English at this time, in their wars with each other, made no pretense of respecting the neutrality of the commerce of the United States and treated American ships and their crews contemptibly; in this respect, France was worse than Britain (but the latter's impressing of American sailors, with its insult to both individuals and the nation, could not be tolerated).

When the American Congress, in 1795, decided to build a navy and reluctantly voted to authorize the construction of six frigates, it was not so much the Barbary pirates (used as an excuse) as the constant, annoying threats and outright hostility of both the French and the British that were responsible for attempted retaliatory measures. When America's war vessels were ready for sea, Congress, emboldened by the possession of a little navy, decided that "French insolence was even more unbearable than that of the English" and authorized all American commanders "to take all French cruisers, public or private, with which they might come up." This action was the Undeclared War on France, and the Chesapeake frigate *Constellation* (built by the Master Shipwright Stodder at his yard at the Point in Harris Creek), convoying and seeking to protect American merchantmen from the depredations of the French in the West Indies, fought the French frigate *Insurgente* off Nevis of the Leeward Islands on February 9, 1799, and caused her to strike her colors. The Frenchman carried more guns and men than the *Constellation* and was known as one of the fastest vessels of her class in the world; she asked for the fight, but the fewer guns of the American ship were of bigger caliber than those of the *Insurgente,* and clever handling of the *Constellation,* with the heavier metal that she discharged into the French ship's hull, wore the enemy down.

Following the embargo and the nonintercourse decree of November 2, 1810, Baltimore and the Chesapeake, as did all parts of the country interested in marine matters, chafed and felt humiliated. On April 7, 1812, a prominent Baltimore citizen wrote: "I still think it impossible that our Executive can have any serious intention of going to war with England, in the unprepared state of this country, and particularly so, as we are equally as ill treated by France as respects capturing and burning American ships." In May, however, the town could hold its temper no longer with the highhandedness of the British and French, nor restrain its impatience with Congress and the executive. The *Chesapeake* affair, they affirmed, was war by the British on a defenseless American Government ship, and on May 21, at a special meeting, a resolution was passed, the purport of which was an appeal to the government of the United States to declare war and not to mind the detail of choosing England or France —one or both—as the enemy. President Madison signed the War Act on June 8, and on June 18 the "War of 1812" formally commenced.

Baltimore Prides Itself on Its Hornet-stinging Type of Armed Merchantman and the Exploits of the Privateer CHASSEUR *under the Audacious Command of Capt. Thomas Boyle, of Marblehead, Mass.*

When hostilities began in 1812, the United States had no navy, comparatively speaking, and the very few vessels that it possessed could give but little assurance of security to the merchant marine of the young republic from the belligerence of the navies of Britain and France and the large merchant fleet of the English that sailed the Seven Seas, many ships of which were well armed. Hence there was developed, primarily in the Chesapeake region (favored by geographic location for trading to the West Indies, etc., with a minimum amount of effective molestation from the British), a swift, hornet-stinging type of armed merchantman —letters of marque and "out-and-out" privateers—that could use its speed and handiness to escape more heavily armed foreign vessels and prey upon and capture lightly protected or unarmed British merchantmen. It was to enable private American vessels to keep the seas and continue in trade, and particularly to act against the French, that Congress authorized the issuance of "Letters of Marque and Reprisal." American merchantmen were encouraged to arm for their own protection, and American shipowners called for speed from builders, so that their trading vessels could outsail belligerent craft that they could not fight. Two forms of commissions were issued for privately owned vessels. One was given to a privately owned vessel of war (this was the privateer), and under its terms the commander was ordered "to capture or sink any vessel of the enemy" that he could find. The privateer was not a merchantman that made trading voyages; she went on "cruises" looking for enemy ships and prizes. The other commission given to an armed vessel that went on voyages to a given destination, just like any peaceful trader, was known as a "letter of marque," which permitted the ship to capture only those enemy vessels that she might encounter in the course of a voyage undertaken for lawful trading. American privateers and letter-of-marque vessels of the late eighteenth and the early years of the nineteenth century were the prototype of the much-mentioned and lightly used term "Baltimore clipper," which in fact was merely a relatively fine-lined, loftily sparred, and heavily canvased small merchantman. It was successful in days of peace only in trade and service—often illegitimate—where cargo capacity, both deadweight and bulk, was decidedly subordinate to speed. Later, when the country was at peace and the period of both declared and undeclared wars with Britain and France had passed, vessels of this type were naturally in demand (in addition to South American privateers) as smugglers and as opium runners, slavers, etc., and they could be used with success in the carrying of lightweight cargoes where speed of delivery was a very important factor in the fixing of freight rates.

It was during the War of the Rebellion that American privateers and letter-of-marque ships took to the seas to harass the British as well as to engage in trade. The ardent advocates of privateering were generally "little navy" men, for they held that, while it was futile for America to build a navy that would have any effect upon the tremendous war fleets of the Mistress of the Seas, privateers that were swift and well-armed sailers would harass British merchantmen, capture British vessels with their prized cargoes, and destroy such British wealth as they came across afloat that they could not capture and divert for their own use. John Adams wrote to the President of Congress from Amsterdam on September 17, 1780, bearing upon the destruction of British commerce by privateering: "This is a short, easy, and infallible method of humbling the English and bringing the war to a conclusion. In this policy I hope our countrymen will join with utmost alacrity." Contrary to the statement frequently expressed, neither the building nor commissioning of American privateers or letter-of-marque ships originated on the Chesapeake; neither was this form of marine warfare an American idea, for the French and Spaniards had used it for many years. During the War of

the Rebellion, Massachusetts had the largest merchant marine; therefore, it was but natural that it should provide the most privateers. During the course of the war, that state issued some thousand letters of marque, while historians tell us that "six hundred and twenty-six commissions were issued by the Continental authorities to Massachusetts vessels." We are further told that "some seven hundred different Massachusetts privateers were at sea during the seven years after serious fighting began." A Chesapeake list of privateers dating from April 1, 1777, it is said, "contains the names of 248 vessels"; but an authoritative historian has written that four out of every five privateers engaged in the attack on British commerce during the Revolution were Massachusetts vessels.

During the War of 1812, federal licenses, we are told, were granted to 126 privately owned Chesapeake vessels. Hamilton Owens, in BALTIMORE ON THE CHESAPEAKE, says that 78 were letter-of-marque vessels and captured but few prizes, 27 were privateers, pure and simple, and 21 pursued both callings. Of the 126 vessels, 54 were either captured or lost; but all these Chesapeake privateers and letter-of-marque ships combined "accounted for 556 of the enemy's vessels." The activities of American vessels of this class "helped supply the country's needs for imported goods" during the thirty-month war "and made it possible for the American representatives to negotiate a more honorable peace."

As Salem, Mass., takes pride in the exploits of its privateers and calls particular attention to the feats, "unequaled sailing ability, and prowess" of its privateer *America,* the "hornet pest" of the British merchant marine in the North Atlantic, so Baltimore and the Chesapeake boast of the depredations on British commerce of their outstanding privateer *Chasseur.* The *Chasseur* pursued the callings of both a letter-of-marque merchant ship and a privateer, but it would seem that the vessel achieved fame by the combination of outstanding speed with an audacious commander, rather than by a series of voyages and a big bag of valuable prizes. The *Chasseur* made history, but this was due primarily to the saucy impudence of her master, Capt. Thomas Boyle, a Marblehead, Mass., Yankee of Irish stock, and not to her long list of captures and sinkings of British ships. (A more detailed account of the exploits of Captain Boyle and the privateers *Comet* and *Chasseur* is given in Volume II of this work, pages 856-871 inclusive.) The Chesapeake's most famous commerce raider—the *Chasseur* of "356 tons burthen and just under 116 ft. long"—was built at the yard of Thomas Kemp at Fell's Point, probably with privateering in mind. She was launched December 12, 1813, and, it has been said, was proclaimed "the largest vessel built at Baltimore" up to that time. This is surprising, for historians tell us that Master Builder Stodder, who launched the frigate *Constellation* on September 7, 1797, had previously built (about 1795) "the giant ship *Goliath*" at his Harris Creek yard, which was "a ship of six hundred tons, by far the largest constructed up to that time in Maryland waters and destined for the East India trade."

Evidently, some writer years ago sought to classify the *Chasseur* as a Baltimore clipper and distinguished her as the largest Baltimore clipper of her day; but, as the *Goliath* was built for oriental trade and the *Chasseur* successfully engaged later in that service, it is difficult to say what the difference was—other than size—in the model and rig of the *Goliath* and the *Chasseur.* The *Chasseur* was sold by auction in New York in 1814. Boyle bought a share in her, and the command was turned over to him, as he had been successful in the operation of the Chesapeake-built 187-ton privateer schooner *Comet* and was both resident in Baltimore and experienced in the handling of Chesapeake vessels. Evidently, the *Chasseur* was built as a schooner, but Captain Boyle, with the possibilities of disguise as well as sailing qualities in mind, had the vessel supplied with extra spars and sails, so that he could, on occasion, turn his two-masted schooner into a brig or brigantine. On July 28, 1814, the *Chasseur* sailed for British waters; she eluded naval and more powerfully armed vessels, captured en route three unimportant, defenseless merchant craft and the *Antelope,* an armed letter-of-marque brig that never fired a shot, and, when off the Scilly Isles, burned two small craft "unworthy the risk of manning and sending in." The next capture was the brig *Marquis of Cornwallis.* She was of no value, but Captain Boyle utilized her to free his ship of prisoners and sent her in

as a cartel. As mentioned in Volume II, he commissioned her captain to post at Lloyd's Coffee House the following proclamation, which, to all who knew the puny *Chasseur*—Captain Boyle's sole command—and the extent of his armed marine forces, was the height of absurdity and of unequaled impudence:

WHEREAS it has been customary with the Admirals of Great Britain commanding the small forces on the Coast of the United States, particularly with Sir John Borlaise Warren and Sir Alexander Cochrane, to declare the coast, of the United States, in a State of Strict and rigorous blockade without possessing the power to justify such a declaration or stationing an adequate force to maintain such blockade.

I do therefore, by virtue of the POWER and AUTHORITY in me vested (possessing sufficient force) declare all the PORTS, HARBOURS, BAYS, CREEKS, RIVERS, INLETS, OUTLETS, ISLANDS and SEA COASTS of the UNITED KINGDOM of GREAT BRITAIN and IRELAND in a state of strict and rigorous BLOCKADE.

And I do further declare, that I consider the force under my command adequate to maintain STRICTLY, RIGOROUSLY, and EFFECTUALLY, the said blockade.

And I do hereby require the respective officers, whether Captains, Commanders, or Commanding Officers under my command, employed or to be employed on the coasts of ENGLAND, IRELAND and SCOTLAND, to pay strict attention to this my PROCLAMATION.

And I do hereby caution and forbid the SHIPS and VESSELS of all and every NATION in AMITY and PEACE with the United States from entering or attempting to enter, or from coming or attempting to come out of any of the said PORTS, HARBOURS, BAYS, CREEKS, RIVERS, INLETS, OUTLETS, ISLANDS, or SEA COASTS, on or under any pretence whatever.

And that NO PERSON may plead IGNORANCE of this my PROCLAMATION I have ordered the same to be made public in ENGLAND.

The captain of the "*Cornwallis*" carried out his mission, and the proclamation was duly posted at Lloyd's. The story says that "insurance rates were immediately raised to an unprecedented height and the cost of carrying linen from Belfast to Liverpool went up to thirteen guineas the hundred." But Britain was still Mistress of the Seas, and Boyle's bravado increased his troubles and caused him to keep dodging British warships, which combed the seas looking for the audacious and insolent American. On August 28, Boyle captured a small ship and a brig (which he later lost) and on the 30th picked up the sloop *Christiana,* and by her he sent ashore a repetition of his proclamation. The *Chasseur* continued preying on small unarmed British merchant craft, taking prizes and losing them, filling her cargo space with the most valuable goods, alternately chasing and being chased until the end of September, when Captain Boyle sailed to the west. He reached New York in late October, turned his cargo over to the federal authorities, and went to Baltimore to report. On Christmas Eve of 1814, peace had been made at Ghent; but America did not know it, so the *Chasseur* sailed on a winter cruise to the West Indies. (The North Atlantic seas in winter were no waters for Baltimore "clippers.") He returned on March 18, 1815, after a rather uneventful cruise, his single noteworthy and profitable achievement being the capture, after a hard fight, of the British armed schooner *St. Lawrence* (formerly the American privateer *Atlas*), which he sent into Havana, but the value of this prize was offset by the loss of life on the *Chasseur.* It is said:

Boyle was very apologetic in his letter to his owners recounting this affair, for a privateer whose motive is profit is going beyond his province when he deliberately engages in a battle to the death with a war vessel. Moreover, he lost five men killed and eight wounded on his own ship, which was something that took explaining.

Captain Boyle was made much of upon his return to Baltimore, and the feeling of relief that the war was over combined with local pride—after hearing from Boyle glowing accounts of his exploits—resulted in a celebration, the master of the *Chasseur* being made the hero of a triumphant reception at Fell's Point. It has been well said, "Boyle in the *Comet* and *Chasseur* was by far the most picturesque, as well as the most articulate, of all the privateer commanders out of Baltimore during the War of 1812." But he was more than that, for he was undoubtedly the most colossal bluffer and the most impudent master of a vessel as well as, in some respects,

the most ridiculous that ever sailed the seas. Capt. Thomas Boyle, however, was no fool. He was a good navigator, a fine seaman, and an unusually good disciplinarian for his day; moreover, he had the good fortune when in the *Chasseur* to be master of an unusually handy vessel and fast sailer—one that could show her heels to the heavier, fuller, and less canvased British war vessels and armed merchantmen.

Chesapeake Bay Shipbuilding from the End of the Revolution to the Beginning of the Clipper Ship Era

Carl C. Cutler says that Baltimore "vessels present a line of descent unbroken in time or principle from the swift ships of the 18th century to the appearance of a new and more efficient type of clipper about the middle of the 19th century." He continues:

> Henry Wilson's wharf at Fell's Point was known from Eastport to New Orleans in the closing years of the 18th century, while the black main-royal of the house of Wilson & Company was, more than 50 years later, carried around the world by some of the largest and finest clippers afloat. During all the intervening years the name of Wilson was intimately associated with Baltimore's merchant marine.
>
> Isaac McKim, who began life as a common sailor not long after the Revolution, is best known as the owner of the finest, if not the first, of Baltimore's famous clipper ships, the *Ann McKim*. Eventually he became as familiar a figure in the halls of Congress as he had been on the quarter deck of his little Baltimore brig.
>
> During the early 1800's, Prince's shipyard at Fell's Point was a prominent concern on the Chesapeake, and produced some of the largest and finest of the early clippers. William Price was building about the same time and somewhat later Kennard & Williamson, the builders of the *Ann McKim,* were in the front rank of Baltimore shipbuilders.

Not all the so-called "Baltimore clippers" were built in Baltimore or even in Maryland. Yards on the Chesapeake, in both Maryland and Virginia, turned out many a good "shop-built, white oak ship," some of which became famous because of the times, the trade, and the conditions under which they operated.

The Baltimore type of small fast sailer would seem to have been admirably suited for the China tea trade, but by the mid-forties, New York builders, led by William H. Webb, were beating Baltimore ships "at their own game" in this trade. With the *Helena* (598 tons), built 1841, *Cohota* (691 tons), built 1843, and *Panama* (612 tons), built 1844 for N. L. & G. Griswold; the *Montauk* (505 tons), built 1844 by Webb for William S. Wetmore; and the *Houqua* (583 tons), built 1844 by Brown & Bell for A. A. Low & Bro., New York was well in the van with superior ships, resourceful and vigorous command, and courageous merchants. Their ships, returning to the home port directly and expeditiously, supplied the center of the greatest national consumer demand. Capt. "Bob" Waterman, in the old Webb, New York-built, New Orleans packet *Natchez* of 524 tons, built 1831, was making sailing records in 1845 between China and New York for Howland & Aspinwall, and in 1845 and 1846 this enterprising firm had Smith & Dimon build for it "real clippers"—the fast *Rainbow,* 752 tons, and the immortal *Sea Witch,* 908 tons.

Of all the great fleet of sailing packets sailing out of New York during what may be termed the packet era (1818-1858), only one ship was Chesapeake built and that the *Marmion* of 277 tons (length 94 ft., beam 26 ft., depth 13 ft.), constructed at Baltimore in 1811. This ship sailed for years as a transient in the North Atlantic, but ran as a packet in the Atlantic "shuttle" for only a year or so (1823-1824) in the Havre Second Line. Her sailing perform-

ance in the service was average, with a best run of 26 days on the westbound passage; her slowest crossing occupied 46 days, and the average of her runs "uphill" was 38 days. In 1843, Baltimore shipowners made an unsuccessful attempt to establish a packet line between the Chesapeake and Liverpool; they did not build Baltimore ships for this service, but purchased three old New York packets. In the forties, New York was the marine metropolis of the United States, and as the Philadelphia and Boston packet lines to Europe could not compete in volume of business, popular favor, or excellence of management and service with the New York transatlantic packet lines, it was to be expected that Baltimore would fail as an American terminus for a successful line of sailing packets.

The following list of thirty-six selected Chesapeake-built deep-sea sailing vessels—each of which gained a reputation for speed or some general outstanding performance—covers a period of construction of some sixty-five years, 1783-1848. These fast sailers and Baltimore clippers (general traders, packets, etc.) give a quality cross section of Chesapeake Bay shipbuilding from the end of the Revolution to the commencement of the real clipper ship era; i.e., the decade of 1850-1859 inclusive.

Year Built	Name and Tonnage	Builder	Owner
1783	EMPRESS OF CHINA (360 tons)	Baltimore (as claimed; also credited to Boston)	Robert Morris et al., Philadelphia and New York
1799	MARYLAND (464 tons)	Baltimore	Wm. Taylor, Baltimore
1805	HOPE (416 tons)	Talbot Co., Md.	Jacob Adams et al., Baltimore
1809	CONGRESS (363 tons)	Prince, Baltimore	Wm. A. Moores, Baltimore
1811	MARMION (packet; 277 tons)	Baltimore	LeRoy, Bayard, et al., New York
1812	CHASSEUR (brig; 356 tons)	Baltimore	Wm. Hollins et al., Baltimore
1812	INDIAN CHIEF (401 tons)	Portsmouth, Va.	Granville S. Oldfield, Baltimore
1813	FINDORF (brig; 216 tons)	Mathews Co., Va.	Thos. Higenbotham, Baltimore
1814	SWIFT (schooner; 315 tons)	Baltimore	Phillip Mercier, Baltimore
1816	MERIDIAN (388 tons)	Anne Arundel Co., Md.	Maryland
1816	NORTH POINT (480 tons)	Wm. Price, Baltimore	Maryland
1817	SUPERB (527 tons)	Baltimore	John Carrere, Baltimore
1817	LADY MONROE (brig; 240 tons)	Baltimore	Adams & Conkling, Baltimore
1822	CORINTHIAN (503 tons)	Baltimore	Wm. H. DeWolf, Bristol, R. I.
1823	YELLOT (schooner; 180 tons)	Baltimore	Isaac McKim, Baltimore
1824	AURORA (packet; 347 tons)	Baltimore	Robt. Kermit, Jas. Mowatt, et al.
1825	LADY ADAMS (274 tons)	Baltimore	Hugh Birckhead, Baltimore
1825	COVINGTON (350 tons)	Baltimore	Jas. Wilson et al., Baltimore
1830	JOHN GILPIN (brig; 283 tons)	St. Michaels, Md.	Matthew Kelly et al., Baltimore
1830	CARROLL OF CARROLLTON (packet; 696 tons)	Baltimore	Crary, New York, and Brander, Petersburgh, Va.
1831	RICHARD ALSOP (brig; 283 tons)	Mathews Co., Va.	Richard Alsop, Philadelphia
1832	SPLENDID (473 tons)	Baltimore	N. L. & G. Griswold, New York
1833	ANN McKIM (494 tons)	Kennard & Williamson, Baltimore	Isaac McKim, Baltimore

(Continued on next page)

Year Built	Name and Tonnage	Builder	Owner
1833	NAPIER (470 tons)	Baltimore	Robt. Hancock et al., Baltimore
1833	TROUBADOUR (brig; 198 tons)	Baltimore	Hutson, Jenkins & Reyburn, Baltimore
1834	TWEED (brig; 307 tons)	Baltimore	Hugh Jenkins et al., Baltimore
1836	VALPARAISO (bark; 402 tons)	Baltimore	Wm. Platt, Philadelphia
1838	VENUS (465 tons)	Wm. & Geo. Gardner, Baltimore	Lambert Gittings, Baltimore
1838	SEA (807 tons)	Baltimore	Reuben Fisher et al., Norfolk, Va.
1840	INCA (bark; 377 tons)	Baltimore	Cook, Baltimore; Sampson & Tappan, Boston
1848	ANDALUSIA (772 tons)	Baltimore	D., T., & H. Wilson, Baltimore
1848	ARCHITECT (520 tons)	L. B. Culley, Baltimore	Adams Gray, Baltimore
1848	GREY EAGLE (479 tons)	Abraham & Cooper, Baltimore	John B. McKeever et al., Philadelphia
1848	GREY HOUND (536 tons)	Henry Meads & Thos. Horney, Baltimore	David Stuart et al., Baltimore
1848	MIMOSA (bark; 241 tons)	Baltimore	Edward C. Bates et al., Boston
1848	THOMAS WATTSON (349 tons)	Caleb Goodwin & Co., Baltimore	T. B. Wattson, Philadelphia

Baltimore "clippers" in the China trade were occasionally making good runs in the forties. In the spring of 1843, the *Splendid,* when eleven years old, ran home from Canton in 102 days, and in June of 1845 Captain Conklin brought home the *Stephen Lurman* (Baltimore built and owned) in 95 days, having made the round voyage to Canton in eight months and ten days. She thus beat the short "away-from-home" times of both the *Horatio* (470 tons; built at New Bedford, Mass., in 1833 and owned in New York), whose "absent-from-port" period of eight months and twenty days was made in 1843, and the *Probus* (647 tons; built at Medford, Mass., in 1841 and jointly owned by Parker, of Boston, and Wetmore, of New York), which in 1842 was absent from port eight months and fifteen days on a round voyage to Canton. The *Sabina* (412 tons), built in New York in 1823, was reported to have made a tea run home from the Orient in 1834 in only 90 days. In 1843, Capt. "Bob" Waterman brought home the *Natchez* (524 tons; built by Webb & Allen, New York, in 1831 as a New Orleans packet) in 92 days, and the battle for speed supremacy in the China trade was on, the rivalry between the small tea "clippers" of the forties being a forerunner of the keen contests to be waged between real clippers of large size in the California trade in the early fifties.

In the spring of 1844, the Webb-built *Helena* (598 tons) of New York made the run from Canton to New York in 90 days; in 1845 the *Montauk* (505 tons; also Webb built) reached New York 94 days and Cape Hatteras 87 days out from China. The *Cohota* (691 tons), another New York Webb-built ship, followed with a run of 100 days; but Captain Waterman on the old *Natchez,* leaving Macao on January 14, 1845, arrived in port on April 3 after an amazing record run of 78 days, bringing China "only eleven weeks distant from New York." The fast runs of the *Natchez* caused Howland and Aspinwall, her owners, to build "larger and faster, real speed clippers." They looked not to Baltimore, the historic nursery of small fast American ships (of which the *Ann McKim* of 494 tons, built in Baltimore in 1833, was acknowledged as one of the best and possibly the finest example), but to the shipbuilders of their own port of New York. Moreover, they did not go to William H. Webb, the eminently successful New York builder of fast ships, but ordered their two new "faster and bigger, real clippers," the *Rainbow* of 752 tons (launched January 22, 1845) and the *Sea*

Witch of 908 tons (launched December 8, 1846), from Smith & Dimon, New York, primarily, it would seem, because John W. Griffiths, a young naval architect who was interested in and advocated sharp models for speed, was employed by that firm as draftsman. The *Rainbow,* on her first voyage to China and return, had bad luck and was forced to run home in the unfavorable season; the time at sea was not fast, but she lowered the record for the round trip to seven months and seventeen days.

In 1846 the tea trade from China to East Coast (U.S.A.) ports was dominated by New York, and although forty-six "clippers" were regularly employed in this trade and half owned elsewhere, practically all brought their cargoes to New York. The run from China to New York was known at that time as the hardest, fastest service under sail the world had ever seen. It was an ideal trade for the much-vaunted Baltimore clippers of the young republic, of the War of 1812, and of the following twenties and thirties. Most surprisingly, the performance of the small fast Chesapeake craft did not measure up to that of small New York-built "China packets," and as the size of "tea clippers" increased and New York built them with better-shaped and sturdier models and greater sail spread, the difference in performance became most pronounced. In 1846 the *Houqua* (583 tons; launched by Brown & Bell, New York, May 3, 1844) ran home from Canton in 94 days, the *Helena* (598 tons) made a record passage from Anjer (Java Head) in only 73 days 20 hours, and the *Montauk* (505 tons) arrived in New York 87 days out from Macao, making the run from Macao to Anjer in only 10 days and from Anjer to the Cape of Good Hope in 42 days. This was the fourth trip of the little New York, Webb-built *Montauk,* on none of which had she been over 90 days at sea—a remarkable record. Eight days after the *Montauk's* arrival home, the clipper *Rainbow* (752 tons), completing her second voyage, reached New York (April 16, 1846); she had sailed October 1, 1845, and had been away—including detention in port—only six months sixteen days (197 days), a new record. This can be compared with that of eight months ten days made by a Baltimore ship prior to the *Rainbow's* good voyages and fast turn-around. On this her second voyage, the New York clipper made the fast run of 79 days from Macao, and she crossed the equator only 60 days out. In 1847 the still faster New York-built clipper *Sea Witch* (908 tons) ran from Canton to New York in 81 days and from Anjer in 62 days—the record; on March 25, 1849, she reached New York from Hong Kong in 74 days 14 hours—another record.

Early-built Baltimore Clippers in the Cape Horn Service

As late as 1855 and in the heyday of the fame of extreme clippers—built large and fast for the California service—the little New York-built China tea clipper *Panama* of 612 tons, after eleven years in steady service in the driving tea trade, made the run from Anjer to New York in 67 days and from Shanghai in 85 days. Very few passages made by the powerful extreme clippers of three or four times her size were as fast. By 1846 the reputation of Baltimore clippers as fast sailers had suffered greatly because of the superior performances of many New York- and a few Massachusetts-built small fast ships in the China trade. In 1848 Baltimore built three clippers designed to re-establish its prestige and regain the honors lost to New York in the building of small fast square-riggers for the China tea trade. This trio, *Grey Hound* (536 tons), *Architect* (520 tons), and *Grey Eagle* (479 tons), was built in three different yards for three different owners—two Baltimore and one Philadelphia groups. None of them ran in the Canton-New York trade, but the *Architect,* the most successful of the trio, made some good voyages in the China-England tea trade. Soon after these vessels entered service, the California Gold Rush started, and these three "Baltimore clippers of a perfected

type" averaging 512 tons register and a much larger clipper, the *Andalusia* of 772 tons, built in Baltimore also in 1848 for the Wilsons, were among the first acknowledged and designated "clippers" to be put in the around-the-Horn to California run. The record of this Baltimore quartet of early "real" clippers is not impressive in the Cape Horn run; the three smaller clippers proved to be fast, but not big or rugged enough for the trade, and the larger *Andalusia* evidently lacked speed. The following is a record of these four early-built Baltimore clippers in the California westbound run:

	Time of Passages from East Coast Atlantic Ports to San Francisco				
Name of Ship	1849	1850	1851	1852	1853
ANDALUSIA	From Chesapeake, 150 days	From Delaware, 148 days	——	From Sandy Hook, N. Y., 143 days	From Sandy Hook, N. Y., 146 days
ARCHITECT	From New Orleans, 161 days (claimed 127 days net)	——	From Sandy Hook, N. Y., 132 days (claimed 116 days net and 13 days at Talcahuano)	——	——
GREY EAGLE	From Delaware Capes, ? (claimed 113 days, 117 days, and 119 days net)	——	——	An unverified claimed passage of 121 days from unstated point of departure	——
GREY HOUND	From Chesapeake, 144 days (claimed 117 days, 119 days, and 116 days net)	——	——	From Sandy Hook, N. Y., 129 days (claimed 125 days)	From Chesapeake, 149 days (claimed 132 days)

The four westbound passages around the Horn of the *Andalusia* averaged 147 days. Of the six verified passages of the three small (1848-built) Baltimore clippers on this run, the actual average known time from pilot to pilot on five of the passages (the sixth being uncertain) was 143 days, but the average net sailing time at sea for a total of seven westbound runs from various eastern points to the Golden Gate was claimed by owners and command as from 121½ to 123 days. The claims on two passages vary, in time and authority, six days for one run and three days for the other, and this in net sailing. Apparently, both the command and owners of the small early Baltimore-built clippers in the California trade were enthusiastic regarding the speed of their ships. Conscious of the tradition and what was expected of "Baltimore clippers," they evidently stretched the truth so much in announcing the length of runs that they probably deceived themselves as well as a good part of the general public—but not experienced seafaring men and northern shipowners.

The last three of the 500-ton Baltimore clippers of the pre-clipper decade—the *Architect* of 520 tons, *Grey Eagle* of 479 tons, and *Grey Hound* of 536 tons—were undoubtedly fast sailers; but the size, hull model and construction, and the spar and sail plan were all obviously unsuited for the severe Cape Horn trade. Baltimore shipowners and shipbuilders were slow to change their ideas. "It is hard for old dogs to learn new tricks." With the clamoring of New York and New England shippers for bigger and sturdier ships for the California run and the advocating by experienced masters of at least 1,500-ton or even 2,000-ton ships for the Cape Horn trade, Baltimore continued building 500-ton clippers in the important boom years of 1850 and 1851, constructing, however, one ship of 1,000 tons, the *Union,* for Lurman in the fall of 1851. The *Andalusia* of 772 tons, built in 1848, was not even equaled in size until the *Union* was launched, the ten fast ships built during the period 1848-1851 having averaged only 490 tons.

"Clippers" Constructed in the Chesapeake Territory during the Clipper Ship Decade, with a Record of Their Builders and Deep-Sea Service

During the clipper ship decade following the middle of the nineteenth century, the twenty-seven ships listed in the following table, with sharp lines, lofty spars, and big sail spread, designated as "clippers," were built in the Chesapeake territory—almost all at Baltimore, Md., and environs.

Year Built	Name of Clipper	Tonnage	Builder	Owner
1850	PALADIN (bark)	460	J. Gardner, Baltimore	Sold Buenos Aires
1850	SEAMAN	546	R. & E. Bell, Baltimore	Thos. J. Handy, New York
1850	SEA NYMPH	526	Adams Gray, Baltimore	Adams Gray, Baltimore
1851	ELIZA F. MASON	582	Baltimore	——
1851	SEAMAN'S BRIDE	668	R. & E. Bell, Baltimore	Thos. J. Handy, New York
1851	UNION	1,012	Fell's Point, Baltimore	S. Lurman & Co., Baltimore
1852	ATALANTA	1,289	Gardner & Palmer, Baltimore	Montell & Co., Baltimore
1852	KATE NAPIER	700	Baltimore	——
1852	LADY SUFFOLK	530	Adams Gray, Baltimore	Adams Gray, Baltimore
1852	RATTLER	539	Baltimore	——
1852	SIROCCO	1,131	Wm. & Geo. Gardner, Baltimore	Damon & Hancock, Philadelphia
1853	EUROCLYDON	1,410	Wm. & J. Gardner, Baltimore	Hancock & Dawson, Philadelphia
1853	FLORA TEMPLE	1,916	J. Abraham, Baltimore	Abraham & Ashcroft, Baltimore
1853	FRIGATE BIRD (also given as 567 tons)	805	J. A. Robb, Baltimore	C. H. Cummings & Co., Philadelphia
1853	KATE HOOPER	1,489	Hunt & Wagner, Baltimore	J. A. Hooper, Baltimore
1853	NEPTUNE'S CAR	1,616	Page & Allen, Portsmouth, Va.	Foster & Nickerson, New York
1853	ROVER'S BRIDE	376	Foster & Booz, Canton, near Baltimore	J. D. Nason, San Francisco
1853	SPIRIT OF THE TIMES	1,206	Cooper & Slicer, Baltimore	Aymar & Co., New York
1854	CANVASBACK	731	Abraham & Ashcroft, Baltimore	Oelrich & Lurman, Baltimore
1854	NAPIER	1,811	Wm. & Geo. Gardner, Fell's Point, Baltimore	Hancock & Dawson, Philadelphia
1854	PRIDE OF THE SEA	1,600	Foster & Booz, Baltimore	Jas. Hooper & Co., Baltimore
1855	CARRIER DOVE	1,694	J. Abraham, Baltimore	Montell & Co., Baltimore
1855	CHERUBIM	1,796	J. Abraham, Baltimore	David Currie et al., Richmond, Va.
1855	HELEN MAR (bark)	511	Baltimore	Geo. Logan, New York
1855	MARY WHITRIDGE	978	Hunt & Wagner, Baltimore	Thos. Whitridge & Co., Baltimore
1855	WHISTLING WIND	1,800	Wm. & Geo. Gardner, Fell's Point, Baltimore	——
1858	SIRIUS	851	Cooper & Butler, Baltimore	Sold Bremen, Germany

Throughout the period, Baltimore continued to build some small vessels, but most Chesapeake shipowners felt compelled to respond to the demand of shippers for larger clippers and to profit by the usually unfortunate experiences of little ships in the Cape Horn run. In 1851, Lurman built the first 1,000-ton Chesapeake clipper at Fell's Point, Baltimore, and the following year one so-called "big" clipper was built in the territory for Baltimore owners and one for Hancock, of Philadelphia. In 1853 five of the seven clippers built were of over 1,200 tons register, but three of them were for northern owners (the one built at Portsmouth, Va., was designed by Webb, of New York), and only two of all the clippers constructed in the Chesapeake area in the big building year were for local (Baltimore) owners. Two large clippers

and one small clipper were built in the territory during the year 1854 and three sizable clippers in 1855 (and a smaller one, *Mary Whitridge* of 978 tons, by far the best). After a couple of years of idling, the last Chesapeake clipper, the *Sirius* of 851 tons, was built in 1858 and immediately sold to Bremen, Germany.

The following table shows the number and size of Chesapeake clippers built during the clipper ship decade, with the names of the largest and smallest and the average registered tonnage of the ships built each year:

Year Built	Number of Clippers	Tonnage			
		Total	Largest Ship	Smallest Ship	Average
1850	3	1,532	SEAMAN, 546	PALADIN, 460	511
1851	3	2,262	UNION, 1,012	ELIZA F. MASON, 582	754
1852	5	4,189	ATALANTA, 1,289	LADY SUFFOLK, 530	838
1853	7	8,818	FLORA TEMPLE, 1,916	ROVER'S BRIDE, 376	1,260
1854	3	4,142	NAPIER, 1,811	CANVASBACK, 731	1,381
1855	5	6,779	WHISTLING WIND, 1,800	HELEN MAR, 511 (bark)	1,356
1858	1	851	SIRIUS, 851	SIRIUS, 851	851
Total (1850-1858)	27	28,573	FLORA TEMPLE, 1,916	ROVER'S BRIDE, 376	1,058

The largest Chesapeake "real" clippers (in model and rig) built during the years 1850-1859 were:

Name	Tonnage	Year Built	Name	Tonnage	Year Built
FLORA TEMPLE	1,916	1853	KATE HOOPER	1,489	1853
NAPIER	1,811	1854	EUROCLYDON	1,410	1853
WHISTLING WIND	1,800	1855	ATALANTA	1,289	1852
CHERUBIM	1,796	1855	SPIRIT OF THE TIMES	1,206	1853
NEPTUNE'S CAR	1,616	1853	SIROCCO	1,131	1852
PRIDE OF THE SEA	1,600	1854	UNION	1,012	1851

The above were the only "real" clipper ships built at any time in the Chesapeake area (Maryland and Virginia) with a registered tonnage in excess of 1,000 tons.

As in earlier days, the records of builders are not always clear, emphasis being placed on the owners and the general locality where built. The designation "built in Baltimore" applied to a large area covering Baltimore and all environs. The following table gives the principal known builders of Chesapeake clippers during the clipper ship decade 1850-1859 inclusive:

Names of Builders	Number of Ships Built	Total Tonnage	Average Tonnage per Ship
The Gardners—William, George, and J.; also Gardner & Palmer, who built one ship	6	7,901	1,317
J. Abraham; also Abraham & Ashcroft, who built one ship	4	6,137	1,534
Hunt & Wagner	2	2,467	1,233
Cooper & Slicer; also Cooper & Butler	2	2,057	1,028
Foster & Booz	2	1,976	988
R. & E. Bell	2	1,214	607
Adams Gray	2	1,056	528
Page & Allen*	1	1,616	1,616
J. A. Robb	1	805	805
Unknown Baltimore builders	5	3,344	669
Total	27	28,573	1,058

*Builders of NEPTUNE'S CAR, the first and only clipper built in the state of Virginia; launched at Portsmouth, Va., in 1853; generally conceded to be one of the two fastest clippers built in the Chesapeake territory, the other being the much smaller but very speedy MARY WHITRIDGE, of 978 tons, built in 1855 by Hunt & Wagner, Baltimore.

The American clipper shipbuilding era, which can be said to have commenced in early 1850 (as far as launching and registration are concerned), reached its height in 1853-1854,

faded quickly through the years 1855-1856, and had terminated by 1859, with only 3 clipper ships built that year, 6 in 1858, and only 7 ships and 2 barks in 1857. In 1850, 18 clipper ships and 6 clipper barks were built in the country—a total of 24 clippers. In 1853, the record was reached with 115 clipper ships and 5 clipper barks—a total of 120 clippers. The following year (1854) new construction had dropped to 71 clippers, all told, of which 68 were full-rigged ships and 3 were barks. Baltimore, the reputed originator of the "clipper" type of sailing vessel, built 5 clippers in 1855, which was the same number that was built there in 1852, as against 7 in the boom year of 1853 and 3 in 1854. After 1855, Baltimore built only 1 clipper, the *Sirius* of 851 tons (constructed by Cooper & Butler in 1858). During the decade 1850-1859 inclusive, only 27 clippers were built, all told, in the Chesapeake and Baltimore territory out of 444 built in the eastern United States and classified as clippers; i.e., only about 6 per cent of the national total. After 1855, the percentage of clippers built in Baltimore and the Chesapeake area in relation to the number built on the entire East Coast of the United States was only 1.7 per cent (1 out of 58).

Some of the Baltimore clippers built in the clipper ship decade made fast passages and runs in various trades, but as a whole they did not show up as well as New York- and Down East-built ships in the around-the-Horn California service. Seventeen of the Chesapeake-built clippers constructed during the years 1850-1858 made one passage or more westbound from Atlantic Coast ports to San Francisco, the total number of such passages of Chesapeake clippers being thirty-six in a ten-year period and the average time, port to port, 140.1 days. This was slow considering the period, the type of ships in the service (i.e., sharpness of model and large size of sail area, etc.), and the speed made in the Cape Horn run by the clippers built in New York, Connecticut, Massachusetts, New Hampshire, and Maine yards.

The following table gives a comparative record of the size and performance of Chesapeake-built clippers in the westbound Atlantic port to San Francisco Cape Horn run during the clipper ship decade 1850-1859 inclusive:

Name of Clipper and Year Built	Registered Dimensions Length x Beam x Depth	Tonnage	Number of Passages	Time of Each Passage in Days, Port to Port	Average Time of All Passages in Days
SEA NYMPH (1850)	131 x 29 x 14	526	2	158-124	141
SEAMAN (1850)	136 x 24 x 16	546	2	107-131	119
SEAMAN'S BRIDE (1851)	152 x 31.5 x 17.5	668	3	161-120-120	133.7
UNION (1851)	184 x 35.6 x 21.7	1,012	2	121-128	124.5
ATALANTA (1852)	194 x 37.8 x 21.5	1,289	3	142-126-126	131.3
RATTLER (1852)	137 x 29 x 15	539	1	133	133
SIROCCO (1852)	175 x 37.5 x 22.5	1,131	2	147-133	140
FLORA TEMPLE (1853)	234 x 41.7 x 25	1,916	2	164-125	144.5
FRIGATE BIRD (1853)	156 x 33.5 x 19	805	2	150-169	159.5
KATE HOOPER (1853)	205 x 39.5 x 24	1,489	2	133-136	134.5
NEPTUNE'S CAR (1853)	216 x 40 x 23.5	1,616	5	117-122-138-187-115	135.8
ROVER'S BRIDE (1853)	133 x 28 x 11.4	376	1	152	152
SPIRIT OF THE TIMES (1853)	192 x 36.7 x 21.5	1,206	1	162	162
NAPIER (1854)	216 x 42.5 x 26	1,811	2	142-120	131
CARRIER DOVE (1855)	208 x 42 x 24	1,694	3	205-158-127	163.3
CHERUBIM (1855)	217 x 43 x 25	1,796	1	194	194
MARY WHITRIDGE (1855)	168 x 34 x 21	978	2	114-138	126

Of the seventeen Chesapeake clippers that participated in the around-the-Horn California service (making thirty-six westbound passages to San Francisco during the clipper ship decade of 1850-1859), four made only one run, nine made two, three made three, and one completed five passages. The averages (port to port), with the fastest and slowest of these passages, arranged in groups, were as follows:

		Average Length of Passages in Days				
Number of Passages	Number of Clippers	Of the Group	Of Slowest Ship in Group	Of Fastest Ship in Group	Fastest Single Passage in Days	Slowest Single Passage in Days
5	1	135.8	135.8	135.8	115	187
3	3	142.8	163.3	131.3	120	205
2	9	135.5	159.5	119	107	169
1	4	160.2	194	133	133	194

The fastest runs were: SEAMAN, 107 days; MARY WHITRIDGE, 114 days; and NEPTUNE'S CAR, 115 and 117 days. The slowest runs were: CARRIER DOVE, 205 days; CHERUBIM, 194 days; and FRIGATE BIRD, 169 days.

The following table is a record of all single westbound passages of Chesapeake clippers in the California run:

Length of Passages in Days	Number of Passages	Percentage of Total 36 Passages	Length of Passages in Days	Number of Passages	Percentage of Total 36 Passages
Under 110	1	2.77	Over 140 and under 150	4	11.11
Over 100 and under 120	6	16.66	Over 150 and under 175	7	19.44
Over 120 and under 130	8	22.22	Over 175 and under 200	2	5.55
Over 130 and under 140	7	19.44	Over 200	1	2.77

Only 41⅔ per cent of the passages were made in under 130 days, and 27¾ per cent of the runs required more than 150 days—a poor average speed record for the clipper ship decade.

The fastest of all the passages around the Horn by Chesapeake clippers was made by the *Seaman* on her maiden voyage in 1850. The time of 107 days was a splendid performance and was the only run around the Horn westbound of any Chesapeake-built ship better than 115 days. Much publicity was given by Baltimore interests to the fast sailing of the *Seaman;* she was credited with covering 1,508 miles in five days, with running from the latitude of Valparaiso to San Francisco in 30 days, and from the line to her destination in only 14 days, "equaling the best performances of ships three times her size." Evidently, on this passage, the *Seaman* experienced sailing conditions of wind and sea unusually favorable both for a quick run and for a small vessel, but her performance is dimmed when it is known that at about the same time the diminutive Boston pilot boat *Fanny* of only 84 tons made the Cape Horn run from Boston to San Francisco in only 106 days, or one day less than it took the *Seaman* (6½ times as large) to make the passage from New York to the Golden Gate. The *Seaman* encountered favorable weather on her return voyage and claimed (1) a run of 15 days from San Francisco to the equator; (2) 36 days from San Francisco to Valparaiso; (3) 27 days from Valparaiso to Rio de Janeiro; (4) 30 days from Rio de Janeiro to Cape Henry; and (5) a running time east from the Golden Gate to Cape Henry of 94 days. On her second voyage to California, the *Seaman* sailed into San Francisco on December 9, 1852, in company with the *Sea Witch* and *Samuel Russell,* two New York-built clippers; but the *Seaman* had required 131 days to make the passage from New York as against 109 days for the *Sea Witch* and

119 days for the *Samuel Russell.* The *Winged Arrow* made the run from Boston about the same time in 115 days, and the big new Boston-built *Sovereign of the Seas* (although partly dismasted and refitted at sea) sailed from New York four days after the *Seaman* and arrived at the Golden Gate twenty-four days ahead of the Baltimore-built clipper.

The *Seaman's Bride,* built a year later than the *Seaman* (both by R. & E. Bell, of Baltimore, for Thomas J. Handy, of New York), was 142 tons, or 22 per cent, larger than her "older sister" and was given a tremendous spread of canvas, including three moonsails. Much was expected of her in speed, but, while undoubtedly fast under favorable conditions of wind and sea, she had a disastrous maiden voyage to California. She took 161 days to complete the passage and had to put into Valparaiso for repairs, which required about a month's time. Afterwards, with a reinforced and somewhat reduced spar and rigging plan, she made two westbound passages to the Golden Gate in the satisfactory and fair average time of 120 days. The *Seaman's Bride* (668 tons) was deflated as a claimed "phenomenally fast Baltimore clipper" by the much fuller-modeled and lighter-canvased Webb- and New York-built *Panama* (612 tons). Reaching New York on February 2, 1853, this vessel had beaten not only the *Seaman's Bride* but also the clippers *Witchcraft* (1,310 tons) and *Aramingo* (716 tons) from twenty-eight to twenty-one days in a run from Shanghai.

Of all the Chesapeake clippers built in the clipper ship era, the most outstanding in performance were the Virginia-built *Neptune's Car* (1,616 tons) and the much smaller *Mary Whitridge* (978 tons), built by Hunt & Wagner, Baltimore, in 1855. *Neptune's Car,* on one occasion in the China trade, won sailing honors at the expense of *Westward Ho* (undoubtedly one of the fastest clippers ever built); she made more passages (five) around the Horn than any other Chesapeake-built clipper, and if her unfortunate 1857 voyage of 187 days is ignored (when she had to put into Rio de Janeiro for repairs), then the mean time of her other four passages westbound around the Horn is 123 days, and the two best were 115 and 117 days. The *Mary Whitridge*—like the older and speedier *Sea Witch*—was small for the Cape Horn run, but she averaged 126 days on her two westbound passages, and her first voyage of 114 days was the second fastest run to San Francisco made by any Chesapeake-built clipper. In 1855 the *Mary Whitridge* (length 168 ft., beam 34 ft., depth 21 ft.), with favorable strong winds, made an amazing passage from the Baltimore Capes to Helvoet, English Channel, and, it was claimed (New York HERALD, August 6, 1855), "landed passengers in England in less than 12½ days from the Chesapeake." If true, this is probably—distance considered—the best run ever made by a sailing vessel across the Atlantic. The *Mary Whitridge* was also credited in 1860 with a record run of 18 days from Melbourne, Australia, to Batavia.

Among other fast sailing performances of Baltimore clippers was a passage in 1858 of 78 days from Liverpool to Melbourne by the *Carrier Dove* (1,694 tons) and a run in 1856 of 32 days from Melbourne to Valparaiso by the same vessel. Her performance in the California Cape Horn service was poor; her best passage took 127 days and the two others 158 and 205 days, respectively, the latter including a stay at Rio de Janeiro of about seven weeks for necessary repairs. The *Rover's Bride* was credited in 1855 with a fast run of 31 days from Sydney, Australia, to Valparaiso. This vessel was the smallest of all the Baltimore clippers built in the fifties, and, being only of 376 tons, she was far too little for the Cape Horn service; she made one passage to San Francisco westbound in 152 days. The *Union* (1,012 tons), the first of the moderate-sized Chesapeake clippers, made two runs around the Horn westbound in the fair average time of 124½ days, her best passage being 121 days. This ship is credited with having sailed 340 nautical miles in twenty-four hours, an average speed for a day in excess of 14 knots per hour.

Experimental Shipbuilding Activities in the "Deep South"

The Chesapeake, in the days of sail, was the farthest south of any center of shipbuilding activities. However, in the clipper ship era, a medium clipper was built in the "Deep South." This vessel was the *Stephen R. Mallory* of 959 tons (length 164 ft., beam 35 ft., depth 23 ft.), built by Bowne & Curry at Key West, Fla., in 1856. The *"Mallory"* is said to have been the only clipper ever built in the world with mahogany timber. She was not extremely sharp lined, but was designed to be "a good carrier with a fair turn of speed." Her only completed westbound passage around the Horn in the clipper ship decade (1850-1860) was a run from New York to San Francisco in 1858 in the slow time of 151 days. The *Talisman* (1,238 tons; built in Maine in 1854), clearing New York the same day as the *Stephen R. Mallory,* beat the Florida-built ship sixteen days on the run out, and the Chesapeake-built clipper *Mary Whitridge* (978 tons; constructed in 1855), sailing nine days after the *"Mallory,"* reached the Golden Gate four days ahead of her.

One ship of Down Easter type was built by Down East shipbuilders in the South at a place whence originated white oak and hard pine used in the shipyards of the northern states. This ship was the *Henrietta* of 1,203 tons (length 201 ft., beam 39 ft., depth 24 ft.), launched in April 1875 at Bucksville, S. C. She was constructed to the order of Capt. Jonathan C. Nickels, of Searsport, Maine, by his master builder, E. Dunbar, and a crew of Maine ship carpenters, riggers, blacksmiths, joiners, etc., using northern imported iron, cordage, and such materials other than the local growth of timber. The *Henrietta,* a main skysail-yard ship, was first commanded by her owner and, it is said, was "a satisfactory and profitable ship" for many years, being operated mainly in trade with the Orient or Australia. In August 1894, when in charge of a pilot, she went ashore on the Japanese coast when proceeding from Yokohama to Kobe, and although later refloated and towed to Kobe, the ship was condemned and broken up. It was reported that the experiment of building the *Henrietta* in the South was not an economic success and that "the expense of transporting and maintaining [Maine] workmen so far from home, not to speak of inconveniences of climate, location of site, furnishing of supplies, etc.," was much greater than anticipated. The ship cost too much money, the additional expenses of building in the South far outweighing the saving effected by using local timber. As soon as the *Henrietta* was completed, Capt. Jonathan C. Nickels junked his Bucksville, S. C., shipyard and shipped all his men and material that could be salvaged back to Searsport, Maine, where his master builder, E. Dunbar, built Captain Nickels' next ship, the *R. R. Thomas* of 1,333 tons, launched in October 1876. The building of the *Henrietta* in the South was described by a fraction owner as "an expensive mistake that will not be repeated," and evidently it never was.

The Launching and Registration of Ships on the Chesapeake in Relation to the Marine Activities of Other United States Shipbuilding Centers

Wood shipbuilding in the United States reached an all-time record high in the clipper ship boom of the early fifties, which followed the discovery of gold in California. The peak year of construction of clippers was 1853, with the volume of building reducing in 1854 and then holding rather steadily during the years 1855 and 1856 at a level—considering the number of ships built—only one-third that of 1853. By 1857 no extreme clipper ships were being

launched, the boom had spent itself, and a reaction of depression and inactivity was in evidence; the number of medium clippers built per year in America during the period 1857-1860 inclusive averaged only 5¼ per cent of the number of extreme clippers launched in 1853. The Chesapeake (Maryland and Virginia) built only 27 extreme and medium clippers during the decade 1850-1859 inclusive as against 94 constructed in New York and environs and "up the Sound," 108 built in Maine and New Hampshire, and 210 launched in the state of Massachusetts. The state of New Hampshire alone, with its very small length of coast line and with building limited to the Piscataqua River, constructed as many clippers during the booming clipper ship decade as did the entire Chesapeake territory, with its extensive area and water front, an abundance of the finest oak for timbers, and closeness to the country's best source of supply of material for planking.

It has been said that clippers originated at Aberdeen in Britain and on the Chesapeake in America. Both Aberdeen, Scotland, and the Chesapeake in the United States built small ships with a reputation for speed and with many claims made for their yacht-like quality, fineness of model, and big sail spread, but both Aberdeen and the Chesapeake failed to hold for long any position of leadership—assuming that they ever possessed it. Aberdeen was unable to compete in shipbuilding in Britain with the Clyde, Mersey, and Tyne, and in the United States the Chesapeake had fallen far behind New York and Boston in the construction of fast ships in the forties and was an unimportant factor contributing to the production of sharp-lined heavily canvased sailers during the entire clipper ship decade. The Chesapeake territory and the entire country south of the Delaware launched only 28 out of 444 clippers and reputed clippers (i.e., only about 6 per cent) built in the United States during the decade 1850-1859 and during the boom year of 1853 constructed only 7 out of the 120 ships of this type (i.e., only 5.8 per cent) launched in the entire country. Of the total marine tonnage built in the United States during the year ending June 30, 1853, the Chesapeake and the states of Maryland and Virginia produced only 5.5 per cent. In that year, the tonnage built and registered in the state of Maine alone, excluding New Hampshire, was 7.7 times that officially reported for Baltimore and the Chesapeake, and the tonnage registered in New York City and Boston, Mass., was 4.7 and 4.2 times, respectively, that officially recorded in Baltimore. To illustrate the extent and nature of ship construction in and around Baltimore, Md., with names of the builders, during a period of great building activity in the country, the following statement is presented. It was compiled by an investigating authority in November 1854 and promptly published in a national marine journal.

Vessels Built and Registered at the Port of Baltimore from January 1, 1854, to November 1, 1854, with Their Measured Dimensions and Tonnage and the Names of the Builders

Type	Name	Length		Breadth		Depth		Tonnage	Builder
		Feet	*Inches*	*Feet*	*Inches*	*Feet*	*Inches*		
Ship	G. W. GARMANY	149	0	31	6	15	9	680	Cooper & Butler
Ship	FLORA TEMPLE	233	9	41	9	20	10½	1,915	Abraham & Ashcroft
Ship	SIR JOHN FRANKLIN	170	8	35	8	17	10	999	John J. Abraham
Bark	A. A. DREBERT	116	0	26	2	12	2	336	Joseph Harris
Bark	FANNY EALER	126	2	28	7	14	3½	468	Martin & Larkey
Bark	EMILY	114	6	26	10	10	9	299	J. A. Robb
Schooner	NEY	102	4	25	2	7	6	173	W. H. Skinner
Schooner	ECHO	105	0	25	6	9	6	230	W. Skinner & Sons
Ship	PRIDE OF THE SEA	206	0	41	9	20	10½	1,660	Foster & Borze*
Schooner	A. M. BANDELL	85	0	24	0	8	0	142	J. N. & P. H. Muller
Schooner	FAR WEST	66	0	20	6	5	0	58	W. Skinner & Sons
Schooner	CLARK COTTRELL	93	0	23	10	9	1	180	Sanks & Riggin
Schooner	STORM KING	102	8	26	0	9	3	220	George B. Colton

(Continued on next page)

Type	Name	Length		Breadth		Depth		Tonnage	Builder
		Feet	*Inches*	*Feet*	*Inches*	*Feet*	*Inches*		
Ship	CANVASBACK	153	7	32	2	16	1	731	Abraham & Ashcroft
Schooner	STARS	82	6	24	2	5	10	100	W. Skinner & Sons
Brig	SPIRIT OF '76	104	9	25	6	10	3	246	Hunt & Wagner
Schooner	SAMUEL	94	8	25	0	9	9	204	Henry Kelley
Brig	CORREO	112	8	26	0	9	11	263	Hunt & Wagner
Ship	AMERICA	176	7	38	0	19	0	1,167	Cooper & Butler
Schooner	FRANK	94	4	24	10	9	2	184	John H. Davis
Bark	LEAN RACER	140	4	27	0	13	8½	483	J. S. & M. J. Fardy
Ship	RATTLER	147	2	34	7	17	3½	794	Foster & Borze*
Brig	R. C. WRIGHT	95	0	25	4	9	6	202	Hunt & Wagner

Total for ten-month period: 7 ships, 4 barks, 3 brigs, and 9 schooners (23 vessels) aggregating 11,734 tons.

*Recorded elsewhere as Foster & Booz.

In the official figures showing the number and class of vessels built and registered at the principal ports and revenue districts in the United States for the year ending June 30, 1853, Baltimore occupies sixth position in total tonnage, but third place in the number of vessels built; most of the craft constructed were small, the average being only 212 tons as against 936 tons for Boston, Mass., and 586 tons for Bath, Maine. Of the 68 vessels reported as built and registered during the year, there were 15 ships and barks, 9 brigs, 43 schooners, and 1 steamer. The percentage of square-riggers to total number of craft built was much higher than for Philadelphia (and the Delaware) and New York (and the Hudson), but it fell far short of that of the principal ports and revenue districts in Massachusetts and Maine, as the following table giving the ten principal ocean ports in registration of tonnage, set forth in order of relative volume and importance, clearly shows:

Name of Port and District	Percentage of Number of Each Class of Vessels Built to Total Number Registered					
	Ships and Barks	Brigs	Total Square-riggers	Schooners	Sloops; Canal and River Boats	Steamers
New York, N. Y.	7.37	2.05	9.43	27.05	39.75	23.77
Boston, Mass.	79.69	1.56	81.25	15.63	1.56	1.56
Bath, Maine	72.31	4.62	76.92	16.92	1.54	4.62
Philadelphia, Pa.	0.63	2.55	3.18	17.84	64.97	14.01
Waldoboro, Maine	37.28	20.35	57.63	40.68	1.69	—
Baltimore, Md.	22.06	13.23	35.30	63.23	—	1.47
Passamaquoddy, Maine	53.84	23.08	76.92	17.96	2.56	2.56
Belfast, Maine	35.48	29.03	64.52	35.48	—	—
Portland, Maine	48.00	20.00	68.00	28.00	4.00	—
Portsmouth, N. H.	90.00	—	90.00	10.00	—	—

Official figures covering registration of all vessels in the customs district and port of Baltimore for the year ending June 30, 1853, show 68 vessels of all types aggregating 14,439 tons. A survey of all the shipyards of Baltimore and suburbs shows that for the first ten months of the calendar year 1854 these yards built 23 vessels totaling 11,734 tons register as against official total figures for the entire port and district of 68 vessels (of all classes) aggregating 14,439 tons for the U. S. Government fiscal year ending June 30, 1853. The difference between the two periods and sets of figures is in the number of small schooners and brigs, which totaled 12 for ten months of 1854 as against 52 for the year ending the middle of 1853. Evidently, the government registration figures for the customs district and port of Baltimore included the product of many small Chesapeake yards that was not included in the survey of "all Baltimore shipyards as of November 1, 1854," and building operations—particularly of the smaller yards—were beginning in 1854 to show a decline, due to reaction to the shipbuilding boom, which decline steadily continued to the years of pronounced depression and general business panic.

II.

PHILADELPHIA AND THE DELAWARE

Philadelphia Takes National Leadership in Merchant and Naval Shipbuilding and in Foreign Commerce

THE CITY OF PHILADELPHIA lies about seventy-two miles north of Cape May and about one hundred and two miles by water (Delaware Bay and Delaware River) from the Atlantic Ocean, with the state of New Jersey on the east bank and the states of Delaware and Pennsylvania on the west bank. It is well located as a marine port and business metropolis for an extensive territory far inland. Scharf and Westcott, historians of Philadelphia, have written: "The flourishing commerce of the city was nearly destroyed by the War of the Revolution and her shipping nearly swept from the seas. But it is doubtful if any other city in the country saw both resuscitated with more remarkable success after the return of peace." At the close of the Revolution, Philadelphia, New York, and Newport, R.I. (which before the Rebellion had been one of the most important colonial ports), had virtually no merchant marine and but few vessels that could be adapted for deep-sea trading. Virtually unhampered by British occupation or raids following the evacuation of June 1778, Philadelphia was the first and most energetic in recovery after the signing of the peace treaty in 1783; it quickly took the lead in shipbuilding and commerce and soon became the most important shipbuilding and shipping center in America. It has been generally stated by historians that during the latter part of the eighteenth century, Philadelphia grew to be the most active and prosperous city in America, and until the turn of the century, although smaller than New York, it maintained its national leadership in the building and operation of ships and in foreign commerce. From 1782 to 1787, 155 vessels were reported as built in Philadelphia, of which 56 were sizable deep-sea square-riggers. In 1793 there were 8,145 tons of shipping constructed at Philadelphia, an amount double that built at any other port in the United States. The exports of Philadelphia in 1793 exceeded those of all New England by $1,717,572 and those of New York by $2,934,370. In 1792 the aggregate value of goods shipped to foreign ports by Philadelphia was $3,820,646 and in 1793, $6,958,736. Its exports in 1793 were more than one-fourth of the exports of the whole Union. By 1801 nearly three hundred ocean-going ships were owned in Philadelphia, and fourteen shipyards were in existence (increased to twenty-three yards in 1812). It is said that at this time Philadelphia owned the largest merchant vessel in the United States, a ship of 705 tons register built by Samuel Bowers.

During the period of the Revolution and throughout the eighties and nineties of the eighteenth and the first few years of the nineteenth century, the foremost naval architect and shipbuilder of Philadelphia was Joshua Humphreys, who operated its leading shipyard at Southwark. He enjoyed a national reputation and was particularly competent and successful in warship design and construction.

The insults offered to the flag of the United States and the injuries done to the commerce of the country by the Algerian pirates prior to 1795 induced Congress to pass the act of

March 27, 1794, "to provide a Naval Armament." Thereupon, in pursuance of a declared building program, it accepted Humphreys' plans for the building of six frigates (three 44-gun and three 36-gun) in various parts of the country. (In addition, the *Essex,* a smaller frigate of 32 guns, was built by private subscription at Salem, Mass., at the initiative of William Gray and Elias Hasket Derby and given to the government.) A more detailed account of the building of the six frigates and the reasons therefor will be found in Volume I (pages 636-640) of this work under the heading, "The Raids of Barbary Pirates on the American Merchant Marine Cause the Establishment of the United States Navy."

Philadelphia saw the first ship built for the regular United States Navy, the sailing frigate *United States,* launched on July 10, 1797, from the Humphreys yard. Congress, however, was both pacifistic and economy-minded. When peace with Algiers was found to be purchasable, the price was shamefully paid, and Congress stopped work on other vessels building. It declined further to support the building of the "armament," and the country was left without a navy.

In 1798 the Navy Department was created, and Humphreys launched on November 28, 1799, and completed the following spring at his Southwark yard the 40-gun U.S. frigate *Philadelphia.* This vessel, which had been built by popular subscription by the citizens of Philadelphia and presented to the United States Government, was claimed (by partisan enthusiasts) to be "the most perfect frigate of her day." Augustus C. Buell, writing of the *Philadelphia,* says that she was "the fastest sailing warship in the world, beating the *Constitution* by nearly two knots an hour." On her transatlantic voyage to Tripoli, it is said, "she logged on one occasion 332 miles in twenty-four hours and, on another, 337 miles—the latter being an average slightly exceeding 14 knots per hour." The *Philadelphia,* most unfortunately, was lost in Tripoli Harbor in 1803, when she was only three years old. Joshua Humphreys was the first naval constructor of the United States Navy, but whereas his prime and outstanding achievements were in the design and construction of war vessels, he did much to influence and improve Delaware merchant shipping.

Congress, by act of February 25, 1799, authorized the building or purchasing of six ships of war, each to carry not less than 74 guns; six sloops of war, each to carry 18 guns; and two docks for repairing ships. A million dollars was appropriated for the construction of the twelve warships and $50,000 for the naval docks. It was through these two acts that a navy yard was established at Philadelphia, but the nature, extent, and cost of it was certainly not in harmony with the mind of Congress, and the building of the Philadelphia yard gives an interesting sidelight on the politics and assumed power of an administrative executive of the period.

Upon the Secretary of the Navy devolved the duty of building twelve ships, which the country greatly needed, and two docks, which, while undoubtedly desirable, were not at the moment of similar vital importance. He decided, apparently for political reasons, to go beyond the building of two mere repair docks and justified his acts by arguing that "without a navy yard it is not possible to build ships." Therefore, he purchased a site for an elaborate government shipbuilding yard in Southwark (Philadelphia) and spent $200,000 and two years of time in acquiring the lots. After using the $50,000 appropriated by Congress for the building of two repairing docks in two different parts of the country, he drew upon the fund of $1,000,000 that had been clearly and specifically appropriated for the building of warships—not for repair docks and positively not for a navy yard (of which no mention whatsoever was made in the act). The Secretary of the Navy, after having bought extensive acreage for a navy yard, naturally found the undeveloped site useless for the purpose for which it was acquired; so he commenced to erect buildings and make "improvements," which included not only facilities for building ships but also executive offices, accommodations for personnel, warehouses, stores, and barracks for marines.

The first keel laid down at the Philadelphia Navy Yard was that of the sailing frigate *Franklin* (74 guns), which was launched on August 25, 1815—just sixteen and a half years

after Congress had appropriated funds for building twelve ships of war and "two docks for repairing ships."

In 1821 it was decided to erect a shiphouse at the Philadelphia Navy Yard, so that warships could be built there under cover. The "Frigate House" (210 ft. long, 74 ft. wide, and 80 ft. high) was constructed, and a year later a second and larger shiphouse (270 ft. long, 103 ft. wide, and 84 ft. high) was erected. These two commodious and lofty sheds were used but little; yet they were conspicuous landmarks for half a century. That the building of the second shed was a wanton waste of government funds and taxpayers' money is attested by the fact that not until 1843 (or over twenty years after the completion of the second one) were the two sheds in use at the same time, and then each of the big sheds housed only a small sloop of war that needed no such accommodation for building. In twenty years after the completion of "the two mammoth shiphouses at the Southwark (Philadelphia) Navy Yard," that yard had built only one ship of the line (the *Pennsylvania,* 120 guns), launched July 18, 1837; one sloop of war (the *Vandalia,* 20 guns), launched August 26, 1828; and two small and puny dispatch boats (*Relief,* 4 guns, and *Dale,* 3 guns), launched in 1836 and 1839, respectively. From 1799, when work in acquiring and organizing a navy yard commenced, the Southwark yard built only two ships of the line (*Pennsylvania,* 120 guns, and *North Carolina,* 74 guns) and two sailing frigates (*Franklin,* 74 guns, and *Raritan,* 44 guns). When the *Raritan* was launched on June 13, 1843, the costly and extravagant yard during a period of forty-four years, 1799-1843, had built only four sizable vessels mounting 312 guns all told and a total of nine craft of all types and sizes (eight sail and one steam side-wheeler) carrying a total of 359 guns.

One of the two repairing and fitting-out docks which Congress desired and authorized to be built in 1799 at a cost of $25,000 each, but which the Secretary of the Navy—without authority—converted into a navy yard, was not finally provided for by Congress until July 1851, and the final cost to the United States was $831,840.34. It is evident that a government yard in which to build ships of war, and which would cost several hundred thousand dollars, was not necessary in Philadelphia at the time that Congress appropriated $1,000,000 to build needed warships and $50,000 for two repairing docks. Joshua Humphreys, the country's leading naval constructor, and others in various parts of the country had definitely proved that they could well build the highest class of war vessels in private yards and build them cheaply and quickly if funds were provided. In less than twenty-one months, Humphreys had launched two sailing frigates from his yard at Southwark at the time that the Secretary of the Navy was scheming to establish a government-owned yard in the same general location. This government yard was not ready to build ships even when greatly needed by the country during the War of 1812, and the two vessels constructed in Philadelphia for the United States Navy during the two-and-a-half-year fight with Britain were built in private yards (the sailing frigate *Guerrière,* built by Joseph Grice, Kensington, and a sloop of war, built in Philadelphia by Adam & Noah Brown, of New York). After the Civil War, the Southwark (Philadelphia) Navy Yard, not being considered well located by the government, was sold in 1875 to the Pennsylvania Railroad Company, and a new Navy Yard was established in the same general district at League Island in January 1876.

The old Southwark Navy Yard, from 1843 to the end of its days, built only one more sailing ship of war—the sloop *Germantown* of 20 guns in 1846. It did build, however, a number of small steam-powered war vessels, of which the most important was the *Princeton,* a 31-gun sloop of war driven by a screw propeller, which, launched on September 7, 1843, became a historic pioneer vessel in the realm of steam propulsion and was the first screw-propelled warship ever built. It is significant, however, that during the Civil War the ironclad *New Ironsides,* built on the Delaware and launched May 10, 1862, was built not at the expensive government Navy Yard but by a private shipyard at Kensington (Philadelphia). Speaking of this vessel, General Beauregard said, "The *New Ironsides* was the most powerful of any

northern ship; it was more dreaded than any monitor." A historian of Delaware maritime achievements wrote, "The record shows that the Philadelphia-built *New Ironsides* fought in more battles, stood up better under severer shelling, and piled up more damage on Southern ships than any other vessel in the Union fleet." When the monitor *Terror* was launched into the Delaware on March 24, 1883, it was from the yard of William Cramp & Sons, Philadelphia, which firm built all of the iron and steel armored and unarmored warships constructed on the Delaware during many decades; the government Navy Yard built none.

The following is a list of the vessels built and launched at the United States Navy Yard, Philadelphia, Pa., on the Delaware:

1815, Aug. 25—Sailing frigate *Franklin;* 74 guns.
1820, Sept. 7—Ship-of-the-line *North Carolina;* 74 guns.
1821, June 23—Schooner *Dolphin;* 10 guns.
1828, Aug. 26—Sloop-of-war *Vandalia;* 20 guns.
1836, Sept. 14—Sloop-of-war *Relief;* 4 guns.
1837, July 18—Ship-of-the-line *Pennsylvania;* 120 guns.
1839, Oct. 8—Sloop-of-war *Dale;* 3 guns.
1841, May 5—Side-wheel steamer *Mississippi;* 10 guns.
1843, June 13—Frigate *Raritan;* 44 guns.
1843, Sept. 7—Steam-propeller sloop-of-war *Princeton;* 31 guns.
1846, Aug. 21—Sloop-of-war *Germantown;* 20 guns.
1850, Apr. 6—Side-wheel steam frigate *Susquehanna.*
1855, May 1—Steam-propeller *Arctic;* built for lightboat; afterward in Kaighn's polar expedition.
1855, Oct. 11—Lightboat *Martin's Industry.*
1855, Oct. 24—Steam-propeller sloop-of-war *Wabash.*
1857, Aug. 8—Side-wheel steamer *Shubrick.*
1858, Jan. 9—Lightboat *Second Class.*
1858, Oct. 20—Steam-propeller sloop-of-war *Lancaster;* 22 guns.
1859, Jan. 19—Steam-propeller sloop-of-war *Wyoming;* 7 guns.
1859, Oct. 8—Steam-propeller sloop-of-war *Pawnee;* 11 guns.
1861, Aug. 24—Steam-propeller sloop-of-war *Tuscarora;* 7 guns.
1861, Nov. 16—Side-wheel steamer *Miami.*
1862, Mar. 20—Steam-propeller sloop-of-war *Juniata;* 9 guns.
1862, July 10—Steam-propeller sloop-of-war *Monongahela;* 12 guns.
1862, Dec. 8—Steam-propeller sloop-of-war *Shenandoah.*
1863, May 7—Side-wheel steamer (double end) *Tacony;* 10 guns.
1863, Sept. 29—Steam-propeller *Kansas,* 8 guns.
1864, Mar. 18—Steam-propeller *Yantic,* 3 guns.
1864, Mar. 31—Steam-propeller ironclad *Tonawanda;* later *Amphitrite.*
1865, May 23—Steam-propeller sloop-of-war *Swatara,* 10 guns up; new *Swatara* built in New York.
1865, Oct. 5—Steam-propeller sloop-of-war *Neshaminy;* afterward *Arizona;* afterward *Nevada;* 15 guns.
1867, July 17—Steam-propeller sloop-of-war *Pushmataha;* afterward *Cambridge;* afterward *Congress;* 13 guns.
1869, June 10—Steam-propeller sloop-of-war *Astoria;* later *Omaha;* 12 guns.
1875, Sept. 28—Steam-propeller sloop-of-war *Quinnebaug.*
1875, Nov. 13—Steam-propeller sloop-of-war *Antietam.*
1882 —Steam gunboat *Ossipee.*

The following United States war vessels were built at Philadelphia, on the Delaware, but not at the Navy Yard:

1797, July 10—Sailing frigate *United States;* built at Southwark by Joshua Humphreys, naval constructor.
1799, Nov. 28—Sailing frigate *Philadelphia;* presented by citizens of Philadelphia; built at Southwark by Joshua Humphreys.
1814, Mar. 23—Sloop of war built by Adam & Noah Brown.
1814, June 20—Sailing frigate *Guerrière;* built by Joseph Grice, Kensington.
1862, May 10—Ironclad *New Ironsides;* launched at Kensington; partially burned at League Island on Dec. 16, 1866.

1864, Oct. 13—Steam sloop-of-war *Chattanooga;* built at Kensington; sunk at League Island on Dec. 25, 1871.
1869, Oct. 25—Steamer *Alianthus.*
1883, Mar. 24—Monitor *Terror* from shipyard of William Cramp & Sons, Kensington.

It has been said:

Even though the building at Philadelphia of the *Princeton* revolutionized the construction of men-of-war and created a sensation on both sides of the Atlantic, it did much more, for it inspired the construction of a little vessel, the forerunner of a most important type—the American harbor and coastwise service steam screw tug. A small, squatty hull was fashioned, and in it was placed an engine driving a screw propeller. This pioneer tugboat was named the *Samson* because of its power in handling big vessels, but it was so handy in operation that it became known as the "river donkey," and it was said of it, "The boat goes anywhere and will do anything; it maneuvers as well as a British side-wheel towboat, but takes up much less room, and its engine, working through the screw, exerts more power and pull."

It is generally admitted that "the first boat actually moved by steam in any part of the world" was the boat demonstrated on the Delaware River by John Fitch in July 1786 and propelled by machinery operated by a steam engine. Fitch was first interested in applying steam power to road wagons, and it has been claimed that he was a pioneer in experimentation that later led to the development of the automobile. Following the most successful work of John Fitch with his steamboat in the Delaware waters, another Philadelphian, history records, produced an amphibious craft which attracted a good deal of attention at that time and which is of peculiar interest. Oliver Evans, whose improvements in steam engine design have placed his name high among the mechanical celebrities of his day, constructed a scow, in 1804, with machinery for cleaning or dredging the docking slips and around the piers on the river. This craft, built in Evans' shop in the vicinity of Broad and Market streets, had wheels under her connected with the general utility steam engine placed aboard, and she moved under her own power, as an automobile or tank, to the Schuylkill River, where a stern paddle wheel was attached and the novel vessel launched. We are told that the craft then "proceeded down the Schuylkill to the Delaware and up as far as Dunk's Ferry (Beverly), sixteen miles, and returned to the city without accident or detention." She evidently performed the work for which she was built, for we hear of her removing mud from the river at the Philadelphia Navy Yard and are told that the amphibious craft later "scrambled up" the river bank, using her land wheels, and made the journey back under steam to the Evans shop, or barn.

Philadelphia claims the practical development by Thomas Godfrey, a native of Pennsylvania, of the reflecting quadrant that bears the name of Hadley. It was first brought into use on West India vessels about the period 1731-1732 and was thence carried to England, where Hadley acquired the credit of the invention. The versatile Dr. Benjamin Franklin is said to have made many suggestions for the improvement of the model and sailing qualities of vessels and for increasing their safety; among his suggestions was the idea of a hull divided into watertight compartments, which practice was universally adopted by marine constructors in later years.

William Rush (born July 4, 1756), the son of a ship carpenter of Philadelphia, is said to have been "without a superior as a ship carver and sculptor, having been apprenticed to Edward Cutbush, of London, the best carver of his day." He introduced the upright figure in figureheads of ships and, it is said, "soon excelled all competitors—both here and abroad." The historians Scharf and Westcott have said: "Among the most skillful of the ship-carpenters about the beginning of the century was a Mr. Grice, who built the ship *'Fanny'* for Capt. Charles Macalester [said to be] the fastest sailing merchantman of that day, which made her first voyage from Philadelphia to Cowes in seventeen days."

Prominent Merchant-Shipowners of Philadelphia Dominate the Trade with China and the East Indies in the Early Days of the Republic

Historians have said that "to Philadelphia goes the honor of opening up the China trade for American vessels," and the *Empress of China* is often specifically mentioned as "a Philadelphia-owned vessel that made the first voyage to the Orient for silks and tea." The *Empress of China* was of 360 tons register and evidently was built by Peck, of Boston, in 1783 for Robert Morris et al., of Philadelphia and New York. It is also claimed (and elsewhere reported) that she was built in Baltimore and financed in Philadelphia and New York. Delaware boosters have claimed that the principal ownership of the ship lodged with "the Daniel Parkers of Philadelphia," but the name of Daniel Parker is positively connected with the marine history of Boston, Mass. We read of the construction of the China trader *Probus* of 656 tons in 1841, some fifty-eight years later, by Jotham Stetson in Medford, Mass. (part of Boston), for Daniel P. Parker, of Boston, and William S. Wetmore, of New York. In 1844 the *John Q. Adams* of 622 tons and in 1849 the *Samuel Appleton* of 781 tons were built for the China trade to the order of Daniel P. Parker, of Boston, by Paul Curtis, of Medford, Mass.

The *Empress of China* sailed from New York (not Philadelphia) on "a pioneer and venturesome voyage to an unexplored country" on February 22, 1784. She arrived in Macao on August 23 after a six months' passage; the return run was made in 134 days, and the round voyage occupied 14 months and 24 days—a time that was cut in less than half by the faster tea packets and early "clippers" of the late 1840's. In relation to this pioneer China voyage of the *Empress of China,* it is of interest to note that the *Probus* (jointly owned by Daniel P. Parker, of Boston, and William S. Wetmore, of New York) is credited with being "the first American ship to establish a new record in the tea trade." This claim was made on the performance of the *Probus* on her first voyage to China, out and home, which, according to the New York HERALD of March 19, 1842, "was performed in the almost incredible short space of 8 months 15 days, including the time of discharging and reloading at Macao."

It is said that an early-built *Canton,* constructed by Joshua Humphreys, of Philadelphia, sailed from the Delaware on December 30, 1785, and returned in May 1787, having made the round voyage to Canton, Batavia, and home in a little over sixteen months. The venture, like that of the *Empress of China,* was highly profitable, and as a result of these successful early voyages to the Far East, the trade grew steadily until, in 1805, Philadelphia alone owned twenty-seven ships plying in it. This number increased to forty-two by 1812 notwithstanding President Jefferson's ill-advised embargo, which measure was virtually ignored by Philadelphia merchants, and for some reason or other Jefferson did not attempt (as he did elsewhere) by either civil or military power to enforce his embargo on Delaware ships trading with China and the East Indies. The understanding gradually developed throughout the nearly two years of embargo that if Philadelphia merchant-shipowners chose to take the risks entailed by the British "Orders in Council" and Napoleon's "Decrees of Milan and Berlin," they could do so "at their peril, with no recourse for protection or indemnity in case of misfortune." Philadelphia merchants, who then virtually dominated the East Indies and China trade, had courage, and they knew that they were engaged in a business favored by world political, economic, and geographical conditions. They loaded and dispatched their ships regularly, and they carried no contraband of war. Their voyages were seldom interrupted and almost never terminated by detention or capture. The worst that ever happened was the occasional impressment of some members of the crew by the British or the levying of small tribute by the French. The American merchantmen had good speed for their day, and given sea room, good weather, and

a sailing wind, no British or French warship could get near enough to molest them. From 1803 to 1815, the French did not trade with the Orient at all, and although the British East India Company made sailings with some semblance of regularity, it was greatly handicapped by operating expenses, annoyances, and the convoy system in competition with the aggressive and courageous, neutral Americans, who operated their fast merchantmen independently. The War of 1812 gave all American shipping a great setback, including the trade of the Philadelphia East Indiamen, and although it again picked up when peace was declared, the end of the twenties saw it decline suddenly and in a few years pass almost entirely into the hands of New York and Boston merchants.

Philadelphia merchants owned and operated the converted frigate *George Washington* of 625 tons, built at Providence in 1794 and one of the largest vessels of her day. The *India* of 400 tons was built at Philadelphia for Anthony Morris in 1793, and in the early 1800's William Drummond had the big merchantman *Hindostan* of 562 tons. At the turn of the century, many of Philadelphia's most important merchants were interested in both the production and operation of ships, and many became experienced and resourceful masters.

It is said that a ship named the *Woodrop Sims* was built for Joseph Sims by Joshua Humphreys in 1801 (also given as 1794) and chartered for the China trade in 1808. This ship is reported to have cleared the Delaware Capes on April 8, 1808, and anchored in Whampoa Roads, Canton, on August 6. This figures 120 days, but the report of the run made public by the owners and command stated that the passage was made in still better time; i.e., "117 days from the Delaware to Whampoa, with an actual running time at sea of only 110 days." (Deducted from the 117 days are two days in Table Bay, Cape of Good Hope; three days at Isle of France, Mauritius; and two days at Anjer Road, Java Head.)

The Hollingsworths were very active in Philadelphia shipping circles from 1780 as were Clapier, White, Stephens, McCrea, the Browns, Evans', Biddles, Willings, Simses, Francis', and Pringles during the last years and the turn of the century.

Carl C. Cutler, in a brochure on the "Early Shipping Industry in the Northern States" (The Marine Historical Association, Mystic, Conn.), says:

> Among the early merchants of Philadelphia, Stephen Girard is perhaps the best known. His ships, which included the *Rousseau, Voltaire, Helvetius, Montesquieu, Superb* and *Liberty,* were among the largest and best of early vessels, although few of them measured more than 300 tons. They traded principally with India and China and made a number of excellent passages despite the fact that they were full-built craft. The quality of workmanship and materials which went into their construction is evidenced by the fact that the *Rousseau* saw more than 90 years of active service, ending her days as a New Bedford whaler. When she was broken up in 1893, her original live oak timbers were still sound.

The *Rousseau,* built in Philadelphia in 1802, was of 306 tons register and measured 93 ft. long, 29 ft. beam, and 19 ft. deep. The *Liberty* was built in Philadelphia in 1795 and measured 252 tons register.

The Contribution of the Delaware in the Building and Operation of China and Transatlantic Packets, Sturdy Whalers, and General Traders

Thomas P. Cope, the prominent Philadelphia shipowner, gave great encouragement to the shipbuilders of the city, and his best ships were built there. Philadelphia was indebted to him for the establishment, in 1821, of the first regular line of packet ships between Philadelphia and Liverpool, and the first ship employed in the line was the *Lancaster* of 290 tons, commanded by Captain Dixey. Philadelphia was not far behind New York in inaugurating ocean and coastal sailing packet lines. Four years after New York's first transatlantic packet line (Black Ball, Liverpool) was established, the famous Western Ocean Cope Line of Philadelphia, founded by Thomas P. Cope, was operating a four-ship packet line with monthly service to Liverpool, which continued in operation until the Civil War. However, as compared with New York, the Philadelphia sailing packets lacked much and, it was said in 1839, seemed "to drag on a rather languid existence."

Samuel Spackman soon followed Cope by inaugurating the New Line, also to operate between the Delaware and the Mersey; but this service failed to function as a transatlantic packet line, although it had a larger fleet in service for many years than was owned by the Copes. The Spackman ships were regular traders and generally traveled over the triangular cotton trade route, sailing east with southern cotton loaded at Savannah, Ga., or Charleston, S.C. As early as 1825, public advertisements referred to the sailings of seven Spackman ships of from 346 to 500 tons register.

One of the earliest Philadelphia builders of whom we have a definite record was Thomas Penrose, who built the large ship *Ganges* of 524 tons in 1795 for T. W. Francis and associates, of Philadelphia. Most of the early records of Philadelphia and Delaware shipbuilding give prominence to the names of the owners and but little about the builders except the general location of the yards. Samuel Bowers is known to have built several important vessels around the turn of the century, and one of his most famous vessels was the *Rebecca Sims,* built in 1801 for Joseph Sims, of Philadelphia. This ship was overhauled, coppered, and newly sparred and rigged in the winter of 1806-1807. It is said that the "*Sims,*" fresh from Bowers' shipyard after being completely renovated and improved, took her departure from Cape Henlopen on May 10, 1807, and after an amazingly fast transatlantic passage picked up a Liverpool pilot off the mouth of the Mersey on May 24. If this claimed run of 14 days of the *Rebecca Sims* could be substantiated, it would still stand as virtually equivalent to the ocean sailing record between the Delaware and the Mersey. The *Rebecca Sims* was undoubtedly a stout and well-built as well as a fast ship. In September 1853, the log of the clipper ship *N. B. Palmer* recorded a meeting with "the whale ship *Rebecca Sims* of New Bedford, Captain Parsons, 35 months out; 1,500 bbls. sperm." After sixty years of hard service, the Bowers-built ship was still going strong; but she was bought by the Union forces, loaded with stone, and sunk with many other vessels to blockade Charleston during the Civil War.

Other prominent shipbuilders of Philadelphia around the turn of the century and the first part of the nineteenth century are said to have been Pogelt & Pearson, John Byerly, John Vaughan, Tees & Van Hook, the Van Duzen (or Vandusen) family, John K. Hammett, and William Cramp.

It has been said that when the first United States Census was taken in 1790, the population of Philadelphia had lowered from an estimated one-time 40,000 to about 29,000 and that the Quaker City was second in size to New York. However, records show a population in 1790 of 42,000 for Philadelphia, 33,000 for New York, and 18,000 for Boston as against estimates made in 1789 of 40,000, 30,000, and 16,000, respectively, with the national total population

well under four million. By 1830 the most important seaports, shipbuilding centers, and shipping cities had a population of 202,000 for New York, 161,000 for Philadelphia, 80,000 for Baltimore, and 61,000 for Boston. During the eighties and nineties of the eighteenth century, Philadelphia ship designers and builders were the acknowledged leaders in the country in the production of ships, and Philadelphia merchants vied for leadership with those primarily of Salem and Boston, Mass. New York seems to have generally led the country in coastal trade, and until the middle of the 1790's, it was outstripped by Philadelphia, but after that New York pulled away and kept increasing its lead. Around the turn of the century, New York forged rapidly ahead as a shipping port and was soon battling not so much with Philadelphia as with New England for marine supremacy. At the commencement of the second decade of the nineteenth century, New York boasted a registered tonnage of 244,000 tons; Boston, Mass., had gained second place with 133,000 tons; Philadelphia had dropped to third place with 121,000 tons, while Baltimore and Salem held the fourth and fifth places with 102,000 and 44,000 tons, respectively.

The following craft, presented as a cross section of the leading ships built at Philadelphia, can be mentioned among the outstandingly fast sailing vessels constructed in the United States during the first seven decades of its marine history as a nation (the 1780's to and including the 1840's). Such vessels included general traders, Indiamen, China and transatlantic packets, fruit and coffee traders, and ships in such services as the triangular route—New York, Carolina, and Europe. The size generally increased with the years, and although practically all of these vessels were full modeled, they were heavily sparred and large sail carriers and, being unusually hard driven, occasionally made quite fast passages.

Year Built	Name	Tonnage	Year Built	Name	Tonnage
1783	PIGOU	359	1802	ROUSSEAU	306
1791	CLOTHIER	308	1803	FRANCES HENRIETTA	411
1791	DELAWARE	391	1811	ANN MARIA	368
1794	WOODROP SIMS (also given as 1801)	305	1826	AJAX	628
1795	GANGES	524	1832	COMMERCE	431
1795	LIBERTY	252	1833	SUSQUEHANNA	583
1795	NEW JERSEY	402	1836	GEORGIANA	554
1795	VOLTAIRE	305	1836	ROBERT FULTON	562
1796	GOLDEN AGE	219	1839	VENICE	558
1796	MOUNT VERNON	432	1845	TARTAR	573
1801	REBECCA SIMS	400	1846	ISABELITA HYNE (bark)	350
1801	PLOUGHBOY	287	1847	VALPARAISO	697

Of the above-mentioned 24 ships, 16 were built for Philadelphia, 6 for New York, and 1 for Salem, Mass., owners; 1, the *Delaware,* had joint Philadelphia (Morris) and New York (Constable) ownership. The Salem ship *Golden Age* was built for the well-known Elias H. Derby, and the vessels built for New York merchants were the *Frances Henrietta* for Isaac Clason, the *Georgiana* for the Heckshers, the *Tartar* for Booth & Edgar, and the packets *Ann Maria* for John Flack and *Ajax* for the Whitneys. The Philadelphia owners included the names of Blight, Burton, Clement, Cope, Francis, Girard, McCrea, Meeker, Morris, Oldden, Plumstead, Sims, and Wilmer.

Philadelphia and the Delaware gained a great reputation in the second and third decades of the nineteenth century for the building of a large fleet of sturdy full-bodied square-rigged sailing ships that were used for the whaling trade. Philadelphia was never a prominent whaling port, but the War of 1812 practically obliterated America's whaling fleet, and whalers built on the Delaware were constructed under contract for New England owners. During the years 1815-1822, 64 three-masted ships of a very seaworthy type, each of from 300 to 400 tons register, were built on the Delaware for the whale fishery interests of New Bedford, Nantucket, New London, Sag Harbor, and other American whaling ports.

The vessels built in Pennsylvania in 1847 were 8 ships, 2 brigs, 31 schooners, 121 sloops and canal boats, and 66 steamers, a total of 228, with an aggregate tonnage of 24,126 tons.

The history of shipbuilding in 1854 in Philadelphia is condensed in HUNT'S MERCHANTS MAGAZINE for September 1855, as follows:

Shipbuilder	Launched		On Stocks	
	No. of Vessels	Tonnage	No. of Vessels	Tonnage
T. Birely	13	1,429	2	500
Vaughan & Linn	1	1,500	1	1,200
William Cramp	4	2,495	2	2,919
Hillman & Streaker	5	534	—	—
Birely & Linn	4	728	—	—
John K. Hammitt	1	240	—	—
M. Vandusen	1	120	1	120
Reaney, Neafie & Co.	2	253	1	246
Stewart & Walters	4	1,060	2	455
Total	35	8,359	9	5,440

The builders of wooden ships in 1860, it was reported, numbered thirteen, with $1,350,000 capital; they employed 608 hands and used $297,855 of raw material, the annual product being valued at $804,500. The ship joiners and boat builders were nine in number, with a capital of $18,150; they used raw materials valued at $23,790, employed 76 hands, and produced annually a value of $78,829. There were three iron shipbuilding establishments in Philadelphia in 1860, and metal shipbuilding gradually supplanted the wood. The reports show that in 1882 there were three wood shipbuilding establishments in Philadelphia whose annual product was valued at $415,000, with twelve establishments producing boats and barges with an annual product of $190,400.

The fisheries (general deep-sea and whaling) and the oriental (China packet), West Indian, Mediterranean, and triangular European general trades were all important to American shipbuilders, shipowners, and commerce in general, but the three outstanding and prime types of American vessels that dominated the last century of merchant sail were (1) the transatlantic sailing packets (from the twenties to the Civil War), (2) the clippers (1850-1859), and (3) the Down Easters (of the sixties, seventies, and eighties). The transatlantic packet trade was dominated by New York-owned ships, and no other American port at any time held even a challenging position of any consequence. Boston was favored by nearness to Europe and advantages of route as well as by its shipyards and their ability to build good ships economically; it made frequent and evidently vigorous but, nevertheless, futile attempts to take a good slice of the trade from New York, but at no time did it become a seriously considered competitor of the metropolis. Philadelphia, on the other hand, kept its own Cope Line in operation (generally four ships with monthly service to England) for about forty years and congratulated itself on its ability to do so. Philadelphia as a transatlantic packet port, though proud of its own line's staying power, gave New York no competition worthy of the name and no concern. Any study of American sailing packets has to deal primarily and almost exclusively with the transatlantic packets sailing out of the port of New York to European ports—primarily Liverpool, London, and Havre.

Only two sailing packets—one transatlantic and one coastwise—operating out of the port of New York in regular scheduled lines were built on the Delaware. The *Cambria* of 362 tons (length 108 ft. 2 in., beam 27 ft. 6 in., depth 13 ft. 9 in.) was launched from a Kensington yard in Philadelphia in 1826 and for about five years (1827-1832) saw service as a Western Ocean packet with the London Black X Line. Her average westbound passage during this period was 41 days; best run, 30 days; slowest passage, 48 days. In the fall of 1832, she was converted into a whaler, in which service she performed with satisfaction and profit for thirty

years. In 1862, because of the Civil War, the *Cambria* was "sold foreign." The Delaware-built New York coastal packet was the *Tybee,* launched by S. Grice, Philadelphia, in 1829. This little ship of 298 tons (length 104 ft. 6 in., beam 25 ft. 2 in., depth 12 ft. 8 in.) ran two years (1830-1832) in the New York-Savannah packet line. Her fastest passage while in that service was a run of 6 days; average length of passages, 9.9 days; longest run, 36 days. In the summer of 1832, the *Tybee* was sold to Salem, Mass., interests.

Another New York-owned ship of packet type (not employed by a regular line on a schedule) was the *Ajax* of 628 tons (length 132.3 ft., beam 32.5 ft.), built at Kensington (Philadelphia), Pa., in 1826 for Robert Kermit and Stephen Whitney, of New York.

William Cramp Builds the Only Clipper Ships Constructed on the Delaware, and Philadelphia Takes Fourth Place in Tonnage Built and Registered during the Boom Year 1853

The only clipper ships built in Philadelphia and on the Delaware were four "sharp-modeled, loftily sparred" ships constructed by William Cramp—the three smallest at his yard in Kensington (Philadelphia), Pa., in 1851-1855, and the largest, the *Manitou* of 1,401 tons, in 1855 across the river at Petty's Island, N. J. The three Kensington-built craft launched from the site of the later-developed great Cramp iron (and steel) shipyard—decidedly famous in metal shipbuilding, both naval and merchant steam-propelled vessels, during the half-century 1870-1920—were the little *Stilwell S. Bishop* of 595 tons, built in 1851 for Henry Simons, Jr., the *Morning Light* of 938 tons, built in 1853 for Bishop, and the *Isaac Jeanes* of 843 tons, built in 1854 for Isaac Jeanes & Company, all Philadelphia owners.

The *Stilwell S. Bishop* (length 140.1 ft., beam 31.3 ft., depth 15 ft.) was sold in 1856 by her then owner, Bishop & Simons, of Philadelphia, to Rutter, Newell & Company, of Baltimore, which renamed her the *Grey Eagle.* This small clipper is said "frequently to have made 14 knots" and is credited with a record or near record run from Cape Henry to the equator in 14 days 20 hours. In the California trade, the *Stilwell S. Bishop* made outstandingly uniform fast passages on the run westward around the Horn. She averaged 119 days on five passages to San Francisco negotiated in the years 1852-1855 inclusive—four from Philadelphia and one from Baltimore; best two runs, 112 days from the Chesapeake and 113 days from Delaware Breakwater; slowest run, 128 days from the Delaware. This vessel was rebuilt at Noank, Conn., in 1870, after nineteen years afloat.

The *Morning Light* of 938 tons (length 172 ft., beam 34.3 ft., depth 19 ft.) made three Cape Horn westbound passages in the years 1854-1860 inclusive in 122, 144, and 140 days, respectively—an average of 135 days—which was not fast. This vessel should not be confused with the much larger clipper of 1,713 tons of the same name built the same year (1853) at Portsmouth, N. H., for Boston owners. The *Isaac Jeanes* (length 157 ft., beam 35 ft., depth 21.5 ft.), built as a clipper packet for Mediterranean service, made one run in the California trade during the clipper ship decade—a passage of 129 days in 1855. The one voyage around the Horn westbound of the larger *Manitou* (1,401 tons; 199.3 ft. long and 38.3 ft. beam) was a slow run of 168 days.

The average time of the ten passages made from eastern Atlantic ports to San Francisco by Cramp-built (Philadelphia) clippers was 129.8 days, and for the three largest Cramp-built clippers the record shows five passages averaging the slow time of 141 days. Whatever

honors go to Philadelphia for clipper ship speed are connected with the uniform and fast performances of the diminutive *Stilwell S. Bishop,* which measured only 595 tons register, but was, nevertheless, a very fast vessel in the severe Cape Horn service.

The relative unimportance of Philadelphia and the Delaware in the building of fast wood sailing ships during the clipper ship decade 1850-1859 is apparent from an examination of the statistics covering the building of clipper and reputed clipper ships. According to the records compiled by Carl C. Cutler in GREYHOUNDS OF THE SEA, only 4 out of a total of 443 ships of this type (i.e., only nine-tenths of one per cent) were built on the Delaware River, 3 in Pennsylvania and 1 in New Jersey, but all by the same builder, William Cramp. At mid-century the leadership in the shipbuilding field was held unquestionably by New York, but in the early fifties the center of volume of construction had moved and, further, was continuing to move rapidly to New England and "Down East." As long as William H. Webb built ships, New York had a national leader with no superior in his field of activity. Boston had Samuel Harte Pook, America's most skillful designer, and Donald McKay, the world's most courageous builder and advocate of big sharp-lined, heavily canvased clipper ships. As New England had the advantage of competent shipwrights in quantity, shipbuilding gradually moved east, where "good ships could be built quickly and cheaply."

Although the Delaware was not of national importance in the realm of clipper ship construction, it did hold a position of prominence in the peak boom year of wood shipbuilding. Official statistics show that during the year ending June 30, 1853, the port and customs district of Philadelphia was the fourth in importance in tonnage built and registered, being exceeded only by New York, Boston, and Bath, Maine. Little Waldoboro, Maine (really part of what should be the Bath, Maine, territory), recorded the building of practically the same tonnage as Philadelphia (i.e., 23,314 tons as against 24,427 tons), and the total tonnage registered in Philadelphia during the year was only 35.6 per cent that of New York City and 40.6 per cent that of Boston, Mass. The total tonnage registered in Philadelphia and the state of Pennsylvania in the year ending June 30, 1853, was 31,539 tons; whereas that of Massachusetts was 83,015 tons, New York 83,224 tons, and the state of Maine 118,917 tons (excluding 8,666 tons built and registered at Portsmouth, N.H., which is really part of the Maine territory). Pennsylvania and the Delaware built 8.4 per cent of the total marine tonnage registered during the year of maximum shipbuilding operations; this can be compared with 5.5 per cent built on the Chesapeake (Maryland and Virginia), 19.6 per cent built in each of the states of New York and Massachusetts, and 28.5 per cent constructed and registered in the state of Maine (30.0 per cent if Portsmouth, N.H., is added to the Maine territory).

Of the 157 vessels built, measured, and registered in the port and customs district of Philadelphia during the boom year ending June 30, 1853, aggregating 24,427 tons, only 1 was a ship, 4 were brigs (making 5 square-riggers, two- and three-masted, all told), 28 were fore-and-aft-rigged schooners, 102 were sloops and canal boats, and 22 were steamers. These figures reveal the degeneracy of the Philadelphia type of marine construction. The Delaware led the country in the building of canal and river boats and was at the bottom of the list of all of the important Atlantic Ocean ports and shipbuilding districts in the building of square-rigged deep-sea sail. Even in the building of steamers, New York turned out over 2.6 times as many as Philadelphia, which, incidentally, produced fewer vessels driven by steam power than Pittsburgh, Pa., Louisville, Ky., and Cincinnati, Ohio. The average registered tonnage of the vessels built in Philadelphia in 1853 was 155 tons, that of New York (which also built a large number of small river craft) 306 tons, and that of Boston, Mass., 936 tons.

The Construction of America's Only Deep-Sea Iron Sailing Vessels Proves That They Cannot Compete in Operation with Maine-built Wood Down Easters, and a Yankee Shipbuilder Tells Why

Following the clipper shipbuilding decade of 1850-1859 inclusive and the Civil War, the Delaware built none of the fuller-modeled and more conservatively sparred and canvased merchant sailing wood ships of a better money-making type that, because they originated in Maine and were launched entirely from New England—and primarily Maine—shipyards, became known as "Down Easters." During the sixties, seventies, and eighties, the Down Easter was the only class of deep-sea sailing ship built in the United States. The Delaware did construct, however, in the years 1883 and 1884, a trio of square-rigged three-masted ships for the Cape Horn trade that were built of iron and described as "iron Down Easters." These three ships, the *Tillie E. Starbuck, T. F. Oakes,* and *Clarence S. Bement,* were the only deep-sea iron sailing vessels ever built in America, and until the building of the Sewall fleet of steel square-riggers in Bath, Maine (1894-1902), they were the only metal-hulled ships propelled by wind and canvas constructed in the United States.

The idea of following the British lead and building iron square-riggers for deep-sea work was carried forward by William H. Starbuck, shipping merchant of New York. He had obligated himself, in association with Henry Villard and David B. Dearborn, to get together a fleet of five ships to be used especially for the transport of rails and other needed materials to the coast of the Pacific Northwest for the Northern Pacific Railroad, then in course of construction. Two wood ships were ordered of Bath shipbuilding companies in the winter of 1881-1882, and the ship *William H. Starbuck* of 1,272 net tons was launched from the yard of Goss, Sawyer & Packard in March 1882, being followed two months later by the *Henry Villard* of 1,475 net tons from the yard of Arthur Sewall & Company. (The *Henry Villard* was named after the first president of the Northern Pacific Railroad.) These ships were good carrying vessels of fair speed, and both made good time on their passages considering the cargoes carried. The *"Villard"* made a westbound around-the-Horn run in 130 days and an eastbound passage in 127 days; she showed "a nice turn of speed" in her three passages deep laden with sugar from Honolulu to New York and made these runs in 97, 100, and 107 days, respectively.

With two wood Down Easters in the water, William H. Starbuck decided to build his other three ships of larger size and of iron to get, as he said, "the benefit of increased carrying capacity, both in volume and deadweight, better insurance, and stronger ships." The new vessels were to be of "about 2,000 tons," and it was said, "The only place to build iron ships is on the Delaware." Starbuck contracted with John Roach, of Chester, Pa., to build the first iron ship, which was named the *Tillie E. Starbuck,* and she was launched into the Delaware River on April 14, 1883. This vessel was of 2,033 tons and measured 257 ft. long, 42.7 ft. beam, and 23 ft. deep. She was described as being 270 ft. over-all, 248 ft. on the load water line, with a deadweight capacity of 3,750 tons on a draft of 21 ft. 6 in. The *"Starbuck"* made her best passages under the command of Captain Curtis, a noted sail carrier, and with "the famous David Nicholson as mate," but it was frankly admitted that she could not compare in speed with the wooden ships built in Maine. In 1905 she went ashore and was rather badly damaged; she was lost by foundering off Cape Horn bound for New York from Honolulu with sugar on August 16, 1907.

W. H. Starbuck contracted for his second iron sailing ship with the American Shipbuilding Company, of Philadelphia, which recently had been organized by Commander Gorringe of the U. S. Navy. This vessel was named the *T. F. Oakes;* her keel was laid on May 2, and she was launched September 29, 1883. The *"Oakes"* was of 1,997 tons and measured 255 ft. long, 40.6 ft. beam, and 23.5 ft. deep. She was, therefore, about the same length as the

Tillie E. Starbuck, but two feet narrower. It is said that she had a greater overhang, but carried less cargo than the first of the Starbuck iron sailing trio, her deadweight capacity being given as 3,200 tons on a draft of 22 ft.

The *T. F. Oakes* proved to be a slow and sluggish as well as an unlucky vessel. In 1893 she required 195 days on a passage from New York to San Francisco. In June 1896, she sailed for New York from Shanghai under Capt. E. W. Reed and a month later put into Hong Kong in order to complete her loading. Six days after leaving Hong Kong, the *"Oakes"* ran into a typhoon, which obliged Captain Reed to run to the eastward, where he encountered a second typhoon, and, as a result, it was decided to change the ordinary course via the Cape of Good Hope and continue the voyage to New York sailing east via Cape Horn. The vessel was so long on this passage that the crew began to fall sick with scurvy, for Cape Horn was not rounded until the *"Oakes"* was 168 days out. During the months of November, December, January, and February, deaths occurred at intervals on board. On March 1, 1897, Captain Reed, his wife, and the second and third mates (the first mate had died) were the only members of the ship's company who were able to get around, and they, it is said, "were in a very exhausted condition." The ship crawled up the Brazilian coast, Mrs. Reed doing most of the steering. When off Trinidad, the *T. F. Oakes* sighted the ship *Governor Robie* and got some supplies from her; but a little later the condition on the *"Oakes"* was so serious that she made distress signals, which were picked up by the British oil tank steamer *Kasbek.* At this time, practically all on board, from the captain down (who was suffering with paralysis), had either died or were incapacitated. The *Kasbek,* when she came alongside, was required to put men aboard the *"Oakes"* to handle a towing hawser; for no one on the sailing ship had strength enough to handle the line, and only Abrams, the second mate, was able to stand on his feet. The *Kasbek* towed the *T. F. Oakes* into New York and dropped anchor, outside quarantine, March 21, 1897. At that time, the *"Oakes"* was 259 days out from China and had been posted as missing. This the second iron ship of the Starbuck fleet was lost by stranding on the California coast near San Francisco in 1901.

The third and last of the Starbuck iron Down Easters, the last iron deep-sea sailing vessel built in the United States, was likewise constructed at the yard of the American Shipbuilding Company at Philadelphia. This vessel, the *Clarence S. Bement,* was built a year after the *T. F. Oakes* and was undoubtedly a sister ship, built from the same lines. Her dimensions were length 259.9 ft., beam 40.6 ft., depth 23.6 ft., and she measured 1,999 tons register. As before mentioned, it was said of the *"Bement"* that "she was more notorious for the length of her passages than for the shortness of them." In 1901 very high premiums were paid to re-insure the *Clarence S. Bement* when that ship was making a passage between Yokohama and New York; she finally completed the voyage in the wretched time of 225 days. In 1904 the *"Bement"* was burned at sea when on a passage from Newport News, Va., to San Francisco.

It is evident that all three ships, the *Tillie E. Starbuck, T. F. Oakes,* and *Clarence S. Bement,* were slow, unsatisfactory, undependable, and unprofitable vessels. The building of these three iron ships on the Delaware definitely discouraged other American shipowners from venturing into the construction of iron ships, for it was said by competent authority that "the three Delaware-built iron ships proved that they could not compete with wooden Maine-built Down Easters in any respect." (Comparative data regarding these three ships are given in Volume III, pages 1753-1755.) The experience of Starbuck and his associates with Delaware-built iron ships led to much discussion as to the reason for the pitiable showing of America's first and only iron square-riggers compared with that of Maine-built wood ships. Because of the fouling of iron bottoms and the associated reduction in speed, British-built iron ships had a model fullness sharper than that of a "Yankee wood ship." Even with this attempted adjustment, British iron ships (other than the clippers) were not as fast nor as responsive in handling as a Maine-built vessel of similar tonnage; but the difference in the superiority in performance of American wood sail over British iron sail was much less than that of the wood Down Easter over the Delaware-built iron ships. The best and most plausible as well as a somewhat authoritative ex-

planation of the difference between the Starbuck iron ships and Kennebec-built wood Down Easters of similar tonnage, constructed about the same time, emanates from an associate of Starbuck:

Bath wood ships are built from models and are sparred, rigged and canvased capitalizing a wealth of specialized knowledge accumulated through a century of time and handed down from generation to generation. Maine shipmasters co-operate with Maine owners and builders in a desire to improve both models and rig, so that each new ship is the latest product built from the experiences gained with all ships built in the past. The master builder models the hull of a new vessel in accordance with the requirements of the owners as to size, capacity, and an intimate knowledge of the performances at sea under all sorts of sailing conditions of a multitude of ships previously built. The dimensions, proportions, relative fullness, sheer, deadrise, freeboard, overhang, and a host of important model features are decided upon by co-operation of owners, shipmasters, and builders; nothing is guessed at or decided upon in haphazard fashion, but there is a definite reason for every line and every feature of model and construction, and that reason is never whimsical but is based upon an extensive experience —both personal and handed down from the past— accumulated by analytical-minded men who operate ships and whose whole life is tied up with ships. The rigger, sparmaker and sailmaker are specialists, and they work very closely with sea captains. They know how every vessel that they have rigged, sparred and canvased has behaved at sea under various conditions of wind, sea, and the ship's lading, and how it has acted in tight places where handiness is of great importance. No one man building a ship in Bath, Maine, knows it all or presumes to know it all. The master builder, owner, shipmaster, rigger, sparmaker, and sailmaker all confer in a wonderful spirit of co-operation; they all seek in the broadest possible way to produce the best, and the ship they build is founded upon a great tradition and is the most modern expression of the combined knowledge of specialists, gained by vast accumulated experience.

We built two wood ships in Bath in different yards; they were modeled by different master builders, but, nevertheless, were very similar in essentials. When they were rigged, sparred and canvased, the same men, who were specialists, did the work on both ships. We, having but little experience as owners, left everything to the builders, but they in turn conferred with contracting specialists and the skippers appointed to command the ships, so we got the benefit of two of the oldest and best shipbuilding firms in Bath, of two talented and successful ship designers and master builders, and of the most able and experienced riggers and spar- and sailmakers. The result was that Bath built for us two very satisfactory and highly successful wood ships that carried the relatively large cargoes for their length and tonnage as specified by us, showed good speed, were very handy, and were economical to operate.

The iron ships built on the Delaware had hull models made from lines drawn by a draftsman with no experience whatsoever in the designing of merchant sailing vessels. The same draftsman made the spar, rigging and sail plans, and no specialist and no experienced rigger or sailmaker was at hand to advise. When our shipmasters appeared at the shipyards, their experience could be used only in unimportant details such as equipment and fittings that up to that time had not been made, purchased, or ordered.

From Bath we obtained wood ships that were the product of experts and of specialists and that represented the accumulated experiences of a century or more in the building and operation of wood merchant sail. From Pennsylvania we obtained iron ships that were designed in a shipyard drafting office by men whose experience had been limited to steam vessels, merchant and naval, and the builder of the *"Oakes"* and the *"Bement"* had obtained his entire experience with war vessels. His designing staff were Civil Service Navy Department draftsmen. It is not surprising, therefore, that our wood Bath-built vessels were real ships that performed well under all conditions and that our iron Delaware-built vessels were truly sailing tramps. They were not only poor sailers but also unbalanced, cumbersome, and unhandy vessels; in a word, they lacked "class" and were the product of amateurs.

The wood ships, with their copper bottoms, were able to keep the seas for long periods of time— almost indefinitely; but the iron ships fouled rapidly, and this condition seriously affected their speed. British iron ships had to be dry-docked frequently in order to obtain fair sailing performance, but over a period of years no British iron ship made as good passages and was as fast as an American wood Down Easter of similar size and model fullness. Copper-sheathed wood bottoms made for speed; iron hulls, when out of dry dock for half a year, became sluggish. In the operation of our ships, dry docks were not available at most of the ports of call even if our management had been willing to use them to clean a ship's bottom, and there is no doubt that the sailing performance of the *"Starbuck," "Oakes,"* and *"Bement"* would have been much improved if dry-docking had been more frequent. However, we cannot blame iron hulls and foul bottoms for the poor showing of our three iron ships, for, as one of our shipmasters said, "The trouble started in the model before the keel was laid; it continued in the building, in the placing of the masts and the proportioning of spars and cutting of canvas. Nothing is right and in balance, and, no matter how you drive or jockey in handling a ship, you can never get out of her what is not in her"—or what was not put into her by her designer and builders.

Through the Genius of William Cramp and His Sons, Philadelphia Contributes for a Century to National Achievement in Shipbuilding — Wood and Iron, Sail and Steam, Mercantile and Naval

The Delaware's greatest shipbuilder was probably William Cramp—and this not only because of his extensive and successful building of important merchant sail during a period of over half a century, from the twenties to the seventies of the nineteenth century, but also because of the achievements of his son Charles H. in the realm of iron shipbuilding and in carrying forward the William Cramp tradition (and a reconstructed and enlarged Cramp shipyard) with success into the twentieth century. William Cramp was born in the district of Kensington (later the Eighteenth Ward of the city of Philadelphia) in September 1807. His parents were of English descent. In 1823 he was apprenticed to Samuel Grice, a celebrated shipbuilder of that period, whose yard occupied the site later known as the Verree Rolling Mill. After completing his term of service with Grice, Cramp worked for several years as a journeyman ship carpenter. In 1830, acquiring some property in Kensington (then a suburb of Philadelphia) fronting on the Delaware River, he established an individual business enterprise and commenced the building of wooden vessels. In 1857, William Cramp took into partnership two sons, Charles H. and William M. Cramp, and in 1863 three other sons, Samuel H., Jacob C., and Theodore Cramp. In 1860 the changes that had taken place in marine architecture induced the firm to discontinue the construction of wooden craft and devote its attention entirely to iron vessels. The business of the William Cramp Company is said to have been "directly the fruits of the sagacity and energy of William Cramp." He himself was a practical man and a model of integrity; he was noted for the promptness with which he met every obligation and, in an unostentatious fashion, was quite charitable. William Cramp died on July 6, 1879, at the age of seventy-two years.

Charles H. Cramp, the prominent son of William Cramp, was born on May 9, 1828. He obtained his first practical experience as a shipbuilder at the yard of his maternal uncle, John Byerly, one of Philadelphia's outstanding wood shipbuilders; but in 1846, when in his nineteenth year, Charles went to work at his father's wood shipyard at Kensington. The younger Cramp was interested primarily in warships and machinery; the father, William Cramp, was a skilled, practical wood shipbuilder and so remained throughout his creative business life. It was William Cramp—and not his son Charles H.—who designed and built the Cramp quartet of clipper ships of from 595 to 1,401 tons constructed at the Kensington, Pa., and Petty's Island, N.J., yards of the company during the years 1851-1855 inclusive. Under the direction of Charles H. Cramp, the old and original William Cramp wood shipyard at Kensington (Philadelphia) was developed into a great establishment for building iron war and merchant vessels and their machinery. It was known as the William Cramp & Sons Ship and Engine Building Company. It has been said of William Cramp: "He laid out and started well on the way to development a shipyard in Philadelphia that during an existence of more than a century built approximately four hundred ships, including steamers and battleships, of the largest size."

Upon the death of Charles H. Cramp, the shipbuilding firm that had been acclaimed as the leading and the greatest builder of all classes of vessels and their machinery in America rapidly gravitated, through poor management, into insolvency and ultimately into an absolute suspension of all activities. The genius of the Cramps as shipbuilders held for two generations; the third generation and its employed executives wrecked the once proud company, which, however, has left behind it a record of achievements that will live forever in the history of American shipbuilding—wood and iron, sail and steam, mercantile and naval.

III.

NEW YORK — ONE OF THE WORLD'S GREATEST SHIPBUILDING CENTERS

The First Shipyards Are Established in the 1790's After the Revolution

ALTHOUGH vessels had been built in New York and environs and on the Hudson River and Long Island Sound from early colonial days, the British occupation of the city put a stop to shipbuilding activities. When the British sailed from America, Philadelphia as a city and the Delaware as a shipbuilding river were well in the van as far as both shipbuilding facilities and tonnage ownership were concerned. During the War of the Rebellion, shipyards were operating on the Hudson, notably at Athens and Hudson. Some Loyalist yards in the city, such as Brocklebank's, were in operation; but the tonnage built was relatively small, and New York shipbuilding was virtually nonexistent. Prior to the Revolution, shipbuilding had not been an important industry in New York, but the great demand for vessels soon after 1790 forced the city into their construction, and in an incredibly short time New York became one of the great shipbuilding centers of the world.

A comparison of the population of the four leading American seaports during each ten-year period from 1790 to 1860 is of interest because population is an index of relative size and importance in the realm of trade—both marine (offshore and coastal) and inland. The following table of populations reflects New York's struggle with Philadelphia for supremacy in the early days of the republic and New York's rapid growth in importance as a port during the sailing packet and clipper ship years.

	1790	1800	1810	1820	1830	1840	1850	1860
New York	33,000	60,000	96,000	123,000	202,000	312,000	515,000	813,000
Philadelphia	42,000	69,000	91,000	112,000	161,000	220,000	340,000*	565,000
Baltimore	13,000	26,000	35,000	62,000	80,000	102,000	169,000	212,000
Boston	18,000	24,000	33,000	43,000	61,000	93,000	136,000	177,000

*The population of Greater Philadelphia was stated as 408,000 in 1850.

The old and prominent southern port of Charleston, which had a population of 16,000 in 1790, 20,000 in 1800, and 24,000 in 1810, had advanced to only 29,000 in 1840 and 40,000 in 1860; whereas the cotton port of New Orleans on the Mississippi, with a population of 17,000 in 1810 and 27,000 in 1820, 46,000 in 1830, and 102,000 in 1840, had increased to 116,000 in 1850 and 168,000 in 1860. However, neither Charleston nor New Orleans was at any time a shipbuilding center, and New Orleans supplanted Charleston as the country's prime cotton port.

Under Dutch and British rule, New York had never been an important shipbuilding center. After peace was declared in 1783 following the War of the Revolution, New York remained somnolent and indifferent as to the building of ships for a few years, but in the 1790's stirred

itself because of need and popular demand and established several yards. Among shipbuilders in New York in the late years of the eighteenth century were Thomas Cheeseman (followed by his son Forman), Thomas Vail, Valeo, William Vincent, and Samuel Ackerly. In 1792 three outstandingly fast square-rigged ships were constructed in New York. The *Fanny* of 239 tons (length 86 ft., beam 25 ft. 4 in.) was built by Samuel Ackerly for Lenox & Maitland, New York; the *Severn* of 279 tons (length 91½ ft., beam 26½ ft.) was built for Elijah Pell and Thomas Pearsall (and later acquired by John J. Astor), New York; and the *Factor* of 300 tons (length 95 ft. 8 in., beam 26 ft. 9 in.) was laid down for Albert Wyckoff, New York. These were all quite sizable merchant ships of their day, but they were small compared with the big *Manhattan* of 667 tons (length 130 ft., beam 35 ft., depth 17 ft.), recorded as built by Samuel Ackerly in 1799 or 1800 for Phillip Rhinelander and associates, New York, and the *America* of 561 tons (length 124 ft., beam 32 ft.), built in 1788 for Isaac Gouverneur, Peter and Robert Kemble, and others, New York. The *Manhattan* was the largest merchant vessel built in New York up to the turn of the century and the early 1800's; but the record is indefinite, and the reported dates of construction are conflicting. Historians tell us that she was "a tremendous ship" and "made her first voyage to London in 1801." Capt. Arthur H. Clark says that the *Manhattan* of 600 tons, launched from Samuel Ackerly's yard at the foot of Pelham Street, was built for the China and East India trade. Clark continues: "She was regarded as a monster of the deep, and when she sailed upon her first voyage in 1796, it took nearly all the deep water seamen in the port to man her." Captain Clark is also authority for the statement that the sloop *Enterprise* of 80 tons, built in Albany and sent from New York to China in 1785 under command of Capt. Stewart Dean, was "the first vessel to make the direct voyage from the United States to Canton. She returned during the following year with her crew of seven men and two boys all in excellent condition. When she warped alongside the wharf at New York, Captain Dean and his crew were in full uniform, and the scene, which was witnessed by an admiring throng, was enlivened by 'martial music and the boatswain's whistle.'"

Among the vessels launched from New York yards around the turn of the century were the ships *Eugene, Severn, Manhattan, Sampson, Echo, Hercules, Resource, York,* and *Oliver Ellsworth.* The latter vessel was built by Vail & Vincent and, under the command of Captain Bennett, was reported to have made a passage from New York to Liverpool in 14 days "notwithstanding that she carried away her foretopmast, which was replaced at sea."

Thomas Cheeseman was one of the first shipbuilders in New York, and before the end of the eighteenth century, he was succeeded in business by his son Forman (born in 1763). The latter started the construction of the 44-gun frigate *President,* on which work was automatically stopped when peace was made with Algiers in 1795. Three years later, impending trouble with France caused Congress to make appropriations to complete the work, well advanced, on the frigate. She was launched at Corlear's Hook April 1, 1800, after being nearly six years on the stocks. The *President* was said to be "by far the largest vessel built in or around New York up to that time." Cheeseman constructed the *Braganza I* at the turn of the century for A. Gracie & Sons, New York, and, it is said, built the *Draper* of 300 tons and the big *Ontario* of 500 tons. However, one old record credits the *Draper* to the Ackerly yard.

The East River water front at the close of the Revolution commenced at Cherry Street, and the East River naturally became the city's shipbuilding center. The building yards were located along the river, beginning with Ackerly's near where Brooklyn Bridge now stands and stretching along northward to a point opposite Wallabout Bay. There were a few yards in Brooklyn, although details are not available. As early as 1799, a fast ship, the *Canton* of 518 tons (length 116 ft., beam 32 ft.), was registered as having been built in Brooklyn for Thomas Willing, of Philadelphia, and Stiles's HISTORY OF BROOKLYN states that she was built at Wallabout Bay by John Jackson, the builder of the frigate *John Adams.* Another *Canton* of 409 tons (length 106 ft., beam 30 ft.) was built in New York in 1808 for the Bayards, who

later became interested in a line of transatlantic (New York-Havre, France) sailing packets, and Christian Bergh's name is connected with the building of this ship.

The turn of the century found several master builders, in addition to those before mentioned, engaged in important ship construction work. Eckford & Beebe's yard and that of Christian Bergh, at Corlear's Hook, were laying down vessels for John J. Astor in the early nineteenth century. For a time, Forman Cheeseman was in partnership with Charles Brownne (or Brown), occupying a yard near Samuel Ackerly; this partnership appears to have been dissolved about 1805-1806. Early in the century, Adam and Noah Brown were building sailing vessels of all descriptions. The *Trident* of 461 tons was built by them in 1805, and the *Triton* of about the same size was built the same year by Charles Brownne—each for the China and India trade. John Floyd began shipbuilding in 1807 and launched the *Carmelite,* a ship of 400 tons, during that year, but he was soon appointed naval constructor at the Brooklyn Navy Yard.

Forman Cheeseman built several fast sailers of importance during the first quarter of the nineteenth century, among which were the merchantman (and privateer) *Hibernia* of 327 tons (length 97 ft., beam 28 ft.), launched in 1811 for Samuel and William Craig, New York, and the big *Braganza II* of 470 tons (length 111½ ft., beam 31 ft., depth 15½ ft.), constructed in 1813 for William and Archibald Gracie and Charles King, New York; after the War of 1812, the *Braganza* was operated in sailing packet service. Forman Cheeseman also built the following transatlantic and coastal packets operating on a regular schedule out of New York:

Name	Year Built	Line	Tonnage	Length	Beam	Depth
				Feet	*Feet*	*Feet*
AMITY	1816	Black Ball, Liverpool	382	106.5	28.5	14.3
ROBERT EDWARDS	1817	Black X, London	355	103	28	14
EMPRESS	1820	Charleston	265	91	25.5	13.1

The AMITY is credited with a westbound transatlantic crossing of 22 days, which was fast sailing; the EMPRESS, during nine years of service between New York and Charleston, averaged 7 days on the outward run, with a fast passage of 4 days.

A historian has written in regard to New York shipbuilding:

> The shipbuilders of New York achieved a great reputation for the construction of large vessels after the War of 1812. Shipbuilding had become by 1830 a great industry, employing thousands of men and engaging the keenest businessmen of the city. Coming along the East River one saw many fine vessels on the stocks, and great piles of lumber—white oak, hackmatack, and locust for ribs, yellow pine for keelsons and ceiling timbers, white pine for floors, live oak for "aprons."

Prior to the California Gold Rush, the important shipbuilding firms in New York—which was then the shipbuilding metropolis of the United States—were (1) Isaac Webb & Company, later, Webb & Allen (this Webb being William H. Webb, the son of Isaac Webb), and from 1843 to 1872 William H. Webb operated alone. (2) Smith & Dimon. (3) Brown & Bell. At that time the whole water front of New York, along the East River from Corlear's Hook to about East Tenth Street, was a chain of busy wood shipyards, and the leader of all was Isaac Webb, who later became known as "the Father of American Shipbuilders." Of the early New York shipbuilders, those worthy of special distinction were Christian Bergh and Henry Eckford, and those of the front rank who, around the forties, followed in their footsteps to fame were William H. Webb and Stephen Smith. During the mid-century boom years, the yards of Jacob A. Westervelt and Roosevelt & Joyce rose to positions of importance.

Christian Bergh and His Apprentice, Jacob A. Westervelt, Two of New York's Most Important Early Shipbuilders

Christian Bergh was one of New York's two most important early shipbuilders. He was born in Wettenburgh, Rhinebeck precinct, New York, on April 30, 1763. He both designed and built a large number of fast schooners and brigs and several privateers. The first ship of importance for which he is known to have been entirely responsible seems to have been the *North America* of 400 tons, built in 1804 for the Atlantic trade. In 1809, Christian Bergh constructed in New York the fast brig *Gipsey* of 207 tons for George Main and Ebenezer Stevens, of New York. This "smart trader" was 89 ft. long, 24 ft. beam, and 11 ft. deep. She was a sharp-lined vessel for her day and, it is said, was dismasted and later foundered in a heavy gale off the Cape of Good Hope when bound for Batavia. There is a record of Bergh's building the schooner *Antelope* of 267 tons (length 102.7 ft., beam 26 ft., depth 11.2 ft.) in 1812 for William Bayard, Herman Le Roy, and Isaac Iselin, of New York.

Bergh is also credited with designing and building in 1812-1813 the notorious *Prince de Neufchatel,* which made history as a privateer. She was owned by Madame Flory Charretton, of New York, whose son-in-law, J. Ordronaux, was captain of the French privateer *Marengo.* After the outbreak of the war with England, a letter of marque was issued to Ordronaux for the "*Neufchatel,*" and she sailed to France, where she was fitted out as a privateer with eighteen 12-pounder carriage guns on the broadsides in ports and two long 18-pounders as chase guns. The vessel, described as a schooner, had two masts with four yards on the foremast and two on the main-topmast. She was 110 ft. 8 in. long on deck, 25 ft. 8 in. beam, and of 320 tons burthen. In March 1814, she went to sea and took nine prizes in the English Channel; in June she made six captures of British ships in six days. She had a bloody fight, in a calm, with the British *Endymion,* inflicted 93 casualties on the enemy, and limped back to Boston (with a prize) for reconditioning. After making seventeen escapes from superior British forces, she was finally captured on December 28, 1814, by three British frigates, the *Leander, Newcastle,* and *Acasta* (the first two were big and very fast newly built vessels), when—carrying too much sail—she was partially dismasted in a heavy sea and a stiff blow and was logging 13½ knots and escaping from her fast and heavily armed pursuers. (A more complete record of the privateer *Prince de Neufchatel* is given in Volume II, pages 876-880 inclusive, of this work.)

During the War of 1812, Christian Bergh was in the service of the U.S. Government on the Great Lakes and built vessels used on Lake Erie. At the close of the war, he returned to New York and built a large fleet of vessels—primarily deep-sea general traders and packets (full-rigged ships). He also built a Greek frigate and the famous 6-gun schooner *Antarctic* for Captain Morrill. Of a fleet of 193 recorded regular transatlantic packets operating out of New York during the period of 1818-1858 inclusive, Bergh built 34 between the years 1819 and 1839. These packets measured from 260 tons (*Don Quixote,* built in 1823) to 868 tons (*Stephen Whitney,* built in 1839) and averaged 515 tons. One of the smallest, the *Bayard* of 339 tons, built in 1819, made a westbound transatlantic crossing in the amazingly fast time of 17 days, port to port. Other very fast "uphill" passages across the Atlantic of Bergh-built sailing packets were runs of 19 days by the *President* (468 tons) and the *Wellington* (726 tons) and of 20 days by the *Henri IV* (427 tons) and the *Westminster* (631 tons).

Christian Bergh also built seven packets aggregating 3,396 tons during the years 1823-1834, which sailed out of the port of New York in regular coastal lines; six of these ships ran in the New York-New Orleans service, and one operated for nine years in the Savannah Line.

Robert G. Albion, in his SQUARE-RIGGERS ON SCHEDULE, says:

Christian Bergh, an impressive man six feet four in height with an eagle eye and keen judgment, had been born up the Hudson at Rhinebeck, where his grandfather of the same name settled shortly after 1700. The family migrated to Nova Scotia in the Tory exodus at the close of the Revolution, when Christian was twenty, and there he learned shipbuilding. . . . Later [after returning to New York], he fashioned some swift privateers and during the War of 1812 built some warships on Lake Ontario. With the coming of peace, his yard had become one of the "big three" in New York. He built most of the Second Line Havre packets, and five for the Old Line. By 1830, he acquired most of the London Black X Line orders as well. These were seldom as large as the Liverpool ships but their numbers ran up an impressive total. Several years before his retirement in 1837, Bergh took two young men into partnership under the firm name of C. Bergh & Co. One of these, Robert Carnley, retired at the same time with Bergh and, like him, was a part owner in numerous packets. The other, Jacob A. Westervelt, born in Tenafly, New Jersey, of Dutch colonial stock, carried on the business for many years, principally in partnership with William Mackey.

Christian Bergh, who retired from shipbuilding and an active business life when seventy-four years of age, lived six years more and died in 1843 at the ripe age of eighty.

The following table gives a list of fifty-eight New York transatlantic packets, built by Bergh and the Westervelts during the period 1819-1854 inclusive, and seven New York coastal packets, built by Christian Bergh during the years 1823-1834 inclusive. The fifty-eight transatlantic packets totaled 44,372 tons register, an average of 765 tons per ship (minimum, *Don Quixote* of 260 tons, built in 1823; maximum, *Amazon* of 1,771 tons, built in 1854). The last three ocean packets, built in 1853 and 1854, averaged 1,757 tons register per ship. The seven coastal packets totaled 3,396 tons register, an average of 485 tons per ship (minimum, *Edwin* of 195 tons, built in 1823; maximum, *Kentucky II* of 629 tons, built in 1834). The last three coastal packets, built in 1833 and 1834, averaged 618 tons register per ship.

Name	Year Built	Tonnage	Line
BAYARD	1819	339	Havre
DON QUIXOTE	1823	260	Havre
PARIS	1823	338	Havre
EDWIN (brig)	1823	195	New Orleans
EDWARD QUESNEL	1824	388	Havre
EDWARD BONAFFE	1824	325	Havre
SAMUEL ROBERTSON	1825	421	Black X, London
HENRI IV	1826	427	Havre
SULLY	1827	456	Havre
FRANCE	1827	411	Havre
MACON	1827	359	Savannah
FRANCOIS I	1828	496	Havre
CHARLEMAGNE	1828	442	Havre
CHARLES CARROLL	1828	411	Havre
DE RHAM	1829	492	Havre
ERIE	1829	451	Havre
SOVEREIGN	1830	462	Black X, London
ALABAMA	1830	474	New Orleans
SAMSON	1831	484	Red Swallowtail, London
RHONE	1831	471	Havre
PRESIDENT	1831	468	Black X, London
ALBANY	1831	468	Havre
NASHVILLE	1831	513	New Orleans
POLAND	1832	546	Havre
PHILADELPHIA	1832	542	Black X, London
ORPHEUS	1833	573	Black Ball, Liverpool
MONTREAL	1833	542	Black X, London
UTICA	1833	525	Havre
ARKANSAS	1833	627	New Orleans
ORLEANS	1833	599	New Orleans
COLUMBUS	1834	663	Black Ball, Liverpool
ST. ANDREW	1834	651	Red Star, Liverpool
KENTUCKY II	1834	629	New Orleans

(Continued on next page)

Name	Year Built	Tonnage	Line
GLADIATOR	1835	649	Red Swallowtail, London
TORONTO	1835	631	Black X, London
WESTMINSTER	1835	631	Black X, London
MEDIATOR	1836	660	Black X, London
QUEBEC	1836	653	Red Swallowtail, London
WELLINGTON	1837	726	Red Swallowtail, London
BALTIMORE	1837	658	Havre
STEPHEN WHITNEY	1839	868	Red Star, Liverpool
HOTTINGUER	1841	993	Blue Swallowtail, Liverpool
HENRIK HUDSON	1841	823	Black X, London
ST. NICHOLAS	1841	797	Havre
ONEIDA	1841	791	Havre
ASHBURTON	1842	1,015	Blue Swallowtail, Liverpool
PRINCE ALBERT	1843	884	Red Swallowtail, London
VICTORIA	1843	860	Black X, London
NORTHUMBERLAND	1844	817	Black X, London
WATERLOO	1845	892	Red Star, Liverpool
MARGARET EVANS	1846	899	Black X, London
AMERICAN EAGLE	1846	899	Black X, London
WEST POINT	1847	1,046	Red Star, Liverpool
DEVONSHIRE	1848	1,149	Black X, London
ST. DENIS	1848	959	Havre
CONSTELLATION	1849	1,560	Red Star, Liverpool
SOUTHAMPTON	1849	1,299	Black X, London
OCEAN QUEEN	1850	1,182	Black X, London
UNDERWRITER	1850	1,168	Red Star, Liverpool
WILLIAM TELL	1850	1,153	Havre
RHINE	1850	1,037	Red Swallowtail, London
MERCURY	1851	1,350	Havre
CALHOUN	1853	1,749	Dramatic, Liverpool
AMAZON	1854	1,771	Black X, London
PALESTINE	1854	1,751	Black X, London

The following transatlantic sailing packets built at the Bergh-Westervelt yard were also in coastwise packet service: TORONTO (631 tons) and WESTMINSTER (631 tons), both built in 1835; the MEDIATOR (660 tons) and QUEBEC (653 tons), built in 1836; and the WELLINGTON (726 tons), built in 1837.

Jacob A. Westervelt, an apprentice of Christian Bergh, was one of the leading shipbuilders during New York's great shipbuilding era. Westervelt was born in Hackensack, N.J., in 1800 and was the son of a shipbuilder. In addition to learning much of a practical nature from his father and "the science and art" of shipbuilding from Christian Bergh, he gained experience and wisdom in respect to the operation of ships at sea and the requirements and conditions of ocean trade as a sailor "before the mast" (before he served an apprenticeship with Bergh). Later, as a member of Bergh's firm, he built many packets for that company prior to 1836. For some twelve years, Jacob A. Westervelt operated a shipyard in partnership with William Mackey (no relation of Donald McKay of Newburyport and East Boston fame) and prior to that time had built a few vessels in partnership with Roberts. In 1851 he operated alone as well as in partnership with Mackey and the following two years built as Jacob A. Westervelt and Westervelt & Sons. In 1853, Westervelt, the master shipbuilder, passed away, and his business was split up among several of his sons, of whom Daniel, Aaron, and David built important ships. Jacob A. Westervelt was a good businessman and executive as well as a capable and successful shipbuilder. He accumulated wealth, traveled in Europe "to broaden himself," and became mayor of New York. The front door of his impressive home on East Broadway was ornamented with "a beautiful carved stone cap representing the stern of a packet ship."

During the years 1836-1854 inclusive, Westervelt (including associates and sons) built twenty-six transatlantic packets for regular lines—operating on schedule—engaged in the New

York-Liverpool, London or Havre (France) runs, which aggregated 28,162 tons; in the three booming clipper ship construction years of 1851-1853, the Westervelts built twelve clippers of 14,552 tons. Of the New York transatlantic packets, eleven were built for the Black X (London) Line, four for the Red Star Line, and six for the Havre Line. The most famous was the large record-breaker *Amazon* (1,771 tons), built in 1854, a vessel that for fourteen years made transatlantic westbound passages averaging only 28 days, port to port—an all-time record for any sailing vessel. Other packets built for the same Black X Line that rank among the five having the best service record for average speed were the *Devonshire* (1,149 tons), built in 1848, and the *Palestine* (1,751 tons), built in 1854. The *West Point* (1,046 tons), built in 1847 for the Red Star (Liverpool) Line, and the *Waterloo* (892 tons), built in 1845 for the same line, held fine records for fast average time of passages. The largest and last clipper built by the Westervelts was the *Sweepstakes* (1,735 tons), built in 1853. Other large clippers constructed were the *Kathay* (1,438 tons), *Hornet* (1,427 tons), the famous *N. B. Palmer* (1,400 tons), *Golden State* (1,363 tons), *Mercury* (1,351 tons), *Golden Gate* (1,341 tons), etc. It is said that Jacob Westervelt built, all told, 247 vessels; this number undoubtedly covers all the ships that he designed, built, worked on, or in the construction of which he was financially interested. He received from the Queen of Spain the order of Isabel la Catolica in recognition of the excellent models that he had made for Spanish frigates.

Henry Eckford — New York's First Scientific Shipbuilder

The other early New York shipbuilder of prime importance who ranks with Christian Bergh was Henry Eckford. He was born at Kilwinning near Irvine (Clyde District), Scotland, on March 12, 1775, and worked as an apprentice boy in a British shipyard for about two years. In 1791, when sixteen years old, he went to Quebec, Canada, to work for his uncle, John Black, a naval constructor of note. In 1796, at the age of twenty-one, Eckford moved to New York and worked as a ship carpenter and "constructor of vessels." He was associated with Christian Bergh (who was Henry Eckford's senior by twelve years) for a time and started his own shipyard in New York in 1798, when he was twenty-three years of age. Eckford introduced in New York the custom of building large ships from models with the lines taken off as horizontal water lines, and from these the cross sections and frames were faired up and wood batten molds made. In 1802 he moved his yard to the foot of Clinton Street, and here in 1805, in partnership with Beebe, he launched John J. Astor's famous ship *Beaver* of 447 tons. This vessel, which was 111 ft. long and 29½ ft. beam, was a great cargo carrier and a good sailer, being credited with a run from Canton to Bermuda in 75 days. It is reported that the *Beaver* was broken up after forty years of continuous service and "her live oak frame used to furnish timber for the building of another vessel." Henry Eckford, in partnership with Beebe (1803-1809) or in business for himself, built several outstanding vessels in New York prior to the War of 1812 with Britain. Among them were the brig *Fox* of 225 tons (length 90 ft., beam 23½ ft., depth 12 ft.) in 1809 for John J. Astor, New York, and the fast brig *Sphynx* of 286 tons (length 108.7 ft., beam 26.7 ft., depth 11 ft.) in 1812 for John Whetten and Robert Dickey, New York.

Henry Eckford did work personally for the United States Government from 1807 on. Eckford & Beebe built gunboats for the U.S. Navy during the period 1806-1809, and Eckford and Bergh built the brig *Oneida* in 1809. Henry Eckford gained fame by building warships for the U.S. Government during the War of 1812, and it would seem that his accomplishment in rebuilding Commodore Perry's fleet on Lake Erie was particularly noteworthy. In 1816,

Eckford designed the battleship *Ohio* (74 guns; length 193 ft., beam 53 ft., depth of hold 21½ ft.) for the U.S. Navy. In 1817, while continuing with his private work, he was appointed Chief Constructor of the Brooklyn Navy Yard. After the launching of the *Ohio* on May 31, 1820, Eckford, disgusted with government red tape, official friction, and politics, resigned his commission as Naval Constructor, U.S.N. After disassociating himself with the U.S. Navy Department, Eckford designed and built (or supervised the construction of) four 64-gun frigates of a reported "2,000 tons each" for the governments of Brazil, Colombia, Peru, and Chile. Two of these warships for foreign owners were built at New York, one at Philadelphia, and one at Baltimore, and it is said that all were built in eighteen months—a seemingly incredible time (when it is borne in mind that the 74-gun *Ohio,* built at Brooklyn for the United States Government, was not launched until three years after the keel was laid).

Henry Eckford himself built but few merchantmen; i.e., general traders or packets. In 1819 he designed and built the *Robert Fulton* for David Dunham & Company, New York, and the Ocean Steam Ship Company, which was the first large ocean-going steamer and measured 702 tons (length 159 ft., beam 33.7 ft., depth 14.3 ft.). This steamer was later converted into a sloop of war and sold to Brazil. Among other vessels designed and built by Henry Eckford personally was the sailing packet *Hercules* of 497 tons (length 124 ft., beam 30 ft.), launched in 1822 and owned by David Leavitt and Henry Eckford, of New York, as partners. The last merchant vessel of this type that he built was the coastal packet *Crawford* of 289 tons (length 101 ft., beam 25.2 ft., depth 12.6 ft.), launched in 1824 for the Holmes (New York-New Orleans) Line. The fastest passage southbound of the *Crawford* in this service was a run of 15 days, giving an average speed from dock to dock (including beating up the Mississippi River) of about 5 knots per hour.

In 1830, Eckford designed and decided to build "on spec" a 26-gun corvette of about "a thousand tons" for some foreign power, and he had the Sultan of Turkey particularly in mind as the possible customer. On June 5, 1831, Eckford left New York in his new fast corvette, which he had named *United States,* bound for Constantinople, and he sold this fine vessel to the sultan for $150,000. Eckford and his work were so highly esteemed by the Turkish ruler that inducements were made to the American naval constructor to establish an American type of yard in Turkey and build war and other types of government vessels therein. Eckford built a dispatch boat, which greatly pleased the Turks because of her high speed and amazing handiness, and a large heavily armed frigate and was laying down a powerful ship of the line when he died suddenly on November 12, 1832, when fifty-seven years eight months old. The cause of his death is a mystery. Cholera was publicly announced to be responsible, but persons close to him maintained that he had been poisoned. It is possible that Eckford was too popular with the sultan and too competent and successful to please a great many people in Turkey, "so he was made away with." His body, preserved in a cask of wine, was returned to New York, the remains being brought back to the United States on the bark *Henry Eckford.* The Sultan of Turkey was much distressed at the death of his "brilliant naval constructor" and is credited with saying, "America must be a great nation if it can afford to lose such a man as Henry Eckford." During Eckford's absence from the United States, his shipyard was managed for years by Isaac Webb, a protege of Henry Eckford, who, like Bell of Brown & Bell and Stephen Smith of Smith & Dimon, had come to New York from Stamford, Conn.

Henry Eckford was New York's first scientific shipbuilder and a thoroughly trained technical as well as practical man. Moreover, he was not only an able designer and builder but also an excellent teacher as is evidenced by the number and fame of his apprentices, of whom the most outstanding were Isaac Webb (the father of William H. Webb) and Stephen Smith.

Isaac Webb—Protege and Successor of Henry Eckford and Teacher of America's Greatest Wood Shipbuilders of the 1850's

Isaac Webb, the son of Wilsey Webb, a master shipwright, was born in Stamford, Conn., in 1794. After serving his apprenticeship in the shipyard and designing office of Henry Eckford and gaining the necessary practical experience, Webb succeeded to the management of Henry Eckford's shipyard—one of the "big three" New York yards of the period. He later acquired it for himself, and until his death in 1840, when only forty-six years of age, he operated as a ship designer and builder under the firm names of Isaac Webb & Company and Webb & Allen, being in business partnership during the last years of his life with John Allen. When he opened his first shipyard, his partners owning a minority interest in Isaac Webb & Company were two competent shipwrights. Isaac Webb is credited with constructing in 1822 the *Superior* of 576 tons for Charles Hall, New York. Built for the China trade, she was a large and outstanding ship. In 1824 he launched the *Silas Richards* of 454 tons, which operated as a transatlantic packet in the Blue Swallowtail (New York-Liverpool) Line for ten years (1824-1834) and then, as a general trader, made history and speed records in the China trade before entering the whaling service. The Webb ships made a great name for themselves in the twenties, thirties, and forties in the China trade, for it was the *Natchez* (523 tons), built in 1831 by Webb & Allen as a New Orleans packet and cotton carrier, that in 1845, when fourteen years old, lowered the record of 91 days from Canton to New York (made in 1837 by another Webb vessel, the *Silas Richards*) by a phenomenally fast passage of only 78 days.

Isaac Webb built a number of revenue cutters and auxiliary vessels for the United States Government and a large-sized fleet of general traders, packets, and cotton ships. He was a sound ship designer and builder, and he passed on his knowledge of the art of shipbuilding to many apprentices, of whom the most famous were his son William Henry Webb and Donald McKay—a Canadian-born New Yorker. Of the two, young Webb was by far the more teachable and, as a result, became well grounded in the science of naval architecture. He absorbed technical knowledge that was never acquired by Donald McKay, who took naturally to practical shipbuilding, but throughout his career—even though gifted with unusual talents—remained merely a practical builder. Though expressing strong convictions in regard to model, sail plan, and general design, McKay was never able to make the calculations necessary to qualify as a naval architect. Robert G. Albion says that Isaac Webb's chief distinction historically lies in his training of the two men who were the foremost American shipbuilders in the two decades before the Civil War. One of these, Donald McKay, later moved to Massachusetts and won high honors as a builder of clippers and of a few packets and general traders. The other was Webb's son William H., who remained in New York at his father's yard and achieved the "largest total tonnage of any American shipbuilder before 1860, with vessels as distinguished for their quality as for the quantity of them." Before Isaac Webb's retirement, shortly before his death in 1840, he had succeeded in securing the transatlantic Black Ball Line business, which previously had been enjoyed by Brown & Bell.

The Webb shipyard extended from the foot of Fifth to Seventh Street, East River, New York. The Webbs (i.e., Isaac Webb, Webb & Allen, and William H. Webb) launched from this shipyard thirty-nine transatlantic and five coastal sailing packets that operated in regular lines, on a schedule, out of the port of New York. The thirty-nine transatlantic packets totaled 39,407 tons register, an average of 1,010 tons per ship (minimum, *Silas Richards* of 454 tons, built in 1824; maximum, *Aurora* of 1,639 tons, built in 1854). The last five ocean packets, built in 1853-1855, averaged 1,468 tons register per ship. The five coastal packets totaled 2,742 tons register, an average of 548 tons per ship (minimum, *Louisiana* of 344 tons, built in 1825; maximum, *Liberty* of 689 tons, built in 1842). The last two coastal packets, built in 1842 and 1845, averaged 666 tons register per ship. The following is a list of the forty-four

regular New York sailing packets—transatlantic and coastal—built by the Webbs, 1824-1855. (Note: The author has included the *Ontario II* of 1,501 tons in this list, but there is evidence that this ship was built in Newcastle, Maine. She is not included in somewhat later compilations, which give thirty-eight Webb-built transatlantic packets instead of thirty-nine.)

Name	Year Built	Tonnage	Line
SILAS RICHARDS	1824	454	Blue Swallowtail, Liverpool
LOUISIANA	1825	344	New Orleans
ONTARIO I	1830	489	Red Swallowtail, London
NATCHEZ	1831	523	New Orleans
SARATOGA	1832	542	New Orleans
ST. JAMES	1835	641	Red Swallowtail, London
PENNSYLVANIA	1836	808	Blue Swallowtail, Liverpool
BURGUNDY	1836	762	Havre
OXFORD	1836	752	Black Ball, Liverpool
CAMBRIDGE	1837	798	Black Ball, Liverpool
LOUIS PHILIPPE	1837	794	Havre
VILLE DE LYON	1837	791	Havre
DUCHESSE D'ORLEANS	1838	798	Havre
IOWA	1839	874	Havre
NEW YORK II	1839	862	Black Ball, Liverpool
ARGO	1841	967	Havre
LIBERTY	1842	689	New Orleans
MONTEZUMA	1843	924	Black Ball, Liverpool
YORKSHIRE	1843	996	Black Ball, Liverpool
ZURICH	1844	817	Havre
FIDELIA	1845	895	Black Ball, Liverpool
HAVRE II	1845	870	Havre
SILAS HOLMES	1845	644	New Orleans
COLUMBIA II	1846	1,050	Black Ball, Liverpool
SIR ROBERT PEEL	1846	940	Red Swallowtail, London
ADMIRAL	1846	929	Havre
BAVARIA	1846	908	Havre
SPLENDID	1846	642	Havre
ISAAC WRIGHT	1847	1,161	Black Ball, Liverpool
YORKTOWN	1847	1,150	Red Swallowtail, London
NEW YORK	1847	991	Havre
LONDON	1848	1,145	Red Swallowtail, London
ALBERT GALLATIN	1849	1,435	Blue Swallowtail, Liverpool
MANHATTAN	1849	1,299	Black Ball, Liverpool
GALLIA	1849	1,190	Havre
ISAAC WEBB	1850	1,359	Black Ball, Liverpool
SAMUEL M. FOX	1850	1,062	Havre
GREAT WESTERN	1851	1,443	Black Ball, Liverpool
ISAAC BELL	1851	1,072	Havre
ONTARIO II (See note preceding table.)	1853	1,501	Blue Swallowtail, Liverpool
AURORA	1854	1,639	Blue Swallowtail, Liverpool
JAMES FOSTER, JR.	1854	1,410	Black Ball, Liverpool
HARVEST QUEEN	1854	1,383	Black Ball, Liverpool
NEPTUNE	1855	1,406	Black Ball, Liverpool

Capt. Arthur H. Clark (the commander of several American ships, both sail and steam, during the period 1863-1877 and an author of note) has said that Christian Bergh (1763-1843), Henry Eckford (1775-1832), and Isaac Webb (1794-1840) were "the founders of modern ship-building in the United States." Also, "To the memories of these men, the highest praise is due for their integrity, perseverance, and mechanical skill."

The name of Isaac Webb is worthy of an honored place in the shipbuilding annals of the United States. He has been called "the Father of American Shipbuilders," and this with good reason, for he taught the art of shipbuilding to America's two greatest wood shipbuilders of the forties, fifties, and sixties. However, the designation of "Father of American Shipbuilders," it would seem, could more fittingly be applied to Henry Eckford, New York pioneer, scientific naval architect, and practical shipbuilder, who was the teacher not only of Isaac Webb but also of the famous Stephen Smith (generally credited with building the first real clipper ship) and many other important and successful shipbuilders. Isaac Webb was, however, the "Father" or teacher of America's greatest wood shipbuilders during the prominent and active period of the mid-nineteenth century.

Stephen Smith and John Dimon — Smith & Dimon — Famous Builders of Packets and the Earliest Real Clipper Ships

Stephen Smith, like Isaac Webb, was born in Stamford, Conn. After serving an apprenticeship with Henry Eckford and obtaining desirable general experience, Smith founded with John Dimon the firm of Smith & Dimon, New York shipbuilders, who acquired a yard at the foot of East Fourth Street and became famous all over the world. In this partnership, Smith had complete charge of all the designing and of new construction, and Dimon handled the repairs and reconditioning—an important part of the total work performed by a shipbuilding firm in the days of hard-driven wood sail. Dimon used to say that he attended to the repairs, which were "the most profitable end of the business." On one occasion, he remarked, "Smith builds the ships, and I make the money." Captain Clark says that Stephen Smith was one of the most important of the second generation of great New York modern shipbuilders; that, in partnership with John Dimon, he had a good yard at the foot of Fourth Street, East River, and prior to 1843 built among other merchant vessels the packet ships *Roscoe* and *Independence,* the ship *Mary Howland,* and the North River steamboats *Rochester, James Kent,* and *Oregon.*

Stephen Smith designed and built the four-deck Greek frigate *Liberator* of 1,765 tons (believed to have been intended originally for South American revolutionists), a number of Hudson River steamboats, a large fleet of fine packet ships and general traders, and the earliest real clippers that "blazed a trail" and made history. In the year 1822, the firm, then known as Blossom, Smith & Dimon, built three transatlantic packets: *Florida* of 522 tons (length 123 ft., beam 30.8 ft., depth 15.4 ft.), *Corinthian* of 401 tons (length 112.5 ft., beam 28.3 ft., depth 14 ft.), and *Howard* of 336 tons (length 107 ft., beam 26.5 ft., depth 13.3 ft.). Smith and Dimon were to some degree pioneers in the building of sizable ships, combining capacity, seagoing qualities, and good speed. It is said that when they launched the *Mary Howland* of 500 tons, "her unusual size attracted great crowds to her launching." The Smith & Dimon shipyard built the following transatlantic and coastal sailing packets, which operated regularly on schedule out of the port of New York:

Name	Year Built	Tonnage	Line	Name	Year Built	Tonnage	Line
FLORIDA	1822	522	Black Ball, Liverpool	VIRGINIAN	1832	616	Red Star, Liverpool
CORINTHIAN	1822	401	Blue Swallowtail, Liverpool	UNITED STATES	1833	650	Red Star, Liverpool
HOWARD*	1822	336	Havre	INDEPENDENCE	1834	732	Blue Swallowtail, Liverpool
HAVRE I	1828	480	Havre	ENGLAND	1834	729	Red Star, Liverpool
SHEFFIELD	1831	578	Red Star, Liverpool	OCMULGEE	1835	460	Savannah (later New Orleans)
CINCINNATI	1831	457	New Orleans	GASTON	1838	456	Savannah (later New Orleans)
ROSCOE	1832	622	Blue Swallowtail, Liverpool	MEMPHIS	1839	798	New Orleans

*The HOWARD (336 tons) also saw service as a sailing packet in the coastwise service.

The tonnage of the ten transatlantic sailing packets aggregated 5,666 tons, an average of 567 tons per ship. The tonnage of the four coastal packets was 2,171 tons, an average of 543 tons per ship. The largest ocean packets built by Smith & Dimon were the *Independence* of 732 tons and the *England* of 729 tons, constructed in 1834 for rival New York-Liverpool lines. These vessels were probably equally fast sailers, but the *Independence* captured the

imagination of the public, and until William H. Webb built the *Yorkshire,* which took the sailing honors from her, she was generally considered to be the speed queen of the North Atlantic. For many years, the schedule of the *Independence* was arranged so that under the command of Capt. Ezra Nye she sailed from New York on March 6 and carried across the Atlantic to European countries a copy of the message to Congress of the President of the United States.

The *Virginian* (616 tons), although not as fast in average time of westbound passages as the *Independence* (732 tons), *England* (729 tons), and *United States* (650 tons), made the fastest run "uphill" across the Atlantic of any Smith & Dimon packet, having a 20-day passage to her credit as against 21-day runs for the *Independence* and *England* (also the *Sheffield* of 578 tons).

The Smith & Dimon coastal packets were generally considered fast sailers. The *Ocmulgee* (460 tons) made a passage to New Orleans in only 10 days, the *Memphis* in 12 days, and the *Gaston* in 13 days, and the four packets averaged for a period of four years each in the New Orleans service the good time of 17 days for the southbound passage from New York.

Of the six earliest ships built of the so-called "clipper" type, three were constructed by Smith & Dimon, and most authorities give this firm the credit for building the first two "out-and-out" clippers: the *Rainbow* of 752 tons (length 159 ft., beam 32 ft., depth 18.3 ft.) in 1845 and the *Sea Witch* of 908 tons (length 170.3 ft., beam 34 ft., depth 19 ft.) in 1846 —both for Howland & Aspinwall, New York. Smith & Dimon also built the clipper *Memnon* (1,068 tons; length 170 ft., beam 36 ft., depth 21 ft.) in 1847 for F. A. Delano, New York. A draftsman, John Willis Griffiths, in the employ of Smith & Dimon, is generally considered the designer of the *Rainbow.* It is said that Griffiths "proposed the model characteristics" of the *Rainbow* and "made the drawings of the first real clipper ship ever built in the world." It should be borne in mind, however, that there was in fact no real "first clipper"; for in gradual evolution aimed at the attaining of greater speed, with a sacrifice of carrying capacity, there was no abrupt or revolutionary change in model design—merely an increasing fineness of lines with a large sail spread. Again, although Griffiths was a duly qualified naval architect and a competent technical man and calculator, so likewise was the man for whom he worked and who had to approve and take the full responsibility for all the work done by his firm. Stephen Smith was an experienced and outstanding naval architect and builder, and if the honor of building the world's "first clipper" is given to Smith & Dimon, then the credit for the design cannot be given entirely to John W. Griffiths, for a large part should be bestowed on Stephen Smith. Griffiths, however, occupies an important place in the history of American shipbuilding. He was one of the first technical designers and calculators in the United States to use the printing press and did much to place naval architecture in this country on a sound and scientific basis. Griffiths worked not only as a draftsman for Smith & Dimon but also, to a degree, as a consulting naval architect. He wrote technical articles and books on shipbuilding, edited a marine journal for several years, conducted classes at night, and taught those who enrolled as his pupils how to make the necessary fundamental calculations in the design of a ship, such as computations for displacement, center of buoyancy, center of gravity, metacentric height, center of effort of the sail plan, etc. Griffiths was too narrow and prejudiced to be a great designer; nevertheless, he was active in the design of sail and steam vessels around the mid-century and fills an important niche in the historical record of American shipbuilding.

Many builders have made the claim of designing and constructing and many owners of ordering built, conceiving the idea, and of operating the world's first clipper. As a matter of fact, there was no real pioneer clipper—American or foreign built—just as there was no first fast sailer. Aberdeen in Scotland and the Chesapeake in the United States made claims for originating a clipper type of fast sailing craft, both schooner- and square-rigged, in the

twenties and thirties of the nineteenth century; but American privateers and illegitimate traders, copying French model lines, were making history in the realm of speed under sail in the early years of the republic and during the War of 1812. The *Rainbow* of 752 tons, built in 1845 by Smith & Dimon, of New York, was proclaimed "the first clipper" by owners, who capitalized the advertising associated with the claim of John W. Griffiths—a great publicist—and Smith & Dimon. Isaac McKim, owner, and Kennard & Williamson, shipbuilders at Fell's Point, Baltimore, claimed that their sharp-lined, heavily canvased ship *Ann McKim,* built by them in 1833 (or twelve years before the *Rainbow*) was the world's pioneer clipper. However, New York and Massachusetts builders and owners generally gave little consideration to the claims made for the *Ann McKim,* but presented claims for successful deep-sea sailers whose moderately sharp models and big sail spread had permitted them to win high honors for speed before the *Rainbow, Sea Witch,* and *Memnon* were built by Smith & Dimon.

The Contribution of the Browns and Bells in Building Vessels of Unusually High Quality

It has been said that the pioneer deep-sea square-rigger of what became known as the "clipper" type was possibly one of the following: W. H. Webb's *Helena* (598 tons), built in 1841 for N. L. & G. Griswold, New York, and said to be "the first American tea clipper"; the *Cohota* (691 tons), built by Webb for the same owners in 1843; the *Montauk* (505 tons), built for William S. Wetmore, New York, or the *Panama* (612 tons), built for the Griswolds, New York, and both launched by Webb in 1844; or the *Houqua* (583 tons), built for A. A. Low & Bro. in 1844 by Brown & Bell, New York. This latter noted firm consisted of David Brown and Jacob Bell and succeeded the Brown brothers; it had a yard at the foot of Stanton Street (a part of which had formerly been the Henry Eckford yard) and gained by sheer merit an enviable world-wide reputation for the building of vessels of unusually high quality. David Brown was the nephew and adopted son of Noah Brown (of Adam & Noah Brown). He designed and built many general traders and early packets, and one of his earliest creations was in service for seventy-five years. David Brown's name is borne by a college dormitory at Princeton, where he died in 1850. Capt. Arthur H. Clark, in a historical discussion on American shipbuilders, mentions a great fleet of sailing packets built by David Brown and Jacob Bell and adds: "Besides these, they built fifteen other ships, seven steamers, eight barques and brigs, thirty-nine steamboats, six ferry- and tow-boats, nineteen sloops and schooners, seven pilot boats, and four yachts."

The firm of A. & N. Brown, New York, among other fast sailers, built the *Trident* of 461 tons (length 111 ft., beam 30 ft. 9 in.) in 1805 for Isaac Bell and associates, New York, and the *Pacific I* of 384 tons (length 110 ft., beam 28 ft., depth 14 ft.) in 1807 for Isaac Wright and Francis Thompson, New York. (This ship later operated, 1818-1819, as a Black Ball Line transatlantic sailing packet in the New York-Liverpool run.) In 1812, A. & N. Brown built the 528-ton ship *Ontario* for Benjamin G. Minturn and John T. Champlin, of New York, and the fast schooner *Zebra* of 244 tons (length 104 ft. 4 in., beam 25 ft. 7 in., depth 10 ft. 2 in.) for William Dunlap and associates, New York. Following the conclusion of the war with Britain, several large ships were built in New York, but the big square-rigger *General Brown,* built by A. & N. Brown in 1815, was outstanding; this ship was 147 ft. long, 37 ft. beam, and of 899 tons register.

The following table gives a list of the sailing packets—both transatlantic and coastal—operated on regular lines as per published sailing schedules out of the port of New York and built by the Browns and the Bells (Brown & Bell, A. & N. Brown; also Brown & Porter, J. Bell, and W. H. Brown) during the years 1807-1850. The thirty-five transatlantic packets had an aggregate registered tonnage of 22,833 tons, an average of 652 tons per ship; the twelve coastal packets totaled 6,675 tons register, an average of 556 tons per ship. The largest Brown-built ocean packets were the last two built—the *Constitution* of 1,327 tons, launched in 1846, and the *Henry Clay* of 1,207 tons, built in 1845. Only five of the thirty-five transatlantic packets constructed had a registered tonnage over 1,000 tons; viz., the *Roscius* (1,030 tons), built in 1838, the *Queen of the West* (1,160 tons) and the *Liverpool* (1,077 tons), built in 1843, and the before-mentioned *Henry Clay* and *Constitution.* The smallest Brown-built ocean packets were the diminutive *Henry* of only 257 tons, built in 1822, and the *Stephania* of 315 tons, built in 1819—both for the Havre Line. The largest coastal packets were the big *St. Louis* of 938 tons (the largest of all coastal packets), built in 1850 and credited to J. Bell, and the *Maid of Orleans* of 934 tons, built in 1848 by Brown & Bell, both for the Holmes (New Orleans) Line. The smallest Brown-built coastal packet was the *Commodore Perry* of 262 tons, constructed in 1816, which operated in the New York-Charleston service (1822-1827). During the years 1816-1832, all the Brown-built coastal packets were for the Charleston service, and all that yard turned out after that time (1833-1850) were for the New Orleans Line except one Charleston packet, the *Fairfield* of 587 tons, built in 1846.

Name	Year Built	Tonnage	Line
PACIFIC I	1807	384	Black Ball, Liverpool
COMMODORE PERRY	1816	262	Charleston
JAMES MONROE	1817	424	Black Ball, Liverpool
STEPHANIA	1819	315	Havre
ORBIT	1821	384	Black Ball, Liverpool
SALUDA	1821	289	Charleston
NEW YORK I	1822	516	Black Ball, Liverpool
LEWIS	1822	412	Havre
JOHN WELLS	1822	366	Red Star, Liverpool
MONTANO	1822	365	Havre
HENRY	1822	257	Havre
CANADA	1823	525	Black Ball, Liverpool
WILLIAM BYRNES	1823	517	Red Star, Liverpool
CALHOUN	1823	285	Charleston
PACIFIC II	1824	586	Black Ball, Liverpool
LAFAYETTE	1824	341	Charleston
MANCHESTER	1825	561	Black Ball, Liverpool
BRITANNIA	1826	630	Black Ball, Liverpool
GEORGE CANNING	1827	551	Blue Swallowtail, Liverpool
JOHN JAY	1827	502	Red Star, Liverpool
CALEDONIA	1828	647	Black Ball, Liverpool
HIBERNIA	1830	551	Black Ball, Liverpool
NORTH AMERICA	1831	610	Black Ball, Liverpool
WILLIAM DRAYTON	1831	370	Charleston
SOUTH AMERICA	1832	605	Black Ball, Liverpool
EUROPE	1833	618	Black Ball, Liverpool
FRANCIS DEPAU	1833	595	Havre
MISSISSIPPI	1833	647	New Orleans
SHAKESPEARE	1835	747	Dramatic, Liverpool
EMERALD	1835	518	Havre
VICKSBURG	1835	479	New Orleans
GARRICK	1836	895	Dramatic, Liverpool
SHERIDAN	1836	895	Dramatic, Liverpool
SWITZERLAND	1836	567	Red Swallowtail, London
SIDDONS	1837	895	Dramatic, Liverpool
ROSCIUS	1838	1,030	Dramatic, Liverpool
PATRICK HENRY	1839	880	Blue Swallowtail, Liverpool
ROCHESTER	1839	714	Liverpool
QUEEN OF THE WEST	1843	1,160	Blue Swallowtail, Liverpool
LIVERPOOL	1843	1,077	Blue Swallowtail, Liverpool
SULTANA	1844	662	New Orleans
HENRY CLAY	1845	1,207	Blue Swallowtail, Liverpool

(Continued on next page)

Name	Year Built	Tonnage	Line	Name	Year Built	Tonnage	Line
CONSTITUTION	1846	1,327	Blue Swallowtail, Liverpool	MAID OF ORLEANS	1848	934	New Orleans
GALENA	1846	881	New Orleans	ST. LOUIS	1850	938	New Orleans
FAIRFIELD	1846	587	Charleston				

The transatlantic packets HENRY (257 tons) and SHAKESPEARE (747 tons) also saw service in the coastwise sailing packet trade.

Charles Porter was associated with the Browns around 1825 and, it is said, was a partner with Noah Brown in the building of the Black Ball Liverpool packet MANCHESTER of 561 tons in 1825. The records seem to show that during the same year Charles Porter built the sailing packet BIRMINGHAM of 571 tons (length 128.8 ft., beam 31.4 ft., depth 15.7 ft.) for the Red Star (New York-Liverpool) Line. Possibly the same model was used in the building of both the MANCHESTER and the BIRMINGHAM, and Brown may have been interested with Porter in the construction of the latter vessel.

About 1821, there was a greatly increased demand for larger ships. The principal builders at this time were Adam & Noah Brown, who in 1815 had built the huge ship *General Brown;* Sidney Wright; Blossom, Smith & Dimon; Brown & Bell; Isaac Webb & Company; Fickett & Crockett; and Henry Eckford. Between 1821 and 1825, Brown built several vessels in partnership with Jacob Bell and, in 1825, at least one vessel, the New York transatlantic packet *Manchester* (561 tons) of the Black Ball Line, in partnership with Porter. Brown & Bell operated exclusively as a partnership from 1825 until Brown's death in 1850, and among other vessels that this firm built were twenty-eight regular transatlantic sailing packets for the New York to Liverpool, London, or Havre service. Brown, personally, it is said, was directly interested in the designing and building of all the thirty-five ships as mentioned above, aggregating 22,833 tons, for this New York transatlantic established packet service. Among the fine, outstanding packets that were designed by Brown and built by Brown & Bell were the record-making *Canada* (525 tons), built in 1823, and the *Caledonia* (647 tons), built in 1828, which made a westbound crossing in only 17 days. The *South America* (605 tons), built in 1832, was—considering the time constructed and average speed—the fastest transatlantic packet over a period of ten or more years. Among the leaders for all-time average sailing performance were the *Garrick* (895 tons), built in 1836 for the Dramatic Line (New York-Liverpool), the *Patrick Henry* (880 tons), built in 1839 for the Blue Swallowtail Line (New York-Liverpool), the *Queen of the West* (1,160 tons), built in 1843 for the New York-Liverpool service, and the *Constitution* (1,327 tons), built in 1846 for the Blue Swallowtail Line (New York-Liverpool).

Of the many famous New York transatlantic sailing packets built by Brown & Bell, special mention should be made of the *Liverpool* (1,077 tons), designed by Brown and built by Brown & Bell in 1843, which plowed back and forth across the unfriendly North Atlantic Ocean for thirty-seven consecutive years and was withdrawn from the trade in 1880, only when the sailing packet service was definitely discontinued for all time. The little *Stephania* of 315 tons, built by Noah Brown in 1819, was a rugged and outstanding vessel; for, after forty-nine years of service as a packet and a whaler, she was sold to Australian owners. It is said that Brown's favorite ships of his creation were the *Roscius,* built in 1838, and the *Queen of the West* and *Liverpool,* built in 1843, seven years before his death.

Brown & Bell built many square-rigged ships of the packet type that did not sail for any length of time in a regular line operating on schedule. Some of these packet ships carried a good number of passengers and sailed at times between regular ports; others were general traders, and some were transients and later operated as sailing tramps in the North Atlantic trade, picking up cargoes wherever paying freight could be found. The following ships built by Brown & Bell during the years 1821-1826 were described as square-rigged sailing packets:

Name	Year Built	Tonnage	Length	Beam	Owner
			Feet	*Feet*	
WILLIAM TELL I	1821	367	103	28½	Samuel Hicks et al., New York
BALTIC	1822	410	110	29	Samuel Hicks et al., New York
ROMAN	1825	492	118	30½	Samuel Hicks et al., New York
UNITED STATES	1825	676	130½	34	Jonathan Trimble, New York
WASHINGTON	1825	742	142	34	Charles Hall, New York
GREAT BRITAIN	1826	725	138½	34	Jeremiah Thompson, New York

Charles Brownne (or Brown) built the packet type of square-rigger *Cincinnatus* of 373 tons (length 98 ft., beam 29 ft. 9 in.) in 1818 for S. W. Coates, John Griswold, and associates, of New York, and Brown & Bell built the fast general trader *Congress* of 376 tons (length 112 ft., beam 27 ft. 4 in.) in 1831 for E. K. Collins, New York. In addition to building in 1844 one of the claimed famous "first" or pioneer clippers, the *Houqua* of 583 tons (length 142 ft., beam 30 ft., depth 16 ft. 8 in.), for A. A. Low & Bro., New York, Brown & Bell constructed the fast clipper *Samuel Russell* (957 tons; length 173½ ft., beam 34½ ft., depth 20 ft.) for the same owners in 1847. Although not as heavily sparred, these two vessels were approximately in a class with the *Rainbow, Sea Witch,* and *Memnon,* built in 1845, 1846, and 1847, respectively, by Smith & Dimon.

Brown & Bell built vessels of all types, both sail and steam. After serving a certain part of the stipulated period of apprenticeship with Isaac Webb & Company, Donald McKay left that firm before his time was out—evidently being actuated by a desire to make more money—and worked for some time, gaining valuable experience, with Brown & Bell. The Empress of Russia, as an expression of appreciation for the loan of some ship drawings, personally sent a handsome ring to David Brown. After Brown's retirement in 1848 and his death in 1850, his partner, Jacob Bell, who himself was a shipbuilder of note, continued the business. In 1848 he built the fast bark *Rover* of 358 tons (length 113 ft., beam 26½ ft.) for his own account, and in the following year he launched the large fast clipper *Oriental I* for A. A. Low & Bro., New York. The *Oriental* was of 1,003 tons register (185 ft. long, 36 ft. beam, and 21 ft. deep) and was generally considered to be an advance in clipper ship model and sail plan upon any ship then afloat. She was designed and built for the China trade and on her maiden voyage to Hong Kong made the passage in 81 days and averaged 200 miles per day on the run; she then took tea to England, and her unprecedented passage of 97 days from dock to dock, "against the monsoon," revolutionized the design of British ships and gave unquestioned leadership on the seas to the United States.

Jacob Bell built three clippers during the years 1850-1852: *White Squall* (1,119 tons), *Trade Wind* (2,045 tons), and *Messenger* (1,350 tons). The *Trade Wind,* when built, was the largest ship ever constructed. Jacob Bell died about the same time as Jacob A. Westervelt, and in 1852 the business of Jacob Bell was succeeded by that of his son Abraham C. Bell, whose first vessel, built in the fall of 1852, was the clipper *Jacob Bell* of 1,381 tons. This ship was followed by the clippers *North Wind* (1,041 tons), *San Francisco* (1,307 tons), and the famous *Adelaide* (1,831 tons), built in the years 1853-1854. Jacob Bell and, later, Abraham C. Bell are credited with building during the years 1850-1854 seven excellent fast clippers aggregating 10,074 tons, an average of 1,439 tons. This high average for size was exceeded by only two other clipper shipbuilders in the entire country; viz., Donald McKay and Robert E. Jackson, both of East Boston, Mass. Roosevelt & Joyce succeeded in 1853 to the business and shipyard of the Browns and the Bells. This firm proved to be very energetic and for a number of years continued to turn out some of the finest examples of sailing craft afloat.

Its first large vessel was the extreme clipper *David Brown* of 1,715 tons, built in 1853 for A. A. Low & Bro., New York.

Robert G. Albion says of Brown & Bell:

Their first packet, which they built in 1822, was the smallest of them all, the *Henry*. In that same year, however, they succeeded Sidney Wright as constructors for the Black Ball Line. By 1833, they had built ten ships for this line, including some of the most satisfactory packets of the middle period. Their success drew the contracts of Collins when, from 1836 to 1838, he built his four large Dramatic Line packets, which surpassed in size all earlier ones. After the depression at this time, the yard built several packets for the Liverpool Swallowtail Line and the new Woodhull & Minturn Liverpool line, four of which were in turn the largest packets afloat at the time of their launching. Altogether Brown & Bell built twenty-seven packets in addition to the seven already built earlier by Adam and Noah Brown. During the middle portion of the packet period, their ships were among the best.

The Ficketts and Their Associates — Builders of the Largest Number of Coastal Packets Operating Out of the Port of New York

The three big shipyards in New York during the first part of the nineteenth century, all located in Manhattan on the East River, were owned and operated by Christian Bergh, Adam & Noah Brown, and Henry Eckford. All three firms had direct business continuity to and beyond mid-century and were prominent throughout the sailing packet era; while the successors of the original builders held unquestioned leadership in the shipbuilding field of New York—and of the entire country—during the first part of the clipper ship decade (1850-1859). Jacob A. Westervelt and "The Westervelts" succeeded to the ownership and management of the Christian Bergh yard, Brown & Bell (and later Jacob Bell and A. C. Bell) carried on the old Adam & Noah Brown shipbuilding firm, and Isaac Webb & Company, Webb & Allen, and William H. Webb successively operated and owned the Henry Eckford yard and company. At times, some shift was made in the site of these yards on the river, but the original firms and the successor partnerships and companies continued to operate and build fine ships as long as New York remained a factor in the building of wood vessels.

A fourth New York yard was of great importance in the building of sailing packets during a couple of decades ending about 1840. This was generally known as the Fickett yard and was run by various combinations of the Fickett family—Scott, Francis, Samuel, and George—with occasional outside partners, of whom by far the most important and productive was William Crockett. Many ships were built by the Ficketts alone (particularly Scott and Francis Fickett), several were built by Fickett & Crockett, one or two by Fickett & Thomas, and a few by William Crockett alone. The Fickett yard led all the shipbuilding firms both in New York and elsewhere in the production of coastal sailing packets. During the years 1819-1839 inclusive, it turned out twenty-five coastal sailing packets totaling 10,410 tons and, during the years 1821-1829 inclusive, seven transatlantic sailing packets totaling 2,823 tons (a total of thirty-two ships aggregating 13,233 tons register) operating on schedule out of the port of New York for the regular packet lines. These square-riggers were generally small, the average of the thirty-two sailing packets built being only 414 tons; the three smallest and earliest built, varying from 244 tons to 254 tons, were brigs. The largest ocean packet built at the Fickett yard was the *Formosa* of 450 tons (length 119 ft., beam 29 ft., depth 14½ ft.), built in 1829 for the Havre Line. The largest coastal packets built by the Ficketts and their partners were the *Frankfort* of 799 tons (length 152 ft., beam 34 ft., depth 20 ft.), constructed in 1839, and the *Fairfield* of 680 tons (length 139 ft., beam 30 ft., depth 22 ft.), launched the same year, both for the New York & New Orleans Line; also the *Yazoo* of 677 tons

(length 137 ft., beam 33 ft., depth 16½ ft.), built in 1833 for the Louisiana & N. Y. Line. The following table gives a list of the regular New York sailing packets, both transatlantic and coastal, built by the Ficketts (including Fickett & Crockett, Fickett & Thomas, and William Crockett) during the years 1819-1839 inclusive:

Name	Year Built	Tonnage	Line	Name	Year Built	Tonnage	Line
PHOEBE ANN (brig)	1819	244	New Orleans	KENTUCKY I	1827	415	New Orleans
FANNY (brig)	1820	254	New Orleans	JOHN LINTON	1827	413	New Orleans
EDWARD (brig)	1821	254	New Orleans	FORMOSA	1829	450	Havre
PANTHEA	1821	370	Red Star, Liverpool	HUNTSVILLE	1831	522	New Orleans
WILLIAM	1822	292	New Orleans	LOUISVILLE	1831	516	New Orleans
HANNIBAL	1822	440	Red Swallowtail, London	ANSON	1832	324	Charleston
HUDSON	1822	368	Black X, London	YAZOO	1833	677	New Orleans
VIRGINIA	1823	355	New Orleans	BELLE	1833	340	Savannah
FLORIAN	1823	335	New Orleans	NEWARK	1834	306	Savannah
LEEDS	1823	408	Blue Swallowtail, Liverpool	OCONEE	1835	460	Savannah
FRANCES	1824	367	New Orleans	MILLEDGEVILLE	1835	399	Savannah
YORK	1824	433	Red Swallowtail, London	AUBURN	1837	427	Savannah
BRIGHTON	1824	354	Red Swallowtail, London	TRENTON	1837	427	Savannah
TALMA	1825	391	New Orleans	ST. MARY'S	1838	444	New Orleans
RUSSELL	1825	386	New Orleans	FRANKFORT	1839	799	New Orleans
AZELIA	1825	383	New Orleans	FAIRFIELD	1839	680	New Orleans

It is probable that Samuel and Francis Fickett, who built the *Talma* (391 tons) in 1825 and the *Kentucky I* (415 tons) in 1827 for the New Orleans-New York Holmes Line, also built for this same line the sailing packet *Illinois* of 413 tons (length 117 ft., beam 28 ft., depth 14 ft.), which was launched in 1826; also possibly the *Tennessee* of 415 tons and practically a sister of the *Kentucky I,* both of which packets were built in New York in 1827.

The Fickett packets were good sailers and well-built ships. The pride of the fleet for many years was the fast and reliable packet *Huntsville* of 522 tons (length 131 ft., beam 30 ft., depth 14.8 ft.), which operated thirteen years (1831-1844) in the New York-New Orleans service and, undisputed, held all sailing records between the ports until during the year of her retirement from the trade the bigger *Sultana* of 662 tons, built by Brown & Bell in 1844, appeared in the service. Several Fickett packets practically equaled the *Huntsville's* best single run of 10 days between New York and New Orleans (*Kentucky I, Oconee, Auburn,* and *St. Mary's*), but her average time of passage out of 15.1 days for thirteen years' continuous service has never been approached. Some of the Fickett transatlantic packets did good sailing on the westward run against the prevailing wind. The little *York* of 433 tons (length 118½ ft., beam 28½ ft., depth 14¼ ft.), built in 1824, averaged only 30 days on the "uphill" return runs between London and New York for a period of two years (1825-1826 and 1832-1833); her fastest passage was a run of 24 days, and her slowest occupied only 36 days.

Apparently, sailing packet construction was a very competitive business in New York around the thirties, for the Ficketts found it desirable during their last five or six years of building coastal packets to take an interest in the ships that they built for both the New Orleans and Savannah packet lines. The Fickett yard turned out several ships of the sailing packet type other than those built for the regular New York lines that operated on published sailing schedules. Among them was the *London I* of 408 tons (length 112 ft., beam 28½ ft.), built in 1822 by Scott and Francis Fickett for Samuel Candler and Robert N. Waite, of New York. This ship should not be confused with the later, larger, and more famous transatlantic sailing packet *London* of 1,145 tons (length 170 ft., beam 38½ ft., depth 22¼ ft.), built in 1848 by William H. Webb, of New York, for the London Red Swallowtail Line and which operated fifteen years in that service.

Other New York Shipbuilders and Their Construction of Transatlantic and Coastal Packets

It would seem that the first prominent builder of wood square-rigged sailing packets in New York was Sidney Wright, a nephew of Isaac Wright. The older Wright was one of the founders of the Black Ball Line, which originated the transatlantic packet service. During a period of six years (1817-1822), Sidney Wright built one Red Star (Liverpool), one Havre Line, and six Black Ball packet ships that ran out of New York on regular schedules during the years 1818-1833 inclusive and, it is said, built other packets and ships of the packet type that operated in other lines or groups and as transients. Because of his family connections and a good start as a shipbuilder, Sidney Wright would most probably have gone far as a leading New York builder of square-riggers had he not died in the summer of 1822; at the same time, his latest creation, the *Liverpool* of 496 tons, was being sent to the bottom by an iceberg, which she struck in a fog (July 25) on her maiden voyage and only 40 days after her launching. The crew and passengers were all saved by the ship's small boats.

The following list gives one coastal and eight transatlantic sailing packets aggregating 3,802 tons register built by Sidney Wright during the period 1817-1822 for regular packet lines operating as per published schedules out of the port of New York. The average tonnage of the eight deep-sea packets was 436 tons, the largest being the unfortunate *Liverpool* of 496 tons (length 126 ft., beam 29½ ft., depth 14¾ ft.), built in 1822, and the two sister ships, the *William Thompson* and *James Cropper* of 495 tons (length 120 ft., beam 30½ ft., depth 15 ft.), built in 1821. The smallest Wright-built ocean packet was the little *Cadmus* of 306 tons (length 97½ ft., beam 26¾ ft., depth 13⅓ ft.), built in 1818 for French service, and the next in size was the famous pioneer ship of the transatlantic packet lines, the *Courier* of 381 tons (length 103½ ft., beam 29 ft., depth 14½ ft.), built in 1817.

Name	Year Built	Tonnage	Line	Name	Year Built	Tonnage	Line
COURIER	1817	381	Black Ball, Liverpool	WILLIAM THOMPSON	1821	495	Black Ball, Liverpool
MANHATTAN	1818	390	Red Star, Liverpool	JAMES CROPPER	1821	495	Black Ball, Liverpool
CADMUS	1818	306	Havre	COLUMBIA I	1821	492	Black Ball, Liverpool
ALBION	1819	434	Black Ball, Liverpool	LIVERPOOL	1822	496	Black Ball, Liverpool
LOUISA MATILDA	1820	313	Savannah				

The fastest of the Sidney Wright-built ocean packets was the *Columbia I,* which ran for eleven years (1822-1833) in the Black Ball (Liverpool) and Red Swallowtail (London) lines. This vessel of 492 tons (length 123 ft., beam 29.8 ft., depth 14.9 ft.) made one westbound passage in the phenomenally fast time of only 17 days, and her lifetime average of homeward runs in the service was 35 days. The *Albion,* which met disaster in 1822 after three years of transatlantic service in the Black Ball (Liverpool) Line, made no very fast single crossing, but she held the record of low average time for the Wright packets with 34 days. Moreover, her longest time of crossing of only 41 days beat the performance of all other Wright-built transatlantic packets. The only coastal packet engaged in a regular scheduled service sailing out of the port of New York and built by Sidney Wright was the *Louisa Matilda,* which ran three years (1824-1827) in the New York-Savannah Line. This ship was of 313 tons register (length 97 ft., beam 27 ft., depth 13½ ft.), and her fastest passage outbound, or south, was a run of 4 days; her average time was about 6½ days, and her slowest performance in three years was a passage out of 10 days.

At the Williams yard, Williamsburg, N.Y., Thorne & Williams built the Savannah sailing packet *Emperor* of 302 tons in 1824. Later, the yard was owned and operated by Jabez Williams, who built the clipper ships *Eclipse* of 1,223 tons in 1850 for George Buckley and associates, New York, the *Simoon* of 1,436 tons for Benjamin A. Mumford Company, New York, and the big *Tornado* of 1,802 tons (length 222.2 ft., beam 41.7 ft., depth 28 ft.) for W. T. Frost & Company, New York, both in 1852. In 1849, Jabez Williams built the fast trader bark *Greenpoint* of 500 tons (length 131.7 ft., beam 28.8 ft.) for Thomas Wardle, New York, and in the late forties constructed some large and fast sailing packets for the New York coastal packet lines. The following seven sailing packets totaling 3,567 registered tons, an average of 510 tons per ship, were built at the Williams yard during the period 1824-1846 for regular packet lines operating on published schedules out of the port of New York:

Name	Year Built	Line	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
EMPEROR	1824	Savannah	302	94	26.2	14
LOUISA	1832	Savannah	590	137.2	29.3	14.7
CELIA	1833	Savannah	338	105.5	26.8	13.4
CATHARINE	1839	Charleston	477	122	29.5	17
UNION	1842	New Orleans	544	133	30	19.3
SOUTH CAROLINA	1845	Charleston	580	131.2	31.3	15.7
ATLANTIC	1846	New Orleans	736	147.4	33.2	20

John Lozier was one of the early builders of New York sailing packets and in the years 1815 and 1816 launched two ships that saw service in the transatlantic New York-Liverpool run during 1820-1824. The dimensions and record of these two early packets are as follows:

Name	Year Built	Line	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
NESTOR	1815	Black Ball, Liverpool	481	114.8	30.8	15.4
HERCULES	1816	Red Star, Liverpool	334	103	27	13.5

The *Nestor* was operated in the transatlantic service for four years (1820-1824) and averaged 42 days on the westward crossings, her best run being a passage of 27 days. The *Hercules* was in the service two years (1822-1823) and averaged 41 days on the westward crossing, but her fastest passage occupied 33 days and her slowest 52 days. In 1813, John Lozier built the fast schooner *Boxer* of privateer type for Frederick Jenkins and associates, of New York; this speedy and handy little vessel was of 276 tons register and was 105.4 ft. long, 25.6 ft. beam, and 11.5 ft. deep.

James Morgan (and James Morgan & Son) built several sailing packets and traders around the middle of the twenties. In 1824, Morgan built the packet type of North Atlantic trader *Isaac Hicks* of 495 tons (length 119.6 ft., beam 30.6 ft.) for Samuel Hicks and associates, New York, and in 1824-1825 built the following three square-rigged packets for regular lines operating on schedule out of the port of New York:

Name	Year Built	Line	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
QUEEN MAB	1824	Havre	270	92	25	13.3
SILVANUS JENKINS	1825	Red Star, Liverpool	547	127.3	31	15
STATIRA	1825	Savannah	253	94.5	24.6	12.2

Each of the New York transatlantic packets operated in that service for four years, the *Queen Mab* in the years 1824-1828 and the *Silvanus Jenkins* in the years 1828-1832; each averaged 40 days for her westbound ocean crossings, and each made a crossing in 28 days. The *Statira* ran in the New York-Savannah Line for nine years (1825-1834) and averaged 7.8 days on the passage, her best run being a passage of 5 days.

It is known that in 1831 Lawrence & Sneden (or Sneeden), New York, built the coastal sailing packet *Creole I* for the New Orleans service; this vessel was of 542 tons and measured 132.5 ft. long, 30 ft. beam, and 15 ft. deep. In 1847, Perrine, Patterson & Stack built the packet *St. Charles* for the New York-New Orleans run, in which she operated with success for thirteen years (1848-1861) and was withdrawn only because of the Civil War; this ship was of 798 tons and had a length of 150.6 ft., a beam of 33.6 ft., and a depth of 21.6 ft. The *St. Charles* made one run in 10 days and averaged 15.2 days on her passages during her thirteen years in the New York-New Orleans service. Her slowest run occupied 21 days. In 1856, Roosevelt & Joyce built the packet *Glad Tidings* for the Holmes (New Orleans) Line; this ship was of 898 tons and measured 175 ft. long, 34.5 ft. beam, and 22.6 ft. deep. At Athens, N.Y., opposite Hudson on the Hudson River, the transatlantic sailing packet *Acasta* of 330 tons was built in 1818. This ship, which ran in the New York-London service in the Black X Line for four years (1824-1828), was 99 ft. long, 27.6 ft. beam, and 13.8 ft. deep. From the other side of the river at Hudson, N.Y., there was launched in 1822 the sailing packet *William Wallace* of 228 tons (length 86.7 ft., beam 25.3 ft., depth 12 ft.), which operated out of New York in the Savannah Line during 1824-1825.

Many sailing packets that operated out of New York in regular packet lines on schedule during the sailing packet era of 1818-1858 are known to have been built in New York, but the names of the builders are unknown. Assuming that the New York-New Orleans packets *Illinois* of 413 tons, built in 1826, and *Tennessee* of 415 tons, built in 1827, were launched from the Fickett yard (and built by Samuel and Francis Fickett), the following list includes one transatlantic and nine coastal packets sailing in regular lines as per schedule out of the port of New York known to have been constructed in New York with the builder not identified according to available records.

Name	Year Built	Tonnage	Line	Name	Year Built	Tonnage	Line
SAVANNAH	1822	248	Savannah	SOUTHERNER	1834	670	New Orleans
DE WITT CLINTON	1828	417	New Orleans	INDIANA	1844	607	New Orleans
ALABAMIAN	1832	384	Mobile	NEW YORK	1844	524	Charleston
ANGELIQUE	1833	420	Charleston	CHRISTIANA	1846	666	Red Swallowtail, London
MATILDA	1833	312	Mobile	CREOLE II	1847	767	New Orleans

The INDIANA ran sixteen years (1845-1861) and the CREOLE II fourteen years (1847-1861) in the New York-New Orleans packet line, and both were withdrawn from the service because of the Civil War. The only transatlantic packet mentioned above, the CHRISTIANA, ran eight years (1853-1861) in the Atlantic "shuttle."

The sailing packet *Champlain* of 624 tons (length 132 ft., beam 32½ ft.) was built in New York by an unidentified builder in 1834 for Platt, Hollingshead, et al., Philadelphia. After leaving the packet service and discontinuing as a passenger liner, this ship did good work for many years in the tea trade. Two other fast ships that made good sailing records around mid-century were built in New York, but there is no record available to identify the builders. These were the *John G. Coster* of 714 tons (length 141 ft., beam 33½ ft., depth 21¾ ft.), built in 1841 for Joshua Atkins, New York, and the *Wisconsin* of 925 tons (length 157 ft., beam 39 ft., depth 21 ft.), built in 1847 for B. A. Mumford and associates, New York. These two ships were known as "tea ships" and were fast-sailing Canton traders, which preceded the extreme sharp-lined clippers. Both made fast voyages from China to England and later appeared in the Cape Horn trade during the Gold Rush. The *Wisconsin*

made fast westbound runs around the Horn to San Francisco, and her time of 121 days in 1850 and 118 days in 1852 was better than that of many of the extreme clippers. Captain Mumford recorded in his log of the first of these two fine passages: "Anchored at 3:15 P.M., June 24 [1850] in San Francisco Harbor ahead of all the ships that sailed 30 days before us." In referring to ships like the *Wisconsin* that preceded the clippers, a historian has well said that they "derived their speed from the quarter-deck rather than from their lines." Other fast sailers built in New York in 1823, but with the builders unidentified, were the *Herald* of 395 tons (length 111 ft., beam 28 ft. 3 in.), built for George Law, Baltimore, Md., and the *Sabina* of 412 tons (length 116 ft. 6 in., beam 28 ft. 10 in.), built for Robert L. Taylor, Abraham Richards, et al., New York; both were of the packet type.

An Analysis Showing the Location of Sailing Packet Builders

The following tables giving the location of builders of sailing packets operating out of the port of New York on regular lines as per advertised schedules—and the names of the New York builders—during what may be termed the sailing packet era, 1818-1858, have been arranged from data compiled by Robert G. Albion in SQUARE-RIGGERS ON SCHEDULE (Princeton University Press). The record includes 193 transatlantic packets. (Statistics are available regarding the sailing performance of 188 of these packets, which are listed in Volume II of this work, pages 1291-1300 inclusive, with tonnage, dimensions, builder, years in transatlantic service, etc. They are arranged in the order of sailing performance based on the average time of all westbound runs, with a record of the average, fastest, and slowest passages for each vessel.) Albion says that the records from which the following compilations have been made are not complete, but they present a reasonably close approximation to the truth. They show a concentration of construction in a few New York yards and a gradual shift from New York to "Down East" yards. The New Hampshire tonnage can be considered in conjunction with that of Maine, and the center of building activities showed the trend, which became increasingly evident in the fifties and the clipper ship era, of moving from New York (and Connecticut) to Massachusetts (and Rhode Island) eastward to New Hampshire and Maine. It is of interest to note that only two small transatlantic, or ocean, packets and one coastal packet engaged in the New York service were built south of New York.

Transatlantic Packet Builders

Where Built	Number of Packets Built during Period				Total 1807-1857	Total Tonnage
	Prior to 1818	1818-1832	1833-1847	1848-1857		
A. *New York*						
Bergh-Westervelt	—	21	25	12	58	44,372
Webb	—	2	24	13	39	39,407
Brown & Bell and A. & N. Brown	2	18	15	—	35	22,833
Smith & Dimon	—	7	3	—	10	5,666
Wright	1	7	—	—	8	3,489
The Ficketts and Crockett	—	7	—	—	7	2,823
Morgan	—	2	—	—	2	817
Lozier	2	—	—	—	2	815
Other New York builders	2	1	1	—	4	1,974
Total by New York builders	7	65	68	25	165	122,196

(Continued on next page)

Where Built	Number of Packets Built during Period				Total 1807-1857	Total Tonnage
	Prior to 1818	1818-1832	1833-1847	1848-1857		
B. Massachusetts	—	5	2	3	10	7,706
C. Maine	—	—	—	7	7	8,272
D. New Hampshire	—	—	—	4	4	5,444
E. Connecticut	—	2	2	—	4	1,771
Total by New England builders	—	7	4	14	22	23,193
F. Pennsylvania	—	1	—	—	1	362
G. Upstate New York	—	1	—	—	1	330
H. Maryland	1	—	—	—	1	277
Total as recorded	8	74	72	39	193	146,358

Of the eleven recorded ships that entered the New York-Europe transatlantic sailing packet service in 1858 or thereafter:

Four vessels of 5,991 tons (aggregate new measurement) were built in New York.
Four vessels of 5,954 tons (new measurement) were built in Maine.
Two vessels of 2,505 tons (new measurement) were built in Boston, Mass.
One vessel of 1,266 tons (new measurement) was built in New Hampshire.
A total of seven ships out of eleven, with a tonnage of 9,725 out of 15,716 tons, was built in New England.

Of these eleven later-day transatlantic sailing packets in the New York service, two were built during the period 1850-1855 inclusive, five during 1856-1860 inclusive, two in 1863 (the HUDSON II and the NE PLUS ULTRA), and one in 1869—the CHARLES H. MARSHALL (the last of her class).

Coastwise Packet Builders

Where Built	Number of Packets Built during Period				Total 1815-1857	Total Tonnage
	Prior to 1818	1818-1832	1833-1847	1848-1857		
A. *New York*						
The Ficketts and Crockett	—	15	10	—	25	10,410
Brown & Bell; A. & N. Brown; W. H. Brown	1	4	5	2	12	6,675
Williams	—	2	5	—	7	3,567
Bergh-Westervelt	—	4	3	—	7	3,396
Webb	—	3	2	—	5	2,742
Smith & Dimon	—	1	3	—	4	2,171
Wright	—	1	—	—	1	313
Other New York builders	—	9	7	1	17	8,222
Total by New York builders	1	39	35	3	78	37,496
B. Connecticut	1	19	8	2*	30	11,465
C. Massachusetts	—	—	4	—	4	2,375
D. Maine	—	—	—	2	2	1,228
E. Rhode Island	—	—	—	1	1	625
Total by New England builders	1	19	12	5	37	15,693
F. Pennsylvania	—	1	—	—	1	298
G. Upstate New York	—	1	—	—	1	228
Total as recorded	2	60	47	8	117	53,715

*No record of year built for HERO (749 tons); in coastwise packet service 1848-1850.

The above compilation of coastwise packets and their builders does not include eight vessels sailing during part of their careers in this service, but which were primarily ocean packets and are included in the data covering transatlantic packets and their builders. These vessels are the SHAKESPEARE, WELLINGTON, MEDIATOR, QUEBEC, TORONTO, WESTMINSTER, HOWARD, and HENRY. Other packets known to have operated in the New York regular scheduled sailing packet coastwise lines, such as the HUDSON, ISAAC ALLERTON, CHARLESTON II, and JOHN MINTURN, are not included, as the records of dates, builders, and places of building are incomplete and uncertain.

The following table is a recapitulation of the data of both transatlantic and coastwise New York sailing packets and gives the total number of packets built by the various builders, in the stated geographic locations, for the period covered as far as known data will permit. The number and tonnage of the sailing packets cover only vessels, with builders or location of yards identified, that sailed regularly in packet lines operating on published schedules out of the port of New York.

Where Built	Number of Packets Built during Period				Total 1807-1857	Total Tonnage
	Prior to 1818	1818-1832	1833-1847	1848-1857		
A. *New York*						
Bergh-Westervelt	—	25	28	12	65	47,768
Webb	—	5	26	13	44	42,149
Brown & Bell and the Browns	3	22	20	2	47	29,508
The Ficketts and Crockett	—	22	10	—	32	13,233
Smith & Dimon	—	8	6	—	14	7,837
Wright	1	8	—	—	9	3,802
Williams	—	2	5	—	7	3,567
Morgan	—	2	—	—	2	817
Lozier	2	—	—	—	2	815
Other New York builders	2	10	8	1	21	10,196
Total by New York builders	8	104	103	28	243	159,692
B. Connecticut	1	21	10	2	34	13,236
C. Massachusetts	—	5	6	3	14	10,081
D. Maine	—	—	—	9	9	9,500
E. New Hampshire	—	—	—	4	4	5,444
F. Rhode Island	—	—	—	1	1	625
Total by New England builders	1	26	16	19	62	38,886
G. Pennsylvania	—	2	—	—	2	660
H. Upstate New York	—	2	—	—	2	558
I. Maryland	1	—	—	—	1	277
Total as recorded	10	134	119	47	310	200,073

After 1848, there were few coastwise sailing packets built (only 3 in New York and 5 in New England), and only the Webb and Westervelt yards in New York were building transatlantic sailing packets. Of the 39 New York ocean packets built during the period 1848-1857, 25 were constructed in New York City (Webb built 13 and Westervelt 12), and 14 were launched from New England yards, Maine and New Hampshire building 11 and Massachusetts 3. Notwithstanding the gaps in the customs records as to the builders of a dozen or so packets and the place of building of several more, it is possible to give relatively complete grand totals of New York sailing packets and their builders for the first forty years of such packet service. All together, New York built some 165 transatlantic packets totaling 122,196 tons out of 193 such ships of 146,358 aggregate tons register, regarding which data are available, and 78 coastwise packets totaling 37,496 tons out of 117 such ships of 53,715 aggregate tons register. The total of both ocean-going and coastal New York sailing packets built in New York was 243 ships of 159,692 tons out of 310 ships of 200,073 tons register that operated during the years 1818-1858 in that service.

For individual records, first place for the whole period goes to the Bergh-Westervelt firm, which built some 58 ocean and 7 coastal packets, a total of 65 ships aggregating 47,768 registered tons. That, however, was spread over about thirty-five years, whereas the Webb total of 39 ocean and 5 coastal packets, with an aggregate registered tonnage of 42,149, was concentrated into a period of practically twenty years. The 65 Bergh-Westervelt packets

averaged 735 tons per ship, whereas the Webb-built packets averaged 958 tons each. Starting much earlier, Brown & Bell (and the Bells) built 3 more New York sailing packets than the Webb yard, but their 47 ships averaged only 628 tons per vessel, and the product of the Fickett (and Crockett) yard consisted of 32 packets with the low average of only 414 tons per ship.

After 1848, the size of transatlantic sailing packets increased rapidly, reaching a peak with the building by Westervelt in 1854 of the *Amazon* of 1,771 tons, constructed for the London Black X Line. Coastwise sailing packets increased in size as the years advanced, particularly in the long-distance runs such as in the New York-New Orleans lines. The maximum was reached for coastal packets with the building in 1850 by Jacob Bell of the *St. Louis* of 938 tons for the New Orleans run. After 1848, only 8 New York coastwise sailing packets were built, whereas 36 transatlantic packets were constructed. Albion says:

> As for individual ships, Webb built the *Yorkshire,* the fastest of the ocean packets over a long period. . . . Westervelt built the *Amazon,* the largest and one of the fastest of all the packets, while Brown & Bell turned out the *Sultana,* the fastest New Orleans packet, and the second *Liverpool,* which had the longest continuous line service of any packet. . . . Donald McKay's *New World* was fast, but not the fastest.

During the period of 1847-1855, when a large number of good sizable transatlantic sailing packets were built in New York, 15 were constructed by William H. Webb for five regular lines, while the Westervelt yard (Westervelt & Mackey and J. A. Westervelt) launched 13 sailing packets for five established lines with regular scheduled sailings. No other firm of New York shipbuilders during these years built transatlantic sailing packets for regular lines operating out of New York. The following table gives a list of the packets built by each of the Webb and Westervelt yards during the nine-year period:

WILLIAM H. WEBB				WESTERVELT			
Year Built	Name	Registered Tonnage	Line	Year Built	Name	Registered Tonnage	Line
1847	ISAAC WRIGHT	1,161	Black Ball, Liverpool	1847	WEST POINT	1,046	Red Star, Liverpool
1847	YORKTOWN	1,150	Red Swallowtail, London	1848	DEVONSHIRE	1,149	Black X, London
1847	NEW YORK	991	Second Line, Havre	1848	ST. DENIS	959	Second Line, Havre
1848	LONDON	1,145	Red Swallowtail, London	1849	CONSTEL-LATION	1,560	Red Star, Liverpool
1849	MANHATTAN	1,299	Black Ball, Liverpool	1849	SOUTH-AMPTON	1,299	Black X, London
1849	ALBERT GALLATIN	1,435	Blue Swallowtail, Liverpool	1850	UNDERWRITER	1,168	Red Star, Liverpool
1849	GALLIA	1,190	Whitlock, Havre	1850	OCEAN QUEEN	1,182	Black X, London
1850	ISAAC WEBB	1,359	Black Ball, Liverpool	1850	RHINE	1,037	Red Swallowtail, London
1850	SAMUEL M. FOX	1,062	Second, Havre	1850	WILLIAM TELL	1,153	Second, Havre
1851	GREAT WESTERN	1,443	Black Ball, Liverpool	1851	MERCURY	1,350	Second, Havre
1851	ISAAC BELL	1,072	Second, Havre	1853	CALHOUN	1,749	Dramatic, Liverpool
1854	HARVEST QUEEN	1,383	Black Ball, Liverpool	1854	PALESTINE	1,751	Black X, London
1854	JAMES FOSTER, JR.	1,410	Black Ball, Liverpool	1854	AMAZON	1,771	Black X, London
1854	AURORA	1,639	Blue Swallowtail, Liverpool				
1855	NEPTUNE	1,406	Black Ball, Liverpool				

William H. Webb (1816-1899), America's Greatest Wood Shipbuilder

William H. Webb, the son of Isaac Webb and the greatest and most versatile of American wood shipbuilders during the packet sailing ship, clipper ship, and early wood steamship days, was born in New York on June 19, 1816. He entered his father's shipyard (Isaac Webb & Company) as an apprentice in 1831, when fifteen years of age, and served his time as a shipwright. Later, in the drafting room and office, he was thoroughly grounded in the designing and technical end of the business. He studied naval architecture at night and at an early age showed pronounced ability in mathematical ship calculations, which, coupled with a rare sense of proportion and balance, fortified him not only to assume responsibility for design in original fields but also to construct vessels successfully and to meet unusual conditions on sound and economic lines. W. H. Webb was a rare combination of a designer of great ability, a practical builder, a businessman, and a money-maker. He had vision, with balance, and originality expressed with due regard to all associated economic factors. As early as 1835, W. H. Webb assumed definite and unusual responsibilities as a practical shipbuilder, and in 1836, when only twenty years of age, he built the Black Ball sailing packet *Oxford* (752 tons) under subcontract from his father. In 1838, when twenty-three years of age, he designed and built the Havre Line packet *Duchesse d'Orleans* (798 tons), which ran for fourteen years steadily in the Atlantic "shuttle" between New York and France and later gave long and excellent service as a general trader in the Atlantic run. In 1842, young Webb shouldered the entire responsibility for the construction of the New York-New Orleans sailing packet *Liberty* of 689 tons. From 1843 on, he built, among a host of other vessels of all types, the following packets, which were all full-rigged three-masted ships. This list excludes barks, brigs, brigantines, etc., as well as clippers, pre-clipper China tea packets, steamers, and vessels of war. (Note: In the following tables, the builder's measurements and dates from Webb's book of plans have been used wherever such figures are available. This fact accounts for some variations in dimensions as compared with other records.)

Name	Year Built	Owner	Trade	Tonnage	Dimensions in Feet and Inches		
					Length	Beam	Depth
YORKSHIRE	1843	Marshall, New York	Atlantic	996	167	35- 4	21
MONTEZUMA (Webb & Allen)	1843	Black Ball, New York	Atlantic	924	162	34- 6	20- 6
ZURICH	1844	Drayton, New York	Atlantic	817	150	35	21
PANAMA	1844	Hennings & Gosling, New York	General	610	135	32	19- 6
HAVRE (II)	1845	Drayton, New York	Atlantic	870	156	34- 6	20- 6
FIDELIA	1845	Marshall, New York	Atlantic	895	152	35	21
ADMIRAL	1846	Drayton, New York	Atlantic	929	160- 2	35- 6	21- 6
BAVARIA	1846	Whitlock, New York	Atlantic	908	160	35- 6	21
SPLENDID	1846	Havre Line	Atlantic	642	130	33	22- 9
COLUMBIA (II)	1846	Marshall, New York	Atlantic	1,050	170- 6	36- 8	21- 6
MARMION	1846	Taylor, New York	General	903	165	39	22
SIR ROBERT PEEL	1846	Grinnell, New York	Atlantic	940	160	35- 6	21- 6

(Continued on next page)

Name	Year Built	Owner	Trade	Tonnage	Dimensions in Feet and Inches		
					Length	Beam	Depth
YORKTOWN	1847	Grinnell, New York	Atlantic	1,150	170	38- 8	22- 3
ISAAC WRIGHT	1847	Black Ball, New York	Atlantic	1,161	175	38- 1	22- 6
NEW YORK	1847	Havre Line	Atlantic	991	165- 8	36- 2	21- 1
LONDON	1848	Grinnell, New York	Atlantic	1,145	169-11	38- 6	22- 3
ALBERT GALLATIN	1849	Grinnell, New York	Atlantic	1,435	192	40	28- 3
GALLIA	1849	Havre Line	Atlantic	1,190	171	39- 2	27- 9
CATHERINE	1849	Tucker, Cooper, New York	General	610	135	31	19
GUY MANNERING	1849	Taylor, New York	General	1,418	190	39- 7	28- 9
MANHATTAN	1849	Marshall, New York	Atlantic	1,299	182	39- 6	27- 3
ISAAC WEBB	1850	Marshall, New York	Atlantic	1,360	185	38-10	27- 3
SAMUEL M. FOX	1850	Havre Line	Atlantic	1,062	170- 3	36-11	26- 6
VANGUARD	1850	Phillips, New York	General	1,196	176	38- 6	22- 6
JOSEPH WALKER	1850	New York	General	1,225	180	39- 4	23
GREAT WESTERN	1851	Marshall, New York	Atlantic	1,443	191- 8	40- 6	28- 6
ISAAC BELL	1851	Drayton, New York	Atlantic	1,072	171	37	26- 7
ANNAWAN	1852	Wakeman, Dimon, New York	General	759	161	34- 7	22- 1
ROYAL SAXON	1852	Cameron, New South Wales	General	759	152	33	19
JOHN BRIGHT	1853	Williams & Guion, New York	Atlantic	1,445	191- 7	40- 6	28- 4
AURORA	1854	Howland & Frothingham, New York	Atlantic	1,639	200	43- 7	29
CULTIVATOR	1854	Williams & Guion, New York	Atlantic	1,446	192- 7	40- 6	28- 6
HARVEST QUEEN	1854	Marshall, New York	Atlantic	1,383	188- 3	40	28- 6
JAMES FOSTER, JR.	1854	Marshall, New York	Atlantic	1,410	171- 6	40	27- 6
NEW ORLEANS	1854	Frost, New York	General	924	160- 8	35- 6	21- 6
THORNTON	1854	Williams & Guion, New York	Atlantic	1,422	190	40- 6	28- 6
NEPTUNE	1855	Marshall, New York	Atlantic	1,406	191	40	28
JOHN H. ELLIOTT	1856	Post, Smith, New York	General	1,077	173	36- 1	23
OCEAN MONARCH	1856	Frost, New York	General	2,145	242- 2	43- 7	30- 2
RESOLUTE	1857	Williams & Guion, New York	Atlantic	1,413	190	40	28
ROGER A. HEIRN	1857	Post, Smith, New York	General	1,088	173- 4	37	23
ALEXANDER MARSHALL	1860	Marshall, New York	Atlantic	1,232	179	37	23
CHARLES H. MARSHALL	1869	Marshall, New York	Atlantic	1,683 (new meas.)	193	39- 2	28- 6

Robert G. Albion says:

William H. Webb's first ship "on his own" was the highly satisfactory Black Baller *Oxford,* in 1836. From then on he had all the Black Ball and Havre Old Line business. For a brief period he was in partnership with one Allen but, after 1843, he built on his own account, showing great versatility in the construction of steamships and clippers as well as packets. Many years later, he published detailed plans of more than a hundred vessels which he had built. . . .

Upon the death of his father, Isaac Webb, in 1840, William took his father's place in the partnership with John Allen, and the firm continued until 1843 as Webb & Allen. William H. Webb operated alone from 1843 until his retirement in 1872, his shipyard being located in New York City on East River and covering the river water front, with the full required depth, between Fifth and Seventh streets. Records show that after building as a contractor the packet ships *Oxford* in 1836, *Duchesse d'Orleans* in 1838, and *Liberty* in 1842, he built the following full-rigged ships, barks, brigs, and schooners during the period 1843-1869 inclusive:

Year Built	Name of Vessel	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner or Consignee
			A. *Ships*			
1843	COHOTA	690	145	32	20	Singapore owners
1843	MONTEZUMA (Webb & Allen)	924	162	34- 6	20- 6	C. H. Marshall & Co., New York
1843	YORKSHIRE	996	167	35- 4	21	C. H. Marshall & Co., New York
1844	MONTAUK	505	128	29- 6	17	New York owners
1844	PANAMA	610	135	32	19- 6	Hennings & Gosling, New York
1844	ZURICH	817	150	35	21	W. S. Drayton, New York
1845	FIDELIA	895	152	35	21	C. H. Marshall & Co., New York
1845	HAVRE (II)	870	156	34- 6	20- 6	W. S. Drayton, New York
1846	ADMIRAL	929	160- 2	35- 6	21- 6	W. S. Drayton, New York
1846	BAVARIA	908	160	35- 6	21	W. Whitlock, Jr., New York
1846	COLUMBIA (II)	1,050	170- 6	36- 8	21- 6	C. H. Marshall & Co., New York
1846	MARMION	903	165	39	22	R. L. Taylor, New York
1846	SIR ROBERT PEEL	940	160	35- 6	21- 6	C. Grinnell, New York
1846	SPLENDID	642	130	33	22- 9	Havre Line
1847	ISAAC WRIGHT	1,161	175	38- 1	22- 6	C. H. Marshall & Co., New York
1847	NEW YORK	991	165- 8	36- 2	21- 1	Havre Line
1847	YORKTOWN	1,150	170	38- 8	22- 3	Grinnell, Minturn & Co., New York
1848	LONDON	1,145	169-11	38- 6	22- 3	Grinnell, Minturn & Co., New York
1849	ALBERT GALLATIN	1,435	192	40	28- 3	C. Grinnell, New York
1849	CATHERINE	610	135	31	19	Tucker, Cooper & Co., New York
1849	GALLIA	1,190	171	39- 2	27- 9	Havre Line
1849	GUY MANNERING	1,418	190	39- 7	28- 9	R. L. Taylor, New York
1849	MANHATTAN	1,299	182	39- 6	27- 3	C. H. Marshall & Co., New York
1850	CELESTIAL	860	158	34	19	P. Blanco, New York
1850	ISAAC WEBB	1,360	185	38-10	27- 3	C. H. Marshall & Co., New York
1850	JOSEPH WALKER	1,225	180	39- 4	23	New York owners
1850	SAMUEL M. FOX	1,062	170- 3	36-11	26- 6	Havre Line
1850	UNIVERSE	1,297	186- 6	38- 7	28- 8	Williams & Guion, New York
1850	VANGUARD	1,196	176	38- 6	22- 6	J. W. Phillips, New York
1851	CHALLENGE	2,007	230	41- 8	26	N. L. & G. Griswold, New York
1851	COMET	1,836	228	40- 4	22	Bucklin & Crane, New York
	(Sold to British in 1863; renamed FIERY STAR and put in the Australian run.)					
1851	GAZELLE	1,244	182	38- 2	21	Taylor & Merrill, New York
1851	GREAT WESTERN	1,443	191- 8	40- 6	28- 6	C. H. Marshall & Co., New York
1851	INVINCIBLE	1,769	221	39- 3	25- 6	Abram Bell & Sons, New York
1851	ISAAC BELL	1,072	171	37	26- 7	W. S. Drayton, New York
1851	SWORDFISH	1,036	170	35-10	20- 2	Crocker & Warren, New York
1852	ANNAWAN	759	161	34- 7	22- 1	Wakeman, Dimon & Co., New York
1852	AUSTRALIA	1,447	192	40	27	Williams & Guion, New York
1852	FLYING DUTCHMAN	1,257	190	37	21- 6	Geo. Daniels et al., New York
1852	ROYAL SAXON	759	152	33	19	R. W. Cameron, Sydney, Australia
1853	FLYAWAY	1,274	190	37	21- 6	Galwey, Cassado & Teller, Spain
1853	JOHN BRIGHT	1,445	191- 7	40- 6	28- 4	Williams & Guion, New York
1853	YOUNG AMERICA	1,961	235	40- 2	25- 9	Abram Bell & Sons, New York
1854	AURORA	1,639	200	43- 7	29	Howland & Frothingham, New York
1854	CULTIVATOR	1,446	192- 7	40- 6	28- 6	Williams & Guion, New York
1854	HARVEST QUEEN	1,383	188- 3	40	28- 6	C. H. Marshall & Co., New York
1854	JAMES FOSTER, JR.	1,410	171- 6	40	27- 6	C. H. Marshall & Co., New York

(*Continued on next page*)

Year Built	Name of Vessel	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner or Consignee
1854	NEW ORLEANS	924	160- 8	35- 6	21- 6	Wm. T. Frost, New York
1854	THORNTON	1,422	190	40- 6	28- 6	Williams & Guion, New York
1855	NEPTUNE	1,406	191	40	28	C. H. Marshall & Co., New York
1856	INTREPID	1,173	179- 9	37- 8	23	Bucklin & Crane, New York
1856	JOHN H. ELLIOTT	1,077	173	36- 1	23	Post, Smith & Co., New York
1856	OCEAN MONARCH	2,145	242- 2	43- 7	30- 2	Wm. T. Frost, New York
1856	UNCOWAH	988	169	35- 8	22	Wakeman, Dimon & Co., New York
1857	BLACK HAWK	1,175	180	36- 6	23	Bucklin & Crane, New York
1857	RESOLUTE	1,413	190	40	28	Williams & Guion, New York
1857	ROGER A. HEIRN	1,088	173- 4	37	23	Post, Smith & Co., New York
1860	ALEXANDER MARSHALL	1,232	179	37	23	C. H. Marshall & Co., New York
1869	CHARLES H. MARSHALL	1,683 (new meas.)	193	39- 2	28- 6	C. H. Marshall & Co., New York

The CHARLES H. MARSHALL was a three-decker built for European and East Indian trade. Launched May 26, 1869, she was the last vessel built by W. H. Webb and the last square-rigged ship built in New York City or State. Webb wrote of her, "She was a large carrier and a good sea boat. Draft of water when launched, with masts in end, yards on deck, one anchor, two chain cables (90 fathoms each) on board, was forward 10 ft. 3 in., aft 10 ft. 5 in. Deep draft, 24 ft."

B. *Barks*

1853	SNAP DRAGON	619	140	29- 4	18	Wakeman & Dimon, New York
1854	HOUSTON	518	132- 6	30- 1	14	Wakeman & Dimon, New York
1855	ALAMO	507	133	30- 6	13	Wakeman & Dimon, New York
1856	ALICE TAINTER	637	140	31- 5	17- 8	Post, Smith & Co., New York
1857	TRIESTE	542	135	28-11	14- 9	Dutilth & Co., New York
1860	HARVEST QUEEN	315	114	26- 6	11- 3	C. B. Fessenden, New York
1869	JAMES A. BORLAND	670	143	32	18-10	Borland & Dearborn, New York

C. *Brigs*

1844	RAMON DE ZALDO	125	90	21- 3	8- 4	Pacific Ocean trade
1852	VOLANTE	307	112	26- 6	11- 3	Schiff & Bros., New York
1855	JOSEPHINE	258	130	21- 5	9- 6	J. B. Sardy, New York
1860	EMMA DEAN	221	117- 6	25-10	8- 6	Faulke & Augusta, Curacao

D. *Schooners*

1843	VIGILANT	70	56	18- 5	4- 8	Built for U. S. Government
1851	PLENDOME	266	101	25- 7	10- 9	Mitchell, New York
1852	MANHASSET	266	101	25- 7	10- 9	Flanner & Os., New York
1853	FANNY	122	85- 6	21- 2	9	"Built for general business"
1860	ISAAC WEBB	95	72	20	7	New York pilots

William H. Webb was his own designer and his own master builder. While he was in the shipbuilding business, up to his fifty-seventh year, he was, in fact, the naval architect and constructor of the vessels that he built, although in later years he became very prominent as a businessman and a director of enterprises. It has been written of William H. Webb, "He was the greatest shipbuilder of his time, not only because of the number, size, quality and type of vessels he built, but also because of the extraordinary designs for which he was responsible." And, again, "Not only were his accomplishments as a designer and builder of ships pre-eminent, but also during the period that he was engaged in business the output of his shipyard was far greater than that of any other in the country, in both the number of vessels built and their aggregate tonnage."

William H. Webb was the builder of the first American China tea packets of a fast pre-clipper type, commencing in 1841 with the *Helena* of 598 tons. His "out-and-out" clippers

built during the California Gold Rush boom and in the fifties, prior to the depression of 1857, were not as highly publicized as were the ships built by Donald McKay, of Boston; neither were they as large, but they were of equal quality, and outside of a couple of ships, in the design of which Webb was influenced too much by owners and others, they were in many respects of very superior design. The Webb-designed and built *Swordfish* (of 1851) was only two-thirds the size of the McKay-built *Flying Fish,* constructed the same year; but on their maiden voyages, made at the same time around the Horn to California, the Webb boat overwhelmingly defeated the McKay clipper. The *Flying Fish* was one of the very best vessels ever built by McKay. Of the clippers built by William H. Webb, the most heralded at the time of building—and his biggest ship of this general type—was probably his worst, the *Challenge* (2,007 tons), built in 1851. In the design of this vessel, he was influenced by the speed craze of the time to be radical and follow lines generally suggested by John W. Griffiths. Therefore, Webb built a vessel that had a big deadrise, a wide-flowing bilge, and a midship section as weak as any British tea clipper of the fifties and sixties. Although he produced the most handsome ship of her day and a fast sailer, she was not a real Webb creation. Notwithstanding her faults, she defeated her British competitor in a much-heralded tea race with "Dicky" Green's *Challenger* and was so much admired in England that the admiralty "took off her lines and complete dimensions of hull and spar plan." Webb's "worst production," it has been said, "was superior to Britain's best," and the *Challenge* materially influenced the design of British clippers up to and including the world-famous *Thermopylae,* built in 1869, a ship that ranked with the *Cutty Sark* as the fastest of all British-built sailing vessels and that was credited with being the queen of all British clippers in the China tea trade in the seventies.

Of the sixteen clippers built by William H. Webb (aggregating 20,928 tons and averaging 1,308 tons each), two ships can be selected, excluding the famous *Swordfish* (1,036 tons) and the *Challenge* (2,007 tons), as particularly outstanding. The *Comet* (1,836 tons), built in 1851, is unequaled in maritime sailing history as a maker of records in runs between points on the Seven Seas. This ship, among her many all-time records, holds the one for the fastest passage around the Horn from San Francisco to New York. The second outstanding Webb clipper was the *Young America* (1,961 tons), built in 1853, which expressed William H. Webb's reaction to the 1850-1851 extreme speed craze. This ship, designed by Webb to be "a fast sailer, a good carrier, and to make money over a long term of years," was a practical rather than a Gold Rush, emotional product. She was, in a measure, a prototype of the splendid but fuller-modeled Bath, Maine, Down Easters to come, exemplified by the *Henry B. Hyde* (2,583 tons), built in 1883. William H. Webb always said that the *Young America* was his finest product in the realm of sail, and the record of the ship proves that her designer's ideas at the time of building were sound and economic. She successfully fought for thirty years not only the gales and storms off Cape Horn but also all sorts of competition from steam, marine, and railway travel, and when she was taken off the New York-California run, she was sold abroad as a speedy and sturdy general trader—"sound of timbers and good for many years."

Although William H. Webb was the third greatest American builder of "clipper" ships (considering the aggregate tonnage launched), he ranked as the leading builder of sailing packets, and records are available showing that he built thirty-eight ships of this type, aggregating 38,885 tons, an average of 1,023 tons per vessel, all of which sailed to or out of the port of New York. Webb also built at least seventeen general trading square-rigged ships aggregating 20,123 tons, an average of 1,184 tons per vessel, most of which were packets at some time or other and were designed and built to meet the requirements of the packet trade. Again, many of the Webb-built packets and general traders were in fact medium clippers, and the clipper *Australia* (1,447 tons), built by Webb in 1852, was a packet owned by the Black Star Line. Neither the *Guy Mannering* (1,419 tons), built by Webb in 1849 for the Black Star Line, nor the second *Ocean Monarch* (2,145 tons), built by him in 1856 for William T. Frost, New York, is designated in this classification as a packet, but as a general trader; both, however, were successful ships of historic interest. The *Guy Mannering,* which operated

in the transatlantic trade (and whose owners claimed two 9-day passages from New York to Cape Clear—world records, if true), was the first three-decked merchant vessel built, and the *Ocean Monarch* was the largest sailing ship, as far as tonnage and cargo-carrying capacity are concerned, ever built of what is known as the packet type.

William H. Webb's most famous sailing packet was the *Yorkshire* (996 tons), built in 1843 for the Black Ball Line. This vessel ran for eighteen years (1844-1862) in the line's transatlantic service and was the fastest packet on the Western Ocean. Her westbound crossing from Liverpool to New York of 16 days, port to port, has never been beaten, and her average passage time of 29 days on the westward crossing "uphill" and against "the King of the West Wind," maintained for the period of eighteen consecutive years, has never been equaled and challenged by only one ship—the *Amazon*—of almost twice the size and built eleven years later. The *Amazon's* fastest run was 24 days, or 50 per cent longer than the westbound record run of the famous and speedy *Yorkshire.*

Among the first flight of fast, popular, and successful New York transatlantic packets was the Webb-built *Great Western* (1,443 tons), built in 1851 for the Liverpool run of the Black Ball Line. This speedy packet ran steadily for twenty-seven years in the severe transatlantic packet trade, driven hard to make time notwithstanding wind and seas, and was in "good, sound condition" when sold in 1878 to Pacific Coast shipping interests. Only one packet out of 188 whose performances are recorded by Albion as regular New York transatlantic packets during the packet era of 1818-1858 had a better sailing performance in the Atlantic "shuttle," considering average speed and length of service, than the *Great Western.*

Other outstanding Atlantic packets designed and built by William H. Webb were *Columbia II* (1,050 tons), built in 1846; *Isaac Wright* (1,161 tons), built in 1847; and *Neptune* (1,406 tons), built in 1855—all for the Black Ball Line and the New York-Liverpool service. These three packets, with the *Yorkshire* and *Great Western,* rank among the best eleven for speed performance, and considering only vessels with twelve or more years of steady service in the trade, these five stand among the leading eight. Of these eight fast, "reliable and durable" packets, the five built by Webb averaged 30.8 days westbound, port to port, for an average period of service per ship in the transatlantic trade of twenty and a half years, and the average best crossing westward for the five ships was only 21.8 days.

Other famous Webb-built sailing packets were:

Name	Tonnage	Year Built	Line	Name	Tonnage	Year Built	Line
FIDELIA	895	1845	Black Ball	NEW YORK	991	1847	Havre
ISAAC WEBB	1,360	1850	Black Ball	GALLIA	1,190	1849	Havre
HARVEST QUEEN	1,383	1854	Black Ball	ISAAC BELL	1,072	1851	Havre
JAMES FOSTER, JR.	1,410	1854	Black Ball	ALBERT GALLATIN	1,435	1849	Blue Swallowtail
ADMIRAL	929	1846	Havre	SIR ROBERT PEEL	940	1846	Red Swallowtail
BAVARIA	908	1846	Havre	YORKTOWN	1,150	1847	Red Swallowtail

The *Sir Robert Peel* ran successfully for thirty-four years in the Atlantic "ferry" (1846-1880) and withdrew from the service only when all sailing packet lines were discontinued.

In 1854, William H. Webb virtually abandoned the building of clippers. Although he built the *Black Hawk* (a clipper of 1,175 tons) and the smaller *Uncowah* (988 tons)—his last clippers—on definite orders, following 1853 he had strongly discouraged clipper shipbuilding. When he launched the *Young America* in 1853, he affirmed, "This is my conception of what a well-designed and built sailing ship should be. She will be fast and handy, amply stiff, and carry well. The ships of the future should be like this one, or possibly even a little fuller, but with no loftier spars or bigger sail spread." Donald McKay, in Boston (Webb's outstanding rival at the time), was building and championing big, fast clippers. He declared, "You can't

get them too big if you keep them fine with sharp hollow water lines forward and a clean run aft."

In addition to building clippers and sailing packets, William H. Webb launched the following general traders during the period 1856-1869:

Name	Year Built	Tonnage	Owner
OCEAN MONARCH (II)	1856	2,145	William T. Frost & Co., New York
JOHN H. ELLIOTT	1856	1,077	Post, Smith & Co., New York
RESOLUTE	1857	1,413	Williams & Guion, New York
ROGER A. HEIRN	1857	1,088	Post, Smith & Co., New York
ALEXANDER MARSHALL	1860	1,232	C. H. Marshall & Co., New York
CHARLES H. MARSHALL	1869	1,683 (new meas.)	C. H. Marshall & Co., New York

The *Alexander Marshall* was operated for eighteen years (1860-1878) in the Black Ball Line between New York and Liverpool, after which she became a transient. The *Charles H. Marshall* also ran in the Black Ball Line and was engaged in the transatlantic service ten years, or until the line discontinued its regular scheduled operations in 1878, after which the vessel did transient business. The *Charles H. Marshall* is of particular historic interest, as she was the last vessel of sailing packet type built and, moreover, the last full-rigged ship constructed in New York.

In the late forties and early fifties, W. H. Webb commenced to pay particular attention to steam, which his Boston rival, Donald McKay, ridiculed for long years. Webb, in addition to his achievements in the realm of wood sail, built the first steamship to round the Horn and enter the Golden Gate; the first large and successful steamship to carry mail between Panama and San Francisco on the Pacific and between the United States and Panama on the Atlantic; the first steamship for the New York-Georgia trade and the first steamship for the New York-New Orleans trade; the first successful Hudson River steamboat; the first three steamships to carry mail from New York to China via Panama transfer and San Francisco; and the fastest steamboats for the Long Island Sound passenger and freight service. The steamboats *Bristol* and *Providence,* built by Webb in 1866 for the Fall River Line, were the fastest steam vessels of their day.

W. H. Webb was a pioneer in the design and construction of steam screw wood ironclad war vessels, and he built (1862-1863) the *Re d'Italia* and *Re Don Luigi di Portogallo,* each of 6,000 tons displacement, for the Royal Italian Government; the steam screw frigate *General Admiral,* of 7,000 tons displacement (1859), for the Imperial Russian Government and also a steam screw corvette of 1,400 tons. The *Dunderberg,* renamed *Rochambeau* (1866), of 7,200 tons displacement, he designed, built, and sold to Emperor Napoleon III of France; this vessel was the largest ironclad ram and speediest armored war vessel of her day, mounting four 15-inch and twelve 11-inch guns in her main battery.

The following table has been prepared to show how both Webb and McKay struggled to build wood ships after the panic of 1857 and throughout and after the Civil War. Donald McKay persistently advocated "big wood clippers" and stubbornly fought steam. William H. Webb built steam vessels as long as there was a demand in and around New York for wood merchant craft, paddle-wheel or screw-propelled, and for as long a time as he could sell such vessels or interest foreign countries in his excellently designed wood armored warships, which capitalized experience gained from the Civil War. The year 1866 saw virtually the end of wood ship construction for both New York and Boston builders, who made heroic efforts to re-establish themselves as wood shipbuilders around 1868-1869. Webb gave his "dying gasp" as a wood vessel constructor in 1872, after two years of shipyard idleness, and McKay, after five years of inactivity, built two small sloops of war for the United States Government in 1875 and retired from the field. New York and Boston were defeated as wood shipbuilders

around 1870, but the state of Maine—with Bath on the Kennebec River, "The City of Ships," the capital of Maine shipbuilding—had "just begun to fight." Bath's greatest glory and greatest maritime honors in the realm of wood ship construction were won in the seventies, eighties, and early nineties of the nineteenth century after New York and Boston, with their great Webb and McKay, had "quit the game" and decided that wood ships were "a thing of the past." The following table shows the tonnage of vessels built by these two rival shipbuilders from the year 1858 to their retirement—1872 for Webb and 1875 for McKay.

	William H. Webb				Donald McKay			
Year	Merchant Sail	Merchant Steam	Naval Steam	Total	Merchant Sail	Merchant Steam	Naval Steam	Total
1858	—	1,021	1,400	2,421	1,097	—	—	1,097
1859	—	1,400	5,000	6,400	214	—	—	214
1860	1,863	—	—	1,863	214	—	—	214
1861	—	5,175	—	5,175	1,300	—	—	1,300
1862	—	3,642	4,250	7,892	—	—	1,000	1,000
1863	—	2,800	4,250	7,050	—	—	1,000	1,000
1864	—	2,656	—	2,656	—	—	—	—
1865	—	—	—	—	—	—	—	—
1866	—	4,600	5,250	9,850	—	1,211	—	1,211
1867	—	—	—	—	410	—	—	410
1868	—	—	—	—	2,787	—	—	2,787
1869	2,353	3,836	—	6,189	2,209	—	—	2,209
1870	—	—	—	—	—	—	—	—
1871	—	—	—	—	—	—	—	—
1872	—	1,900	—	1,900	—	—	—	—
1873		Discontinued			—	—	—	—
1874					—	—	—	—
1875					—	—	1,500	1,500
Total for 18 years	4,216	27,030	20,150	51,396	8,231	1,211	3,500	12,942

It has been said quite generally that William H. Webb was responsible for the design and construction of 150 vessels. This may be correct, for it is probable that he designed and possibly supervised the construction, in an advisory capacity, of several vessels that were not built in his own yard. However, it has been authoritatively stated: "William H. Webb personally built 138 vessels, aggregating 177,872 tons." Statistics of 126 Webb-designed and built vessels are herein set forth, and the list is admittedly incomplete.

Wood Sailing Vessels Built by William H. Webb, New York
All Ship-rigged unless Otherwise Designated

Name	Year Built	Type	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner
OXFORD	1836	Packet	752	147- 6	33- 6	21- 6	Black Ball Line (Atlantic)
LOUIS PHILIPPE	1837	Packet	794	147- 6	34- 6	25- 6	Havre Line (Atlantic)
DUCHESSE D'ORLEANS	1838	Packet	798	155- 6	34- 2	20- 6	Havre Line (Atlantic)
NEW YORK	1839	Packet	862	152- 6	35- 4	22·	Black Ball (Atlantic)
MALEK-ADHEL	1840	Trading brig	110	80	20- 7	7- 9	Pacific Ocean trade
HELENA	1841	First American tea clipper	598	135	30- 6	20	New York owners; China trade
LIBERTY	1842	Packet	689	146	32	20	New Orleans-New York
LIGERA	1842	Schooner	55	48	15- 8	6- 6	West Indies owners
COHOTA	1843	Oriental tea clipper	690	145	32	20	Singapore owners
VIGILANT	1843	Schooner	70	56	18- 5	4- 8	Built for U. S. Government
YORKSHIRE	1843	Fastest transatlantic packet	996	167	35- 4	21	Black Ball Line (Atlantic)

(Continued on next page)

Name	Year Built	Type	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner
MONTAUK	1844	Tea clipper	505	128	29- 6	17	New York owners; China trade
PANAMA	1844	General trader	610	135	32	19- 6	Hennings & Gosling, New York
RAMON DE ZALDO	1844	Trading brig	125	90	21- 3	8- 4	Pacific Ocean trade
ZURICH	1844	Packet	817	150	35	21	Havre Line (Atlantic)
FIDELIA	1845	Packet	895	152	35	21	Black Ball Line (Atlantic)
HAVRE (II)	1845	Packet	870	156	34- 6	20- 6	Havre Line (Atlantic)
ADMIRAL	1846	Packet	929	160- 2	35- 6	21- 6	Havre Line (Atlantic)
BAVARIA	1846	Packet	908	160	35- 6	21	Havre Line (Atlantic)
COLUMBIA (II)	1846	Packet	1,050	170- 6	36- 8	21- 6	Black Ball Line (Atlantic)
MARMION	1846	General trader	903	165	39	22	R. L. Taylor, New York
SIR ROBERT PEEL	1846	Packet	940	160	35- 6	21- 6	Red Swallowtail Line (Atlantic)
SPLENDID	1846	Packet	642	130	33	22- 9	Havre Line (Atlantic)
ISAAC WRIGHT	1847	Packet	1,161	175	38- 1	22- 6	Black Ball Line (Atlantic)
NEW YORK	1847	Packet	991	165- 8	36- 2	21- 1	Havre Line (Atlantic)
YORKTOWN	1847	Packet	1,150	170	38- 8	22- 3	Red Swallowtail Line (Atlantic)
LONDON	1848	Packet	1,145	169-11	38- 6	22- 3	Red Swallowtail Line (Atlantic)
ALBERT GALLATIN	1849	Packet	1,435	192	40	28- 3	Blue Swallowtail Line (Atlantic)
CATHERINE	1849	General trader	610	135	31	19	Tucker, Cooper & Co., New York
GALLIA	1849	Packet	1,190	171	39- 2	27- 9	Havre Line (Atlantic)
GUY MANNERING	1849	General trader	1,418	190	39- 7	28- 9	R. L. Taylor, New York
MANHATTAN	1849	Packet	1,299	182	39- 6	27- 3	Black Ball Line (Atlantic)
CELESTIAL	1850	Clipper	860	158	34	19	P. Blanco, New York
ISAAC WEBB	1850	Packet	1,360	185	38-10	27- 3	Black Ball Line (Atlantic)
JOSEPH WALKER	1850	General trader	1,225	180	39- 4	23	New York owners
SAMUEL M. FOX	1850	Packet	1,062	170- 3	36-11	26- 6	Havre Line (Atlantic)
UNIVERSE	1850	Clipper	1,297	186- 6	38- 7	28- 8	Williams & Guion, New York
VANGUARD	1850	General trader	1,196	176	38- 6	22- 6	J. W. Phillips, New York
CHALLENGE	1851	Clipper	2,007	230	41- 8	26	N. L. & G. Griswold, New York
COMET	1851	Clipper	1,836	228	40- 4	22	Bucklin & Crane, New York
(Sold to British in 1863; renamed FIERY STAR and put in the Australian run.)							
GAZELLE	1851	Clipper	1,244	182	38- 2	21	Taylor & Merrill, New York
GREAT WESTERN	1851	Packet	1,443	191- 8	40- 6	28- 6	Black Ball Line (Atlantic)
INVINCIBLE	1851	Clipper	1,769	221	39- 3	25- 6	Abram Bell & Sons, New York
ISAAC BELL	1851	Packet	1,072	171	37	26- 7	Havre Line
PLENDOME	1851	Schooner	266	101	25- 7	10- 9	Mitchell, New York
SWORDFISH	1851	Clipper	1,036	170	35-10	20- 2	Crocker & Warren, New York
ANNAWAN	1852	Fast trader	759	161	34- 7	22- 1	Wakeman, Dimon & Co., New York
AUSTRALIA	1852	Clipper	1,447	192	40	27	Williams & Guion, New York
FLYING DUTCHMAN	1852	Clipper	1,257	190	37	21- 6	Geo. Daniels et al., New York
MANHASSET	1852	Schooner	266	101	25- 7	10- 9	Flanner & Os., New York
ROYAL SAXON	1852	Fast trader	759	152	33	19	R. W. Cameron, Sydney, Australia
VOLANTE	1852	Trading brig	307	112	26- 6	11- 3	Schiff & Bros., New York
FANNY	1853	Schooner	122	85- 6	21- 2	9	New York owners
FLYAWAY	1853	Clipper	1,274	190	37	21- 6	Galwey, Cassado & Teller, Spain
JOHN BRIGHT	1853	General trader	1,445	191- 7	40- 6	28- 4	Williams & Guion, New York
SNAP DRAGON	1853	Clipper bark	619	140	29- 4	18	Wakeman & Dimon, New York
YOUNG AMERICA	1853	Clipper	1,961	235	40- 2	25- 9	Abram Bell & Sons, New York
AURORA	1854	Packet	1,639	200	43- 7	29	Howland & Frothingham, New York
CULTIVATOR	1854	General trader	1,446	192- 7	40- 6	28- 6	Williams & Guion, New York
HARVEST QUEEN	1854	Packet	1,383	188- 3	40	28- 6	Black Ball Line (Atlantic)
HOUSTON	1854	Trading bark	518	132- 6	30- 1	14	Wakeman & Dimon, New York

(Continued on next page)

Name	Year Built	Type	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner
JAMES FOSTER, JR.	1854	Packet	1,410	171- 6	40	27- 6	Black Ball Line (Atlantic)
NEW ORLEANS	1854	General trader	924	160- 8	35- 6	21- 6	Wm. T. Frost, New York
THORNTON	1854	General trader	1,422	190	40- 6	28- 6	Williams & Guion, New York
(Marine press reports the launching of a 350-ton schooner by W. H. Webb on July 15, 1854, that is not included in this list.)							
ALAMO	1855	Trading bark	507	133	30- 6	13	Wakeman & Dimon, New York
JOSEPHINE	1855	Trading brig	258	130	21- 5	9- 6	J. B. Sardy, New York
NEPTUNE	1855	Packet	1,406	191	40	28	Black Ball Line (Atlantic)
ALICE TAINTER	1856	Trading bark	637	140	31- 5	17- 8	Post, Smith & Co., New York
INTREPID	1856	Clipper	1,173	179- 9	37- 8	23	Bucklin & Crane, New York
JOHN H. ELLIOTT	1856	General trader	1,077	173	36- 1	23	Post, Smith & Co., New York
OCEAN MONARCH	1856	General trader	2,145	242- 2	43- 7	30- 2	Wm. T. Frost, New York
UNCOWAH	1856	Clipper	988	169	35- 8	22	Wakeman, Dimon & Co., New York
BLACK HAWK	1857	Clipper	1,175	180	36- 6	23	Bucklin & Crane, New York
RESOLUTE	1857	General trader	1,413	190	40	28	Williams & Guion, New York
ROGER A. HEIRN	1857	General trader	1,088	173- 4	37	23	Post, Smith & Co., New York
TRIESTE	1857	Trading bark	542	135	28-11	14- 9	Dutilth & Co., New York
ALEXANDER MARSHALL	1860	Packet and general trader	1,232	179	37	23	C. H. Marshall & Co., New York
EMMA DEAN	1860	Trading brig	221	117- 6	25-10	8- 6	Faulke & Augusta, Curacao
HARVEST QUEEN	1860	General trading bark	315	114	26- 6	11- 3	C. B. Fessenden, New York
ISAAC WEBB	1860	Pilot schooner	95	72	20	7	New York pilots
CHARLES H. MARSHALL	1869	General trader	1,683 (new meas.)	193	39- 2	28- 6	C. H. Marshall & Co., New York
JAMES A. BORLAND	1869	Trading bark	670	143	32	18-10	Borland & Dearborn, New York

Total tonnage of these 82 wood sailing vessels built by William H. Webb..... 79,263 tons.

W. H. Webb built at least one vessel per year during the period 1836-1839 inclusive under contract for his father. From 1840 to 1843, following his father's death, he built in partnership with John Allen, the firm being Webb & Allen as it had been for a few years preceding Isaac Webb's death.

W. H. Webb, at the completion of his apprenticeship in 1835, in addition to taking the entire responsibility for building the sailing packets *Oxford, Louis Philippe, Duchesse d'Orleans,* and *New York* (all full ship-rigged), was active in the construction of the following transatlantic packets in addition to other vessels of which statistics are not readily available:

Name	Year Built	Type	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Owner
ST. JAMES	1835	Packet	641	133- 9	32- 8	20- 5	Red Swallowtail Line (Atlantic)
BURGUNDY	1836	Packet	762	148	33- 8	21- 6	Havre Line (Atlantic)
PENNSYLVANIA	1836	Packet	808	148	34- 9	21	Blue Swallowtail Line (Atlantic)
CAMBRIDGE	1837	Packet	798	156- 6	34- 2	21- 6	Black Ball Line (Atlantic)
VILLE DE LYON	1837	Packet	791	147	34- 6	25- 6	Havre Line (Atlantic)
IOWA	1839	Packet	874	155- 6	35- 2	21-10	Havre Line (Atlantic)
ARGO	1841	Packet	967	161	36- 4	20- 6	Havre Line (Atlantic)
MONTEZUMA	1843	Packet	924	162	34- 6	20- 6	Black Ball Line (Atlantic)

Total tonnage of these 8 transatlantic packets..... 6,565 tons.

The total tonnage of the above 90 wood sailing vessels is 85,828 tons. These vessels can be generally subdivided into the following classes:

Type	No. of Vessels	Total Tonnage	Average Tonnage per Vessel
Packets	38	38,885	1,023
Clippers	18	21,736	1,208
General traders	23	23,312	1,014
Coastwise traders	11	1,895	172
Total	90	85,828	954

Several of these vessels designated as "general traders"—and, as a matter of fact, a substantial majority of them—were built for and at times used as packets. The only ships classified above as packets are those which for many years operated steadily in regular established packet lines, with sailings on a regular scheduled date. Some of the vessels designated as "general traders" (and in one or two cases as "packets") could be classified as "clippers" inasmuch as they were modeled and sparred as medium clippers and could come under the category of "reputed clippers."

These 90 Webb-built wood sailing vessels can be divided according to their spar, sail, and rigging plans as follows:

No. of Vessels	Rig	Total Tonnage	Average Tonnage per Vessel
72	Three-masted ships	80,125	1,113
7	Three-masted barks	3,808	544
5	Two-masted brigs	1,021	204
6	Two-masted schooners*	874	146
90		85,828	954

*These schooners were all fast and small sailing craft and far different from the big full-bodied fore-and-aft-rigged craft used in the American coastwise trade during the latter part of the nineteenth and the early years of the twentieth century.

The following table is a summary of vessels built by William H. Webb, 1836-1872:

	Number of Vessels	Total Tonnage
Merchant sailing vessels	90	85,828
Merchant steam vessels	30	49,285
Total merchant vessels—sail and steam*	120	135,113
Naval vessels**	6	20,750
Total	126	155,863

*Both divisions known to be incomplete because of loss or misplacing of records.
**Does not include W. H. Webb's activities for the U. S. Government during the Civil War.

As before stated, it has been said that records—evidently not entirely available in detail—show that "William H. Webb built 138 vessels, aggregating 177,872 tons." This stated figure of 177,872 tons, total tonnage, is believed to include displacement figures for naval vessels. If displacement figures were used for the naval vessels, the aggregate tonnage of the 126 vessels herein recorded would be 163,513 tons. *Note:* More recently discovered records of "Launching in New York in the Year 1854" show that the list of vessels built by Webb herein

set forth in detail is understated for that year to the extent of one schooner of 350 tons and one steamer (ferryboat) of 200 tons, a total of two vessels aggregating 550 tons *for that year alone,* which should be added to the before-stated list of vessels built by William H. Webb.

Wood Merchant and Naval Steam Vessels Built by William H. Webb, New York

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Description of Engine and Remarks	Owner or Consignee
1847	UNITED STATES	2,055	243	39- 4	31	Side-wheeler	C. H. Marshall et al., New York
1848	CALIFORNIA	1,057	200	33	20	Side-wheeler	Pacific Mail S.S. Co.
	(First steamship to round the Horn and enter the Golden Gate [San Francisco], Calif.)						
1848	PANAMA	1,087	200	34	20	Side-wheeler	Pacific Mail S.S. Co.
1848	TENNESSEE	1,250	210	34- 4	22	Side-wheeler	N. Y. & Carthagena S.S. Co., New York
1849	GOLIAH	333	145	25	11	Side-wheeler; vertical beam	Minturn & O., San Francisco
1850	ALABAMA	1,261	214	35- 5	22	Side-wheeler	S. L. Mitchell & Son, New York
1851	FLORIDA	1,261	214	35- 6	22	Side-wheeler	S. L. Mitchell & Son, New York
1851	GOLDEN GATE	2,067	265	40	30	Side-wheeler; oscillating	Pacific Mail S.S. Co.
1851	JAMES ADGER	1,152	215	32- 3	21	Side-wheeler	Spofford, Tileston & Co., New York
1852	AUGUSTA	1,310	220	35	21- 6	Side-wheeler	S. L. Mitchell & Son, New York
1853	GEORGE LAW	2,500	272	39- 2	29- 6	Side-wheeler	New York owners
	(Later named CENTRAL AMERICA.)						
1853	PELAYO	850	200	30- 6	14- 6	Side-wheeler; vertical beam	Pelayo
1853	SAN FRANCISCO	1,850	276	39-10	23- 6	Side-wheeler	Pacific Mail S.S. Co.
	(Marine press reports the launching by W. H. and Eckford Webb on May 26, 1854, of the 200-ton steamer UNION, built to be used as a ferry by the Fair Haven R.R. Co., which is not included in this list.)						
1855	ALEXANDER	331	145	25	11	Side-wheeler	Hutchinson, Kolh & Co., San Francisco
1855	AMERICA	544	170- 6	28- 4	12- 2	Side-wheeler	B. S. Saunders & O., Sitka
1855	ASTORIA	500	160	24- 6	12	Screw steamer	B. C. Saudert, San Francisco
1856	CUBA	820	200	30- 6	13	Side-wheeler	Pelayo, Pordo & Co., Havana
1856	WILLIAM H. WEBB	655	190	30- 2	12	Side-wheeler (towboat)	Chambers & Heiser, New York
	(W. H. Webb's book of plans of wooden vessels built by him says that during the Civil War this vessel "was fitted by the Rebels as a ram and employed in their defenses on the Mississippi River and proved formidable and an exceedingly fast vessel.")						
1857	HARRIETT LANE	600	180	30	12- 6	Revenue cutter	U. S. Treasury Dept.
1857	MOSES TAYLOR	1,372	246	34	20- 5	Side-wheeler; 2 beam engines	C. Vanderbilt, New York
1858	GUATEMALA	1,021	205	32	17	Direct 300 H.P.	Panama R.R. Co.
1858	JAPANESE	1,400	214	35- 8	17- 6	Steam corvette propeller	Imperial Russian Government
1859	GENERAL ADMIRAL	5,000	313- 7	54- 6	33- 7	Russian steam frigate	Imperial Russian Government
	(Displacement 7,000 tons.)						
1859	YORKTOWN	1,400	250	34	17	Side-wheeler	N. Y. & Virginia S.S. Co.
1861	CONNECTICUT	1,600	250	37- 6	22- 6	Side-wheeler	
	(W. H. Webb's book of plans of wooden vessels built by him says of the steamer CONNECTICUT: "Built for passenger business, New York to Savannah. Bought when new by the United States Government at the outbreak of the rebellion and converted into a war cruiser mounting several guns. Was a very handsome vessel. Proved an excellent sea boat, very fast, and was a great favorite. . . . Was later named the SOUTH AMERICA and ran as mail packet, New York to Brazil, and was the favorite vessel in the service.")						

(Continued on next page)

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Description of Engine and Remarks	Owner or Consignee
1861	CONSTITUTION	3,575	331	45	30	Beam engine 105 in. by 144 in.	Pacific Mail S.S. Co.
1862	GOLDEN CITY	3,642	341	44	30	Side-wheeler	Pacific Mail S.S. Co.
1862	RE D'ITALIA	4,250	283	55	33- 7	Screw ironclad ram frigate; 32 guns	Royal Italian Government
	(Displacement 6,000 tons. The RE D'ITALIA was the first ironclad steamer to cross the Atlantic Ocean.)						
1863	RE DON LUIGI DI PORTOGALLO (Displacement 6,000 tons.)	4,250	283	55	33- 7	Sister to RE D'ITALIA	Royal Italian Government
1863	SACRAMENTO	2,800	300	41- 6	28	Side-wheeler	Pacific Mail S.S. Co.
1864	HENRY CHAUNCEY	2,656	320	42- 3	27- 4	Side-wheeler	Pacific Mail S.S. Co.
1866	BRISTOL	2,300	370	47- 6	16	Side-wheeler	Long Island Sound steamboat
1866	DUNDERBERG	5,250	377- 4	72-10	22- 7½	Ironclad screw ram with four 15-in. and twelve 11-in. guns	Battleship sold to French and renamed ROCHAMBEAU
	(Displacement 7,200 tons. The largest and speediest ironclad and war vessel of her day. Sold by W. H. Webb to Emperor Napoleon III of France.)						
1866	PROVIDENCE	2,300	370	47- 6	16	Side-wheeler	Long Island Sound steamboat
1869	CHINA	3,836	363	46	31- 4	Side-wheeler	Pacific Mail S.S. Co.
1872	NEVADA	1,900	288	40	21	Side-wheeler	Pacific Mail S.S. Co.
Total of 36 vessels		70,035 tons consisting of 30 merchant vessels of 49,285 tons (including one towboat of 655 tons) and 6 naval vessels of 20,750 tons (including one revenue cutter of 600 tons)					

In addition to shipbuilding activities, William H. Webb was one of the chief backers and dominating spirits behind the Pacific Mail Steamship Company, the Panama Railroad Company, and many other steamship and transportation companies.

America's greatest wood shipbuilder—a designer, constructor, and businessman of outstanding merit—died October 30, 1899, when eighty-three years of age and twenty-one years after his retirement from the shipbuilding business. During his life, William H. Webb was connected for forty-one years with the designing and building of ships: four years as an apprentice, five years as a draftsman, foreman, shipwright, and subcontractor, and thirty-two years as the responsible proprietor of a shipyard as well as its technical head and practical constructor. Webb advocated building ships to carry big cargoes at a good speed and to last well—twenty years or so. McKay preached sail, speed, and capacity through size, not through fullness of model, and he gave but little thought to the cost of repairs and the total expense of operation, with maintenance and amortization, in relation to total annual net revenue. A great deal has been written about the ships designed and built by Donald McKay at East Boston, Mass., and much publicity given to them. However, it should be borne in mind that McKay's brilliant career was very short-lived and that he failed to produce any type of eminently successful vessel outside of the extreme clipper, which operated in boom days when freight receipts were abnormally high. Even at the peak of McKay's success and at the time of his most prolific activities, the leading shipbuilder and designer in the United States of America was William H. Webb, of New York. McKay, at the height of his career, talked "clipper" and was interested only in "clippers" and for many years would build nothing else. In this respect, he was stubborn and had a "one-track mind." When McKay was self-satisfied and boastful of his clipper building business, Webb said, "This demand for extreme speed, with very fine models oversparred, is a flash in the pan." Webb further affirmed that sanity would return "and cold common sense reassert itself, for, after all, ships are built and operated to make money." Therefore, when McKay was closing down his East Boston shipyard, Webb studied deeply the possibility of merchant steamers built of wood to carry passengers, mail, and cargo and wood warships as well as fast and commodious wood sailing packets and general

traders for both ocean and coastwise trade. He declared that he was interested in ships—"anything that will float and that can be used to make money or serve some useful or necessary purpose."

The following table gives a comparative record of the number and types of vessels constructed by William H. Webb and Donald McKay during the period of 1850-1857 inclusive (i.e., from the California Gold Rush to the depression and financial panic that came in 1857 as a reaction to the unwarranted boom of 1850-1853):

	William H. Webb					Donald McKay				
Year	Clippers	Regular Packets	General Traders	Small Coastal Sail	Steamers	Clippers	Regular Packets	General Traders	Small Coastal Sail	Steamers
1850	2	2	2	—	1	1	3	2	—	—
1851	5	2	—	1	3	4	—	—	—	—
1852	2	—	2	2	1	3	—	—	—	—
1853	3	—	1	1	3	5	—	—	—	—
1854	—	3	4	—	—	7	—	—	1	—
1855	—	1	1	1	3	2	—	—	—	—
1856	2	—	3	—	2	6	—	1	—	—
1857	1	—	3	—	2	—	—	—	—	—
Total for eight years	15	8	16	5	15	28	3	3	1	—
Total for eight-year period:						Total for eight-year period:				
Sail					44	Sail				35
Steam					15	Steam				—
Sail and steam					59	Sail and steam				35

From 1838 *to the End of the* 1850's, *New York Shipbuilders Take the Lead in Launching Sharp Ships*

Outstanding contributions in the forties to the New York-owned fleet of China packets and early tea clippers built by New York rivals of W. H. Webb were the Smith & Dimon fast trio consisting of the *Rainbow* (752 tons), built in 1845, the *Sea Witch* (908 tons), built in 1846, both for Howland & Aspinwall, New York, and the *Memnon* (1,068 tons), built in 1847 for F. A. Delano, New York; also the Brown & Bell and Jacob Bell famous trio consisting of the *Houqua* (583 tons), built in 1844, the *Samuel Russell* (957 tons), built in 1847, and the *Oriental* (1,003 tons), built in 1849, all for A. A. Low & Bro., New York. It has been well and truly said, "Nowhere in the world were ships being built in the late forties which possessed in anything like equal degree the combined speed, capacity, and seagoing qualities of the fast New York-China packets, traders, or early clippers designed and built by Webb, Smith, and Brown, of New York." In addition to Webb, Brown & Bell, and Smith & Dimon, several other New York builders, such as the Westervelts and Perrine, Patterson & Stack, were turning out a number of sharp packets in the forties and mid-century. The fast *Jamestown* of 1,151 tons was built by Perrine, Patterson & Stack in 1847 for Slate, Gardner & Company, New York. (This ship, of pre-clipper design and type, arrived in New York May 15, 1854, after a run of 91 days from Manila.)

During the clipper ship boom in the early fifties, the Williamsburg firm of Perrine, Patterson & Stack dissolved, and each member went into business for himself. Jabez Williams, also of Williamsburg, continued his building operations and launched some fine ships, as did Isaac C. Smith, of Hoboken, N.J. Sneeden & Whitlock established a yard at Greenpoint, Long Island, and this firm rebuilt Donald McKay's *Great Republic,* damaged by fire in 1853 when loading for her maiden voyage. Thomas Collyer constructed a number of fine vessels, including several "very smart clipper barks," and early in the fifties many other yards built one or two vessels. Occasionally, Staten Island shipyards produced sizable craft. On Long Island, Port Jefferson, Greenpoint, and Sag Harbor had important shipbuilding operations from early days. Sag Harbor, with its whaling interests, led in size and number of vessels constructed. Among its builders were Willets & Bishop, Benjamin Wade, and Henry R. Harris.

New shipbuilding firms were established during the fifties to meet the demand for clippers and steamers. Before 1840, New York took the lead from all other communities in the building of vessels for, first, the packet service (transatlantic and coastal) and, later, the tea trade. It has been said that, from the time that the *Roscius* (1,030 tons) was launched in 1838 by Brown & Bell for the New York-Liverpool Dramatic Line until toward the close of 1850, "New York launched more sharp ships which eventually won high honors than all other ports combined. What is more important perhaps, she appears to have contributed more toward working out the new principles of design which were destined to make obsolete a majority of the earlier theories." Possibly, the fine performance of Smith & Dimon's transatlantic sailing packet *Independence* of 732 tons in the New York-Liverpool Blue Swallowtail (or Fourth) Line heralded the day of faster, bigger, and better sailing ships, but at the commencement of the fifth decade of the nineteenth century New York was supreme in the production of good fast ships. It produced more first-class transatlantic and China packets than all other places combined between 1840 and 1850. In this decade as well as in the one that followed it, William H. Webb stands out as a leading figure among the wood shipbuilders not only of New York but also of the world. In addition to designing and building the fastest transatlantic and coastal packets of the times, Webb, in the years 1841 to 1844, laid down successively the *Helena* (598 tons), *Cohota* (691 tons), and *Panama* (612 tons), all for N. L. & G. Griswold, of New York. During 1844, he also built the *Montauk* (505 tons) for William S. Wetmore, of New York. All the ships were fast and exceptionally burdensome, and several Webb-built vessels, including converted packets, established new records on the China run.

The following tables give a list of the clippers constructed by New York shipbuilders during the clipper ship decade and the record of the stated performance of each ship and of the ships of each New York builder on westbound passages around Cape Horn to the Golden Gate during the so-called clipper ship era, 1850-1860 inclusive:

				Westbound Passages around the Horn to California, 1850-1860			
					Time in Days		
Year Built	Name	Registered Tonnage	Owner	Number	Average	Shortest	Longest
	A. *By William H. Webb* (including one clipper credited to Eckford Webb)						
1850	CELESTIAL	860	Bucklin & Crane, New York	4	116	104	133
1850	UNIVERSE	1,297	Williams & Guion, New York	—	—	—	—
1851	CHALLENGE	2,007	N. L. & G. Griswold, New York	3	115⅓	109	120
1851	COMET	1,836	Bucklin & Crane, New York	7	118⁶⁄₇	103	142
1851	GAZELLE	1,244	Taylor & Merrill, New York	4	125½	114	135

(Continued on next page)

Year Built	Name	Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Number	Time in Days		
					Average	Shortest	Longest
1851	INVINCIBLE	1,769	Jas. W. Phillips, New York	2	112½	110	115
1851	SWORDFISH	1,036	Barclay & Livingston, New York	4	107¾	94	117
1852	AUSTRALIA	1,447	Williams & Guion, New York	—	—	—	—
1852	FLYING DUTCHMAN	1,257	Geo. B. Daniels et al., New York	4	109	102	124
1853	FLYAWAY	1,274	Schiff Bros. & Co., New York	3	115⅔	106	125
1853	SNAP DRAGON (bark)	619	Wakeman, Dimon & Co., New York	1	126	126	126
1853	YOUNG AMERICA	1,961	Geo. B. Daniels, New York	4	125½	107	174 (dismasted)
1854	STING RAY (Eckford Webb)	985	Wakeman & Dimon, New York	1	133	133	133
1856 (or 1857)	BLACK HAWK	1,175	Bucklin & Crane, New York	3	122⅔	107	142
1856	INTREPID	1,173	Bucklin & Crane, New York	2	138½	132	145
1856	UNCOWAH	988	Wakeman, Dimon & Co., New York	2	129½	116	143
1850-1856	Sixteen vessels totaling 20,928 registered tons—an average of 1,308 tons per ship.....			44	119.3	94	174

The average length of passage of the *Young America* for her first three voyages in 1853-1856 was 109⅓ days. On her disastrous passage in 1859, she experienced violent gales, was dismasted, and put into Rio de Janeiro; after necessary repairs were completed, she made the run from Rio to San Francisco in 69 days, the second best passage on record between these ports. Arranging the sailing records around the Horn westbound of the Webb-built extreme and medium clippers by years when the passages were made, we obtain the following data:

Year	Number of Passages	Average Length of Passages in Days	Year	Number of Passages	Average Length of Passages in Days
1850	2	119	1856	4	123
1851	5	105⅚	1857	4	122
1852	3	117	1858	3	120⅓
1853	7	114⅙	1859	3	153
1854	7	120⅙	1860	2	110
1855	4	116¾	11-year period	44	119.3

Considering the length of all passages of the Webb-built clippers in relation to the year that the ships were built, we obtain the following comparative record:

Year Built	Number of Passages of All Ships 1850-1860	Average Length of Passages in Days	Year Built	Number of Passages of All Ships 1850-1860	Average Length of Passages in Days
1850	4	116	1853	8	121.9
1851	20	116.8	1854	1	133
1852	4	124	1857	7	129.1

Year Built	Name	Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Number	Time in Days		
					Average	Shortest	Longest
			B. *By "The Westervelts"*				
			1. *Westervelt & Mackey*				
1851	HORNET	1,427	Chamberlain & Phelps, New York	6	129⅔	106	155
1851	MERCURY	1,351	Boyd & Hincken, New York	—	—	—	—
1851	N. B. PALMER	1,400	A. A. Low & Bro., New York	3	119	106	130
Total of three ships.....		4,178		9	126.1	106	155
			2. *Aaron Westervelt*				
1851	ARAMINGO	760	Chamberlain & Phelps, New York	2	135	133	137
			3. *Jacob A. Westervelt*				
1851	EUREKA	1,041	Chambers & Heiser, New York	4	139¼	120	174
1851	GOLDEN GATE	1,341	Chambers & Heiser, New York	3	114⅔	104	126
1852	CONTEST	1,099	A. A. Low & Bro., New York	3	113	100	129
1852	GOLDEN CITY	810	Chambers & Heiser, New York	5	123⅘	108	144
1853	GOLDEN STATE	1,363	Chambers & Heiser, New York	3	135⅓	125	153
1853	KATHAY	1,438	Goodhue & Co., New York	2	123	121	125
Total of six ships.....		7,092		20	125.55	100	174
			4. *Westervelt & Sons*				
1853	RESOLUTE	787	A. A. Low & Bro., New York	1	144	144	144
			5. *Daniel & Aaron Westervelt*				
1853	SWEEPSTAKES	1,735	Chambers & Heiser, New York	4	111¼	95	125
1851-1853	Twelve Westervelt-built vessels totaling 14,552 registered tons—an average of 1,213 tons per ship.....			36	125.14	95	174

The sailing records of the twelve Westervelt-built clippers around the Horn westbound during each year of the period 1850-1860 inclusive are as follows:

Year	Number of Passages	Average Length of Passages in Days	Year	Number of Passages	Average Length of Passages in Days
1851	4	137¼	1856	3	109⅓
1852	6	121⅙	1858	1	144
1853	8	122⅝	1859	3	118⅓
1854	6	128½	1860	2	132½
1855	3	128⅓	During decade	36	125.14

Considering the length of all passages of the Westervelt-built clippers in relation to the year that the ships were built, we obtain the following record:

Year Built	Number of Passages of All Ships 1851-1860	Average Length of Passages in Days	Year Built	Number of Passages of All Ships 1851-1860	Average Length of Passages in Days
1851	18	128.1	1853	10	124.1
1852	8	119.8	Total	36	125.14

Year Built	Name	Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Number	Time in Days		
					Average	Shortest	Longest
			C. By "The Bells"				
			1. Jacob Bell				
1850	WHITE SQUALL	1,119	Wm. Platt & Sons, Philadelphia	3	119	110	126
				In 1854 and again in 1855 started passages and was unable to proceed to destination.			
1851	TRADE WIND	2,045	Booth & Edgar et al., New York	3	116⅔	103	125
1852	MESSENGER	1,350	Slate & Co., New York	4	123¾	122	127
Total of three ships.....		4,514		10	120.2	103	127
			2. A. C. Bell				
1852	JACOB BELL	1,381	A. A. Low & Bro., New York	3	120⅔	117	123
1853	NORTH WIND	1,041	Grinnell, Minturn & Co., New York	2	126½	115	138
1853	SAN FRANCISCO	1,307	Rich, Elam, et al., New York	No completed passage; sunk off San Francisco.			
1854	ADELAIDE	1,831	Thos. Wardle, New York	4	124½	115	133
Total of four ships.....		5,560		9	123.67	115	138
1850-1854	Seven Bell-built vessels totaling 10,074 registered tons—an average of 1,439 tons per ship.....			19	121.84	103	138

The sailing records of the seven Bell-built clippers around the Horn westbound during each year of the period 1850-1860 inclusive are as follows:

Year	Number of Passages	Average Length of Passages in Days	Year	Number of Passages	Average Length of Passages in Days
1850	1	126	1855	2	118.5
1851	1	122	1856	2	119
1852	4	115	1857	1	127
1853	5	125.6	1858	1	133
1854	1	127	1860	1	117

During the years 1850-1860 inclusive, Bell-built clippers made nineteen westbound passages averaging 121.84 days.

Considering the length of all passages of the Bell-built clippers in relation to the year that the ships were built, we obtain the following data:

Year Built	Number of Passages of All Ships 1850-1860	Average Length of Passages in Days	Year Built	Number of Passages of All Ships 1850-1860	Average Length of Passages in Days
1850	3	119	1853	2	126½
1851	3	116⅔	1854	4	124½
1852	7	127⅜	Total	19	121.84

Year Built	Name	Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860: Number	Time in Days: Average	Shortest	Longest
			D. *By Roosevelt & Joyce*				
1853	DAVID BROWN	1,715	A. A. Low & Bro., New York	3	109⅓	99	126
1853	RAPID	1,115	Jas. Bishop & Co., New York	2	181	137	225
1854	MONARCH OF THE SEAS	1,971	Lawrence Giles & Co., New York	—	—	—	—
1855	TITAN	1,985	Daniel C. Bacon, Boston, Mass.	—	—	—	—
1856	FAIRY (barkentine)	629	Gordon, Talbot & Co., New York	—	—	—	—
1856	GLAD TIDINGS	898	Wm. Nelson & Son, New York	—	—	—	—
1857	HOTSPUR	862	Frank Hathaway et al., New Bedford, Mass.	—	—	—	—
1853-1857	Seven vessels totaling 9,175 registered tons—an average of 1,311 tons per ship			5	138	99	225
			E. *By Perrine, Patterson & Stack* (with one ship built by Wm. Perrine)				
1851	EAGLE	1,296	Henry Harbeck & Co., New York	4	115¾	104	131
1851	INO	895	Siffkin & Ironsides, New York	2	125	116	134
1851	JOHN STUART	1,654	Mumford, Smith, et al., New York	4	132¾	124	136
1852	ANTELOPE	1,186	Henry Harbeck & Co., New York	4	126¼	97	155
1853	FLYING CLOUD (bark)	350	Henry Harbeck & Co., New York	—	—	—	—
1853	WIDE AWAKE	758	Siffkin & Ironsides, New York	1	113	113	113
1854	FRANCIS A. PALMER (built by Wm. Perrine at Greenpoint, L. I.)	1,426	E. D. Hurlburt, New York	1	164	164	164
1851-1854	Seven vessels totaling 7,565 registered tons—an average of 1,081 tons per ship			16	126.6	97	164
			F. *By Jabez Williams, Williamsburg, N. Y.*				
1850	ECLIPSE	1,223	Geo. Buckley et al., New York	3	118⅓	110	126
1852	SIMOON	1,436	Benj. A. Mumford & Co., New York	1	132	132	132
1852	TORNADO	1,802	W. T. Frost & Co., New York	4	121¼	110	137
1850-1852	Three vessels totaling 4,461 registered tons—an average of 1,487 tons per ship			8	121.5	110	137

(Continued on next page)

Year Built	Name	Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Number	Time in Days		
					Average	Shortest	Longest
			G. By Isaac C. Smith, Hoboken, N. J.				
1851	HURRICANE	1,608	C. W. & H. (or A.) Thomas, New York	4	124½	112	142
1853	GRAVINA	818	Howes & Co., New York	—	—	—	—
1854	TEJORCA (or TEJUCA; bark)	470	Wm. A. Sale, Jr., New York	—	—	—	—
1851-1854	Three vessels totaling 2,896 registered tons—an average of 965 tons per ship			4	124.5	112	142
			H. By Thomas Collyer				
1853	PANAMA	1,139	N. L. & G. Griswold, New York	3	117⅓	114	121
1856	ROEBUCK (bark)	456	Reynolds & Cushman, New York	1	152	152	152
1857	DAWN (bark)	387	Geo. Savory et al., New York	—	—	—	—
1853-1857	Three vessels totaling 1,982 registered tons—an average of 661 tons per ship			4	126	114	152
			I. By Smith & Dimon				
1850	NICHOLAS I	596	Weston, Goodhue, et al., New York	—	—	—	—
1850	MANDARIN	776	Goodhue & Co., New York	3	121⅔	116	126
1850	Two vessels totaling 1,372 registered tons—an average of 686 tons per ship			3	121⅔	116	126
			J. By Willets & Bishop, Sag Harbor, L. I.				
1852	STORM (bark)	545	Slate, Gardner & Howell, New York	1	111	111	111
1852	LINE GALE (bark)	536	New York	—	—	—	—
1852	Two vessels totaling 1,081 registered tons—an average of 540 tons per ship			1	111	111	111
			K. By Messrs. Lupton, Greenpoint, L. I.				
1855	BLACK SEA	791	Funch & Meinke, New York	—	—	—	—
			L. By George Steers, Williamsburg, N. Y.				
1854	SUNNY SOUTH	702	Napier, Johnson & Co., New York	1	143	143	143
			M. By S. G. Bogert				
1855	ZEPHYR (bark)	534	Chamberlain & Phelps, New York	1	168	168	168
			N. Kingston, N. Y.				
1852	MESSENGER BIRD (bark)	419	Francis Danielson, Boston, Mass.	—	—	—	—

Recapitulation of New York-built Clipper Ships, 1850-1857 Inclusive

Name of Builder	Number of Clippers Built	Years	Total Registered Tonnage	Average Tonnage per Ship	For New York Owners: Number of Ships	For New York Owners: Total Registered Tonnage	Westbound Passages around the Horn to California, 1850-1860: Number	Time in Days: Average	Time in Days: Shortest	Time in Days: Longest
William H. Webb	16	1850-1856	20,928	1,308	16	20,928	44	119.3	94	174
The Westervelts	12	1851-1853	14,552	1,213	12	14,552	36	125.1	95	174
Bell (Jacob and A. C.)	7	1850-1854	10,074	1,439	6	8,955	19	121.8	103	138
Roosevelt & Joyce	7	1853-1857	9,175	1,311	5	6,328	5	138	99	225
Perrine, Patterson & Stack	7	1851-1854	7,565	1,081	7	7,565	16	126.6	97	164
Jabez Williams	3	1850-1852	4,461	1,487	3	4,461	8	121.5	110	137
Isaac C. Smith, Hoboken, N. J.	3	1851-1854	2,896	965	3	2,896	4	124.5	112	142
Thomas Collyer	3	1853-1857	1,982	661	3	1,982	4	126	114	152
Smith & Dimon	2	1850	1,372	686	2	1,372	3	121.7	116	126
Willets & Bishop, Sag Harbor, L. I.	2	1852	1,081	540	2	1,081	1	111	111	111
Lupton, Greenpoint, L. I.	1	1855	791	791	1	791	—	—	—	—
George Steers	1	1854	702	702	1	702	1	143	143	143
S. G. Bogert	1	1855	534	534	1	534	1	168	168	168
Kingston, N. Y.	1	1852	419	419	—	—	—	—	—	—
Total of fourteen builders	66	1850-1857	76,532	1,160	62	72,147	142	123.6	94	174

Some of the early clippers and ships not classed as clippers built in New York during the five years (1845-1849 inclusive) preceding the clipper shipbuilding decade of 1850-1859 inclusive did some excellent sailing not only in the U.S.A.-Orient trade, for which they were built, but also in Cape Horn passages to California and in the China-Britain tea trade, which was opened up to American and foreign vessels at the mid-century. The following table is a representative list of eleven early clippers and fast sailers of a transitional model, design, and sail plan launched by New York shipyards during the years 1845-1849 inclusive, to which have been added the four outstanding early clippers *Eclipse, Mandarin, White Squall,* and *Celestial,* built in New York in 1850 by four different builders for four different owners:

Year Built	Name	Registered Tonnage	Builder	Registered Dimensions in Feet: Length	Beam	Depth	Owner
1845	RAINBOW	752	Smith & Dimon	159	32	18.3	Howland & Aspinwall, New York
1846	SEA WITCH	908	Smith & Dimon	170.2	34	19	Howland & Aspinwall, New York
1847	MEMNON I	1,068	Smith & Dimon	170	36	20	F. A. Delano, New York
1847	SAMUEL RUSSELL	957	Brown & Bell	173.5	34.5	20	A. A. Low & Bro., New York
1847	WISCONSIN	925	New York	157	39	21	B. A. Mumford, New York
1847	JAMESTOWN	1,151	Perrine, Patterson & Stack	176.2	37.2	22.8	Slate, Gardner & Co., New York

(Continued on next page)

Year Built	Name	Registered Tonnage	Builder	Registered Dimensions in Feet			Owner
				Length	Beam	Depth	
1848	ROVER (bark)	358	Jacob Bell	113	26.5	13	Jacob Bell, New York
1849	GREENPOINT (bark)	500	Jabez Williams	131.7	28.8	17.5	Thos. Wardle, New York
1849	ORIENTAL I	1,003	Jacob Bell	185	36	21	A. A. Low & Bro., New York
1849	MECHANIC'S OWN	541	Bishop & Simonson	128.2	30.6	17	An association of mechanics
1849	MARIA	397	Isaac C. Smith, Hoboken, N. J.	127.3	25.8	13.1	Chas. W. Swift, New York
1850	ECLIPSE	1,223	Jabez Williams	195	36.7	21.5	Geo. Buckley, New York
1850	MANDARIN	776	Smith & Dimon	151.5	33.5	19.2	Goodhue & Co., New York
1850	WHITE SQUALL	1,119	Jacob Bell	190	35	21	Wm. Platt & Sons, Philadelphia
1850	CELESTIAL	860	William H. Webb	158	34	19	Bucklin & Crane, New York

Eleven of the vessels enumerated in the preceding comparative list of clippers and fast sailers, built in New York during the years 1845-1850 inclusive, made one or more westbound passages around Cape Horn following the California Gold Rush (which commenced during the fall of 1848) and during the first half of the fifties. The following statement records the comparative performance of these New York-built early clippers and fast sailers in the California service:

Year Built	Name	Registered Tonnage	Years in Cape Horn Trade	Passages Westbound around the Horn to San Francisco			
				Number	Time in Days		
					Average	Fastest	Slowest
1849	ORIENTAL I	1,003	1853	1	101	101	101
1846	SEA WITCH	908	1850-1852	3	105	97	110
1847	SAMUEL RUSSELL	957	1850-1855	4	113.2	107	119
1850	ECLIPSE	1,223	1851-1853	3	117.7	109	125
1850	WHITE SQUALL	1,119	1850-1853	3	118.7	110	125
1850	MANDARIN	776	1850-1853	3	121.7	116	126
1847	JAMESTOWN	1,151	1852	1	127	127	127
1847	MEMNON I	1,068	1849-1850	2	130.5	122	139
1847	WISCONSIN	925	1850-1853	3	135.7	118	168
1849	MECHANIC'S OWN	541	1851	1	150	150	150
1849	GREENPOINT (bark)	500	1850	1	199	199 (via Valparaiso)	199
		Total and averages.....		25	123½	97	199

Three of the above vessels claimed to have established speed records between North Atlantic ports and San Francisco or any North Pacific port. They were (1) the *Memnon I,* built by Smith & Dimon in 1847, which passed through the Golden Gate on August 28, 1849, after a run of 122 days "net sailing"; (2) the *Samuel Russell,* built by Brown & Bell in 1847, which undoubtedly established a record when she reached San Francisco on May 6, 1850, 111

days out from New York, after a claimed passage of 109 days; (3) the *Sea Witch,* built by Smith & Dimon in 1846, which entered San Francisco Harbor 79 days after the record-making passage of the *Samuel Russell* was completed (i.e., on July 24, 1850), 102 days after custom-house clearance in New York (on April 13), and after a generally accepted passage around the Horn from New York to San Francisco (with a scheduled stop at Valparaiso with freight) of only 97 days at sea.

The *Oriental I,* built by Jacob Bell, of New York, in 1849, was a historic vessel, as she did more to revolutionize British shipbuilding than any sailing ship built in the nineteenth century. This fast ship, which won high laurels in the oriental trade, made only one run in the California service, but that was an outstandingly fast passage westbound of only 101 days in 1853. The *Sea Witch* and *Samuel Russell* were not built for the California trade, and they were too small for the run; nevertheless, they were record-makers in this trade and together negotiated seven complete passages around the Horn westbound during the years 1850-1855. Their average was only 109¾ days (fastest, 97 days; slowest, 119 days), a performance that only a very few extreme and medium clipper ships of very much larger size and power, built four to ten years later expressly for this trade, could equal. The *Sea Witch* made phenomenal runs in the Cape Horn service, as she did over all courses of the world's Seven Seas on which she sailed during her record-making career; but the combined record in the Cape Horn run of the New York ships of over 925 tons built during 1847-1850—and including the *Sea Witch* of 908 tons and the little *Mandarin* of only 776 tons—is outstanding. These eight fast sailers made twenty westbound passages around the Horn averaging only 116½ days, with the length of the fastest runs varying from a minimum of 97 days to a maximum of only 127 days, which was amazing, consistently fast and uniform sailing.

Five of these early New York clipper (and pre-clipper) ships made westbound runs of 110 days and better, and only one failed to complete a started voyage. The *White Squall,* built by Jacob Bell in 1850, was oversparred and overcanvased. She made three fine voyages around the Horn in the years 1850-1853 averaging 118⅔ days (best passage, 110 days), but on her fourth attempt she sailed from New York for San Francisco in bad winter weather on December 29, 1854. On the 31st, she suffered damage in a gale, and four men were severely injured; so she returned to New York. Starting out again rigged as "a three-masted brig" (an unexplained, unusual designation), she cleared New York on February 17, but was dismasted during a heavy gale in the Atlantic and put into Rio de Janeiro, where she was re-rigged as a bark. Surprisingly, she did not continue on to San Francisco and deliver her cargo as it was common for vessels to do in a similar plight, but returned to New York. In this connection, it is well to note that almost every clipper ship, sometime in her sailing career, was compelled to make port en route to California for major repairs to hull, spars and canvas. Such famous and successful record-making clipper ships as the *Flying Cloud, Young America,* etc., suffered experiences like that of the *White Squall,* but they continued their voyages after repairs were made and were saved the ignominy of quitting and acknowledged failure. Captain Lockwood had command of the *White Squall* on the maiden voyage and Captain Kennedy on her second and third highly successful passages, but it is interesting and significant that the identity of the captain on the fourth attempted voyage is unknown. However, it is possible that the skipper of the *White Squall* was not responsible for turning back; he may have been arbitrarily ordered to do so by the owners of the ship.

The performances of these early clippers and fast sailers, launched from New York shipyards during the years 1845-1850 inclusive, can be well gauged by a consideration of the length of passage of their around-the-Horn westbound runs from New York to San Francisco with the record and claimed record passages made by sailing ships between these two ports from the run of the *Sea Queen* early in 1848 to the unquestioned records of the *Samuel Russell, Sea Witch, Surprise,* and *Flying Cloud* established from May 6, 1850, to August 31, 1851. The fast sailers of pre-clipper design, such as the *Samuel Russell* (launched 1847), and the clippers

built up to the time of the *Flying Cloud* (launched 1851) lowered by some forty days the actual time of passage westbound—from over 130 days—and in a little over fifteen months lowered the time around the Horn from 111 days (claimed 109 days) to 90 days (claimed 89 days), a drop of some twenty days.

The following statement shows the fast record and claimed record passages around the Horn to San Francisco from the spring of 1848 to the final all-time record passage of the *Andrew Jackson* in the early months of 1860:

Name of Ship	Arrived San Francisco	Around the Horn Westbound Length of Passage in Days	Comment
SEA QUEEN	Apr. 30, 1848	138	Claimed 125 days net.
GREY EAGLE	May 18, 1849	147	Claimed 117 days net; also 113 days net.
GREY HOUND	June 3, 1849	144	Claimed 119 days net; also 116 days net.
ARCHITECT	June 28, 1849	161	Claimed 127 days net.
MEMNON	Aug. 28, 1849	139	Claimed 122 days net.
ARGONAUT	Mar. 18, 1850	139	Claimed 133 days net.
REINDEER	Apr. 2, 1850	131	Claimed 122 days net and a record.
SAMUEL RUSSELL	May 6, 1850 (an unquestioned record)	111	Claimed 109 days and a record.
SEA WITCH	July 24, 1850 (an unquestioned record)	97	Ninety-seven days at sea, but a scant 102 days, port to port (Apr. 13-July 24), as a scheduled stop was made en route at Valparaiso for freight and passengers.
SURPRISE	Mar. 19, 1851 (an unquestioned record)	96 days 15 hours	Sailed from New York Dec. 13, 1850, and reached San Francisco Mar. 19, 1851. Elapsed time, 96 days.
FLYING CLOUD	Aug. 31, 1851 (an unquestioned record)	90	Claimed 89 days 21½ hours.
FLYING CLOUD	Apr. 20, 1854	90-91	Claimed 89 days 8 hours and a record.
ANDREW JACKSON	Mar. 24, 1860 (a record, but recently challenged by partisan friends of the FLYING CLOUD)	89	Claimed 89 days 4 hours and a record.

Four early clippers and fast sailers launched from New York shipyards (1847-1850) did some fine and record-making sailing in the years 1850 and 1851 between China ports and London loaded with tea for the British home market. The first American ship to enter this trade after the British bars (which had excluded foreign ships from engaging in this trade) were let down was the *Oriental I,* built by Jacob Bell, of New York, in 1849. She made a record run and history. The *Oriental* sailed from Whampoa on August 27, 1850, and arrived at London on December 4, 1850, after a wonderfully fast and record-making passage of 99 days. She arrived at London fully two or three weeks before she was expected, and her quick passage created a furor. The *Wisconsin,* built at New York in 1847 and no clipper, sailed from Whampoa December 4, 1850, and arrived at London March 13, 1851, ninety-nine days after the arrival at that port of the *Oriental.* Considering her fullness of model, this passage of 99 days made by the *Wisconsin* was a more wonderful sailing performance than that of the clipper *Oriental.* The *White Squall* sailed from Whampoa September 8, 1851, was anchored two days off Anjer, and reached the Isle of Wight on December 16, 1851, 99 days out and after a passage of 97 days net under canvas. The small 860-ton clipper ship *Celestial,* built by William H. Webb, New York, in 1850, is credited with the fastest tea passage from China to England of any of these early clippers and fast sailers. There is, however, an indefiniteness about the clearance and sailing time from Foochow. She is said to have sailed on October 27, 1853, for London, where she arrived January 31, 1854, and reported her passage as one of 96 days, which seems correct. Chinese reports say that the *Celestial* was at Foochow on November 4, 1853, and if she reached London on January 31, 1854 (which date is verified by official records

of entry), she must have made the run from China to England in 88 days—a performance never at any time claimed by either the command or owners of the ship.

Seven of the eleven vessels enumerated in the preceding list of clippers and fast sailers, built in New York during the years 1845-1850 inclusive, made one or more passages in the China-Britain tea trade, and the following statement records the comparative performances of these New York-built ships in this service. The voyages originated at Whampoa (four), Shanghai (three), Foochow (two), Canton (one), and Woosung (one) and—as far as these sailing records are concerned—ended at London (seven), Deal (two), Liverpool (one), and Isle of Wight (one).

Year Built	Name	Registered Tonnage	Years in China-Britain Tea Trade	Passages Eastward around Cape of Good Hope to London (Deal)			
				Number	Time in Days		
					Average	Fastest	Slowest
1850	WHITE SQUALL	1,119	1851	1	99	99 (reported 97 days net)	99
1847	WISCONSIN	925	1850 1852	2	112	99	125
1849	ORIENTAL I	1,003	1850-1851	2	113.5	99	128
1850	CELESTIAL	860	1852-1857	3	123.3	96 (reported)	137
1847	JAMESTOWN	1,151	1851	1	127	127	127
1850	ECLIPSE	1,223	1851	1	135	135	135
1849	GREENPOINT (bark)	500	1851	1	171	171	171
	Total and averages.....			11	123	96	171

Whereas all fifteen of the New York-built fast sailers and early clippers enumerated as constructed during the years 1845-1850 inclusive had some good and outstanding sailing performances to their credit, six of the ships, i.e., *Rainbow, Sea Witch, Memnon,* and *Mandarin* (built by Smith & Dimon), *Oriental* (built by Jacob Bell), and *Eclipse* (built by Jabez Williams), made nine world sailing records over the Seven Seas during the years 1846-1856. Of these records, the four Smith & Dimon early clippers made seven, three of which were captured by the amazing *Sea Witch.* The *Rainbow* (752 tons) lowered the round voyage record, New York-China port (Canton)-New York, in the winter of 1845-1846 to 6 months 16 days. The *Memnon* (1,068 tons) made a transatlantic crossing from New York to Liverpool in 14 days 8 hours and a transpacific crossing from San Francisco to Whampoa, China, in 36 days. The *Mandarin* (776 tons) ran from New York to Melbourne in only 70 days, and the *Sea Witch* (908 tons)—the most famous vessel designed and constructed by Smith & Dimon—made speed records on the Indian, Atlantic, and Pacific Oceans and on voyages rounding both the Cape of Good Hope and Cape Horn. The *Eclipse* (1,223 tons), among other fast passages, made a run of 62 days from New York to Valparaiso, Chile. The *Oriental* (1,003 tons), launched by Jacob Bell in 1849 and in many respects the most important "clipper" of her day, made some fast historic voyages in the China-Britain tea and other trades and in her first year of service ran from New York to Hong Kong in 81 days.

A good line on the active shipbuilders in New York immediately after the boom clipper shipbuilding year of 1853 and the class of vessels that they were constructing is given by the following list of New York shipbuilders and their launchings during the year 1854 as prepared by John W. Griffiths and published in a marine journal, New York, early in 1855. (The statement says that the builders Abram Bell, Levine Burtis, J. A. Westervelt & Son, and Aaron Westervelt "furnished no list," but it does not say whether these firms built or did not build any vessels during the year.)

Builder, Name of Vessel, Type, and Tonnage	Dimensions in Feet			Date of Launching 1854	Owner	Trade
	Length	Beam	Depth			
A. *Thomas Collyer*						
HANDY KING (brig; 500 tons)	120	31	16	Feb. 15	Russell H. Post	Mobile
KNICKERBOCKER (ship; 1,000 tons)	165	34	21½	Apr. 22	Stanton & Thomas	New Orleans
J. D. SECOR (steam tug; 140 tons)	95	21	7	Mar. 21	Collyer and others	Towing
GLEN COVE (steamboat; 467 tons)	200	32	8½	July 20	Glen Cove	N. Y. & Glen Cove
B. *William Collyer*						
CAHAWBA (steamship; 2,200 tons)	—	—	—	Mar. 16	N. Y., Mobile & Havana	—
Dredge machine (80 tons)	—	—	—	Apr.	—	—
R. L. MABIE (steamboat; 148 tons)	—	—	—	May 20	—	Towing
MERCURY (steamboat; 208 tons)	—	—	—	June 15	Livingston & Rogers	—
C. *Capes & Allison*						
C. G. WATERBURY (schooner; 200 tons)	—	—	—	—	W. Cook	—
MARSHALL NYE (propeller; 220 tons)	—	—	—	—	—	Havrestraw
POTOMSKIA (propeller; 360 tons)	—	—	—	—	—	New Bedford
ACORN (propeller; 200 tons)	—	—	—	—	—	Boston
D. *John English* [or Englis]						
FOREST CITY (steamboat; 900 tons)	—	—	—	—	Portland S. Packet Co.	Boston to Portland
M. SANDFORD (steamboat; 900 tons)	—	—	—	Aug. 29	Hariet & Sandford	N. Y. to Philadelphia
Ferryboat (450 tons)	—	—	—	—	Peck Slip Co.	Ferrying
E. *Laurence & Foulks* [or Lawrence]						
NEPTUNE (steamboat; 160 tons)	120	22	7½	—	Peter Crany	Boston Harbor
COMMONWEALTH (steamboat; 1,600 tons)	330	42	13	—	Norwich & New London Steamboat Co.	New London
HENRY MUNSI (steamboat; 150 tons)	110	21	7½	—	A. O. Jackson	Harbor towing
F. *Lupton & McDermot*						
E. MORRISS (steamboat; 63 tons)	75	20	5	—	P. Morris & Co.	Towboat
CATSKILL (steamboat; 95 tons)	80	22	6½	—	Charles Beal	Ferryboat
NONE SUCH (barge; 150 tons)	100	21	8½	—	Charles Holgate	Canal
NORTH SEA (bark; 500 tons)	140	31	20	—	Funck & Mernskie [or Funch & Meinke]	North Europe
G. *A. Patterson*						
LADY JANE (schooner; 210 tons)	100	23	10½	Dec. 21	J. Kushan and others	California
WILLIAM LAYTON (ship; 1,000 tons)	163	36	23	Jan. 1	—	—
DAVID HOADLEY (ship; 1,000 tons)	163	36	23	Feb. 6	—	—

(Continued on next page)

Builder, Name of Vessel, Type, and Tonnage	Dimensions in Feet			Date of Launching 1854	Owner	Trade
	Length	Beam	Depth			
G. *A. Patterson*—Continued						
F. B. CUTTING (ship; 1,000 tons)	165	36	23	Mar. 16	Russell H. Post & Co.	Havre
JEREMIAH THOMPSON (ship; 1,900 tons)	217½	43	29	June 1	Thompson & Stephens	Liverpool
EMILY KEITH (schooner; 240 tons)	100	26	9	June 27	M. H. Keith	General freighting
CITY OF NEW YORK (ship; 1,900 tons)	215	43	29	July 15	Kingsland & Sutton	Liverpool
H. *William Perrine*						
CIUDAD BOLIVIA (brig; 350 tons)	115½	26⅔	12½	Jan. 14	Harbeck & Co.	General freighting
SUNNY SIDE (ship; 740 tons)	146	32	21	Mar. 2	Calvin Adams	General freighting
JOHN H. RYERSON (ship; 1,000 tons)	154	35⅓	23	Mar. 15	Hurlbut & Co.	Antwerp
HENRY HARBECK (ship; 740 tons)	146	32	21½	Apr. 6	Harbeck & Co.	General freighting
FRANCIS A. PALMER (ship; 1,600 tons)	195	40	28½	Aug. 21	Hurlbut & Co.	Havre
NUREMBERG (ship; 1,200 tons)	180	37½	24	Sept. 9	C. Sagory	N. O. and Havre
I. *Roosevelt & Joyce*						
PENGUIN (3-masted schooner; 530 tons)	130	32	10	Apr. 10	A. A. Low & Bros.	Canton
EMILY (schooner; 265 tons)	110	28	9	Apr. 25	D. C. Freeman & Co.	Wilmington
J. *Smith & Dimon*						
A steamship of 2,500 tons on the stocks, but no vessel launched in 1854.						
K. *Isaac C. Smith & Son*						
OLYMPIA (sloop; 55 tons)	—	—	—	Mar. 3	—	—
OCEAN WAVE (steamboat; 300 tons)	—	—	—	Mar. 21	Middletown & Shrewsbury Trans. Co.	—
Steamboat (60 tons)	—	—	—	Apr. 27	—	Southern rivers
TEJUCA (clipper ship; 470 tons)	—	—	—	May 20	W. A. Sale	—
Steamboat (500 tons)	—	—	—	June 24	Hoboken Ferry	—
Steamboat (200 tons)	—	—	—	—	W. N. Doherty	—
L. *Jeremiah Simonson*						
PLYMOUTH ROCK (steamboat; 1,700 tons)	335	40	13	May	C. Vanderbilt	Stonington
MAGNOLIA (steamboat; 1,240 tons)	235	33	23½	Aug. 22	C. Vanderbilt	—
M. *Sneeden & Whitlock*						
NELLY BAKER (steamboat; 300 tons)	150	—	—	Mar. 29	Boston & Nahant Steamboat Co.	Boston & Nahant
METROPOLIS (steamboat; 2,300 tons)	345	—	—	Apr. 20	Fall River Steamboat Co.	Sound
FALL RIVER (steamboat; 350 tons)	165	—	—	June 24	R. Borden	—
YOUNG AMERICA (steamboat; 450 tons)	180	—	—	Aug. 8	New Bedford & Nantucket Co.	—
CUBA (steamboat; 750 tons)	260	—	—	Aug. 19	Mobile & New Orleans Mail Line	—

(Continued on next page)

Builder, Name of Vessel, Type, and Tonnage	Dimensions in Feet			Date of Launching 1854	Owner	Trade
	Length	Beam	Depth			
N. *Thomas Stack*						
CHANTICLEER (bark; 332 tons)	115	26½	12	Jan. 7	Freeman & Co.	New York
HANNIBAL (bark; 497 tons)	140	30	12	June 29	W. B. Whitehead	Suffolk
CLARA (bark; 697 tons)	144	32⅙	18½	June 17	Wakeman, Dimon & Co.	Southport
ILVA (bark; 289 tons)	117	29	9½	May 2	Maitland, Phelps & Co.	New York
EMMA (brig; 171 tons)	91	23½	9	May 20	H. K. Corning	New York
REBECCA (bark; 299 tons)	112	25½	11½	July 19	Freeman & Co.	New York
DELAFIELD (brig; 183 tons)	95	24	9	Aug. 16	H. Delafield	New York
O. *George Steers*						
JULIA (yacht; 90 tons)	—	—	—	June 15	James M. Waterbury	New York
Pilot boat (107 tons)	—	—	—	—	W. J. Murphy	New York
SUNNY SOUTH (ship; 750 tons)	—	—	—	Sept. 6	Napier, Johnson & Co.	China
P. *William H. Webb*						
HOUSTON (brig; 600 tons)	132½	30	14	Jan. 17	Wakeman, Dimon & Co.	Texas
CULTIVATOR (ship; 2,000 tons)	190	40½	28⅓	Mar. 14	J. O. Ward	Liverpool
HARVEST QUEEN (ship; 2,000 tons)	188	40½	28⅓	May 10	C. H. Marshall & Co.	Liverpool
THORNTON (ship; 2,000 tons)	190	40½	28⅓	June 7	Williams & Guion	Liverpool
Schooner (350 tons)	130	22	9	July 15	W. H. Webb	—
PELAYO (steamship; 850 tons)	200	31	14	July 22	P. Blanco	Cuba
Q. *Eckford Webb*						
UNION (steamboat; 200 tons)	—	—	—	May 26	Fair Haven R. R. Co.	Ferry
STING RAY (ship; 843 tons)	—	—	—	June 3	Wakeman, Dimon & Co.	—
R. *Ed. F. Williams*						
FRANKLIN NICKERSON (schooner; 350 tons)	100	28¼	9½	—	Dollner & Potter	Georgetown, S. C.
T. R. Allen (schooner; 255 tons)	97	28	10⅝	—	Allen & Welch	Southern coast
ALMENA (bark; 706 tons)	150	32	19	—	Dollner & Potter	European
FANNIE CURRIE (schooner; 305 tons)	112	29	10½	—	John Currie	Brazil
S. *John T. Williams*						
A bark launched in 1854; no data given.						

The inactivity of Smith & Dimon in building is conspicuously noticeable in the list of vessels launched in New York in 1854, and the steamship referred to as under construction may have been John W. Griffiths' "seven-day transatlantic steamship" *William Morris,* which failed to reach anywhere near the expectations of the designer and promoters. The Westervelt yard, which does not report any launching as per this list, was operating, for in that year J. A. Westervelt built the big London Black X packets *Palestine* (1,751 tons) and *Amazon* (1,771 tons). The *Amazon* measured 216 ft. long, 42 ft. beam, and 27½ ft. deep and was the largest of all regular ocean packets operating out of New York; moreover, she was a very fast vessel.

The Westervelts continued to build ships and in 1863 launched the large sailing packet *Hudson II* of 1,801 registered tons (new measurement). This packet, which was 205 ft. long, 42 ft. beam, and 29 ft. deep, operated for over six years (1863-1869) in the New York-London transatlantic service in the Black X Line. Perrine, Patterson, and Stack, having dissolved their company with each partner going into business for himself, were particularly active in this their first year of operating alone. The list enumerates five ships and a brig built by William Perrine totaling 5,630 tons, five ships and two schooners launched by A. Patterson aggregating 7,250 tons, and five barks and two brigs—all relatively small—built by Thomas Stack with a total of 2,468 registered tons.

The firm of Perrine, Patterson & Stack, from its new building yard established in 1845 at the head of Water Street, New York, launched the packet and general trader *Jamestown* in November 1847 for Slate, Gardner & Company, New York; it also built the *Senator,* "a portly packet of 1,250 tons," for the same owners. The *Jamestown* was of 1,151 tons (length 176.2 ft., beam 37.2 ft., and depth 22.8 ft.) and had the reputation of being "quite fast." In the winter of 1851-1852, she ran in the China-Britain tea trade and made a passage from Whampoa to Deal (London) of 127 days. In 1852 she made her one trip around the Horn westbound during the clipper ship decade; she made a good run of 127 days from New York to San Francisco and on May 15, 1854, arrived at New York after a fast passage of 91 days from Manila. Perrine, Patterson & Stack, at its Greenpoint, Long Island, N.Y., yard, built the ship *Jeremiah Thompson* in 1854 for Samuel Thompson's Nephews, a shipping firm operating in the transatlantic trade. The *Jeremiah Thompson* was of 1,904 net registered tons (216 ft. long, 42 ft. beam, and 28 ft. deep) and until 1868 was employed carrying passengers and freight between New York and Liverpool (but not in a regular packet line sailing on an advertised schedule). After leaving the transatlantic service when fourteen years old, the *"Thompson"* made a number of voyages to San Francisco, west South American ports, and the Orient. Considering her relatively full, good cargo-carrying model, she made very good passages, the average time of her westbound runs to San Francisco being 125 days, with one run from New York in 113 days and one from Liverpool to the Golden Gate in 109 days. Eastbound, the *"Thompson"* has to her credit a fine passage of 104 days from San Francisco to New York. Another ship launched in 1854 from the Greenpoint, Long Island, yard of Perrine, Patterson & Stack was the *City of Brooklyn* of 1,745 tons register (length 182 ft., beam 42.7 ft., depth 29.3 ft.), built for Nesmith & Sons, New York, for the transatlantic trade. She was an unusually beamy and successful vessel for her length, having a ratio of only 4¼ to 1, and for nearly thirty years did good service in the transatlantic and South American (coal and guano) trades.

After the dissolution of the firm of Perrine, Patterson & Stack, Thomas Stack built some good ships at the Williamsburg, N.Y., yard, which under the old company had seen the launching of many fine vessels in the sailing packet and clipper ship days. The following three ships built by Thomas Stack are worthy of special mention:

Name	Year Built	Type	Tonnage	Registered Dimensions in Feet			Owner
				Length	Beam	Depth	
JACOB A. STAMLER	1856	Packet and general trader	1,000	175	37	25.5	Havre Second Line
MARIANNE NOTTEBOHM	1857	Packet and general trader	1,116	186	36.5	22.3	Laytin & Hurlbut, New York
CLEOPATRA	1867	Half clipper	1,233	184	40	23.5	Thos. S. Hathaway & Co., New Bedford

The *Jacob A. Stamler* ran in the transatlantic regular packet service of the Havre Second Line for seven years (1864-1870) and before that time was a transient and general trader. The *Marianne Nottebohm* operated as a packet carrying passengers and cargo between New

York and Liverpool during the first ten years of her career; thereafter, she was employed in general trade. In 1869 she made a westbound passage from New York to San Francisco in 118 days, which was an excellent run for a vessel of her model. She proved to be a handy ship, and after sailing under canvas for forty years, she was converted into a coal barge. The *Cleopatra* made three passages from New York to San Francisco, and most of her life was spent trading between the Atlantic Coast and ports of the Far East, mainly those of China and India. She was a good sailer and both a fortunate and profitable ship. In 1869 she made a westward run around the Horn from New York to San Francisco in 118 days, and this was followed by a passage of 126 days from Manila to New York, thence 7 days to St. John, N.B., and from there 16 days to Liverpool. In 1876 she crossed the Pacific from Yokohama to San Francisco in 27 days. The *Cleopatra,* when twenty-one years old, was sold in 1877 to the Germans, and she was destroyed by fire and an explosion of dynamite in the cargo on April 22, 1894, when on a passage from Bremerhaven to New York.

No Down Easters were built in New York or south of New York. Only general traders, packets, clipper ships, medium clippers, and medium and sharp-lined packet clippers were launched from New York shipyards. When Massachusetts, Mystic, Conn., etc., followed the example of Maine and endeavored to produce Down Easters modeled, sparred and canvased like the practical and profitable ships that had been built for decades at Bath, Maine, New York simply quit building wood sailing ships. No square-rigged sailing ship was built in New York in the seventies or thereafter, and the sailing packet and general transatlantic trader *Charles H. Marshall* (1,683 tons), built by William H. Webb, was the last real ship constructed in New York State.

John W. Griffiths—Technical Naval Architect and Theorist, Marine Editor and Publisher

John W. Griffiths, the New York naval architect, achieved a measure of fame and a good deal of publicity when as draftsman at the shipyard of Smith & Dimon, New York, he made the plans of the *Rainbow* (752 tons), launched January 22, 1845, which he and many others claimed was the "first real clipper ship." This ship was built to the order of Howland & Aspinwall, New York, and whereas she represented a departure from the usual models of her day, there was nothing startlingly new or radical about her. As has been well said, "The *Rainbow* differed from former vessels merely in the manner in which she combined existing principles of design—a statement which holds equally true for every successful ship of the period." Ships had been built with hollow, or concave, water lines forward, others with relatively full and convex entrance lines; some had been constructed with their biggest transverse section at mid-length, others with it forward, and still others with their fullest frame aft of midships. All sorts of transverse midsections had been used and were being used in ship design—great deadrise and flat floors, easy rounding bilge and sharp bilge, tumble home (and kettle bottoms) or flat wall sides. Sheer lines, relative fullness or fineness of the run, flare above water with overhangs and above-water buoyancy of model at each end covered, it would seem, almost every possible form. Griffiths made a design with one combination that, at the time, proved rather successful, and much capital was made of it by the designer, owners, and builders.

As a matter of fact, there were many faults in the design of the *Rainbow* and in the model of sailing ships that Griffiths advocated. American shipbuilders and operators quickly sensed

the most glaring of them and made corrections when they built ships, profiting, among other things, by the experience gained with transatlantic packets. John W. Griffiths was a great publicist; he lectured, wrote books and articles, and edited the only marine publication in the country. However, he seems to have accomplished but little actual and demonstrable work in the design and construction of real ships outside of his work as draftsman at the Smith & Dimon shipbuilding plant and the design work that he did—in conjunction with Stephen Smith, naval architect and master builder of the firm that employed him—during the building of the *Rainbow* and *Sea Witch.* Griffiths was a competent technical naval architect and a theorist—self-satisfied and bigoted; he championed sharp concave-line fore body models, with big deadrise and slack bilge, just as Donald McKay urged big sharp-lined ships and became fanatical in his stand. McKay, however, did have sense enough to follow Samuel Harte Pook and New York transatlantic sailing packet builders and put flat floors and big midship cross sections in his ships, even though size, sharpness and big sail spread, and speed—without regard to deadweight capacity and profitable operation—continued to be a mania with him. Griffiths never seemed to change his views, and after his contribution to American ship design in working on the plans of the *Rainbow* (and presumably of the *Sea Witch* and the *Memnon*), we hear little of any real design or construction work for which he was either entirely or substantially responsible until a quarter of a century after the launching of the *Rainbow.* We then come across him in reliable marine records as the designer and constructor of a much-heralded ship named the *New Era,* built in 1870 at New York, which was financed by Capt. J. Henry Sears, of Boston, and built for Glidden & Williams, Boston, managing owners, for trade in the Orient.

The *New Era* was built with the Griffiths type of model, but it was said at her launching, "She is the first and only ship ever built in exact accordance with the ideas of her designer." It is said that she was built with bent timbers. "Every frame timber that required curvature has been bent from the straight log, the futtocks being extended in one stick from keel to rail." This method of building was "expensive and demanded the liberal use of iron." The *New Era* was of 1,140 net registered tons, with a length of 179 ft., a beam of 38 ft., and a depth of 23 ft. She was 20 ft. longer than the *Rainbow* and 9 ft. longer than the *Sea Witch* and was 6 ft. and 4 ft. beamier, respectively, than these two earlier ships. She was much deeper—4.6 ft. more than the *Rainbow* and 4 ft. more than the *Sea Witch;* hence her tonnage exceeded that of the *Rainbow* by 388 tons and that of the *Sea Witch* by 232 tons.

Griffiths predicted that the *New Era* would be "the strongest and fastest wood ship on the seas," but the ship, which saw service for eleven years, has not a single fast passage to her credit. Unfortunately, she made no westbound runs around Cape Horn, so there is no opportunity to compare her performance over this testing course with that of other ships. History reveals merely the fact that the *New Era* "made average passages" and was not outstanding in any way. Whether or not her hull was particularly strong cannot be stated, but it is significant that on her last voyage, leaving Hong Kong October 17, 1881, for San Francisco, she went ashore on October 28 and soon afterwards "broke in pieces and became a total wreck." The crew all got ashore safely.

At the height of the clipper ship boom in the early fifties, it would seem that John W. Griffiths neither designed nor built any clipper ship. Smith & Dimon, his employers during the design and construction of the *Rainbow, Sea Witch,* and *Memnon I,* built only one clipper thereafter—the little *Nicholas I* of 596 tons, launched in 1850, for the Russo-American Fur Company. It is interesting to note that in the building of this vessel Smith & Dimon departed from the model lines championed by Griffiths. The *Nicholas I,* said to be the first American clipper to be built for a foreign account, had a 26-inch deadrise on a 31½-foot beam, and Captain Leach, who sailed her to Cronstadt for her owners in the summer of 1850, reported that she was an excellent sea boat and very swift. He considered her comparatively flat floor a great improvement over the Griffiths idea of midship section, big deadrise, and slack rounding

bilge. The records show that in 1853 John W. Griffiths was connected with the building of a "seven-day steamship" for the transatlantic Galway run. This was a light shallow craft of wood and iron named the *William Morris* and for the purpose intended was a mistake and naturally a failure. Conditions on the North Atlantic are quite different from those on a river or any body of protected water.

George Steers—Famous as the Designer and Builder of the Schooner Yacht AMERICA, *Winner of "the America's Cup"*

While Griffiths was engaged with the *William Morris,* another New York naval architect of note was trying to interest capital in building a "six-day boat of from 500 ft. to 1,000 ft. in length." The man behind this ridiculous proposition was none other than George Steers, the designer and builder of the two-masted schooner yacht *America.* This vessel had defeated British yachts abroad and brought back a trophy to the United States, where it still remains and is known as "the America's Cup"—the most coveted and raced-for bit of silver in the world. It was written in the early fifties, "Since the American yacht *America* beat the English yachts that were built with every perfection at hand without regard to cost, there has been a stir among shipbuilders and shipowners for a different class of vessel for the merchant service." Giving Steers all the credit due him as the designer of the fast yacht *America* (which incidentally was also well sailed), we find that when he seriously talked of building a wood hull for transatlantic service of "from 500 ft. to 1,000 ft. in length," he proved himself to be no naval architect, no technically trained man, no builder of experience with even 200-foot vessels, and positively no engineer. It is well known and was so known in the early fifties of the last century that no wood hull propelled by steam (screw or paddle) or by sail and wind could possibly be built for ordinary ocean service with a length exceeding 400 ft. For service on the North Atlantic, the idea of seriously considering building a vessel beyond this length was sheer madness. To talk of wood hulls "500 ft. to 1,000 ft. in length" suggests either an amazing gross ignorance or unadulterated lunacy.

George Steers was born in Washington, D. C., in the year 1820. He was the son of Henry Steers, an English shipwright, who came to the United States in 1819 and obtained work in the Washington Navy Yard. George Steers's brother, James R., was a shipwright like his father and was employed at various times by Smith & Dimon and William H. Brown. George was apprenticed to this brother and at an early age gave evidence of some ability in design. George Steers designed his first pilot schooner in 1841. This little vessel, named the *William G. Hagstaff,* sailed so well and operated so handily that she led to the later pilot boats *Mary Taylor, Moses H. Grinnell,* and *George Steers.* In 1843, George Steers entered into partnership with William Hathorne, the firm being known as Hathorne & Steers. Aside from the building of the schooner yacht *America*—which had unusual sailing ability—and several good pilot boats, Steers seems to have done nothing outstanding, although he is credited with the design of the U.S. steam frigate *Niagara* and three other steamers, one of which is said to have been the *Adriatic* of the Collins Line.

Steers sought to capitalize his reputation as the designer of the victorious yacht *America,* "the fastest small sailing vessel in the world." During the California Gold Rush, when "speed was king," he tried to interest shipowners to have him design and build for them clipper ships "as much faster than other clippers built and building as the *America* is faster than any other yacht afloat on either side of the Atlantic." It was said that Donald McKay copied certain

features of the model of the yacht *America* (entrance and run lines, but positively not the drag aft or deadrise of that yacht) when he built his clipper *Lightning* of 2,084 tons in 1854 for James Baines & Company, of Liverpool. (The British later tried to fill out the hollow forward lines of the *Lightning* with wood packing and claimed that when they could keep this filling in position, the speed of the clipper was improved.) At the height of the clipper ship boom, the Steers brothers (George, the designer-promoter, and James R., the practical builder) made public designs for "a fast clipper modeled after the lines of the *America*." Fortunately for the possible backers of the enterprise, the scheme to build such a merchant vessel did not carry through. The model of the 2,500-ton ship was very much like that of the *America,* and Steers claimed that the design was an improvement over the form of the yacht. The proposed clipper was "calculated to sail twenty-two miles an hour." Much publicity was given the Steers design and model, but even during a more or less hysterical boom period, shipowners and shipbuilders were conservative and sound enough in their judgment not to fall for the Steers propaganda and build a big ship with a sharp yacht-like model of a modified Baltimore clipper design and a pronounced drag aft. A vessel of the type proposed would undoubtedly have been very fast in certain waters under favorable conditions of wind and sea, but she would not have been satisfactory for the Cape Horn trade, on the Australian turnpike, or in the north transatlantic service.

The Baltimore clipper *Ann McKim* had some of the model characteristics of the *America,* but she was not a money-maker, being more the type of an opium clipper (or a privateer) than a tea clipper and positively not suited for a Cape Horner. William H. Webb, in the clipper *Challenge,* had followed somewhat the original Griffiths lines. However, when the Steers brothers were trying to sell the idea of a "big *America*" to shipping interests, Webb and his associates were following the idea advanced in 1849 by Samuel Harte Pook, the young naval architect of Boston, Mass., which capitalized the experience of New York builders and owners of transatlantic sailing packets. Both Stephen Smith and William H. Webb were turning to real merchant vessels with a good, full midship section, little deadrise, a good beam with plenty of stability—light or loaded—and a fair money-making carrying capacity.

In 1854, George Steers got his opportunity, not to build an improved *America* of 2,500 tons but to build a ship of more moderate proportions, and he designed and launched from his Williamsburg yard the clipper ship *Sunny South* of 702½ registered tons (length 144.7 ft., beam 31.3 ft., depth 16.5 ft.), built to the order of Napier, Johnson & Company, New York. The *Sunny South* proved to be a disappointment to her owners, and the Steers bubble was pricked. She made one westbound around-the-Horn run to San Francisco, leaving New York November 21, 1854, and required 143 days for the trip. It must be admitted that this was very slow time for a ship that, it was predicted by Steers and his friends, was to be the fastest sailer afloat. The *Sunny South* was neither an outstandingly fast nor a profitable ship. In 1859 she was sold in Cuba, her name changed to *Emanuela,* with Havana the hailing port, and her royal studding-sail booms and skysail masts and yards were removed. On August 10, 1860, she was seized by the British warship *Brisk* in the Mozambique Channel. The *Emanuela* was flying the Chilean flag and had 850 slaves on board. After being captured, the old *Sunny South* finished her career as a store ship in the British Navy in the South African (Cape of Good Hope) station.

Soon after the building of the *Sunny South,* George Steers passed away unexpectedly; he died on September 26, 1856, at the early age of thirty-six years.

It is of interest to note that the first ship railway built in America was constructed by Henry Steers, father of James and George Steers, and his partner. In return for their enterprise, the New York State Legislature granted the ship railway company a charter for a bank to last "as long as grass grows and water runs." Thus was founded the Dry Dock Bank, now the Eleventh Ward Bank, of New York City; the only other bank ever to receive such a charter was the Bank of the Manhattan Company, New York.

Other New York-built Vessels of Unusual Interest

Another New York-built vessel of unusual interest became known in 1873 as "the big and fast three-masted, three-decked, full-rigged ship *Three Brothers*" of 2,972 tons register. This vessel had a main lower mast 98½ ft. long and 44 in. diameter at the deck, a main topmast 56½ ft. long and a topgallant mast 70 ft. long, with a main lower yard 100 ft. long and 29 in. diameter, and she spread "15,000 yards of cotton canvas." The ship *Three Brothers* was owned by George Howes & Company, New York, and was named after the three brothers, George, Henry, and Jabez, who constituted the firm. She had a good sailing record, particularly during the first scant six years of her career as a sailer. In this period, she negotiated four westbound around-the-Horn passages to San Francisco—two from Liverpool and two from New York—in an average of 123½ days (best, 112 days; slowest, 134 days) and five eastbound passages—three to Liverpool and one each to New York and Havre—in an average of less than 109 days (best, 104 days to Liverpool; slowest, 111 days to both Havre and New York). In 1882 the *Three Brothers* made a fast passage of 112 days from Antwerp around the Horn westward to California, and in 1881 she ran eastward from San Francisco to Antwerp in the very good time of 105 days. Her lifetime record as a sailer around the Horn during the years 1873-1885 gives the *Three Brothers* an average of slightly less than 125 days for seven westbound passages and 115¾ days for nine eastbound runs. On another voyage westbound, which was broken by a stop at Rio de Janeiro, she made the run from Rio to San Francisco in 72 days, and on her passage east in 1882-1883 the ship was troubled with a mutinous crew that greatly affected her sailing performance between ports.

The interesting thing about this fast American sailing ship *Three Brothers,* described erroneously in the seventies and early eighties as "the largest and fastest sailing ship in the world," is the fact that she was built in 1856-1857 by Jeremiah Simonson at Greenpoint, Long Island, N. Y., as "the wooden brig-rigged, paddle-wheel steamer *Vanderbilt*" and ran with the *Adriatic* and *Illinois* in the transatlantic trade between New York, Havre, Southampton, and Bremen in Commodore Vanderbilt's North Atlantic Mail Steamship Line. She was popularly known as "Vanderbilt's yacht," had a tonnage of 3,360 tons, and measured 311 ft. long, 47 ft. beam, and 31¾ ft. deep. On her third crossing eastbound, she made a transatlantic record of 9 days 8 hours from New York to the Needles (best day's runs, 350, 370, and 333 miles, distances which she later equaled or beat when operating as a sailing ship under canvas alone). In June 1858, the *Vanderbilt* ran from Southampton to New York in 9 days 13 hours and in 1859 from the Needles to New York in 9 days 9½ hours. Her fastest time eastbound was a run from New York to Southampton in 9 days 5 hours, on which occasion she beat the Cunarder *Persia,* the then record-holder, by "a good half hour." Vanderbilt withdrew his steamers from transatlantic trade in 1860 owing to the U. S. Government's lack of support, and in March 1862 he made a present of his crack steamer *Vanderbilt* to the U. S. Navy. She was armed with 16 guns and was in active service during the Civil War. In the spring of 1873, after lying idle at the Mare Island, Calif., Navy Yard for over six years, she was sold—when sixteen years of age—by the government to George Howes & Company, which turned her over to Coombs & Taylor, Hunter's Point, Calif., to be converted into a full-rigged three-masted ship under the supervision of the famous skipper, Capt. "Bob" (or "Bully") Waterman. When over fifty-five years old, the *Three Brothers* (ex-*Vanderbilt*) was in service as a coal barge at Gibraltar.

The *Ericsson* was another New York-built steamer converted in later years into a square-rigged sailing ship. This vessel, built of oak throughout in 1852, was a long ship with fine lines, and she proved to be a fast sailer "worthy to be compared with the superb *Three Brothers.*" In the spring of 1874, the *Ericsson,* operating in the grain fleet running from San

Francisco to Europe, sailed through the Golden Gate on February 20 and arrived at Liverpool on June 3 after a fast passage of 103 days. Donald McKay's highly publicized half clipper *Glory of the Seas* sailed six days after the *Ericsson* and arrived in the Mersey twenty-one days after the converted steamer was at her dock. The *Ericsson* beat the *Glory of the Seas* by fifteen full days on this run and the British ship *Wasdale,* which sailed one day after the *"Glory"* and arrived in company with her, by fourteen days.

Another well-known ship that was built at Greenpoint, Long Island, N.Y., was the *Blue Jacket,* launched January 27, 1865, from the yard of Pine & Davis. This ship was more of a half clipper than a Down Easter and was built for Charles R. Green, New York. She measured 1,339 tons net register and was 195 ft. long, 40½ ft. beam, and 24 ft. deep. Notwithstanding a fine appearance and rather sharp lines, the *Blue Jacket* was a slow sailer; the average of her eight passages from New York to San Francisco was 146 days, the fastest being a run of 131 days. She made eastbound passages of 132 days and 144 days from San Francisco to Liverpool, and a passage of 100 days from Honolulu to New Bedford on her first homeward run seems to have been her only creditable performance.

Claimed Record and Near Record Sailing Achievements of New York-built Square-riggers

The New York-built clipper ships—both extreme and medium—and many other fast sailers launched from New York shipyards prior to the clipper ship era established many world's records for speed over trade routes on the Seven Seas. From a multitude of claimed record and "near record" performances in the realm of speed, i.e., fast passages between ports or between points, the following list is presented of outstanding sailing achievements of square-riggers constructed by New York shipyards:

A. *Ships Built by William H. Webb*

SWORDFISH (1,036 tons; built 1851)

1. *San Francisco to Shanghai*—32 days 9 hours.
   Sailed San Francisco June 16, 1853.
   Arrived Shanghai July 19, 1853.
   Capt. Charles Collins reported, "Anchored off port July 19, 32 days 9 hours out, which is a record run."
2. *Equator* (Atlantic) *to New York*—16 days.
   Arrived New York March 2, 1860.
   Capt. Joseph W. Crocker reported, "Ran from line in Atlantic in 16 days."
3. *Shanghai to New York*—81 days.
   Cleared Shanghai December 12, 1859.
   Arrived New York March 2, 1860.
   Capt. Joseph W. Crocker reported, "A record passage of 81 days and was becalmed five days on the equator in the Atlantic."
4. *Shanghai to Anjer*—10 days.
   Cleared Shanghai December 12, 1859.
   Arrived Anjer December 22, 1859.
   Claimed by Captain Crocker as "a record run from Shanghai to Anjer."

CELESTIAL (860 tons; built 1850)

San Francisco to Hong Kong—33 days.
Capt. Theodore Palmer reported, "Arrived in Hong Kong in 1852, 33 days out from San Francisco."

CHALLENGE (2,007 tons; built 1851)

1. *Hong Kong to San Francisco*—33 days.
   Arrived at San Francisco April 22, 1852.
   Capt. John Land reported, "A passage of 33 days from Hong Kong and only 18 days to San Francisco from a position opposite Japan—a record."
2. *San Francisco to Honolulu*—8 days.
   Capt. John Land reported in 1852, "Ran from San Francisco to Honolulu in 8 days and from San Francisco to within 400 miles of Hong Kong in 27 days."
3. *Anjer to London*—65 days.
   Cleared Whampoa August 5, 1852.
   Arrived Anjer September 13, 1852.
   Arrived Deal November 18, 1852.

COMET (1,836 tons; built in 1851)

1. *San Francisco to equator* (Pacific)—11½ days.
   Sailed San Francisco February 13, 1853.
   Capt. E. C. Gardner reported, "Discharged pilot at 6 P.M., February 13, and crossed the equator February 25, approximately 11½ days out, which appears to be the record."
2. *San Francisco to equator* (Pacific)—13½ days.
   Sailed San Francisco December 27, 1853.
   Captain Gardner reported, "Made a very fast run of 13½ days to the equator."
3. *San Francisco to Cape Horn*—35½ days.
   Sailed San Francisco December 27, 1853.
   Captain Gardner reported, "Made a fine run to the Cape of 35½ days, which is a record."
4. *Equator* (Atlantic) *to New York*—15 days.
   Arrived New York March 14, 1854.
   Captain Gardner reported, "Arrived after 15 days' sailing from the equator."
5. *San Francisco to New York*—76 days 7 hours.
   Sailed San Francisco December 27, 1853.
   Arrived New York March 14, 1854.
   Captain Gardner reported, "Made records all along the course and arrived 76 days from San Francisco wharf to anchor at Sandy Hook."
6. *Liverpool to Hong Kong*—84 days.
   Cleared Liverpool June 17, 1854.
   Arrived Hong Kong September 7, 1854.
   Capt. E. C. Gardner reported, "A run of 83 days 21 hours, pilot to pilot, and 84 days 16 hours, anchor to anchor."
7. *Equator* (Pacific) *to San Francisco*—12 days.
   Arrived San Francisco February 25, 1856.
   Captain Arquit reported, "A record run of 12 days from the line."

FLYING DUTCHMAN (1,257 tons; built 1852)

1. *San Francisco to equator* (Pacific)—12 days.
   Sailed San Francisco February 12, 1853.
   Capt. Ashbel Hubbard reported, "Discharged pilot at 7 P.M., February 12, and crossed the line in early morning of February 24, making run in 12 days."
2. *Round voyage New York-San Francisco-New York*—6 months 24 days.
   Arrived New York May 8, 1853, after a round voyage from New York to San Francisco and return in 6 months 24 days, including detention in port of San Francisco, unloading and loading cargoes, etc.

YOUNG AMERICA (1,961 tons; built 1853)

Liverpool to Melbourne—71 days.
Cleared Liverpool April 18, 1858.
Arrived Melbourne June 29, 1858.

Among the older ships built by William H. Webb to make record voyages are the following:

HELENA (598 tons; built 1841)

New York to Anjer—73 days 20 hours.
Cleared New York November 1, 1845.
Arrived Java Head February 14, 1846.
Capt. Joseph Eyre reported, "A run from New York to Anjer in 73 days 20 hours, the fastest that has been made."

YORKSHIRE (996 tons; built 1843)—a packet.

Liverpool to New York—16 days.
Sailed Liverpool November 2, 1846.
Arrived Sandy Hook, New York, November 17, 1846.
Capt. D. G. Bailey reported, "Arrived off Sandy Hook November 17, 1846, and at the city at noon, the 18th, from Liverpool November 2 in a passage of less than 16 days." This is the best westbound transatlantic crossing of any sailing packet.

(The NATCHEZ, a packet of 523 tons, built in 1831 by Isaac Webb, father of William H. Webb, and John Allen [Webb & Allen], cleared Macao, China, on January 14, 1845, and arrived at New York the morning of April 3, 1845. Capt. Robert Waterman reported, "A record run of 78 days, which makes China only eleven weeks from New York.")

B. *Ships Built by the Westervelts*

(i.e., Westervelt & Mackey, Jacob A. Westervelt, and Daniel & Aaron Westervelt)

SOUTHAMPTON (1,299 tons; built 1849)—a packet.

New York to Falmouth, England—13 days 12 hours.
Sailed Sandy Hook, New York, 11:00 P.M., June 8, 1850.
Arrived Falmouth June 22, 1850.

N. B. PALMER (1,400 tons; built 1851)

1. *Honolulu to New York*—82 days.
   Arrived New York July 14, 1854.
   Capt. Charles P. Low reported, "A record run of 82 days from Honolulu."
2. *Shanghai to New York*—82 days.
   Cleared Shanghai October 25, 1858.
   Arrived New York January 16, 1859.
   Capt. Jas. A. Higham reported, "A fast passage of 82 days to Sandy Hook from Shanghai."
3. *Cape of Good Hope to New York*—36 days.
   Passed Cape of Good Hope December 11, 1859.
   Arrived New York January 16, 1860.
   Captain Higham reported, "A record run of 36 days from longitude of Cape of Good Hope to New York, beating the record by two days."

HORNET (1,427 tons; built 1851)

San Francisco to Callao, Peru—33 days.
Sailed San Francisco September 4, 1853.
Arrived Callao October 7, 1853.
Capt. Wm. Knapp reported, "Arrived Callao after a fast run of slightly more than 33 days from Frisco."

GOLDEN GATE (1,341 tons; built 1851)

1. *Shanghai to Beachy Head, England*—86 days.
Cleared Shanghai November 22, 1854.
Arrived Beachy Head February 23, 1855.
Capt. Samuel F. Dewing reported, "Was in collision in the China Sea and lost about a week having to put into Batavia. Our sailing time was 86 days."
2. *Shanghai to Batavia*—9½ days.
In November 1854, reported as "a fine run from Shanghai to Batavia in 9½ days, which is record time."

CONTEST (1,099 tons; built 1852)

Round voyage New York-San Francisco-New York—195 days.
Sailed from New York November 16, 1852.
On return arrived at New York May 30, 1853.
Capt. William Brewster's log states, "Round trip occupied 195 days and the total net sailing time only 180 days." Both the gross and the net time, it was said, "are believed to be records."

GOLDEN CITY (810 tons; built 1852)

San Francisco to Woosung, China—36 days.
Sailed San Francisco February 28, 1854.
Arrived Woosung April 5, 1854.
Capt. Richard Canfield reported, "A fast run of 36 days, which equals the record from Frisco to a South China port."

SWEEPSTAKES (1,735 tons; built 1853)

1. *New York to Bombay*—74 days.
Cleared New York May 9, 1857.
Arrived Bombay July 22, 1857.
Capt. George E. Lane reported, "A passage of 74 days—a record."
2. *Bombay to New York*—81 days.
Cleared Bombay December 30, 1857.
Arrived New York March 21, 1858.
Captain Lane reported, "A fine run home of 81 days in record time, making a record each way and a combined record for the two passages out and home of 155 days."

KATHAY (1,438 tons; built 1853)

1. *Anjer to Cape of Good Hope*—25 days.
Arrived New York January 8, 1856.
Capt. Thomas C. Stoddard reported, "25 days from Anjer to Cape of Good Hope, equaling the record set by the *Sea Witch*, and a run of 93 days from Shanghai."
2. *Hong Kong to Bangkok*—6 days.
Cleared Hong Kong December 24, 1857.
Arrived Bangkok December 31, 1857.
Captain Stoddard reported, "A few hours over 6 days between ports and the quickest run on record."

GOLDEN STATE (1,363 tons; built 1853)

Shanghai to New York—90 days.
Cleared Shanghai January 1, 1855.
Arrived New York April 1, 1855.
Capt. Andrew Barstow reported, "A very good run of 90 days, considering the conditions encountered."

C. *Ships Built by Smith & Dimon*

RAINBOW (752 tons; built 1845)

Round voyage New York-Canton-New York—6 months 16 days.
Cleared New York October 1, 1845.
On return arrived New York April 16, 1846.
Capt. John Land reported, "Returned in the record time of 6 months 16 days and on homeward run crossed equator in Atlantic 60 days and arrived New York 79 days out from Macao."

SEA WITCH (908 tons; built 1846)

1. *Anjer to New York*—62 days.
Cleared Canton May 3, 1847.
Arrived New York July 25, 1847.
Capt. Robert Waterman reported, "81 days from Canton and 62 days from Anjer—the record."
2. *Hong Kong to New York*—74 days 14 hours.
Cleared Hong Kong January 8, 1849.
Arrived New York March 25, 1849.
Captain Waterman reported, "A record run of 74 days 14 hours."
3. *New York to Valparaiso*—59 days.
Sailed New York April 13, 1850.
Arrived Valparaiso June 11, 1850.
Capt. George Fraser reported, "A fast passage of 59 days, which makes a record."

MEMNON (1,068 tons; built 1847)

1. *New York to Liverpool*—14 days 8 hours.
Sailed New York November 6, 1848.
Arrived Point Lynas November 20, 1848.
Capt. Joseph R. Gordon reported, "Took pilot off Point Lynas at 12:30 night of November 20 after a crossing of 14 days 8 hours."
2. *San Francisco to Whampoa*—36 days.
Sailed San Francisco November 9, 1850.
Arrived Whampoa December 15, 1850.
On this Pacific crossing made the run reported by Captain Gordon as "Honolulu to Hong Kong in the record time of 19 days."

MANDARIN (776 tons; built 1850)

New York to Melbourne—70 days.
Cleared New York December 21, 1855.
Arrived Melbourne March 1, 1856.
Capt. John W. C. Perit reported, "A fast run of 70 days and made in record time."

INDEPENDENCE (732 tons; built by Stephen Smith in 1834)—a transatlantic packet.

New York to Liverpool—14 days 12 hours.
Capt. Ezra Nye reported on return of *Independence* from Liverpool (New York HERALD of June 15, 1836), "The outward passage to Liverpool was made in 14 days 12 hours [i.e., in May 1836]."

D. *Ships Built by the Bells*

(Jacob and A. C. Bell; also Brown & Bell)

ORIENTAL (1,003 tons; built 1849)

New York to Hong Kong—81 days.
Cleared New York May 18, 1850.
Arrived Hong Kong August 8, 1850.
Capt. Theodore Palmer reported, "A record run of 81 days."

MESSENGER (1,350 tons; built 1852)

1. *San Francisco to Philadelphia*—82 days.
Arrived at Delaware Capes January 23, 1854, and at Philadelphia January 26, 1854.
Capt. Frank Smith reported, "A record run of 82 days from San Francisco to Philadelphia."
2. *San Francisco to Cape Horn*—38 days.
Capt. Frank Smith, upon arrival at Philadelphia January 26, 1854, reported, "A run of 38 days from San Francisco to Cape Horn."

JACOB BELL (1,381 tons; built 1852)

New York to Bombay—77 days.
Cleared New York March 16, 1856.
Arrived Bombay June 1, 1856.
Capt. Charles F. W. Behm reported, "Arrived at Bombay in a fog June 1, 1856, 77 days from New York."

NORTH WIND (1,041 tons; built 1853)

London (Downs) to Port Phillip, Australia—66 days.
Sailed from the Downs November 10, 1859.
Arrived at Port Phillip January 15, 1860.
Capt. W. S. Morton reported, "A fast record run of 66 days from the Downs to Port Phillip."

ADELAIDE (1,831 tons; built 1854)

Callao, Peru, to Hampton Roads, Va.—60 days.
Arrived New York November 14, 1859, after a passage reported by Capt. Edgar Wakeman of "60 days from Callao" (New York HERALD of November 17, 1859).

NEW YORK (516 tons; built by Brown & Bell in 1822)—a transatlantic packet.

New York to Liverpool—15 days 16 hours.
Sailed New York December 16, 1823.
Arrived Liverpool January 1, 1824 (A.M.).
Capt. George Maxwell reported, "Arrived Liverpool New Year's morning 15 days 16 hours from city to city."

E. *Ships Built by Isaac C. Smith, Hoboken, N. J.—New York Harbor*

HURRICANE (1,608 tons; built 1851)

1. *Rio de Janeiro to San Francisco*—67 days.
Sailed Rio de Janeiro February 8, 1852.
Arrived San Francisco April 15, 1852.
Capt. Samuel Very, Jr., reported, "A fast passage of 67 days."
2. *San Francisco to Honolulu*—10 days.
Captain Very reported, "Passed Honolulu September 30, 1854, in 10 days from San Francisco."
3. *Hong Kong to Singapore*—6½ days.
Cleared Hong Kong November 21, 1854.
Arrived Singapore November 27, 1854.
Captain Very reported, "A run of 6 days 12 hours, anchor to anchor, and an average speed of slightly less than ten knots per hour."
4. *England to Calcutta*—84 days.
Captain Very reported, "Arrived at Sand Heads November 5, 1855, from off Portsmouth, where pilot was dropped August 12, in 84 days 12 hours, pilot to pilot."
5. *Calcutta to England*—79 days.
Sailed Sand Heads January 10, 1856.
Arrived Falmouth April 2, 1856.
Captain Very reported, "Took pilot off Falmouth April 2, 1856, 83 days out and 79 sailing days from Sand Heads."

F. *Ships Built by Perrine, Patterson & Stack*

EAGLE (1,296 tons; built 1851)

Montevideo to New York—36 days.
Sailed Montevideo June 2, 1854.
Arrived New York July 8, 1854.
Capt. John S. Farren reported, "Arrived New York on July 8 after a record run from Montevideo and Rio Plate of 36 days."

INO (895 tons; built 1851)

Java Head to Cape of Good Hope—26 days.
Passed Java Head December 14, 1858.
Passed Cape of Good Hope January 9, 1859.

Capt. Converse F. Plummer reported upon arrival at New York February 19, 1859, "Made a good passage of 91 days from Woosung to New York, but ran from Java Head to the Cape of Good Hope in 26 days, which is near record time."

G. *Ships Built by Thomas Collyer*

PANAMA (1,139 tons; built 1853)

1. *Shanghai to New York*—85 days.
   Cleared Shanghai October 27, 1854.
   Arrived New York January 20, 1855.
   Capt. Wm. P. Cave reported, "A smart run of 85 days from Shanghai."
2. *Anjer to New York*—67 days.
   Sailed Anjer November 15, 1854.
   Arrived New York January 20, 1855.
   Captain Cave reported, "Ran from Anjer to New York in 67 days."
3. *New York to Melbourne*—74 days 8 hours.
   Arrived Melbourne July 10, 1856.
   Captain Cave reported upon arrival, "Made a run of 74 days 8 hours from New York."

DAWN (bark of 387 tons; built 1857)

Buenos Aires to New York—36 days.
Arrived New York 2:00 A.M., June 11, 1860.
Capt. Levi Chase reported, "Arrived New York after a passage of 36 days from Buenos Aires in which we covered 6,500 miles and averaged over 180 miles a day and over 7½ knots per hour for the entire run. This is a record."

H. *Ship Built by Jabez Williams*

ECLIPSE (1,223 tons; built 1850)

New York to Valparaiso—62 days.
Cleared New York January 5, 1852.
Arrived Valparaiso March 13, 1852.
Capt. Joseph Hamilton reported, "Arrived Valparaiso after 62 days of sailing, pilot to pilot, from New York."

I. *Ship Built by Roosevelt & Joyce*

DAVID BROWN (1,715 tons; 1853)

Anjer to London—69 days.
Cleared Shanghai July 11, 1854.
Sailed Anjer August 20, 1854.
Arrived Gravesend October 28, 1854.
Capt. Geo. S. Brewster reported, "Made run of only 69 days from Anjer with copper torn and cutwater twisted from being aground."

J. *Ship Built by Sidney Wright*

COLUMBIA (492 tons; built 1822)—a transatlantic packet.

Portsmouth, England, to New York—15 days 18 hours.
Dropped pilot off Portsmouth (noon) April 1, 1830.
Arrived off Sandy Hook night of April 16, 1830.
Capt. J. C. Delano reported, "A record crossing of 15 days 18 hours."

K. *Small Schooner Built at Sag Harbor, N. Y.*

SIERRA NEVADA (not the clipper ship of the same name)

Shanghai to San Francisco—34 days.
Arrived San Francisco January 25, 1851.
Capt. L. B. Edwards reported, "Made the crossing from Shanghai to San Francisco in the record time of 34 days and averaged 7½ knots per hour, port to port."

The following table is a recapitulation of the before-stated record and outstanding "near record" passages and deep-sea runs of New York-built ships:

Name of Builder	Number of Stated		
	Ships	Passages or Runs	Separate Voyages
William H. Webb	8	20	15
The Westervelts (and Mackey)	9	14	14
Smith & Dimon (and Stephen Smith)	5	8	8
The Bells (and Brown)	6	7	6
Isaac C. Smith	1	5	5
Thomas Collyer	2	4	3
Perrine, Patterson & Stack	2	2	2
Jabez Williams	1	1	1
Roosevelt & Joyce	1	1	1
Sidney Wright	1	1	1
Sag Harbor, N.Y.	1	1	1
Total of outstanding performances as recorded out of a multitude of reported fast sailings	37	64	57

New York Becomes the Country's Premier Port and Marine Metropolis While the Center of Sailing Ship Construction Moves "Down East" to the Kennebec River, Maine

Robert G. Albion, in SQUARE-RIGGERS ON SCHEDULE, refers to a marked change in the late forties of the nineteenth century in the location of transatlantic and coastwise sailing packet shipbuilding, the shift being from New York and Boston "Down East" via Portsmouth, N.H., to Maine.

Up to 1848, Maine and New Hampshire had not built a single New York packet. In the next ten years New Hampshire built four ocean packets at Portsmouth, chiefly by George Raynes. Maine built six ocean packets and two for the coastal lines, including the clipper *Phoenix,* built at Cape Elizabeth, across the harbor from Portland, for the Red Star Line. Rhode Island's only packet in the whole forty years [1818-1858] was a 625-ton New Orleans liner from Warren. Connecticut, which had run up such a big score earlier, built a single coastal packet during the decade. This was characteristic of the general shift in shipbuilding at the time.

In the 1850's, New York and Boston as clipper shipbuilding centers were decidedly in the public eye. Their population, together with that of the two other leading American seaports (Philadelphia and Baltimore), is presented herewith as officially reported for the years 1850 and 1860, respectively. The figures are divided into "free native" and "foreign born," with the latter separated into "the most important nationalities."

	Total	Free Native	Foreign	Ireland	Germany	Great Britain
			1850			
New York	515,000	277,000	235,000	133,000	55,000	31,000
Philadelphia (Greater)	408,000	286,000	121,000	72,000	22,000	20,000
Baltimore	169,000	130,000	35,000	12,000	19,000	2,000
Boston	136,000	88,000	46,000	35,000	1,000	4,000
			1860			
New York	813,000	429,000	383,000	203,000	119,000	37,000
Philadelphia	565,000	396,000	169,000	95,000	43,000	23,000
Baltimore	212,000	154,000	52,000	15,000	32,000	2,000
Boston	177,000	114,000	63,000	45,000	3,000	5,000

Whereas it was Philadelphia that was challenging New York for leadership as to size and population around mid-century, it was not Philadelphia but Boston that threatened New York's leadership as a shipbuilding center. In 1855, whereas the port of New York listed "31 shipbuilding establishments employing 2,313 hands," it had reached the peak of its greatness as a shipbuilding center. However, it was to continue to grow as America's greatest ocean port and trading center. The port of Boston in 1855 listed 19 shipbuilding plants working on full-rigged wood ships, besides the smaller yards building other types of craft. It was estimated that the Boston shipbuilding establishments employed over 1,500 men, but the Massachusetts yards collectively had about 3,500 men on their pay rolls. Massachusetts as a state was second to Maine in shipbuilding (as to both tonnage and labor employed), even though the Pine Tree State had no William H. Webb or Donald McKay and built but few clippers and sailing packets and but little spectacular tonnage that was in the public eye.

The permanently registered tonnage, the number of square-riggers built, and the tonnage entered in foreign trade at certain important U.S.A. ports for the year 1855 are set forth comparatively herewith:

Port or Customs District	Permanently Registered Tonnage	No. of Square-riggers Built	Tonnage Entered in Foreign Trade	Port or Customs District	Permanently Registered Tonnage	No. of Square-riggers Built	Tonnage Entered in Foreign Trade
New York	566,613	40	1,377,738	Baltimore	77,107	14	121,337
Boston	393,577	49	373,626	Philadelphia	47,739	10	152,822
Bath, Maine	129,262	56	4,423*	Portsmouth, N.H.	18,680	8	2,436
Portland, Maine	82,895	31	37,577	Salem, Mass.	18,337	—	14,659

*It is clearly evident that Bath, Maine, was a great shipbuilding and ship-owning center, but was never an important trading port; its geographical location, while excellent for building wood ships, prevented it from ever becoming a foreign trading port.

At the time of the California gold boom, the principal shipbuilding center of the United States—considering leadership, quality of design and construction, and tonnage launched within a defined, concentrated area—was New York City. A section of Massachusetts consisting of Boston and environs (Medford, East Boston, Chelsea, Charlestown, South Boston, etc.), with certain outlying communities and Newburyport, was rapidly coming to the fore. The state of Maine, from Portsmouth, N.H., on the Piscataqua to Eastport and the Passamaquoddy, was constructing more and more low-cost tonnage, which was built not to make speed records but to carry at a fair speed relatively large deadweight and volume cargoes per registered measured ton and to make money in operation. At an early date, Maine shipbuilders, under the leadership of Bath and Kennebec yards, were thinking and working on a per-ton-per-mile-per-day basis and using such figures as a yardstick to rate the relative economic quality of marine tonnage in competitive deep-sea trade. By 1857 the glory of New York and Boston as shipbuilding centers had passed, but because of geographic location, connections, farsightedness, and courage, New York continued steadily to grow in power, influence, and tonnage as the greatest seaport on the American continent, even though its shipbuilding eminence was over. After the Civil War, New York was decidedly secondary to Greater Boston as a constructor of ships, and both New York and Boston became grossly inferior to Maine as shipbuilding centers, in both tonnage and importance, as the century advanced. Baltimore (and the Chesapeake) and Philadelphia (and the Delaware) had been outclassed and long since passed in the race for shipbuilding supremacy; they were of the past. As far as foreign and coastwise water-borne trade was concerned, New York had definitely become the premier port and marine metropolis of the United States.

During the clipper shipbuilding decade (1850-1859 inclusive), ships were built in quantity from the Chesapeake to the Penobscot, but Maine was in the lead as a shipbuilding state in number and tonnage of vessels constructed. Bath built several "half" clippers, and during a speed-crazy era Maine launched a number of sharp-lined heavily sparred ships built on order; but Maine master builders were not pleased with them, and Maine shipowners would have nothing to do with the type. After the clipper ship boom had spent itself and a natural reaction of depression was encountered, the spars and canvas of clippers were cut down, but the models of built ships could not be made fuller. The sound views of Maine shipbuilders and owners proved themselves, and Maine continued to build their type of ship in quantity when New York and Boston yards shut down. After the Civil War, the center of shipbuilding activity, which had been gradually moving eastward through many decades, definitely placed itself on the Kennebec River in Maine; it was there that American wood shipbuilding made its final stand and waged its last fight for survival.

The greatest natural tidewaters suitable for shipbuilding in the United States are—from south to north and east—Chesapeake Bay, Delaware River, New York Harbor (with its Hudson and East rivers), Thames River, Boston Harbor, Kennebec River, and Penobscot Bay. These locations generally became shipbuilding centers of prominence, although in clipper ship days the fine Thames River, with its admirable deep-water Groton shore, was overlooked by wood shipbuilders, and coast points a few miles to the east, such as Mystic, Westerly, etc., were favored notwithstanding their shoal-water limitations. Penobscot Bay, with many yards at Rockland, Frankfort, Thomaston, etc., never rose to prominence—beyond that of secondary sites—as did the Merrimac River, with volume and quality building at Newburyport, and the Piscataqua River, with its several active yards at Portsmouth, N.H., and a navy yard on the opposite bank at Kittery, Maine. The most prominent centers for wood shipbuilding around the middle of the nineteenth century were New York Harbor, Boston Harbor, and the Kennebec River, Maine; at the commencement of the fifth decade of the twentieth century, the greatest steel shipbuilding centers are around Chesapeake Bay, the Delaware River, and the Kennebec River, with sections of New York Harbor in use. The Thames River facilities, even in boom days, continue to be inadequately utilized.

The first ship built on the American continent was launched into the mouth of the greatest natural shipbuilding river in the United States, but during the eighteenth and the first half of the nineteenth century wood vessels were often constructed for years and in relatively large numbers in locations where timber and labor were available and the site of the shipyard itself quite unsuitable for the launching and flotation of seagoing craft. Vessels were built in New England and "put overboard" into tidewater on a high tide, and the craft were left lying on the mud most of the time while they were being rigged and fitted out. Many a sizable hull was hauled a long distance on skids and rollers from her building berth on a farm or in a woods clearing to a tidewater creek, and stories are told of "hauling vessels for miles 'cross country" from their inshore building site to river or ocean. Relatively large ships were built at points well inland, with builders dependent upon occasionally deep water in rivers and creeks to float them to the ocean. Some shipyards were so poorly located from the standpoint of depth of water channel to the ocean that many vessels could reach the sea only by being careened and secured to lighters, tanks, or barrels, in order to lift them and lessen their draft as they were towed to tidewater of sufficient depth to float them. A number of ships were built many miles from the ocean on creek or river banks, where they would float at high river or high tide; at that time there were no fixed bridges over such streams and inlets, an improvement in the public interest that became necessary as the country was developed and the population, industry, and business increased. Many famous harbors of the early nineteenth century had been developed with but little, if any, regard to natural depth of water with associated utility, accessibility, and steady use by sizable deep-sea vessels. Whereas shipyards require a depth of water with a nature of bottom suitable for launching and for floating ships light, harbors have to accommodate laden vessels with ease, economy, and safety. Attempts were made during the nineteenth century to perpetuate poorly located harbors by the operation of wide shallow-draft floating docks that lifted a laden vessel so that she could be towed, while resting at light draft on blocks and cradled in a dock, over shoals and into harbor. A floating dry dock of this type, known as a "camel," was used at Nantucket to take whaling ships over the bar during the 1840's.

The outstanding locations in the United States with topography of land and depth of water off the shore frontage naturally suitable for the building, launching, and floating of relatively large vessels were sections of New York City, N.Y., Greater Boston, Mass., the mouth of the Thames River (New London and Groton), Conn., and the Kennebec River, Maine. As far as natural advantages were concerned, the Kennebec River offered the best shore and water conditions for shipbuilding as the size of vessels increased with the years, and the site of Bath, Maine, aside from being admirable throughout the seventeenth, eighteenth,

and most of the nineteenth century in its proximity to timber stands and sources of needed material, was unequaled in shore topography for building and the depth and width of water for launching and floating ships—both light and full laden—and, furthermore, in accessibility to the deep sea. Although the city of Bath is twelve miles from the mouth of the Kennebec River, there has always been not only a depth of water in the river, directly off its banks, to launch and float the largest ships, and this without dredging, but also a width of river so that any vessel could be launched naturally, stern first, without checking or snubbing. Moreover, although the location is well north, the river never freezes over as do more highly publicized great rivers, such as the Hudson, which lie much farther to the south.

During colonial days, the War of 1812, and the first decades of the nineteenth century, Salem, Mass., built some ships and was one of America's greatest shipowning centers, with possibly, for a time, its most world-famous harbor. Gradually, however, the limitations as to natural advantages caused its decline. William Gray, said to have been "America's greatest shipowner of his day," moved from Salem to Boston in 1809; other shipping interests followed him, and Boston rose to eminence as a great marine center as Salem declined. During the clipper ship decade (1850-1859), no clipper ships were built at Salem, but three reputed clippers aggregating 3,400 tons register were built at Marblehead, Mass., in the vicinity of Salem and almost due east and oceanward of that once famous marine center and harbor.

Both William H. Webb, of New York, and Donald McKay, of Boston, definitely discontinued the building of wood sailing vessels in 1869, and neither had been active in the field following the depression and panic of 1857. During the thirteen-year period 1857-1869 inclusive, Webb built only three and McKay only four sizable wood sailing vessels. In ten of the years, Webb built no sailing craft, and in nine of the years McKay built only 838 tons of small fishing boats and one small bark for coastwise trade. It can be said that both Webb and McKay virtually terminated their wood sailing shipbuilding careers in 1856-1857, although in 1868-1869, after years of inactivity and abandonment of the field, each built two sizable wood sailing vessels. Bath, Maine, continued as an aggressive and successful builder of its own type of Down Easters for thirty-seven years after Webb and McKay had virtually stopped building wood sail and twenty-four years after the most famous New York and Boston shipbuilders had constructed their last wood sailing vessel.

Throughout the business depression of the late fifties (which was closely followed by the Civil War), Maine shipbuilders built good ships and constructed them economically and promptly for merchants in any part of the country who wanted them and could pay the reasonably low price asked. After the war, Maine wood shipyards, under the leadership of Bath's master builders, "commenced to hum" in the construction of good paying ships, and soon in them—the famous wood square-rigged Down Easters—was centered both America's leadership in wood shipbuilding and the country's hopes for the continuance and survival of a natural and great national industry. Not only the first but also the last deep-sea vessel constructed on the American continent was built on the Kennebec River in Maine, and following the launching in 1892-1893 of the mammoth four-masted shipentine *Roanoke,* the world's biggest wood square-rigger, and the trim full-rigged three-masted ship *Aryan,* the building of wood deep-sea ships was permanently discontinued. Bath, however, constructed steel square-rigged Down Easters for another decade—the only steel deep-sea sailing ships ever built in the United States and on the American continent. Furthermore, for about half a century beyond the time of the closing down of the Webb and McKay wood shipbuilding yards in New York and Boston, Bath built for the coastwise trade large six-masted wood schooners (at least one, the *Wyoming,* with a hull larger than that of the big square-riggers *Roanoke* and *Great Republic*).

IV.

CONNECTICUT RIVER AND LONG ISLAND SOUND

Connecticut Is Second Only to New York in Building Wood Square-rigged Ships for New York Transatlantic and Coastal Packet Lines

THE long, wide, but shallow Connecticut River, from its mouth in Long Island Sound to a point inland of Hartford, had many shipyards on its banks in colonial times and during several decades of the young republic. For the period, relatively sizable ships were built on the river. The records show that, in 1790, Hartford, Conn., had a number of square-riggers of good size and that, in 1792, John Morgan of that city owned the ship *Justina* of 309 tons. Two outstanding, rather large transatlantic sailing packets were built in 1833 at Hartford, Conn. The larger and more famous was the popular *Sylvie de Grasse,* constructed by D. & H. Burgess. This ship measured 641 registered tons (length 140½ ft., beam 31⅔ ft., depth 16 ft.) and ran in the New York-Havre, France, lines (Havre Old Line and later the Union Line) for fourteen years, 1834-1848. The average length of her westward "uphill" passages across the stormy North Atlantic was 35 days, but she made one very fast crossing in 20 days, and her worst performance under severe and adverse sailing conditions—wind and sea—was a run of 54 days. In 1848 she was sold to California parties and rounded the Horn in the early days of the Gold Rush, but, unfortunately, was run ashore and wrecked at the mouth of the Columbia River when loaded with "nearly half a million feet of lumber" destined for the booming new town of San Francisco.

The other important and sizable transatlantic sailing packet built in 1833 at Hartford, Conn., was the *Normandie* of 500 tons (length 130½ ft., beam 29 ft., depth 14½ ft.), constructed by L. Smith to run in the same New York-France service as did the larger *Sylvie de Grasse.* This ship saw three years (1834-1837) of service in the Atlantic "shuttle," and her average length of all westbound passages was 37 days (shortest, 26 days; longest, 48 days). The cabin joiner work, finish, and decorations of the *Normandie* were unusually fine for her day. From 1837 on, she functioned as a general trader, or transient, in the north transatlantic service and "went missing" on a midwinter passage from Liverpool to New York in December 1844 after eleven years of hard service and driving in "the toughest ocean trade in the world."

Prior to the 1830's, a fairly large fleet of ships and brigs hailed from Wethersfield, Conn., which is only a few miles south of the city of Hartford. Middletown, over thirty miles northwest of the mouth of the Connecticut River, sent out whalers and also built packet ships. The *Desdemona* of 294 tons (length 98 ft., beam 26 ft., depth 13 ft.) was built there in 1823 for J. J. Boyd, William Bayard, and the New York-Havre, France, Second Line, in which service she operated two years (1824-1826), when she was withdrawn from the run because of her small size. Her average length of westbound passage in regular transatlantic packet service was 39 days (shortest run, 35 days; longest, 49 days). She was a uniform sailer, as is proved by a comparison of the length of her average and best passages, but was rather slow. The

Desdemona was a general trader in the North Atlantic until she was ten years old, when she became a whaler; she continued in this service for the long period of fifty-nine years (1833-1892). When the whaling industry using small wood square-riggers waned and the *Desdemona* discontinued operations in that trade, she was sixty-nine years old and "in good seaworthy condition with reasonably sound timbers, considering her extreme age." Middletown, Conn., also built in 1822 the New York-Charleston square-rigged packet ship *Othello* of 264 tons, a vessel of only 30 tons less register than the transatlantic packet *Desdemona.*

Connecticut led with a wide margin all states other than New York in the building of wood square-rigged sailing packet ships for the New York lines—transatlantic and coastwise. All together, four ocean and thirty coastal packets were built in Connecticut for regular packet lines running out of New York; these vessels totaled about 13,236 tons register, an average of some 389 tons per ship. Twenty-six of these New York sailing packets built in Connecticut were constructed on the banks of the Connecticut River; they represent 76.5 per cent of the number and 10,720 tons, or 81.0 per cent, of the total tonnage built in the state. Saybrook, near the mouth of the river, led with nine ships, but East Haddam—fourteen miles upstream from the river's mouth—was a close second with eight, and Hartford, Middletown, Essex, and Chatham each built two packet ships, with Middle Haddam building one large packet in 1838. The honors for building for the transatlantic service went to Hartford, an inland city thirty-five miles from the ocean as the crow flies and about forty-four miles upstream from the mouth of the Connecticut River.

The following table shows the number and tonnage of square-rigged sailing packets built on the banks of the Connecticut River which were operating on schedule out of the port of New York in regular transatlantic and coastal lines during what may be termed the packet era of 1818-1858:

Where Built	Number of Packets			Registered Tonnage of Packets			Average Tonnage per Ship
	Ocean	Coastal	Total	Ocean	Coastal	Total	
Saybrook	—	9	9	—	2,853	2,853	317
East Haddam	—	8	8	—	3,995	3,995	499
Hartford	2	—	2	1,141	—	1,141	570
Essex	—	2	2	—	947	947	473
Middle Haddam	—	1	1	—	641	641	641
Chatham	—	2	2	—	585	585	292
Middletown	1	1	2	294	264	558	279
Total	3	23	26	1,435	9,285	10,720	412

The size of the packet ships built at the various points on the Connecticut River evidently bears no relation to the distance of the shipyards from the mouth of the river. Saybrook, near the ocean, built relatively small packets, whereas shipyards well upstream launched what were large ships in their day and averaged a good, high registered tonnage per vessel. The following table gives a list of the coastwise packets—sailing in regular lines out of the port of New York—that were built in the various towns on the Connecticut River:

Name	Year Built	Line	Tonnage	Name	Year Built	Line	Tonnage
1. *Saybrook* (nine vessels totaling 2,853 tons)				2. *East Haddam* (eight vessels totaling 3,995 tons)			
AMELIA I	1815	Charleston Ship	204	INDIANA	1825	Mobile	306
AUGUSTA	1821	Savannah	236	ST. JOHN	1828	Mobile	397
NIAGARA	1822	Charleston Ship	319	JUNIOR	1831	Mobile	377
HENRY HILL	1822	Mobile	192	COTTON PLANTER	1838	Mobile	501

(Continued on next page)

Name	Year Built	Line	Tonnage
1. *Saybrook*—Continued			
EXTIO	1825	Mobile	278
AMELIA II	1825	Mobile	244
ELISHA DENISON	1827	Mobile	359
HECTOR	1833	Mobile	557
RUSSELL BALDWIN	1833	Mobile	464
3. *Essex* (two vessels totaling 947 tons)			
TUSKINA	1830	Mobile	420
LORENA	1832	Mobile	527
5. *Middle Haddam* (one vessel of 641 tons)			
PANTHEA	1838	Holmes (New Orleans)	641

Name	Year Built	Line	Tonnage
2. *East Haddam*—Continued			
SULLIVAN	1839	Charleston Ship; also Charleston Bulkley	436
SOUTHPORT	1840	Charleston Bulkley	499
HERO	1848	Louisiana & New York	749
E. BULKLEY	1850	Charleston Bulkley	730
4. *Chatham* (two vessels totaling 585 tons)			
LAVINIA	1823	Holmes (New Orleans)	309
CHANCELLOR	1823	Holmes (New Orleans)	276
6. *Middletown* (one vessel of 264 tons)			
OTHELLO	1822	Charleston Ship	264

Chatham, Conn., was at one time an important shipbuilding center. During the Revolution and the War of 1812 with Britain, shipyards well inland and free from molestation by the powerful British Navy were popular and kept busy turning out merchantmen, privateers, and an occasional ship built for war. The 28-gun ship *Trumbull,* built at Chatham during the early days of the Rebellion, was captured in 1778 off the Delaware by H.B.M. ships *Iris* (ex-*Hancock*) and *General Monk* (ex-*General Washington*—privateer). The British criticized "the poor construction" of the colonial-built *Trumbull,* but they, nevertheless, inducted her into the British Navy (as they did all other American-built warships and privateers that fell into their hands), changed her name to *Tobago,* and reduced her armament to 20 guns. Among other famous and fast ships built at Chatham, Conn., was the *Liberty* of "over 300 tons" (length 104 ft., beam 25½ ft.), launched in 1799 for George and James Howland and others, of New Bedford, Mass., and Samuel Hicks, of New York; also the speedy schooner *Viper* of 303 tons (length 105 ft., beam 25¼ ft.), built in 1812 for William Sturgis and associates, of Boston, Mass. During the sailing packet ship era, Chatham built in 1823 the *Lavinia* of 309 tons and the *Chancellor* of 276 tons—both for the Holmes (New York-New Orleans) Line, and Essex built two sizable square-rigged packets seven and nine years later for the Mobile Line. The largest packet built at this part of the river was the *Lorena* of 527 tons (length 126 ft., beam 30 ft., depth 15 ft.), launched in 1832.

Middle Haddam, about twenty-three miles upstream and at the turn of the river where it runs west to Middletown, built the large sailing packet *Panthea* for the Holmes (New York-New Orleans) Line in 1838. This square-rigger was of 641 tons register, 136 ft. long, 32 ft. 4 in. beam, and 20 ft. 9 in. deep. East Haddam built some big ships, the largest being the packet *Hero,* launched about 1848, and closely approaching her in size was the *E. Bulkley*—the only packet built in Connecticut after 1848 and the finding of gold in California. The dimensions of these two largest ships constructed in East Haddam were as follows:

Name	Registered Tonnage	Length	Beam	Depth
		Feet	*Feet*	*Feet*
HERO	749	145	33.75	19.3
E. BULKLEY	730	148	33	19.5

Among the outstanding fast traders built "down river" at Saybrook, Conn., may be mentioned the *Maria* of 344 tons (length 102 ft., beam 28 ft., depth 14 ft.), built for the Griswolds and the Haydens, of New York, in 1811. The largest of the nine regular New York coastwise sailing packets built in Saybrook for lines running to Mobile, Charleston, and Savannah during the years 1815 to 1833 was the sizable square-rigger *Hector* of 557 tons, launched in 1833; this ship measured 134 ft. long, 30 ft. 3 in. beam, and 15 ft. deep. Fourteen years later (1847), the small, light-draft bark *Jennette* of 248 tons (length 105 ft., beam 27½ ft., depth 9½ ft.) was built for Charles Peterson, New Haven, Conn. The *Jennette* did some fast sailing in the China-England tea trade, including a run in 1853-1854 from Hong Kong to London in 103 days. The little "good-carrying" *Jennette* left Hong Kong December 21, 1853, and reached London on April 3, 1854. At about the same time, other clippers in the tea trade—all much larger—made passages to London as follows:

Name of Clipper	Registered Tonnage	Arrived London 1854	Length of Passage in Days	Sailed from
VANCOUVER	548	Mar. 31	127	Foochow
RESOLUTE	787	Apr. 4	117	Canton
ARGONAUT	575	Apr. 3	112	Hong Kong
MYSTERY	1,155	Mar. 14	120	Shanghai

The fast clipper ORIENTAL left Canton on December 22, 1853, and was lost February 25, 1854.

The *Resolute* (length 151½ ft., beam 33¾ ft., depth 19½ ft.) was built by Westervelt & Sons, New York, in 1853. The *Argonaut* (length 147½ ft., beam 29 ft., depth 21 ft.) was built by Samuel Lapham, Medford, Mass., in 1849, and made a westbound passage around the Horn in 1849 in 133 days; she was beaten in time that year only by the sharp-lined clippers *Memnon* (122 days) and *Reindeer* (131 days). The *Mystery* (length 185 ft., beam 37 ft., depth 23 ft.) was built by Samuel Hall, East Boston, Mass., in 1853.

Apparently, the Connecticut River turned out good, well-built wood sailing craft, and at the commencement of the clipper ship era, small Saybrook-built vessels were giving a good account of themselves over deep-sea routes where their small size did not prove too great a handicap.

Surprising as it may seem, wood shipbuilding never flourished between the Connecticut River and New York City or on the shores of Long Island. Small boat building was practiced extensively in colonial days, but during the Revolution all yards on the shore of the Sound or on the banks of streams emptying into the Sound and easily navigable to British punitive naval and military forces were abandoned. The same conditions existed during the War of 1812, and what shipbuilding was done in Connecticut centered well inland on rivers such as the Connecticut, Thames, and Housatonic. Between New York and the mouth of the Connecticut River, the Housatonic River empties into the Sound near Stratford, Conn., and about four miles east of the city of Bridgeport, Conn. Ships were built at Stratford, Bridgeport, and Fairfield (which lies to the west of Bridgeport as Stratford does to the east), and up the Housatonic River—twelve miles from the mouth—sizable wood ships were built at Derby and Shelton.

New Haven, like Bridgeport, was a seaport of importance in the late eighteenth and the first half of the nineteenth century, and some shipbuilding was carried on—but not extensively. Milford, on the Sound about midway between Bridgeport and New Haven, built some wood ships, and between New Haven and the Connecticut River to the east, ships were constructed at Killingworth, Madison, and Clinton and launched into the little Hammonasset River, which enters Long Island Sound about eleven miles west of the long, wide, but shallow Connecticut River and about thirty miles east of the mouth of the smaller and livelier Housatonic River.

The total tonnage of sizable wood ships and of square-riggers of any size built in the state of Connecticut west of the Connecticut River (i.e., between Saybrook and New York) is relatively insignificant. When New York City called on Connecticut to build some square-rigged sailing packets for its numerous established, regular lines—transatlantic and coastwise—during the so-called sailing packet era of 1818-1858, only 13.4 per cent of the tonnage built in the entire state of Connecticut for the service was constructed west of the Connecticut River. There was built in 1800 at Stratford, Conn. (at the mouth of the Housatonic River), an unusually fast square-rigger of 297 tons, named *Mars,* to the order of Thomas Carpenter, of New York, and Liffert Lifferts, of Philadelphia. This craft was 95 ft. 3 in. long and 26 ft. 8 in. beam and, incidentally, was 37 tons larger than another vessel of the same name built in Massachusetts in 1795.

In 1815 the square-rigged transatlantic packet *Garonne* was built at Milford, Conn., and she did service for years in the New York-Havre Whitlock Line; this ship was of 296 tons register and had a measured length of 95 ft. and a beam of 26 ft. 9 in. At Fairfield (Bridgeport), three New York-Charleston packet ships totaling 783 tons register were built during the period 1818-1832: (1) *President* of 243 tons, built in 1818; (2) *Charleston I* of 167 tons, built in 1822; and (3) *H. Allen* of 373 tons (length 101.7 ft., beam 27 ft., depth 15.3 ft.), built in 1832.

Close by, at Black Rock (Fairfield), Conn., there was constructed in 1853 the only really sizable clipper built in the state of Connecticut west of Mystic. This ship, the *Black Hawk,* was constructed by the firm of Hall & Teague for its own account, and she was a large vessel—1,579 tons register, 213 ft. long, 40 ft. beam, and 27 ft. deep. She was an unfortunate craft and foundered in 1854.

Killingworth, Conn., attained a reputation for building some good and, for the times, sizable square-riggers. The location is also referred to in records as Killingworth-Clinton, Madison, and the Hammonasset River. Two New York-Charleston packet ships were built at Killingworth-Clinton: *Franklin* of 212 tons, in 1819, and *Sutton* of 346 tons (length 106 ft., beam 26 ft. 9 in., depth 13 ft. 8 in.), in 1832. Daniel Buell, of Killingworth, in 1831 built by contract for Jacob Fowler and Charles Morgan, of New York, a fast little bark of 217 tons named the *John W. Cater* that gained a place in the marine history of the nation. This bark was only 89 ft. 4 in. registered measured length, 24 ft. 2 in. beam, and 11 ft. 5 in. deep; but she was surely one of the first—and probably the first—privately owned ships to sail from New York to San Francisco following the finding of gold in California. The *John W. Cater* sailed deeply laden with a useful cargo on October 18, 1848.

At Derby, Conn., well up the Housatonic River, the New York-Charleston square-rigged sailing packet *Columbia* was built in 1846. She was a sizable coastal packet of 441 tons register and measured 122 ft. 8 in. long, 28 ft. 5 in. beam, and 14 ft. 2 in. deep.

A little clipper bark, the *Gazelle* of 253 tons, was built in 1852 by Lane & Jacobs, New Haven, Conn., by contract for H. Trowbridge & Sons, St. Croix. This shapely, fast craft was 108 ft. long, 25.3 ft. beam, and 10.3 ft. deep; practically nothing is known of her history.

V.

THE THAMES AND MYSTIC RIVERS OF CONNECTICUT

An Area Unequaled for Its Size in the Production of Hardy Seafaring Men, Outstanding Ships, and Important Sailing Records

THE territory around the fine, navigable Thames River in Connecticut and the immediate coast line east of New London came into prominence in very early times as a shipbuilding center of importance. Here in 1900 the world's largest steel passenger and cargo steamships designed up to that time were laid down on the Groton shore, and relatively large vessels of superior quality were built in that general location during the eighteenth and the first part of the nineteenth century. What can be considered the New London and Thames River district in shipbuilding extends from midway between the Thames and Connecticut rivers on the west to and including the Pawcatuck River and Westerly, R.I., on the east—a distance of ocean frontage of some twenty-three miles. (Building actually took place between Waterford, opposite Niantic, Conn., and Westerly, R.I., about eighteen and one-half miles as the crow flies.) East of the New London district, there was no shipbuilding until the shores of Narragansett Bay were reached. West, the Connecticut River was close at hand, and it enjoyed a period of pronounced shipbuilding activity. New London dates from 1645, and in 1650 it was credited with thirty permanent settlers, of whom four were experienced shipwrights. A few years later, with the number of reported settlers doubled, we are told, sixteen of them were sufficiently skilled to work at shipbuilding. By 1660 the building of vessels, as an industry, was well established on the Thames River, and it grew steadily, with yards expanding upstream, on the Groton shore, and over to and beyond the Mystic River as time advanced. John Leeds was building vessels in Groton in the 1680's, and before the end of the century the shipwrights John Packer, Joseph Wells, and John Burrows, Jr., had established themselves on the Mystic River, where good ship timber could be obtained with only a short haul to satisfactory building and launching sites.

A three-masted square-rigged ship of 720 tons, the largest vessel built in America up to that time, was constructed in 1723 (or 1725) on the Groton, Conn., shore immediately opposite New London by a builder named Jeffreys, and from this building site some one hundred eighty years later, the Pacific liners S.S. *Minnesota* and *Dakota,* each of 21,000 tons (the largest vessels of their day and the largest cargo carriers ever constructed in any country of the world to date), were successfully launched. The Jeffreys vessel, known as the *"Great Ship,"* was evidently built expressly for the British Royal Navy, and her builder is said to have been the Jeffreys, referred to in the diary of Samuel Pepys, who was building other vessels in England during the latter part of the reign of King Charles II.

New London and the Thames River in general, because of the fact that their marine interests were centered primarily in whaling, played a relatively small part in the development of American shipbuilding and shipping during the early and middle nineteenth century. Up

to the War of 1812, Norwich (some twelve miles up the Thames River almost directly north of New London) was evidently more active than New London and Groton in the building of ships, and the very fast ship *Oliver Ellsworth* of 410 tons was built in Norwich in 1801 for the Polymerts, of New York. Another well-known ship, the *Resolution* of 325 tons, was built the same year for Alpheus Dunham, of Boston. Samuel Story constructed the fast ship *Crisis* of 337 tons at Norwich in 1819 for S. S. Howland, of New York. She was 103 ft. long, 27 ft. beam, and 13½ ft. deep and was acclaimed "the fastest of the ships drawn together to form the first transatlantic packet lines." In the London Black X Line, 1824-1826, she averaged only 34 days on westward passages (shortest, 30 days; longest, 42 days) and was a consistently good sailer in the stormy North Atlantic for such a small ship. Although ships were constructed at Norwich in gradually reducing numbers until after the Civil War, the merchants of that community, after the whaling business waned, turned from the sea to industrial investments ashore. Waterford built substantial brigs and schooners during the first half of the nineteenth century (launched into the ocean inlets about four miles west of New London), but the Thames River was not important as a shipbuilding center, in harmony with its natural advantages, during the clipper ship boom of the mid-century.

The building of general deep-sea square-rigged vessels in the vicinity of the Thames River developed well during the first half and middle of the nineteenth century on the shore of the ocean inlets and rivers running about fourteen miles east of the Thames to the Pawcatuck and Westerly, R.I., which is on the eastern bank. The Mystic River, six miles east of the Thames, and Stonington, Conn., on the ocean six miles east of the Thames River, became prominent shipbuilding centers and Stonington, Conn., an important whaling port. In 1832 the fast ship *Robert Bowne* of 505 tons was built there for Grinnell & Minturn, of New York, and in 1843 the packet ship *Wabash* of 398 tons of the New Orleans & New York Line. It has been said by historians that the little seaport of Stonington "bred such hardy and enterprising mariners that they played a role out of all proportion to their numbers in American maritime history" during the first half of the nineteenth century, and the town had a pronounced influence in New York sailing packet circles—particularly coastwise. It was the home of Peter and John S. Crary, owners and "silent backers" of packets.

On the small tidal stream to which the Indians had given the name "Mistick," a village was established by early English-born settlers in the early 1650's. Boats were soon being built in this location, for in the absence of roads such were indispensable for transport of persons, supplies, and produce. There is a tradition that a vessel was built at Mystic in 1662 for the West Indies trade. Records indicate that there were two shipyards at the head of the Mystic River about 1760, but virtually the entire population at the time of the Revolution, as in other parts of New England, lived on scattered farms, and vessels were built generally by men whose activities included farming, trading, timbering, fishing, and seafaring. Carl C. Cutler, in "Mystic—the Story of a Small New England Seaport," says that in the seventeenth century, on the shores of the little Mystic River, a community was founded "which was to become famous wherever ships floated, and which, for a time, was to produce more noted captains, a greater tonnage of fine ships and a larger number of important sailing records than any place of its size in the world."

The Mystic River, from Old Mystic (about six miles north of Noank) to Noank on the ocean point, had vessels launched into its waters from early colonial days to well into the twentieth century. Small craft were built upstream, and as ships increased in size, the yards were moved oceanward to deeper water. Records of early shipbuilding on the Mystic River are very meager, and practically nothing is known of the vessels built prior to the birth of the young republic. Eldredge Packer, taking over the old John Packer shipyard at Mystic, launched the 71-ton sloop *Polly* in 1784. The sloop *Hero,* which he built in 1800, became a famous vessel; for this small craft, which was only 47 ft. long, rendered good service as a privateer during the War of 1812, and it was in this little vessel that Capt. Nathaniel B. Palmer dis-

covered the Antarctic continent in 1821. In 1795, Edward Packer (a brother of Eldredge) launched the 51-ton sloop *Revenue* from the Packer yard, and in 1805 he built the sizable brig *Independence.* The two Packers are credited with building a relatively large fleet of sloops and several schooners, brigs, and brigantines. Among these were the brig *Friendship* of 127 tons, built in 1804, and the schooner *Prudence Mary* of 150 tons, launched in 1807. About 1790, Thomas and James Latham, shipwrights, located a yard at Noank, which the Latham family operated for some eighty years; the sloop *Sally* was launched from this yard in 1793. John Parks is known to have been active in building sloops near the mouth of the river "soon after the Revolution." In the late 1790's, Christopher and David Leeds operated a shipyard on the East Bank at the head of the river, and Enoch Burrows had a yard on the opposite West Bank, from which a large, fast vessel named the *Leader* was launched in 1798. It is said that the *Leader,* which had been designed by Christopher Leeds, was taken over by the U. S. Navy and was reputed to be at the time "the fastest ship in the armed forces." Prior to the War of 1812, the Leedses are credited with building a number of sizable vessels, among them being the ship *Orris* of 239 tons, built in 1809; the brig *Almira* of 206 tons, launched in 1810; and the brig *Independence* and schooner *Mary,* each of 168 tons, built in 1808 and 1811, respectively. Among the sizable vessels known to have been built in the Mystic-Stonington-Groton area in the nineteenth century prior to the War of 1812 were the 374-ton ship *Hardware,* launched by Simeon Holme in 1803; the *Eliza* of 274 tons, built by Joseph Sisson, and the *Ann Williams* of 332 tons, built by Samuel Remington, both launched in 1806; the *Venus* of 209 tons, built by Amasa Miller in 1809; and the *Flora* of 338 tons, laid down on the Groton shore in 1811. Following the close of the war, the Leedses (Christopher and David) built a sizable fleet of vessels, which included ships of over 300 tons, and the yard was being operated until about the end of the 1830's.

The East Bank of the Mystic River was known as the Stonington side, and here Mystic, Old Mystic, Stonington, etc., are located; while the West Bank of the river was part of Groton, which carried west and was the East Bank of the Thames River opposite New London. Therefore, there is likely to be confusion in the shipbuilding records of the Mystic and Thames rivers and between the villages of Stonington, Mystic, and Groton. Customhouse records prior to the mid-nineteenth century give the townships in which vessels were built; therefore, craft laid down on the East Bank of the Mystic River were built in Stonington; and those launched from the West Bank were recorded as built in Groton.

Records show that a 300-ton ship was built at the Mystic Narrows in 1790 by Benjamin Morrell, who continued to build sizable ships and brigs as well as smaller craft on the river and, in 1815, launched the ship *Volunteer* at Stonington for Captain Fanning, the explorer. Edmund Fanning, born at Stonington in 1769, a descendant of an Edmund Fanning who had settled near the Mystic River in or about 1655, made a sealing voyage in the brig *Betsey* in 1792 to the islands south of Cape Horn and opened up new avenues of profitable trade. In 1797-1799, he took the *Betsey* on a sealing voyage on which he circumnavigated the globe. After taking a cargo of skins aboard, Fanning sailed for China, where he disposed of his skins profitably and loaded teas and silks for New York. This is said to have been "the first time an American vessel, sailing from New York with an all-American crew, carried the flag around the world." Following the close of the War of 1812, Captain Fanning resumed sealing operations and, in 1815, took the new ship *Volunteer,* manned by local men, on a successful around-the-world sealing voyage sailing west. In 1817, Fanning took the *Sea Fox* over the same course, and these profitable sealing voyages opened up a new trade that Mystic men capitalized to their commercial advantage. The brig *Hersilia* of 131 tons, built by Leeds at the head of the river, sailed under Capt. James P. Sheffield, of Stonington, in July 1819 for the southern sealing rookeries and made a very profitable voyage, following which a fleet of eight Mystic vessels entered the trade in 1820; these vessels, in addition to the famous twenty-year-old sloop *Hero* and the brig *Hersilia* (before mentioned), consisted of the locally built and owned brigs

Catherine, Clothier, Emaline, and *Frederick* and the schooners *Express* and *Free Gift.* Success in the sealing business led Mystic River mariners to take up whaling, and the 312-ton *Hydaspe,* built by Leeds in 1822, was Mystic's pioneer whaleship.

Charles Mallory, who became one of Mystic's most prominent and successful shipbuilders, commenced working at Mystic as a young journeyman sailmaker in January 1817. Mallory owned "a piece" of the *Hydaspe* (probably paid for by service) in 1822, and in 1833 he acquired a managing control in Mystic's second whaleship, the 265-ton ship *Aeronaut,* built in 1830, as well as the larger full-rigged whalers *Bingham* (375 tons) and *Acasta* (330 tons). In 1836, Mallory gave up his sailmaking business and, during a period of business depression, embarked heavily in whaling ventures, was most successful, and built a fortune whose foundations were in whaling. In the early forties, Mallory had a controlling interest in and managed nine of the Mystic fleet of eighteen whaleships. Charles Mallory became one of Mystic's leading citizens and, in the fifties and sixties, was one of the wealthiest shipbuilders and shipowners in Connecticut. In 1849 he built his first sizable merchant ship, the bark *Fanny* of 341 tons, and in 1853 he owned and operated six clippers. During the clipper ship decade, Mallory built more clippers (nine of them) that made more Cape Horn westward passages to California (twenty-two of them) than any other Mystic builder. Some of his sizable clippers were outstandingly fast, good, reliable carriers and profitable to operate when most of the sharp-lined and all of the "extreme" clippers could not pay expenses in competitive trade.

The advantages of the Mystic River for shipbuilding influenced Silas Greenman, Jr. (whose father, a master builder, had been constructing vessels at Westerly, R. I., since the late 1780's), to move to Mystic in 1824, and the following year he built the brigs *Pulaski* of 66 tons and *Bunker Hill* of 144 tons in part of the Leeds yard on the East Bank at the head of the river. Both these vessels were used in the Fanning sealing trade. In 1833, Silas Greenman, Jr., felt it desirable for him to return to Westerly to take over the active management of his father's yard, so he handed the Mystic yard over to his younger brothers, George and Clark. They conducted the business as a partnership until 1838, when another brother, Thomas, joined them, and the firm became George Greenman & Company. In 1833 the old Greenman yard at Westerly, on the Pawcatuck, built the whaleship *Thomas Williams* of 340 tons (length 106 ft., beam 27 ft., depth 13½ ft.) for Stonington owners, and George and Clark Greenman contracted to build for New York owners the largest ship ever laid down up to that time on the Mystic River. This ship, the *John Baring* of 529 tons (also reported as 590 tons), was 130 ft. long, 30 ft. beam, and 28 ft. in depth. She was too big to be built at the head of the river, so the Greenmans moved their yard two miles downstream, where they could get deeper water. After operating there for some four years, they purchased land still farther down the river at Adams Point, where they could obtain "more land and deeper water front," and here they built sizable vessels successfully for a period of some forty years. The *John Baring* ran for years as a Mobile packet before being sold abroad. In 1845 the Greenman yard on the Mystic built the ship *Niagara* of 730 tons, in 1849 the ship *William Rathbone* of 1,118 tons, and in 1853 the medium clipper *David Crockett* of 1,679 tons, each of which established a record for size of vessels built in the state of Connecticut up to the time of her construction.

Silas Greenman, Jr., after moving back to the Pawcatuck and taking up the management of his father's yard, lived at Westerly until his death in 1881. Silas preferred to operate in direct charge and assume all responsibility rather than to act as one of a partnership. He built many ships on the Pawcatuck alone, but later had his son, George S., associated with him in business. In 1852 he built the clipper ship *Island City* of 700 tons for Stanton & Thompson, of New York.

The other three "Greenman boys," the sons of "old Silas Greenman," the well-known shipbuilder of Westerly, R.I., following the Revolution, definitely associated themselves with building ships on the Mystic. George, the oldest of the three (but younger than Silas, Jr.), was an able shipwright and executive; but he had some of the characteristics of his older brother,

and he preferred to be a boss rather than a partner. The firm of George Greenman & Company expresses correctly the relative importance of George in the company, for it was not a Greenman brothers' partnership but a company in which all three of the brothers owned invested capital, with George as the directing head. The following table is a shipbuilding record of the firm of George Greenman & Company during the forty-four years (1834-1878) of its active existence at Mystic, Conn.:

Number of Vessels Built	Type	During Years	Tonnage Range	Total Tonnage
		Sail		
			Tons	*Tons*
3	Sloops	1834-1840	40 to 55	135
7	Fishing smacks	1836-1838	25 to 30	192
19	Two-masted schooners	1837-1858	75 to 160	1,700
3	Three-masted schooners	1872-1876	Average 322	966
7	Brigs	1836-1865	225 to 450	2,087
12	Barks	1840-1867	350 to 796	6,126
15	Three-masted ships	1833-1869	530 to 1,679	17,106
66	Sailing vessels	1833-1876	25 to 1,679	28,312
		Steam		
11	Screw vessels	1842-1864	247 to 943	5,846
10	Side-wheelers	1855-1878	110 to 575	3,608
7	Miscellaneous screw tugs, lighters, gunboats, etc.	1859-1874	Average 164	1,150
28	Steam vessels	1842-1878	Up to 943	10,604
		Total All Vessels		
94	Sail and steam	1833-1878	Up to 1,679	38,916

Dexter Irons was building small vessels on the Mystic River in the late 1830's and during the forties entered into a partnership with Amos Grinnell. In 1849 this firm built the fast small bark *Asa Fish* of 320 tons for Amos Grinnell and others, of Stonington and Groton. A yard, located for building larger vessels, was established at Pistol Point, and during the years 1851-1855 of the clipper ship decade, the firm of Irons & Grinnell built four clippers aggregating 5,113 tons, of which the famous *Andrew Jackson* of 1,679 tons was one. She holds both a transatlantic and the westbound Cape Horn record. This ship has been authoritatively described as "the fastest sailing vessel of the clipper ship era," and it could also be said that if the quality rating of a ship is determined by the cost of carrying a ton per mile per unit period of time (per week, month, or year), several Mystic-built ships were in the first flight, and a few of them led the world. Dexter Irons died shortly before the outbreak of the Civil War, and the yard suspended operations, but after the war building was resumed by the firm of Hill & Grinnell and still later by Pendleton Brothers. The downriver shipbuilding site established and developed by Dexter Irons built vessels intermittently until after the close of World War I, and during its later years it constructed a number of multi-masted schooners.

Charles Mallory, during his career, was evidently interested in several yards and master builders. He was essentially a merchant, and both prior to and during the years that he owned his own yard, Mallory financed some master builders who constructed for him on a contract basis. As early as 1836-1839, an old Mystic builder constructed for Mallory three schooners with a tonnage of from 95 to 130 tons, which were named the *Meteor, Mobile,* and *Swallow.* In 1853, Mallory bought the well-located old Appleman's Point yard, then known as the Forsyth & Morgan shipyard, and John A. Forsyth as master builder constructed some vessels for him there; while at Mallory's "old yard," owned and operated by him, across the river, Peter Forsyth built clippers in the early fifties following the construction of the bark *Fanny* in 1849. Mallory's second real clipper, the *Alboni* of 917 tons, built in 1852 in the Mallory

yard, was registered with Mason Crary Hill, a designer of ability, as the builder. Of Mallory's nine clippers built in the 1850's, six were registered with Charles Mallory as managing owner and two in the name of New York owners; one, the *Twilight* of 1,482 tons, had Gates & Company, of Mystic, as owners of record. (Capt. Gurdon Gates, of Mystic, was the commander of the ship from the time that she was built in 1857 to her sale during the Civil War in 1863.)

The record of Charles Mallory and his Mystic contemporaries shows that they were open-minded in their business enterprises. Mallory, originally a sailmaker, became interested in whaling, and after experience with small coasting vessels, he branched out into deep-sea merchandising and became interested in fast ocean carriers and clippers. During the Civil War, the Mallorys built twenty-two steamers; whereas Donald McKay, in Boston, built only four and spent most of his time advocating the building of fast armed sailing vessels as cruisers. The Mallorys had no such old-fashioned notions and advocated the building of the fastest possible steamers to protect merchant sailing ships at sea and act as commerce destroyers. The secretary of the Confederate Navy, Stephen R. Mallory, was of the same maritime inheritance as Charles Mallory, of Mystic, and both were descendants of Peter Mallory, who settled in New Haven in 1644. After the Civil War, in which a few southern steam vessels played havoc with the merchant sail of the North and, in addition to sinking valuable tonnage, drove hundreds of fine, fast sailing ships to foreign registry, the Mallorys turned to steam and founded the Mallory Steamship Company. The early Mallory line steamers were built at the Mallory yard in Mystic.

The Palmer shipyard was established in 1832 at Noank on the West Bank at the mouth of the Mystic River, and it adjoined the yard established by Roswell Avery Morgan in the late 1790's. Like the Morgan yard, the Palmer yard built small craft for many years; but whereas the Morgan family continued such construction for three generations and until it ceased operations, the Palmer yard in the latter part of the nineteenth century built sizable vessels, including outstanding, large steamboats, and around 1890-1900 was said to be the largest shipyard between New York and Boston. This yard was operated during both World Wars of 1914-1918 and 1939-1945. It is claimed that it has "a continuous record of shipbuilding for 113 years" and, during that time, has launched "nearly six hundred vessels of all types and sizes"—merchant and naval; sail, steam, and tow.

During the boom of the clipper ship era, William E. Maxson (recorded also as Maxon), Capt. N. G. Fish (of N. G. Fish & Company, Mystic, shipowners), and others formed the firm of Maxson, Fish & Company and established a shipyard in West Mystic near the railroad line. This the last yard of importance to be laid out in the Mystic area built two Cape Horn clippers in 1854-1856 and other sizable vessels. During the Civil War, the firm name was changed to Maxson & Fish, and in four years the yard launched fourteen steamers in addition to several sailing craft. One of these was the *Galena,* designed by Samuel Harte Pook, the famous young Boston naval architect. This vessel, covered with railroad iron and one-inch thick boiler plate, was very lightly armored, but she has been described as "the first seagoing ironclad of the United States Navy." Later, the Maxson & Fish shipyard became the Alexander Irving yard.

Carl C. Cutler, author of the authoritative work GREYHOUNDS OF THE SEA—THE STORY OF THE AMERICAN CLIPPER SHIP (Putnam, 1930), in his brochure "Mystic—the Story of a Small New England Seaport" (The Marine Historical Association, Mystic, Conn., 1945), says that in the American extreme clipper era of 1851-1860, during which period of ten years "the overwhelming majority of sailing records that still stand were made," Mystic ships were responsible for nearly eleven per cent of the notable passages from North Atlantic ports to San Francisco—taking the limit of 110 days or less as the criterion. "In four of the ten years, Mystic clippers made the record passage of the year. This is the more remarkable when it is considered that Mystic built a very small proportion of the American clipper fleet, and competed in only 9 of the 10 years." This Cape Horn westward passage of some 16,000 or 17,000 miles has been described as "the toughest course sailing ships have encountered since time began,"

and a passage of 130 days was regarded by Maury as fair time for a clipper ship. Cutler also says that Mystic-built clippers were up against "the competition of the great ports of Boston, New York, Philadelphia and Baltimore and two score other minor ports which figured in the clipper ship saga, and which, first and last, put nearly thirty times the number of ships on the run."

A Record of the Clipper Ships Built in Mystic and Their Noteworthy Achievements in the Severe Cape Horn Trade

In the so-called clipper ship decade (1850-1859 inclusive), four Mystic, Conn., shipyards —George Greenman & Company, Irons & Grinnell, Charles Mallory, and Maxson, Fish & Company—built twenty clippers aggregating about 23,600 tons and averaging 1,180 tons per vessel. They ranged from the *Aspasia* of 632 tons to the *David Crockett* and *Andrew Jackson,* each of 1,679 tons; twelve clippers measured 1,274 tons or over and averaged 1,471 tons register. The following table gives a list of the clipper ships built at Mystic, Conn., and environs (including the one built at Westerly, R.I.), during the period 1850-1859 inclusive, with their record in the California Cape Horn service:

A. *Built by Charles Mallory* (nine vessels of 8,970 tons register; including the ALBONI, generally credited to Mason C. Hill as builder)

Year Built	Name and Tonnage	Registered Dimensions in Feet			Owner	Westbound Passages in Cape Horn Service				
						No. of Runs	Time in Days			Years in Service
		Length	Beam	Depth			Average	Best	Slowest	
1851	ELIZA MALLORY (649 tons)	130	33.5	18	E. D. Hurlburt, New York	Not suitable for Cape Horn service.				
1852	ALBONI (917 tons)	156	37.5	21	Charles Mallory, Mystic, Conn.	4	148	129	165	1852-1858
1852	CHARLES MALLORY (698 tons)	155	33	18	Charles Mallory, Mystic, Conn.	1	115	115	115	1852-1853
						Lost on return passage.				
1853	HOUND (714 tons)	143	33	17	Charles Mallory, Mystic, Conn.	2	237	131	343	1856-1857
1853	PAMPERO (1,375 tons)	202.5	38.2	21	J. Bishop Co., New York	3	118⅓	108	126	1853-1860
1854	ELIZABETH F. WILLETS (825 tons)	156	34	19	Charles Mallory, Mystic, Conn.	5	129⅔	111	166	1855-1860
1856	MARY L. SUTTON (1,448 tons)	192	40.7	23	Charles Mallory, Mystic, Conn.	5	116⅔	103	143	1856-1860
1857	TWILIGHT (1,482 tons)	196	40.3	22.6	Gates & Co., Mystic, Conn.	2	107	100	114	1858-1859
1859	HAZE (862 tons)	151	34	21.7	Charles Mallory, Mystic, Conn.	No record of any passages.				
B. *Built by George Greenman & Company* (five vessels of 7,522 tons register)										
1853	DAVID CROCKETT (1,679 tons)	215.8	40.5	27	Handy & Everett, New York	4	123	116	131	1857-1860
1854	BELLE WOOD (1,400 tons)	195.5	39.3	29	John A. McGaw, New York	No record of any passages.				
1855	LEAH (1,428 tons)	180	42	21	John A. McGaw, New York	Lost on maiden voyage.				
1856	ATMOSPHERE (1,486 tons)	190	41.3	20.7	John A. McGaw, New York	1	150	150	150	1857
1858	PRIMA DONNA (1,529 tons)	203.5	42	24	John A. McGaw, New York	2	122½	119	126	1858-1859

(Continued on next page)

Year Built	Name and Tonnage	Registered Dimensions in Feet: Length	Beam	Depth	Owner	Westbound Passages in Cape Horn Service: No. of Runs	Time in Days: Average	Best	Slowest	Years in Service
	C. *Built by Irons & Grinnell* (four vessels of 5,113 tons register)									
1851	HARRIET HOXIE (678 tons)	140	33	18	Post, Smith & Co., Mystic, Conn.	3	133⅓	128	140	1852-1855
1853	ELECTRIC (1,274 tons)	185.1	38.7	21.5	G. Adams, New York	1	116	116	116	1854
1854	HARVEY BIRCH (1,482 tons)	196	40.5	28	J. H. Brower & Co., New York	3	140⅓	123	159	1855-1858
1855	ANDREW JACKSON (1,679 tons)	222	40.2	22.2	J. H. Brower & Co., New York	5	105⅔	89	131	1855-1859
	D. *Built by Maxson, Fish & Company* (two vessels of 2,019 tons register)									
1854	B. F. HOXIE (1,387 tons)	187	40	23	N. G. Fish & Co., Mystic, Conn.	4	145½	138	153	1855-1866
1856	ASPASIA (632 tons)	145	31	20	N. G. Fish & Co., Mystic, Conn.	2	146	134	158	1856-1858
	E. *Built by Silas Greenman & Son, Westerly* (one vessel of 700 tons register)									
1852	ISLAND CITY (700 tons)	150	33	18.5	Stanton & Thompson, New York	No record of any passages.				

RECAPITULATION

Number of builders of clippers..... 5
Number of clippers built..... 21
Total registered tonnage.....24,324
Years built .....1851-1859 inclusive
Number of passages around the Horn westbound, 1850-1860 47

Builders of Mystic, Conn.	No. of Clippers Built	Total Registered Tonnage	Average Registered Tonnage per Vessel	Average Registered Dimensions in Feet: Length	Beam	Depth	Average Ratio L. to B.	Speed Performances Westbound around the Horn for All Clippers Built: Total No. of Passages	Length of Passages in Days: Average	Fastest	Slowest	Number of Outstanding Fast Clippers Built
Charles Mallory	9	8,970	997	164.6	36	20.2	4.57	22	135.4	100	343	3
George Greenman & Co.	5	7,522	1,504	197	41	24.3	4.80	7	126.7	116	150	2
Irons & Grinnell	4	5,113	1,278	185.8	38.1	22.4	4.88	12	122.2	89	159	2
Maxson, Fish & Co.	2	2,019	1,010	166	35.5	21.5	4.67	6	145.7	134	158	0
Silas Greenman & Son (Westerly)	1	700	700	150	33	18.5	4.55	No record.				0
Total	21	24,324	1,158	175.8	37.4	21.6	4.70	47	132	89	343	7

Of the five shipbuilding firms of Mystic (and Westerly) that constructed clipper ships, three of them produced outstandingly fast ships, and at Mystic were built two of the very best clippers turned out during the era when "speed was king." These two vessels occupying a prominent position in the historic marine hall of fame were the *Andrew Jackson,* built by Irons & Grinnell in 1855, and the *David Crockett,* built by George Greenman & Company in

1853—each of 1,679 tons. The *Andrew Jackson* made the shortest all-time westbound passage from an East Coast U.S.A. port to California around the Horn: 89 days 4 hours. She has the best speed record in that service for four consecutive passages westbound in 1856-1860: 102, 102, 103, and 89 days (average, 99 days). In addition, she has to her credit the all-time 15-day record westbound transatlantic run from Liverpool to Sandy Hook in 1860; also the 30-day round voyage record from New York to Liverpool and return, a passage of 61 days from Callao to New York the same year, and an 83-day run from San Francisco to New York in 1859. The *Andrew Jackson* was a better carrier and money-maker than the *Flying Cloud* (which claimed two runs in less than 90 days from New York to San Francisco—89 days 8 hours and 89 days 21½ hours), and, unlike the *Flying Cloud,* she never made a slow passage or showed signs of weakness when hard driven. (The *Flying Cloud* made a run to San Francisco of 185 days, port to port, in 1856 and was then laid up, at which time the *Andrew Jackson* was doing her fastest sailing and making money as well as speed records.) No ship that ever sailed in company with the *Andrew Jackson* equaled her time to a common destination.

The second Mystic-built clipper to gain immortality wherever records of such fast sailing ships are kept—the *David Crockett*—won her glory by fast sailing and a maintained uniform record for speed, reliability, and money-making over a long term of years. Probably no other clipper equaled the *David Crockett* as a business investment during the full period in which she operated. She cost $93,000 when completely equipped and outfitted in 1853 and "by 1876 had returned a net profit of over half a million dollars to her owners, equivalent to 24 per cent per annum, or 2 per cent per month, on the investment." It was said that the *David Crockett,* after about thirty years of continuous deep-sea service, "had not cost her insurance underwriters a single dollar." The only other clipper built in the early fifties that could and did engage in the around-the-Horn California service until 1883 was the *Young America* (1,961 tons), built by William H. Webb, of New York, also in 1853. The record of these two clippers —the *David Crockett* and the *Young America*—"fighting it out" for supremacy over the most severe, long trade route for sail in the world, as their age steadily advanced until they had spent thirty years in service (each traveling about one million nautical miles), is unequaled in the annals of sail.

The *David Crockett* was not as fast as the *Andrew Jackson;* the *"Crockett"* first saw service as a North Atlantic packet, made a voyage to India, returned to the Atlantic trade, and was four years old when she made her first passage to California. Her best runs as a transatlantic packet in the New York-Liverpool service were 19 days eastbound and 25 days westbound. During the clipper ship decade, the *"Crockett"* made four passages around the Horn to San Francisco in 122, 116, 131, and 123 days, respectively—an average of 123 days; but, although her spars and canvas were considerably reduced about 1860, Capt. Arthur H. Clark, in THE CLIPPER SHIP ERA, credits the *David Crockett* with making her "best twelve passages from New York to San Francisco in an average of $109\frac{7}{12}$ days, her best being 102 days in 1872." Carl C. Cutler credits the *David Crockett* with averaging 113 days 14 hours for her best twenty westward Cape Horn passages from New York to San Francisco. It would seem, however, that all her twenty-five westward passages to California occupied 2,974 days, an average of 119 days, her best run being in the winter of 1871-1872, when on her fourteenth passage she covered the distance in 103 days. Eastward, the *David Crockett* made a total of twenty-three Cape Horn passages in 2,357 days, an average of only 102½ days; her best sailing performance eastbound was a run of 88 days direct to New York, where she arrived early in 1862.

It is surprising that George Greenman & Company, in 1853, and Irons & Grinnell, in 1855, both of Mystic, Conn., should turn out extraordinarily fast and successful clipper ships, considering their very limited experience in this line and their lack of technical knowledge in the realm of naval architecture, and that these two ships should have the same identical tonnage (1,679 tons) and beam (about 40½ ft.). Following Smith & Dimon's building of the *Rainbow* (752 tons) in 1845 and the *Sea Witch* (908 tons) in 1846, builders of clipper

ships had generally sought to copy John W. Griffiths' ideas of model, with its sharp, hollow end lines, large deadrise, and weak midship section. This was prior to the time of Samuel Harte Pook's designing of outstanding, fast clippers, excellently modeled and planned, that carried well and capitalized experience gained with transatlantic packets. From the first, Pook advocated a flat floor, but little deadrise, and a strong midship section, with flaring bow and powerful above-water ends, sharp entrance lines, and a long clean run under water. The Mystic builders were strongly influenced by Pook, and it is said that he supplied a design of a clipper ship "of about 1,700 tons with flat floor and sharp ends, to have speed and carry well," to New York owners who did not want to build in Boston and "contracted to build the ship nearer New York." The *David Crockett* was built for Handy & Everett and the *Andrew Jackson* for J. H. Brower & Company, both of New York, and it is probable that the unusually well-modeled and excellent clipper ships turned out at Mystic, Conn., yards owed their very evident class to the fact that the builders followed a model and ideas obtained in some way or other, direct or indirect, from Samuel Harte Pook, of Boston.

When once a well-shaped wood ship was built in any community, other builders copied or attempted to copy the model. The original builder of a good ship also used what he considered a satisfactory basic model for the construction of other ships, changing the length by adding to the midship body, at times making the depth a little different, and on rare occasions even "monkeying slightly with the beam." The Sewalls, of Bath, Maine, built all their seven four-masted steel shipentines of varying dimensions, constructed during the years 1898-1903, from the model of the *Erskine M. Phelps* (length changes, 20.3 ft.; depth changes, 0.6 ft.; tonnage variation, 383 tons). She in turn had the same dimensions as their first steel ship, the *Dirigo* of 3,004 tons, built in 1894, and the same general lines with only minor changes in the fore body which could be made cheaply in the mold loft, but which, nevertheless, improved the performance of the vessel at sea. The *"Phelps"* was popularly known as "the clipper of the Sewall-built steel fleet" and the *Dirigo* as "a slow poke."

The registered measured dimensions and tonnage of the *Erskine M. Phelps, Dirigo,* and *William P. Frye,* the last of the square-rigged fleet of the Sewalls (built for their own account from the lines of the *"Phelps"*), are set forth comparatively herewith:

	Year Built	Tonnage		Dimensions in Feet		
		Gross	Net	Length	Beam	Depth
DIRIGO	1894	3,004	2,855	312.0	45.1	25.6
ERSKINE M. PHELPS	1898	2,998	2,715	312.1	45.2	25.6
WILLIAM P. FRYE	1901	3,374	2,998	332.4	45.4	26.2

Other fast and highly considered Mystic-built clippers were the *Pampero, Mary L. Sutton,* and *Twilight,* built by Charles Mallory, the prominent builder-operator of ships; the *Prima Donna,* built by George Greenman & Company; and the *Electric,* built by Irons & Grinnell. The small 825-ton *Elizabeth F. Willets* was a good ship, but she was too diminutive for the Cape Horn California run.

The average performance of Mallory-built ships in the Cape Horn run was marred by the first voyage of the *Hound,* which sailed from New York September 17, 1856, and did not reach San Francisco until August 26, 1857, a passage of 343 days. It is said that she put into Rio for repairs and sailed April 28; so the *Hound* actually took 120 days to sail from Rio de Janeiro to the Golden Gate, and if the report that she was in Rio 115 days is correct, the ship spent 228 days at sea out of the 343 days—possibly a record at the time for slow sailing for a clipper built primarily for speed. (The *Hound's* second voyage around the Horn was negotiated in 131 days.) If we eliminate the surprisingly slow run of the *Hound* from the performance record of Mallory-built clippers, the other twenty-one passages show an average length of 125½ days, which compares favorably with that of Greenman clippers and is only 3.3 days slower than the average of Irons & Grinnell clippers in runs during the 1850's.

Mallory's clippers were handicapped in the Cape Horn service because of their small size, six of the nine ships built during the clipper ship decade being of tea clipper size (i.e., 649 to 917 tons); only three were of medium size (1,375 to 1,482 tons) and none of large size—either for the period or for general and Cape Horn trade. The *Mary L. Sutton* of 1,448 tons, built in 1856, is generally considered to have been the best of the Mallory clippers and one of the most popular ships in the California trade. She made a passage of 103 days to San Francisco, averaged 116.4 days on five consecutive westbound runs around the Horn and 110.8 days on six of her eight passages, and made a record run of 17 days from 50° S. Pacific to the equator; her average of five passages from San Francisco to New York direct was only 95 days. The fastest passage of any Mallory-built clipper from an Atlantic port to the Golden Gate was made by the *Twilight* (1,482 tons) in 100 days, and both her runs west in 1858 and 1859 were made in excellent time—averaging 107 days. The *Pampero* made good runs around the Horn, but the generally more highly rated *Elizabeth F. Willets* (825 tons) was too small for the service, and a smart passage of 111 days was counterbalanced by a very slow voyage of 166 days. In 1860, however, the "*Willets*" made a record run from Lahaina to New Bedford in 89 days.

Greenman's second best clipper was the *Prima Donna,* built in 1858, but neither the Greenmans nor the firm of Irons & Grinnell—which constructed the *Electric*—produced any other ships of the class of that marvelous pair, *Andrew Jackson* and *David Crockett.* Maxson, Fish & Company's clippers were uniformly and consistently slow performers and were outclassed in an era when speed was demanded; it would also seem that the clippers built by this Mystic firm had no offsetting points of excellence. In the sixties, however, Maxson, Fish & Company launched some good ships somewhat of the Down Easter type, commencing with the fast sailer and good carrier *Garibaldi,* built in 1860. The *Seminole,* a reputed "half clipper" built in 1865, made history and put this Mystic firm "on the map" as builders of fast post-war ships.

Mystic Launches Many Wood Sailing Ships of the Down Easter Type

Basil Lubbock, in his register of American Down Easters, mentions only one Mystic-built ship—the famous *Seminole* of 1,439 tons; but Mystic launched many square-rigged wood ships of generally Down Easter type, of which the following, built in the sixties, were well and favorably known:

Name	Year Built	Tonnage	Registered Dimensions in Feet			Owner
			Length	Beam	Depth	
		Built by Maxson, Fish & Company				
GARIBALDI	1860	1,336	183	40.2	28	Calvin Adams, New York
CREMORNE	1862	1,091	161.5	38.7	23.5	Lawrence Giles & Co., New York
SEMINOLE	1865	1,439	196	41.5	25	Lawrence Giles & Co., New York
HELICON	1868	1,274	185	38.5	23.7	Calvin Adams, New York
DAUNTLESS	1869	995	181	35	22.7	Calvin Adams, New York

(Continued on next page)

Name	Year Built	Tonnage	Registered Dimensions in Feet			Owner
			Length	Beam	Depth	
Built by George Greenman & Company						
FAVORITA	1862	1,194	188	37	24	John A. McGaw, New York
COLDSTREAM	1866	806	165	35	18	John A. McGaw, New York
FROLIC	1869	1,348	192	39.7	24.5	John A. McGaw, New York
Built by Charles H. Mallory						
TWILIGHT	1866	1,303	188.4	39	23.2	Charles H. Mallory, Mystic
ANNIE M. SMULL	1868	1,010	181.7	37.2	21.7	Charles H. Mallory, Mystic

The *Seminole* was reputed to be "a good-carrying, fast half clipper" rather than a typical Down Easter, and it is said that she carried fifty per cent more deadweight than her registered tonnage. She was built for the California trade and, until she was sold on the Pacific Coast in 1887, made twenty-one westbound passages around the Horn from New York to San Francisco. In 1868 she was dismasted in the Gulf Stream and spent over three months at St. Thomas undergoing repairs. The average length of the other twenty direct passages west was 126 days; the fastest was a phenomenal and surprisingly fast run of 98 days (also reported as 96 days) on her maiden voyage, and the slowest run was of 155 days and her last in that service (average time of all twenty-one westbound passages, about 130 days). Three of her outward runs were made in from 112 to 114 days and nine in from 120 to 130 days. After the all-time record clipper ship westward Cape Horn passage of the Mystic-built *Andrew Jackson* (89 days 4 hours) from New York to San Francisco in the winter of 1859-1860, only two sailing ship passages have been made over this course in under 100 days. The first was made by the Mystic-built 1,439-ton half clipper *Seminole* in 1865 in a reported 96 days, and this was tied in the winter of 1873-1874 by Donald McKay's last-built ship, the *Glory of the Seas* of 2,009 net tons, launched in October 1869. The *Seminole,* popularly known as "the fastest American early post-war ship," was a fast but also a very lucky ship, and her good voyages were to a large degree due to her good fortune with regard to weather. Outside of her one encounter with a hurricane in the Gulf (which dismasted her), she experienced but little severe weather, and her average time for rounding Cape Horn (50° S. Atlantic to 50° S. Pacific) was only 17 days. The *Seminole* made seventeen passages from San Francisco to New York, on one of which she had to put into Valparaiso because of a leaky hull. The average time of the sixteen direct runs was only 108 days and of all seventeen passages, 112 days. Three eastbound runs around the Horn were made in 94, 96, and 97 days, respectively, which is fast sailing; the two longest runs were each of 119 days. She made one passage from the Golden Gate to Queenstown in 101 days and two to Liverpool in 116 and 112 days, respectively.

The *Garibaldi* was a prominent member of the early California grain fleet. Her sailing record was good, her best performance being a round voyage (New York-San Francisco-Liverpool-New York) in 240 sailing days. It consisted of a westbound passage around the Horn of 110 days, an eastward run to Liverpool of 111 days, and a westbound transatlantic crossing of 19 days. On one run westward, the *Garibaldi* experienced very heavy weather and was 69 days off Cape Horn.

The *Cremorne* was in the Cape Horn trade and made six westbound passages to San Francisco, with four completed eastward runs from the Golden Gate to New York and one with wheat to Liverpool. The last westward passage was made in 115 days, and the ship has to her credit runs of 102, 106, 111, and 113 days from the Golden Gate to New York, which is

good sailing. On one passage eastbound, she ran from San Francisco to the equator in only 14 days. On June 1, 1870, the *Cremorne* passed through the Golden Gate bound for Liverpool with wheat, and she was never heard of again nor any trace found of her or of the twenty-three persons on board. A perusal of the record of voyages of the *Helicon* shows no fast passages, but the ship maintained consistently a good average for speed and suffered no mishaps. The passages of the yacht-like and relatively small *Dauntless* in the California trade averaged well as to length; they include one of 118 days from New York to San Francisco and a run of 96 days from Manila to Boston.

George Greenman & Company's ship *Favorita,* owned by J. A. McGaw, of New York, was also engaged principally in trade between New York, San Francisco, and Britain, making in all nine such round voyages. Her passages westbound averaged 130 days (shortest, 114 days; longest, 148 days) and those eastward 113 days (shortest, 103 days to New York; longest, 122 days to Queenstown). The *Coldstream* was a handsome little vessel and a fast sailer "for her inches" in the westbound California run. She made three trips around the Horn from New York to San Francisco, which averaged only 122 days (best, 113 days; slowest, 127 days). Her three runs eastward from the Golden Gate to Liverpool averaged 126 days, which, comparatively, is not anywhere near as good as her westbound performance. The *Frolic,* also built by Greenman, was not as fast a ship as other craft of similar type launched in the Mystic, Conn., yards in the sixties, and her passages in the California trade were slower than average. In March 1871, the *Frolic* and *Ringleader,* built by Pierce & McMichael at Chelsea (Boston) in 1868, sailed from New York together—side by side—to race for San Francisco. The contest developed into a drifting match, and both ships made very poor time; that of the *Frolic* to the Golden Gate was 165 days, whereas the *Ringleader* negotiated the distance in 147 days and was "not proud of her victory because of the long voyage."

Charles H. Mallory's *Twilight* was a popular and fortunate vessel that made average passages, but she was not as fast as her sharper model seemed to promise. Her eight passages from New York to San Francisco averaged the very slow time of 147 days, and her best westward run took 136 days. Eastbound, her best passage was a run from the Golden Gate to New York in 109 days, but her best time to Liverpool was 135 days. The *Twilight* was said to have been an unfortunate ship as to weather, and she seldom experienced favorable sailing conditions. The *Annie M. Smull* was said to have had the model of a medium clipper, and she made some fast passages, one being a run of 34 days from San Francisco to Hong Kong. The average of her passages around the Horn westbound to the Golden Gate was 125 days, and her slowest run was only 130 days. Eastbound, she made a run of 111 days from San Francisco to New York and another of 113 days to Queenstown. The *"Smull"* carried case oil from North Atlantic ports to the Far East for many years and in 1895, when twenty-seven years old, was sold and put under Norwegian registry.

Mystic's Construction of Steamers, Schooners, Yachts, and Small Fast Craft Completes a Shipbuilding History of 283 Years — 1662-1945

Mystic became interested in steam vessels at an early date. As early as 1825, there was launched from the Burrows yard, located at the head of the river on the West Bank (or the Groton side), the steamer *Cadet,* and it would seem that at this time only about half a dozen steamers had been built outside of New York, "the birthplace of the steamship." George Greenman & Company built twenty-eight steamers, both screw and side-wheelers, and in 1842

this firm launched the *Florida,* which was one of the first twin-screw steamers built in America. During the Civil War and associated period, the Mystic yards built fifty-six steamers and gunboats (many on foreign order), the majority of them being ocean-going screw-propelled vessels. These steamers ranged up to 250 ft. in length, and the boilers and machinery for most of them were built and installed in the Mystic area. One of these vessels was an iron towboat, and this the only iron tug built on the river was constructed at a time when iron shipbuilding in the United States was in its infancy.

The record of the little town of Mystic, Conn., during the Civil War is a marvelous one, and in all New England, only Boston (a port some twenty times larger) surpassed its record in war-time marine construction. Charles H. Mallory was a convert to steam and in 1869 founded the Mallory Steamship Company, which for some seventy years was an important link between New York and Galveston, Texas, and discontinued operations only with the outbreak of World War II. Mallory built transports for the government during the Civil War, and when some of them were returned to Mystic after hostilities ceased, he acquired and reconstructed them. They were used with other vessels as the nucleus of the fleet of the Mallory Line. The Mallory yard built twenty-two steamers at Mystic during the Civil War, and among these was the gunboat *Varuna,* which sank three Confederate gunboats in the Battle of New Orleans, destroying the third by a broadside delivered by a courageous command when her own gun deck was under water. In 1869, Mystic built a fleet of fifteen gunboats for Spain, and in this year the last of the Mystic square-riggers were built with the launching of the *Frolic* of 1,365 tons by George Greenman & Company in September and of the *Dauntless* of 995 net tons by Maxson, Fish & Company in December.

The Greenmans built their last steamer in 1878 and Mallory his last wooden steamship in 1874, but the Mallory Line at this time had switched to iron construction. Two iron steamers had been ordered from John Roach's Chester, Pa., yard in 1871. Mallory's last wood steamer lay idle at her dock for some three years before she was finally disposed of for a very low price, for in the middle and late seventies there was no demand for wood steamers. The last yard to build steam vessels in the Mystic area was that of the Palmers at Noank. In 1882 they constructed the big Long Island Sound steamboat *Rhode Island* of 2,900 tons and 332 ft. length, which was heralded as "the finest inland water craft afloat." In 1889 the still larger and more impressive steamboat *Connecticut* of 3,500 tons and 345 ft. length was launched, and from 1882 to 1906 the Palmer yard built sixteen steam vessels in addition to reconstructing many others, including some of the largest Sound steamboats. During World War I, the old Palmer wood shipyard built a number of ocean steamers in the emergency and, during World War II, constructed many mine sweepers and crash boats. Small navy craft were also built during the recent war by the Mystic shipyard at the old Maxson & Fish yard and at the Post shipyard, which was part of the old Irons & Grinnell yard.

In addition to building fifty-six steamers, Mystic constructed three ships, two barks, three brigs, and six schooners during the four years of the Civil War. Carl C. Cutler of The Marine Historical Association, Inc., Mystic, Conn., says: "For many years the village built a greater tonnage of fine ships and steamers than any port of its size in America." Referring to its Civil War marine construction, we read: "From whatever angle this record is viewed, it stands as one of the notable human achievements in American history. No shipbuilding center on the Atlantic Coast with three times the population of Mystic approached it." The years of Mystic's greatest activity and prosperity were from 1850 to 1870; thereafter, outside of war craft built in the emergencies created by the two World Wars, marine construction was restricted to the building of schooners, barges, steamers, and small craft—yachts, pilot boats, and fishermen.

From early days, Mystic enjoyed a reputation for building small fast craft, but in 1854 the two-masted schooner *Simeon Draper* of 206 tons was built at Noank, and her record for speed and quality was such that, after being sent out to China, she was sold for a yacht to the King of Siam in 1857. Charles H. Mallory had the fast yacht *Richmond* (26 tons) built for

himself in 1855, and this was followed three years later by the *Haswell* (39 tons), which in the first regatta in which she was entered was reported to have "beaten every yacht in every class." The famous yacht *L'Hirondelle,* built at the Forsyth & Morgan yard in 1865, which beat the *Vesta* (known as "the fastest schooner afloat") on the Sandy Hook course in 1866, was bought by James Gordon Bennett, Jr., and renamed the *Dauntless.* She made a 13-day 17-hour passage across the Atlantic, covering 296 nautical miles in one day. The little sandbagger *Annie,* with jib and mainsail designed and built by D. O. Richmond and launched from the Packer shipyard in Mystic in 1880, had a hull only 30 ft. long and defeated fast yachts of much larger size. In 1867, Charles H. Mallory built two 72-ft. steam yachts, the *Kate* and the *Mystic,* followed a year later by the 87-ft. *Fanny* and still later by the *Ruth.* The Palmer, Morgan, and Latham yards at Noank, at the mouth of the Mystic on the West Bank, built high-class small fast craft for many long years, including some excellent 80- and 90-ft. schooners.

In addition to fishermen, yachts and pilot boats, and miscellaneous wood sail and steam craft, the Mystic area turned out sizable merchant sail with fore-and-aft rigs long after it discontinued, at the close of the sixties, the building of square-riggers. Three-, four-, and five-masted schooners of sturdy design were constructed. In 1900 the Palmer yard at Noank was constructing three four-masted schooners at the same time, while at yards upstream building was being revived. The Gilbert Transportation Company built a fleet of sizable schooners during the early years of the twentieth century, and the Holmes Company built the big five-masted schooner *Jennie R. DuBois* in the old Maxson & Fish yard. These operations ceased in 1907, but building was resumed during World War I; this emergency activity continued until terminated by the shipping depression of 1919, when a schooner in frame on the stocks remained in that condition for years until salvaged for the timber and metal.

Mystic has a shipbuilding history extending from 1662 to 1945, a period of 283 years. It is futile to attempt to estimate the number of vessels built in the area prior to the establishment of the U.S. Customs service in 1789, and since that time the records are both confusing and incomplete. Carl C. Cutler, in his historical brochure on Mystic, says:

> It has been possible, however, to determine definitely that 869 vessels have been built here since 1789. The list includes sloops of 30 tons and upwards, schooners up to 2,000 tons, clipper ships and packets of 1,700 tons, and steamships of 3,500 tons and more. It includes 22 clipper ships, 118 steamers, and 20 yachts. This aggregate is by no means complete. It does not contain any of the numerous larger yachts and fishing vessels built during the past 40 years. It omits all sloops and schooners and other vessels built at the Morgan and Latham yards during a period of about fifty years. These and many more vessels are excluded because no precise information is available other than that they were built in the townships of Stonington or Groton. Still others are missing, owing to gaps in the Custom House records. All things considered, it is reasonable to assume that a complete tally for the past 156 years [1789-1945] would exceed 1,000 vessels by a substantial margin.

VI.

THE NARRAGANSETT AND BUZZARDS BAY

EAST OF THE THAMES RIVER, CONNECTICUT, and its environs lies the shipbuilding district of the Narragansett, with the Massachusetts coast extending east through Buzzards Bay to Cape Cod. New Bedford, on Buzzards Bay, about twenty-three miles east of Narragansett Bay, was once a port of prime importance and world famous for its whalers. However, shipbuilding activities in this area from early colonial days to the end of wood sail centered around Narragansett Bay and the rivers tributary to it flowing through the states of both Rhode Island and Massachusetts. It would seem that a line could be drawn at Narragansett Bay dividing the influence of the big shipbuilding and shipping cities, New York and Boston; but Buzzards Bay, farther to the east, seems to have been more associated with New York and to favor it rather than Boston. Connecticut and Rhode Island, also to some degree the water front of Buzzards Bay, not only did a lot of business with New York but also "supplied the raw material" for many of New York's greatest seamen and shipowners; just as Cape Cod and the northeast coast towns of Massachusetts (as a matter of fact, from Portsmouth, N.H., south to Nantucket Sound) acted as an important feeder to Boston.

Sailing Ship Construction at Newport, Providence, Bristol, and Warren, of Rhode Island, and at Swansea and Barneyville, of Massachusetts

Newport, R.I., the marine capital of the Narragansett, rivaled New York in importance before the Revolution, but its decline was rapid. The *Mount Hope* of 602 tons, built at Newport in 1800-1801 for Gibbs & Channing, Newport, was said to be, when launched, "the second largest vessel in the country." Providence, R.I., about thirty miles from Point Judith and the open ocean, was interested in ships at an early date. Recorded as built and owned in Providence are the big *President Washington* (958 tons) in 1791, owned by John Brown and John Francis; the *George Washington* (624 tons) in 1794, owned by Brown; and the *Ann & Hope* (551 tons) in 1798, owned by Brown & Ives. Relatively little shipbuilding was done in Providence following the War of 1812, but the fast *Panther* of 407 tons, built there in 1819, is recorded as owned by Edward Carrington, Jr., of Providence. In the fifties, the firm of Allen & Simpson launched some small fast square-riggers from its Providence yard. The best was the clipper *Haidee* of 396 tons (length 137 ft., beam 27 ft., depth 11½ ft.), built in 1854 and sold to E. Sanchez Doiz—very evidently to be used as a slaver, for, when engaged in this trade in 1858, she was scuttled to prevent capture. Bristol and Warren, R.I., also on Narragansett Bay (twenty-three and twenty-seven miles, respectively, northeast of Point Judith), built ships from early colonial days as did Swansea, on Mount Hope Bay, over

the Massachusetts border. Nearby at Barneyville, on the Palmer River, Mason Barney built vessels from early in the century until the panic of 1857; several were quite sizable, the best known being the clipper *Sparkling Wave* of 665 tons, built in 1853 for Eben H. Balch, of Boston.

Bristol, R.I., launched in 1847 the fast *Esther May* of 499 tons for Morrill & Baker, Boston; but Warren, R.I. (about four miles to the north of Bristol), was the greatest shipbuilding center of the district and, after building fast sailers in the thirties and forties, turned out some first-class clippers in the fifties. At Warren, R.I., the speedy bark *Candace* of 398 tons was built in 1845 for Bucklin & Crane, New York, and in 1847 the ship *Carrington* of 641 tons for Edward Carrington, Providence, R.I. In 1850 a Warren shipyard launched the only coastal packet built in the state of Rhode Island during the whole forty years of the square-rigged wood sailing packet era; this was the large ship *Chace* of 625 tons (length 133 ft., beam 32.3 ft., depth 16.2 ft.) of the Charleston Ship Line. The *Chace* operated for five years in the coastal packet service (1850-1855), and her passages between New York and Charleston during the period averaged 7 days—her best run between ports being 5 days and her longest passage 12 days. Particulars regarding the four clippers or reputed clippers built at Warren, R.I., which aggregated 4,157 tons register and averaged 1,039 tons per ship, are set forth herewith:

Year Built	Name	Builder	Tonnage	Registered Dimensions in Feet			Owner
				Length	Beam	Depth	
1853	GEM OF THE SEA (bark)	Chase & Davis	372	116	26.2	13.4	Australian trade
1853	LOOKOUT	Chase & Davis	1,291	198	38.3	21.8	E. Buckley & Sons, New York
1853	PRIDE OF THE OCEAN	Daniel Foster	1,525	196	42.2	24	Immediately sold abroad and name changed
1854	MARY OGDEN	Chase & Davis	969	159	36.7	20.5	Geo. Buckley, New York

The *Gem of the Sea* was credited in 1854 with a record passage of 35 days from Port Phillip, Victoria, Australia, to Callao (the port of Lima), Peru. It was reported that during this run the little bark averaged 242 miles per day—a speed of over 10 knots per hour—for twenty-two consecutive days, which was amazingly fast maintained sailing. The *Lookout* was an outstanding, fast, and consistent performer in the California Cape Horn service. In the clipper ship decade, she made six westbound passages to San Francisco averaging 117½ days; her best time was 109 days (she made three passages in 112 days or better), and her slowest time was 130 days. Few clippers of the size of the *Lookout*—1,291 tons—can show a better record for speed around the Horn for six consecutive westbound voyages.

Capt. James M. Hood Builds Eight Clipper Ships at Somerset, Mass.

Eastward, on the Taunton River (which empties into Narragansett Bay), the town of Somerset, near Fall River, Mass., was a shipbuilding community from colonial days to the business depression that preceded the Civil War. In this town, which lies about twenty-five miles northeast of Newport and the mouth of Narragansett Bay, Capt. James M. Hood built eight clippers (six ships and two barks) during the years 1850-1853 inclusive. These clippers, built well inland in the state of Massachusetts, were as follows:

Year Built	Name	Tonnage	Registered Dimensions in Feet			Owner
			Length	Beam	Depth	
1850	ROSARIO (bark)	499	130.1	29	15.5	A. & M. Howes, New York
1851	GOVERNOR MORTON	1,430	196.5	39.7	26	Handy & Everett, New York
1851	RAVEN	712	158	32.7	17	Crocker & Warren, New York
1851	RIP VAN WINKLE	1,095	175.4	36.8	21	Eagle & Hazard, New York
1852	ARCHER	1,096	182	36	21.5	Crocker & Warren, New York
1852	PATHFINDER (bark)	373	120	27	15.5	Ogden & Haynes, San Francisco
1853	MISCHIEF	561	144	29	16.5	Merrill & Townsend, New York Immediately sold to San Franciso
1853	SKYLARK	1,209	190	37	22	Crocker & Warren, New York
1850-1853	Total of eight vessels aggregating 6,975 tons register—an average of 872 tons per ship.					

The *Governor Morton* claimed a record run from Port Phillip to Callao in 1855 of 31½ days, and in 1854 she is credited with a passage to the Golden Gate of 104 days and a run to the Horn of 45 days. The *Raven,* with a run in 1851 of 106 days around the Horn westbound to San Francisco, has the honor of being the only vessel of similar size or less tonnage that ever beat the *Sea Witch* in any sailing contest; the *Sea Witch* made the passage in 110 days and the big *Typhoon* (1,611 tons and a very speedy ship) in 107 days. The *Archer* made a westbound passage to San Francisco in 1854 in 106 days, running from the Horn to the line in 16 days. The little bark *Pathfinder,* of only 373 tons, was obviously unsuited for the Cape Horn trade; but she made the westbound passage in 151 days, covered 316 miles in one day, and "on several occasions logged over 13 knots per hour." The *Mischief* was also far too small for Cape Horn service, and the *Skylark's* best two passages westbound around the Horn were negotiated in 116 and 118 days, respectively. It is said that Captain Hood benefited by the advice of Samuel Harte Pook, of Boston, in the modeling of the *Governor Morton* and *Raven;* also that "Pook's ideas in design (hull and rig) and in construction influenced most of Captain Hood's shipbuilding work at Somerset, Mass."

The record of the Hood-built clippers in the California around-the-Horn trade westbound during the clipper ship decade is as follows:

Name of Ship	Registered Tonnage	Number of Passages	Period	Length of Passages in Days		
				Average	Shortest	Longest
GOVERNOR MORTON	1,430	3	1852-1854	117.3	104	125
RAVEN	712	4	1851-1854	132.5*	106	190*
ARCHER	1,096	5	1853-1859	124.8	106	146
PATHFINDER	373	1	1852	151	151	151
MISCHIEF	561	1	1853	172**	172**	172**
SKYLARK	1,209	4	1853-1860	130.5	116	146
All ships (six)	897 (average)	18	1851-1860	130.6†	106	190†

*Long passage of 190 days includes lay-up at Rio de Janeiro for repairs. Command claimed net running time at sea of 118 days, which, if correct, would give an average time at sea of four passages of the RAVEN of 114½ days (fastest, 106 days; slowest, 121 days).

**Claimed 42 days spent at Valparaiso for repairs and running time at sea 130 days.

†Average length of passage, considering the 1854 run of the RAVEN as 118 days and the 1853 passage of the MISCHIEF as 130 days, becomes 118¾ days (fastest, 106 days; slowest, 151 days).

There was also built in 1850 at Somerset, Mass., the large transatlantic sailing packet *William Nelson* of 1,039 tons register. This square-rigger was 174 ft. long, 36 ft. beam, and

18 ft. hold measurements and ran for seven years in the regular service of the New York-Havre, France, lines (Havre Whitlock and, later, Union Line). Evidently, however, the *William Nelson*—particularly when her good size is considered—was a slow sailer on the Western Ocean, for the average length of her crossings westbound was 42 days, her shortest being a run of 38 days and her longest 50 days. In 1858 the *William Nelson* became a North Atlantic transient, or "sailing tramp," and she was burned at sea on a voyage from Antwerp, Belgium, to New York in July 1865.

Shipbuilding on Buzzards Bay—Fairhaven and New Bedford

Across the waters of Buzzards Bay from New Bedford to the east, some shipbuilding in early colonial days centered at Falmouth, Mass., where the fast ship *Herald* of 326 tons was built in 1797 for Ebenezer Preble and associates, of Salem, Mass. Shipbuilding on Buzzards Bay, however, centered in Fairhaven and New Bedford, Mass., as the life of the republic advanced. Whaling was the most important business, but foreign trade was not ignored. The fast sailer *Swift* of 321 tons was built in 1805 at New Bedford for Jireh Swift and other New Bedford merchants, and four years later (1809) the still larger *Euphrates* of 364 tons was launched from the same berth for Cornelius Grinnell, William Howland, et al., also of New Bedford. The *Catherine* (Capt. Eben Clark) was put on a regular run between New Bedford, Mass., and London, England, and during the twenties and thirties of the nineteenth century, several sailing packets were built at New Bedford for New York lines as well as many general traders. Among the latter class of vessels were the fast and profitable *Horatio,* built in 1833 by Hillman for Grinnell & Minturn for use in the China trade and the *Oneida* of 420 tons.

The early transatlantic sailing packet lines used ships drawn from various ports and the product of many shipyards and shipbuilding centers. It has been said, "The charter members of these ocean lines were a motley lot of small general traders built in various places on various plans." Not only was New Bedford, Mass., one of the building towns and ports to supply old ships for the new packet service but also the transatlantic New York-Liverpool or London Swallowtail lines were "almost purely Yankee concerns with operators and owners chiefly from New Bedford." This whaling port "invested heavily in some of the Swallowtail packets" that were built there, such as the *Cortes, Napoleon,* and *George Washington.*

The *Cortes* of 381 tons (length 106.5 ft., beam 28.5 ft., depth 14.3 ft.), built in 1820, ran five years (1822-1826) in the Blue Swallowtail (or Fourth) Line from New York to Liverpool; her westbound passages in this service averaged 35 days (shortest run, 24 days; longest, 42 days). In 1826-1827, the *Cortes* operated in the New York-London Red Swallowtail Line, where she averaged 40 days on her westbound, or "uphill," passages against the "King of the West Wind"; her fastest run in the service was 32 days and the slowest 54 days. The *Napoleon* of 538 tons (length 131.8 ft., beam 30 ft., depth 15 ft.), built in 1827, ran nine years (1827-1836) in the Blue Swallowtail (New York-Liverpool) Line; her westbound passages in this service averaged 34 days (shortest run, 26 days; longest, 46 days). She was wrecked at Mobile in February 1841. The *George Washington,* a "big" packet of 609 tons (length 133.5 ft., beam 31.8 ft., depth 15 ft.), built in 1832, ran thirteen years (1832-1845) in the Blue Swallowtail (New York-Liverpool) Line; her westbound passages in this service averaged 35 days (shortest, 23 days; longest, 54 days). These three New Bedford wood

square-rigged sailing packets did some fine uniform sailing across the stormy North Atlantic during the years 1822-1845. They averaged 34⅔ days on their westbound crossings from Liverpool to New York (fastest passage, 23 days; slowest, 54 days).

The early transatlantic sailing packets were very small square-riggers with powerful, rather full models, good freeboard, and buoyant topsides; they were strongly sparred and rigged, not too heavily canvased, and were built for severe ocean service. In model and sail plan, they were the antithesis of the later, much larger, sharp-lined, overcanvased "clippers," and they were infinitely better sea boats when bucking western gales in the wintertime on the North Atlantic. These sturdy ships, capable of "keeping the seas" in any waters and in any weather, made excellent whalers; therefore, it is not surprising that the whaling port of New Bedford was interested in the early small transatlantic packets and that a large number of these packets, after they became too small to serve acceptably in the transatlantic "shuttle," ended their days as whalers. The New Bedford-built *Cortes,* after spending seven years as a transatlantic packet, operated twenty years (1828-1857 inclusive) as a whaler.

Another vessel built at New Bedford, Mass., that saw service both as a transatlantic packet and as a whaler, but that was primarily more of the China packet type, was the *Oneida,* built in 1832 by Benjamin Barstow for Francis S. Hathaway et al., New Bedford, and Gideon Nye, Jr., New York. This little ship was a fast sailer of 420 tons register, 116 ft. long, and with a 14-ft. depth of hold. After operating for a time as a transatlantic packet, she was put in the China trade, where she made several good passages. In 1857 the *Oneida* entered the whaling trade, but in 1861 was again put into the China trade under the command of Capt. Jesse F. Potter, of Salem. On April 24, 1863, on a homeward passage with a cargo valued at $433,588, the *Oneida* was captured when near the equator in the Atlantic and burned by the Confederate commerce raider *Florida.* Later, claims filed against the British Government amounting to some $760,000 (including interest approaching $300,000) were paid under a decision of the Geneva Conference. The *Oneida* was thirty-one years old and in good physical condition when she was destroyed.

Reuben Fish, one of the later builders of whalers, constructed several sizable fast ships at Fairhaven (across the ocean inlet from New Bedford), including the bark *Gallego* of 373 tons in 1847 for Warren Delano, New York, and the *Sea Nymph* of 1,215 tons in 1853—the first clipper ship to be built on Buzzards Bay. (This *Sea Nymph* of New Bedford, Mass., should not be confused with the little Baltimore clipper of the same name of 526 tons, built in 1850, which, sailing from New York the middle of December 1850 virtually in company with Samuel H. Pook's new *Surprise,* was beaten sixty-one days by that ship in the run to the Golden Gate.)

Another clipper built at Fairhaven, Mass., presumably by Fish, was the "beautiful, ill-fated *John Milton*" of 1,445 tons, launched in 1855. This ship, nearing the end of her second return voyage in the California around-the-Horn trade and running before a bitter southeast snowstorm, went ashore near Montauk on the eastern tip of Long Island the night of February 20, 1858, with a loss of all hands (twenty-six) and a complete and rapid destruction of the vessel. When dawn broke, only a few signs of floating wreckage were visible. The only two Buzzards Bay clippers, both built at Fairhaven, can be briefly described as follows:

Year Built	Name and Tonnage	Registered Dimensions in Feet			Owner	Westbound California Passages 1854-1859			
							Time in Days		
		Length	Beam	Depth		No.	Average	Best	Slowest
1853	SEA NYMPH (1,215 tons)	188	37.3	22	E. M. Robinson, New Bedford	4	132	113	148
1855	JOHN MILTON (1,445 tons)	203.5	39	19	G. Hussey, New Bedford	2	142.5	136	149

VII.

BARNSTABLE COUNTY AND CAPE COD, MASSACHUSETTS

The Only Clipper Ships — and the Only Large Vessels — Ever Built on Cape Cod Are Launched by Shiverick Brothers at East Dennis

In BARNSTABLE COUNTY, MASSACHUSETTS, ships were built from early times on both the Neck and Cape Cod itself, although the land and water are not suitable for the building and launching of sizable vessels. East Dennis, Barnstable, and Chatham have a shipbuilding history, and in the fifties, East Dennis, Mass., on the north shore of the Neck (about seventeen miles east of the entrance to the present Cape Cod Canal and—as the crow flies—forty miles east of New Bedford, Mass., and sixty-two miles southeast of Boston), surprised the shipping world by building five clipper ships of from 671 to 1,091 tons register and launching them into a little tidal creek barely wide and deep enough to float them at high water. East Dennis was put "on the map" as a builder of clippers because of the initiative, energy, and promotion abilities of Capt. Christopher Hall, who influenced Shiverick Brothers to construct them and then personally arranged the financing, sales of fractions, and the ultimate disposal of the vessels to shipping firms. In this respect, he was assisted and encouraged by Prince S. Crowell, of East Dennis, who retained control of the management of three of the clippers and moved his office to Boston, Mass., in the fall of 1855.

The following table gives a record of the five clipper ships built by Shiverick Brothers, East Dennis, the only clippers and the only relatively large vessels ever built on Cape Cod:

Name and Year Built	Tonnage	Registered Dimensions in Feet			Owners	Westward California Passages				
								Time in Days		
		Length	Beam	Depth		Years	No.	Average	Fastest	Slowest
HIPPOGRIFFE (1852)	671	155.5	30.5	16.5	Hall, Crowell, et al., East Dennis	——	—	——	——	——
BELLE OF THE WEST (1853)	936	167	35	17.5	Hall and Glidden & Williams, Boston	1853 1859	2	133½	131	136
KIT CARSON (1855)	997	173	36	22	P. S. Crowell et al., East Dennis	1855 1857	2	138	129	147
WILD HUNTER (1855)	1,081	178.6	36.2	22.5	Bush & Wildes, Boston	1856 1857	2	118½	108	129
WEBFOOT (1856)	1,091	180	37.5	22	P. S. Crowell, Boston	1856-1860	4	132¾	119	159
	Total	Averages								
Five clippers (1852-1856)	4,776 Average 955 tons	171	35	20	Boston and East Dennis	1853-1860	10	131	108	159

The *Belle of the West* (936 tons) was probably the most famous of the Cape Cod quintet, but she was not as fast a sailer as the *Wild Hunter* (1,081 tons) and the *Webfoot* (1,091 tons). The *Kit Carson* (997 tons) made her first run west around the Cape from Boston, as did the *Belle of the West* on each of her two voyages in 1853 and 1859. The *Kit Carson's* second and long passage was from New York, and the poor time of 147 days made on this run is explained by an analysis of the log, which shows that the clipper was 30 days off Cape Horn. The *Wild Hunter* made the best record of the East Dennis ships in the California trade; she sailed from Boston, and her westbound passage of 108 days in 1856 was the best time made by a Cape Cod ship in the Cape Horn run. Evidently, however, on this passage, the *Wild Hunter* experienced unusually good weather and favorable conditions—wind and sea—for fast sailing, for the five clippers clearing eastern Atlantic ports between January 5 and 18 averaged only 107½ days on the run to the Golden Gate. These clippers, with port of departure, time of arrival at San Francisco, and length of passage in days, are set forth herewith in the order of their clearance:

Name of Clipper	Tonnage	Where Built	Port of Departure	Arrival San Francisco 1856	Length of Passage in Days
WILD HUNTER	1,081	East Dennis, Mass.	Boston	Apr. 29	108
AURORA	1,396	Chelsea, Mass.	New York	Apr. 29	112
GOLDEN CITY	810	New York	New York	May 1	113
DAVID BROWN	1,715	New York	New York	Apr. 28	103
PHANTOM	1,174	Medford, Mass.	New York	Apr. 29	101

The last and largest of the Cape Cod clippers, the *Webfoot,* is said to have been "a little fuller built" than the *Wild Hunter.* She made each of her first two passages around the Horn to the Golden Gate in 119 days; on her third passage, however, she encountered very bad weather and made the very slow run of 159 days—the worst performance of any East Dennis clipper in the California trade. The faster *Northern Light,* sailing a few days ahead, made a run of 124 days; but the *Golden Eagle* and *Wild Rover,* sailing a few days after the *Webfoot,* made their record slow passages. The *Golden Eagle,* with runs of 108 and 110 days to her credit, took 217 days to reach her destination and reported being 90 days off the Horn in heavy gales; the *Wild Rover,* sailing about a week after the *Webfoot,* reached San Francisco about a month behind her after a passage of 173 days (as against 159 days for the *Webfoot*). This last of the Cape Cod clippers did some good sailing on other routes, and on March 21, 1859, the *Webfoot* arrived at Sandy Hook, N.Y., after a fast run of 85 days from Calcutta, India.

VIII.

THE MASSACHUSETTS COAST AND ITS EARLY SHIPBUILDING BACKGROUND

The Colonists Protect and Honor Shipbuilding and Foster the Construction of High Quality Sailing Vessels

WHEREAS THE LOWER PART of the Kennebec River around Bath, Maine, was the cradle of American shipbuilding and the first ship built in the New World was launched into its waters, the Massachusetts coast area might well have been termed during the seventeenth and most of the eighteenth centuries as the nursery of American shipbuilders. It is generally stated by marine historians that the Mystic River, Massachusetts, received by launching on July 4, 1631, "the third ship built in the American colonies," the *Blessing of the Bay,* which had been constructed mainly of locust and was "sent to sea Aug. 31, 1631." The first vessel constructed on this continent was, as before stated, the *Virginia of Sagadahock,* built at the mouth of the Kennebec (then known as the Sagadahock River) in the late months of 1607. Some two and a half centuries later, this area became the leading center of shipbuilding in the United States and, after another half-century, produced America's last sailing vessels—both wood and steel. The second vessel built on the continent is said to have been a river and sound sailing craft built in New Amsterdam (New York), which evidently was not a seagoing ship—as were the *Virginia of Sagadahock* (which made many transatlantic and other long ocean voyages) and, it would seem, the *Blessing of the Bay.* It is known that in early 1629 "six shipwrights of whom Robert Moulton is chief" were at work for "the New England Co. plantation in Massachusetts Bay," and materials needed for the building of ships such as pitch, tar, rosin, oakum, cordage, sailcloth, nails, etc., were sent from London in May 1629 to Massachusetts Bay in "the charge of one George Farr, now sent over to the six shipwrights formerly sent." Old records suggest that ships were built in Massachusetts before Governor Winthrop launched the historic *Blessing of the Bay* in 1631, and by 1633 very sizable vessels were being constructed; for at that time William Wood, in his "New England Prospects," said that Matthew Cradock "is at charges of building ships. The last yeare one was upon the Stockes of a hundred tunne; that being finished, they are to build one of twice her burden." It would seem, however, that the Cradock ships were being built for the British stockholders in the colony venture and "were all sent to England and employed there in trade."

Floating tonnage was an essential to the early colonists, and in 1624 the Pilgrims at Plymouth brought over an experienced ship carpenter who, we are told, "quickly built them 2 very good and strong shallops and a greate and strong lighter, and had timber for 2 catches" when he fell sick of a fever and soon died. These shallops were not really ships but open-deck fishing boats that had also to be used for communications. Between towns, there were for long years no roads that could be traveled, and transport on the ocean and on navigable

rivers and streams had to be substituted for what under ordinary conditions in a developed country would have been land travel. Shipbuilding was taken seriously by the Massachusetts Bay colonists from early days. The Massachusetts Great and General Court on October 7, 1641, passed a law to regulate shipyards "on the Mistick River" and at "Meadford" and to raise the quality of construction so that nothing should be "defective or amiss in any materials or workmanship." Ship carpenters had been exempted from compulsory military training in 1639, and regulatory decrees affecting the industry were evidently promulgated quite generally in Massachusetts during the late thirties and early forties. On May 29, 1644, the General Court proposed the formation of a company of shipbuilders "with powers to regulate the building of ships and to make such orders and laws amongst themselves as may conduce to the public good." Massachusetts depended upon the sea for its livelihood from the earliest days and, therefore, felt that it was to its selfish interest to protect its fisheries and the shipbuilding industry, which was so vital to its success in both the fisheries and marine transport or ocean trade. Under these conditions, it was but natural that the industry was honored and protected during colonial days, and this to the annoyance of the British, who did not care to see New England develop into a great maritime colony. The honor and protection bestowed upon shipbuilding by Massachusetts logically operated to raise the standard of construction to a high plane and tended to make the Massachusetts Bay Colony a nursery for the production of good shipwrights as well as of good fishermen.

It has been said that as early as 1629 three two-masted shallops, each of some 15 to 20 tons burthen and fitted with lug sails, were built "upon the Neck, near or upon Winter Island, Salem," and that the first ship carpenters sent out to the Massachusetts colony from England built their first vessels (for the fisheries) at or near Salem. It is known that Richard Hollingsworth, an able English shipwright, migrated to Salem in 1635, but evidently no publicity was given his work until after the campaign of the Rev. Hugh Peters at Salem in the interest of shipbuilding in 1640. We read, "Hollingsworth, a shipbuilder by trade, . . . began in February, 1641, to build a ship of 300 tons [at Salem], which was finished and launched the following June." Another vessel quickly followed her, for we read that Salem built two ships in 1641 and the following year one more, with three vessels on the stocks at Boston and one at Dorchester, and all these craft were used in trade by the colonists with Virginia and the West Indies and for the fisheries. It is difficult to differentiate between recorded achievement and actual accomplishment throughout the early colonial period, for we read in NEW ENGLAND'S FIRST FRUITS that in 1642, besides many small craft, "we are in a way of building ships of an 100, 200, 300 and 400 tons. Five of them are already at sea, many more of them in hand at this present." Notwithstanding that many vessels were undoubtedly used for trading and transport, the mainstay of the shipbuilding industry from the earliest colonial days in New England was the fishing business, and "it was the fishermen who largely supplied the captains and crews of the trading ships."

In 1643 a sizable ship was built at Gloucester by an English shipwright named Stevens or Stephens and other skilled mechanics, and this master builder is probably the man referred to by Emanuel Downing of the Massachusetts Bay Company in a letter written to England:

> The Governor hath with him one William Stephens, a shipwright; soe able a man as they believe there is hardly such an other to be found in this kingdom. . . . This Stephens hath built here many ships of great burthen; he made the "Royal Merchant," a ship of 600 tons. This man, as they informed me, had more regard for his substantial performence than the wages he was to receive and so grew to poverty.

It is said that other countries tried to obtain the services of Stephens, but that he preferred to remain and work in New England. There is a record at the Registry of Deeds, Salem, Mass., that in June 1661 William Stevens agreed to build a vessel for a John Brown, "the said Stevens to be paid the sum of £3, 5s, for every tunn of said ship's burthen." This shipwright was undoubtedly the same person who was building at Gloucester in 1643 and who is referred to above as William Stephens.

In the last half of the seventeenth century, shipyards in Massachusetts were not necessarily on the water front, and many yards were located on good level ground on farms within a good downhill haul of the water, to which the vessel built was taken by teams and man-power by the means of rollers, sleds, or wheels for launching. On March 19, 1668, the General Court granted in the town of Ipswich "one acre of ground near Mr. Cogswell's farm for a yard to build vessels for the use of the inhabitants and to employ workmen for that end." Edward Randolph, writing in 1676, mentions shipbuilding at Ipswich, and it would seem that it was quite common in those days to locate shipyards near the timber and the homes of the builders, which generally meant some distance from the river or stream running to tidewater. Rowley, a few miles north of Ipswich and between that town and Newbury and likewise some miles from the ocean and deep water, built sizable ships as early as 1680. At about the turn of the century, Capt. Nathaniel Perley, we are told, built a ship of 90 tons burthen on Rowley Common and hauled the vessel "a distance of more than a mile and a half to the river side by more than a hundred yoke of oxen."

The return of the General Court to the Royal Commissioners dated Boston, March 16, 1665, estimates that there were 132 vessels that had been built and were then owned on Massachusetts Bay; of these, 80 were deemed small and of from 20 to 40 tons, 40 were considered medium size and from 40 to 100 tons, whereas 12 were "large" and over 100 tons burthen. Shipbuilding and ship trading ports were extending and becoming numerous, for we read that on February 9, 1682, the General Court felt it necessary to give consideration to the northeasterly part of the colony; so it was enacted that "the Port of Salem, with Marblehead, Beverly, Gloucester, Ipswich, Rowley, Newbury and Salisbury annexed as members, are and shall be lawful Ports in this colony where all ships and other vessels shall load and unload." Obviously, Massachusetts Bay sought to control all the ocean coast line and the streams discharging into the Atlantic from the Plymouth territory (Cape Cod, Barnstable Neck, Buzzards Bay, and Narragansett) in the south to the Merrimac River in the north, and later it had aspirations on the Piscataqua in what is now the state of New Hampshire. The validity of the act establishing these "distant towns" as "lawful Ports" of entry (and the aggressiveness of Massachusetts Bay) was "disallowed by the Privy Council" on August 22, 1693, because it was said to be, following long years of controversy, "in conflict with the Acts of Parliament." In June 1693, a law was passed, also in Massachusetts, that required "surveyors to be appointed to examine materials and workmanship of any ship or vessel hereafter built within the province."

Records in the Massachusetts State archives show that during the period 1698-1714, 1,402 vessels were built in the colony for its own use, of which 439 were ships, 29 barks, and 278 brigantines, and of these, seven-eighths were said to be owned in Boston. In addition, 239 vessels were reported as being built during the period for foreign owners, and 169 of them went to Britain. Massachusetts continued to grow during the end of the seventeenth and the first part of the eighteenth century as "an excellent builder of fine ships of all sizes and trades, including those suitable for long deep-sea ocean voyages." By 1724, Massachusetts ships (operated entirely by colonists), because of superior construction, relatively low price, and an outstanding quality of good handling, were giving the British a good deal of concern; for in that year "sixteen master builders belonging to the Port of London" petitioned "the Lords of the Committee of Plantations" and through them the British Government to protect British shipbuilders from the products of the Massachusetts Bay Colony and "not to encourage ship building in New England because [well-trained] workmen [who had served a British apprenticeship] are drawn thither." The care taken in America to build good ships and the frequent periodic inspections by competent parties as the work progressed impressed British visitors. In Douglass' "Historical and Political Summary of America," published in Britain in 1748, we read: "The ships built in Boston exceed all other building Yards, the Many

Merchants and Ship Masters, good Connoisseurs, transiently inspect them, and every bad Piece of Timber or length of Plank is censored."

We read in THE SAILING SHIPS OF NEW ENGLAND by George Francis Dow that by the year 1760 the New England provinces were building annually some three to four hundred sailing vessels and a very large number of small craft used for fishing alongshore. "Wherever there was a village by the sea, some vessel might be seen upon the stocks." We are also told that in 1769 the American provinces launched 389 vessels—113 square-riggers and 276 sloops and schooners—measuring 20,000 tons and that "Massachusetts built nearly one-half of this number."

Boston Bay from Winthrop on the north to Nantasket on the southeast, which includes Quincy Bay and the Mystic, Charles, and Neponset rivers, has been an active shipbuilding community from the earliest colonial days. Every small utilizable site on the water front and river banks around Boston seems to have produced ships. Cutler has said, "Hardly a tidewater creek, however small, was without its shipyards. Along the shore from Weymouth to Haverhill one could hardly escape the sound of topping maul and caulking mallet." On the Atlantic seaboard to the southeast, the coast from Nantasket south to Plymouth, with its inlets and small, unimpressive streams, had a host of shipyards from which sizable ships—considering the period—were launched during the seventeenth, eighteenth, and the first part of the nineteenth centuries. Yards of importance were located at Cohasset, Scituate, Marshfield, Duxbury, Kingston, and on the banks of the North River at South Scituate (Norwell), Hanover, Pembroke, and Wanton, which built large numbers of first-class ships. Indeed, this part of the state around the turn of the century was referred to as "the shipyard of Boston" and, as before stated, might have been called the nursery of Massachusetts shipbuilders. To the northeast, ships were built in quantity at Marblehead and Salem, and for several decades Salem vied with Boston for leadership in the marine field and as a port of importance. Still farther eastward, Gloucester, from the earliest days, was a shipbuilding and shipping town and has always led as a fishing port. Farther to the north, the Merrimac River, near the border of the state, was a natural shipbuilding center and had yards of prominence at Newbury and Newburyport, Salisbury, Amesbury, Merrimac, and Haverhill.

There was but little shipbuilding of importance in Boston proper after the Revolution, but Charlestown, Mass., across the river to the north, turned out considerable tonnage. The fast ship *Calumet* of 189 tons (length 81½ ft., beam 23 ft.) was built at Charlestown in 1803 for William Gray, of Salem (later of Boston), and the same year Boston saw the *Sally* launched for James Cook, Timothy Bryant, et al., of Boston. The *Sally,* which was of 323 tons register, 97½ ft. long, and 27½ ft. beam, was lost on Bahama Bank in 1825.

During the early part of the nineteenth century, a number of relatively large vessels were built in South Boston. Medford, on the Mystic River some four miles to the northwest of the city, became active in producing ships at this time and was Greater Boston's first big marine tonnage building center. Chelsea followed in the construction of ships, but East Boston, which was to become in the fifties the area from which Greater Boston's largest ships were launched, did not build its first vessel until 1835.

In the general vicinity of Boston, many sizable fast ships were built around the turn of the century and during the first decades of the nineteenth century. To the southeast of the city, there was a good deal of building at Hingham, Weymouth, Quincy, and Milton. The fast and sizable sailer *Alert* of 377 tons (length 108 ft., beam 28 ft.) was built at Milton by Daniel Briggs for Theodore Lyman, of Boston. The *Alert* was a regular trader, modeled and rigged for speed, with seaworthiness and capacity. Such craft were the predecessors of the packet ships and occasionally made fast runs. Under the command of Captain Nichols, the *Alert* arrived at Boston during April 1811 after an extraordinarily short westbound passage of 20 days from Liverpool. (This *Alert,* which was the second Boston-built vessel to bear the name, should not be confused with *Alert III* of 398 tons, constructed for the same owners

by Noah Brooks in South Boston in 1828, which was burned by the Confederate raider *Alabama* in 1862.)

The shipbuilding records of the North River (Hanover, Pembroke, etc.) and Scituate Harbor yards, of Kingston, Salem, the Merrimac, and certain other localities in southern and southeastern Massachusetts are dealt with at some length elsewhere, but many other towns and sections of the state have an important shipbuilding history. For instance, Marshfield and Duxbury, lying between Scituate (and the North River towns) and Kingston and some ten and six miles, respectively, north of Plymouth, were important shipbuilding communities from early days and built some noteworthy vessels in the eighteenth and early nineteenth centuries. At Duxbury, the fast sailer *Cabot* of 339 tons (117 ft. long and 25 ft. beam) was built in 1832 for Charles A. and Edward Hecksher, of New York. The famous pioneer China trader *Empress of China* of 360 tons is said to have been built there in 1783 for New York and Philadelphia owners; this ship, the first to arrive in China under American colors, made history.

Vessels were built in Plymouth in early days, and in 1828 the East Indiaman *Hoogly* was constructed for Capt. Daniel Bacon, of Boston. However, as the years went by, Massachusetts shipbuilding naturally developed in volume, quality, and importance not only in and around Boston and to the south but also along the short stretch of coast running from the area including Boston Bay and environs northward to the Merrimac River, where the depth of water and topography of shore or river front were suitable for shipbuilding, just as great, lasting ports were established where there were safe, protected harbors and deep water. Gloucester, handicapped by low water, became content to be a fisheries harbor and center; but in the first part of the nineteenth century, Salem—also greatly handicapped by low water—competed with the Merrimac builders for honors in the production of good fast ships as long as such ships were small. As Boston grew as a shipping center, Salem waned, and when ships became bigger and the clipper ship era arrived, the days of Salem were past. Three clippers, however, aggregating 3,391 tons register were constructed at Marblehead in the vicinity of the old shipbuilding community of Salem, which is rich in marine tradition and was famous the world over for its ships during the last part of the eighteenth and the first decades of the nineteenth centuries.

IX.

KINGSTON, MASSACHUSETTS — ILLUSTRATING MARINE ACTIVITIES IN A SMALL NEW ENGLAND TOWN NOT NATURALLY WELL FAVORED FOR SHIPBUILDING

IN COLONIAL DAYS, vessels were built when and where the need existed or the opportunity presented itself to make money, furnish desired seasonal employment, and utilize available materials advantageously—and this without much regard to the location of the shipbuilding berth. At the time, ships were small and in the eighteenth century were generally sloops, ketches, schooners, and topsail schooners of from 30 to 100 tons. The sizable vessels were usually brigs and brigantines of about 150 tons. (The yards of one Massachusetts town in the last decade of the eighteenth century built "ships" in quantity that averaged only 50 tons register, and 31 per cent of them were sloops.) The depth of water needed to float such vessels, when light, was not great. If the builder could figure out some way of moving his hull to a river or creek bank, where either high river in the spring or a high tide would give a depth of water sufficient to float it, and if there was a channel that at high water would permit of the towing of the vessel to the sea (if necessary, lightened by pontoons, casks, or lighters), then he seemed to give but little concern as to where he laid his keel. In those days, bridges over rivers and creeks were infrequent and gave the prospective builder no worry. The result was that a large percentage of the vessels built in the country were constructed in very undesirable locations when viewed from the standpoint of suitability for a permanent shipyard site and if proper consideration were given depth of water for launching and for economic and efficient movement to the waters in which she was intended to sail. Ships were built in the seventeenth, eighteenth, and first part of the nineteenth century in geographical locations that today would be deemed impossible, and it is surprising to hear of the construction of ships for deep-sea trade in cities, towns, and villages that are well inland, far from the ocean, and are not now considered as being on the banks of a navigable stream. During the War of the Rebellion and that of 1812, there was a rather necessary intent to build ships on the banks of streams or ocean inlets sufficiently far from the ocean and from deep well-known navigable rivers to be comparatively free from the danger of raids, with either seizure or destruction by the British armed forces; therefore, what were, in fact, undesirable locations for shipyards not only continued in use but also developed. After the establishment of yards, the disadvantages of location were minimized, and they were continued in operation for long periods of time and most often until the increasing size of ships and the development of the country inland—with the need of permanent bridges over rivers and relatively unimportant rivers and creeks—made impossible the continuance of building vessels in the locality.

A history of shipbuilding in America from the birth of the republic would obviously be incomplete if it dealt only with the product of yards located on suitable navigable waters and concentrated on the activities of shipwrights of Chesapeake Bay, the Delaware and Hudson rivers, New York, Boston, and the Piscataqua, Kennebec, and Penobscot rivers. From New York to the Passamaquoddy, hundreds of unsuitable locations for the establishment of ship-

yards built vessels. Considering the natural geographical disadvantages and handicaps of the sites, many of them constructed surprisingly large ships and persisted in their building activities for almost unbelievably long periods of time.

To illustrate the nature of the shipbuilding industry in a location not suitable for the economic building of deep-sea vessels, Kingston, on the Jones River in the historic Plymouth, Mass., region, has been selected not because of its intrinsic importance but because of its authenticated records, the fact that it owned and operated vessels and was a hailing port for ships sailing the Seven Seas as well as a building center, and, furthermore, because of its environment of shipbuilding and shipping communities. Possibly a locality much farther from the ocean would have furnished historic material of greater interest in some phases. However, it is felt that a consideration of Kingston shipbuilding, shipbuilders, shipowners and operations for a whole century of time supplies historic facts that can be considered typical of the nature of activity in this realm in small and not naturally well-favored communities not only in Massachusetts but also throughout the New England seaboard and rivers tributary thereto and from Long Island Sound to the Passamaquoddy.

Kingston, Mass., is some five miles northwest of Plymouth and about thirty miles southeast of Boston. It has a record of vessels built at the "Landing" on Jones River and of the vessels owned at and hailing from the "port" of Kingston from 1776 to the end of its marine history in 1898 (but only one small steamer of 30 tons register was built after 1876). Ships were built on the banks of the Jones River before 1776, but no authenticated records of number and tonnage are available. It is known that a yard was operated by a Caleb Stetson at the Stony Brook Landing Place prior to 1714 and that in 1713 Samuel Drew, a shipwright, moved from Duxbury to Kingston. He and his descendants, a son Cornelius (born 1802) and six grandsons (William, James, Zenas, Cornelius, Seth, and Abijah), operated as builders and shipwrights as long as vessels were built and owned in Kingston.

William Drew built two "big ships" at Kingston for the Provincial Government of Massachusetts (or the state of Massachusetts Bay), the brig *Independence* in 1776 and the ship *Mars* in 1778. One of the earliest merchant owners of vessels in Kingston was Nicholas Sever, who settled there in 1728; he died in 1764, but his sons and grandsons carried on and were owners of record of ships built in Kingston up to the launching of the full-rigged ship *Leodes* (445 tons), built in 1841 for John Sever. There is a record of a schooner built by Zenas Drew and of a brigantine built by Samuel Drew, each for William Sever in 1760. Seth Drew is known to have built two schooners in 1784 and, the following year, a sloop for William Drew and Jonathan Holmes, a brig for Jackson Davis and others, and, what is of importance, "a schooner for William Gray, merchant of Salem" (one of America's foremost shipowners). Timothy Drew built "the big ship *Magnet*" (371 tons) in 1811 and Stephen Drew the brig *Zamor* (248 tons) in 1826.

Another generation of the Drews to build ships at Kingston is represented by Nathaniel D. Drew, who launched his first vessel, the schooner *Cohannet* of 99 tons, in 1839. Building intermittently until 1854, he constructed seven schooners aggregating 702 tons, a brig of 99 tons, and three barks totaling 852 tons, the largest being the *Messenger Bird* of 418 tons, built in 1852 during the California clipper ship boom. Nathaniel D. Drew was a technical naval architect of considerable ability, as is evidenced by his drawings that have survived the ravages of time. Between 1839 and 1865, he designed many vessels, some of which were built by Drew himself; some were constructed by Joseph, Alexander, and Edward Holmes and others. The last deep-sea vessel built at Kingston (and the last craft of any kind of over 30 tons register) was the *Helen A. Holmes*, a brig of 316 tons launched in 1874. The master shipwright in charge of construction was Spencer Drew of still another generation of the pioneer shipbuilding family of Kingston.

Another prominent name among the old shipbuilders of Kingston is Lysander Bartlett, who built vessels from the sloop *Harmony* of 49 tons in 1804 to the "big ship" *Leodes* of 445

tons in 1841. His son, Lysander Bartlett, Jr., carried on and was a registered builder from 1839 to 1852. He constructed the schooner *October* of 114 tons for Joseph and Edward Holmes in 1840, built the brig *Rodney* of 116 tons for his own (and family) account in 1842, and continued until 1852, when he built his last and largest vessel, the bark *White Wings* of 293 tons.

The Holmes Family of Shipbuilders and Shipowners — the Most Prominent in Kingston

The most prominent name connected with shipbuilding and ship ownership at Kingston was Holmes. Charles and Jedediah Holmes were part owners of the 39-ton sloop *Sally,* built in 1796. In 1801, Joseph Holmes built at Bridgewater for his own account the brig *Two Pollys* of 250 tons, followed the next year by the brig *Algol* of 220 tons and, later, by the brig *Trident* of 130 tons and the schooner *Alexander* of 112 tons—the latter for Bartlett, Holmes, et al., of Kingston. Joseph Holmes built his first vessel at Kingston, the ship *Lucy* of 208 tons, in 1806. From 1806 to 1837, Joseph Holmes was the registered builder of 42 vessels (and he most probably built several of the craft of which the builder is unidentified). From 1838 to 1863, Joseph Holmes built alone, with Horace Holmes for a while, and later with Edward Holmes, his talented son, as master carpenter. During this period, Joseph Holmes was the registered builder of 24 vessels, and from 1864 to 1874 (the end of shipbuilding operations at Kingston), Edward Holmes ran the yard himself, building 8 vessels, 7 of which were for his own account. Of 215 vessels built at Kingston and 270 vessels—all told—built at and owned in Kingston, Mass., from 1776 to 1898 inclusive, members of the Holmes family owned 101, wholly or in part. Joseph was the outstanding member of the family, of which eleven persons were shipowners and five builders. Alexander Holmes was a registered owner of new ships from 1825 to 1860 and Edward from 1831 to 1874.

Joseph Holmes, who died in 1863 in his ninety-second year, was an active shipbuilder and shipowner for sixty-two years. His first shipyard was located about twelve miles, as the crow flies, west of Plymouth and the Atlantic and about seven miles northeast of Taunton, Mass. His Bridgewater-built ships had to reach the ocean—some forty miles away—by means of the Taunton River and Narragansett Bay. From 1827 on, Edward Holmes was associated with his father in business; from 1831 his name appears as part owner of vessels and with the building of the ship *Raritan* of 492 tons. In 1843 he is registered as master carpenter, or shipwright, in responsible charge of construction. Edward Holmes was distinguished from all the other shipbuilders of Kingston and the surrounding territory because of his thorough grounding, both technical and practical, his extensive experience, and his most unusual versatility. Joseph Holmes said of his son: "He is the only man I know that can go into the woods, select and cut the timber, design and build the vessel, rig and canvas her, and then sail her after she is finished." Edward Holmes served at sea "before the mast," as mate, and later as captain and proved to be an able master and navigator.

Henry M. Jones, the marine historian of Kingston, has said: "It seems singular that Nicholas Sever, who, with his sons, was the first person in Kingston to become an owner of vessels in any number, was first a minister and that one hundred years later Joseph Holmes, who, with his sons, was the largest shipowner and builder the town ever had, was also first a minister, both being college graduates, Joseph Holmes graduating from The College of Rhode Island, later called Brown's University, in 1797."

The following quotation is part of an interesting letter written by Joseph Holmes on July 1, 1859:

My connection in building vessels in Bridgewater commenced in the year 1801. . . . I laid the keel for a vessel in a yard which I hired near the line between Bridgewater and Raynham which I called the Bridgewater Ship Yard and is where I built all the vessels which I built in Bridgewater, five in number: Brig *Two Pollies,* Brig *Algol,* Brig *Lucy* noted for taking first cargo of ice, Schooner *Alexander,* Brig *Trident,* which vessel took spare material to Kingston on Jones River, my native place where I commenced building in the year 1806 at Jones River Landing so called. I have kept a vessel on the stocks nearly the whole time, sometimes two and once built three in a year and bought one besides. All but two I have fitted for sea and sent to sea on my own account and risk. I am now about placing another keel on the blocks of about two hundred tons, being 87 years and 7 months old.

Joseph Holmes had ideas in regard to ships very similar to those of the master builders and shipowners of Bath, Maine. The story is told of a Boston merchant's inviting bids for the construction of a full-rigged deep-sea trader in the winter of 1856-1857. An East Boston shipbuilder presented his proposition and was told that his price was too high and much more than the bid of a first-class Maine builder. The East Boston shipbuilder scornfully asked, "But would you seriously consider buying a Maine-built ship and never know when the 'Down-East' slowpoke will arrive in port?" The merchant replied:

Well, the tortoise sometimes beats the hare, and with freights as they are today many a sharp-lined clipper ship is being laid up and most of them are having their spars and sails cut down. McKay's crack *Flying Cloud* is tied up at a New York wharf as the owners cannot afford to continue losing money operating her, and on the *Cloud's* last passage westbound to California many a Maine-built, good-carrying ship beat her time by forty or fifty days, as the *Cloud* was dismasted and badly strained and had to put into Rio for repairs. Maybe a ship with less of a speed model and more of a hull for carrying both bulk and weighty cargo can be operated to make money when what you call a "medium clipper" cannot be kept in the trade without heavy losses being suffered by the owners. I am looking for my next ship to be an asset upon our books, not a liability, and I am sorry to say we shipowners have plenty of the latter class of speedy but poor-carrying and extremely expensive ships to run and maintain in repair on our hands today, and we don't know what to do with them.

Joseph Holmes did not build "Down Easters," but he and his son Edward did design and construct full-bodied and good cargo-carrying vessels that were unusually seaworthy and reliable sailers under severe conditions of wind and sea. They were modeled more like the fuller-bodied transatlantic packets, and such craft, incidentally, made splendid whalers as well as general traders, for they had the ability to keep the seas. Like many of the relatively blunt-bowed sailing packets in the North Atlantic "shuttle," the Holmes ships, whereas not designed for speed, made fair average passages, and most of them are credited with occasional very good runs. They had full bows and heavy quarters and sterns, and it was said that "when afloat, one end looked about as full as the other."

The following story is told of a newly launched Holmes ship, which was lying at Rocky Nook Wharf while being rigged. Capt. Otis Baker, Jr., of the fast clipper *Herald of the Morning* went down to the dock to see the new vessel. After looking her over, he walked to the bow and facetiously wrote in white chalk on the ship's black painted side: "This is the bow." The difference between the entrance lines of the Holmes ship and those of the big sharp-lined ocean greyhound *Herald of the Morning* of 1,294 tons was so pronounced that many persons joined with Captain Baker in his joke; nevertheless, whereas the clipper ships made money when "speed was king" and freight rates abnormally high, they did not prove to be a good investment in ordinary times and were big money-losers in bad times. The Holmes ships, on the other hand, were consistent, regular money-makers; they enjoyed no phenomenal years, as did the California Gold Rush clippers, but they paid steadily year after year a very good return on their investment and throughout the days of wood sail were very profitable to their owners. The Holmeses, however, proved that they could build very seaworthy vessels with a good turn of speed. It is said that their transatlantic Mediterranean "fruit ships" (the barks *Ann & Mary* of 242 tons, *Fruiter* of 290 tons, *Abby* of 178 tons, *Sicilian* of 321 tons,

Neapolitan of 320 tons, *Fruiterer* of 321 tons, and the brig *Bird of the Wave* of 178 tons—built from 1849 to 1857 inclusive in clipper ship days) were "very fast, and it is probable that their model has never been improved on." In model lines, carrying capacity, and spread of canvas, these vessels resembled somewhat the very much larger Down Easters built in the seventies and early eighties at Bath, Maine.

It is said that at mid-century Joseph Holmes "was one of the largest individual shipowners in the United States," and again, "He was a wealthy man, and all his money had been made in the operation of ships, of which he owned about a hundred." We further read: "Joseph Holmes, who built one or two vessels a year for sixty years, had schooners named for every month of the year except May, and that one he cleverly named the *May Bee,* as there was already a schooner named the *May* listed in the United States Shipping Register." He built and operated ships during the War of 1812 and at that time had to have ships whose prime protection was their speed rather than the guns that he placed aboard. He got in the habit early of taking risks in the operation of his vessels, and as their numbers increased, he decided to insure the ships himself, "take all risk, and pay no premiums to others." He kept his vessels in excellent physical condition, but insisted on making all possible repairs and reconditioning at his own (Kingston) yard. His letters to shipmasters read: "In case of accident, always remember your vessel is not insured and expend nothing but what is necessary to make your vessel seaworthy. If it is necessary that your vessel should be sold for the benefit of all concerned you will buy her in and draw on me if you think it an object."

Joseph Holmes engaged principally in trade with the West Indies and in this, the transatlantic, Mediterranean, and later the Cape Horn service he lost very few of his vessels at sea or when making port, notwithstanding the trade that they were in and the lack of facilities that today so materially safeguard the operation of ships. (There were few lighthouses and no lightships, the charts were often crude and inaccurate, the channels were poorly buoyed, and there were no tugs or revenue cutters to call on for assistance.) In 1861, when few of the clipper ships were making any money for their owners, Joseph Holmes dispatched his rather full-bodied bark *Egypt* of 557 tons and his finer-lined but diminutive Mediterranean fruit bark *Fruiterer* of only 321 tons on a 16,000-mile voyage westbound around Cape Horn for San Francisco; they sailed together, separated, sighted one another off the Horn, again separated, and passed through the Golden Gate in company. Apparently, the larger size and superior hull design in heavy weather of the *Egypt* balanced in length of passage, under the conditions prevailing, the finer model lines of the smaller and usually faster *Fruiterer.* Joseph Holmes kept his fleet together and built or had each vessel built exactly of the type desired and in full harmony with his ideas; he operated them personally and made a lot of money "steadily and with amazing regularity throughout the years." As before mentioned, he died in 1863, "a rich and highly respected man." His son Edward sold many of the Holmes ships during the Civil War (at the time that so many American ships were being "sold foreign"), and gradually the Holmes fleet, built up and operated so profitably by Joseph, was dispersed following his death.

A Record of Vessels Launched at Kingston during a Period of 123 Years — 1776-1898

Historian Henry M. Jones has said that "276 vessels with a total tonnage of about 34,000 tons have been built and launched into Jones River at the Landing since the Revolution; these vessels include sloops, pinks, schooners, brigs, barks, and ships." This stated number and

tonnage are probably correct, but the following table is an authenticated record of vessels launched at Kingston from 1776 to the end of the shipbuilding era. The builders of 43 of these vessels, recorded and constructed during the period 1782-1823, are unidentified; however, it seems quite positive that many of the early ones (1782-1805) were built by the Drews, who, moreover, are known to have been engaged in the shipbuilding business of Kingston (also, to some extent, as owners) from 1713 to 1874—a period of 161 years.

	Number of Vessels Built									Registered Tonnage	
Years	Ships	Barks	Brigs	Total Square-riggers	Schoon-ers	Sloops	Total Sail	Steamers	Total All Vessels	Total	Average per Vessel
1776-1799	1	—	1	2	17	8	27	—	27	1,576	58.4
1800-1809	1	—	5	6	11	9	26	—	26	2,557	98.2
1810-1819	4	—	4	8	22	4	34	—	34	3,734	112.7
1820-1829	3	—	12	15	25	3	43	—	43	4,851	112.8
1830-1839	7	2	3	12	19	1	32	—	32	5,606	175.2
1840-1849	4	3	6	13	13	—	26	—	26	4,704	180.9
1850-1859	1	7	2	10	3	1	14	—	14	3,350	239.3
1860-1869	—	5	—	5	4	2	11	—	11	2,594	235.8
1870-1879	—	—	1	1	—	—	1	—	1	316	316.0
1880-1889	—	—	—	—	—	—	—	—	—	—	—
1890-1898	—	—	—	—	—	—	—	1	1	30	—
Total 1776-1898 (a period of 123 years)	21	17	34	72	114	28	214	1	215	29,318	136.4

Of the 53 vessels owned in and hailing from Kingston during the period 1776-1876, but not built there, 19 were constructed at nearby Duxbury during the years 1793-1868, 4 came from close-by Bridgewater yards (built 1801-1806), and 4 were built during 1789-1825 at Scituate, thirteen miles to the north. Eight of the vessels were launched at Gloucester and nearby Essex during 1801-1836. Hanover (in 1816), nine miles to the north of Kingston, and Pembroke (in 1838), seven miles to the north, each built a vessel for Kingston owners, as did Plymouth (in 1796), a few miles to the southwest. Farther away but within the state, Newburyport (in 1815), Sandwich (in 1821), and Chatham (in 1817) on Cape Cod and Fairhaven near New Bedford (in 1860) each built one Kingston vessel. Four vessels were constructed in Connecticut yards for Kingston shipowners—three at Killingworth (located between New London and New Haven) during the years 1829-1833 and one at Montville (seven miles north of New London), built in 1810. Distant Maine constructed seven of the Kingston-owned vessels. Two were launched in 1820 at Westbrook, near Portland, and two were built on the Androscoggin, seven miles west of Bath (one at Brunswick in 1808 and one at Topsham in 1822). Wells, a few miles west of Kennebunk, launched one of the vessels in 1831. Addison (between Bar Harbor and Machias) built one in 1838, and the other came from distant Brewer (opposite Bangor on the Penobscot River).

In order to maintain a sense of balance and relativity, it is well to note that whereas Kingston launched in a century of time (in fact, during a period of 123 years) 215 vessels totaling 29,318 registered tons, the customhouse district of Bath in the one year 1854 built 98 vessels with a tonnage of 77,597 tons, or 2.65 times as much, and of these Bath-built vessels, 90.6 per cent of the total tonnage constructed were full-rigged three-masted ships, while 99.7 per cent were square-riggers. The city of Bath, Maine, alone (not the Greater Bath district) in the year 1854 launched 46 vessels of 40,415 tons, in 1919 built vessels totaling 43,170 tons, and in 1899 turned out ships of 39,021 tons net register. In many single years of its shipbuilding history, the city of Bath proper, excluding environs, launched a greater marine tonnage than was built in Kingston and purchased from the outside and owned by Kingston merchants during its entire marine history—a period of well over a century and a half.

A Record of the Vessels of Over 275 Tons Built at Kingston, 1776-1898

The following table gives a list of the vessels of over 275 tons register built at Kingston, Mass., during the period 1776-1898. It will be seen that the Holmeses built and owned 22 of these 31 vessels; the Bartletts built 7 and the Drews 2; the Severs owned 5 of them, the Delanoes 2, and Plymouth and Nantucket parties 1 each.

Name of Vessel	Rig	Year Built	Tonnage	Builder	Owner
JOSEPH HOLMES	Ship	1851	611	Jos. and Ed. Holmes	Jos. Holmes et al.
SOLOMON	Bark	1866	600	Ed. Holmes	Ed. Holmes
EGYPT	Bark	1860	557	Jos. and Ed. Holmes	Jos. Holmes et al.
HERCULEAN	Ship	1839	542	Jos. and Horace Holmes	Jos. Holmes
NATHAN HANNAU	Ship	1848	513	Jos. and Ed. Holmes	Jos. Holmes et al.
RARITAN	Ship	1843	492	Jos. and Ed. Holmes	Jos., Ed., and Alex. Holmes
RIALTO	Ship	1834	459	Jos. Holmes	Jos. Holmes et al.
LEODES	Ship	1841	445	Lysander Bartlett	John Sever
ALESTO	Ship	1840	420	Lysander Bartlett	Benj. Delano et al.
MESSENGER BIRD	Bark	1852	418	Nathaniel Drew	Alex. Holmes et al.
CHARLES	Ship	1836	387	Lysander Bartlett	John Sever
MAGNET	Ship	1811	371	Timothy Drew	Plymouth
RUSSELL	Ship	1834	348	Lysander Bartlett	John Sever et al.
HORNET	Bark	1868	330	Ed. Holmes	Ed. Holmes
KINGSTON	Ship	1822	325	Jos. Holmes	Jos. Holmes
LEMUEL	Bark	1863	321	Jos. Holmes	Jos. Holmes
FRUITERER	Bark	1861	321	Jos. Holmes	Jos. and Ed. Holmes
SICILIAN	Bark	1855	321	Jos. and Ed. Holmes	Jos. Holmes et al.
NEAPOLITAN	Bark	1856	320	Jos. Holmes	Jos. Holmes et al.
COLUMBUS	Ship	1821	320	Jos. Holmes	Jos. Holmes
RAMBLER	Ship	1818	320	Jos. Holmes	Jos. Holmes
MARIPOSA	Ship	1833	317	Lysander Bartlett	John Sever
HELEN A. HOLMES	Brig	1874	316	Ed. Holmes	Ed. Holmes
OHIO	Ship	1830	300	Jos. Holmes	Jos. Holmes
ELIZABETH	Schooner	1812	300	Jos. Holmes	Jos. Holmes
BALTIMORE	Ship	1832	299	Lysander Bartlett	John Sever
ALASCO	Bark	1832	299	Jos. Holmes	Jos. Holmes et al.
TURBO	Bark	1831	294	Jos. Holmes	Jos. Holmes et al.
WHITE WINGS	Bark	1852	293	Lysander Bartlett, Jr.	Benj. Delano et al.
FRUITER	Bark	1853	290	Jos. and Ed. Holmes	Jos. Holmes et al.
CHILI	Ship	1819	278	Lewis Holmes	Nantucket

The record of shipbuilding is obviously not complete during the Revolution, as some privateers were built on the Jones River. Four vessels were built in 1812, one of which was the big topsail schooner *Elizabeth* of 300 tons, launched by Joseph Holmes. In 1813 three schooners were built, in 1814 one schooner and the brig *Lucy* of 140 tons (another Joseph Holmes vessel), in 1815 two brigs (built by the Drews) and a schooner, and in 1816 four schooners. The clipper ship era had but little effect on Kingston other than as an incentive for the Holmeses (Edward and Joseph) to build in 1851 their largest vessel—and the biggest ship ever launched at Kingston—the *Joseph Holmes* of 611 tons (length 142 ft., beam 36 ft., depth 15½ ft.). When the shipyards of Maryland, New York, Boston, the Merrimac, and the Piscataqua were booming through the building of clipper ships, the Kingston yards launched

annually merely the usual number of their type of full-bodied deep-sea traders—only one in 1851, three in 1852, two in 1853, two in 1854, and one in 1855; but when the yards of New York, Boston, and Maryland ceased building clipper ships and were shut down, the Kingston yards went merrily along producing vessels, and only in one year of the Civil War (1862) do the records show that no vessel was launched in the town. (However, Joseph and Edward Holmes have stated that they built a schooner in 1862, a bark in 1861, and a schooner in 1863.) Kingston shipyards continued to build through the sixties, but they constructed only one brig, a small schooner, and a sloop in the seventies (and a 30-ton steamer in 1898).

X.

NORTH RIVER, MASSACHUSETTS, AN OLD AND IMPORTANT BUILDING CENTER AND "A NURSERY FOR BOSTON SHIPBUILDERS"

THE PART OF Massachusetts between Plymouth and Cohasset on the coast and stretching well inland along the banks of creeks and small rivers has a great shipbuilding history and one that is seemingly out of all proportion to the natural advantages that the area offers for the building of ships. In the seventeenth and eighteenth centuries, vessels built and used in commerce were small, and yards located in these early days at sites where streams were narrow and the water shallow continued to be used for many decades, notwithstanding their unfavorable setting. When the yards were moved because of the demand for floating tonnage of larger dimensions and drawing more water, shipbuilding firms generally continued in the original area, merely moving to obtain the benefit of as much building room and as wide and deep waters as the locality offered. For years in many building centers of Massachusetts and New England, to the estimated cost of building a ship was added an item of known and unavoidable expense of a certain amount per ton for getting the vessel through, or over, sand and mud into deep tidewater.

In the preface of the HISTORY OF SHIPBUILDING ON NORTH RIVER, PLYMOUTH COUNTY, MASSACHUSETTS, 1640-1872, written by L. Vernon Briggs, at Hanover, Mass., in 1889, we read:

> The name of North River is familiar to the older generations of seafaring men and especially to the older residents of Nantucket, New Bedford, Sag Harbor, Barnstable, Provincetown, Boston and the South Shore. Great Britain was a market for a large number of North River built vessels before the Revolution. Prior to 1800 North River was known the world over; vessels were not designated as having been built in Scituate, Marshfield, Hanover or Pembroke, but "on North River." The author has unearthed the records of over one thousand and twenty-five vessels built here, and the United States Flag was carried around the world, and among other places, to the following countries for the first time at the mast heads of North River built vessels: Great Britain, Canada, the Northwest coast, to the Black Sea and China. The largest number of vessels built on the River in a single year that the author has found the records of was thirty in 1801, and the year 1818 shows the next largest number, twenty-four. During the five years, from 1799 to 1804 inclusive, there were built here one hundred and fifteen vessels, an average of twenty-three each year. During the ten years, from 1794 to 1804 inclusive, there were one hundred and seventy-eight built here, or an average of seventeen each year. The largest number of vessels found bearing the same name were *Betseys* and *Sallys*, fourteen each; twelve *Marys*, eleven *Pollys*, and ten *Neptunes*. Times look a little brighter for the shipbuilders in general now; nine or more vessels are on the stocks at Bath, Maine; Currier has just launched a 1200-ton four-masted schooner at Newburyport; a similar vessel has recently been launched at New Haven, Connecticut, and six or more vessels are building at East Boston. North River may yet see another vessel, and perhaps many more built upon her banks. Several of the old shipbuilders affirm that in building small vessels there are no obstacles but what could easily be overcome, if the men had the courage.

Whereas to the average American there is only one North River in the United States (and that in New York between Manhattan and New Jersey and actually the lower stretch of the

Hudson River), to the Massachusetts man North River means a little stream—and a relatively insignificant stretch of shallow water—in Plymouth County, Mass., some twenty miles southeast of Boston ("The Hub"). This North River section, which is rich in tradition and shipbuilding history and includes Scituate, Marshfield, Hanover, Pembroke, Norwell, etc., was not only a shipbuilding center from the days of the early Plymouth County settlers but also a sort of nursery for Massachusetts wood shipbuilders. From this area sprang the men who built important vessels in various parts of the state (with the exception of Donald McKay, who was born in Canada and trained in New York) and the master builders who produced the fine, big wood ships built in Greater Boston during the forties, fifties, and sixties of the nineteenth century. These years included the clipper shipbuilding decade of 1850-1859 and the period when Boston led not only the United States but also the world in the number, size, and quality of outstanding ships launched in one building community.

From this North River, Mass., nursery of wood shipbuilders came Enos Briggs, the famous master builder of Salem, Mass., and the E. & H. O. Briggs, who built some of the finest clipper ships in the world at their South Boston yard; Thatcher Magoun, the pioneer and most prominent shipbuilder of Medford, Mass., and Calvin Turner, who shared with Magoun in making Medford for several decades the most important shipbuilding center of Greater Boston; Elisha Hayden and William Cudworth, who formed the important firm of Hayden & Cudworth, of Medford, Mass., and were born in Sea View and South Scituate, respectively. Paul Curtis, who built fine ships in Medford, Chelsea, and East Boston, left the North River to make a great name for himself in Boston, and James O. Curtis, another of the leading shipbuilders of Boston in its golden era (with a shipyard at Medford), was of the same family. Henry and John Taylor left the North River to build ships in the Greater Boston area, and John Taylor was the first to build ships at Chelsea. Joshua T. Foster, who built fast ships at Medford before the clipper ship decade and also the last clipper ship launched in Greater Boston, was a South Scituate boy and received his training there. A directory of important Boston wood shipbuilders is practically a list of North River shipbuilding families. Samuel and William Hall built at Marshfield before they moved to Boston. The famous Samuel Hall, builder of the record-breaking clipper *Surprise* and the owner at East Boston of one of The Hub's most successful shipyards, served his apprenticeship at Barstow's yard in Hanover and, it is said, "upon attaining his majority, left the North River with a broad axe on his shoulder and twenty-five cents in his pocket to seek his fortune." Jotham Stetson, who built big and first-class ships at Medford and later at Chelsea, was a member of a great Scituate family of shipbuilders. Among the shipwrights of a branch of the Stetson family who moved from the North River to other fields of seemingly greater opportunity (and less competition) were the following:

Charles—born 1752; went to New Bedford.
Thomas—born 1766; went to Barnstable.
Lincoln—born 1774; went to Salem.
Wiswell—born 1785; went to Kingston.
Jotham—born 1794; went to Medford.
Alpheus—born 1794; went to South Boston.
Elisha—born 1799; went to Medford.
Melzar—born 1805; went to South Boston.
John—born 1811; went to Medford.

Samuel Lapham, who built fine ships at Medford, A. & G. T. Sampson, who had an important yard at East Boston (also the Sampsons who were shipowners and operators in Boston), and many others who became prominent in the building of ships, not only in Boston but also throughout the state of Massachusetts, came from North River or Plymouth County families. John Barstow, who retired from shipbuilding and shipping in 1869, was one of six generations that built ships in the same yards on the North River from the North River Bridge to Sunset Hill. Barstow, who was a well-posted as well as broadly experienced shipbuilder, following his retirement at Boston, said, "Every ship-builder that began business in Medford, East and South Boston went there either from Scituate, Hanover, or Pembroke."

The greatest technical designer of clipper ships in the United States, Samuel Harte Pook, of Boston, the son of Naval Constructor Pook, U.S.N., was a relative of and was named after Samuel Hartt (or Harte), master shipwright. In 1815, Samuel Hartt built the 464-ton ship *Mount Vernon,* "the largest vessel ever built on the North River," and engineered the moving out to sea of this big craft of her day. A historian has written of this achievement: "It is certainly wonderful how a vessel of her size could be launched from this yard; but such is the fact, and she was gotten out of the river safely, and was a well-built and successful ship." Samuel Hartt was naval constructor at the Portsmouth, N.H., and other U.S. Navy yards; he died at South Scituate on December 18, 1860, at the age of seventy-eight years.

Many of Scituate's first settlers came from Kent, and they had among them shipwrights from Chatham. It has been said, "Without doubt the art of shipbuilding so early established at North River can be traced to the British naval dockyards of Chatham on the Medway." A fishing station was established at Scituate in 1633, and deep-sea fishing required the use of seaworthy boats. Gradually, the fishing grounds covered were extended, and larger and more commodious craft, capable of keeping the sea under all conditions of weather, were in demand. The fishing settlement grew into a shipbuilding community, and, with ships available, general trading developed until Scituate and the North River—Marshfield, Hanover, Pembroke, etc.—became definitely interested in coastal trade, commerce to and from the West Indies, and, later, foreign trade on the Seven Seas. One of the oldest shipyards on the North River was that of William Barstow, who came from England in 1635 in the ship *Truelove* and settled in that part of Scituate now known as Hanover in 1649.

In 1811 the *Mohawk* of 407 tons was built at Hanover by Joshua Turner for New York owners, and she was described as "the largest vessel ever built in Hanover." To take this vessel to deep water, "gundalows and empty casks" were used to lessen her draft. A historian writes: "It is truly wonderful that so large a vessel could be launched at this point in the river and safely reach the ocean." Again, we are told: "Ships built up the North River had to be lifted up and their draught of water lessened to get them down to the deep ocean in which they were built to trade. Vessels were lightened by having gondolas lashed to them at low tide and they were heaved forward through soft bottom with kedges." The North River pilots were a very necessary as well as capable and resourceful group of men. There were no steam tugs in those days, and the vessels engaged in ordinary trade had to be handled by sail with lines ashore pulled by groups of men, oxen, or horses (two bow guys, called breast lines, and two stern-quartering guys, called quarter lines). Kedges were used, two at a time, "an extra kedge being buried ahead before the pilots heaved up to a previous one," and this so that direction could be maintained. Briggs, writing of the work of the North River pilots, says of the ordinary commercial transits of the river:

> When a vessel drew so much water that it was necessary to get her keel through the bar, they would go to the beach beyond and bury heavy planks in the sand five or six feet deep, laying them at right angles with the position of the vessel, and from their centre attached chains, which they carried along in covered trenches until some distance from the planks, where they would lay them on the surface. The process of burying these planks was called "burying niggers." A tackle would be attached to the end of the chain and carried up the river to the windlass on the bow of the vessel. Scows also were invariably lashed, just below the bow and stern at low tide to help raise the vessel. With much tackle and large blocks, and often with fifteen men heaving at the windlass, they would get the vessel inch by inch through the bar, or shoals. Sometimes vessels could not be gotten out during one course of tides and would have to lay until the next course of high tides.

William Gray (1750-1825), of Salem and Boston, who, it is said, "was probably the largest shipowner ever in this country and at one time personally owned over sixty square-rigged deep-sea vessels engaged in foreign trade," had quite a number of ships built on the North River. From the Barstows' Lower Yard—John B. and Elijah Barstow, master ship-

wrights—was launched in November 1818 the full-rigged merchant ship *Clay* of 299 tons for "Hon. William Gray of Boston," to be commanded by Capt. Benjamin Hichens.

The Barstows, who built one or two vessels each year, constructed several important whalers during the period 1819-1833. The *Washington* of 309 tons, launched in 1819, was a whaler built for Reuben Swain and Zenas Coffin, of Nantucket. The following year the Barstows launched the whaler *Spermo* of 296 tons for Aaron Mitchell, also of Nantucket. In 1821 two whalers were built, the *Constitution* of 325 tons, launched in March and owned by Zenas Coffin, and the *Oeno* of 328 tons, launched in September for Aaron Mitchell, and in 1822 another whaler was built for Zenas Coffin—the ship *Lydia* of 329 tons. (These vessels were especially built for very long voyages and for whaling in the Pacific.)

Scituate, from the earliest days, was interested in fishing and in the building of fishing vessels. Massachusetts never lost its initial interest in fish, and its prime maritime ventures for a long period were in the realm of fisheries. Maine had early fishing settlements on its coast line, but quickly centered its thoughts on timber, and its prime articles of trade from early colonial days were forest products. Maine became the "Pine Tree State," but Massachusetts was the land of the "Sacred Cod," and it steadily maintained its interest and trade in fisheries and in the building of fishing vessels. Massachusetts fishermen in Massachusetts-built boats have continued unceasingly to fish on the Grand Banks, and it is but natural that they led in the operation and building of fishing and whaling vessels. Scituate and the North River built a large fleet of whalers around the turn of the century, and for a term of years following the close of the War of 1812 (during which the American whaling fleet was practically exterminated by the British), they built whalers for owners of New Bedford, Nantucket, Sag Harbor, etc., to virtually the limit of the capacity of their shipbuilding ways.

William Vassall and Timothy Hatherly are mentioned among the earliest prominent settlers of North River, and William Vassall, in writing to Rev. John Wilson, of Boston, June 7, 1643, described his and Timothy Hatherly's and other farms and said: "Our lands reach ten miles or more to the Southwestward, by which runneth a faire river navigable for boats ten miles and hay grounds on both sides and hath an outlet into the sea about four miles from the meeting house." The early settlers found forests of white oak that was soon converted into ships, and all timber suitable for use in shipbuilding soon disappeared because of the demand. Shipwrights had to go farther and farther afield to obtain oak and other hardwoods for framing and planking. Elijah Foster was urged by his family as early as 1760 to abandon his intention of becoming a shipwright because, he was told, "the timber is so far exhausted that the business must soon fail." The Smiths, of Hanover, in a contract dated March 10, 1795, agreed to build a vessel of 115 tons, with "dimensions 57 ft. 4½ in. keel; 10 ft. hold; 22 ft. beam. To be built of good, sound, white oak timber and plank, . . . calculated to sail fast and carry a good burthen; to finish the upper work as may best suit the owners; to be completed the first day of July next." We read that when the Fosters built the two ships *Pacific* (314 tons) and *Peruvian* (334 tons) at Wanton in 1818, "Massachusetts oak, ash and pine" were used in their construction and that "the ash came from Pembroke." A lot of spruce knees were used in the building of the *Pacific* as well as some of hackmatack. By the middle of the nineteenth century, ships were being built at North River made almost entirely with framing and knees from Maine, Canada, or the Carolinas and with southern hard pine planking.

Barry says: "During the palmy days of shipbuilding in Hanover, 1800-1808, five or six yards were in active operation and at least ten vessels were fitted annually for the sea. The scene of North River was one of animation and industry. . . . The pastures were strewed with timber and teams of 'fat oxen' daily brought in from the forests around their loads of white oak, beech, hacmatack, maple, pine and other timber." Briggs says that at this time "four hundred ship carpenters gathered on a Saturday night at Hanover Four Corners."

Seth and Samuel Foster built six vessels at Wanton in the year 1817, which was the largest number built at any yard on the North River during any one year—only Smith's yard in Hanover excepted.

In the "good old days," it evidently took a great deal of liquor to build a ship. In the eighteenth century and during most of the first two decades of the nineteenth century, liquor was charged to the vessels, the same as material used in building them. This was the common practice at all the yards on the North River and elsewhere in Massachusetts. Later, when the use of liquors supplied by the builders was discontinued in the shipyards, there was much labor discontent, with strikes and walkouts; but the reform was persisted in by the builders and the practice discontinued, and this in the interest of good workmanship and "safety first" as well as for other economic reasons. The following items are two charges from an old account book found by historian Briggs:

To 78 gallons West India Rum drank in the summer of 1811 while at work on vessel — $104.

To 80 gallons Gin and Rum from May 22 to August 15, 1813, at 9 shillings — $120.00

A Record of Shipbuilding in the North River Area from 1678 to 1871 — a Period of 194 Years

L. Vernon Briggs, historian of shipbuilding on North River and at Scituate Harbor, has prepared extensive data, which are both interesting and valuable, concerning ships built and claimed to have been built in the territory covered. The Briggs statistics cover without any perceptible break a building period of 194 years and go as far back as 1678—a time for which tradition and legend rather than documentary proof must furnish material for a list of vessels (name, tonnage, year built, etc.). This may be affected by a coefficient of enthusiasm and pride in family and location that is not evident when a less partisan historian seeks to collect data from written records and write about shipbuilding in other sections of the country. Massachusetts is generally favored by having had ardent champions write pages of its history, but it is only fair to say that the statement regarding ships said to have been built on the North River, Mass., prepared from the zealous researches of L. Vernon Briggs and friends, cannot be compared with the available cold-blooded records of very limited written statistics of other communities, where tradition has not been drawn on and where possibly the builders and their families lived from day to day and were too matter of fact and humble in their achievements to make any attempt to pass on to posterity by pen or word of mouth material from which any appealing and seemingly interesting or worth-while history could be formed. Prior to the nineteenth century, the Kennebec River had most probably thousands of ships built on its banks and launched into its waters of which we have no and shall never obtain any authentic information. Therefore, the following table of vessels said to have been built on the North River, which has been compiled from statistics gleaned by an ardent native of Plymouth County, is of great merit when only North River shipbuilding is considered in relation to the years and the various yards; but neither the number nor the reported sizes of the ships built can be compared with the historic record of other communities, which seldom go back with any degree of accuracy prior to the declaration of peace following the War of 1812.

Years	Number of Vessels Built							Tonnage of Vessels Built						
	Ships	Barks	Brigs	Brigantines	Schooners	Sloops	Total	Ships	Barks	Brigs	Brigantines	Schooners	Sloops	Total
1678-1700	17	3	—	20	—	31	71	1,406	190	—	915	—	882	3,393
1701-1710	9	2	1	27	—	28	67	660	130	30	1,462	—	866	3,148
1711-1750	4	—	1	4	—	3	12	280	—	60	215	—	100	655
1751-1775	4	—	1	1	3	4	13	625	—	70	180	74	88	1,037
1776-1790	7	—	1	7	70	13	98	1,233	—	118	835	3,510	600	6,296
1791-1800	26	—	12	8	66	7	119	6,278	—	1,624	1,080	4,716	386	14,084
1801-1805	42	3	10	3	46	5	109	10,924	575	1,584	481	4,056	250	17,870
1806-1810	32	—	1	—	6	1	40	8,686	—	177	—	540	35	9,438
1811-1815	19	—	2	—	9	1	31	6,260	—	364	—	507	35	7,166
1816-1820	16	1	9	—	48	5	79	4,575	125	1,439	—	3,526	201	9,866
1821-1825	10	—	16	1	17	2	46	3,200	—	2,900	116	1,380	60	7,656
1826-1830	7	1	22	2	16	1	49	2,120	338	4,592	363	1,147	36	8,596
1831-1835	6	15	20	1	20	3	65	1,953	3,694	3,447	125	1,747	125	11,091
1836-1840	—	5	19	5	32	1	62	—	1,093	3,097	722	3,009	21	7,942
1841-1845	—	10	7	—	11	1	29	—	2,048	1,254	—	807	56	4,165
1846-1850	1	9	4	—	18	1	33	414	2,007	970	—	1,402	34	4,827
1851-1860	—	8	1	—	20	—	29	—	2,973	127	—	2,141	—	5,241
1861-1871	—	—	—	6	9	—	15	—	—	—	810	1,010	—	1,820
Total 1678-1871 (a period of 194 years)	200	57	127	85	391	107	967	48,614	13,173	21,853	7,304	29,572	3,775	124,291

North River vessels were necessarily small craft when compared with the tonnage of merchant sailing ships built in the last half of the nineteenth century. The average tonnage of 967 vessels enumerated by historian L. Vernon Briggs, said to have been built during the 194-year period 1678-1871 inclusive, was only 128½ tons, and the average of the 200 three-masted full-rigged ships reported built was 243 tons; of the 57 barks, 231 tons; of the 127 brigs, 172 tons; of the 85 brigantines, 86 tons; of the 391 schooners, 75½ tons; and of the 107 sloops, 35 tons. These figures seem pitiably small compared with clippers of the early fifties measuring 2,000 to 3,357 tons and with later sailing ships, some of which were still larger. However, it is well to bear in mind not only that North River was limited by width of river and depth of water to the building of small craft but also that the shipbuilding history of record and tradition dates back to 1678. Ships engaged in world trade in the sixteenth, seventeenth, and eighteenth centuries were all comparatively small ships. When vessels were first built on North River, a 100-ton ship was considered a sizable vessel and a 200-ton ship a very big one. When Thatcher Magoun graduated from the North River school of shipbuilders and, after gaining further experience in other Massachusetts yards, went to Medford in 1802 to found his own yard, his idea of a good-sized vessel was one of 200 or 300 tons. When he located his yard, he said, "I want to look well into the future and have plenty of land to build on and plenty of water to take, float and carry to the ocean big ships of five hundred tons."

Magoun's first Medford-built vessel was the brig *Mt. Aetna* of 188 tons, built in 1803; but his next was the "big ship" *Eclipse* of 343 tons, built in 1805, and he built no larger one until, in 1810, he launched the *Sachem* of 397 tons, which he thought was "a very big ship." It was 1828 before Magoun built a 400-ton ship.

Lindsay, in his HISTORY OF MERCHANT SHIPPING AND ANCIENT COMMERCE, says that in 1572 the largest merchantman that sailed from the port of London, England, was of only 240 tons register. The *Mayflower* that brought the Pilgrim Fathers to America in 1620 was of but 180 tons burden, and historians say that "only one of the vessels that composed the squadron of Columbus in 1492 had a deck."

The following table gives a list of the largest vessels (of over 300 tons register) reported by L. Vernon Briggs to have been built on North River and at Scituate Harbor, Mass., during its shipbuilding days, placed at 1678-1871:

Year Built	Name	Rig	Tonnage	Builder
1859	EVELINE	Bark	650	Sylvester and Barnabus Briggs, Scituate Harbor
1848	EMPIRE	Brig	497	Turner, Otis & Cole, Scituate Harbor
1856	ALMATIA	Bark	475	Briggs & Turner, Scituate Harbor
1815	MOUNT VERNON	Ship	464	Samuel Hartt, Wanton
1810	LADY MADISON	Ship	450	William Delano, Wanton
1811	MOHAWK	Ship	407	Joshua Turner, Hanover
1815	SOLON	Ship	402	Benjamin Stockbridge, Hanover
178–	MASSACHUSETTS	Ship	400	James Briggs, North River
1794	SUPERB	Ship	395	Simeon Keene, White's Ferry
1833	HILO	Ship	390	Waterman & Bates, Fox Hill
1805	TOPAZ	Ship	385	William Delano, Wanton
1815	LAURA ANN	Ship	375	Caleb Turner, Brick-kiln
1833	ONTARIO	Ship	367	Waterman & Bates, Fox Hill
1809	IDA	Ship	363	William Delano, Wanton
1810	AMERICA	Ship	362	Joshua Turner, Hanover
1815	MALABAR	Ship	355	Torrey et al., Block-house
1810	MT. VERNON	Ship	352	Joshua Turner, Hanover
1815	EDWARD	Ship	346	Edward and Samuel Eells, Smith Yard
1811	ACASTUS	Ship	343	Elisha Briggs, Brick-kiln
1815	ANN	Ship	340	Thos., John B., and Elijah Barstow, Two Oaks
1826	LAGODA	Ship	340	Seth and Samuel Foster, Wanton
1801	FORTUNE	Ship	339	Elisha Foster, Wanton
1799	INDUS	Ship	338	William Delano, Wanton
1828	NEPTUNE	Bark	338	John B. and Elijah Barstow, Lower Yard
1828	RISING SUN (ZENAS COFFIN)	Ship	338	John B. and Elijah Barstow, Lower Yard
1832	CHARLES & HENRY	Ship	337	John B. and Elijah Barstow, Lower Yard
1815	HEROINE	Ship	337	William Copeland, Fox Hill
1823	GOREE	Ship	336	John B. and Elijah Barstow, Lower Yard
1800	HARLEQUIN	Ship	336	William Delano, Wanton
1823	COREL	Ship	335	Hanover
1818	PERUVIAN	Ship	334	Foster & Co., Wanton
1822	JAPAN	Ship	332	Foster & Co., Wanton
1831	WARSAW	Ship	331	John B. and Elijah Barstow, Lower Yard
1827	HANOVER	Ship	329	John B. and Elijah Barstow, Lower Yard
1822	LYDIA	Ship	329	John B. and Elijah Barstow, Lower Yard
1831	MARYS	Ship	329	John B. and Elijah Barstow, Lower Yard
1821	CYRUS	Ship	328	Foster & Co., Wanton
1821	OENO	Ship	328	John B. and Elijah Barstow, Lower Yard
1821	LION	Ship	326	Foster & Co., Wanton
1806	AUGUSTUS	Ship	325	William Delano, Wanton
1806	CHARLESTON & LIVERPOOL PACKET	Ship	325	David Kingman, Hanover

(Continued on next page)

Year Built	Name	Rig	Tonnage	Builder
1818	FOSTER	Ship	317	Foster & Co., Wanton
1816	SUFFOLK	Ship	314	Jeduthan Palmer, Brick-kiln
1818	PACIFIC	Ship	314	Foster & Co., Wanton
1830	PHENIX	Ship	314	John B. and Elijah Barstow, Lower Yard
1805	ROMEO	Ship	312	David Kingman, Hanover
1811	ELIZA ANN	Ship	312	Thos., John B., and Elijah Barstow, Two Oaks
1805	SUSAN	Ship	311	Samuel Rogers, Hanover
1811	CALIBAN	Ship	311	Jonathan Samson, North River Bridge
1817	INDEPENDENCE	Ship	311	Thos., John B., and Elijah Barstow, Two Oaks
1795	SARAH	Ship	310	Calvin Turner and Alden Briggs, Brick-kiln
1810	SAMUEL	Ship	310	Edward and Samuel Eells, Smith Yard
1819	WASHINGTON	Ship	309	John B. and Elijah Barstow, Lower Yard
1807	ISABELLA	Ship	308	David Kingman, Hanover
1815	SARAH	Ship	307	Jonathan Samson, North River Bridge
1801	FLORA	Ship	306	Jotham Tilden, Block-house
1803	MOSES MYERS	Ship	306	Elisha Briggs, Brick-kiln
1810	MISER	Ship	304	Elisha Briggs, Brick-kiln
1807	SUWARROW	Ship	303	Elisha Briggs, Brick-kiln
1809	GOVERNOR GORE	Ship	302	Thos., John B., and Elijah Barstow, Two Oaks
1833	NASHUA	Bark	301	Souther & Cudworth, Chittenden Yard
1804	ARCTURUS	Ship	300	Calvin Turner and Alden Briggs, Brick-kiln
1853	YOUNG TURK	Bark	300	Melzar Turner et al., Scituate Harbor

The *Mohawk* was said to be "the largest vessel ever built in Hanover," and it was apparently a difficult job to get her down the river. The *Mount Vernon* was evidently begun by William Delano, and Samuel Hartt was called in to complete the construction, launch her, and float her to deep water; she was described as "the largest vessel ever built on the North River." The *Solon* was owned by Benjamin and Martin Stockbridge, of Hanover, and referred to by them "as the second largest vessel ever built in Hanover and the ship that ruined us." The *Massachusetts,* when launched from the Briggs yard in the 1780's, was claimed to be "the biggest merchant ship of the day." The *Hilo,* it is said, cost so much to lighten and drag down the river into deep water that the extra expense over and above the estimate for the work was "twice as much as the builder's profit"; therefore, Waterman & Bates lost money on this job. In model and proportions, there was a great similarity in most of the North River-built ships of the various decades. The *Lady Madison* was 112 ft. long, 30 ft. beam, and 15 ft. deep; the *Laura Ann,* 103 x 28 x 14; *Malabar,* 102 x 28 x 14; *Ontario,* 108 x 27 x 13; *Arcturus,* 100 x 28 x 14; *Edward,* 102 x 27 x 15; *Neptune,* 106 x 27 x 15; and the *Romeo,* 96 x 27 x 13.

The *Sarah,* built by Jonathan Samson, was said to have been started and well in frame when the Embargo Act became effective. Disgusted, the builders and owners stopped work on the ship, and nothing more was done to her until peace was declared following the War of 1812. The *Sarah* was "an old vessel" when she was launched in 1815, and she was lost on Arklow Banks off the Irish coast on February 15, 1818. The *Ann,* built by the Barstows at the Two Oaks yard, was kept on the stocks throughout the period of the war with Britain, and she was not launched until 1815. The *Rising Sun,* built at the Barstows' Lower Yard in 1828 for Zenas Coffin, of Nantucket, was a whaler. She was launched in June, and when she arrived at Nantucket from the builder's yard, Zenas Coffin was lying dead; his son Henry changed the name of the newly delivered ship, and she was rechristened *Zenas Coffin* in memory of his father. It is said that this 338-ton ship was owned in 1874, when forty-six years old, by Garrels & Mayer, of Halifax, Nova Scotia, and that this firm acquired her after she was raised following her intentional sinking off Charleston as one of the "Stone Fleet," with many other old whalers, by the northern forces to obstruct blockade runners.

The *Lady Madison,* built in 1810 by William Delano at his Wanton yard, measured 450 tons and was owned jointly by Thomas Hazard, Jr., of New Bedford, and Jacob Barker, of New York. This fast sailer is said to have held the westbound Atlantic record for many years. On April 4, 1812, under command of Captain Swain, she arrived at New York (not Boston, which is a shorter run) "in the unprecedented time of 18 days, and she was on the Grand Banks in 9 days." A story that has been often told bearing upon the dishonest "honesty" of certain businessmen is founded upon what is claimed to be a true episode in the career of the *Lady Madison.* It is said that she was out on a whaling voyage and, on her homeward voyage laden with sperm oil, encountered much rough weather. The delay alarmed her owners, who feared that she was lost. Jacob Barker, who was a Quaker, went to the insurance office and requested the agent to make out a policy for the insurance of the ship, but not to sign it until he heard further. In the meantime, Barker, hearing that the ship was lost, promptly sent a boy from his office to the insurance agent with the message: "If thee hast not signed the policy, thee need not, for I have heard from my ship." The insurance man, supposing the ship to be safe and wishing to get the premium, signed the policy and sent it to the Quaker. To the dismay of the agent, he found that the ship was lost, and he had to pay one-half of the insurance in settlement. The *Lady Madison* was lost on Goodwin Sands in the English Channel in 1815, when only five years old.

Ichabod Thomas built a number of important ships, and it is said that he "more than any other man spread the renown of North River in foreign ports." One of Thomas' ships, the *Bedford,* achieved fame, for she was the first vessel that carried the American Stars and Stripes into a British port. It is said that, upon her arrival, she caused more consternation than any other vessel before or since. The *Bedford* was a small vessel, built in 1772 as a schooner; afterwards she was changed to a brig and finally rebuilt, with another deck added, and rigged as a ship, but after these alterations she measured only 180 tons. The *Bedford* arrived in London February 6, 1783, with the Stars and Stripes flying. Customhouse officers had to apply to solicitors to know what to do with her. After some delay, she was permitted to enter officially, and this vessel flew the first United States flag ever displayed in Europe. The appearance of the ship in London was chronicled by the English press as follows:

> The *"Bedford,"* Capt. Mooers, belonging to Mass., arrived in the Downs on the 3rd of February, passed the Gravesend the 4th, and was reported at the Custom House, the 6th inst. She was not allowed regular entry until some consultation had taken place between the Commissioners of the Customs and the Lords of the Council, on account of the many Acts of Parliament yet in force against the rebels in America. She is loaded with 488 butts of whale-oil, is American built, manned wholly by American seamen, wears the rebel colors, and belongs to the Island of Nantucket in Massachusetts. This is the first vessel which has displayed the 13 rebellious Stripes in any British Port. The vessel lies at Horsely Down, a little below the Tower, and is intended immediately to return to New England.

Another important vessel built by Ichabod Thomas was the *Maria,* a full-rigged ship constructed in 1782. This vessel, which proved to be a very profitable ship, has a record for operating in the mercantile marine steadily for ninety years, during a good part of which she was in the whaling trade. It is said that the *Maria* was owned for some fifty-five years by Samuel Rodman, of New Bedford, and his descendants and that $250,000 stood to the vessel's credit in 1859, when she sailed from New Bedford on her twenty-seventh—and last—whaling voyage under the American flag. In 1863 the ship was operating under the Chilean flag and had been renamed *Maria Pachaco.* (This change of flag during the American Civil War was evidently prompted by the desire to avoid the risk of capture by rebel raiders.) The vessel, it is said, was "in good condition and bade fair to outlast her century" when she went ashore and was lost at Vancouver Island in 1872.

According to the information gleaned by historian L. Vernon Briggs regarding old ships built on the North River and at Scituate, the first 100-ton ship was launched in this area in 1698, a 120-ton ship in 1702, a 140-ton ship in 1765, and a 180-ton brigantine in 1772. He then records a tremendous jump in size, for the next large ship, according to his findings, was

the 400-ton ship *Massachusetts,* "built between 1780 and 1790," with nothing larger than the 163-ton ship *Britannia* being launched between 1772 and the building of the *Massachusetts* some years later. The *Superb* of 395 tons was laid down in 1794, and the next large ship built was the *Indus* of 338 tons in 1799, followed a year later by the *Harlequin* of 336 tons, in 1801 by the *Fortune* of 339 tons, and in 1805 by the *Topaz* of 385 tons. In 1811 the *Mohawk* of 407 tons was built and in 1815 the *Mount Vernon* of 464 tons. This ship remained the largest built in the territory until the brig *Empire* of 497 tons was launched into Scituate Harbor in 1848, and the final honors for size go to the bark *Eveline* of 650 tons, built also at Scituate Harbor in 1859.

During the clipper ship decade, no clippers were built on the North River, and during the national shipbuilding boom years of 1850-1854, the North River and Scituate region launched nothing more impressive than two barks, each of 300 tons register, and eighteen other smaller craft (barks, brigs, and schooners) varying from 65 to 260 tons. Following the building of Scituate's largest vessel, the bark *Eveline* of 650 tons in 1859, only nineteen more craft were built during the years 1860-1871, and all were small (from 23 to 207 tons). The last vessel built at Scituate Harbor was the schooner *Meteor* of 116 tons, launched in 1864, and the last craft constructed on the banks of the North River was the schooner *Helen M. Foster* of 90 tons, built in 1871 by Joseph Merritt at the Chittenden Yard.

The North River was truly the nursery of wood shipbuilders, who moved to Boston when bigger ships than "The River" could receive and float were in demand. It was North River-trained master builders and shipwrights who built most of the large, fast, and famous clipper ships constructed in Greater Boston—at Medford, Chelsea, East Boston, South Boston, etc.—during the clipper ship decade of 1850-1859 inclusive, and it was North River master shipwrights who established and who owned an overwhelming majority of Boston's shipyards during the period from the twenties to the seventies of the nineteenth century, which included the important building years of wood sail.

XI.

BOSTON, MASSACHUSETTS

From Early Days — Shipbuilders, Ships, and Seamen

SHIPS HAD BEEN built on the banks of the Mystic River and at Medford following the launching of Massachusetts' first vessel—the little *Blessing of the Bay*—in 1631, but building lagged in the eighteenth century. Small sloops, schooners, and similar craft, generally called "lighters," were built at the landing near Rock Hill in West Medford during the seventeenth century for use on the river and in the harbor. There is a record of the building "on the Mistick" of a small vessel for a Mr. Rhodes, of Boston, named the *Mayflower* after the craft that landed the Pilgrim Fathers on Plymouth Rock. It is also said that a brigantine of 40 tons was built at Medford in 1699 and a "ship" of 60 tons (about 65 ft. long and 15 ft. beam) in 1703. Medford, which saw the building of Massachusetts' pioneer ship, was also the section of Greater Boston to build the first sizable ships in quantity in the early years of the nineteenth century. Medford maintained its position of leadership in the Boston area until well into the fifties, when the demand for larger ships during the clipper ship decade gave East Boston the advantage because of its superior geographical location on deeper water in Boston Harbor.

In the early days of the young republic, Boston had its ships and seamen. From that port were sent out in 1788 the *Columbia,* a ship of 212 tons, and the sloop *Lady Washington* of 90 tons, commanded by Capt. John Kendrick and Capt. Robert Gray, who took them around Cape Horn to the northwest coast of America and then, after trading for cargoes of furs, went across to China. The *Columbia* returned to Boston by the way of the Cape of Good Hope and was the first vessel to carry the United States ensign around the globe. Subsequently, she discovered the majestic river that bears her name and so won the great Northwest for the flag under which she sailed. The *Massachusetts* of 600 tons, the largest merchant vessel built in America up to her time (and a sort of American attempt to copy a British East Indiaman), was launched at Quincy, Mass., in 1789 and was owned in Boston. She sailed for Canton and was sold there to the Danish East India Company for $65,000.

Ezra Weston, one of the most famous of the old-time Boston shipowners, began business in 1764 and owned his own shipyard, sail-loft, and extensive rope-walk at Duxbury, Mass., where his vessels were built and equipped. In 1798 his son Ezra became a partner, and this firm continued until the death of the father in 1822. The son then went on in his own name until 1842, when his sons (Gersham, Alden, and Ezra) were taken into the firm, and they continued it until 1858, in all some ninety-three years. The last place of business was at Nos. 37 and 38, Commercial Wharf. From the year 1800 to 1846, the Westons owned twenty-one ships ranging in tonnage from the *Hope* of 880 tons to the *Minerva* of 250 tons; one bark, the *Pallas* of 209 tons; thirty brigs, from the *Two Friends* of 240 tons to the *Federal Eagle* of 120 tons; thirty-five schooners, from the *St. Michael* of 132 tons to the *Star* of 20 tons; and ten sloops, from the *Union* of 63 tons to the *Linnet* of 50 tons. The brig *Smyrna* of 160 tons, one of the Weston fleet, built in 1825, was the first American vessel to bear the flag of the United

States into the Black Sea after it was opened to commerce. She arrived at Odessa July 17, 1830. The Weston firm was one of the most distinctive and largest shipowners of its time in the United States, and the Westons not only built but also loaded their own vessels. Their house flag was of red, white, and blue horizontal stripes.

Thatcher Magoun, "the Father of Shipbuilding on the Mystic River," and His Contemporary and Successor Builders of Medford

The Revolution suspended all shipbuilding in and around Boston, and the new century had dawned before the building of ships became an important industry on the Mystic River and in Greater Boston. Thatcher Magoun, of the North River, Mass., was the pioneer and the father of "modern" wood shipbuilding at Medford and on the Mystic River in the Greater Boston area. He was born in Pembroke, Mass., June 17, 1775. Pembroke—and the North River—was at that time a shipbuilding center of much importance, with a fine history for turning out good and well-built ships. Young Magoun served a five-year apprenticeship at Salem, Mass., with the well-known ship designer and builder, Enos Briggs, also a native of Pembroke, and gained further experience in both designing and building at Barker's yard in Charlestown, Mass., before acquiring in 1802, when twenty-seven years of age, the site for his own yard at Medford. There, in 1803, Magoun built the brig *Mount Aetna* of 188 tons—the first vessel to be built in Medford following the Revolution. When Magoun started shipbuilding operations at Medford, he made the statement: "This river [the Mystic] will float any vessel that I may build, and the neighborhood will furnish an ample supply of oak timber for many years to come." Almost from the start, however, Magoun had to go out of Medford for timber, which was procured at Malden, Woburn, Burlington, Lexington, Stoneham, Andover, and their adjoining towns. One of Magoun's first purchases was of standing trees at Winchester, for which he paid six dollars per ton, the seller to cut and deliver the timber at the Magoun shipyard. White oak plank came to Medford by the Middlesex Canal. As the mid-century approached, southern hard pine was used more and more instead of oak for planking, and the length of the planks was greatly increased. In the first decade of the nineteenth century, Boston shipbuilders were often paid a price of about twenty-five dollars per registered ton to cover the timber, planking, and woods, with labor, of a ship's completed hull; everything else required for the vessel was furnished either direct by the owner or by the builder at the owner's expense.

From 1803 to 1813, all the vessels registered as being built at Medford were constructed by Thatcher Magoun and Calvin Turner in their competitive yards. Calvin Turner was the son of Calvin Turner, a prominent and most able master shipbuilder on the North River. Young Turner, who had been trained in his father's yard, was a skilled draftsman and ship designer as well as a talented practical builder. He was in partnership with Briggs—C. Turner & E. Briggs—during 1804-1807 and himself ran the yard (located in what later became known as the Samuel Lapham yard) until 1816, when he built his last ship, the *Telegraph* of 391 tons, for the Appletons, of Boston. Calvin Turner constructed more full-rigged ships than Thatcher Magoun and averaged a somewhat higher tonnage per vessel during this early period. The following table is a comparative summary of the building activities at the Magoun yard and Turner yard at Medford during the period 1803-1813 inclusive, the type and size of vessels being stated:

BUILT BY THATCHER MAGOUN

No. of Vessels	Type of Vessels	Registered Tonnage Total	Registered Tonnage Average per Vessel
4	Ships	1,393	348
16	Brigs	3,166	198
0	Schooners	—	—
Total— 20	All vessels	4,559	228

Largest Vessels Built by Magoun

A. Three-masted Ships

Year	Name	Tonnage	Owner
1810	SACHEM	397	John Holland
1812	EMILY	361	Andrew Scott*
1805	ECLIPSE	343	Thos. H. Perkins

B. Brigs

Year	Name	Tonnage	Owner
1808	REAPER	285	Andrew Cabot
1809	GIPSY	283	Joseph Lee, Jr.
1806	GULLIVER	248	Joseph Lee, Jr.

*All the thirty-nine vessels were owned in Boston except the EMILY, which was owned in New York.

BUILT BY CALVIN TURNER (and C. Turner & E. Briggs)

No. of Vessels	Type of Vessels	Registered Tonnage Total	Registered Tonnage Average per Vessel
10	Ships	3,427	343
5	Brigs	1,201	240
4	Schooners	417	104
Total— 19	All vessels	5,045	265

Largest Vessels Built by Turner

A. Three-masted Ships

Year	Name	Tonnage	Owner
1810	MARY & FRANCES	439	Nathaniel Goddard
1810	CORDELIA	426	P. P. Pope
1811	MARCELLUS	385	C. D. Coolidge

B. Brigs

Year	Name	Tonnage	Owner
1813	RAMBLER II**	318	Benjamin Rich
1812	RAMBLER I	268	Benjamin Rich
1811	DOLPHIN	236	Edward Cruft

**A privateer built for use in the War of 1812 with Britain.

It is said that in 1815 Calvin Turner built the brig *Avon* of 388 tons in twenty-six working days and, in 1813-1814, constructed the *Rambler* of 318 tons and the *Reindeer* of 382 tons, each in thirty-six days; this probably covers the time of construction of the wood hull from the laying of the keel to the launching. These three brigs were built with the utmost dispatch for Benjamin Rich et al., Boston, for use as privateers. During 1815, Thatcher Magoun built "the big and fast" brig *Panther* of 430 tons; this was the largest vessel, following the *Mary & Frances* of 438.9 tons (built by C. Turner & E. Briggs in 1810), to be launched at Medford prior to 1832. In that year Magoun built the ship *Trenton* of 441 tons for the Liverpool Packet Company, of Boston, Mass. The following transatlantic sailing packets were built by Thatcher Magoun for the Liverpool Packet Company:

Year Built	Name	Tonnage	Year Built	Name	Tonnage
1828	BOSTON I	428	1832	TRENTON	441
1828	LIVERPOOL	429½	1832	LOWELL	430
1832	BOSTON II	426	1833	PLYMOUTH	440

This Boston transatlantic packet line, which, apparently, owned eight ships, had to abandon the enterprise after about five years of unprofitable operation. It is said that owing to the inability of Boston to attract large shipments of foodstuffs from the West, its packet ships found it difficult to get paying freight for England without going to the South for cotton, "which, of course, precluded their building up a passenger business." Evidently, New York was geographically well situated and had become well entrenched as the American port for transatlantic packet lines to England and France.

In 1822, Thatcher Magoun built the *Topaz* of 363 tons for William Appleton et al., Boston, who had organized the Boston and Liverpool Packet Company in 1821. The Appleton

syndicate also acquired the famous *Emerald* of 359 tons, built by John Wade, Boston, in 1822, the *Sapphire* of 366 tons, built by E. & H. Rogers, Medford, Mass., in 1825, and the *Amethyst* of 359 tons, built in Boston in 1823. All these "jewel packets" measured about 110 ft. long and 27 ft. beam, but the line proved unsuccessful and the packets drifted into other channels of trade. The Cunard Line, operating with heavy British subsidies, opened a steam packet line to Boston in 1840, and a few years later (1844) Enoch Train made a last attempt to run an American sailing packet line between Boston and Liverpool. The Train line was evidently regarded by Bostonians with mixed emotions. It could not compete with steam packets fostered by the British Government, and in an effort to make the line pay, Train frequently, on "sailing day," sent a packet to a southern port to load cotton for Liverpool instead of sailing her direct for the English port with passengers and freight as advertised. Thatcher Magoun built several ships at Medford for Enoch and Samuel Train before Enoch Train became financially interested in Donald McKay and his East Boston yard. Among these ships were the *Kremlin* (350 tons) and *St. Petersburg* (828 tons), built in 1839, the *Governor Davis* (731 tons), launched in 1841, and the *Dorchester* (415 tons), constructed in 1842. In 1844, Donald McKay and William Pickett built at Newburyport the *Joshua Bates* of 620 tons (length 143 ft., beam 31 ft.) for Train & Company. McKay built ships for Train during a period of about ten years, but Train ran into serious financial troubles in the early fifties as did James Baines a few years later—McKay's second and last "good angel."

In 1817 the ship *Falcon,* when launched from the Thatcher Magoun yard, was said to be "remarkable for being the first vessel built and launched in Medford without a daily allowance of ardent spirits to the ship carpenters." We read, however, that the vessel was "profanely christened with Medford rum." In 1820 two brigs of 162 tons each, the *Tamahourelaune* and the *Jones,* were constructed by Magoun for Josiah Marshall. After all the parts were fitted, they were taken down, clearly marked, transported to Boston, and shipped on board the *Thaddeus* for final erection and launching at the Sandwich Islands.

No ships measuring 500 tons or over were built at any Medford, Mass., yard prior to 1834; but in that year the *Franconia* of 510 tons was built by Jotham Stetson, the *Eli Whitney* of 548 tons by Sprague & James, and the *Luconia* of 550 tons by Curtis & Company in the Thatcher Magoun shipyard. Magoun continued to build until 1836, and his yard, with other firms constructing therein, carried on operations at Medford well past mid-century and the clipper ship era. Calvin Turner built in what became known as the Lapham yard until 1816, but the yard continued to launch ships up to and throughout the clipper ship boom. Rogers was the builder in 1822-1825, followed by George Fuller in 1829 and Samuel Lapham. One of the earliest comers to Medford connected with the shipbuilding industry was George Bryant Lapham, a capable and highly esteemed man.

Much has been written of the size of American-built sailing ships in the late seventeen and early eighteen hundreds, but we get a very definite line on what a young progressive shipbuilder considered a big ship at the turn of the century when Thatcher Magoun located his Medford yard and said that there was ample timber for building and water for launching any vessel that he might build. Magoun personally operated his entire yard from 1802 until 1834, and during this period of thirty-two years the largest ships that he built were the *Jessore* of 461 tons and the *Archimedes* of 452 tons. In the fall of 1834, Magoun leased part of his yard to Curtis & Company, which built the ship *Luconia* of 550 tons for D. C. Bacon, of Boston. In 1835, Magoun built the ships *Molo* of 492 tons and *Levant* of 480 tons, and Curtis & Company constructed in the same yard the ship *Denmark* of 550 tons. The following year (1836) Thatcher Magoun—then sixty-one years of age—personally designed and constructed his last and his largest ship, the *Deucalion* of 509 tons, built to the order of his firm of Boston shipowners and operators, T. Magoun & Son. During that year, P. & J. O. Curtis built the ships *Parthenon* (550 tons) and *Claudius* (527 tons), and F. Waterman & H. Ewell built the ship *Eben Preble* (530 tons) and two brigs of 270 and 240 tons, respectively, in the Magoun yard.

Among the famous ships owned and operated by the firm of T. Magoun & Son, of Boston, were the clipper ships *Electric Spark* of 1,216 tons (built in 1855 and lost on the Irish coast in 1869), *Thatcher Magoun* of 1,248 tons (built in 1856 and sold to the Norwegians in 1874), and the extremely fast ship *Witchcraft* of 1,310 tons (designed by Pook and built by Paul Curtis, Chelsea, in 1850), which was purchased in March 1854 and lost off Hatteras April 8, 1861.

P. & J. O. Curtis and Waterman & Ewell, as two separate operating partnerships, leased the Magoun shipyard during the years 1837-1839 inclusive, when Paul and J. O. Curtis acquired a yard of their own at Medford. Almost immediately thereafter, Paul Curtis separated from J. O. Curtis. Paul built his last ship at Medford, the *Beverly* of 676 tons, in 1852, and feeling that he wanted "more room and water to build bigger ships," he constructed vessels during the clipper ship decade in Chelsea and East Boston. J. O. Curtis continued to operate his Medford yard and in the decade 1840-1849 inclusive launched twenty-nine ships, the largest being the *William Sturgis* of 700 tons, built in 1849. During the same years, Paul Curtis launched twenty-one ships at his Medford yard; they averaged a much greater tonnage than the vessels built by J. O. Curtis. None was small, and several were of 800 tons and over, the largest being the ship *Independence* of 864 tons, constructed in 1847 for A. Hemenway, of Boston.

During the years 1840-1845, the Thatcher Magoun shipyard was leased by F. Waterman and H. Ewell, who in this six-year period built thirty-four vessels, the largest being the ship *Taglioni* of 800 tons, launched in 1840 for W. H. Boardman, of Boston. In 1846, H. Ewell operated the Magoun yard alone and built the ship *Supply* of 547 tons, one bark of 304 tons, three brigs of from 150 to 190 tons, and a schooner of 100 tons. The following year (1847) both Hayden & Cudworth and H. Ewell used the Magoun yard and together built four ships (two each) of from 572 to 621 tons. From 1848 on, Hayden & Cudworth leased the yard alone, and when this firm launched the clipper *Rambler* of 1,119 tons in 1854 at the commencement of the end of the shipbuilding boom, she was its Hull No. 31—all built at the Thatcher Magoun yard at Medford. Following the *Rambler,* Hayden & Cudworth built six more clippers at the Magoun yard, making nineteen clippers in all launched during the years 1850-1856 inclusive. It is significant that the last clipper built at the old Magoun shipyard at Medford was the *Thatcher Magoun* of 1,248 tons, built by Hayden & Cudworth for T. Magoun & Son, of Boston, in 1856—the year Thatcher Magoun died at the age of eighty-one. (In 1851, B. F. Delano built two ships at the Magoun yard for W. W. Goddard, of Boston, and in 1854 the pilot boat *William H. Starkey.*) The biggest vessels built at the Thatcher Magoun shipyard at Medford were the clipper ship *Herald of the Morning* of 1,294 tons and the *Kingfisher* of 1,286 tons, launched by Hayden & Cudworth in 1853. The largest ship built at Medford was the *Ocean Express* of 1,697 tons, constructed by J. O. Curtis in 1854.

Thatcher Magoun has been called "the Father of Shipbuilding on the Mystic River," and in Brooks's HISTORY OF MEDFORD we read that in 1802 this great man laid the first keel of that fleet of ocean merchant ships, numbering in the next half-century 175 built at that yard alone, "whose sails have whitened every sea and bay on the navigable globe." Many more ships were launched from the Magoun yard, including eleven in 1853-1854, before it went permanently out of business, at a much later date, because of the decline of wood shipbuilding in Boston and environs. Charles Brooks further wrote in 1855 of the Mystic River and Medford:

> Where can a little river be found that will afford convenient sites for ten large ship-yards within one mile's distance? When, in one of these yards, we have seen from one to three vessels on the stocks at the same time, and have listened to that well-known, busy hum that comes from the boring of augers, the cutting of saws, and the driving of bolts, we have felt that a more glorious exhibition of human industry could nowhere be witnessed. To the gentlemen who have been at the head of this great enterprise, Medford is deeply indebted. . . . The names of Magoun, Turner, Lapham, Sprague, James, Fuller, Rogers, Stetson, Waterman, Ewell, Curtis, Foster, and Taylor will be held in grateful remembrance for many generations.

A. R. Baker published in 1846 a register of vessels built in Medford. Brooks extended the list to the end of 1854 and said:

> From this register, it appears that five hundred and thirteen vessels have been built in Medford between the beginning of the present century [nineteenth] and the year 1855, with an aggregate of two hundred and thirty-two thousand two hundred and six tons [old measurement]; and at a cost, of . . . ten millions four hundred and forty-nine thousand two hundred and seventy dollars [based on $45 per ton for hull, spars, and rigging complete]. The greatest number constructed in any one yard is one hundred and eighty-five; and, in any single year, thirty in 1845 [aggregating 9,712 tons with a value of about half a million dollars]. . . . In the five years preceding April 1, 1837, sixty vessels were built in this town [Medford], which employed two hundred thirty-nine workmen, and of which the measurement was twenty-four thousand one hundred and ninety-five tons, and the value one million one hundred and twelve thousand nine hundred and seventy dollars. All the vessels constructed in the county [during this period], except eleven, were built at Medford. The value of these sixty ships was about one-sixth of all the shipping built in the Commonwealth during the same period. In the year preceding April 1, 1845, twenty-four ships were launched in Medford. . . . In that year, one-quarter of the [one thousand] shipbuilders in the Commonwealth were employed in this town, and built nearly one-quarter of the ships constructed in the State, one-third of the [total] tonnage, and one-half of the value of the whole.

In the forties, Medford led the East Coast in building fast vessels for the China trade, and the firm of Waterman & Ewell, from its Medford (Thatcher Magoun) yard, launched in 1842 the important *Paul Jones* of 624 tons, built for Forbes, of Boston, and Russell & Company, of China. The famous Capt. "Nat" Palmer was in command on her first voyage. Paul Curtis built the *John Quincy Adams* (622 tons) in 1844; Hayden & Cudworth, the *Anstiss* (595 tons) for William S. Wetmore, of New York, in 1847; Jotham Stetson, the fast *Probus* (647 tons) in 1841 and the *Living Age* (727 tons) in 1848; and Samuel Lapham, the *Argonaut* (575 tons) in 1849. None of these vessels were clippers, although they have been described as such; they were, however, as Carl C. Cutler says, "exceptionally fine, heavily sparred, burdensome craft, capable of making better passages than the great majority of ships of their time."

Among the many fast wood sailers built in the Boston, Mass., area in the quarter-century which preceded the clipper ship era, or decade (1850-1859), can be mentioned the following:

Year Built	Name and Tonnage	Builder	Owner
1824	JOHN GILPIN (brig; 248 tons)	Rogers, Medford	Stephen Glover, Boston
1825	PILGRIM (brig; 181 tons)	Sprague & James, Medford	Joshua Blake, Boston
1825	TRESCOTT (341 tons)	T. Magoun, Medford	A. M. Lawrence, New York
1830	EQUATOR (398 tons)	Charlestown	R. and S. Glover, New York and Boston
1833	SAMARANG (378 tons)	Boston	Brigham and Abbott, New York
1834	GENTOO (435 tons)	Holmes, Boston	Daniel C. Bacon, Boston
1834	ASIA (475 tons)	Leavitt, Boston	Wheelright, Boston
1837	SEVERN (573 tons)	Sprague & James, Medford	Josiah Macy et al., New York
1839	VERNON (bark; 304 tons)	Magoun yard, Medford	John Russell, Plymouth
1839	AKBAR (643 tons)	S. Hall, East Boston	Forbes, Cabot, et al., Boston
1839	CINCINNATI (608 tons)	J. Curtis, Medford	Lombard et al., Boston

(Continued on next page)

Year Built	Name and Tonnage	Builder	Owner
1841	PROBUS (647 tons)	J. Stetson, Medford	Parker, Boston
1842	PAUL JONES (624 tons)	Magoun yard, Medford	Bacon and Forbes, Boston
1844	HEBER (434 tons)	Magoun yard, Medford	Bacon, Boston
1844	THOMAS B. WALES (599 tons)	Magoun yard, Medford	Wales & Co., Boston
1844	COQUETTE (bark; 457 tons)	S. Hall, East Boston	Russell & Co., Canton
1844	JOHN QUINCY ADAMS (622 tons)	P. Curtis, Medford	Parker, Boston
1845	CORSAIR (301 tons)	J. Stetson, Medford	Wheeler & Adams, Boston
1846	SAXONVILLE (422 tons)	J. Taylor, Medford	Francis, Boston
1847	URIEL (799 tons)	W. Hall, Boston	Page, Crocker, Waldron et al., Boston
1847	ANSTISS (595 tons)	Hayden & Cudworth, Medford	Wetmore, New York
1847	HORSBURGH (543 tons)	Hayden & Cudworth, Medford	Bacon, Boston
1848	ABAELLINO (606 tons)	J. T. Foster, Medford	Tirrell, Boston
1848	LIVING AGE (727 tons)	J. Stetson, Medford	Peters, Boston
1848	JENNY LIND (533 tons)	McKay, East Boston	Fairbanks and Wheeler, Boston
1849	LANTAO (593 tons)	S. Hall, East Boston	Spooner, Boston
1849	HAZARD (bark; 404 tons)	S. Hall, East Boston	Gardner, Salem
1849	SAMUEL APPLETON (781 tons)	P. Curtis, Medford	Parker, Boston
1849	ARGONAUT (575 tons)	S. Lapham, Medford	Lodge, Boston
1849	REINDEER (800 tons)	McKay, East Boston	Forbes, Upton, et al., Boston

Boston-built Regular Line Transatlantic and Coastal Packets

Boston built, all told, only four ocean, or transatlantic, and two coastal sailing packets for regular lines operating on schedule out of the port of New York, and of these six ships, only one, the *Robert Fulton,* saw service in early packet days. It is significant and shows the trend of movement of shipbuilding east in the fifth and sixth decades of the nineteenth century that three of the four Boston-built New York transatlantic sailing packets were constructed in 1846-1850, and these vessels were in service when the lines ceased operations in 1880-1881.

The packet *Plymouth Rock* was built for Upton, Boston, and saw service in Train's Boston-Liverpool line before being sold to the London Red Swallowtail Line. The two Boston-built New York coastal sailing packets were built at Medford (1838-1840) for J. Macy & Son, New York, and the Louisiana & N.Y. Line. The following table is a comparative statement showing the dimensions, various particulars, and performance records of the Boston-built regular line packets sailing on schedule out of the port of New York.

Name and Year Built	Builder	Tonnage	Registered Dimensions in Feet			Line	Yrs. in Service	Time of Westbound Passages in Days		
			Length	Beam	Depth			Average	Best	Slowest
Transatlantic Packets										
ROBERT FULTON (1818)	Brooks, Boston	340	103.3	27.2	13.6	Blue Swallowtail, Liverpool	1822-1824	44	37	60
NEW WORLD (1846)	McKay, East Boston	1,404	187	40.5	28	Blue Swallowtail, Liverpool	1846-1880	31	18	42
PLYMOUTH ROCK (1849)	McKay, East Boston	973	174	34.7	22.5	Red Swallowtail, London	1856-1880	—	22	50
CORNELIUS GRINNELL (1850)	McKay, East Boston	1,117	182	36.4	23.5	Red Swallowtail, London	1850-1881	33	24	48
Coastal Packets										
CLIFTON (1838)	Sprague & James, Medford	599	140	33.6	15.3	New Orleans	1845-1860	16.9	12	25
OSWEGO (1840)	Waterman & Ewell at Magoun's yard, Medford	647	154.3	31.2	15.3	New Orleans	1845-1852	20.8	12	33

A Record of Vessels Launched at Medford, 1803-1873 Inclusive

The following tables give a recapitulation of all the vessels launched at Medford (Boston), Mass., during the building years 1803-1873 inclusive, divided—following the year 1809—into five-year periods, with the final year 1873 added. (There was no construction during the years 1870, 1871, and 1872.) The number and total tonnage, also the average tonnage, of each type of vessel for each period are set forth. It will be noted that full square-rigged ships increased in relative numbers and importance, with the years, up to the height of the clipper ship boom in 1853; that barks became very popular prior to the California Gold Rush; and that no brigs or schooners were built in the clipper ship years 1850-1854. Only nine steamers were constructed during the last twenty-four years of wood shipbuilding at Medford, which represents 6.5 per cent of the total vessels built during and after 1850, 9.1 per cent of the number of full-rigged ships, and 8.2 per cent of the number of three-masted square-riggers (ships and barks) built during this period.

Years	Number of Vessels: Ships	Barks	Brigs	Schooners	Sloops	Total Sail	Steamers	Total All Vessels	Registered Tonnage: Ships	Barks	Brigs	Schooners	Sloops	Total Sail	Steamers	Total All Vessels
1803-1809	6	—	9	1	—	16	—	16	1,879.8	—	1,988.4	100.0	—	3,968.2	—	3,968.2
1810-1814	8	—	14	3	—	25	—	25	2,939.3	—	2,905.7	318.4	—	6,163.4	—	6,163.4
1815-1819	12	—	20	1	2	35	—	35	4,074.9	—	4,735.2	40.0	136	8,986.1	—	8,986.1
1820-1824	12	—	21	3	—	36	2	38	4,176.0	—	4,262.7	254.0	—	8,692.7	186.0	8,878.7
1825-1829	23	—	11	3	—	37	—	37	7,803.5	—	2,357.0	190.0	—	10,350.5	—	10,350.5
1830-1834	40	2	7	—	—	49	—	49	16,436.0	638.0	1,621.0	—	—	18,695.0	—	18,695.0
1835-1839	48	4	4	1	1	58	—	58	25,423.0	1,232.0	866.0	35.0	75	27,631.0	—	27,631.0
1840-1844	48	17	1	4	—	70	1	71	27,118.0	5,056.0	142.0	459.0	—	32,775.0	269.0	33,044.0
1845-1849	53	29	8	12	—	102	—	102	34,551.5	9,543.0	1,343.0	1,562.0	—	46,999.5	—	46,999.5
1850-1854	62	13	—	2	—	77	5	82	60,213.0	4,522.0	—	163.0	—	64,898.0	2,580.0	67,478.0
1855-1859	18*	8	—	1	—	27	1	28	17,438.0	3,341.0	—	283.0	—	21,062.0	858.0†	21,920.0
1860-1864	12	3	—	—	—	15	3	18	10,632.0	1,523.0	—	—	—	12,155.0	2,670.0†	14,825.0
1865-1869	6*	—	3	—	—	9	—	9	6,190.0	611.0	978.0	—	—	7,779.0	—	7,779.0
1873	1*	—	—	—	—	1	—	1	956.0	—	—	—	—	956.0	—	956.0
Total 1803-1873 (73 years)	349	76	98	31	3	557	12	569	219,831.0	26,466.0	21,199.0	3,404.4	211	271,111.4	6,563.0	277,674.4

*Five of these ships later re-rigged as barks.

†Two screw steamers aggregating 1,276 tons sold to U.S. Government during Civil War; one, the YOUNG ROVER, was built as an auxiliary bark for the East Indian trade.

The Number and Total Registered Tonnage of Each Type of Vessel Built at Medford (Boston), Mass., during the Shipbuilding Years 1803-1873 Inclusive Expressed as a Percentage of the Total Number and Aggregate Registered Tonnage of All Vessels Built

Number of Vessels		Registered Tonnage	
Type of Vessel	Percentage of Total	Type of Vessel	Percentage of Total
Ships	61.33	Ships	79.14
Barks	13.36	Barks	9.59
Brigs	17.22	Brigs	7.62
Total square-riggers	91.91	Total square-riggers	96.35
Schooners	5.45	Schooners	1.22
Sloops	0.53	Sloops	0.08
Total sailing vessels	97.89	Total sailing vessels	97.65
Steamers	2.11	Steamers	2.35
Total all vessels	100.00	Total all vessels	100.00

Average Size of Medford-built Vessels of Each Type for Periods as Set Forth Below Covering the Construction Years of 1803-1873 Inclusive

	Average Tonnage of Each Type of Vessel						
Years	Ships	Barks	Brigs	Schooners	Sloops	Steamers	Average of All Vessels
1803-1809	313.3	—	220.9	100.0	—	—	248.0
1810-1814	367.4	—	207.5	106.1	—	—	246.5
1815-1819	339.6	—	236.8	40.0	68.0	—	256.7
1820-1824	348.0	—	203.0	84.0	—	93.0	233.6
1825-1829	339.3	—	214.3	66.3	—	—	279.7
1830-1834	410.9	319.0	231.6	—	—	—	381.5
1835-1839	529.6	308.0	216.5	35.0	75.0	—	476.4
1840-1844	564.9	297.4	142.0	114.7	—	269.0	465.4
1845-1849	651.9	329.1	167.8	130.1	—	—	460.8
1850-1854	971.2	347.8	—	81.5	—	516.0	822.9
1855-1859	968.8	417.6	—	283.0	—	858.0	782.9
1860-1864	886.0	507.7	—	—	—	890.0	823.6
1865-1869	1,031.7	—	326.0	—	—	—	864.3
1873	956.0	—	—	—	—	—	956.0
Average 1803-1873 (73 years)	629.9	348.2	216.3	109.8	70.3	546.9	488.0

The largest ship launched at Medford was the Cape Horn clipper *Ocean Express* (1,697 tons), built by J. O. Curtis in 1854. The last real clipper constructed for the California run was the *Flying Mist* (1,183 tons), launched by J. O. Curtis in 1856; but the ship *Industry* (1,106 tons), built in 1858, also by J. O. Curtis, made a run around the Horn to San Francisco and was classed as a medium clipper. Of the thirty-seven full-rigged ships built at Medford during 1855 and thereafter, twelve were classified as clippers and probably only six rightly so; i.e., the *Sancho Panza* (876 tons), built by Samuel Lapham, the *Electric Spark* (1,216 tons), *Goddess* (1,126 tons) and *Thatcher Magoun* (1,248 tons), built by Hayden & Cudworth, all in 1855, and the *Flying Mist* (1,183 tons), launched by J. O. Curtis in 1856. The *Good Hope* (1,295 tons), *Silver Star* (1,195 tons), *Wild Gazelle* (490 tons), and *Industry* (1,106 tons), built by J. O. Curtis, and the *Hesperus* (1,020 tons) and *Templar*

(946 tons), built by J. T. Foster, during the years 1855-1858 inclusive, whereas described as clippers and medium clippers, had a model fullness and spar plan that would seem to place them in the class of half clippers, or rather sharp-modeled general trading ships. Most of the later ships built at Medford were constructed for the Indian and oriental (or East Indian) trade, and the names of many of them are significant: *Mogul* (798 tons), *Punjaub* (780 tons), *Agra* (951 tons), *Tanjore* (907 tons), *Cashmere* (936 tons), etc.

Historians of Medford have recorded the following data in regard to the shipyards of that town, which flourished as Boston's most important shipbuilding center in the first half of the nineteenth century and continued building deep-sea square-rigged ships until 1873—or four years after Donald McKay launched his last deep-sea sailer at East Boston:

1. *Thatcher Magoun yard* (on Riverside Avenue, opposite the end of Park Street): Medford's first shipyard; established 1803. Afterwards used by Curtis & Company, Paul Curtis, James O. Curtis, Waterman & Ewell, B. F. Delano, and Hayden & Cudworth. One hundred ninety-three vessels were built at this yard.

2. *Sprague & James yard* (foot of Foster's Court, off Riverside Avenue): Established 1816. Afterwards used by John Taylor, Foster & Taylor, and Joshua T. Foster. The last yard to build a square-rigged or deep-sea ship at Medford. One hundred thirty-three vessels were built at this yard.

3. *James O. Curtis yard* (off Swan Street, later site of city stables): Established 1839. Used steadily by J. O. Curtis until launching of ship *Cashmere* (936 tons) in 1869. (B. F. Delano built one small vessel here in 1854.) Seventy-eight vessels were built at this yard.

4. *Turner & Briggs yard* (on Riverside Avenue, opposite end of Cross Street): Established 1804. Later used by Calvin Turner, E. & H. Rogers, Samuel Lapham, and George Fuller. Sixty vessels were built at this yard.

5. *Jotham Stetson yard* (on South Street, just above Winthrop Street bridge): Established 1833. Jotham Stetson built thirty-two vessels here during years 1833-1853 inclusive, and Luther Turner built a 387-ton bark in this yard in 1854. Thirty-three vessels were built at this yard.

6. *James Ford yard* (on South Street, opposite end of Walnut Street): Established 1815. Afterwards used by George Fuller. Twenty-nine vessels were built at this yard.

7. *Paul Curtis yard* (on South Street, at the end of Curtis Street): Established 1839 and operated by Paul Curtis until he removed his business to East Boston in 1852. Twenty-seven vessels were built at this yard.

Other relatively unimportant yards were in operation at times, but the number and tonnage of the vessels built were small.

It has been said that Medford, Mass., originated the type of American square-rigged three-masted sailing ship that became known as the "Down Easter"; but this is not correct, as the vessel claimed to be the pioneer of the type that rose to great prominence after the Civil War was the "stout little general trader" *Paul Jones,* built in 1842. This ship was described as "a full-built carrier" of 624 tons intended for the oriental trade. She was built by Waterman & Ewell for John M. Forbes and the Boston, Mass., and Canton, China, firm of Russell & Company. She was intended to be "a smart sailer" and a profitable ship to operate in carrying good paying cargoes and in making reasonably fast passages in the pre-clipper days before "speed was king" and before the discovery of gold in California and the development of the Cape Horn California trade. In 1843 the *Paul Jones* left Boston on January 15 on her maiden voyage for China. She crossed the equator 26½ days out, rounded the Cape of Good Hope 54 days out, reached the Straits of Sunda on April 10, 88 days out, and arrived at Hong Kong after a passage of 111 days, having logged 13,289 miles, or an average of 120½ miles a day, with an average speed of over 5 knots per hour on the entire passage. On her run home completing the maiden voyage, the *Paul Jones* was 75 days from Anjer to New York, where she arrived August 1, 1843. Her best day's run in the southeast trades was 266 miles, an average speed of 11.1 knots per hour. She crossed the equator 88 days out and reached New York January 18, 1845, after a passage of 113 days from China. Her average speed for this homeward passage was said to be 5.7 knots per hour.

The *Paul Jones* is reported to have left New York October 13, 1847; she crossed the line 31 days out, rounded the Cape of Good Hope 57 days out, passed St. Paul's Island on December 22, 70 days out, was off Sandalwood Island on January 7, 1848, 86 days out, and

anchored at Hong Kong February 4 after a passage of 113 days. On this voyage, the mileage stated by log was 16,554 nautical miles, which gives an average mileage covered per day of 146½ and an average speed of 6.1 knots per hour. The best day's run was 252 miles, which gives an average speed of 10½ knots per hour, and the vessel was reported as covering 2,145 nautical miles in ten consecutive days, which gives an average speed for this period of 8.94 knots per hour. Returning, the *Paul Jones* sailed from the Canton River on March 2, 1848. She is reported to have cleared the Straits of Sunda April 5 and was off Cape Horn 32 days from Java Head. Her best day's run in the trades was 253 miles, which gives an average speed for the day of 10.54 knots per hour. She reached New York on June 20, 110 days from Canton and only 76 days from Anjer. The round voyage showed an average speed of about 5.8 knots per hour for 223 days while traveling about 31,000 nautical miles.

The *Paul Jones* was described by contemporaries as "a beautiful white-painted craft with five yards on each mast." She was said to have "a moderate sail plan" and to be "economical to operate." In the early 1850's, this moderately fast, good-carrying little vessel was evidently driven into obscurity on the world's important trade routes by the fast clippers. Unlike the fast clippers, however, her career was not very brief, for she continued to operate in the fifties, sixties, and seventies, and she was steadily employed in trade for forty-five years, until she was lost by fire leaving Melbourne and had to be abandoned off the Otway. The fire was said to be of incendiary origin, having been set by a shanghaied crew. The *Paul Jones* was too small a vessel for long-distance ocean trading in the sixties, seventies, and eighties and too small for the Cape Horn run; nevertheless, she made a record of service superior to that of any of the more spectacular clippers, even though in the 1850's the *Paul Jones* was branded as "an old-fashioned sailing craft."

A Record of Shipbuilding at East Boston, with the Vessels and Tonnage Constructed by Each Important Builder, 1835-1858

Arthur H. Clark, in THE CLIPPER SHIP ERA, writes that after the War of 1812, the merchants of Boston built or bought most of their vessels at Medford, Newburyport, Salem, Scituate, and Duxbury, within the state, and at Portsmouth, N.H., and other ports where timber was more plentiful. He continues:

> It was not until 1834, when the East Boston Timber Company was incorporated by James Paige, Francis Oliver, and Gideon Barstow, that shipbuilding began to flourish [in Boston proper]. Stephen White was the moving spirit in this transaction, as in 1833 he had bought on behalf of himself and associates, eighty thousand feet of land in East Boston, between Border and Liverpool streets, at three cents per foot, for the establishment of a timber yard and dock. Mr. White also purchased Grand Island, in the Niagara River, which was covered with valuable timber. Sawmills were erected on the island, and a supply of the finest quality of ship timber was created, and brought by the Erie Canal to tidewater; thence by coasting vessels to East Boston. This attracted ship-builders from other towns, and eventually made Boston a famous ship-building centre. . . .
>
> The first Boston ferry-boats, the *East Boston, Essex,* and *Maverick,* were built at East Boston in 1834-35, but nothing further was done in shipbuilding there until 1839, when Samuel Hall, a well-known builder of Marshfield and Duxbury, removed to East Boston and established a yard at the west end of Maverick Street.

From around mid-century to the close of the wood shipbuilding days, East Boston, because of its location, accessibility, and facilities, became more and more the greatest shipbuilding center in the Greater Boston area. East Boston had land area for building and water for

launching and floating at all stages of construction the vessels of constantly increasing size that trade development demanded. It reached the height of its fame in 1854, when it launched twenty-nine ships aggregating 38,627 registered tons; but East Boston was the unquestioned leader of large wood ship construction in the Boston area from 1850 or 1851 to the end of the era of merchant wood sail and, during the four-year period 1853-1856 inclusive, constructed ninety-three vessels totaling 115,870 tons—an average of twenty-three vessels of 28,967 aggregate tons per year. Eighty-four per cent of the number of vessels and over 95 per cent of the tonnage built during these four years were full-rigged ships (including the four-masted ship-entine *Great Republic*), and over 94.7 per cent of the number of vessels and 99.3 per cent of the aggregate tonnage were ships and barks, all with at least two masts square-rigged.

The following table gives a record of the vessels built at East Boston during 1835-1858 inclusive—a period of twenty-four years.

	Number of Vessels						Tonnage of Vessels					
Year	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total
1835	1	—	—	—	—	1	458	—	—	—	—	458
1839	1	—	—	1	—	2	642	—	—	99	—	741
1840	1	1	—	—	—	2	373	353	—	—	—	726
1841	2	1	—	—	—	3	945	188	—	—	—	1,133
1842	—	1	—	3	—	4	—	198	—	336	—	534
1843	—	1	—	2	—	3	—	372	—	170	—	542
1844	1	3	—	1	—	5	360	1,183	—	186	—	1,729
1845	1	1	1	3	1	7	751	269	126	344	750	2,240
1846	2	1	1	3	—	7	2,298	229	191	322	—	3,040
1847	5	1	—	2	—	8	3,907	267	—	307	—	4,481
1848	2	—	2	2	—	6	1,429	—	365	134	—	1,928
1849	4	5	—	2	—	11	3,362	1,405	—	160	—	4,927
1850	8	2	1	1	—	12	9,516	965	153	82	—	10,716
1851	9	2	—	—	—	11	11,943	873	—	—	—	12,816
1852	11	1	2	—	—	14	15,094	432	375	—	—	15,901
1853	18	2	—	—	—	20	31,230	708	—	—	—	31,938
1854	25	2	—	2	—	29	37,350	976	—	301	—	38,627
1855	13	4	—	1	1	19	16,220	1,726	—	93	140	18,179
1856	22	2	—	1	—	25	25,748	1,098	—	280	—	27,126
1857	8	4	—	5	1	18	7,459	2,008	—	790	57	10,314
1858	4	—	—	—	1	5	4,502	—	—	—	816	5,318
Total 1835-1858	138	34	7	29	4	212	173,587	13,250	1,210	3,604	1,763	193,414

The following table shows the percentage of the number and the total tonnage of each type of vessel to the aggregate number and tonnage of the vessels of all types (also the average tonnage of each type) built at East Boston during the period 1839-1858 inclusive:

Type of Vessel	Number	Percentage of Total Number	Tonnage	Percentage of Total Tonnage	Average Tonnage
Ships	138	65.1	173,587	89.8	1,258
Barks	34	16.0	13,250	6.8	390
Brigs	7	3.3	1,210	0.6	173
Schooners	29	13.7	3,604	1.9	124
Steamers	4	1.9	1,763	0.9	441
Total	212	100.0	193,414	100.0	912

The most important builders of ships at East Boston, Mass., during the period of 1835-1858 inclusive, which carries through the clipper shipbuilding era, the California Gold Rush, and the national shipping boom of 1850-1854 and to the depression and panic of 1857-1858, were as follows:

Name of Builder	Year Commenced Building	Vessels Built up to and Including 1858		
		Number	Tonnage	Average Tonnage per Vessel
Donald McKay	1845	49	68,978	1,407
Samuel Hall	1839	53	30,186	570
Paul Curtis	1852	22	26,954	1,225
Robert E. Jackson	1853	15	15,014	1,001
Jackson & Ewell	1850	7	10,064	1,438
Daniel D. Kelly	1848	12	6,903	575
Hugh R. McKay	1854	6	6,707	1,118
G. & T. Boole	1854	5	6,522	1,304
A. & G. T. Sampson	1849	7	4,743	678
Jarvis (or Jairus) Pratt and Pratt & Osgood	1850	5	4,068	814
William Hall & Co.	1854	4	3,403	851

The total tonnage of the above-stated eleven largest East Boston builders is 183,542 tons, or 94.4 per cent of the aggregate tonnage built in that district during the years 1835-1858 inclusive. The other builders—eighteen of them—launched, during that time, 9,872 tons all told, or only 5.6 per cent of the total tonnage constructed in East Boston during the period. All of these builders of a relatively small output in the years mentioned were not "small" builders; neither were their ships small. The prominent firm of E. & H. O. Briggs built the *Joseph Peabody* of 1,198 tons in East Boston in 1856 for Curtis & Peabody, Boston. C. F. & H. D. Gardner built two ships, the *Cashangar* of 1,090 tons and the *Laughing Water* of 925 tons, for its own account. Burkett & Tyler built the ship *Princess Royal* of 1,210 tons for Daniel Deshon & Son, Boston, in 1858. Brown & Lovell constructed the bark *Eringo* of 323 tons for T. B. Wales & Company, Boston, in 1853 and the ship *Arcadia* of 705 tons for Robinson & Mellus, Boston, in 1854. Andrew Burnham launched two vessels in 1854—the ship *Northern Eagle* of 665 tons for the Tirrell Company and Dillaway, Boston, and the schooner *Abby Whitman* of 232 tons for William D. Clifford, Boston. Joseph Burke built two barks—the *General Warren* of 356 tons in 1855 for J. H. Shattuck et al., Boston, and the *Achilles* of 529 tons in 1856 for a Philadelphia syndicate. The bark *Moneka* of 462 tons was built by Silvanus Smith for C. W. Hamilton in 1857. Lauchlan McKay (the brother of Donald) built the small bark *Odd Fellow* of 229 tons in 1846. Another "small" building firm, Brown, Bates & Delano, constructed its only and the first vessel built at East Boston, the full-rigged ship *Niagara* of 458 tons, launched in 1835 for Henry Oxnard, Boston.

In the list of vessels built at East Boston during the period 1835-1858 inclusive, the following numbers—with tonnage indicated—are credited to Donald McKay:

Year	Number of Vessels						Tonnage of Vessels					
	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total
1845	1	—	1	—	—	2	751	—	126	—	—	877
1846	2	—	—	1	—	3	2,298	—	—	178	—	2,476
1847	3	—	—	—	—	3	2,680	—	—	—	—	2,680
1848	2	—	—	—	—	2	1,429	—	—	—	—	1,429
1849	3	1	—	—	—	4	2,769	413	—	—	—	3,182
1850	5	1	—	—	—	6	5,824	451	—	—	—	6,275
1851	4	—	—	—	—	4	6,567	—	—	—	—	6,567
1852	3	—	—	—	—	3	5,775	—	—	—	—	5,775
1853	5	—	—	—	—	5	12,306	—	—	—	—	12,306
1854	7	1	—	—	—	8	14,017	692	—	—	—	14,709
1855	3	—	—	—	—	3	5,360	—	—	—	—	5,360
1856	5	1	—	—	—	6	6,773	569	—	—	—	7,342
Total 1845-1856	43	4	1	1	—	49	63,169	2,125	126	178	—	68,978

This list does not agree with the ones taken from the family records of Donald McKay, as it adds the small brig *Samuel Cook* of 126 tons, built in 1845, and the schooner *Lacon* of 178 tons, built in 1846. Also, it classifies as a bark the *Benin* (692 tons), built in 1854; whereas McKay, who built this vessel for Thomas Harrison & Company, Liverpool, England (for its African trade), described the *Benin* as "the only fore-and-after" that he had ever built for foreign account. She was evidently a three-masted topsail schooner and not a "square-rigger," i.e., ship or bark.

Whereas Donald McKay was East Boston's most important wood shipbuilder from the standpoint of tonnage and the construction of outstanding large ships, it was Samuel Hall who was looked upon as the leading shipbuilder of that community. He established his yard at East Boston six years before McKay moved there from Newburyport. Hall was the pioneer and also a public-spirited businessman of broad interests. He did much to develop the town as an important industrial community. Born April 23, 1800, Samuel Hall was a son of Luke and Anna Tuels Hall of the North River region, Plymouth County, Mass. He served his apprenticeship as a shipwright at "Deacon" Elisha Barstow's yard in Hanover and upon attaining his majority, it is said, "left Barstow's yard with twenty-five cents in his pocket and a broadax on his shoulder." He journeyed to Medford and from there to Camden, Maine, from which place he later returned to Marshfield, Plymouth County. With his brothers Luke and William, Samuel Hall built vessels in Marshfield from 1825 to 1828 and during this period constructed the schooner *Daniel* of 72 tons for Marshfield owners and the schooner *Triton* of 75 tons for Duxbury owners. In the building of the latter vessel, Samuel Hall was in complete charge as master carpenter. The brig *Smyrna* of 162 tons, hailing from Boston, was also built by the Hall brothers in 1825. In 1827, Samuel Hall built the brig *Waverly* of 232 tons, which was sold to Plymouth merchants and later to Salem owners. Dissolving partnership with his brothers, he left Marshfield in 1828 for Duxbury and there built vessels for Ezra Weston, with Henry Taylor as foreman. In 1837-1838, Hall built on his own account in Duxbury and early in 1839 moved to East Boston.

In April 1839, Samuel Hall commenced laying out a shipyard at East Boston (about where the end of Maverick Street is). He was one of the pioneers and the owner of the first shipyard of note in that section of Greater Boston, which was to become the leading shipbuilding district in that part of Massachusetts during the clipper ship era. In 1839, Samuel Hall launched the first ship from his East Boston yard—the *Akbar* of 642 tons, built for Forbes and Cabot, of Boston. It is said that, from then until 1860, he built 110 vessels, "some of them the largest, fastest, and best ships that ever skimmed the seas." Among the largest and best-known of the clippers were the *Surprise* and *Game Cock,* built in 1850; the *Flying Childers, John Gilpin,* and *Polynesia,* built in 1852; the *Amphitrite, Mystery,* and *Wizard,* built in 1853; and the *Florence,* built in 1856. His most important fuller-modeled ships of Down Easter type were the *California* of 1,413 tons, built in 1864, and the *Highlander* of 1,352 tons, built in 1868.

Samuel Hall became interested in much besides shipbuilding. In 1847 he was president of the Drydock Company and was president of the East Boston Ferry Company from its organization in 1852 until it was acquired by the city. He was also president of the Maverick National Bank from its incorporation until his death, which occurred November 13, 1870, when he was seventy and a half years old.

Although Samuel Hall claimed to have built "clippers" in the early forties, his earliest claim for distinctive honors, the bark *Coquette* of 457 tons, constructed in 1844, and his *Hazard* of 404 tons (337 tons under new measurement rules), built in 1849 and also bark-rigged, while appearing like clippers because of their extremely lofty rigs and big spread of canvas, had not the model of clippers but were much fuller. Moreover, they were not as fast as the W. H. Webb ships built in New York in the early forties, such as the *Helena* (598 tons), built in 1841, the *Cohota* (691 tons), in 1843, the *Montauk* (505 tons) and *Panama* (612 tons), a year later, and the famous New York Brown & Bell-built ship *Houqua* of 583 tons, launched

May 3, 1844, owned by A. A. Low & Bro., of New York, and commanded by Capt. N. B. Palmer. All were used in the China tea trade.

The following table gives a record of vessels built by Samuel Hall at East Boston during the years 1839-1858 inclusive:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
AKBAR	1839	Ship	642	Forbes, Bacon, Sears, and Cabot, Boston
GALENA	1839	Schooner	99	Boston
BARNSTABLE	1840	Ship	373	Daniel C. Bacon et al., Boston
SULTAN	1840	Bark	353	McGaw, Dimmock, and Lincoln, Boston
WALPOLE	1841	Ship	592	George Pratt, Boston
MASSACHUSETTS	1841	Ship	353	Rand and Gardner, Nantucket
GAZELLE	1842	Schooner	114	John J. Dixwell, Boston
BELLE	1842	Schooner	74	John Wilson et al., Boston
ZEPHYR	1842	Schooner	148	R. B. Forbes et al., Boston
ANTELOPE	1843	Bark	372	J. M. Forbes and Philip Duncarcog, Boston
FROLIC	1843	Schooner	88	John J. Sullivan et al., Boston
CITIZEN	1844	Ship	360	Charles G. and Henry Coffin, Nantucket
COQUETTE	1844	Bark	457	E. N., C. C., and J. H. Perkins et al., Boston
EDITH	1844	Bark	407	R. M. Forbes and T. H. Perkins, Boston
SAPPHO	1844	Bark	319	Dixwell and Bacon, Boston, and J. C. Crocker, Barnstable
MIDAS	1844	Schooner	186	J. M. and R. B. Forbes and W. C. Hunter, Boston
DESPATCH	1845	Schooner	91	Boston
CARRIOCA	1845	Schooner	163	G. Abbott, Beverly, and H. Gardner, Salem
MONTEZUMA	1845	Schooner	90	Boston
MASSACHUSETTS	1845	Steamer	750	J. M. and R. B. Forbes, J. L. Gardner, et al., Boston
MAIL	1846	Brig	191	H. Doane et al., Boston
SAMOSET	1847	Ship	734	J. M. and R. B. Forbes, D. N. Spooner, and H. A. Pierce, Boston
PETERHOFF	1847	Ship	493	Lewis Endicott et al., Salem
IOSCO	1847	Bark	267	P. M. Parker and G. T. Lyman, Boston
ERA	1847	Schooner	188	Zenas D. Bassett, Boston
TELEGRAPH	1847	Schooner	119	Simeon, Benjamin, and Isaac Baker, Boston
BELLE	1848	Schooner	64	Atwood et al., Wellfleet, Mass.
LANTAO	1849	Ship	593	Daniel N. Spooner, Boston
HAZARD	1849	Bark	403	Henry Gardner et al., Salem
EUTAW	1849	Bark	199	Jairus B. Lincoln et al., Boston
EDMUND DWIGHT	1849	Bark	199	Horace Scudder et al., Boston
OLIVE CLARK	1849	Schooner	90	Elisha Clark, Jr., et al., Harwich, Mass.
SURPRISE	1850	Ship	1,262	A. A. Low & Bro., New York
RACE HORSE	1850	Bark	514	John M. Forbes, Boston
GAME COCK	1851	Ship	1,392	Daniel C. Bacon & Co., Boston
HOOGLY	1851	Ship	1,304	D. C. & W. B. Bacon, Boston
ROBERT B. FORBES	1851	Ship	756	J. Hunnewell, H. A. Pierce, and Charles Brewer, Boston
SEA BIRD	1851	Bark	333	Ephraim Lombard et al., Boston
MERMAID	1851	Bark	540	Edward Gassett et al.
FLYING CHILDERS	1852	Ship	1,150	John M. Forbes et al., Boston
JOHN GILPIN	1852	Ship	1,089	Hunnewell & Pierce, Boston
POLYNESIA	1852	Ship	1,075	J. Hunnewell, H. A. Pierce, and Charles Brewer, Boston
MYSTERY	1853	Ship	1,155	Boston
WIZARD	1853	Ship	1,601	Oliver Slate & Co., New York
AMPHITRITE	1853	Ship	1,687	Richard Green, London
ORIENTAL	1854	Ship	1,654	D. C. & W. B. Bacon et al., Boston
ALERT	1855	Ship	1,194	Samuel Hall et al.
QUICK STEP	1855	Bark	523	Ephraim Lombard et al., Boston
ANTELOPE	1855	Bark	415	Russell & Co., Canton, China
HALCYON	1855	Schooner	93	Edward Cunningham, Shanghai, China
FLORENCE	1856	Ship	1,045	John M. Forbes et al., Boston
INDIAN	1857	Ship	786	Henry Gardner, Salem
HIGHLANDER	1858	Ship	1,047	Edward D. Peters & Co., Boston

A recapitulation of the number, type, and tonnage of the vessels built by Samuel Hall during each year of the period 1839-1858 inclusive is presented herewith:

	Number of Vessels						Tonnage of Vessels					
Year	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total	Ships	Barks	Brigs	Schoon-ers	Steam-ers	Total
1839	1	—	—	1	—	2	642	—	—	99	—	741
1840	1	1*	—	—	—	2	373	353	—	—	—	726
1841	2	—	—	—	—	2	945	—	—	—	—	945
1842	—	—	—	3	—	3	—	—	—	336	—	336
1843	—	1	—	1	—	2	—	372	—	88	—	460
1844	1	3	—	1	—	5	360	1,183	—	186	—	1,729
1845	—	—	—	3	1	4	—	—	—	344	750	1,094
1846	—	—	1	—	—	1	—	—	191	—	—	191
1847	2	1	—	2	—	5	1,227	267	—	307	—	1,801
1848	—	—	—	1	—	1	—	—	—	64	—	64
1849	1	3	—	1	—	5	593	801	—	90	—	1,484
1850	1	1	—	—	—	2	1,262	514	—	—	—	1,776
1851	3	2	—	—	—	5	3,452	873	—	—	—	4,325
1852	3	—	—	—	—	3	3,314	—	—	—	—	3,314
1853	3	—	—	—	—	3	4,443	—	—	—	—	4,443
1854	1	—	—	—	—	1	1,654	—	—	—	—	1,654
1855	1	2	—	1	—	4	1,194	938	—	93	—	2,225
1856	1	—	—	—	—	1	1,045	—	—	—	—	1,045
1857	1	—	—	—	—	1	786	—	—	—	—	786
1858	1	—	—	—	—	1	1,047	—	—	—	—	1,047
Total 1839-1858	23	14	1	14	1	53	22,337	5,301	191	1,607	750	30,186

*The bark SULTAN of 353 tons was reported as constructed by Hall & Bates in 1840.

Paul Curtis was a builder of "big ships," and during a period of six years (1852-1857), he launched from his East Boston yard twenty full-rigged ships and one bark—a total of twenty-one square-riggers (all three-masters), or an average of 3.5 per year. The average tonnage of the twenty full-rigged ships was 1,285 tons, and the ships ranged from the *John Elliot Thayer* of 1,918 tons, built in 1854, to the *Fortuna* of 659 tons, launched in 1857. The following table gives a list of the Paul Curtis vessels built at East Boston during the years 1852-1858 inclusive:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
GOLDEN WEST	1852	Ship	1,441	Glidden & Williams, Boston
GOLDEN FLEECE	1852	Ship	967	William F. Weld & Co., Boston
QUEEN OF THE SEAS	1852	Ship	1,355	Glidden & Williams, Boston
CLEOPATRA	1853	Ship	1,562	Benjamin Bangs, Boston
REPORTER	1853	Ship	1,100	David Snow et al., Boston
WELLFLEET	1853	Ship	1,353	Isaac Rich, Nathaniel Stone, et al., Boston
MARINER	1853	Ship	1,230	William Perkins & Co., Boston
RADIANT	1853	Ship	1,380	Baker & Morrill, Boston
JOHN ELLIOT THAYER	1854	Ship	1,918	Benjamin Bangs and John E. Thayer, Boston
PANTHER	1854	Ship	1,260	George Minot, Nathaniel Hooper, et al., Boston
ENOCH TRAIN	1854	Ship	1,650	Isaac Rich & Co. et al., Boston
ROBERT H. DIXEY	1855	Ship	1,253	Daniel Deshon & Son, Boston
GOLDEN FLEECE	1855	Ship	1,475	William F. Weld & Co., Boston
EMPRESS	1855	Ship	1,294	Harbeck & Co., New York
AZOR	1855	Bark	432	Dabney & Cunningham, Boston
EVELYN	1856	Ship	1,198	Harbeck & Co., New York
SEA KING	1856	Ship	1,166	William Perkins & Co., Boston
ORION	1856	Ship	1,297	George Minot, Nathaniel Hooper, et al., Boston
MARY BANGS	1856	Ship	958	E. Bangs & Son
FORTUNA	1857	Ship	659	Lombard, Whitney & Co., Boston
BELVEDERE	1857	Ship	1,190	William F. Weld & Co., Boston
MANJVAR	1858	Steamer	816	Russian Government

A recapitulation of the Paul Curtis tonnage built at East Boston during the period 1852-1858 is presented herewith:

	Number of Vessels				Tonnage of Vessels			
Year	Ships	Barks	Steamers	Total	Ships	Barks	Steamers	Total
1852	3	—	—	3	3,763	—	—	3,763
1853	5	—	—	5	6,625	—	—	6,625
1854	3	—	—	3	4,828	—	—	4,828
1855	3	1	—	4	4,022	432	—	4,454
1856	4	—	—	4	4,619	—	—	4,619
1857	2	—	—	2	1,849	—	—	1,849
1858	—	—	1	1	—	—	816	816
Total 1852-1858	20	1	1	22	25,706	432	816	26,954

Robert E. Jackson was one of the outstanding wood shipbuilders of East Boston. In the three-year period 1854-1856 inclusive, when the shipbuilding boom was positively waning, Jackson built nine full-rigged ships of 11,648 tons total register—an average of three ships per year and an average tonnage of 1,294 tons per ship. Robert E. Jackson, operating his own yard, launched the following fifteen vessels during the five years 1853-1857 inclusive—an average of three hulls per year:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
CHALLENGER	1853	Ship	1,334	W. & F. H. Whittemore & Co., Boston
KING LEAR	1854	Ship	1,936	Seccomb & Taylor, Boston
BLUE JACKET	1854	Ship	1,791	Seccomb & Taylor, Boston
SWALLOW	1854	Ship	1,435	Benjamin W. Tucker, New York, Seccomb & Taylor, et al., Boston
DRAGOON	1855	Ship	1,433	John M. Forbes, George B. Whiton, et al., Boston
HARRY OF THE WEST	1855	Ship	998	Calvin Adams et al., New York
MARTHA	1856	Ship	1,197	William Parsons & Co., Boston
NORSEMAN	1856	Ship	812	A. Cunningham & Sons, Boston
ENDEAVOR	1856	Ship	1,137	A. Cunningham & Sons, Boston
LUCY AND HARRIET	1856	Ship	909	Meyer, Stucken & Co., New York
BORNEO	1857	Ship	772	William F. Weld & Co., Boston
GEMSBOK	1857	Bark	622	Isaac Taylor et al.
AMELIA	1857	Schooner	268	George S. Hobson and Alexander L. Fairweather, New York
MANUELLA	1857	Schooner	267	George S. Hobson & James R. Van Pelt, New York
JOHN PATTERSON	1857	Schooner	103	Isaac Taylor, Boston

Prior to Robert E. Jackson's operating alone, Jackson & Ewell (and Elwell & Jackson) are credited by some records with building the following seven vessels at East Boston during the years 1850-1853 inclusive. The average tonnage of the six full-rigged ships built was 1,644 tons, the *Queen of Clippers* and the *Lightfoot,* built in 1853, registering 2,197 and 1,996 tons, respectively.

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
JOHN BERTRAM	1850	Ship	1,080	Glidden & Williams, Boston
MERIDIAN	1850	Ship	1,350	William F. Weld & Co., Boston
WINCHESTER	1851	Ship	1,474	William F. Weld & Co., Boston
WINGED RACER	1852	Ship	1,767	Seccomb & Taylor, Boston
JULIA ANNA	1852	Brig	200	Joseph Harding and Robert E. Jackson, Boston
LIGHTFOOT	1853	Ship	1,996	Howes & Co., New York
QUEEN OF CLIPPERS	1853	Ship	2,197	Seccomb & Taylor, Boston

The following table is a recapitulation of the number, type, and tonnage of vessels built by Robert E. Jackson and Jackson & Ewell (and Elwell & Jackson) at East Boston during the years 1850-1857, inclusive:

	Number of Vessels				Tonnage of Vessels			
Year	Ships	Barks	Schooners	Total	Ships	Barks	Schooners	Total
Built by Robert E. Jackson								
1853	1	—	—	1	1,334	—	—	1,334
1854	3	—	—	3	5,162	—	—	5,162
1855	2	—	—	2	2,431	—	—	2,431
1856	4	—	—	4	4,055	—	—	4,055
1857	1	1	3	5	772	622	638	2,032
Total	11	1	3	15	13,754	622	638	15,014
Built by Jackson & Ewell (and Elwell & Jackson)								
1850	2	—	—	2	2,430	—	—	2,430
1851	1	—	—	1	1,474	—	—	1,474
1852	1	1	—	2	1,767	200	—	1,967
1853	2	—	—	2	4,193	—	—	4,193
Total	6	1	—	7	9,864	200	—	10,064
Total 1850-1857	17	1 bark 1 brig	3	22	23,618	822	638	25,078

Daniel D. Kelly built a bark, a brig, and two small schooners, with a total tonnage of 769 tons, at East Boston during the five years 1848-1852 inclusive—an average tonnage of only 192 tons per vessel and 154 tons per year. During the next four years, however, Kelly built five full-rigged ships and two barks in addition to a small schooner, a total of eight vessels (two per year) aggregating 6,134 tons and an average of 1,533 tons per year. The five ships built totaled 5,229 tons—an average of 1,046 tons per ship. The following is a list of the twelve vessels built by Daniel D. Kelly at East Boston during the eight-year period:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
CALEB CURTIS	1848	Brig	185	William King, William Holmes, et al., Boston
JANE	1849	Schooner	70	Builder's account
FANNY	1850	Schooner	82	Builder's account
OLD HICKORY	1852	Bark	432	D. D. Kelly and William Ulmer, Boston
EDWIN FORREST	1853	Ship	1,144	Crosby, Crocker, et al., New York
FIREFLY	1853	Bark	385	Warren, R.I.
BOSTONIAN	1854	Ship	1,090	George Callender & Co., Boston
ZEPHYR	1854	Ship	1,184	Thomas B. Wales & Co., Boston
FRIEND	1854	Schooner	69	Builder's account
THOMAS JEFFERSON	1855	Ship	995	Daniel Deshon & Son, Boston
MAYFLOWER	1857	Ship	816	William Kelly et al.
SALACIA	1857	Bark	451	Larkin, Stackpole & Co., Boston

The schooners *Jane* of 70 tons, built in 1849, and *Friend* of 69 tons, built in 1854, were constructed by D. D. Kelly and William G. Holmes, in partnership, for their own account.

Hugh R. McKay built at East Boston six full-rigged ships aggregating 6,707 tons (an average of 1,118 tons per ship) during the five-year period 1854-1858 inclusive. He built in alternate years during the decline following the shipping and shipbuilding boom, and the *Princess* of 1,080 tons—launched in 1858—was constructed during the business panic following the demoralizing depression of 1856-1857. Hugh McKay launched three ships totaling 3,189 tons in 1854, two totaling 2,438 tons in 1856, and one of 1,080 tons in 1858. His largest

ship was the *Benares* of 1,398 tons, built in 1856, and the smallest was the *Barreda Brothers* of 770 tons, launched in 1854. The following table is a record of the Hugh McKay vessels built at East Boston during the period:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
INDIAMAN	1854	Ship	1,165	Sampson & Tappan, Boston
BARREDA BROTHERS	1854	Ship	770	Sampson & Tappan, Boston
GANGES	1854	Ship	1,254	William S. Bullard, Boston
FAVORITE	1856	Ship	1,040	William F. Weld & Co., Boston
BENARES	1856	Ship	1,398	William S. Bullard, Boston
PRINCESS	1858	Ship	1,080	J. Baker & Co., Boston

George and Thomas Boole (operating as G. & T. Boole) built five full-rigged ships and the 280-ton schooner *Calliope* at East Boston during the three years 1854-1856 inclusive. The ships totaled 6,242 tons, an average of 1,040 tons for the square-riggers, the largest being the *Weymouth* of 1,396 tons and the smallest the *Emerald* of 1,080 tons. The list of vessels launched by the Booles during the period is stated herewith:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
WEYMOUTH	1854	Ship	1,396	J. & A. Tirrell et al., Boston
EMERALD	1855	Ship	1,080	Howland & Ridgway, New York
POMONA	1856	Ship	1,181	Howland & Frothingham, New York
PLUTARCH	1856	Ship	1,322	Howland & Ridgway, New York
ENDYMION	1856	Ship	1,263	Howland & Ridgway, New York
CALLIOPE	1856	Schooner	280	Thomas Dana & George G. Tarbell, Boston

A. & G. T. Sampson built relatively small craft at East Boston during the years 1849-1852, but thereafter built three sizable full-rigged ships averaging 1,214 tons register and a small bark of 284 tons in the course of the next five years. During the nine-year period 1849-1857, the Sampsons launched from their East Boston yard the following seven vessels consisting of four ships totaling 4,093 tons, two barks totaling 475 tons, and a brig of 175 tons—an average of 678 tons per vessel and 527 tons per year:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
EAGLE	1849	Bark	191	Nathan Foster et al., Boston
ANDES	1851	Ship	450	Sold to Lodge and Coolidge, Boston
LAURILLA	1852	Brig	175	William F. Weld & Co., Boston
FEARLESS	1853	Ship	1,185	William F. Weld & Co., Boston
FANNY McHENRY	1854	Ship	1,237	J. McHenry, Philadelphia
WARREN HALLETT	1854	Bark	284	Samuel W. Hallett et al., Boston
VOYAGEUR de la MER	1857	Ship	1,221	George A. Stone (agent for viceroy of Egypt)

Jarvis (also recorded as Jairus) Pratt built a ship and a brig at East Boston during the years 1850-1852, and between 1855 and 1858 Pratt & Osgood launched three full-rigged ships. The list of the East Boston Pratt-built vessels is as follows:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
ZAZA	1850	Brig	153	Antonio M. Yznaga de Valle, New York
LADY FRANKLIN	1852	Ship	475	William Ropes, Boston
ELVIRA	1855	Ship	1,138	Vernon Brown & Co., Boston
SUSAN HOWLAND	1856	Ship	1,137	Vernon Brown & Son, Boston
PERUVIAN	1858	Ship	1,165	William F. Weld & Co., Boston

William Hall & Company built three full-rigged ships and a bark at East Boston during the period 1854-1857. The ships averaged 977 tons each, the largest being the *Fatherland* of 1,542 tons and the smallest the *Halcyon* of 671 tons. The list of William Hall & Company's East Boston vessels is as follows:

Name of Vessel	Year Built	Rig	Registered Tonnage	Owner
FATHERLAND	1854	Ship	1,542	Green, London, England
HALCYON	1854	Ship	671	William Perkins & Co., Boston
CEYLON	1856	Ship	717	William F. Weld & Co., Boston
ALMATIA	1857	Bark	473	J. Gould, J. M. Cutler, et al., Boston

Clipper Ships and Reputed Clippers Constructed by Each Important Boston Builder during the Clipper Ship Decade and the Reported Record of Each Ship in the Westbound Cape Horn Service

In addition to Medford and East Boston, the section of Greater Boston known as South Boston became of importance as a shipbuilding center around mid-century and turned out a substantial number of vessels and marine registered tonnage during the clipper ship decade. Capt. Arthur H. Clark, in THE CLIPPER SHIP ERA, has written:

> The Briggs Brothers, of South Boston, came from an old and celebrated ship-building family of Scituate, their great-grandfather having been a shipbuilder of note in colonial times, while their grandfather, James Briggs, was the builder of the famous *Columbia,* in 1773. After his death the yard was continued by his sons, Henry and Cushing, who built some of the finest ships sailing out of Boston, besides many of the New Bedford and Nantucket whalers, during the first half of the last century. The brothers E. & H. O. Briggs, who established their yard at South Boston in 1848, were the sons of Cushing Briggs, and they possessed the skill in design and thorough knowledge of construction for which the family had long been famous among the merchants and underwriters of Boston.

The leading Boston, Mass., shipbuilders at the mid-century and during the very brief period of construction of sharp-modeled, heavily canvased clipper ships were: E. & H. O. Briggs, of South Boston; James O. Curtis, of Medford, and Paul Curtis, of Medford, Chelsea, and East Boston; Joshua T. Foster, of Medford; Samuel Hall, of East Boston; Hayden & Cudworth, of Medford; Robert E. Jackson, of East Boston; Samuel Lapham, of Medford; Donald McKay, of East Boston; Joshua Magoun, of Charlestown; A. & G. T. Sampson, of East Boston; Jotham Stetson, of Chelsea; and John Taylor, of Chelsea. The following tables give a list of the clipper ships built by Boston shipbuilders during the clipper ship decade and the reported record of the performance of each ship and of the ships of each Boston builder on westbound passages around Cape Horn to San Francisco during the so-called "clipper ship era," 1850-1859 inclusive:

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Time in Days		
			Number	Average	Shortest	Longest
		A. 1. By Donald McKay, East Boston				
1850	STAG HOUND (1,534 tons)	Upton and Sampson & Tappan, Boston	6	117½	108	127
1851	FLYING CLOUD (1,782 tons)	Grinnell, Minturn & Co., New York	6	116½	90	185
1851	STAFFORDSHIRE (1,817 tons)	Enoch Train & Co., Boston	1	102	102	102
1851	FLYING FISH (1,505 tons)	Sampson & Tappan, Boston	7	107	92	114
1851	NORTH AMERICA (1,464 tons)	Nickerson & Co., Boston	1	151	151	151
1852	SOVEREIGN OF THE SEAS (2,421 tons)	Andrew F. Meinke, New York	1	103	103	103
1852	WESTWARD HO (1,650 tons)	Sampson & Tappan, Boston	4	106	102	110
1852	BALD EAGLE (1,704 tons)	Geo. B. Upton, Boston	4	116½	109	121
1853	EMPRESS OF THE SEAS (2,197 tons)	Wm. Wilson & Son, Baltimore	3	120	115	125
1853	STAR OF EMPIRE (2,050 tons)	Enoch Train & Co., Boston	—	—	—	—
1853	CHARIOT OF FAME (2,050 tons)	Enoch Train & Co., Boston	2	122	118	126
1853	GREAT REPUBLIC (3,357 tons)	A. A. Low & Bro., New York	4	107	94	120
1853	ROMANCE OF THE SEAS (1,782 tons)	Geo. B. Upton, Boston	3	107	97	116
1854	LIGHTNING (2,084 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1854	CHAMPION OF THE SEAS (2,447 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1854	JAMES BAINES (2,515 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1854	BLANCHE MOORE (1,787 tons)	Charles Moore & Co., Liverpool, England	—	—	—	—
1854	SANTA CLAUS (1,256 tons)	Jos. Nickerson & Co., Boston	2	140	136	144
1854	COMMODORE PERRY (1,964 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1854	JAPAN (1,964 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1855	DONALD McKAY (2,595 tons)	James Baines & Co., Liverpool, England	—	—	—	—
1855	DEFENDER (1,413 tons)	Kendall & Plympton, Boston	3	147	136	153
1856	MASTIFF (1,031 tons)	Geo. B. Upton, Boston	2	137	133	141
1856	MINNEHAHA (1,695 tons)	Kendall & Plympton, Boston	—	—	—	—
1856	AMOS LAWRENCE (1,396 tons)	Emmons & Parsons, Boston	1	141	141	141
1856	ABBOTT LAWRENCE (1,498 tons)	Geo. B. Upton et al., Boston	—	—	—	—
1856	BALTIC (1,372 tons)	A. Zerega & Co., New York	—	—	—	—
1856	ADRIATIC (1,327 tons)	A. Zerega & Co., New York	—	—	—	—
1858	ALHAMBRA (1,097 tons)	Wm. Thwing & Co., Boston	—	—	—	—
1850-1858	Twenty-nine vessels totaling 52,754 registered tons—an average of 1,819 tons per ship.		50	117½	90	185

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		2. *By Hugh R. McKay, East Boston*				
1854	INDIAMAN (1,165 tons)	Sampson & Tappan, Boston	2	132	124	140
1855	GANGES (1,254 tons)	W. S. Bullard, Boston	—	—	—	—
1854-1855	Two vessels totaling 2,419 registered tons—an average of 1,209 tons per ship.		2	132	124	140
		B. *By E. & H. O. Briggs, South Boston*				
1851	NORTHERN LIGHT (1,021 tons)	James Huckins, Boston	5	119½	110	124
1851	SOUTHERN CROSS (938 tons)	Baker & Morrill, Boston	9	136	120	155
1852	METEOR (1,068 tons)	Curtis & Peabody, Boston	5	118½	111	133
1852	WINGED ARROW (1,052 tons)	Baker & Morrill, Boston	6	125	113	150
1853	BOSTON LIGHT (1,154 tons)	James Huckins & Sons, Boston	1	102	102	102
1853	GOLDEN LIGHT (1,140 tons)	James Huckins & Sons, Boston	—	—	—	—
1853	BONITA (1,127 tons)	James Huckins & Sons, Boston	2	129½	118	141
1853	CYCLONE (1,109 tons)	Curtis & Peabody, Boston	3	125	114	140
1853	JOHN LAND (1,054 tons)	Baker & Morrill, Boston	5*	183	102	311
1854	SARACEN (1,266 tons)	Curtis & Peabody, Boston	1	147	147	147
1854	GRACE DARLING (1,197 tons)	Chas. B. Fessendon, Boston	4	132	125	144
1854	STARLIGHT (1,153 tons)	Baker & Morrill, Boston	6	126	118	146
1854	COSSACK (586 tons)	Curtis & Peabody, Boston	—	—	—	—
1855	MAMELUKE (1,303 tons)	Curtis & Peabody, Boston	2	156	139	173
1855	FAIR WIND (1,299 tons)	Henry S. Hallet & Co., Boston	3	143	133	158
1855	VITULA (1,188 tons)	Williams & Daland, Boston	2	129	128	130
1856	ASA ELDRIDGE (1,324 tons)	Henry S. Hallet & Co., Boston	3	133½	122	147
1856	JOSEPH PEABODY (1,198 tons)	Curtis & Peabody, Boston	1	145	145	145
1856	ALARM (1,184 tons)	Baker & Morrill, Boston	1	130	130	130
1858	MEMNON II (789 tons)	Briggs, Hallet, Eldridge, et al., Boston	1	159	159	159
1851-1858	Twenty vessels totaling 22,150 registered tons—an average of 1,107 tons per ship.		60	137½	102	311

*Two disastrous passages, one of 311 days and one of 269, with stops at ports for repairs.

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		C. Paul Curtis, Medford, Chelsea, and East Boston				
1850	WITCHCRAFT (1,310 tons)	Pickman and Rogers, Salem	6	127	98	169
1850	KREMLIN (bark; 504 tons)	Craft & Co., Boston	—	—	—	—
1851	COURSER (1,024 tons)	Richardson & Co., Boston	4	134	109	154
1852	GOLDEN WEST (1,441 tons)	Glidden & Williams, Boston	3	149	124	177
1852	QUEEN OF THE SEAS (1,356 tons)	Glidden & Williams, Boston	3	135	131	138
1852	GOLDEN FLEECE I (968 tons)	Weld & Baker, Boston	2	134	128	140
1852	BEVERLY (676 tons)	Whitney & Perkins, Boston	1	144	144	144
1853	CLEOPATRA (1,562 tons)	Benj. Bangs, Boston	2	120	110	130
1853	REPORTER (1,474 tons)	David Snow, Boston	4	117	106	130
1853	RADIANT (1,318 tons)	Baker & Morrill, Boston	4	137	130	143
1854	PANTHER (1,278 tons)	R. C. Mackay & Sons, Boston	2	141½	139	144
1854	JOHN ELLIOT THAYER (1,918 tons)	Enoch Train & Co., Boston	1	130	130	130
1855	GOLDEN FLEECE II (1,535 tons)	Weld & Baker, Boston	5	119	112	130
1856	EMPRESS (1,294 tons)	H. Harbeck & Co., New York	—	—	—	—
1856	MARY BANGS (958 tons)	W. H. Bangs & Co., Boston	—	—	—	—
1857	BELVEDERE (1,322 tons)	Baker, Weld, et al., Boston	2	142	127	157
1857	FORTUNA (659 tons)	Israel Lombard & Co., Boston	—	—	—	—
1850-1857	Seventeen vessels totaling 20,597 registered tons—an average of 1,212 tons per ship.		39	131	98	177
		D. By Hayden & Cudworth, Medford (Thatcher Magoun's old yard)				
1850	GEO. E. WEBSTER (bark; 354 tons)	Wade, Reed, et al., Boston	1	113	113	113
1851	JOHN WADE (639 tons)	Reed, Wade & Co., Boston	3	123	117	131
1852	GOLDEN EAGLE (1,121 tons)	Wm. Lincoln & Co., Boston	6	124	107	157
1852	ALEXANDER (596 tons)	J. A. Baxter & Co., Boston	1	123	123	123
1852	GEM OF THE OCEAN (702 tons)	Wm. Lincoln & Co., Boston	1	121	121	121
1853	HERALD OF THE MORNING (1,294 tons)	T. Magoun & Son, Boston	5	112	100	130
1853	KINGFISHER (1,286 tons)	Wm. Lincoln & Co., Boston	3	122	114	128
1853	WHITE SWALLOW (1,192 tons)	Wm. Lincoln & Co., Boston	4	131	111	149
1853	RINGLEADER (1,157 tons)	Howes & Crowell, Boston	5	114	107	122

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		D. *By Hayden & Cudworth, Medford*—Continued (Thatcher Magoun's old yard)				
1853	CLIMAX (1,051 tons)	Howes & Crowell, Boston	2	126	115	137
1853	EDITH ROSE (510 tons)	Yates & Porterfield, New York	—	—	—	—
1854	ROBIN HOOD (1,182 tons)	Howes & Crowell, Boston	5	121	107	129
1854	RAMBLER (1,119 tons)	Baxter Bros., Yarmouth, Mass., and Israel Nash, Boston	2	157½	142	173
1854	OSBORNE HOWES (1,100 tons)	Howes & Crowell, Boston	3	140	124	151
1854	FLEETWING (896 tons)	Crowell, Brooks & Co., Boston	6	137	113	158
1855	ELECTRIC SPARK (1,216 tons)	T. Magoun & Son, Boston	3	122	106	142
1855	GODDESS (1,126 tons)	Baxter Bros., Boston	2	132	129	135
1855	RIVAL (984 tons)	Howes & Crowell, Boston	1	143	143	143
1856	THATCHER MAGOUN (1,248 tons)	T. Magoun & Son, Boston	2	125	125	125
1850-1856	Nineteen vessels totaling 18,773 registered tons—an average of 988 tons per ship.		55	126	107	173
		E. *By J. O. Curtis, Medford*				
1851	TELEGRAPH (1,069 tons)	P. & S. Sprague & Co., Boston	4	122	110	136
1851	SHOOTING STAR (903 tons)	Reed, Wade & Co., Boston	3	123	106	142
1851	ANTELOPE (507 tons; also reported as 587)	Wm. Lincoln & Co., Boston	2	123	118	128
1852	STAR OF THE UNION (1,057 tons)	Reed, Wade & Co., Boston	4	127	123	136
1852	WHIRLWIND (961 tons)	W. & F. H. Whittemore, Boston	3	123	120	129
1852	ONWARD (874 tons)	Reed, Wade & Co., Boston	3	143	120	158
1853	GEORGE PEABODY (1,397 tons)	Wm. F. Weld, Boston	—	—	—	-
1853	EAGLE WING (1,174 tons)	Chase & Tappan, Boston	5	121	115	131
1853	WILD RANGER (1,044 tons)	Sears & Thatcher, Boston	3	129	125	132
1853	COMPETITOR (871 tons)	W. F. Weld & Co., Boston	4	129	114	141
1854	OCEAN EXPRESS (1,697 tons)	Reed, Wade & Co., Boston	4	135	124	144
1854	OCEAN TELEGRAPH (1,495 tons)	Reed, Wade & Co., Boston	5	127	106	154
1855	GOOD HOPE (1,295 tons)	R. L. Taylor, New York	1	144	144	144
1856	SILVER STAR (1,195 tons)	Reed & Wade, Boston	2	144	140	148
1856	FLYING MIST (1,183 tons)	Theo. & Geo. B. Chase, Boston	2	118	113	123
1857	WILD GAZELLE (490 tons)	Joshua W. Davis et al., Boston	—	—	—	—
1858	INDUSTRY (1,106 tons)	Theo. Chase, Boston	1	146	146	146
1851-1858	Seventeen vessels totaling 18,318 registered tons—an average of 1,077 tons per ship.		46	128	106	158

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		F. 1. *By Robert E. Jackson, East Boston*				
1852	WINGED RACER (1,767 tons)	Seccomb & Taylor, Boston	3	116	108	121
1853	QUEEN OF CLIPPERS (2,361 tons)	Seccomb & Taylor, Boston	1	118	118	118
1853	CHALLENGER (1,334 tons)	W. & F. H. Whittemore, Boston	5	121	111	134
1854	KING LEAR (1,936 tons)	Seccomb & Taylor, Boston	—	—	—	—
1854	BLUE JACKET (1,790 tons)	Seccomb & Taylor, Boston	—	—	—	—
1854	SWALLOW (1,435 tons)	Dugan & Leland, New York, and Seccomb & Taylor, Boston	—	—	—	—
1855	HARRY OF THE WEST (1,050 tons)	Calvin Adams, New York	—	—	—	—
1856	ENDEAVOR (1,137 tons)	Cunningham Bros., Boston	3	129	122	137
1856	NORSEMAN (812 tons)	Cunningham Bros., Boston	1	144	144	144
1857	GEMSBOK (bark; 622 tons)	E. I. Cleveland et al., Boston	—	—	—	—
1852-1857	Ten ships totaling 14,244 registered tons—an average of 1,424 tons per ship.		13	123	108	144
		2. *By Jackson & Ewell, East Boston*				
1853	LIGHTFOOT (1,996 tons)	Howes & Co., Boston	1	113	113	113
		3. *By Elwell & Jackson, East Boston*				
1850	JOHN BERTRAM (1,080 tons)	Glidden & Williams, Boston	3	121	106	144
1850-1857	Total of twelve "Jackson-built ships" aggregating 17,320 tons—an average of 1,443 tons per ship.		17	122	106	144
		G. 1. *By Samuel Hall, East Boston*				
1850	GAME COCK (1,392 tons)	Bacon, Taylor, et al., New York	4	139½	114	185
1850	SURPRISE (1,262 tons)	A. A. Low & Bro., New York	3	110	96	118
1850	RACE HORSE (bark; 530 tons)	I. Goddard & Co., Boston	1	109	109	109
1851	HOOGLY (1,304 tons)	D. C. Bacon & Sons, Boston	1	127	127	127
1851	R. B. FORBES (757 tons)	J. S. Coolidge & Co., Boston	2	132	126	138
1851	MERMAID (bark; 533 tons)	Hall, Gassell, May, et al., Boston	2	133½	108	159
1852	FLYING CHILDERS (1,125 tons)	Forbes and Cunningham Bros., Boston	3	115	113	117
1852	JOHN GILPIN (1,089 tons)	Pierce & Hunnewell, Boston	3	116	94	140
1852	POLYNESIA (1,084 tons)	Pierce & Hunnewell, Boston	6	139	104	197

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		G. 1. *By Samuel Hall, East Boston*—Continued				
1853	AMPHITRITE (1,687 tons)	Sold to Green, London	—	—	—	—
1853	WIZARD (1,601 tons)	Slate & Co., New York	3	136	117	148
1853	MYSTERY (1,155 tons)	Crocker, Sturgis, and Bacon, Boston	1	135	135	135
1855	QUICK STEP (bark; 523 tons)	Daniel C. Bacon et al., Boston	—	—	—	—
1856	FLORENCE (1,045 tons)	J. M. & R. B. Forbes, Boston	—	—	—	—
1850-1856	Fourteen ships totaling 15,087 registered tons—an average of 1,078 tons per ship.		29	128	94	197
		2. *By William Hall, East Boston*				
1854	FATHERLAND (1,180 tons)	Green, London	—	—	—	—
		H. *By Jotham Stetson, Chelsea* (including the *Asterion*, built by Abner Stetson in 1854; the *Coringa*, built by Jotham Stetson at Medford in 1851; and the *Celestial Empire*, built by Jotham Stetson at South Boston in 1852)				
1851	CORINGA (777 tons)	N. B. Goddard & Co., Boston	3	147	132	155
1852	CELESTIAL EMPIRE (1,395 tons)	C. H. Parsons & Co., New York	1	146	—	—
1853	YOUNG BRANDER (1,467 tons)	Brander, Williams & Co., Boston	—	—	—	—
1854	NEPTUNE'S FAVORITE (1,347 tons)	H. A. Kelly & Co., Boston	3	124	115	140
1854	ASTERION (1,135 tons)	David Snow et al., Boston	—	—	—	—
1854	BOUNDING BILLOW (bark; 354 tons)	Lombard, Conant, et al., Boston	—	—	—	—
1855	BEACON LIGHT (1,376 tons)	Jotham Stetson, Boston	—	—	—	—
1855	HARRY BLUFF (1,244 tons)	Chas. R. Green, New York	—	—	—	—
1851-1855	Eight ships totaling 9,095 registered tons—an average of 1,137 tons per ship.		7	137	115	155
		I. 1. *By John Taylor, Chelsea*				
1851	SYREN (1,064 tons)	Silsbee, Pickman, et al., Salem	5	131	118	141
1852	MALAY (868 tons)	Silsbee, Pickman, et al., Salem	3	131	118	149
1852	LOTUS (660 tons)	Dabney & Cunningham, Boston	4	136	124	143
1853	STORM KING (1,400 tons)	Dana & Co., Boston	5	133	124	148
1853	AURORA (1,396 tons)	Silsbee, Pickman, et al., Salem	4	139	112	216
1854	NABOB (1,246 tons)	Wm. Appleton & Co., Boston	1	112	112	112
1855	DERBY (1,062 tons)	Silsbee, Pickman, et al., Salem	3	137	120	155
1851-1855	Seven ships totaling 7,696 registered tons—an average of 1,099 tons per ship.		25	133	112	216

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		2. By Isaac Taylor, Chelsea				
1853	MATCHLESS (1,034 tons)	N. & B. Goddard, Boston	2	121½	110	133
		J. By Joshua T. Foster, Medford				
1852	NATIONAL EAGLE (1,095 tons)	Fisher & Co., Boston	1	134	134	134
1852	ELLEN FOSTER (996 tons)	J. & A. Tirrell, Boston	2	146	140	152
1853	MORNING STAR (1,105 tons)	T. B. Wales & Co., Boston	6	123	101	148
1853	WEST WIND (1,071 tons)	J. & A. Tirrell, Boston	5	142	133	170
1856	HESPERUS (1,020 tons)	T. B. Wales & Co., Boston	—	—	—	—
1858	TEMPLAR (946 tons)	T. B. Wales & Co., Boston	—	—	—	—
1852-1858	Six ships totaling 6,233 registered tons—an average of 1,039 tons per ship.		14	134	101	170
		K. By Samuel Lapham, Medford				
1852	PHANTOM (1,174 tons)	Crocker, Warren, and Sturgis, New York and Boston	4	113	101	127
1853	DON QUIXOTE (1,429 tons)	John E. Lodge, Boston	5	118½	108	141
1854	NOR'WESTER (1,267 tons)	J. T. Coolidge & Co., Boston	4	131	123	140
1855	SANCHO PANZA (876 tons)	John E. Lodge, Boston	2	144	141	147
1852-1855	Four ships totaling 4,746 registered tons—an average of 1,186 tons per ship.		15	124	101	147
		L. By Joshua Magoun, Charlestown (including the *Galatea* built by Joseph Magoun in 1854)				
1852	MOUNTAIN WAVE (633 tons)	A. Hardy & Co., Boston	2	151	131	171
1853	OCEAN PEARL (847 tons)	Hardy and Sears, Boston	3	141	132	157
1853	WAVERLEY (749 tons)	Curtis, Nichols, et al., Boston	1	166	166	166
1854	GALATEA (1,041 tons)	W. F. Weld & Co., Boston	5	129	114	144
1856	EXPOUNDER (1,176 tons)	Paul Sears, Boston	1	138	138	138
1852-1856	Five ships totaling 4,446 registered tons—an average of 889 tons per ship.		12	139½	114	171
		M. By A. & G. T. Sampson, East Boston				
1853	FEARLESS (1,184 tons)	W. F. Weld & Co., Boston	5	121½	114	127
1853	PEERLESS (1,100 tons)	W. F. Weld & Co., Boston	1	210	210	210
1854	FANNY McHENRY (1,237 tons)	G. McHenry & Co., Philadelphia	—	—	—	—
1853-1854	Three ships totaling 3,521 registered tons—an average of 1,174 tons per ship.		6	136	114	210

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
			Number	Time in Days		
				Average	Shortest	Longest
		N. *By George Thomas, Quincy*				
1854	KING PHILIP (1,486 tons)	Grant and Reynolds, Boston	—	—	—	—
1856	LOGAN (1,541 tons)	Wm. Whitlock, Jr., New York	—	—	—	—
1854-1856	Two ships totaling 3,027 registered tons—an average of 1,513 tons per ship.		—	—	—	—
		O. *By Daniel D. Kelly, East Boston*				
1853	EDWIN FORREST (1,141 tons)	Crosby, Crocker & Co., New York	2	132½	132	133
1854	ZEPHYR (1,184 tons)	Wales, Emmons, et al., Boston	1	168	168	168
1853-1854	Two ships totaling 2,325 registered tons—an average of 1,162 tons per ship.		3	144	132	168
		P. *By Miscellaneous Builders*				
1852	DAUNTLESS (791 tons) Built by Benj. F. Delano, Medford	W. N. Goddard, Boston	1	120	120	120
1854	NORTHERN EAGLE (665 tons) Built by Andrew Burnham, East Boston	Tirrell and Dellaway, Boston	2	179	168	190
1852	LADY FRANKLIN (464 tons) Built by Jarvis Pratt, East Boston	Wm. Ropes, Boston	—	—	—	—
1856	ORPHEUS (1,272 tons) Built by Rice & Mitchell, Chelsea	W. F. Weld & Co., Boston	2	127½	114	141
1857	RICHARD BUSTEED (662 tons) Built by Emery Sawyer, Quincy Point	Jacob Stanwood, Boston	1	178	178	178
1854	BOSTONIAN (1,100 tons) Built "in Boston"	Henry D. Brookman et al., Boston	2	141	140	142
1852-1857	Six ships totaling 4,954 registered tons—an average of 826 tons per ship.		8	149	114	190

Recapitulation of Boston-built Clipper Ships, 1850-1859 Inclusive

Name of Builder	Number of Clippers Built	Years	Registered Tonnage		Westbound Passages around the Horn to California, 1850-1860			
						Time in Days		
			Total	Average per Ship	Number	Average	Shortest	Longest
Donald McKay, East Boston	29	1850-1858	52,754	1,819	50	117½	90	185
Hugh R. McKay, East Boston	2	1854-1855	2,419	1,209	2	132	124	140
E. & H. O. Briggs, South Boston	20	1851-1858	22,150	1,107	60	137½	102	311
Paul Curtis, Medford, Chelsea, East Boston	17	1850-1857	20,597	1,212	39	131	98	177
Hayden & Cudworth, Medford	19	1850-1856	18,773	988	55	126	107	173
J. O. Curtis, Medford	17	1851-1858	18,318	1,077	46	128	106	158
Robert E. Jackson, East Boston (including one ship built by Jackson & Ewell and one by Elwell & Jackson)	12	1850-1857	17,320	1,443	17	122	106	144
Samuel Hall, East Boston	14	1850-1856	15,087	1,078	29	128	94	197
William Hall, East Boston	1	1854	1,180	1,180	—	—	—	—

(Continued on next page)

Recapitulation of Boston-built Clipper Ships, 1850-1859 Inclusive—Continued

Name of Builder	Number of Clippers Built	Years	Registered Tonnage		Westbound Passages around the Horn to California, 1850-1860			
						Time in Days		
			Total	Average per Ship	Number	Average	Shortest	Longest
Jotham Stetson, Chelsea (including one ship built at Medford and one at South Boston; also one built by Abner Stetson)	8	1851-1855	9,095	1,137	7	137	115	155
John Taylor, Chelsea	7	1851-1855	7,696	1,099	25	133	112	216
Isaac Taylor, Chelsea	1	1853	1,034	1,034	2	121½	110	133
Joshua T. Foster, Medford	6	1852-1858	6,233	1,039	14	134	101	170
Samuel Lapham, Medford	4	1852-1855	4,746	1,186	15	124	101	147
Joshua Magoun, Charlestown	5	1852-1856	4,446	889	12	139½	114	171
A. & G. T. Sampson, East Boston	3	1853-1854	3,521	1,174	6	136	114	210
George Thomas, Quincy	2	1854-1856	3,027	1,513	—	—	—	—
Daniel D. Kelly, East Boston	2	1853-1854	2,325	1,162	3	144	132	168
Miscellaneous, Boston	6	1852-1857	4,954	826	8	149	114	190
Total	175	1850-1858	215,675	1,233	390	129½	90	311

The Boston-built clippers constructed in the clipper ship decade (1850-1859) were built in the various sections of Greater Boston as follows:

Location of Yards	Clippers Built		Tonnage of Clippers Built	
	Number	Percentage of Total Number	Tons	Percentage of Total Tonnage
East Boston	76	43.43	110,184	51.08
Medford	53	30.29	54,476	25.26
South Boston	21	12.00	23,545	10.92
Chelsea	17	9.71	19,335	8.97
Charlestown	5	2.86	4,446	2.06
Quincy	3	1.71	3,689	1.71
Total	175	100.00	215,675	100.00

Whereas only 6 per cent of the number and 5¾ per cent of the total registered tonnage of the clippers built in New York during the clipper ship decade were for American owners located out of New York, about 14½ per cent of the number and 20⅓ per cent of the tonnage of Boston-built clippers constructed during the same period were for other than Boston and associated Massachusetts owners. Over 5 per cent of the number and about 8½ per cent of the tonnage of the clippers built in Boston during the years 1850-1859 inclusive were for British owners. Of all the clipper ships built by Donald McKay at East Boston during the clipper ship decade, 45 per cent of the number and about 53 per cent of the total registered tonnage were for other than Boston owners, and of the clippers built by the Halls at East Boston during the same period, one-third of the number and about 44 per cent of the tonnage were constructed to the order of New York and British owners.

The following statement shows the number of the clippers and their registered tonnage built at the various Boston yards during the years 1850-1859 inclusive (1) for owners located in Boston and environs and (2) for New York, Baltimore, Philadelphia, and British owners (i.e., for all other than Boston or local ownership). The identity of only the builders who constructed for out-of-town or foreign owners is set forth, and one vessel jointly owned by Boston and New York interests is considered as being owned one-half in Boston and one-half in New York.

Name of Builder	Boston Owners		U.S.A. Owners Outside of Boston		British Owners		Total Owners Outside of Boston		Total All Owners	
	No. of Ships	Tonnage	No. of Ships	Tonnage	No. of Ships	Tonnage	No. of Ships	Tonnage	No. of Ships	Tonnage
D. McKay	16	24,942	5	New York 10,259	7	15,356	13	27,812	29	52,754
			1	Baltimore 2,197						
			6	Total 12,456						
Halls	10	9,145	3	New York 4,255	2	2,867	5	7,122	15	16,267
P. Curtis	16	19,303	1	New York 1,294	—	—	1	1,294	17	20,597
Jackson	8½	12,477	1½	New York 1,767	—	—	1½	1,767	10	14,244
Sampsons	2	2,284	1	Philadelphia 1,237	—	—	1	1,237	3	3,521
Hayden & Cudworth	18	18,263	1	New York 510	—	—	1	510	19	18,773
J. O. Curtis	16	17,023	1	New York 1,295	—	—	1	1,295	17	18,318
Stetsons	7	7,851	1	New York 1,244	—	—	1	1,244	8	9,095
Thomas	1	1,486	1	New York 1,541	—	—	1	1,541	2	3,027
Total of these nine Boston builders	94½	112,774	14½	New York 22,165	9	18,223	25½	43,822	120	156,596
			1	Baltimore 2,197						
			1	Philadelphia 1,237						
			16½	Total 25,599						
Total all Boston builders	149½	171,853	16½	25,599	9	18,223	25½	43,822	175	215,675
Percentage of total	85.43	79.68	9.43	11.87	5.14	8.45	14.57	20.32	100.00	100.00

The following table is a record of the clipper ships built in Boston and New York, America's greatest centers for the production of such vessels, during the real clipper shipbuilding decade 1850-1859 inclusive. The number of ships built, the total registered tonnage and average tonnage per ship, the number of builders who launched two, five, ten, and fifteen or more clippers during the ten-year building period, and the relative performance of these Boston-built and New York-built clipper ships in the California around-the-Horn service—westbound passages—are set forth comparatively.

	Boston	New York
Number of clipper ships built	175	66
Total registered tonnage of clipper ships built	215,675	76,532
Average registered tonnage per ship	1,233	1,160
Number of westbound passages around the Horn to California made by these clipper ships during the years 1850-1860 inclusive	390	142
Number of westbound passages to California per ship, 1850-1860 inclusive	2.22	2.18
Average time in days of all westbound passages of clipper ships to California, 1850-1860 inclusive	129.5	123.6
Number of builders of two or more clippers	17	10
Number of builders of five or more clippers	11	5
Number of builders of ten or more clippers	7	2
Number of builders of fifteen or more clippers	5	1

The following table is a record of the clipper ships built in Boston by Donald McKay and in New York by William H. Webb during the real clipper shipbuilding decade 1850-1859 inclusive. The number of ships built (for all owners and for American registry only), the total registered tonnage and average tonnage per ship, and the relative performance of these McKay-built (Boston) and Webb-built (New York) clipper ships in the California around-the-Horn westbound run are set forth comparatively.

	McKay, Boston	Webb, New York
Number of clipper ships built	29	16
Number of clipper ships built for U.S.A. owners	22	16
Number of clipper ships put in California run	16	14
Total registered tonnage of clipper ships built	52,754	20,928
Average registered tonnage per clipper	1,819	1,308
Number of westbound passages around the Horn to California made by these clipper ships during the years 1850-1860 inclusive	50	44
Number of such westbound passages per clipper ship	1.70	2.75
Number of such westbound passages per U.S.-owned clipper ship	2.27	2.75
Number of such westbound passages per ship actually placed in run	3.10	3.14
Average time in days of all westbound passages of clipper ships to California, 1850-1860 inclusive	117.5	119.3
Shortest time in days of a westbound passage	90	94
Longest time in days of a westbound passage	185	174
Number of clippers built making a run under 100 days	4	1
Number of clippers built making a run under 105 days	6	4
Number of clippers built making a run under 110 days	9	9
Number of clippers built making a run under 115 days	10	10
Number of clippers built making a run over 165 days	1	1
Number of clippers built making a run over 150 days	3	1
Number of clippers built making a run over 140 days	6	5

An Analysis of Early Clippers and Fast Sailers in Comparison with Real Clipper Ships in Service

Some of the early clippers and ships not classed as clippers built in Boston during the five years (1845-1849 inclusive) preceding the clipper shipbuilding decade of 1850-1859 inclusive did some good sailing not only in the America-China (India and oriental) trade, for which they were designed and built, but also in the Cape Horn service to California and in the China-England service via the Cape of Good Hope. This trade was opened by the British to American and other foreign ships in 1850. The following table is a representative list of early clippers and fast sailers of a transitional type built in Boston during the years 1845-1849 inclusive, to which have been added the eight vessels with clipper sharp-lined models and large sail spread launched from Boston shipyards in 1850—the product of five different yards and building firms and of six designers, built for eight different owners.

Year Built	Name and Registered Tonnage	Builder	Registered Dimensions in Feet			Owner
			Length	Beam	Depth	
1845	CORSAIR (301 tons)	Jotham Stetson, Medford	115	23.8	18.8	Augustus Hemenway, Boston
1847	SAXONVILLE (bark; 422 tons)	John Taylor, Medford	125.5	27.1	20.5	Josiah W. Blake et al., Boston
1847	HORSBURGH (543 tons)	Hayden & Cudworth, Medford	141	28.8	20.7	Daniel C. Bacon et al., Boston
1847	ANSTISS (595 tons)	Hayden & Cudworth, Medford	140	30.4	20.5	Wm. S. Wetmore, New York
1847	URIEL (799 tons)	Wm. Hall	156.3	33.4	24.4	Page, Crocker, Waldron, et al., Boston
1848	JENNY LIND (533 tons)	Donald McKay, East Boston	141.5	28.5	22	Fairbanks, Wheeler, and McKay, Boston
1848	ABAELLINO (606 tons)	J. T. Foster, Medford	144.5	30.3	22	James Tirrell et al., Boston
1848	LIVING AGE (727 tons)	Jotham Stetson, Medford	150.2	32.5	23.3	Appleton, Reed, et al., Boston
1849	HAZARD (404 tons)	Samuel Hall, East Boston	122.5	27.3	13.2	Henry Gardner, Salem
1849	ARGONAUT (575 tons)	Samuel Lapham, Medford	147.4	29	21	John Ellerton Lodge, Boston
1849	LANTAO (593 tons)	Samuel Hall, East Boston	135.5	31	20.2	Daniel N. Spooner, Boston
1849	SAMUEL APPLETON (781 tons)	Paul Curtis, Medford	156.5	32.9	21.7	Daniel P. Parker, Boston
1849	REINDEER (800 tons)	Donald McKay, East Boston	156.5	33.4	22	Forbes, Upton, and Sampson & Tappan, Boston
1850	GEORGE E. WEBSTER (bark; 354 tons)	Hayden & Cudworth, Medford	121.5	27	11.8	Wade, Reed, et al., Boston
1850	KREMLIN (bark; 504 tons)	Paul Curtis, Medford	127	27.4	19.5	J. S. Emery & Co., Boston
1850	RACE HORSE (bark; 530 tons)	Samuel Hall, East Boston	125	30	16	I. Goddard & Co., Boston
1850	JOHN BERTRAM (1,080 tons)	Elwell & Jackson, East Boston	180	37	20	Glidden & Williams et al., Boston
1850	SURPRISE (1,261 tons)	Samuel Hall, East Boston	183.2	38.7	22	A. A. Low & Bro., New York
1850	WITCHCRAFT (1,310 tons)	Paul Curtis, Chelsea	187	39	22	Pickman and Rogers, Salem
1850	GAME COCK (1,392 tons)	Samuel Hall, East Boston	190.5	39.8	22	Bacon, Taylor, et al., New York
1850	STAG HOUND (1,534 tons)	Donald McKay, East Boston	215	39.7	21	Upton and Sampson & Tappan, Boston

Of the twenty-one vessels set forth in the preceding list of fast sailers and clippers built in Boston during the period 1845-1850 inclusive, only fourteen made one or more westbound

passages around Cape Horn following the discovery of gold in California. (Two others made runs in the China-Britain tea trade.) The following statement records the comparative performances of these fourteen Boston-built early fast sailers and clippers in the California service:

Name and Registered Tonnage	Year Built	Years in Cape Horn Trade	Passages Westbound around the Horn to San Francisco			
			Number	Time in Days		
				Average	Fastest	Slowest
SURPRISE (1,261 tons)	1850	1850-1854	3	110.7	97	119
RACE HORSE (bark; 530 tons)	1850	1850	1	112	112	112
GEORGE E. WEBSTER (bark; 354 tons)	1850	1850	1	113	113	113
STAG HOUND (1,534 tons)	1850	1851-1858	6	117.5	108	127
LANTAO (593 tons)	1849	1853	1	121	121	121
JOHN BERTRAM (1,080 tons)	1850	1851-1853	3	122	106	144
WITCHCRAFT (1,310 tons)	1850	1851-1860	6	127	98	170
LIVING AGE (727 tons)	1848	1852	1	127	127	127
HORSBURGH (543 tons)	1847	1852-1858	2	129.5	128	131
SAMUEL APPLETON (781 tons)	1849	1852-1855	3	138	128	145
ARGONAUT (575 tons)	1849	1849-1852	2	138.5	138	139
GAME COCK (1,392 tons)	1850	1851-1855	4	139.7	115	185
REINDEER (800 tons)	1849	1849-1856	5	142	131	162
URIEL (799 tons)	1847	1850	1	158	158	158
Total and averages			39	131½	97	170

Two of the above-stated Boston-built ships claimed to have established speed records between North Atlantic ports and California. One was the *Reindeer,* which reached San Francisco on April 2, 1850, 131 days after clearing New York. This was a record if the dates of clearance from a North Atlantic port and arrival at San Francisco are considered, as it beat the previous 139-day runs of the *Memnon* and *Argonaut;* but the *Reindeer* claimed a passage of 122 days net, and when claims for net sailing time are considered, the issue becomes confused. The *Memnon* had previously claimed a 122-day net sailing run; the *Grey Hound,* with an actual passage based on elapsed time of 144 days, had made two claims, one of 119 days and another of 116 days net, both for the same run; the *Grey Eagle,* which required 147 days to make the Golden Gate after leaving Delaware Capes, had claimed a 117-day passage, later reduced to "113 days net sailing at sea." The second of the before-enumerated Boston-built ships to claim a speed record in the around-the-Horn to California run was the *Surprise,* and hers was an unquestioned record. Her command set the passage from New York to San Francisco as 96 days 15 hours; but if the ship sailed on December 13, 1850, as New York records state, and arrived at San Francisco on March 18, 1851, as per official records, this passage would be one of only 95 days. Four of the fourteen Boston ships made westbound around-the-Horn passages of 110 days or better; two of these were designed by Samuel H. Pook, and one was a Donald McKay ship. Eleven New York-built ships of the same period and type made twenty-five westward passages and averaged 123½ days, which can be compared with fourteen Boston-built ships making thirty-nine passages and averaging 131½ days for the runs. Many of the Boston-built ships were quite small, but it was the larger of these vessels that made the long passages of 170 and 185 days.

One of the Boston-built ships that shows up fairly well in the records of sailing performances around the Horn and was a good, well-designed and built, fast ship was the *John Bertram* of 1,080 tons, launched by Elwell & Jackson from that firm's East Boston yard in 1850. The *"Bertram,"* it is said, was built in only sixty-one days, but she withstood thirty-three years of hard driving and made many outstandingly fast and record voyages before she foundered in 1883. On September 2, 1851, she anchored in Rio de Janeiro Harbor 58 days out from San Francisco—a record. On November 1, 1854, she sailed from Manila and arrived in Boston Harbor on January 30, 1855, after a record passage of 90 days. In addition to the fast Cape Horn run of 98 days made by the *Witchcraft* (1,310 tons; built by Paul Curtis, of Chelsea, from designs by Pook), this fast ship made many short passages, including a record run in 1851 of 62 days from Rio de Janeiro westward around the Horn to San Francisco, where she arrived August 11, having sailed from Rio on June 10. Another Pook clipper, the *Surprise* (1,261 tons; built by Samuel Hall, East Boston), in addition to three fast westbound runs around the Horn (one of 97 days), made a passage of 82 days in 1857 from Shanghai to New York, leaving Shanghai January 1 and arriving in New York Harbor on March 24. This ship was a fast sailer, a very consistent performer, and a "fine, handy sea boat."

Seven early-built clippers and fast sailers launched from Boston shipyards during the years 1847-1850 inclusive made one or more passages, loaded with tea, in the China-Britain trade. However, the only Boston-built ships launched prior to 1851 to gain distinction in this trade were the *Surprise* and the *Samuel Appleton,* although the little *Argonaut* (575 tons; built by Samuel Lapham, of Medford, in 1849) made two satisfactory and highly profitable tea passages to London—one of 123 days from Shanghai in 1853. The fastest run of any of these Boston-built ships launched during the period 1845-1850 was a passage of 106 days made by the fast clipper *Surprise* in 1852. This ship cleared Canton July 19, left Anjer on August 18, and made a run from there to the Downs in 76 days, arriving November 2; London, and her final destination, was made the next day, November 3, 1852. The *Samuel Appleton* also made a good tea passage from China to London in 1853. This Medford-built 781-ton ship (launched by Paul Curtis in 1849) cleared Shanghai February 9, passed Anjer March 4, called at St. Helena April 22, and arrived at London May 31, 1853, 111 days out from Shanghai, 88 days from Anjer, and 39 days from St. Helena.

The following statement records the comparative performances of these Boston-built ships in the China-Britain tea trade. The voyages originated at Shanghai (four) and Whampoa, Canton, Woosung, and Hong Kong (one each) and, as far as these sailing records are concerned, ended at London (four), Deal (three), and the Downs (one).

Name and Registered Tonnage	Year Built	Years in China-Britain Tea Trade	Passages Eastward around Cape of Good Hope to London (Deal)			
			Number	Time in Days		
				Average	Fastest	Slowest
SURPRISE (1,261 tons)	1850	1852	1	106	106 (from Canton)	106
SAMUEL APPLETON (781 tons)	1849	1853	1	111	111 (from Shanghai)	111
ARGONAUT (575 tons)	1849	1850-1853	2	133	123 (from Whampoa, 143 days; from Shanghai, 123 days)	143
KREMLIN (bark; 504 tons)	1850	1852	1	136	136 (from Shanghai)	136
STAG HOUND (1,534 tons)	1850	1855	1	141	141 (from Woosung)	141
JOHN BERTRAM (1,080 tons)	1850	1852	1	160	160 (from Shanghai)	160
SAXONVILLE (bark; 422 tons)	1847	1860	1	167	167 (from Hong Kong)	167
Total and averages			8	136	106	167

Seven Boston-built early clippers and fast sailers launched during the period 1845-1850 made eight passages in the China-Britain tea trade, and the average length of the runs was 136 days (fastest, 106 days; slowest, 167 days). This performance can be compared with that of the seven New York-built early clippers and fast sailers of similar type, built during the same years, which made eleven tea passages, all told, and averaged 123 days for the runs (fastest, 96 days; slowest, 171 days). The average tonnage of the seven Boston-built ships was 880 tons and that of the seven New York-built ships 969 tons. The slowest run in each group of ships was made by the smallest vessels; among the Boston-built craft, the bark *Saxonville* of 422 tons made a passage of 167 days, and the smallest New York vessel, the bark *Greenpoint* of 500 tons, made a run of 171 days. Six of the seven New York-built ships averaged passages of 135 days or better, but only three of the Boston-built vessels averaged passages of this time.

The average length of passages around the Horn westbound from a North Atlantic port to San Francisco is the best yardstick for measuring the relative speed performance of sailing vessels. The westward run around Cape Horn against the prevailing wind, "greybeard" combers, and current is generally much tougher than the eastbound rounding of the Cape, and a passage in the winter months of the Southern Hemisphere (corresponding to the summer months in the North), with the usually associated gales and at times ice, is an entirely different proposition from the rounding of the Horn in the less stormy and more pleasant summer months, not to mention the occasional possibility of favorable easterly winds. The clipper *Young America,* built by W. H. Webb, New York, holds the record for the fastest rounding of Cape Horn westbound in 6 days from 50° S. Atlantic to 50° S. Pacific. Two McKay-built (East Boston) clippers and one Hayden & Cudworth-built (Medford) clipper covered the distance in 7 days, and of the five passages around the Horn in 8 days, three were negotiated by Webb-built clippers and one each by ships built by McKay and Hayden & Cudworth. Some of the fastest clippers took seven or eight weeks to round the Horn under very difficult conditions of wind and sea, which they were unfortunate enough to encounter.

Under unusually favorable sailing conditions, three clipper passages around the Horn westbound from New York to San Francisco were made in 89-90 days (the record eastbound is 76 days), but several clippers occupied from 200 to 300 days, and over, on the run. The big and powerful four-masted steel shipentine *Edward Sewall* took 67 days in the spring of 1914 to round the Horn westbound, and in 1908 the British-built *Kenilworth,* with a reputation for speed and many fast passages to her credit, reached the Golden Gate 579 days out from her port of departure after 423 days at sea. The clippers *Rapid* and *Hound,* in 1853, took 225 days and 343 days, respectively, on the passage from port to port. (The *Hound* was 115 days at Rio de Janeiro for repairs.) During the same year, the *Juniper* made a passage westbound of 212 days, on which she was held up a full seven weeks off Cape Horn.

There is a great element of luck attached to every voyage of any wind-propelled ship, but by far the best criterion of the speed of ships under canvas is the average time—preferably over a long term of years—of a sailing ship in regular service covering the most difficult part, either outward or homeward, of her round voyages. For the California run, this is the westbound, or outward, passage for eastern-owned vessels against wind, sea, and current around the Horn; for the transatlantic trade, it is the westward, or homeward, passage for American-owned ships against the prevailing westerlies. Any sailing ship might be fortunate enough to encounter conditions of weather, wind, and sea that would be favorable for a fast voyage on a single passage or an occasional run. Again, a ship propelled by wind might be expected to make a good record over a relatively long period of time if her voyages could be "spotted," with almost sole attention being given to the season of the year and average—and expected—conditions of wind and sea over the various parts of the course. A ship in steady service, sailing year after year in a certain trade, with regard given only to loading, unloading, and sailing between ports expeditiously and economically, had no opportunity to be placed artificially to

make good runs and avoid bad ones; therefore, the average steady sailing performance of a ship for a term of years, in a regular run, is just as true a gauge of a vessel's speed at sea under canvas as a single brilliant or slow voyage, which may be pleasing or disappointing and in either case positively deceiving for purposes of comparison.

Some of Donald McKay's biggest and most powerful clippers were constructed "on spec" for the builder's account, and such ships as the *Sovereign of the Seas* and *Great Republic* had to be operated for a time by McKay. The *Great Republic* was badly burned when loaded at the pier in New York before she commenced her maiden voyage and was thrown on the hands of the insurance companies. The *Sovereign of the Seas* had to be turned over to agents and temporary owners of record for sale. A good deal of the excessive publicity given McKay's clippers was inspired by the fact that McKay always seemed to have an expensive big ship for sale; he used the press to advertise his wares and thus by sheer propaganda to help him sell his ships for a good price. After the maiden voyage around the Horn of the *Sovereign of the Seas,* with the big 2,421-ton ship still unsold, McKay's publicity mill ground out "all sorts of extravagant statements with nauseating claims and insinuations," including "a challenge to the world." The ire of Webb, New York shipbuilder, was kindled, so he challenged the then stated owners of the *Sovereign of the Seas* "to put up or shut up" and expressed a willingness to bet $10,000 that his medium clipper *Young America* (1,961 tons)—461 tons less register than the *Sovereign of the Seas*—would beat McKay's extreme clipper on a run, loaded, from New York to San Francisco. The owners of record of the *Sovereign of the Seas,* with a ship to sell, declined the challenge and stated that "the state of the California freight market" precluded "the possibility of laying her on in that direction with any advantage"; for they naturally had much to lose as salesmen if their ship was defeated in such a match race. (The previous year Webb's *Swordfish* of only 1,036 tons, a fuller ship, had beaten McKay's much larger, extreme, sharp-lined clipper *Flying Fish* of 1,505 tons by four days in a race to the Golden Gate.) The California market could not have been so bad at the time (and it was very much worse later, when the *Sovereign of the Seas,* with permanent owners, entered the run), for twelve clippers sailed to San Francisco between May 31 and June 30. Two Webb-built ships, the *Flying Dutchman,* 106 days out (sailing from New York June 3), and the *Young America,* 110 days out (sailing from New York June 10), made the quickest runs, the average of the other ten clippers being 135¾ days. Of the entire fleet of twelve ships sailing west during the month, the three Webb-built medium clippers averaged 111⅔ days on the passage west, and the four New York-built ships averaged 114¼ days. The four Boston-built clippers averaged 124½ days, and the two Baltimore-built ships averaged 128 days.

The sailing performance of a ship around the Horn compared with the run of some other vessel should take into consideration (1) the type of model and rig, whether she was an extreme, medium, or half clipper, whether she was deep laden or of relatively light draft, and how much cargo she carried in weight in relation to her registered tonnage—an index of model fullness; (2) size, the best practical index being the measured registered tonnage, new measurement—in use during the clipper shipbuilding decade; (3) season of the year and usual direction and velocity of winds and conditions of sea experienced at the time of the passage; (4) age of ship and physical condition, with due regard to reputation of builder and the custom of owners as to repairs and conditioning; (5) quality, experience, and record of command and competency of officers and crew. A little ship could not possibly compete with a big ship of the same quality of model and sail plan in the Cape Horn service. A small ship might make a phenomenally fast single passage under very favorable conditions, which were occasionally met, but average performances for years prove the impossibility of a little vessel's competing with a big ship on the Cape Horn run. Lightly sparred and rigged clipper ships with great sail spread might make one or more fast runs in the trade, but ultimately dismasting and putting into some port en route became inevitable, and the more extreme the clipper the greater the possibility of the ship's experiencing serious accidents and long drawn-out passages.

The *Flying Cloud,* built by McKay at East Boston, was an unusually fast extreme clipper. However, after five splendid runs westward around the Horn, on which she encountered phenomenally good luck and averaged 102 days per passage, she met some bad weather in 1856 on Voyage No. 6. She was in Rio de Janeiro 17 days for repairs en route, and it took her 185 days to reach San Francisco. After this experience, the *Flying Cloud* was laid up, as she had been hard driven and was "too expensive to operate." When business picked up again, her spars and canvas were cut down, but the ship was old and worn before she reached what should have been her prime, and she was positively not designed to make money in competitive trade. The *Young America,* built by Webb, of New York, was a far better carrier than the *Flying Cloud* and a clipper, but not an extreme clipper. She sailed from New York, also in March 1856, shortly after the *Flying Cloud,* and came safely through the bad spell of weather that so seriously injured the McKay clipper. Even though the jib boom of the *Young America* was broken in three places and part of her bulwarks stove in, she made the passage to San Francisco in 107 days, making her average for her three voyages up to that time—on none of which had she encountered particularly favorable sailing conditions—109 days. On her fourth westward passage, the "time jinx" frowned seriously on the *Young America;* she, too, in 1859, when six years old, had to put into Rio de Janeiro for repairs because of dismasting, and she did not reach San Francisco until 174 days after leaving New York. The *Young America,* however, was a well-designed and excellently built moderate clipper, with good cargo-carrying capacity. Her spars were cut down in the interest of economical operation, which also reduced the possibility of further dismasting—a constant threat to all lofty and oversparred clippers on the Cape Horn run. She made her fastest westward around-the-Horn run (102 days) in 1880. When the *Young America* three years later, at the age of thirty years, withdrew from that trade to operate in other waters, she had a record of having made twelve passages westward to San Francisco, with an average of 110½ days for the runs.

The medium clipper *Andrew Jackson* (1,679 tons), built at Mystic, Conn., in 1855, had a different sort of record from that of most of the clippers in the California run. When she appeared in the service, she was branded "a rather full-bodied vessel and not a real clipper." The "*Jackson*" made a maiden voyage to San Francisco in 128 days, and the shipping fraternity considered this "a fair performance for a ship of her type." Her commander, builders, and owners, however, thought otherwise; they were disappointed in the ship and decided to make radical changes in her sail plan that involved the stepping of masts. With a new arrangement of spars, the *Andrew Jackson,* which had been classed as "no real clipper," made history under sail in the world's worst trade routes—around the Horn and transatlantic westbound. She made four more runs to San Francisco during the clipper ship decade, averaging 98½ days, and one of these (a passage of 89 days 4 hours) beat the best time of the extreme clipper *Flying Cloud.*

Aside from the design and size of a ship and the time of year and sailing conditions (wind and sea) under which a voyage was made, the sailing performance was affected by conditions of lading, draft and trim, and weight of cargo aboard. Many a ship laden for speed rather than for profits has been given an advantage in length of voyages in comparison with a ship operated solely in the interest of carrying the biggest possible money-making cargo. Again, the quality of command was an important factor in the performance of vessels under canvas. In the first five decades of the nineteenth century, America was developing the finest sailing masters that the world has ever known. In the early fifties, the demand for "hard-driving" speed captains for a newly built, big fleet of fine-lined, heavily canvased clippers exceeded the supply. New York and Boston owners bid against each other to get the cream of the available, experienced ship captains who had "won their spurs" and made a good record for fast passages. Merchant competed with merchant and builder with builder in striving to obtain for their ships the best possible command and mates, and naturally the most highly publicized builders, owners, and ships were favored by captains and officers, who

sought connections that would tend to increase their reputations. In this respect, the ships of Donald McKay, of Boston, and William H. Webb, of New York, noted builders of fast vessels, enjoyed an advantage over the product of other designers and constructors.

Another factor of importance in the sailing performance of a ship was the luck and the result of judgment—good or bad—of the skipper. If a master followed explicitly Maury's sailing charts and recommendations, he was on safe ground and would make the best record over a long period of time. If he became adventuresome, overambitious, and egotistical, deeming his own judgment superior to the advice of Maury (which was based on the accumulated records of wind, sea, and currents), he generally had cause to regret it. An incident of this sort occurred on the maiden voyage of the Webb-built *Young America.* This clipper left New York June 10, 1853, and on July 8 (in Lat. 8° 00′ N., Long. 29° 46′ W.) caught up with the little Maine-built *Windward,* which made "no pretensions to speed." The "*America*" passed the *Windward,* sailed to the eastward, and her command (Capt. D. S. Babcock) ignored Maury's suggestions as to course. Fifty-six days later, the fast *Young America* again sighted the average sailer *Windward* (in Lat. 58° 58′ S., Long. 70° 02′ W.), and the log of the little Maine-built ship reads: "Ship *Young America* on my lee bow 2 or 3 miles dist. Hoist my ensign and then my private flags; he wont answer me: acts as though ashamed of the beat that I have given him up to here [from Lat. 8° N. to 59° S.]: If a breeze springs up he runs right away from me as he did before. If he does not look out sharp I shall be close on him at S Frisco." Here is a case of the hare and the tortoise. Babcock, in a very fast ship, had been outsailed for fifty-six days by a much smaller and slower ship simply because he had ignored Maury's suggestions based on organized and plotted, accumulated experience. During the balance of the voyage, Babcock followed the Maury charts. He rounded the Horn nine days ahead of the *Windward* and passed through the Golden Gate thirty-four days before the smaller vessel. The passage out was completed in 110 days as against 155 days for the *Windward,* and this after being held even for fifty-six days. If Captain Babcock had been less adventuresome and conceited, he probably could have made San Francisco on this run in 95 to 100 days and saved ten to fifteen days on the passage. His attempt "to raise a breeze" was not giving the ship a fair chance to show how she could sail, but such a fact is not revealed in cold-blooded statistics of the length of voyages in days, port to port.

Some of the clippers were commanded by "hard-driving" and "lucky" captains, others by courageous and resourceful men who—no matter what they did—were unfortunate and out of luck. In the era of the California Gold Rush, when "speed was king," many a ship was built too hurriedly for an excellent construction job. New yards sprang up along the entire Atlantic ocean and river water front, the demand for master builders exceeded the supply, and much of the work of shipwrights, caulkers, sparmakers, riggers, etc., was performed by men who were not experienced artisans. Everything was done with a rush, and a premium was often paid for speed in getting a job done—not for quality of construction. When the new sharp-lined, oversparred, and heavily canvased ships of a "greyhound" type were sent to sea, there was a deficiency of experienced officers and competent crews to handle such ships effectively and get out of them the possibilities of the design. Some builders built well and did not permit their product to be detrimentally affected by the speed craze in constructing and sending ships to sea. Some ships were fortunate, as were their owners and their builders, in being commanded, officered, and operated by experienced, competent, and "lucky" men. Some race horses are given good rides—and brainy ones—by their jockeys, and others are handicapped by the man in the saddle and his poor judgment. Clipper ships were like Thoroughbred, nervous race horses. Some made records because of phenomenal, fortuitous circumstances, others because they were "given an unusually good ride"; but many ships of equal quality in design were relatively unfortunate, some with weather and some with command, and a great majority of the ships, if they were in service for any length of time, suffered one or more bad voyages through the operation of the law of averages. Other good ships making only one or two passages in a

certain trade were unfortunate in being placed in the run when affecting conditions of season, wind and sea prevented a good showing. All these factors and many more of lesser importance have to be considered in comparing the performances of sailing ships and particularly of the "greyhounds of the sea" during the clipper ship era.

Record or "Near Record" Sailing Performances of Clipper Ships Built in the Boston Area and in Massachusetts

The following list is presented of outstanding sailing performances of clipper ships built in the Greater Boston area. All were claimed to be record or "near record" runs between ports or points over trade routes on the Seven Seas.

A. *Built by Donald McKay, East Boston*

FLYING CLOUD (1,782 tons; built 1851)

1. *New York to San Francisco*—89 days 21 hours.
   Sailed New York June 2, 1851.
   Arrived San Francisco August 31, 1851.
   Capt. Josiah P. Creesy reported a passage of "89 days 21 hours, anchor to anchor."
2. *San Francisco to Honolulu*—8 days 8½ hours.
   Sailed San Francisco September 26, 1852.
   Passed Honolulu October 5, 1852.
   Capt. Josiah P. Creesy reported "a record run of 8 days 8½ hours."
3. *New York to San Francisco*—89 days 8 hours.
   Sailed New York January 21, 1854.
   Arrived San Francisco April 20, 1854.
   Capt. Josiah P. Creesy reported, "Sailed from anchor at noon Jan. 21 in tow; made sail and cast off from tug 3:30 p.m. Made record run of 89 days 8 hours New York to San Francisco." The *Flying Cloud* was not in sight off the coast at sundown April 20, 89 days 6 hours from her anchor in New York.
4. *New York to Hong Kong via San Francisco*—126 days.
   Sailed New York January 21, 1854.
   Arrived Hong Kong June 7, 1854.
   Capt. Josiah P. Creesy reported "126 days at sea—a record over the course."

JAMES BAINES (2,515 tons; built 1854)

1. *Boston to Liverpool*—12 days 6 hours.
   Sailed Boston September 12, 1854.
   Arrived Rock Light (Liverpool) September 25, 1854.
   Capt. Charles McDonnell reported, "A record run of 12 days 6 hours from Boston Light to Rock Light." (Also stated as 12 days 9 hours, with best day's run 342 miles.)
2. *Liverpool to Melbourne*—63 days (also 63¾ days).
   Sailed Liverpool December 10, 1854.
   Arrived Melbourne February 12, 1855.
   Capt. Charles McDonnell reported, "A passage of 63 days from Liverpool to anchor inner harbor, Hobson's Bay. Did not clear land until Dec. 16 and ran from land (Irish Channel) to land (Cape Otway) in less than 58 days—the record." (Reported best day's run, 423 miles.)
3. *Calcutta to Liverpool*—77 days.
   Arrived Liverpool April 16, 1858.
   Capt. Charles McDonnell reported, "Made a passage from Sand Heads in 77 days."

GREAT REPUBLIC (3,357 tons; built 1853)

New York to equator (Atlantic)—15 days 19 hours.
Sailed New York December 7, 1856.
Crossed equator December 23, 1856.
Capt. Joseph Limeburner reported, "Crossed the line December 23 in 15 days 19 hours—the record."

LIGHTNING (2,084 tons; built 1854)

1. *Boston to Liverpool*—13 days 21 hours.
   In February-March 1854, reported, "13 days 21 hours from Boston Light to Liverpool; best day's run, 436 miles."
2. *Melbourne to Liverpool*—63 days (64⅛ days).
   Sailed Melbourne August 20, 1854.
   Arrived Liverpool October 23, 1854.
   Capt. James Nicol Forbes reported, "Took pilot Oct. 22 from Melbourne Aug. 20 in 63 days, pilot to pilot, and 64 days 3 hours, port to port." (Best day's run reported as 412 miles.)

BALD EAGLE (1,704 tons; built 1852)
San Francisco to New York—78 days.
Arrived New York May 19, 1854.
Capt. A. H. Caldwell reported, "A passage from San Francisco of 78 days."

STAFFORDSHIRE (1,817 tons; built 1851)
Calcutta to Boston—82 days.
Sailed Saugor January 26, 1852.
Arrived Boston April 20, 1852.
Capt. Josiah Richardson reported, "Left Saugor 8 p.m. Jan. 26. Anchored at Boston 9 a.m. April 20—a passage of 82 days."

B. *Built by James O. Curtis, Medford*

TELEGRAPH (1,069 tons; built 1851)
1. *Valparaiso to San Francisco*—34 days.
Arrived at San Francisco April 16, 1854.
Capt. Kimball Harlow reported, "Arrived at San Francisco April 16, 1854, in 34 days from Valparaiso."
2. *Valparaiso to Boston*—58 days.
Sailed Valparaiso June 20, 1853.
Arrived Boston August 20, 1853.
Capt. George W. Pousland reported upon arrival, "A passage of 58 days from Valparaiso to Boston" (Boston ATLAS, August 21, 1853).

ONWARD (874 tons; built 1852)
San Francisco to Singapore—43 days.
Arrived Singapore December 15, 1856.
Capt. E. A. Luce, upon arrival, "claimed a record passage of 43 days between San Francisco and Singapore" (Singapore TIMES, December 23, 1856).

OCEAN TELEGRAPH (1,495 tons; built 1854)
Callao, Peru, to New York—58 days.
Sailed Callao April 28, 1855.
Arrived New York June 25, 1855.
Capt. George H. Willis reported upon arrival New York morning of June 25, 1855, "a fast run of 58 days from Callao" (New York HERALD, June 26, 1855).

EAGLE WING (1,174 tons; built 1853)
1. *Woosung to New York*—84 days.
Sailed Woosung November 23, 1855.
Arrived New York February 15, 1856.
Capt. Eben H. Linnell reported "a passage of 84 days" (New York HERALD, February 20, 1856).
2. *London (Downs) to Hong Kong*—83 days 12 hours.
Sailed Downs April 17, 1855.
Arrived Hong Kong July 10, 1855.
Capt. Eben H. Linnell reported on arrival, "Left Downs 8 a.m., dropped pilot 9:30 a.m. April 17, arrived here July 10 after passage of 83 days 12 hours from pilot to pilot; was anchored inside the Ladrones becalmed the night of July 9."
3. *Hong Kong to New York*—82 days.
Arrived New York June 3, 1859.
Capt. Thomas Worth reported on arrival "an 82-day passage from Hong Kong" (New York HERALD, June 4, 1859).

FLYING MIST (1,183 tons; built 1856)
1. *Caldera, Chile, to Chesapeake Bay*—51 days.
Sailed from Caldera August 23, 1857.
Arrived New Point, Chesapeake Bay, October 13, 1857.
Capt. Eben H. Linnell reported "a record run of 51 days between ports."
2. *Cape Horn to Chesapeake Bay*—37 days.
Arrived New Point, Chesapeake Bay, October 13, 1857.
Capt. Eben H. Linnell, upon arrival, reported "a record run of 37 days from Cape Horn to the Chesapeake."

C. *Built by Paul Curtis, Chelsea, Medford, and East Boston*

WITCHCRAFT (1,310 tons; built 1850)
Rio de Janeiro to San Francisco—62 days.
Sailed Rio de Janeiro June 10, 1851.
Arrived San Francisco August 11, 1851.
Capt. William C. Rogers, upon arrival, reported "a record run of 62 days from Rio."

COURSER (1,024 tons; built 1851)
Cape of Good Hope to New York—38 days.
Passed Cape of Good Hope November 22, 1852.
Arrived New York December 30, 1852.
Capt. William Cole, upon arrival from Canton, reported "a fast run of 38 days from the Cape of Good Hope" (New York HERALD, December 31, 1852).

BEVERLY (676 tons; built 1852)
Boston to Calcutta—85 days 16½ hours.
Sailed Boston August 30, 1852.
Arrived Calcutta November 23, 1852.
Captain Chase reported upon arrival, "Sailed Boston Light 7 p.m., August 30; took pilot off Sand Heads 11:30 a.m., Nov. 23—a passage of 85 days 16½ hours, pilot to pilot."

GOLDEN WEST (1,441 tons; built 1852)
Coast of Japan to San Francisco—20 days.
Sailed coast of Japan May 13, 1856.
Arrived San Francisco June 2, 1856.
Captain Putnam reported upon arrival, "Made a transpacific run in 20 days, averaging 243 miles per day and over 10 knots per hour for the entire crossing."

D. *Built by E. & H. O. Briggs, South Boston*

NORTHERN LIGHT (1,021 tons; built 1851)

1. *San Francisco to Boston*—76 days 6 hours.
   Sailed San Francisco March 13, 1853.
   Arrived Boston May 29, 1853.
   Capt. Freeman Hatch reported upon arrival "a record passage of 76 days 6 hours."
2. *San Francisco to Cape Horn*—38 days.
   Sailed San Francisco March 13, 1853.
   Passed Cape Horn April 20, 1853.
   Capt. Freeman Hatch, upon arrival at Boston, reported, "We made a record run from San Francisco to the Cape of 38 days."

SOUTHERN CROSS (938 tons; built 1851)

San Francisco to Calcutta—56 days.
Arrived Sand Heads, Calcutta, December 25, 1851.
Capt. Levi Stevens, upon arrival, reported "a run of 56 days net from San Francisco."

METEOR (1,068 tons; built 1852)

50° S. Pacific to equator (Pacific)—15½ days.
Captain Melville, upon arrival at San Francisco, July 23, 1859, reported—after the passing of Cape Horn—"a run north of 15½ days from 50° S. Pacific to the equator."

JOHN LAND (1,054 tons; built 1853)

Calcutta to Boston—88 days.
Sailed Saugor November 28, 1856.
Arrived Boston February 24, 1857.
Capt. Warren H. Bearse reported upon arrival "a passage of only 88 days from India."

E. *Built by Samuel Hall, East Boston*

SURPRISE (1,261 tons; built 1850)

Shanghai to New York—82 days.
Sailed Shanghai January 1, 1857.
Arrived New York March 24, 1857.
Capt. Charles Ranlett, upon arrival, reported a passage of "a few hours over 82 days."

MERMAID (bark of 533 tons; built 1851)

Shanghai to San Francisco—31 days.
Arrived San Francisco August 23, 1865.
A 31-day transpacific crossing and a record passage between the ports (New York HERALD, August 30, 1865).

WIZARD (1,601 tons; built 1853)

1. *New York to Singapore*—78 days.
   Sailed New York August 10, 1854.
   Arrived Singapore October 27, 1854.
   Capt. S. H. Slate, upon arrival, reported "a passage of 78 days."
2. *Manila to New York*—84 days.
   Sailed Manila January 11, 1861.
   Arrived New York April 5, 1861.
   Captain Woodside, upon arrival, reported "a record passage of 84 days from Manila to New York" (New York HERALD, April 6, 1861).

F. *Built by Samuel Lapham, Medford*

PHANTOM (1,174 tons; built 1852)

1. *Boston to Rio de Janeiro*—23 days.
   Sailed Boston January 6, 1853.
   Off port Rio de Janeiro January 30, 1853.
   Capt. Alvin H. Hallett reported, "Were off port Rio de Janeiro proceeding south on the 23rd day out."
2. *Callao, Peru, to Rio de Janeiro*—32 days.
   Arrived Rio de Janeiro October 18, 1853.
   Capt. Alvin H. Hallett reported, "Arrived at Rio in 32 days from Callao."

NOR'WESTER (1,267 tons; built 1854)

Boston to Calcutta—86 days 21½ hours.
Sailed Boston Light June 23, 1855.
Arrived Sand Heads, Calcutta, September 17, 1855.
Capt. Frank O. Eldridge reported, "Arrived off Sand Heads midnight, Sept. 17, from Boston Light, 3:30 a.m., June 23, a passage of 86 days 21½ hours."

G. *Built by Elwell & Jackson, East Boston*

JOHN BERTRAM (1,080 tons; built 1850)

1. *San Francisco to Rio de Janeiro*—58 days.
   Sailed San Francisco July 5, 1851.
   Arrived Rio de Janeiro September 2, 1851.
   Capt. Frederick Lendholm reported upon arrival "a record passage of 58 days."
2. *Manila to Boston*—90 days.
   Sailed Manila November 1, 1854.
   Arrived Boston January 30, 1855.
   Capt. Frederick Lendholm reported upon arrival "a run from Manila to Boston of 90 days."

H. *Built by A. & G. T. Sampson, East Boston*

FEARLESS (1,184 tons; built 1853)

Manila to Boston—86 days.
Sailed Manila February 24, 1855.
Arrived Boston May 21, 1855.
Capt. Nehemiah Manson reported upon arrival "a good run of 86 days from Manila to Boston" (New York HERALD, May 23, 1855).

I. *Built by Daniel D. Kelly, East Boston*

EDWIN FORREST (1,141 tons; built 1853)
Chincha Islands to Hampton Roads—64 days.
Arrived Hampton Roads November 22, 1857.
Captain Crocker reported upon arrival "a passage from the Chinchas to Hampton Roads of 64 days" (New York HERALD, November 23, 1857).

The foregoing list of fast sailing performances records forty outstanding passages, or runs, of twenty-seven clipper ships launched by nine different shipbuilding firms with their yards located in the Greater Boston area. If, following the same method of selecting and reporting records or near records, we included the entire state of Massachusetts, it would be necessary to add only the following five sailing performances of five ships, constructed by four building firms located on the Merrimac to the north and on Cape Cod and at Swansea to the south.

J. *Built by George W. Jackman, Newburyport*

WHISTLER (820 tons; built in 1853)
Anjer to Melbourne—21 days.
Passed Anjer April 24, 1855.
Arrived Melbourne May 15, 1855.
Capt. Charles H. Brown reported "a very fast run of 21 days."

K. *Built by Currier & Townsend, Newburyport*

COURIER (554 tons; built in 1855)
Rio de Janeiro to Philadelphia—25 days.
Arrived at Philadelphia June 29, 1859.
Captain Olmstead reported upon arrival "a passage of 25 days from Rio" (New York HERALD, June 30, 1859).

L. *Built at Amesbury, Mass.*

WILDFIRE (bark of 338 tons; built 1853)
Boston to Gibraltar—14 days.
Sailed from Boston May 13, 1853.
Captain Mosman reported passing Gibraltar "in 14 days, which is a record."

M. *Built by Mason Barney, Swansea, Mass.*

SPARKLING WAVE (665 tons; built 1853)
Montevideo to San Francisco—61 days.
Arrived San Francisco April 14, 1855.
Capt. John C. Hubbard, Jr., upon arrival, reported "a record run of 61 days from Montevideo."

N. *Built by Shiverick Bros., East Dennis, Mass.*

WEBFOOT (1,091 tons; built 1856)
Calcutta to New York—85 days.
Arrived New York March 21, 1859.
Captain Hedge reported upon arrival "a passage of 85 days from Sand Heads" (New York COMMERCIAL ADVERTISER, March 22, 1859).

Although the bark *Gallego* of 373 tons was not a clipper, this fast sailer, built at Fairhaven, Mass., in 1847, is credited with a smart run of 43 days from San Francisco to Shanghai in 1850 reported as "the shortest time known between the ports." The little Fairhaven-built pre-clipper bark cleared San Francisco September 13, 1850, and arrived at Shanghai October 26.

Vessels Built in the Boston Collection District during the Year 1854

The following statement gives a schedule of the vessels built in the Boston Collection District for the year 1854, the year following the height of the boom in American wood shipbuilding brought about by the discovery of gold in California and the demand for fast ships in the Cape Horn trade. The schedule shows the name of the builder with location of yard, the registered dimensions and tonnage, and the type of each vessel. The total number built in

Boston for the year was seventy-two vessels aggregating 62,037 tons register, an average of 862 tons per vessel. (This list, taken from contemporary press reports, shows some variations in names, etc., when compared with other records.)

Name	Type	Length	Breadth	Depth	Tonnage	Builder's Name	Where Built
		Feet	*Feet*	*Feet*			
WEYMOUTH	Ship	200	38	24	1,395	J. & J. Boole (recorded elsewhere as G. & T.)	East Boston
SARACEN	Ship	189	38	24	1,265	E. & H. O. Briggs	South Boston
GRACE DARLING	Ship	193	37⅛	23½	1,240	E. & H. O. Briggs	South Boston
STARLIGHT	Ship	194	26¼	23	1,152	E. & H. O. Briggs	South Boston
COSSACK	Bark	238	30½	17¾	586	E. & H. O. Briggs	South Boston
SARAH	Bark	103	25	11¼	260	James S. Briggs	Scituate
ARCADIAN	Ship	152	37¾	20¼	705	Brown & Lovell	East Boston
ELINGO (possibly same as ERINGO, recorded elsewhere)	Bark	113¾	26⅓	12	327	Brown & Lovell	East Boston
NORTHERN EAGLE	Ship	147	31½	21½	664	Andrew Burnham	East Boston
ABBY STILLMAN	Schooner	103	25½	9½	225	Andrew Burnham	East Boston
OCEAN EXPRESS	Ship	228½	42½	24½	1,937	James O. Curtis	Medford
OCEAN TELEGRAPH	Ship	212	40⅓	26¼	1,626	James O. Curtis	Medford
GEORGE PEABODY	Ship	195	39⅓	27½	1,397	James O. Curtis	Medford
ENOCH TRAIN	Ship	211	40½	28	1,617	Paul Curtis	East Boston
PANTHER	Ship	183	37¾	24	1,260	Paul Curtis	South Boston
GRACE GRIDLER	Schooner	103	27	9⅔	226	J. N. Devereaux	Wellfleet
MIDNIGHT	Ship	171	35	21	962	Fernald & Pettigrew	Portsmouth, N.H.
EMMA	Ship	165	35½	22½	858	J. T. Foster	Medford
ASTERION	Ship	188	36	24	1,135	J. T. Foster	Medford
HORTENSIA	Ship	160¾	32	22¼	701	J. T. Foster	Medford
FATHERLAND	Ship	216	39	23½	1,542	Hall, Foster & Co.	East Boston
ORIENTAL	Ship	209½	41¼	24½	1,654	Samuel Hall	East Boston
D. WEBSTER	Steamer	131⅜	27⅞	10¼	354	Samuel Hall	East Boston
HERALD OF THE MORNING	Ship	206	36½	24	1,293	Hayden & Cudworth	Medford
ROBERT WOOD	Ship	186	37	23	1,181	Hayden & Cudworth	Medford
RAMBLER	Ship	182	36½	23¾	1,119	Hayden & Cudworth	Medford
OSBORNE HOWES	Ship	185	35¾	22¾	1,094	Hayden & Cudworth	Medford
FLEETWING	Ship	167	34	22	896	Hayden & Cudworth	Medford
LAMPLIGHTER	Bark	121	27½	12	365	Hayden & Cudworth	Medford
SHEERWATER	Schooner	61	19	7	69	S. F. Holbroke	Boston
STARR KING	Ship	184¾	37	22¼	1,170	G. W. Jackman	Newburyport
S. WELLER	Ship	207	38¾	23¼	1,435	R. E. Jackson	East Boston
CHALLENGER	Ship	202	37½	23½	1,334	R. E. Jackson	East Boston
BLUE JACKET	Ship	224	41⅓	24	1,190	R. E. Jackson	East Boston
BOSTONIAN	Ship	183⅝	36	23	1,099	D. D. Kelly	South Boston
NOR'WESTER	Ship	185½	38½	23	1,267	Samuel Lapham	Medford
—	Schooner	44⅓	9⅛	7¼	27	D. I. Lawler	South Boston
STARLIGHT	Sloop	59	21	5⅓	54	Samuel C. Loring	Braintree
WHIP	Sloop	35	11⅞	3	——	D. Lovell	Salisbury
JAMES BAINES	Ship	255	44¾	29	2,515	Donald McKay	East Boston
CHAMPION OF THE SEAS	Ship	252	45½	29	2,447	Donald McKay	East Boston
LIGHTNING	Ship	243	42½	23	2,083	Donald McKay	East Boston
COMMODORE PERRY	Ship	212	45	29	1,963	Donald McKay	East Boston
SANTA CLAUS	Ship	184	38½	23	1,256	Donald McKay	East Boston
BENIN	Schooner	155	32½	15	692	Donald McKay	East Boston
BARREDA BROTHERS	Ship	167	31	21	768	Hugh McKay	East Boston

(Continued on next page)

Name	Type	Length	Breadth	Depth	Tonnage	Builder's Name	Where Built
		Feet	*Feet*	*Feet*			
SPEEDWELL	Bark	115	27	12	335	Leonard McKewyer	Boston
S. W. WILSON	Schooner	37	13⅞	4½	20	C. D. Macomber	South Boston
GALATEA	Ship	182⅝	35	23	1,041	Joshua Magoun (recorded elsewhere as Joseph)	Charlestown
COWPER	Ship	181½	34¾	24	1,024	Joshua Magoun	Charlestown
VOYAGER	Bark	115	26	12	328	Joshua Magoun	Charlestown
AMY	Bark	114	27	10⅔	298	Joshua Magoun	Charlestown
STARLIGHT	Bark	114	27	10⅔	298	Joshua Magoun	Charlestown
SAM SLICK	Bark	121	27½	12	367	Mason & Fernald	Newburyport
GOLDEN RULE	Schooner	—	—	—	254	Mason & Fernald	Newburyport
YOUNG AMERICA	Schooner	55	18½	6	51	Minot & Chubard	South Boston
MONEYWICH	Bark	122	27½	12	368	Mitchell & Rice	Chelsea
MYSTERY	Bark	115	25⅞	12	328	Wm. Paulding	Duxbury
BANSHEE	Schooner	23½	8½	3¼	6	Jos. W. Pierce	South Boston
FANNY McHENRY	Ship	191	37¼	24	1,237	A. & G. T. Sampson	East Boston
WARREN HALLETT	Bark	112	26¼	10⅛	284	A. & G. T. Sampson	East Boston
RELIEF	Steamer	91½	22½	8½	151	A. & G. T. Sampson	East Boston
YOUNG BRANDER	Ship	207	39	26½	1,469	Jotham Stetson	Chelsea
NEPTUNE'S FAVORITE	Ship	193	38¾	24	1,346	Jotham Stetson	Chelsea
BOUNDING BILLOW	Bark	120	26½	12	353	Jotham Stetson	Chelsea
AMAZON	Schooner	—	—	—	247	Joseph Story	Essex
SHAKESPEARE	Ship	217	42½	30	1,820	John Taylor	Chelsea
NABOB	Ship	193	37	24	1,245	John Taylor	Chelsea
ALFRED HILL	Ship	142	29	18	549	John Taylor	Chelsea
TRIUMPH	Schooner	43	14	4	19	Moses B. Tower	Boston
MARTHA ANNAH	Schooner	36⅛	12½	4¾	18	Aaron Wiley	Boston
PACIFIC	Brig	87	23½	8½	156	—	—

Recapitulation

Types of Vessels	Number Built	Total Tonnage	Average Tonnage per Vessel	Percentage: Number Built	Percentage: Total Tonnage
Ships	42	54,951	1,308	58.33	88.57
Barks	13	4,497	346	18.05	7.25
Brigs	1	156	156	1.39	.25
Total square-riggers	56	59,604	1,064	77.77	96.07
Schooners	12	1,854	154	16.67	2.99
Sloops (tonnage estimated)	2	74	37	2.78	.12
Total sail	70	61,532	879	97.22	99.18
Steamers	2	505	252	2.78	.82
Total all vessels	72	62,037	862	100.00	100.00

The official list discloses the names of thirty-six builders, of whom twelve produced during the year two or more vessels with a registered tonnage of 1,672 tons, or more, as follows:

Name of Builder	Number of Vessels	Tonnage	Name of Builder	Number of Vessels	Tonnage
D. McKay	6	10,956	J. Stetson	3	3,168
Hayden & Cudworth	6	5,948	J. Magoun	5	2,989
J. O. Curtis	3	4,960	P. Curtis	2	2,877
E. & H. O. Briggs	4	4,243	J. T. Foster	3	2,694
R. E. Jackson	3	3,959	S. Hall	2	2,008
J. Taylor	3	3,614	A. & G. T. Sampson	3	1,672

The above twelve firms, launching forty-three vessels aggregating 49,088 tons register, produced 59.7 per cent of the number and 79.1 per cent of the tonnage built during the year in the Boston District. Other outstanding builders who launched less than the above-stated tonnage during the period were: Samuel Lapham, Medford, one ship of 1,267 tons; G. W. Jackman, Newburyport, one ship of 1,170 tons; D. D. Kelly, South Boston, one ship of 1,099 tons; Fernald & Pettigrew, Portsmouth, N.H., one ship of 962 tons. Hall, Foster & Company, East Boston, built one ship of 1,542 tons and the Booles, East Boston, one ship of 1,395 tons. Nine of the thirty-six stated builders produced less than 100 tons for the year, and sixteen, or 44.4 per cent of the total number of builders, launched less than 500 tons each. The smallest tonnage—and the smallest measured vessel—built by any one builder during the year was 6 tons (the schooner *Banshee*) by J. W. Pierce, South Boston. The largest ship, the *James Baines* of 2,515 tons, as well as the largest average tonnage per ship (1,826 tons) and the largest tonnage (10,956 tons, or 17.66 per cent of the total), was launched by Donald McKay at his East Boston yard.

Sixty-one, or 84.7 per cent, of the vessels and 60,305 tons, or 97.2 per cent, of the total registered tonnage built for the year in the Boston Collection District were launched from seven building sections of Boston as stated below:

	Number of Vessels		Registered Tonnage			Number of Vessels		Registered Tonnage	
Section	Number	Percentage of Total	Tonnage	Percentage of Total	Section	Number	Percentage of Total	Tonnage	Percentage of Total
East Boston	21	29.2	24,403	39.3	Charlestown	5	6.9	2,989	4.8
Medford	14	19.4	16,304	26.3	Newburyport	3	4.2	1,791	2.8
Chelsea	7	9.7	7,150	11.5	Portsmouth, N.H.	1	1.4	962	1.5
South Boston	10	13.9	6,706	10.8					

It is amazing that entirely separate and remote shipbuilding communities, such as Newburyport on the Merrimac River, thirty-three miles away as the crow flies, and Portsmouth in the state of New Hampshire and fifty-two miles distant, should be considered in the Boston Collection District. In the fifties, Boston was a much-advertised, "boosting" community as far as its marine interests and achievements were concerned. It was both ambitious and vainglorious and apparently extended its maritime borders of domination much as Los Angeles, Calif., in competition with San Francisco, stretched its geographical limits in the early twentieth century. It is significant that the Boston Marine Collection District included not only Boston proper and Greater Boston (and such a justifiable location as Braintree in the Quincy and Weymouth section about ten miles away) but also Scituate on the coast twenty-one miles to the east; Essex, not far from Gloucester and twenty-six miles to the northeast; Duxbury, near Plymouth and twenty-nine miles to the southeast; and Wellfleet on far distant Cape Cod, fifty-nine miles away from "The Hub" of Boston.

Donald McKay (1810-1880), World-famous Builder of Large Extreme Clipper Ships, with a Record Covering the Entire Period of His Shipbuilding Career

Donald McKay was born at Shelburne, Nova Scotia, Canada, on September 4, 1810. He came to the United States when sixteen and a half years of age and in 1827 was apprenticed to Isaac Webb & Company, shipbuilders, New York, "to learn the art, trade and mystery of a ship carpenter." For instruction and opportunities to learn to become an all-round skilled artisan in the building of wood vessels and for pocket money of $2.50 a week, McKay agreed, among other things, to abstain altogether, during the stipulated period of his apprenticeship, from the perils of "taverns, playhouses, and matrimony." The indentures as were customary in the twenties and thirties of the nineteenth century were as rigorous as a modern sentence to a concentration camp. He and his brother Lauchlan (born December 16, 1811), also a shipyard apprentice and later a carpenter in the U.S. Navy and skipper of the *Sovereign of the Seas,* worked fifteen hours a day and later as journeymen received $1.15 per day as wages. From Isaac Webb, young McKay acquired the rudiments of naval architecture—as much as his limited education would permit of his absorption. McKay married his first wife, Albenia Boole, in 1833. (She died in 1848, and a year later he married Mary Cressy Litchfield; he had fifteen children, most of whom survived him.) Albenia's father, brother, and other members of the Boole family were master shipbuilders, shipwrights, or artisans definitely associated with wood shipbuilding in New York. She herself was an educated young woman and a school teacher, who, it has been said, could "plan and figure ships." McKay had received but little academic schooling before his marriage, and it was his first wife who undertook the job of educating him so that he became sufficiently grounded in the fundamentals of naval architecture to be deemed competent to assume responsibility as a master builder.

McKay worked at Brown & Bell's shipyard in New York in or around 1834 and was employed at the Brooklyn Navy Yard. He became foreman of a gang, but could not get along with the men and was forced to "quit his job." Jacob Bell, who had taken an interest in McKay, sent him to Wiscasset, Maine, to assist in finishing some ships for certain "New York shipping houses." Returning from Maine to New York, McKay stopped over at the shipbuilding town of Newburyport, Mass., on the Merrimac, and was fortunate to get a job with William Currier. McKay's practical work on the *Delia Walker,* a ship of 426 tons then building in 1840, brought him to Currier's attention. His first experience in assuming leadership and a measure of responsibility in the construction of ships dates from 1841, when working for William Currier at Newburyport. McKay built ships in Newburyport for four years at the yards of William Currier and William Pickett. Then, through the kind offices of Dennis Condry and at the invitation and with the backing of Enoch Train, a shipowner and financier, McKay went to East Boston and opened a yard there in 1845. East Boston was the best location in Greater Boston and vicinity—land and water considered—for building relatively large vessels, and as ships grew bigger (i.e., longer) and drew more water, more and more tonnage was launched from East Boston yards. All of McKay's shipbuilding experience from 1845 to his retirement was gained in Boston, and he died at Hamilton, Mass., on September 20, 1880, when seventy years of age.

A comparison of important dates in the lives of Donald McKay and his great New York contemporary and rival shipbuilder, William H. Webb, is of interest:

	Donald McKay	William H. Webb
Born	Sept. 4, 1810	June 19, 1816
Apprenticed	1827	1831
Built his first ship	1841	1836
Built his last sailing ship	1869	1869
Built his last vessel	1875	1872
Age when apprenticed	17	15
Age when he built his first ship	31	20
Age when he built his last sailing ship	59	53
Age when he built his last vessel and retired	65	56
Years of experience as responsible builder of wood sail	28	33
Years of experience as responsible shipbuilder	34	36
Years of life after retirement	5	27
Died	Sept. 20, 1880	Oct. 30, 1899
Length of life—years	70	83-1/3

When employed by Currier, Donald McKay built, with him, in 1841 at Newburyport, Mass., the bark *Mary Broughton* of 323 tons. In 1842 they built the ship *Ashburton* (449 tons) and the *Courier* (380 tons), and McKay claimed that he, personally, both designed and built the latter vessel. Apparently, McKay had trouble working for or with Currier as he had when working for Isaac Webb and Brown & Bell in New York and at other points where his stay had been brief. In 1843, McKay, who had ability as a builder but no means, entered into some sort of partnership agreement with Pickett at Newburyport, and he was connected in some capacity or other with the building in 1843-1844 of the three packet ships *St. George* of 845 tons, *John R. Skiddy* of 930 tons, and *Joshua Bates* of 620 tons. While building the latter packet, fortunately for McKay, he came in contact with Enoch Train, the owner, and was given the chance to start his own yard at East Boston. The first of the Pickett-McKay trio of packets, the *St. George,* was the pioneer ship of the transatlantic Red Cross Line, later given immortal fame by the fast sailing exploits of the *Dreadnought* (1,414 tons), "The Wild Boat of the Atlantic," built by Currier & Townsend, also at Newburyport, and designed by Currier after McKay had moved to Boston to work for and with Train and was established in his East Boston yard. The *John R. Skiddy,* built by McKay and Pickett, saw five years of transatlantic packet service (1845-1850) with the Red Star (New York-Liverpool) Line. She showed good average speed, averaging 32 days on her westbound crossings; but her best passage was 25 days, quite slow for a fast ship with five years of opportunities to make a "smart" run. Whereas the *"Skiddy"* averaged only one day longer than the *New World* on her westbound crossings, her best passage was a full week longer than the best westward run of the *New World,* and her slowest crossing was 44 days as against 42 days for the bigger Boston-built packet. After building packets and the big, sharp, poor-carrying but fast transatlantic packet *New World* of 1,404 tons in 1846, McKay launched his *Reindeer* of 800 tons in 1849, followed a year later by his first real clipper, the *Stag Hound* of 1,534 tons. McKay's first clippers followed the lines advocated and used by John W. Griffiths, of New York, in the building of the *Rainbow* of 752 tons in 1845. Later, McKay's big fast clippers showed in model the influence of Boston's leading naval architect, Samuel Harte Pook, whose *Surprise* of 1,261 tons, built by Samuel Hall at his East Boston yard in 1850, proved to be a veritable "surprise" in her general performance, as well as speed, under all conditions and circumstances at sea and at the dock.

Donald McKay was not an inventor; he made few, if any, innovations and discovered no basic principle that advanced the science of marine architecture. He absorbed certain ideas of other men and utilized them practically; but his mind ran in one channel only, and he stubbornly stood for size, sharpness of model, big spar plans and sail spread, and speed for his ships.

McKay was the greatest builder of large extreme clippers. He produced some magnificent, speedy vessels and was pre-eminent in the creation of the type of vessel that made him famous. Unfortunately for him, the only kind of ship that he could produce and cared to build was in public favor for only a very few years, for such craft were not money-makers under normal conditions. Absurdly high freight rates—caused by the California Gold Rush, followed by the discovery of gold in Australia—and the craze for speed resulted in the building of clippers during 1850-1854 in numbers far beyond any justification. The inevitable effect of this surplus tonnage was depressed freight rates, destructive competition, and a big loss of money to shipowners following a period when a good-sized clipper would pay for herself in freight and passenger revenue by one westbound voyage from an eastern Atlantic port to the Golden Gate. McKay's clippers were good Cape Horners on account of their size and power. Because of this advantage, due entirely to size and fineness, they made some excellent records, showed many magnificent sailing performances, and gave Donald McKay a great reputation.

Although William H. Webb was generally considered the leading shipbuilder in New York during the forties and fifties, he did not overshadow the many other capable, successful, and prominent builders. In Boston, conditions were different, and most of the glory of Boston as a great shipbuilding community was centered in Donald McKay. In 1855, long before the days of admitted propaganda, it was said, "McKay is the most advertised shipbuilder in the world, and Boston boosts its great builder to the glory of itself." In the booming clipper ship days, Boston was the world's greatest producer of that particular kind of ship (which more conservative Maine shipbuilders did not admire, advocate, nor, therefore, care to build), but McKay was not by any means the only outstanding builder of clipper ships in the Boston area. Boston gloried in McKay's achievements and highly publicized him. It felt in regard to New York very much as Los Angeles, in more recent years, has felt in regard to San Francisco—a competitive and boastful rivalry. It advertised Donald McKay, his product, and the performance of his ships for the glory of Boston, and it broadcast this propaganda not only to every part of the country but also all over the world. Boston had no rival in boasting of its ships and no competition; hence to the average man—and to the average reader of today—the words "clipper ship" and the name of Donald McKay were, and are, practically synonymous. This was grossly unfair to the many other excellent shipbuilders of Boston and Massachusetts (such as Samuel Hall, of East Boston; the Curtis', of Boston and Medford; the Briggs', of East Boston; Hayden & Cudworth, of Medford; Robert E. Jackson, of East Boston; Currier & Townsend, of Newburyport, etc.) and to Boston's brilliant and outstanding young technical naval architect, Samuel H. Pook.

Donald McKay's first real clipper ship was the *Stag Hound* of 1,534 tons, built in 1850. In the following year, McKay stopped building vessels of the reliable, money-making packet and general trading type and produced, during that year and for each ensuing year that he constructed sailing vessels, only ships of the clipper type. However, the last vessel but one that he built (in 1868), the *Sovereign of the Seas II,* he called, in his later years, a full-model ship; in reality, she (like his last vessel, the *Glory of the Seas,* built in 1869) was intended by him, when built, to be a medium clipper. Some of the McKay clippers built during the fifties, he, with the owners, intended for Atlantic packet service. These ships were the *Staffordshire* of 1,817 tons, built for the Train Company, Boston (lost off Cape Sable, December 1853); the *North America* of 1,464 tons, built for Nickerson, Boston, in 1851; the *Star of Empire* and *Chariot of Fame,* each of 2,050 tons, built for the Train Company in 1853; and the *Baltic* of 1,372 tons and *Adriatic* of 1,327 tons, built for Zerega & Company in 1856. Practically all of the McKay-built clippers found themselves in the California, Australia, China, or India trade. None of the real clippers ran either with satisfaction or for any length of time in the north transatlantic trade. In 1851, in addition to the *Staffordshire* and *North America,* McKay built the famous *Flying Cloud* (1,782 tons) and *Flying Fish* (1,505 tons). In 1852 he constructed the big and fast *Sovereign of the Seas* (2,421 tons), the excellent sailer *Westward Ho* (1,650 tons),

and the less fortunate *Bald Eagle* (1,704 tons). In the record big year of clipper ship production, McKay turned out his full quota of vessels (i.e., five of them), and it was truly said of him, "He has gone size crazy." None of his 1853 creations won a place in the historical hall of fame as far as performance was concerned, but one of them, the *Great Republic,* became world famous because of her size. She was built by McKay on speculation and, as originally constructed, measured 4,555 tons. She never took her first cargo to sea, but was burned at the loading dock when laden in New York. When reconstructed by practical New York ship operators and builders, the vessel was cut down to 3,357 tons register, the upper deck removed, and the spars and sail plan materially reduced. From the first, the *Great Republic* was a mistake, and a jinx followed her relentlessly throughout her career.

Enoch Train, who had "discovered" McKay at Newburyport, taken him to Boston in 1845, and not only backed him but also financed him and started him "on his own" as a shipbuilder, met financial reverses in 1853 and became insolvent. Fortunately for McKay, soon after he experienced the combined staggering loss of Enoch Train's support and the personal loss from the disaster to the underinsured *Great Republic,* he was taken up by James Baines, of Liverpool, England. McKay's second "good angel" owned and operated a big fleet of British vessels, and his firm, James Baines & Company, dominated the Black Ball Line running between Liverpool and Australia. In 1854 and 1855, McKay built nine clippers; six of them (aggregating 13,567 tons) were for Baines and his direct associates and line. Another of the nine, Baines arranged to have McKay build for a friend, Moore, of Liverpool, England, who traded to the East Indies. It is worthy of recording that both Enoch Train and James Baines, Donald McKay's financial backers and staunch supporters, who heavily invested their means in the product of McKay's shipyard (one a leading shipowner of the United States and the other a leading shipowner of Great Britain and the British Empire), suffered such terrific losses in the operation of their vessels that they were driven into bankruptcy. Donald McKay himself, exhibiting great faith in vessels of his own design and construction and not finding shipowners and practical operators—other than Enoch Train and James Baines—willing to place orders with him for the type of big fine-lined heavily canvased extreme clippers that he wanted to build, laid down and completed vessels such as the *Sovereign of the Seas* and the *Great Republic* for his own account and then was compelled to operate them. The *Sovereign of the Seas* was, fortunately for him, disposed of after making a complete round voyage; but, as before stated, the *Great Republic* was burned when loaded and about ready to start on her maiden voyage. McKay's luck turned with the loss of the *Great Republic,* on which he deliberately was greatly underinsured. From that time, when McKay was in his early forties, his quickly made "big fortune" disappeared, and he died a poor man after a quarter of a century of discouragement and failure, following a spectacular money-making career of a very few eventful years, which period was America's great clipper building era.

In 1851 McKay built the world-famous *Flying Cloud* (1,782 tons) for Enoch Train, of Boston. In 1852 he built the *Sovereign of the Seas* (the biggest clipper up to that time—2,421 tons) on speculation and with money borrowed through the good offices of Train. This vessel was later sold to James Baines & Company, Liverpool, when tonnage was in demand for the British-Australian trade. In 1853 two of McKay's vessels were built for Train, but it was not until 1854, after he had met Baines, that McKay was given orders to construct big clippers approaching the size that McKay wanted to build. The "big white elephant" *Great Republic,* launched by McKay in 1853 on his own account and built by him when his credit was good (because of Train's support and association), showed what McKay would do if given a free hand. That vessel was too big for any service in the fifties because of her loaded draft and the depth of water in the harbors, rivers, and at the docks where she had to go for trade. In 1854 and 1855, McKay built for Baines, in addition to two clipper general traders of 1,964 tons each, the famous "Big Four" designed for the British-Australian trade. These vessels, although not as big as the *Great Republic,* were more practical, for Baines—a very competent and experienced shipping man—insisted on certain features and limitations. In building the Baines

"Big Four," McKay had "his supreme chance" and an opportunity never before or since given any other shipbuilder to make a name for himself, to write history, and to win immortality for his product and his personal achievements. This famous "Big Four," built by Donald McKay in East Boston, Mass., for a foreign friend and staunch supporter, were:

Lightning of 2,083 tons, built in 1854.
Champion of the Seas of 2,447 tons, built in 1854.
James Baines of 2,515 tons, built in 1854.
Donald McKay of 2,594 tons, built in 1855.

It is significant that McKay's biggest ship built on order was named after himself, and the naming of James Baines's largest and most expensive vessel after the American builder shows the sort of friendly support that McKay received from the hands of his Liverpool patron.

Generally speaking, the McKay clippers did not win any honors for longevity nor for sturdiness of build. The end of McKay's best sixteen clippers, built during the years 1850-1855, is of interest:

Stag Hound—built 1850; burned 1861, when eleven years old.
Flying Cloud—built 1851; burned 1874, when twenty-three years old.
Staffordshire—built 1851; lost at sea 1853, when two years old.
Flying Fish—built 1851; wrecked 1858, when seven years old.
Sovereign of the Seas—built 1852; wrecked 1859, when seven years old.
Westward Ho—built 1852; burned 1864, when twelve years old.
Bald Eagle—built 1852; lost at sea 1861, when nine years old.
Empress of the Seas—built 1853; burned 1861, when eight years old.
Star of Empire—built 1853; condemned 1856, when three years old.
Chariot of Fame—built 1853; disappeared 1874, when twenty-one years old.
Great Republic—rebuilt 1855; lost at sea 1872, after sixteen years in service.
Romance of the Seas—built 1853; lost at sea 1863, when ten years old.
*Lightning**—built 1854; burned 1869, when fifteen years old.
Champion of the Seas—built 1854; lost at sea 1876, when twenty-one years old.
James Baines—built 1854; burned 1858, when about five years old.
Donald McKay—built 1855; in Quebec lumber trade; disappeared from list around 1875; sold to Germans, 1879; cut down to coal hulk, 1881.

* *The Lightning*, it would seem, disappeared from list in 1866, after twelve years of service.

The average service age of these McKay clippers was somewhat less than twelve years, which is a short life, but it was due to no fault of the builder that several of the vessels burned or that some were wrecked. However, the fact that the *Staffordshire* foundered when only two years old, that the *Star of Empire* made a harbor on the South African coast in a sinking condition and had to be condemned when only three years old, and that four other of McKay's outstanding clippers were lost at sea (the *Bald Eagle* and also the *Santa Claus*—a medium clipper built in 1854—when only nine years old and the *Romance of the Seas* when ten years old) does not signify excellent design and staunch construction. The Europeans were of substantial assistance to McKay in the use of his clippers; for, in addition to the eight ships that he built for Liverpool owners, his famous *Flying Cloud*, the *Chariot of Fame*, and the *Great Republic* were bought by the British, the *Sovereign of the Seas* by the Germans, and the *Westward Ho* by South American owners.

Any ship could make "a barrel of money" in the Atlantic port-to-San Francisco trade during the California Gold Rush and in the Britain-to-Australia trade following the Australian gold find, but clippers of the McKay type were not profitable to operate when the reaction to boom freight rates set in. Enoch Train, who backed McKay with both money and orders for ships during the period 1845-1853 and was really responsible for all the orders that McKay received from Boston shipping interests, failed following the height of the boom, and James Baines, who backed McKay heroically and most substantially in 1854 and 1855, suffered severe financial reverses and became insolvent during the severe 1856-1857 depression. McKay himself never

recovered from the loss of the *Great Republic,* and when his second great patron failed, McKay was a broken man. He built what were termed "medium," or somewhat less extreme, clippers in 1856 for Boston owners and then retired as a real force and active power from the shipbuilding business. His later attempts to re-establish himself just before, and then after, the Civil War were both futile and pathetic, and his would-be "comeback" in 1868-1869 was associated with heavy financial losses.

Donald McKay was a great practical shipbuilder. Unlike William H. Webb and Stephen Smith, of New York, he was not a technical man; he knew practically nothing of the science of naval architecture and could not make any ship calculations of importance. He had an excellent "feeling" for a ship, however, and was one of the greatest "rule-of-thumb" and "hunch" shipbuilders that the world has ever known. Some of his early clipper ship ideas were wrong; but, aside from a stubbornness in regard to size, fineness of model, and oversparring and overcanvasing his ships, he developed into the creator of wonderfully fine and fast vessels —if the money-making characteristic of his ships is ignored. However, no wood structures and no spars, rigging and canvas could withstand for any great period the driving that his clippers were built for and were expected to take. On long ocean voyages, with alternations of kindly weather with strong winds, they performed remarkably well as to speed and at times made great records. On transatlantic eastbound passages, they achieved some fast runs with favoring winds, but not one of them ever made a fast passage across the North Atlantic westbound "uphill" against the prevailing west wind; neither were they "speed merchants" in tropical waters. The McKay clippers were too big and powerful for the tea trade, and they were too sharp of model and too heavily sparred for the North Atlantic.

During the Civil War, Donald McKay tried, without success, to turn to iron ships and engine building, and a business was carried on for a time under the name of McKay & Aldus. Even locomotives were built, but the change was not a happy one, as McKay was neither an engineer nor a worker in metals. As a private venture, he attempted during the Civil War the building of wooden steamers, which, fortunately for him, were sold to the government for transport service. McKay was not a steamship man, and in 1869 the firm of McKay & Aldus sold out to the Atlantic Works, which, as builders of machinery, grew to be very successful and acquired a good reputation in and around Boston, Mass. McKay's only connection with the building of an iron vessel was in the construction of the *Ashuelot,* a double-ended sidewheeler, which was built for the government in 1864-1865 and wrecked near Swatow, China.

Donald McKay's last "wood construction jobs," following the extremely disappointing "slow poke" *Sovereign of the Seas II* of 1,502 tons, built in 1868, were the *Glory of the Seas* of 2,102 tons and the little schooner *Frank Atwood* of 107 tons. They were of emotional interest, the first because she was "the great McKay's last clipper," and the second became famous by carrying the notorious "Bill" Tweed of Tammany political fame on his "getaway" from New York to Cuba. McKay permanently retired from the field of wood shipbuilding in 1869, having for many years—since 1856—felt deeply what was termed "the passing and fall of the Sailing Empire."

New York and Boston as shipbuilding centers passed into oblivion with the retirement of William H. Webb and Donald McKay, but Bath, Maine, and certain other Down East shipbuilding communities refused to see, with the great McKay, the collapse of sail or even the passing of wood sail. From the sixties on, Bath became the wood shipbuilding metropolis of the continent of America, and its builders produced great ships, with profit, which made a lot of money for their owners throughout the remainder of the century. When wood square-riggers ceased to be built in 1893, Bath continued to build—in addition to a fleet of steel ships —large numbers of big wood schooners and rigged tow barges for the coastwise trade. These proved profitable in operation until the first World War made all floating tonnage extremely valuable for a few years and then, because of overproduction, caused shipbuilding to become stagnant following the cessation of hostilities.

The following table gives a list of the square-rigged sailing vessels built by Donald McKay at East Boston, Mass., with supplementary notes regarding his earlier shipbuilding activities:

Name, Type, and Year Built	Owner	Trade	Tonnage	Dimensions in Feet				
				Length Keel	Length Deck	Length Over-all	Beam	Depth
WASHINGTON IRVING (packet; 1845)	Train Co.	Atlantic	751	142	151	157	33	21
ANGLO-SAXON (packet; 1846)	Train Co.	Atlantic	894	147	158	162	35	21
NEW WORLD (packet; 1846)	Swallowtail Line	Atlantic	1,404	190	200	210	39	23
OCEAN MONARCH (packet; 1847)	Train Co.	Atlantic	1,301	188	195	205	38	23
A. Z. (packet;1847)	Zerega & Co.	Atlantic	700	140	144	150	33½	20½
ANGLO-AMERICAN (packet; 1848)	Train Co.	Atlantic	704	145	150	156	33	20
JENNY LIND (packet; 1848)	Fairbanks, Boston	Atlantic and southern	533	125	132	142	30	19
L. Z. (packet; 1848)	Zerega & Co.	Atlantic	897	153	163	172	35	21
PLYMOUTH ROCK (packet; 1849)	Upton, Boston	Atlantic	960	156	168	178	36½	21½
HELICON (bark; 1849)	Adams, Boston	East India	400	118	120	128	28	17½
REINDEER (ship; 1849)	Upton, Boston	Pacific	800	146	160	170	35½	21½
PARLIAMENT (packet; 1849)	Upton, Boston	Atlantic	998	160	170	182	37	22
MOSES WHEELER (ship; 1850)	Wheeler, Boston	General	900	155	165	175	36	22
SULTANA (bark; 1850)	Lamb, Boston	Asia Minor	400	120	122	130	28	17½
CORNELIUS GRINNELL (packet; 1850)	Grinnell, Minturn	Atlantic	1,118	172	180	192	38	23½
ANTARCTIC (packet; 1850)	Zerega & Co.	Atlantic	1,115	170	180	190	38	23½
DANIEL WEBSTER (packet; 1850)	Train Co.	Atlantic	1,187	173	182	195	38½	24
STAG HOUND (extreme clipper; 1850)	Upton, Boston	California	1,534	195	208	220	39	23
FLYING CLOUD (extreme clipper; 1851)	Train Co.	California	1,782	208	225	235	41	21½
STAFFORDSHIRE (extreme clipper; 1851)	Train Co.	Atlantic	1,817	215	228	240	41	22
NORTH AMERICA (extreme clipper; 1851)	Nickerson, Boston	Atlantic	1,464	192	205	215	39	22
FLYING FISH (extreme clipper; 1851)	Upton, Boston	California	1,505	198	212	225	38⅙	22
SOVEREIGN OF THE SEAS (extreme clipper; 1852)	McKay, Boston	California; Australia	2,421	245	258	265	44	23½
WESTWARD HO (extreme clipper; 1852)	Boston	California; China	1,650	194	210	220	40½	23½
BALD EAGLE (extreme clipper; 1852)	Upton, Boston	California; China	1,704	195	215	225	41½	22½
EMPRESS OF THE SEAS (extreme clipper; 1853)	Baltimore	California; China	2,197	220	230	240	43	27
STAR OF EMPIRE (extreme clipper; 1853)	Train, Boston	Atlantic	2,050	208	220	232	43	27½

(Continued on next page)

Name, Type, and Year Built	Owner	Trade	Tonnage	Dimensions in Feet: Length Keel	Length Deck	Length Over-all	Beam	Depth
CHARIOT OF FAME (extreme clipper; 1853)	Train, Boston	Atlantic; Australia	2,050	208	220	232	43	27½
GREAT REPUBLIC (clipper; original, 1853)	McKay, Boston	General	4,555	295	305	320	53	39
GREAT REPUBLIC (clipper; rebuilt, 1855)	Low, New York	General	3,357	295	305	320	53	31½
ROMANCE OF THE SEAS (extreme clipper; 1853)	Upton, Boston	California; China	1,782	215	230	240	39½	29½
LIGHTNING (clipper; 1854)	Baines, Liverpool	Australia	2,083	220	233	243	44	23
CHAMPION OF THE SEAS (clipper; 1854)	Baines, Liverpool	Australia	2,447	238	252	262	45½	29
JAMES BAINES (clipper; 1854)	Baines, Liverpool	Australia	2,515	236	255	266	44¾	28
BLANCHE MOORE (extreme clipper; 1854)	Moore, Liverpool	East India	1,787	212	228	240	40	24
SANTA CLAUS (medium clipper; 1854)	Boston	California; India	1,256	180	190	200	38	23
COMMODORE PERRY (medium clipper; 1854)	Baines, Liverpool	Australia	1,964	212	238	250	45	29
JAPAN (medium clipper; 1854)	Baines, Liverpool	Australia	1,964	212	238	250	45	29
DONALD McKAY (clipper; 1855)	Baines, Liverpool	Australia	2,594	240	258	269	46¼	29
DEFENDER (medium clipper; 1855)	Boston	General	1,413	188	200	212	39	23
MASTIFF (medium clipper; 1856)	Upton, Boston	California; China	1,030	165	180	190	37½	22½
MINNEHAHA (medium clipper; 1856)	Boston	California; China	1,695	210	220	230	40	24
AMOS LAWRENCE (medium clipper; 1856)	Boston	California; East India	1,396	190	200	210	39	23
ABBOTT LAWRENCE (medium clipper; 1856)	Upton, Boston	California; East India	1,497	195	205	215	39½	23½
BALTIC (medium clipper; 1856)	Zerega & Co.	Atlantic	1,372	190	200	208	39	23
ADRIATIC (medium clipper; 1856)	Zerega & Co.	Atlantic	1,327	186	196	204	39	33
ALHAMBRA (medium clipper; 1859)	Boston	General	1,097	170	180	190	38	23
GENERAL PUTNAM (ship; 1861)	Upton, Boston	General	1,300	182	192	202	39	23
HELEN MORRIS (medium clipper; 1868)	Boston	General	1,285	185	195	205	38½	23
SOVEREIGN OF THE SEAS II (full-model ship; 1868)	New York	General	1,502	200	210	220	39½	23½
GLORY OF THE SEAS (medium clipper; 1869)	McKay, Boston	California	2,102	235	250	265	44	28½

McKay built (with Currier at Newburyport, Mass.), in 1841, the bark MARY BROUGHTON (323 tons); in 1842, the ship ASHBURTON (449 tons) and the COURIER (380 tons), which was the first vessel that (McKay claimed) he both designed and built. In 1843, in partnership with Pickett at Newburyport, he built the packet ship ST. GEORGE (845 tons); in 1844, the JOHN R. SKIDDY (930 tons) and the JOSHUA BATES (620 tons). In addition to the above list, McKay built in 1854, at East Boston, the schooner BENIN of 692 tons for English owners and the African trade; in 1856, the HENRY HILL, a clipper bark of 568 tons for Boston owners; in 1858-1860, four small Cape Cod fishing schooners of 107 tons each; in 1867, a small brig of 410 tons; and in 1869, the FRANK ATWOOD, a small schooner of 107 tons. In 1866 he built two wooden screw steamboats for the coastwise trade; during the war, he built four vessels and, in 1874-1875, two sloops of war for the U.S. naval service.

The following table is a complete list of vessels built by Donald McKay covering the entire period of his responsible shipbuilding activities, 1841-1875 inclusive:

Year	Number of Vessels Built	Total Tonnage	Type of Vessels	Service
1841	1	323	Trading } At Newburyport with Currier	General
1842	2	829	Trading } At Newburyport with Currier	General; South America
1843	1	845	Packet } At Newburyport with Currier	Transatlantic
1844	2	1,550	Packet } At Newburyport with Pickett	Transatlantic
1845	1	751	Packet } At Newburyport with Pickett	Transatlantic
1846	2	2,298	Packet	Transatlantic
1847	2	2,001	Packet	Transatlantic
1848	3	2,134	Packet	Transatlantic (one partly cotton carrier, southern trade)
1849	4	3,158	Two packets; two traders (ship and bark)	Two transatlantic; one California and Manila; one East India
1850	6	6,254	One extreme clipper (first), STAG HOUND — Cape Horner; three packets; two traders (ship and bark)	One California (McKay's first Cape Horner); three transatlantic; one general; one Asia Minor
1851	4	6,568	Extreme clippers	California; East India; China and transatlantic
1852	3	5,775	Extreme clippers	California and China; one also in Australia and general
1853	5	11,436	Four extreme and one virtually extreme (GREAT REPUBLIC) clippers	Three California and China; one transatlantic, then Australia; GREAT REPUBLIC, general, Crimean War troopship, then California
1854	8	14,708	One extreme clipper; three clippers; three medium clippers; one schooner	Five Liverpool-Australia (three used as troopships during Sepoy Indian mutiny); one California and India; one Liverpool and East India; one African trade
1855	2	4,007	One clipper; one medium clipper	One Australia; one general
1856	7	8,885	Medium clippers	Two transatlantic; two California and China; two California and East India; one general
1857			None	
1858-1859	1	1,097	Medium clipper	General
1859	2	214	Fishing schooners	Cape Cod fleet
1860	2	214	Fishing schooners	Cape Cod fleet
1861	1	1,300	Packet	Boston owner; general
During Civil War period, no merchant vessels; built four small screw steamships for U.S. Government.				
1866	2	1,211	Steam packets	Atlantic coastwise service (Boston and Charleston line)
1867	1	410	Brig	General
1868	2	2,787	One medium clipper; one full-model ship, SOVEREIGN OF THE SEAS II	General
1869	2	2,209	One medium clipper, GLORY OF THE SEAS; one schooner	One California — the last McKay Cape Horner; one West Indian trader
During period 1870-1874, inactive. In 1875, built two small sloops of war for U.S. Government.				
Total for period 1841-1875	64	79,753	Merchant sailing vessels	Transatlantic packets; California and Australian clippers and medium clippers and general
	2	1,211	Merchant steam packets	Coastwise
Total for period 1841-1875	66	80,964	Merchant vessels	Primarily sailing vessels on the Seven Seas

The following table is a record of sailing vessels built by Donald McKay during the period 1841-1869 (inactive during the Civil War years of 1862-1865) in partnership with Currier at Newburyport, 1841-1843; in partnership with Pickett at Newburyport, 1844-1845; and later, from 1845 on, at his own yard—originally financed by Train—at East Boston, Mass.:

Type of Vessels	Number of Vessels	Total Tonnage	Average Tonnage per Vessel	Type of Vessels	Number of Vessels	Total Tonnage	Average Tonnage per Vessel
Clippers	32	57,639	1,801	Coasting square-riggers	3	1,378	459
Packets	17	16,257	956	Schooners	6	1,227	205
General traders	6	3,252	542	Total	64	79,753	1,246

Donald McKay was pre-eminently a "clipper" shipbuilder and, moreover, an ardent advocate and builder of large clippers. Most of his vessels herein designated as packets, general traders, or coasting square-riggers were fine-modeled and relatively heavily sparred and canvased ships that could be reasonably classed as "medium" clippers or "reputed" clippers.

McKay's sixty-four sailing vessels can be divided in groups, according to rig, as follows:

Number of Vessels	Rig	Total Tonnage	Average Tonnage per Vessel
54	Three-masted ships	73,791	1,366
1	Four-masted shipentine	3,357	3,357
2	Three-masted barks	968	484
1	Two-masted brig	410	410
5*	Two-masted schooners	535	107
1	Three-masted schooner	692	692
Total 64 vessels		79,753	1,246

*Fishing boats—Cape Cod service.

The following table gives a summary of vessels built by Donald McKay, 1841-1875:

	Number of Vessels	Total Tonnage
Merchant sailing vessels	64	79,753
Merchant steam coastwise packets	2	1,211
Total merchant vessels—sail and steam	66	80,964
Vessels for U.S. Government	6	3,500
Total	72	84,464

A comparison of the wood shipbuilding record of William H. Webb, of New York, and of Donald McKay, of Newburyport and East Boston, Mass., is of interest:

	William H. Webb 1836-1872		Donald McKay 1841-1875	
	Number	Tonnage	Number	Tonnage
A. *Sailing Vessels*				
Clippers	18	21,736	32	57,639
Packets	38	38,885	17	16,257
General traders	23	23,312	6	3,252
Coastwise vessels	11	1,895	9	2,605
Total sailing vessels	90	85,828	64	79,753

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	William H. Webb 1836-1872		Donald McKay 1841-1875	
	Number	Tonnage	Number	Tonnage
B. *Merchant Steam Vessels*	30	49,285	2	1,211
Total merchant vessels—sail and steam	120	135,113	66	80,964
C. *Naval Steam Vessels**	6	20,750	6	3,500
Total merchant and naval vessels — sail and steam	126**	155,863**	72	84,464

*The displacement (the usual index of size of naval vessels) of the six government vessels—Italian, Russian, French, and U.S.A.—built by William H. Webb is stated as 28,400 tons, or 7,650 tons more than the tonnage figures based on internal volume here shown.

**Admittedly incomplete. It is authoritatively stated that "William H. Webb built 138 vessels, aggregating 177,872 tons."

The Donald McKay record of vessels built is complete.

Samuel Harte Pook (1827-1901), the Country's Best Theoretical Naval Architect of the Clipper Ship Era

Several outstanding clippers built in Boston and "Down East" were from the drawing board of one of America's most brilliant naval architects, Samuel Harte Pook (1827-1901). This ship designer was unique in that he was not a builder and was not in the employ of any one builder. Like John W. Griffiths, of New York, he was a well-trained technical man, a good draftsman and ship calculator; but whereas Griffiths worked as a draftsman in the office of Smith & Dimon, New York shipbuilders, Pook was a professional free lance and a naval architect whom any builder could employ or consult. Samuel H. Pook was born in Boston, Mass., in 1827, and when only twenty-three years of age, he designed two of the greatest American clippers, the *Surprise* of 1,261 tons (length 183.2 ft., beam 38.7 ft., depth 22 ft.) and the *Game Cock* of 1,392 tons (length 190.5 ft., beam 39.8 ft., depth 22 ft.). Samuel H. Pook was the son of Samuel Moore Pook (1804-1878), a distinguished naval constructor of the United States Navy. Young Pook, well educated technically, was a natural mathematician with a rare gift of understanding in all matters pertaining to a ship, all of which, coupled with good taste and sound economic sense, equipped him to be the best theoretical naval architect in the United States during the fifties and the clipper ship era.

The statement, "History is merely a fiction agreed upon," attributed to Napoleon, is applicable to the American clipper. Baltimore, with its *Ann McKim,* claimed to have originated the new type of vessel, while New York historians and boosters have given John W. Griffiths the honor; but Boston, working along lines we now know as propaganda, considered Donald McKay the alpha and omega of all things in the design and construction of the clipper ship and attributed to him qualities and talents that he positively did not possess. Simultaneously, it practically ignored the genius of a contemporary Boston naval architect, the truly great Samuel Harte Pook and, as a matter of fact, the only technical ship designer (naval architect) located in the New England States and northeast of New York City. The naval architects of the clipper ship era were Samuel H. Pook, of Boston, and the New York trio of John W. Griffiths, Stephen Smith (the theoretical and practical shipbuilder of the firm

of Smith & Dimon), and William H. Webb. Donald McKay was a master shipwright and a great practical wood shipbuilder, but he was not a naval architect; he could not design a ship on paper, originate the lines, nor make the simplest calculations, such as those of displacement, center of buoyancy, center of gravity, metacentric height, trim, etc. He was a very highly talented master builder, with not only great courage but also stubbornness and conceit. He could make a wood model and build a ship from his model (as could hundreds of other American wood shipbuilders), but he knew practically nothing of the science of naval architecture and was not an originator in any sense of the word. McKay's claim to fame is as a wonderful practical builder of the largest and sharpest-lined clipper ships carrying the greatest sail spread in the world. However, he had a one-track mind and was a biased and self-satisfied man of one idea (i.e., big sharp ships), and after New York had won outstanding sailing honors with its fine-lined and heavily canvased ships, McKay could see nothing in the realm of shipbuilding except big and still bigger vessels of this type. He concentrated on the building of big fast wood ships, and from 1850 on he did nothing else of note. His vessels, often because of their size and associated power, won sailing honors under unusually favorable sailing conditions and certainly gave the many Boston boosters—who had a highly developed sense of local pride and superiority—something to talk and brag about and so advertised Boston and Bostonians throughout the world. Incidentally, their great Donald McKay was Canadian born and New York trained.

William H. Clark, the marine historian and booster of Donald McKay, nevertheless, speaks of Samuel Harte Pook as "actually a poet who dreamed of perfect ships" and "one of the first marine architects to be independent of a ship-yard." After giving young Pook credit for being one of two designers largely responsible for the development of the Boston-built clipper ship (which, he affirms, was the best and speediest in the world), he states that history has not a great deal to say about Pook, "who did design many famous and marvelous clippers." He continues:

> Samuel Hall, the pioneer clipper-ship builder of East Boston, seems to have been jealous of Pook's genius, and he asserted in Boston newspapers that the success of the Pook ships, which Hall built, was not due to Pook's designs but rather to changes which he, Hall, made in Pook's plans as they were translated into actual ships.

It was such narrow-minded, egotistical, fame-grabbing, and purse-pinching men as Samuel Hall that drove America's most talented technical designer of merchant vessels, in disgust, out of a field that greatly needed his skilled talents and services both in the mid-fifties and in the following several decades.

The *Surprise,* completely designed by Pook, was a wonderful ship and one of the first clippers actually designed and built to take advantage of and make money in the Gold Rush emergency. Because of the drive for speed in construction, she was launched with all masts in position and partially rigged, and her owners, A. A. Low & Bro., of New York, were so pleased with the ship that they gave Samuel Hall, her builder, a testimonial banquet and a purse of $2,500 over and above the contract price. The owners were justified in their delight in the *Surprise,* for on her very first voyage she made San Francisco in 96 days, taking a day off the *Sea Witch's* record and earning a clear profit of $50,000 over her cost. But the *Surprise* had only begun to earn profits. For many years she sailed to China, and year after year she earned big dividends. There is no record that her owners were as generous in remunerating the designer of the fast profit-making ship as they were her builder and command.

Samuel Harte Pook undoubtedly designed more American clippers than we can definitely give him credit for today; in the fifties, merely the names of the builder and the owner of a ship were recorded in public print, and the builder of a vessel (who generally knew nothing of the science of naval architecture) was assumed to be the designer. When the craze developed for clippers during the California Gold Rush, New England shipbuilders generally felt the need of a real naval architect to change their old standard form of model and sail plan to meet the new conditions and demand. We now know, at this late date and after most of

the records regarding designers—not considered important to the public at the time—have been lost, that at least eleven New England shipbuilders engaged Naval Architect Pook as a qualified technical expert to design their first clippers and start them off right in the building of sharp-lined, high-speed ships. Samuel Hall, of East Boston (where Donald McKay built his ships), engaged Pook to design two ships that he had orders to lay down in 1850—one for New York and one for Boston owners. The *Surprise,* the first of the pair to be launched, was the first clipper to be built in East Boston. Other ships built by Samuel Hall had models and sail plans copied after those of the *Surprise* and *Game Cock.* Hall saved money by merely copying in new ships the features of design as conceived and laid down by Pook, and history gives Pook no credit for any ships built by Samuel Hall after 1850.

The same thing occurred with three shipbuilders of Medford, three of South Boston, one of Chelsea, and one of East Dennis, Mass., and with one of Thomaston, Maine. It would seem that only honest "Deacon" Thomas, of Rockland, Maine, after engaging Pook to design for him the *Defiance,* employed Pook the following year to design the great *Red Jacket*—which made history in more senses than one. (Even Thomas, when he moved his shipyard from Rockland, Maine, to Quincy, Mass., in the environs of Boston, seems to have tried to copy the ideas of Pook in the building of new ships without engaging him as designer; probably this is the reason that the "Deacon's" bid for greatness as a shipbuilder began and ended with his construction in Maine of the *Defiance* and *Red Jacket,* the two Pook-designed clippers.) Robert E. Jackson, of East Boston, built in 1854 a second ship in his yard admittedly from the designs of Samuel H. Pook; but this was due to the fact that the owners, Seccomb & Taylor, of Boston, Mass., were so delighted with the performance of the *Red Jacket,* built for them by George Thomas, of Rockland, Maine, from designs by Samuel H. Pook. When they decided to change builders and construct a second and smaller clipper in Boston, their home city, they were insistent that their ship, the *Blue Jacket,* be designed by Pook.

As fast clippers designed by Samuel H. Pook are known to have been built in at least eleven New England yards between East Dennis, Mass., and the Penobscot, Maine, it is probable that the Pook models and sail plans were copied by hosts of other builders—some by purchase and sharing expenses with another builder and some by sheer piracy. It has been said that Pook designed during the winter of 1850-1851 the *Nightingale* (1,066 tons) for Samuel Hanscomb, Jr.; also the *Typhoon* (1,611 tons), built by Fernald & Pettigrew, both of which were constructed at Portsmouth, N.H., in 1851. This is probably true, as the Pook, Fernald, and Hanscomb families were all connected with the navy, and Portsmouth, N.H., with Kittery, Maine (across the river), is a Navy Yard community. It is felt that Samuel H. Pook not only designed the famous clippers *Nightingale* and *Typhoon* but also designed or influenced the designs of seven other clippers of from 766 to 1,204 tons built by Fernald & Pettigrew at Portsmouth, N.H., and of Hanscomb's second and last clipper of 947 tons, built at Eliot, Maine. It has been said: "Young Pook put Portsmouth and the Piscataqua on the map as builders of fine clipper ships as he did the Penobscot of Maine, and Raynes, of Portsmouth, N.H. [in addition to Fernald, Hanscomb, and others], is indebted to the genius of Pook for the fast clippers built by him in the fifties." It would seem that Samuel H. Pook was connected with the design of the *Sea Serpent* (1,402 tons), built by George Raynes, Portsmouth, N.H., in 1850, the *Wild Pigeon* (996 tons) in 1851, and the *Witch of the Wave II* (1,020 tons) in 1856; also possibly with six other clippers built by Raynes, 1850-1859.

Many fast clipper ships built by Samuel Hall were, in fact, designed by Samuel H. Pook, but Hall was "hard to get along with" and made "irritating and unimportant" changes in designs, "being ambitious for credit as a designer as well as a builder." Among the "Sam Hall ships," the principal features of design of which are credited by competent authorities to "young Pook," were (1) *John Gilpin* (1,089 tons), which in the great deep-sea derby of 1852-1853 around the Horn to San Francisco (with fifteen contestants and generally proclaimed as the most remarkable long-distance ocean race of all time) finished first as to

actual arrival (93 days) and second in elapsed time to the *Flying Fish,* a vessel 50 per cent larger that made the run in 92 days; (2) *Polynesia* (1,084 tons), which in 1853 made the run to San Francisco in 104 days after being held several weeks off the Horn by head gales and high seas; (3) *Flying Childers* (1,125 tons), which made fast runs in the tea trade and three good uniform consecutive passages around the Horn in 113, 117, and 115 days, respectively. All of these three clippers were built by Samuel Hall in 1852.

Hall constructed at East Boston some five other fast ships—extreme and medium clippers—that Pook evidently either designed or influenced as far as model and sail plans were concerned. One of them, the *Wizard* (1,601 tons), built in 1853, holds the record, made in 1861, of 84 days from Manila to New York, and in 1854 she made the fastest recorded passage of 78 days between New York and Singapore. One contemporary, in writing of Pook's work as a naval architect, says that Pook was entirely responsible for the design of the *Surprise* and *Game Cock* and continues, "In 1852 Samuel Hall built the *Flying Childers, John Gilpin,* and *Polynesia* from drawings originally prepared by Samuel H. Pook."

It is now well known and authenticated by records of the 1850's that Samuel H. Pook was entirely responsible for the design, among others, of the following outstanding clippers. If all the facts could be brought to light and only the very reasonable rumors verified, it would be evident that Pook was the most prolific of all American clipper ship designers and that the quality of his output was not only unexcelled but also unequaled.

Name	Year Built	Tonnage	Registered Dimensions Length x Beam x Depth in Feet	Builder	Owner
SURPRISE	1850	1,261	183.2 x 38.7 x 22	Samuel Hall, East Boston, Mass.	A. A. Low & Bro., New York
GAME COCK	1850	1,392	190.5 x 39.8 x 22	Samuel Hall, East Boston, Mass.	Daniel C. Bacon, Boston, Mass.
WITCHCRAFT	1850	1,310	187 x 39 x 22	Paul Curtis, Chelsea, Mass.	Pickman and Rogers, Salem, Mass.
TELEGRAPH	1851	1,069	178.2 x 36 x 21.5	J. O. Curtis, Medford, Mass.	P. & S. Sprague & Co., Boston, Mass.
NORTHERN LIGHT	1851	1,021	171.3 x 36 x 21.8	E. & H. O. Briggs, South Boston, Mass.	James Huckins, Boston, Mass.
DEFIANCE	1852	1,691	204 x 42.4 x 29	George Thomas, Rockland, Maine	Wm. T. Dugan, New York
BELLE OF THE WEST	1853	936	167 x 35 x 17.5	Shiverick Bros., East Dennis, Mass.	Glidden & Williams, Boston, Mass.
FEARLESS	1853	1,184	191 x 36.4 x 22	A. & G. T. Sampson, East Boston, Mass.	Wm. F. Weld & Co., Boston, Mass.
RED JACKET	1853	2,305	251.2 x 44 x 31	George Thomas, Rockland, Maine	Seccomb & Taylor, Boston, Mass.
HERALD OF THE MORNING	1853	1,294	203 x 38 x 23.5	Hayden & Cudworth, Medford, Mass.	T. Magoun & Son, Boston, Mass.
CHALLENGER	1853	1,334	206 x 38.3 x 23	Robert E. Jackson, East Boston, Mass.	W. & F. H. Whittemore, Boston, Mass.
OCEAN TELEGRAPH	1854	1,495	212 x 40 x 23	J. O. Curtis, Medford, Mass.	Reed, Wade & Co., Boston, Mass.
BLUE JACKET	1854	1,790	205 x 41.2 x 24	Robert E. Jackson, East Boston, Mass.	Seccomb & Taylor, Boston, Mass.
OCEAN CHIEF	1854	1,228	190 x 39 x 23	J. & C. Morton, Thomaston, Maine	James Baines & Co., Liverpool, England

The clipper ships designed by Samuel H. Pook were well modeled for speed, cargo carrying (considering the emphasis put on speed at the time), seagoing qualities, stability, and power. The best times made by Pook ships around the Horn westbound to San Francisco were: *Surprise,* 96 days; *Witchcraft,* 98 days; *Herald of the Morning,* 100 days (claimed 99 days); *Ocean Telegraph* and *Herald of the Morning,* 106 days; *Herald of the Morning,* 108 days; and *Witchcraft, Telegraph,* and *Northern Light,* each 110 days. This makes a total

of nine passages in 110 days or better; other runs were made in 111, 112, 114 (twice), 115 (twice), and 116 (twice) days. The *Witchcraft,* on her maiden voyage, had a passage from port to port of 127 days, but her net sailing time, at sea, was only 103 days, and the average net time of the *Witchcraft's* six passages westbound was 115½ days. Some of the speed records made by Pook clippers are as follows:

Year	Name of Ship	Course	Time in Days
1851	WITCHCRAFT	Rio de Janeiro to San Francisco	62
1853	NORTHERN LIGHT	San Francisco to Boston	76 days 6 hours
1853	NORTHERN LIGHT	San Francisco to Cape Horn	38
1853	TELEGRAPH	Valparaiso to Boston	58
1854	RED JACKET	New York to Liverpool (dock to dock)	13 days 1 hour 25 minutes
1854	TELEGRAPH	Valparaiso to San Francisco	34
1855	DEFIANCE	Chincha Islands to Hampton Roads	52
1855	RED JACKET	Equator (Atlantic) to Melbourne	44
1855	FEARLESS	Manila to Boston	86
1855	OCEAN TELEGRAPH	Callao (Peru) to New York	58
1857	SURPRISE	Shanghai to New York	82

Many authorities have affirmed that Pook's *Red Jacket* (2,305 tons) was the finest clipper ship ever built. Among her fast sailing performances was a run in January 1854 from New York to Liverpool of 13 days 1 hour and 25 minutes, dock to dock, in which for six consecutive days she covered over 300 nautical miles each day and averaged 343 miles per day for the period, making 413 miles in twenty-four hours and 17¼ knots per hour for a day. The *Red Jacket* was bought by the British and in 1855 made a record run of 44 days from the Atlantic equator to Melbourne, Australia.

The *Defiance* of 1,691 tons, which was built on the berth of "Deacon" Thomas' yard at Rockland, Maine, occupied a year later by the still bigger *Red Jacket,* first showed to the world Samuel H. Pook's ideas for the model of a large clipper. In the spring of 1852, the *Defiance* (Capt. Robert McCerren) sailed from Rockland, Maine, to New York in ballast and made an "unprecedented speed of 20 nautical miles an hour," which electrified the shipping world. This amazing run made a deep impression on shipowners and shipbuilders and changed the design of American clipper models. The *Defiance* had a flat floor and big midship section, with only a ten-inch deadrise. Clippers prior to that time had followed the "sharp bottom" design of frigates, Baltimore clippers, and the fast ships of John W. Griffiths, of New York. Henceforth this was changed, the Pook flat floor and full mid-section were adopted by American designers and builders, and the sharp bottom, with big deadrise and relatively small mid-section, was doomed. The flat floor model had proved successful in the big transatlantic packets; Pook introduced the idea into clipper ship design, and Donald McKay, William H. Webb, and all American builders and designers of note followed in his steps.

In early 1853, the Pook-designed clipper ship *Northern Light* made the phenomenal run from San Francisco to Boston in 76 days 6 hours, a performance that has never been equaled or even approached. All sailing ships designed by Samuel H. Pook were fast vessels, including those that were not so much in the public eye. The *Fearless,* for instance, made a run of only 15 days from the equator to San Francisco in 1854 and the following year made a voyage from Manila to Boston in the phenomenal time of 86 days.

Carl C. Cutler, in his GREYHOUNDS OF THE SEA, says that Pook, when "a mere boy of twenty," designed the first large seagoing tug built in this country—a twin-screw iron steamer of 300 tons. He is also credited with having designed the famous *Ocean Chief,* built at Thomaston, Maine, by J. & C. Morton. Cutler says that Pook was one of the two designers who gained "especial prominence" in clipper ship design, and the second designer that he mentions is not Donald McKay, of East Boston, but John W. Griffiths, of New York. Continuing, he writes: "Pook seems to have sensed very early the shortcomings of the Griffiths models as cargo carriers, and devoted his efforts toward evolving a more burdensome and

even swifter type of ship from the flat-floored packet lines. In the end, his theories—or rather the theories he sponsored—triumphed. . . . After 1852 very few large American ships were built which did not embody the principles followed by Pook."

Cutler, in the appendix of his excellent, authoritative work before mentioned on the American clipper ship, writes:

History seems to have done scant justice to the work of Samuel Harte Pook, naval architect. As a young man he designed a large number of the most successful of the clipper ships, among them the *Red Jacket, Game Cock, Northern Light, Surprise, Ocean Telegraph, Ocean Chief, Telegraph, Fearless, Herald of the Morning, Belle of the West* and *Challenger*. It is doubtful as to whether any individual did more to develop a beautiful and successful merchant marine in America than Pook. After the outbreak of the Civil War he had a long and eventful career as designer of ships for the Navy. His achievements deserve far greater attention than can here be given them.

Another marine historian has said:

Samuel H. Pook, of Boston, was a designer of unusual ability, who successfully competed with Donald McKay in the creation of fast clipper ships. He designed the *Red Jacket* (known as the *Lightning's* great rival), which clipper ship was built by George Thomas at Rockland, Maine, for Seccomb & Taylor. Other famous clippers designed by Pook were the *Game Cock, Surprise, Northern Light, Ocean Telegraph, Herald of the Morning,* etc. It is said that, whereas McKay's ships were chiefly distinguished for their beautiful workmanlike appearance and for strength, rugged and unmistakable, rather than for delicate beauty, Pook's ships, such as the *Red Jacket,* had their strength and undoubted power and utility disguised under graceful curves. For instance, the *Red Jacket* had the graceful arched stem and clipper bow of a China ship, whereas the stem of the *Lightning* was almost straight with only a very slight curve in it.

We also read:

A Bostonian (Pook) designed three of the eighteen California clippers that made a voyage in less than 100 days from an Atlantic port to San Francisco before 1861—the *Surprise* (1,262 tons), *Witchcraft* (1,310 tons), and *Herald of the Morning* (1,294 tons). He also designed the *Northern Light* (1,021 tons), which holds the all-time record on an eastward run around the Horn from San Francisco to an Atlantic port.

This quotation understates Samuel H. Pook's contribution to the sailing achievements of American wood clipper ships, for his vessels were seldom defeated or their performances equaled by the ships of other designers operating under similar conditions. Moreover, Pook has never been given credit for all the fast clippers that he designed nor recognition for those that he materially influenced and was responsible for in substance and essentials. The *Surprise,* Pook's first sizable clipper and the first real clipper built in Boston, Mass., or New England, was an extremely fast vessel. She made three westbound voyages around the Horn and averaged 110.3 days per passage (fastest, 96 days; slowest, 119 days). The *Herald of the Morning* averaged 112.2 days for five westbound California passages during the fifties, with 101 days as her best and 130 days as her slowest voyage. The average time of passage for the *Herald of the Morning* was better than that of McKay's great Cape Horner *Flying Cloud,* which averaged 112.8 days on six passages, port to port. The first three passages of the *Witchcraft* around the Horn westbound averaged less than 104 days—an amazing performance (best passage, 98 days). The *Ocean Telegraph* made a fast run of 58 days from Callao, Peru, to New York and a Cape Horn passage to California in 105 days; the *Northern Light* went to San Francisco in 110 days and the *Game Cock* in 114 days, following with a run of 115 days. The slowest of five westbound around-the-Horn passages of the *Northern Light* was only 126 days, whereas the crack *Flying Cloud* on one occasion required 185 days to make the passage, port to port.

Samuel H. Pook's ships had a good record for longevity. The *Game Cock* (1,392 tons) was in service when thirty years old, and the *Ocean Telegraph* (1,495 tons) was cut down to a barge at the age of twenty-nine years. The *Red Jacket* (2,305 tons) was operating in the Quebec lumber trade when twenty-five years old and, presumably, gradually wore herself out in that humdrum service. The *Herald of the Morning* (1,294 tons) was sold to the British and in 1890 was in service at "a ripe old age" of thirty-seven years. The hard-driven,

record-making *Surprise* (1,262 tons) hit an uncharted, sunken rock in oriental waters and was lost when twenty-six years old, not because of any fault of the ship—design or construction. There is a record that the *Fearless* (1,184 tons) was sold by German owners to Norwegian interests when twenty-five years old. The *Challenger* (1,334 tons) was sold to Peru in 1863, during the Civil War, and disappeared from shipping records in 1875 after a life of twenty-four years. The *Telegraph* (1,069 tons) was a fire victim and suffered destructive damage when seventeen years old. The *Belle of the West* (936 tons) was lost in 1868 after fifteen years of service, and the *Blue Jacket* (1,790 tons) was burned after the same length of service. The *Witchcraft* (1,310 tons) was driven ashore and lost when eleven years old, and the *Northern Light* (1,021 tons) was rammed and sunk when ten years old.

Samuel H. Pook, the young naval architect of Boston and a professional free lance, never had a chance like that of either William H. Webb, of New York, or Donald McKay, of East Boston, to show what he could really do in the design and building of fine ships. He made plans and modeled clippers for several builders in Boston and New England, and although he was engaged in some cases to supervise construction and either plan or approve details, yet in actual operation he had little or no authority, and not a single one of the many splendid vessels that he designed was built exactly as he would have desired. Nearly all of the builders were "rule-of-thumb" and "purse-tight," and many did not take kindly to "modern" suggestions or care in practical operation to relinquish any measure of authority. Some actually fought with their designer and supervising constructor and were wedded to old methods and what they considered the cheap way of doing things. They were decidedly short-sighted in their parsimony and were simply not intelligent enough to work with a real naval architect and capitalize his technical knowledge to their ultimate gain. Again, some builders bought "lines and a spar plan" from Pook; others acquired merely "a half model" from him. It is amazing how many shipbuilders from New York up into eastern Maine "bought cheap" the model lines that Pook had drafted. Many builders bartered with each other without Pook's sanction or knowledge, so that they could make a good attempt to build a clipper ship following the general design of the Boston naval architect.

All wood shipbuilders were copyists and adapters to a great extent. They studied the hull models and spar and sail plans of each other's creations; they examined the underwater body and general characteristics of a rival builder's ship before launching and watched her being rigged at a fitting-out wharf. They became informed of dimensions and tonnage after the vessel was officially measured, and there was but little that they did not know about any ship deemed of importance that was built in their locality or that they cared enough about to see before launching. No shipbuilder produced a distinctive and original, new or revolutionary type of ship that sprang from the creative brain of a designer. Ships were gradually changed in model lines, size, proportion, construction, and rig to meet owners' requirements and as experience was gained in the operation of certain ships under known conditions of lading, wind, sea, and handling. There was no "first clipper" any more than there was a first packet or a first Down Easter; moreover, there was no pioneer medium, or half, clipper. No person could point to any ship and correctly describe her as the world's "first fast ship"; neither can any historian, with any great measure of truthfulness, refer to any sharp-lined, heavily canvased ship as the "first clipper."

John W. Griffiths and Stephen Smith produced sensational ships when Smith & Dimon, New York, built the *Rainbow* in 1845 and the *Sea Witch* in 1846. There is a legend that the Griffiths lines of the *Rainbow* were so radical and "so different from anything previously built" that the owners and builders lacked courage to complete the construction of the ship according to the plans; that the criticism of marine authorities was so adverse after they saw the vessel in frame that she was allowed to remain on the stocks in that condition for a good part of a year before the owners and builders finally became daring enough and sufficiently callous to expressed popular opinion "to take a chance" and to go ahead, plank, and finish her. This is ridiculous. There was essentially and basically nothing new about the *Rainbow*—

merely a sharpening of lines and the intentional sacrifice of certain features in a desire to obtain more speed. Every ship design is an attempt, by compromise, to obtain what the owner desires and specifies. Howland & Aspinwall wanted high speed in a vessel to be built for the China run, and these owners were willing to sacrifice some deadweight capacity to get it. They took kindly to Griffiths' suggestions for an extreme hollow-bow ship; but there was nothing new about such lines, as they had been used in pilot boats and other craft for years. It is said that wiseacres ridiculed the *Rainbow* and declared that her bows were turned inside out; but the New York HERALD contains no sensational account of her model when describing her launching, merely saying, "The *Rainbow* holds out a promise, we should judge by her model, of great speed."

Samuel H. Pook, after his experience with arbitrary, stubborn, somewhat unimaginative, "rule-of-thumb," practical shipbuilders, became disgusted with a field where he could not always use his talents as a professional designer to the best advantage and to his own satisfaction. He turned his attention to wood naval vessels and became, like his talented father, a naval constructor of the United States Navy. Samuel H. Pook was probably the earliest advocate of the ironclad, and he and William H. Webb, of New York, were the world's leading designers of ironclad and ram-bowed armored wood warships in the late fifties and the sixties. Samuel Harte Pook survived his father twenty-three years and died in 1901 at the age of seventy-four; he had retired from active naval service in 1889, when sixty-two years of age.

A British marine authority has written of the clippers built by Donald McKay and with special reference to the four big clippers that he built for James Baines & Company and the Liverpool-Australia British Black Ball Line: "No vessels ever propelled by wind alone have ever traveled so fast through the water as the McKay crack ships." An American historian has said: "The choice of the best designer is a matter of opinion. McKay was thought to be the best by many because of the [highly publicized] success of some of his ships, such as the *James Baines, Flying Cloud,* and *Lightning.* Webb, however, turned out a greater number of clippers [fast sailing ships would be a more nearly correct term], which were undoubtedly as well formed as the McKay vessels; some were better in fact. Griffiths and Pook showed the greatest originality. Of all the lines of clippers that have been published (and models exhibited) those of Pook appear to have been the best formed for speed."

In the annals of American wood ship designers, the name of Samuel H. Pook stands at the top. Considering technical ability, theoretical knowledge, and mathematical skill, Samuel H. Pook, of Boston, and John W. Griffiths, of New York, led all other American designers of ships in the packet and clipper ship era, with William H. Webb close behind. He was also closely followed by Stephen Smith and others who obtained their knowledge of the theory of ship design, direct or indirect, from Henry Eckford, the Scotch-American who was New York's first technical designer and builder. Considering natural—and not theoretical or scientific—ability as a designer, there was little to choose between Pook, Webb, and McKay, with Smith, Brown, Bell, and Westervelt close behind them and Griffiths well in the rear. As practical shipbuilders, Webb and McKay won the highest honors, and neither Pook nor Griffiths was a practical builder; but in and around New York, Boston, Mystic, Conn., Newburyport, Mass., Portsmouth, N.H., Bath, Maine, and several other sections Down East was a host of excellent wood shipbuilders practically as good as Webb and McKay and with a high record for capability, resourcefulness, and sound construction sense that has never been approached by the shipbuilders of wood sail or wood steam in any other country of the world.

It is surprising that the United States (and eastern Canada) built such splendid wood square-rigged sailing vessels during a century or more ending in 1893, with the possession of but little technical knowledge on the part of American shipbuilders. With the retirement of William H. Webb, the death of John W. Griffiths, and the withdrawal of Samuel H. Pook from an interest in the merchant marine, no technical naval architect was connected with American merchant wood shipbuilding, and all building was merely by "rule-of-thumb," the capitalizing

of experience, and the laying down of lines from "whittled" models, with dimensions and spar plan determined by the known performance of some other vessel. American wood shipbuilders were always conspicuously purse-tight in regard to the cost of design, and it was here that Pook ran into many annoyances, particularly in his dealings with Samuel Hall, of East Boston. In the craze for speed during the California boom, all eastern shipbuilders were appealed to for very fast ships. Practical builders availed themselves of Pook's scientific knowledge, rare good judgment, and natural ability to model an excellent and handy sailer; but after buying a set of plans, they did not feel the need of a naval architect's supervision and advice during construction, nor did they care to go to the expense of having made—and paying for—new plans for each new ship. This false economy operated harmfully at times, and it was generally evident even up to and through the period of building America's only fleet of steel sailing ships, constructed in 1894-1902.

The finest designers and builders of the famous Down Easters were not technical men but practical foremen, shipwrights, and master builders with a rare knowledge of ships—past and present—and an ability to model and spar to fill a general specification, based entirely on the known performance of other ships. Bath's greatest wood ship designer and builder, John McDonald, produced a host of outstandingly fine and eminently successful craft during the seventies and eighties (among which was the *Henry B. Hyde,* built in 1884 and generally proclaimed to be the best and fastest Down Easter and sailing vessel ever built), but he knew nothing of the science of naval architecture; neither did any builder connected with Arthur Sewall & Company during the construction of the "Big Wood Four" of the Sewalls —their supreme and final effort in wood sail. John McDonald was an apprentice with Donald McKay in East Boston, and whereas he was known as a pupil of McKay, it was naturally impossible for the pupil to obtain from the teacher knowledge that the master himself did not possess. In this one respect, European shipbuilders were far ahead of American shipbuilders, and as composite construction and then iron and steel supplanted wood, foreign naval architects used their scientific knowledge to good advantage, even though for years they persisted in building far too narrow ships. It was iron and steam, plus an appreciation of the science and the practical application of theoretical naval architecture (and the withdrawal of American capital and government support from shipping and the seas), that gave to Britain the command of the ocean trade of the world. However, all nations—Britain as well as the United States—are indebted to France, the pioneer in scientific naval architecture, for sound basic principles in French-built vessels. They were copied in America to produce our early fast privateers (which proved so troublesome to the British in the War of 1812) and the Baltimore clippers; in England they were used to revolutionize both the merchant and naval marine and, incidentally, to produce Britain's fastest clipper, the *Cutty Sark.*

An Analysis of Shipbuilding in the Principal Ports and Districts of the United States for the Year Ending June 30, 1853, with a Record of Tonnage and Types of Vessels Built in Each State

Whereas shipbuilding in the United States originated on the Kennebec River and the center, or leadership, of the industry went south in harmony with the location of population, it can be said that, following the War of 1812, New York gradually became the metropolis not only of shipping but also of shipbuilding. For fast craft, the Chesapeake was in the van for a while, but as the years advanced the center of building worked northeast from New

York to Boston and Massachusetts until it finally settled once more on the Kennebec River, where for some thirty years following the Civil War, Bath, "The City of Ships," was the great and successful leader and the center of the wood shipbuilding industry of the United States and of the world. It has been said: "The center of wood shipbuilding in the United States and the heart of invention, initiative, and activity in that industry during the first century of the republic gradually but steadily moved back to New England from the South and entrenched itself in Maine, centering around Bath and the Kennebec River, where it made a magnificent final stand and there fought a great but inevitably losing fight for several decades." The clipper was a sailing ship built primarily for speed, and every other factor of design was subordinated to the qualities and characteristics that make for high speed. The state of Maine shipbuilders were "never bitten by the clipper bug," and in ship design and construction "those in the section of the state with Bath on the Kennebec River as the nucleus" persistently stood out for carrying capacity, sea-keeping qualities, relatively small crews, low depreciation and maintenance expenses, and ability to make money competitively. At the time of the early clipper ship era, Boston was successfully challenging New York as a shipbuilding center, and as the fifties advanced, New England came more and more to the fore. Maine gradually supplanted Boston and Massachusetts as the center of wood shipbuilding just as Boston, a few years earlier, had wrested leadership from New York. As a matter of fact, in the fifties wood shipbuilding was primarily a New England industry, for of the clippers and reputed clippers built during the ten-year period 1850-1859 inclusive, over 78 per cent were built in the states east of New York and the metropolitan area.

In the forties and at mid-century, the trend of movement of the national shipbuilding center "toward the East" had become very conspicuous and, it was said, "disturbing to New Yorkers." When the official United States Government figures for the number of vessels built and their measured and registered tonnage during the fiscal year ending June 30, 1853, were made public, it was seen that, although the port and city of New York still led the list of concentrated localities in building ships (with Boston, Mass., second, Bath, Maine, third, and Philadelphia, Pa., fourth), five of the first ten leading marine tonnage-producing cities and towns were in Maine, and that state far exceeded the next two states—New York and Massachusetts—in both the floating tonnage constructed and the number of vessels built during the year. Of the first ten leading shipbuilding communities in the United States, Bath, Maine, ranked third, but Waldoboro, which in reality is part of the Bath geographical district and but twenty-five miles distant, ranked fifth, with Portland, Maine, only twenty-seven miles from Bath, in tenth position. If the figures of Bath, Waldoboro, and Portland, Maine, are combined, this section launched 70,220 tons of vessels during the year as against 68,454 tons for New York and 59,920 tons for Boston. If the tonnage produced at Newburyport (ranking fourteenth in the list of shipbuilding communities of the country) and Gloucester (ranking twenty-first) is added to the Boston tonnage, then this Greater Boston geographic area built 71,909 tons. This is slightly more (2.4 per cent) than the Greater Bath district and 5 per cent more than New York, which had no nearby tonnage-producing community that could be added to make a greater metropolitan district.

In regard to the class of vessels built in Bath (and Maine), Boston, New York, Philadelphia, and Baltimore, the five leading tonnage-producing centers of the country, Boston led as a city with square-riggers, constructing 52 as against Bath's 50, but Greater Bath produced 101. Baltimore built 24 square-riggers, New York 23, and Philadelphia only 5. About two-thirds of the craft built on the Delaware and registered in Philadelphia were small river boats, and New York-built vessels were about forty per cent sloops, river and canal boats, twenty-seven per cent schooners, and around twenty-five per cent steamers or powered boats. Boston and Maine, in 1853, built practically no sloops or small craft—only about two per cent of the total number of vessels constructed—and, strange as it may seem, relatively few schooners. Boston built 10 schooners out of a total of 64 vessels, Bath 11 out of 65, and the Greater Bath area (i.e., Bath, Waldoboro, and Portland, Maine) constructed 42

schooners out of a total of 149 vessels built—a scant twenty-nine per cent. During the year, Boston produced only 1 steamer and the city of Bath only 3 as against 58 for New York and 22 for Philadelphia.

The following table shows the number and class of shipping built at the principal ports and revenue districts in the United States for the year ending June 30, 1853, and exhibits at one view the locality of shipbuilding in the order of the greatest number of tons built in the one year:

Names of Ports and Districts	Class of Vessels					Number Built	Total Tonnage in Tons and 95ths
	Ships and Barks	Brigs	Schooners	Sloops and Canal Boats	Steamers		
New York	18	5	66	97	58	244	68,454.45
Boston	51	1	10	1	1	64	59,920.37
Bath, Maine	47	3	11	1	3	65	38,096.77
Philadelphia	1	4	28	102	22	157	24,426.91
Waldoboro, Maine	22	12	24	1	—	59	23,313.68
Baltimore	15	9	43	—	1	68	14,439.03
Passamaquoddy, Maine	21	9	7	1	1	39	12,333.66
Cincinnati, Ohio	—	—	—	8	32	40	11,691.30
Belfast, Maine	11	9	11	—	—	31	10,187.89
Portland, Maine	12	5	7	1	—	25	8,809.48
Portsmouth, N.H.	9	—	1	—	—	10	8,666.11
Buffalo Creek, N.Y.	—	1	9	—	12	22	8,619.78
Louisville, Ky.	—	—	—	1	29	30	8,592.09
Newburyport, Mass.	8	—	8	—	—	16	7,785.82
Pittsburgh, Pa.	—	—	—	—	34	34	7,112.11
Cuyahoga, or Cleveland, Ohio	4	—	16	14	3	37	7,015.50
Penobscot, Maine	4	7	26	2	1	40	6,491.03
Kennebunk, Maine	4	2	4	—	—	10	5,125.57
Wilmington, Del.	—	1	11	19	2	33	4,435.64
Bangor, Maine	4	6	9	4	1	24	4,329.91
Gloucester, Mass.	—	—	51	—	—	51	4,202.80
Oswego, N.Y.	2	—	7	2	3	14	4,086.12
New Bedford, Mass.	9	—	3	1	—	13	3,796.16
St. Louis, Mo.	—	—	1	10	11	22	3,583.60
New Albany, Ind.	—	—	—	—	9	9	3,455.81
Detroit, Mich.	—	1	16	—	8	25	3,416.44
Machias, Maine	3	4	13	—	—	20	3,394.48
New Haven, Conn.	2	—	10	2	1	15	3,144.01

The tonnage built in the several states during the year ending June 30, 1853, as officially reported, was as follows:

States	Ships and Barks	Brigs	Schooners	Sloops and Canal Boats	Steamers	Total Number of Vessels Built	Total Tonnage in Tons and 95ths
Maine	132	70	133	10	7	352	118,916.67
New York	21	6	85	103	74	289	83,224.05
Massachusetts	73	1	126	3	2	205	83,015.15
Pennsylvania	1	4	28	102	56	191	31,539.07
Ohio	4	—	28	23	35	90	21,213.36
Maryland	15	9	97	—	1	122	16,901.38
Connecticut	4	—	37	21	5	67	9,022.20
New Hampshire	9	—	1	—	—	10	8,666.11
Kentucky	—	—	—	1	29	30	8,592.09
New Jersey	—	—	30	22	6	58	7,107.71
Virginia	3	1	11	14	11	40	6,599.20
Delaware	—	1	11	19	2	33	4,435.64
Michigan	—	1	20	—	14	35	4,304.63
Missouri	—	—	1	10	11	22	3,583.60
Indiana	—	—	—	—	9	9	3,455.81
Rhode Island	6	—	5	—	—	11	3,170.52
District of Columbia	—	—	—	42	—	42	2,743.64

(Continued on next page)

States	Ships and Barks	Brigs	Schooners	Sloops and Canal Boats	Steamers	Total Number of Vessels Built	Total Tonnage in Tons and 95ths
Wisconsin	1	1	10	2	—	14	2,422.39
South Carolina	—	—	24	13	1	38	1,993.87
North Carolina	—	1	16	3	2	22	1,746.36
Louisiana	—	—	9	4	4	17	1,346.12
Illinois	—	—	7	2	—	9	1,158.35
Vermont	—	—	2	—	—	2	218.33
California	—	—	—	—	2	2	150.57
Tennessee	—	—	—	—	1	1	45.17
Total of each class..	269	95	681	394	272	1,711	425,572.49

The Construction of "Half Clippers" and the So-called "Down Easter" Type of Sailing Vessel in the Boston Area

George Thomas, a builder of wood ships at Rockland, Maine, launched his first clipper, the little *Springbok* of 370 tons, in 1851. He then contacted Samuel H. Pook, the Boston naval architect, and bought plans for the sizable clipper ship *Defiance* (1,691 tons), which he built for William T. Dugan, New York. The speed shown by the *Defiance* on her first run under canvas (20 knots per hour in ballast, Rockland to New York) was so amazing that Thomas, known as "The Deacon," gave Pook the job to design a bigger clipper for him, with the result that in 1853 the *Red Jacket* of 2,305 tons was launched from the Thomas yard at Rockland for Seccomb & Taylor, Boston. (She was sold to Liverpool owners in 1855.) The *Red Jacket* made new speed records, was a good carrier and a grand sea boat, and has been proclaimed by some authorities to be "the fastest and best clipper ship ever built." In the meanwhile, "Deacon" Thomas had built at his Rockland, Maine, yard the clipper ship *Rattler* of 1,121 tons, launched in 1852 for William Whitlock, Jr., New York, which made a run of 115 days to San Francisco. Thomas had come to the conclusion that the location of his shipyard at Rockland, Maine, was "too far from the center of shipowning and operating activities" and that he would do better and get more business if he moved his yard to Boston, New York, or to some suitable site between these two leading American ports. It cannot be said that the move of George Thomas from Rockland to Quincy, Mass., a few miles from the center of Boston and within the marine area of Greater Boston, was a wise or fortunate one. He made the switch at the time the clipper ship boom was waning, and Boston had "too many established shipbuilding yards looking for business." Moreover, at Rockland, Maine, "The Deacon" had been "a big frog in a little pool"; in Boston he was a very little frog in a big pool, and Boston was very clannish. During the years 1851-1853 inclusive, Thomas had built in Maine four clippers totaling 5,487 tons; in the balance of the clipper shipbuilding decade, he built only two more, aggregating 3,027 tons, at Quincy, Mass., and one of these was the *Logan,* launched in 1856 for William Whitlock, Jr., of New York, for whom he had built the *Rattler* at Rockland in 1852. Only one ship, the *King Philip* (1,486 tons), built in 1854, was for Boston owners—Grant & Reynolds.

After deciding to leave Rockland, George Thomas probably would have built more good wood ships if he had located his yard in Bath, Maine, where there was an abundance of skilled labor and ships could be constructed cheaply. Thomas built a few good ships at Quincy, Mass., but he was not steadily engaged even after the Civil War and during the boom

of the seventies. In 1867 he launched the *Dexter* of 1,257 tons (length 186 ft., beam 37 ft., depth 23 ft.) for Isaac Taylor, Boston, from the yard then owned by Taylor, but the ship was not the good sailer expected. In the seventies, "Deacon" Thomas built the following four outstanding Down Easters, of which the best was the *America,* but all were fine vessels. The Thomas shipyard at this time was known as the Taylor & Thomas yard, and it would seem that Isaac Taylor, for whom the *Dexter* (in 1867) and the *Red Cloud* (in 1877) were built, financed the operations of the yard and was a partner of Thomas in the building firm.

Name of Vessel	Year Built	Tonnage	Registered Dimensions			Owner
			Length	Beam	Depth	
NORTHERN LIGHT	1872	1,795	219.7	43	28	Built "on spec"; sold to W. F. Weld & Co., Boston
AMERICA	1874	2,054	233	43	28	Thayer & Lincoln, Boston
TRIUMPHANT	1874	2,046	240	43	27.5	Thayer & Lincoln, Boston
RED CLOUD	1877	2,208	230.3	43.2	29	Isaac Taylor, Boston

Another well-known ship was built at Quincy, Mass., in 1869 for James E. Crosby; she was named the *Imperial* and was of 1,331 tons register, 188½ ft. long, 38 ft. beam, and 23½ ft. deep. It is said that Thomas built the four Down Easters *Northern Light, America, Triumphant,* and *Red Cloud* from the same model, merely varying the length of the middle body and slightly changing the depth and position of deck beams. This practice was resorted to, in the interest of economy, far too frequently by American wood shipbuilders when considered from the standpoint of naval architecture and the production of the best possible ships to conform with the requirements outlined by the owners. Arthur Sewall & Company carried over the vicious pinch-penny habit to the building of the only American fleet of steel square-riggers, with the result that the quality of design deteriorated as far as hull proportions, sail plan, and actual performance in service were concerned following the building of the *Erskine M. Phelps* in 1898.

Paul Curtis built the rather burdensome *Enoch Train* at East Boston in 1854. This ship of 1,787 tons net register (length 209 ft., beam 45½ ft., depth 26 ft.) was a big beamy vessel, and although built at mid-century and during the clipper ship era, she was to some degree a prototype of the Down Easters that were built in years to come and had been popular in Maine for some time. The *"Train,"* however, did not have the lines, the capacity, or the speed of the Bath-built ships of the seventies and eighties; moreover, she was an unlucky as well as a slow ship and was frequently in trouble. In 1867 she made a long passage of 167 days from Norfolk to the Golden Gate, followed by a slow run of 143 days from San Francisco to Liverpool. After crossing to New York, the vessel loaded for San Francisco and did not reach that port until 476 days out. Paul Curtis launched the fuller-bodied and rather small square-rigged ships *Akbar* and *Fleetford* from his East Boston yard during 1863-1864—Civil War years. The *Akbar* was of 906 tons net register and measured 159½ ft. long, 32⅔ ft. beam, and 21¾ ft. deep. The *Fleetford* was somewhat larger, measuring 1,104 tons net register, 178 ft. long, 36 ft. beam, and 23⅓ ft. deep. Curtis & Smith (Curtis, Smith & Company and Curtis, Smith & Cushman), among other ships, built the following good Down Easters in the Curtis yard at East Boston during the seventies:

Name of Vessel	Year Built	Net Tonnage	Registered Dimensions		
			Length	Beam	Depth
AGENOR	1870	1,414	202	39.9	24.2
MATCHLESS	1870	1,198	180	38	24
NORTH AMERICAN	1873	1,584	220	41	24
CONQUEROR	1874	1,540	215	41	24

The *North American* was built for Henry Hastings & Company, Boston, and was a fast sailer as well as an outstanding, beautiful ship. On her maiden voyage (New York-Melbourne-San Francisco-Liverpool), she covered over 41,500 nautical miles at an average speed of about 8 knots per hour. The *Agenor,* in 1881, made a transpacific run from the Japanese coast to the Golden Gate in 22 days. She is credited with a fast passage of 30 days from Callao, Peru, to San Francisco and in 1904 made the run from Guayaquil to the Golden Gate in record time. The *Conqueror,* built for E. Williams & Company, Boston, made somewhat better than average time and was a successful ship, proving quite profitable to her owners.

Donald McKay, after ten years of inactivity in the production of wood ships, made a futile and rather pathetic effort to stage a "come-back" in 1868, when he laid down the *Sovereign of the Seas II* at his old East Boston yard, followed the next year by the *Glory of the Seas*—McKay's last ship—launched in November 1869. The *Sovereign of the Seas II* was of 1,502 tons gross and 1,443 tons net register (length 200 ft., beam 41 ft., depth 24 ft.) and was built as a grain carrier for Lawrence Giles & Company, New York. She proved to be a well-constructed ship, but a notoriously poor sailer. Her average time of passage in ten completed runs from North Atlantic ports westbound to San Francisco was 150 days. Her last voyage as an American ship in 1883-1884 was a run from New York to Astoria, which took 160 days; thence to Queenstown, which required 141 days. She was then sold to J. D. Bischoff, of Bremen, Germany, and renamed *Elvira.* Later, the *"Sovereign"* again came under American registry when acquired in 1898 by Luckenbach, converted to a tow barge, and renamed the *Sovereign of the Seas;* she was lost off Barnegat in 1902.

The *Glory of the Seas* was not, like the *Sovereign of the Seas II,* an attempt of McKay to build a Down Easter that could carry well, sail rather fast, and be operated economically; she was a real old-fashioned medium clipper of the type built during the last half of the fifties, and in this field of design and construction McKay was more at home. The *"Glory"* was of 2,103 tons gross and 2,009 tons net register, 240 ft. long, 44 ft. beam, and 28 ft. deep. Like many other McKay ships, she was built "on spec," and at the end of her first voyage (a passage out to San Francisco in 120 days and a run eastbound to Liverpool in 112 days), she was sold to J. Henry Sears, of Boston. A contemporary press item says, "The *Glory of the Seas* was assuredly well built, so well built that she made a bankrupt of her builder, McKay." The *"Glory"* was a good sailer, a good carrier in bulk, and a typical medium clipper in limited deadweight capacity, considering volume of cargo spaces including upper 'tween decks and limited draft loaded. (She was a three-decker with all decks laid complete.) The average time of all eleven passages made westbound around the Horn from North Atlantic ports to San Francisco was 123 days, and on her one run to San Pedro (Los Angeles), Calif., from Liverpool, she made the passage in 121 days. The average of her four runs from New York to the Golden Gate was 114 days, with her best run a splendid performance of 97 days (left New York October 13, 1873; arrived pilot grounds off San Francisco January 18, 1874). Seven westbound passages from English west coast ports averaged 130 days, and the five from Liverpool averaged 132½ days. Eastbound, the *"Glory"* made eight runs to Liverpool averaging 117¼ days and two to Queenstown, Ireland, averaging 111½ days; the average time of all her eleven runs from San Francisco to North Atlantic European ports was 125½ days because of one slow and disastrous run via Valparaiso to Havre, which occupied 220 days. The *Glory of the Seas* was badly beaten in her encounters at sea with W. H. Webb's clipper *Young America,* built fourteen years before the McKay ship (five days on a run in 1872 and thirteen days in 1874). The *"Glory"* made only one Cape Horn round voyage after 1882 and was laid up for long periods of time intermittent with coastal work. She was burned for the copper and iron in her hull in May 1923, when fifty-four years old; but the ship was badly strained in 1881, when twelve years old, and was considered in no satisfactory condition for deep-sea work after her last Cape Horn run in 1885, when sixteen years of age.

Samuel Hall operated his East Boston yard intermittently during the years of depression and the Civil War. His best two ships of the general fullness, sail spread, and type known as

Down Easters were the *California* of 1,413 net registered tons (length 194 ft., beam 38½ ft., depth 24 ft.), built in 1864 for W. F. Weld & Company, Boston, and the *Highlander* of 1,352 net registered tons (length 190 ft., beam 38½ ft., depth 24 ft.), launched four years later (1868) for Sturgis, Clearman & Company, of Boston, which promptly sold her to B. W. Stone & Bro., of Salem, for $100,000. As a matter of fact, although these two Hall ships varied 61 tons, or 4.3 per cent, in registered tonnage, they were built from the same model; they had the same beam and depth, but the *Highlander* had 4 ft. less parallel middle body. "Sam" Hall was making no money in the late fifties and sixties, and he was watching pennies even more than he did in the early fifties, when he had dealings with Pook, the naval architect, and tried to get much for practically nothing and then refused to give credit where credit was due. The *California* and *Highlander* were said to be "of good model well constructed and to present a handsome appearance"; as sailers, they were slow and must have been a disappointment to their owners. The average time of the *California* on her six westbound passages around the Horn to San Francisco was 166 days, and the *Highlander* was conspicuous in the records of ship movements, not because of fast runs at sea but because of her long stays in port.

Robert E. Jackson continued to operate his yard when business warranted and built some good ships at East Boston both before and after the Civil War. His best medium and rather full-modeled square-riggers which, given a good spread of canvas, proved to be good sailers were as follows:

Name of Ship	Year Built	Net Tonnage	Registered Dimensions			Owner
			Length	Beam	Depth	
SUNRISE	1860	1,219	182	39	24	Howland & Frothingham, New York (1862)
SONORA	1868	1,535	212	39	25	Wm. F. Weld & Co., Boston
GREAT ADMIRAL	1869	1,497	215.6	40.2	25.6	Wm. F. Weld & Co., Boston
SEA WITCH	1872	1,233	197	37.8	24.2	Wm. F. Weld & Co., Boston
SPARTAN	1874	1,395	206.6	40.5	24.3	J. H. Sears, of Boston; Comdr. T. H. Allen, of San Francisco

The *Sunrise* was reputed to be "a ship with a good model that made long passages." It is evident that she was a slow sailer. As carrying capacity, with speed, is an index of the quality of model and as the cost per ton per mile is the all-important yardstick in marine transportation, it would seem that no model could consistently be described as "good" if the ship was a slow sailer under average conditions of wind, sea, and lading and under an average quality of command. That the *Sunrise* had not the sailing ability of an average Maine-built Down Easter is proved by the fact that the average time of her seven runs westbound to San Francisco was 160 days and of her two runs eastward with wheat, 133½ days.

The *Sonora* was a much finer-lined ship below water than the *Sunrise* and was, in fact, a medium clipper. In designing this ship, Jackson sacrificed some deadweight carrying capacity to obtain higher speed and overcome in the *Sonora* the well-known shortcomings of the *Sunrise*. He succeeded well in producing a faster ship, but the *Sonora* was no Down Easter and was far from being "a ship to carry well, make nice speed and good money" as was the Bath-built *Henry B. Hyde*—a much fuller-modeled vessel. The *Sonora* averaged the good time of 125 days on her westbound around-the-Horn runs to the Golden Gate (best passage, 114 days). Her last voyage was a run from San Francisco to Liverpool, which she was making in her best time; but when 109 days out, on August 30, 1876, and twelve miles from Holyhead, she was sunk at night as the result of a collision.

The *Great Admiral* was known as "the Weld yacht" and was the owner's "pride and joy." She was rather too finely modeled for a Down Easter and had a block coefficient and the lines

of a medium clipper. The "*Admiral*" made seven westward passages from New York around the Horn to San Francisco during the years 1869-1879 inclusive, and the average time of these runs was 122 days (best, 111 days; slowest, 133 days). In her career, she made nine passages, all told, from North Atlantic ports to the Golden Gate in the years 1869-1895 inclusive, her average time for all these runs being also 122 days. Eastbound, the *Great Admiral* made seven passages, all told, from San Francisco to North Atlantic ports (three to Queenstown, two to Liverpool, one to Dublin, and one to Havre); her average time was 115½ days, the best being a 111-day run to Queenstown—the port of shortest distance—and the longest a 126-day passage to Havre.

Smith & Townsend, East Boston, built during the seventies some good Down Easters that were full-rigged ships and some smaller barks with a Down Easter model that were fast sailers. The following vessels constructed at this yard are worthy of mention:

Name of Ship	Year Built	Tonnage		Registered Dimensions			Owner
		Gross	Net	Length	Beam	Depth	
MAGELLAN II	1873	1,120	1,073	178	34.5	22.9	Augustus Hemenway & Co., Boston
CHARGER	1874	1,444	1,379	203.2	39.8	24	Henry Hastings & Co., Boston
CENTENNIAL	1875	1,286	1,223	190.4	38	24	Sylvanus Smith
PAUL REVERE	1876	1,735	1,657	221	41.2	24.6	W. H. Kinsman & Co.
SOUTH AMERICAN	1876	1,762	1,694	227.5	41.6	25.2	Henry Hastings & Co., Boston
AMY TURNER (bark)	1877	945	900	174	35.4	21.6	Brewer & Co., Boston
LUZON	1881	1,391	1,330	205.8	40.7	24	

The firm of Brewer & Company, of Boston, was the pioneer in opening up the New York-Honolulu trade. In addition to the *Amy Turner,* Smith & Townsend built for the same owner and the same trade the fast Down Easter barks *Coringa, Martha Davis, Edward May,* and *John D. Brewer.*

The *Centennial* was credited with being a good sailer, her best passages being from San Francisco to Liverpool in 102 days, Astoria to Queenstown in 107 days, and New York to Sydney in 84 days. However, her last voyage around the Horn was a disastrous one. She was badly buffeted off Cape Stiff and put back to the Falkland Islands for repairs. After resuming her voyage, the cargo shifted, and she again turned back, this time making Montevideo; she finally reached San Francisco on October 2, 1896, 199 days after leaving New York. The *Centennial* had a checkered career. She was sold to the Alaska Packers Association (fisheries), of San Francisco, in 1896 and was burned "to the water's edge" while laid up at Oakland Creek in December 1904. She was rebuilt and re-rigged as a four-masted barkentine and for many years continued her operations as a "salmon packer." In 1927 she was sold, was sent on a voyage to Australia, and the following year was acquired by moving picture interests of Southern California.

The *Paul Revere* was said to be "a very fast ship," but her performances on passages around the Horn classify her as an average sailer. Her first westward run to San Francisco took 138 days and her second, in 1880, 130 days. In 1902 she made a passage from Baltimore to the Golden Gate in 125 days, and her one run from San Francisco back to the North Atlantic was a passage to Queenstown in 126 days. The *Paul Revere* is credited with logging 1,900 nautical miles in six days—an average of 13.2 knots per hour, which, if true, was very fast sailing. The ship became rather famous because of her race from Hiogo to Yokohama with the Japanese mail steamer *Tokio Maru.* On Tuesday, December 12, 1882, at 8:00 P.M., the *Paul Revere* left Hiogo in ballast for Yokohama, the mail boat having taken her departure at 6:30 P.M. The "*Revere*" reached Yokohama at 4:00 A.M., Thursday, and the mail steamer arrived at 10:00 A.M.—six hours behind the "Yankee sailer"—having taken seven and a half hours longer

time on the run. The passage of 32 hours made by the *Paul Revere* was the record fast run between the two ports by either sail or steam up to that time, but the amazing thing about this performance was that an American sailing ship could cover in 32 hours a distance that a mail steamer required 39½ hours to negotiate—nearly one-quarter longer.

The *South American* was built to the order of Henry Hastings & Company, of Boston, and was built three years after the *North American* had been constructed for him at the Curtis yard, East Boston. The *South American* was to the Hastings fleet of square-riggers what the *Great Admiral* was to the Weld fleet. The *South American* more nearly approached the perfected Maine type of Down Easter in regard to model fullness and speed, and in fineness of lines she was virtually halfway between the *Great Admiral* and the *Henry B. Hyde.* She was a rather good carrier and enjoyed an enviable sailing record. Her average time on five westward around-the-Horn passages to San Francisco from North Atlantic ports was 119½ days, and her average on the two runs that she made from New York to the Golden Gate was 116 days, one being a fine passage of 109 days. Returning eastward, the *South American* averaged 108½ days for her six passages. Three were runs to Liverpool of 115, 100, and 100 days, respectively, with an average of 105 days; on the shorter run to Queenstown, she made two passages, one in 99 days, and her longest voyage eastbound was a run of 120 days from the Golden Gate to Dublin.

John M. Brooks (formerly connected with the George Raynes yard at Portsmouth, N.H., and for six years foreman at Donald McKay's yard, East Boston) and Malcolm Campbell, composing the firm of Campbell & Brooks, built some good ships at East Boston in the seventies. They launched the *Champlain* of 1,473 net registered tons (216 ft. long, 40 ft. beam, and 24 ft. deep) in 1874 for W. H. Kinsman & Company and built the *Saratoga*—slightly smaller—the same year. In July 1877, they launched for M. F. Pickering, of Boston, the ship *Governor Goodwin* of 1,459 tons gross and 1,413 tons net register (length 213 ft., beam 40 ft., depth 24 ft.), which had the same model as the *Champlain* built three years before. Much was expected from these ships in the realm of speed, and they proved to be fast sailers. The career of the *Champlain* was short. On her maiden voyage, she went out to Bombay and Madras with ice, and the passage to Bombay was claimed as being made in record time. From Madras, she made a fair run to New York, where she loaded for San Francisco. Sailing February 15, 1875, about the same time as the ships *Nearchus, Oriental, Criterion, Daniel Marcy,* and *Ocean King,* she was lost on the Farallon Islands, off the Golden Gate, when 121 days out. It is said that, had she made port, she would have beaten all the other five ships in this westward run from seventeen to forty days.

The *Governor Goodwin* spent most of her life employed in trade with the Far East. She made two westward around-the-Horn passages to San Francisco, her maiden voyage (a run of 119 days from the Delaware) and a later run from New York in the fast time of 108 days; her average for the two westbound passages was only 113½ days. Eastbound, the *Governor Goodwin* made three runs from San Francisco to Queenstown in 98, 119, and 130 days, respectively, and one to Liverpool in 111 days. She also made a passage of 129 days from the Columbia River to Antwerp, thus averaging 117½ days for her five runs eastward around the Horn; the average of the four passages from San Francisco to European ports was 114½ days.

Among other good square-rigged ships of the Down Easter variety built in East Boston, representative of the best Massachusetts construction, can be mentioned the following:

Name	Year Built	Net Tonnage	Registered Dimensions			Builder	Owner
			Length	Beam	Depth		
ANDREW JACKSON II	1864	1,095	183	36	23	D. D. Kelly	D. D. Kelly
SACHEM	1875	1,312	194	39.4	23.8	Builders failed; finished by Captain Pickering	M. F. Pickering & Co.
EMILY F. WHITNEY	1880	1,207	193	37.7	23.1	Abiel Gove	Flitner, Whitney, Roby, and Rollins

The *Andrew Jackson II* was a kettle-bottomed ship with considerable tumble home. She was said to be a good sea boat, but a dull sailer. She was sold in 1888, when twenty-four years old, for conversion into a tow barge. The *Sachem's* frame was diagonally strapped with iron and, like all Captain Pickering's vessels, was well built. She was a poor carrier, a fair sailer, and unprofitable to her owners. The *Sachem,* with her rather too sharp model for the seventies, had a reputation for speed, and she made many fast runs in the Far East trade. She made but three Cape Horn westbound voyages in 130, 126, and 148 days, respectively, an average of about 135 days, which was not fast. Eastward, the *Sachem* made three passages around the Horn to Havre and Antwerp in 111, 112, and 127 days, an average of 117 days and an average of 111½ days to Havre, which was neither fast nor slow sailing. The *Emily F. Whitney,* on her maiden voyage, ran from Boston to the Golden Gate in 126 days; thence 115 days to Liverpool and back to San Francisco in 140 days. She made two other eastward passages around the Horn from San Francisco, one being a run of 141 days to England and the other a passage of 123 days to Antwerp. This average of 133 days westbound and 126 days eastbound can be considered ordinary sailing—neither fast nor slow.

Other "full-modeled" good-carrying ships of fair speed built in East Boston were the *Topgallant* of 1,280 tons, launched in 1863, and the *Colorado* of 1,075 tons, built a year later. The *Freeman* of 1,197 tons was another favorably known East Boston product, as was also the little *Independence* of 952 tons (length 165½ ft., beam 34 ft., depth 23 ft.), launched in 1871.

In 1871 a serious and long drawn-out strike of ship carpenters in Boston suspended all work on wood shipbuilding and repairing in the Boston territory. At the time of the walkout, William F. Weld & Company, Boston, had a contract with Robert E. Jackson, East Boston, for the construction of "a bigger *Great Admiral,*" and this shipowning and operating firm—as well as the builder—was greatly annoyed and seriously embarrassed by the strike and the unreasonable attitude on the part of the Boston labor leaders at a time when Boston shipyards were finding it not only difficult but also impossible, in an economic sense, to compete with the wood shipbuilders of Maine. The frame and certain other materials required for the building of the "bigger *Great Admiral*" were at the Jackson yard at East Boston, and although the framing was practically ready for erection, the keel had not been laid and no part of the hull structure was in position on the building stocks. For some unstated reason, the owners and builder of the new ship either could not or would not move the framing and other material acquired for the building of the "bigger *Great Admiral*" to Maine or some other part of the United States. (It is said that the Newburyport, Mass., and Portsmouth, N.H., yards "wouldn't touch it or have anything to do with it," and this was not in the 1940's but seventy years before.) Finally, the firm of William F. Weld & Company made a deal; it dispatched the contracting builder, Robert E. Jackson, to St. John, New Brunswick, Canada, to rent a yard there and prepare a berth for the building of its ship. The builders then took one of their ships, the *George Peabody,* which at the time was in Boston in great need of extensive repairs and reconditioning, and towed her to the Jackson (East Boston) yard. After loading her with the oak framing of the new ship, which weighed 360 tons, and with certain planking and metal (iron and copper) on hand that had been ordered for the job, they sent the ship to St. John.

The "bigger *Great Admiral*" built by Robert E. Jackson, of East Boston, in Canada for William F. Weld & Company, of Boston, under these most unusual, if not unprecedented, conditions was named the *Lightning.* The owners' desire for speed in the construction of the new ship, coupled with an evidently intended, substantial rebuke to the unreasonable attitude of Boston ship carpenters, must have seriously discommoded the owners in the operation of the vessel. The *Lightning* could not under the law be given American registry, so she had to be operated by her Boston owners under the British flag. London was made her hailing port, and during the twelve years that Weld & Company owned her, she was a foreign vessel. It is interesting to record that the combined action of Weld, the owner, and Jackson, the builder,

ended the ship carpenters' great strike in Boston and environs. (The ship *George Peabody* was thoroughly reconditioned in St. John.) However, wood shipbuilding was doomed in Massachusetts, costs were too high, and labor was becoming not only more and more expensive with the years but also less competent and efficient. In the seventies and still more so in the eighties, Boston shipbuilders could not compete with those of Maine, particularly with the yards of Bath, in the economic production of good ships.

The *Lightning* was built at St. John, N.B., from the model of the *Great Admiral,* but six feet was added to her parallel middle body and the deck beams raised six inches. She measured 221 ft. 6 in. long, 40 ft. 3 in. beam, and 26 ft. deep, and her net registered tonnage was 1,576 tons as against 1,497 tons for the *Great Admiral,* built by Robert E. Jackson at East Boston in 1869—two years before. The *Lightning,* like the *Great Admiral,* was called a "medium clipper," but these ships were fairly good deadweight carriers and, in fact, a compromise between a medium clipper and a Down Easter. The *Lightning* made no westbound passage around Cape Horn, and she traded principally with Australia and the East Indies—wherever ships of British registry were favored or on equal terms and not handicapped in relation to American vessels. She was a good sailer. In 1882-1883, on her last voyage under Weld ownership, she was 81 days from New York to Melbourne, thence 3 days to Newcastle, N.S.W.; after loading coal, she made a passage of 40 days to Hong Kong, thence 17 days to Cebu and from that port made a run of 103 days to New York—a total of 244 sailing days for the round voyage, around the world, New York-Australia-China-New York. The *Lightning* then crossed the Atlantic; she was sold to Theo. Ruger & Company, renamed after the senior member of the firm that acquired her, and was put in the barrel oil trade. In November 1888, when seventeen years old, she was rammed and sunk in the English Channel.

Some ships continued to be built at South Boston in the sixties, and the old yard of E. & H. O. Briggs launched an occasional good ship. One of these was the square-rigger *Volunteer,* built during the Civil War and launched in September 1863. This ship was built for William F. Weld & Company, Boston, and was of 1,041 tons net register, 184 ft. long, 36 ft. beam, and 22 ft. deep. She was sold in 1874 to Geyer & Wilkins and went under the German flag as the *Baltimore* of Bremen. The *Volunteer* was engaged for years in the West Coast of Mexico dyewood trade. She was evidently a good comfortable ship and made average passages.

John Taylor, at his Chelsea yard, after building his last clipper in 1855, the *Derby* of 1,062 tons, continued to construct fuller vessels with more attention being paid to cargo carrying and less to extreme speed and associated sharpness of model. In 1856 he launched the *Sumatra* of 1,073 net registered tons (length 180 ft., beam 36 ft., depth 23.4 ft.) for B. W. Stone & Bro., the wealthy Salem merchants, who frequently owned outright the cargoes carried in their ships. In 1858, Taylor built the *Garnet,* a small "but handy and fine-looking ship," of 1,119 net registered tons (length 178 ft., beam 38 ft., depth 23 ft.) for Bramhall & Hall, of Boston. Moving to East Boston, John Taylor, then John & Justin Taylor, and still later Justin Taylor built several fine ships of Down Easter type that carried good cargoes and generally made fair runs. Among the ships that the Taylors built at East Boston were the following:

Name of Ship	Year Built	Tonnage		Registered Dimensions			Owner
		Gross	Net	Length	Beam	Depth	
SOOLOO (II)	1861	784	748	155	35.9	22.2	Silsbee, Pickman & Allen, Salem
MINDORO	1864	1,021	971	169	38.8	23.8	Silsbee, Pickman & Allen, Salem
PANAY	1877	1,190	1,115	186.7	37	23.5	Silsbee, Pickman & Allen, Salem
ICEBERG	1877	1,177	1,135	177	37	24	Tudor Ice Co., Boston

The *Sooloo, Mindoro,* and *Panay* were a well and expensively built trio of ships, especially designed for the Philippine hemp trade. The *Sooloo* made nineteen successful voyages to the East. The *Mindoro* sailed regularly to the East until 1893, and the *Panay* made steady, consistent passages in the service until she was lost on the island of Samar in 1889. These little ships are of particular interest because of the trade that they were in, and the *Panay* was the last of the great East India fleet which for over a century had represented Salem, Mass., merchants and the American flag. The *Iceberg* is an interesting ship because of the trade for which she was built and in which she was engaged. For several years, she carried ice and some general cargo from Boston to ports in the East Indies and returned with oriental produce. Her passages were made in fair time, and she was a good carrier. She was destroyed by fire when loading nitrate at Iquique, Chile, in November 1895, and it is believed that members of the crew were guilty of incendiarism.

Pierce & McMichael built two good-looking ships at Chelsea which had the reputation of being "well-modeled, strongly built, and fast sailers." The *Ringleader,* built in 1868 for Howes & Crowell, of Boston, was of 1,145 tons net register (length 185 ft., beam 37.5 ft., depth 22.7 ft.). She was operated under canvas until 1894 and, when twenty-six years old, was converted into a coal barge. The *Ringleader* was said to be "a very speedy ship," but there are no records to back up this statement other than that of a fast run across the Pacific from Shanghai to San Francisco (5,340 miles logged) in 30 days. Her best passage around the Horn westbound was a fast run of 117 days to San Francisco from Boston. The "glory" of this performance, however, is dimmed by the fact that another Boston-built ship, launched the same year (1868), the *Southern Cross* of 1,129 tons gross and 1,086 tons net register (length 176.8 ft., beam 37.5 ft., depth 23.3 ft.), sailed from Boston in company with the *Ringleader* and passed through the Golden Gate five days in the lead. Both ships experienced favorable sailing conditions of wind and sea throughout the passage. The *Ringleader* beat the *Frolic* by seventeen days in a "race" in 1871 from New York to San Francisco, but as the *Ringleader's* time was 147 days, this contest cannot properly be termed a "race."

The second Pierce & McMichael boat selected for comment is the *Comet II,* built in 1869 also for Howes & Crowell, of Boston, owners of the *Ringleader.* The *Comet II* measured 1,083 tons net register and was 186 ft. long, 37 ft. beam, and 23½ ft. deep. Her first passage from New York to San Francisco was her all-time best, being made in 111 days; in 1872, between the same ports, she made another very good run of 115 days. In December 1878, when nine years old, the *Comet II* was sold at Rotterdam to C. Bolken & Company, Bremen, and went under the German flag with no change of name. She was in the Manila typhoon of October 1882 and suffered damage when driven ashore. In 1896, when twenty-seven years old, she was being employed in transatlantic trade.

In the sixties and seventies, East Boston was the scene of Boston's shipbuilding activities, and but few ships were built at either Chelsea or Medford (where earlier in the century most of Boston's marine tonnage was constructed). The John T. Foster yard at Medford continued to operate throughout the fifties and sixties and built some good ships in the seventies. The *Don Quixote* of 1,174 net registered tons (length 176 ft., beam 37½ ft., depth 23½ ft.) was launched October 1868 for William Hammond and associates, of Boston. Her maiden voyage started disastrously, as she soon encountered a hurricane, was dismasted, and suffered hull damage. She put about for New York and was later picked up and towed there, arriving January 5, 1869, 27 days after her sailing from Boston. After being repaired and refitted, the *Don Quixote* cleared New York February 4 and arrived at San Francisco after a slow passage of 149 days. The *"Don"* made one other run from an East Coast port to the Golden Gate, and on this her second passage she was even slower, requiring 156 days, port to port. Eastward around the Horn, the *"Don"* made two runs from San Francisco to Liverpool in 139 and 146 days, respectively. An average of 152½ days westbound and 142½ days eastbound—each for

two passages—must be considered slow sailing. It is said that the performance of the ship in the East India and China trade was much more satisfactory, but it is evident that her passages were generally made in from fair to slow time. This was disappointing to her owners, who had expected more from her model and sail plan.

The same Foster yard at Medford launched in December 1873 the ship *Pilgrim* of 918 net registered tons (length 173 ft., beam 35 ft., depth 20 ft.) for Henry Hastings & Company, Boston. She was a handsome little craft and in 1880 was changed to bark rig. The *Pilgrim* was for many years a well-known trader between Atlantic ports and those of Australia and the Far East; she made good average passages and proved a profitable ship for her owners. The vessel made two runs around the Horn, both eastward, the better being a passage of 123 days from the Golden Gate to Queenstown.

Another first-class ship, the *Springfield,* was built in Medford in 1868 and launched in December of that year from the yard of the well-known builder, J. O. Curtis. The *Springfield* was of 1,043 tons net register, 170 ft. long, 36 ft. beam, and 23½ ft. deep. On her maiden passage, she took a cargo of ice from Boston to Bombay and on her second voyage went from New York to Melbourne and India.

Basil Lubbock, in an appendix of his book entitled THE DOWN EASTERS—AMERICAN DEEP-WATER SAILING SHIPS, 1869-1929 (written in 1929), gives a list of the vessels (243 in number) that he felt belonged in this category. The list is obviously not complete as far as ships built in the sixties and seventies are concerned, but omissions are general and evidently do not favor or penalize any one location. The Lubbock register includes the *Young America, David Crockett,* and *Great Republic;* these were clipper ships and not "Down Easters," and the last and biggest vessel was an "extreme" clipper. Moreover, although it properly includes the *Glory of the Seas,* built by Donald McKay at his East Boston yard in 1869, that vessel was a medium, or half, clipper and not a Boston builder's attempt to construct a Maine type of Down Easter as was the *Sovereign of the Seas II,* built by McKay the previous year. Some of the best Boston-built ships appearing in the Lubbock register were too sharp-lined to be real Down Easters; for they were about midway, in block coefficient of model fullness and in extent of canvas carried, between the old medium clippers and a Down Easter of the type that survived through the decades of trade competition on the Seven Seas when medium clippers could not be operated at a profit. The Lubbock list of American post-clipper ships built after 1869 gives a good cross section showing the activity of builders during the years when American wood square-riggers were fighting for survival against British iron and steam. It is significant that, if we eliminate the clipper *Young America* from the Lubbock list of ships (which, nevertheless, operated in the Cape Horn trade to California until 1883), not a single vessel in his "Register of American-built Ships, 1869-1929" was constructed in New York or south of Mystic, Conn. The list prepared by Lubbock shows the years of the greatest activity in the building of Down Easters to have been 1877, thirty ships; 1874, twenty-four ships; 1876, seventeen ships; 1875 and 1883, sixteen ships each; and 1882, fifteen ships. These figures must be considered as merely comparative, for Maine—and in some years Bath alone—turned out more sizable and good ships of the real Down Easter type than Lubbock has enumerated to cover the entire country.

With due consideration being given to the incompleteness of the Lubbock list of Down Easters, the following analysis of the location of building of the vessels set forth by him is of interest. It clearly shows the relative building activity in Boston in the earlier years, the movement east, and the supremacy of the city of Bath, Maine (not to mention the geographical area of Greater Bath and of the state of Maine), which steadily increased with the years. In the eighties and nineties, Bath enjoyed practically a monopoly of wood square-rigged shipbuilding and in the late nineties and the first few years of the twentieth century built the only steel square-riggers constructed in the United States.

Years	Number of Ships Built as per the Lubbock Register			Percentage of the Total Number of Ships in the Lubbock Register Built in	
		Constructed in			
	Total	Greater Boston	The City of Bath, Maine	Greater Boston	The City of Bath, Maine
1869 and earlier	24	8	3	33.3	12.5
1870-1873	29	7	10	24.1	34.5
1874-1877	87	14	33	16.1	38.0
1878-1881	38	4	18	10.5	47.4
1882-1885	44	None	29	None	65.9
1886-1888	None	None	None	None	None
1889-1891	8	None	7	None	87.5
1892-1902	13	1	12	7.7	92.3
Total	243	34	112	14.0	46.1

In the five consecutive years that Lubbock shows as having the greatest building activity (i.e., 1873-1877 inclusive), 101 ships are listed, of which Greater Boston produced 17 (or 16.8 per cent) and the city of Bath 38 (or 37.6 per cent). During the next six years (i.e., 1878-1883 inclusive), 69 ships are listed by Lubbock, of which Greater Boston built only 4 (or 5.8 per cent) and the city of Bath launched 39 (or 56.5 per cent). From 1884 to the end of sail, the Lubbock register shows 34 ships built, of which Greater Boston launched only one (or 2.9 per cent)—and that an unprofitable and unfortunate vessel that was changed to fore-and-aft rig—whereas the city of Bath, Maine, built 27 (or 79.4 per cent).

Massachusetts Takes Leadership during the Clipper Ship Construction Boom Years, but Maine Shipyards Gain Supremacy in the Down Easter Period and Hold It to the End of Sail

In the clipper shipbuilding decade following the mid-nineteenth century, Boston constructed some very big ships and averaged rather high on the size of deep-sea vessels built. This was due primarily to the activities of one builder, Donald McKay, who launched 29 clippers from his East Boston yard in the fifties, many of which were from 2,200 to over 2,500 tons register. One, the *Great Republic,* measured 4,555 tons as built and 3,357 tons as cut down and sent to sea. (She was burned when loaded ready to commence her maiden voyage.) McKay was an enthusiast and practically a fanatic in his advocacy of very big, very sharp, and heavily canvased ships; but following the clipper ship boom, the reaction with its depression and panic, and the Civil War (which came immediately afterwards), the size of big ships was reduced to about 1,500 to 2,000 tons gross measurement. A "sizable" ship was of 1,200 to 1,500 tons, an ordinary ship 1,000 to 1,200 tons, and a small ship anything less than 1,000 tons. During the years approaching the end of wood sail and after Boston shipbuilders had retired from the field, Bath built large and still larger square-rigged vessels: 2,200 tons in 1881, 2,300 tons in 1882, 2,400 tons in 1883, and the *A. G. Ropes* of 2,461 tons and *Henry B. Hyde* of 2,583 tons in 1884. After the three years 1886-1888 inclusive (when no square-riggers were built in the United States), the city of Bath launched the *Rappahannock* of 3,185 tons in 1889, the *Shenandoah* of 3,406 tons in 1890, and the *Roanoke* of 3,539 tons in 1892—the world's largest square-rigged vessel to be sent to sea. When Bath built steel square-riggers during the years

1894-1902 inclusive, the tonnage per ship gradually increased with the years from 3,004 tons for the *Dirigo* and 2,998 tons for the *Erskine M. Phelps* to 3,374 tons for the *William P. Frye* and 3,381 tons for the Standard Oil shipentine *Atlas.*

Having built no wood square-riggers during the years 1882-1892 inclusive (and only two ships since 1878), Boston surprisingly launched at East Boston in the spring of 1893 the three-masted bark *Holliswood,* constructed by J. M. Brooks for Capt. E. M. Knight, who both owned and commanded the vessel. This wood bark, which quickly became known as "the unlucky *Holliswood,*" was of 1,402 tons gross register and measured 176 ft. long, 38 ft. beam, and 19½ ft. deep. She was neither well designed nor built, and there seems to have been no valid reason for her construction. After a dismasting, she was re-rigged as a barkentine in 1903, and after another dismasting in 1904, she was changed to a three-masted schooner. The year that the *Holliswood* was built at East Boston (1893) was the year that saw the building at Phippsburg (Bath), Maine, of America's last wood ship, the *Aryan* of 2,017 tons (length 248.6 ft., beam 42.3 ft., depth 26 ft.), and was one year following the building of America's largest wood square-rigger, the four-masted shipentine *Roanoke* of 3,539 tons (length 311.2 ft., beam 49.2 ft., depth 29.2 ft.). Big wood sailing vessels were built at Bath for many years after the launching of the *Roanoke,* such as the *Wyoming* of 3,731 tons (length 330 ft., beam 50 ft., depth 30½ ft.), built by Percy & Small in 1909; but all wood sailing craft constructed in Bath and the United States after 1893 were fore-and-aft schooner-rigged vessels, the largest of which were fitted with six masts. (The one seven-masted schooner built, the *Thomas W. Lawson,* launched in 1902, was a steel and not a wood vessel.)

Following the Revolution, Philadelphia was the most important shipbuilding center and for a time the greatest port for shipping in the United States. New York, after the turn of the century, quickly wrested the lead from the Quaker City in quantity and quality of building and as a trading port. Baltimore had never, as is popularly supposed, held a dominant position of leadership in the building and operation of ships, although the Chesapeake was greatly favored geographically in its proximity to the West Indies. Trade with those islands for years was hazardous because of pirates as well as the presence of foreign warships protecting real and assumed embargoes. Speed, rather than guns, was found to be the best protection for American vessels engaged in both legitimate and illegitimate trade in the West Indies and, during the wars between Britain and France, in the East Indies also. The Chesapeake, trading almost entirely with the West Indies, was compelled to build for speed at the sacrifice of capacity more generally than the Delaware and much more than New York and New England, which traded more in the North Atlantic and with distant parts of the globe. During the War of 1812, however, when all merchants sending ships to sea took great risks of possible capture and total loss, New York and New England also were required to build for speed to protect their merchantmen from the British. The northern yards, "when put to it," readily built fast merchantmen, letters-of-marque ships, and privateers that were equal in speed to the best that Baltimore had ever produced. Salem, Mass., launched the famous privateer *America,* which raised havoc with British shipping off the European coast. The Salem-owned *Grand Turk,* which made history harassing the British, destroying or capturing their ships, and escaping from superior forces, was built at Wiscasset, Maine.

New York, from the twenties to mid-century, held the position of leadership in American shipbuilding, and this could be called the sailing packet era. New York as a port for transatlantic and coastal packets was supreme; it overcame all competition from Philadelphia and Boston (the only two ports that at any time made serious efforts to challenge its dominant position), gradually extended its sphere and scope of leadership in the realm of foreign trade, and supplanted Philadelphia as America's prime trading port to the Orient. New York, furthermore, challenged Boston and Salem in the East Indian trade, but never monopolized this business, as Massachusetts fought New York "tooth and nail" for leadership in trade to India and China. Although Boston and Salem lost much of the China trade to New York,

they held the bulk of the Indian and East Indian business to the end of wood sail. New York sailing packets outclassed all other vessels of this type in most of the first half of the nineteenth century, and in the forties New York-built China packets made history with great sailing performances. In the several years that preceded the clipper ship decade of 1850-1859, New York-built fast sailers, pre-clippers, and early clippers, which were constructed for and operated in the China trade, led in quality, performance, speed, capacity, and money-making powers the product of Chesapeake, Delaware, and Massachusetts yards or of any American or foreign builder that attempted to challenge them. New York-built ships were supreme in the Atlantic "ferry" and in the trade to China—the two great trade routes of the world. The discovery of gold in California, the Gold Rush, and the unprecedented demand for ships and for the fastest possible ships in the years 1850-1854 rather quickly operated to change the picture. The Atlantic packet service using wood sail was doomed to succumb to the competition of heavily subsidized iron steam, and the curfew practically was tolled in the late fifties. In the early fifties, New York built splendid specimens of the clipper type of ship—both extreme and medium—in harmony with the demand for speed. However, New York yards, located in a relatively restricted area, could build only a fraction of the craft demanded by shipping merchants, so Boston and Massachusetts shipyards got their big chance to rise to the emergency and build sharp-lined ships in quantity. The cry along the Atlantic seaboard was, "We want fast ships built fast, and we want lots of them."

Boston, with its many yards and spread-out facilities, took the lead in clipper ship construction soon after the clipper shipbuilding era commenced. Massachusetts in general followed, with tidewaters from Mystic, Conn., a few miles east of New London, to the Piscataqua River, which separates New Hampshire from Maine, receiving launched sharp-lined clipper hulls as fast as they could be built to supply a hysterical demand during the boom. In these years and under these conditions, the mantle of shipbuilding leadership was transferred from New York to Boston—not because Boston built better ships, for it positively did not, but because Boston, a sort of metropolis of the Massachusetts, Rhode Island, and New Hampshire shipbuilding area, could supply a "quantity-in-a-stated-time" demand that was far beyond the capacity of New York yards, all huddled together on the East River. New York built a large number of clippers, and they were generally splendid ships that averaged higher in quality than the run of Massachusetts-built clippers; but Massachusetts constructed by far the greater number and the greater tonnage, and as New York had held leadership during the sailing packet era so Boston gained and held it during the comparatively brief clipper ship era. For quality leadership in the design and construction of sailing "greyhounds of the sea," New York had its William H. Webb and Boston its Donald McKay and the nationally outstanding Samuel Harte Pook, professional naval architect. In the production of fast medium clippers with fair cargo capacity, Webb was unexcelled. For building sharp-lined, heavily sparred and canvased, big and powerful "extreme" clippers that showed amazingly high speed under favorable conditions of wind and sea, McKay was in a class by himself; indeed, no other builder attempted the construction of clippers as large as the *Sovereign of the Seas* (2,421 tons), *Champion of the Seas* (2,447 tons), *James Baines* (2,515 tons), *Donald McKay* (2,594 tons), and *Great Republic* (4,555 tons as originally constructed). Moreover, experienced and competent American owners could not be found who were willing to finance and try to make money by running such large, deep-draft, expensive ships, with their big crews and high operating, maintenance and depreciation expenses.

McKay clippers were fast, made fine records, and placed McKay as the designer and builder of speedy ships at the top of the list. He was, however, greatly favored in comparison with other builders; for he both designed and built just what he pleased, and he seldom had owners or any other persons or groups restricting or interfering with his work. Many of his biggest ships—*Great Republic, Sovereign of the Seas, Empress of the Seas, Commodore Perry, Japan,* and *Glory of the Seas*—were laid down for his own account, and his famous

quartet of big clippers (i.e., *Lightning* of 2,083 tons, launched January 3, 1854; *Champion of the Seas* of 2,447 tons, launched April 15, 1854; *James Baines* of 2,515 tons, launched July 25, 1854; and *Donald McKay* of 2,594 tons, launched January 17, 1855) was built for a foreign owner, James Baines & Company, Liverpool, England, to run in the Australian Black Ball Line. Incidentally, it is interesting to note that in submitting a tender to build these ships, Donald McKay affirmed that they were to be the fastest sailing ships in the world. James Baines & Company, in 1854, also purchased from McKay the clippers *Commodore Perry* and *Japan,* each measuring 1,964 tons, then on the building stocks at East Boston, and Charles Moore & Company, of Liverpool, England, also acquired from McKay in 1854 the clipper *Blanche Moore* of 1,787 tons. Within a period of thirteen months, seven big and powerful clippers aggregating 15,354 tons (and averaging 2,193 tons per bottom—maximum, 2,594 tons; minimum, 1,787 tons) were built by McKay for foreign owners or sold on the stocks to them. Eleven other McKay-built ships were transferred at some time or other to foreign registry. Of twenty-four big and sizable ships built by McKay of which we know the end, eight were destroyed by fire, five were wrecked, and nine foundered at sea (including the *Champion of the Seas* off Cape Horn and the big *Great Republic* in the North Atlantic). The big and fast McKay clippers that made history and wonderful speed records did not make money for their owners after the brief shipping boom of 1849-1854 to California and of 1852-1856 to Australia was ended or, at least, the highly inflated bubbles were punctured. McKay's American backer, Enoch Train, of Boston, "went under" during the United States depression and panic; he was followed a little later into insolvency by McKay's second and last backer and customer, James Baines, of Liverpool. Donald McKay himself made money building ships around mid-century and the early fifties, but he lost practically all of it before he retired as a builder of ships.

McKay was a great publicist for constructing ships to sell; he felt that "advertising pays" and helped to get a good price for his vessels. Moreover, after being secondary to New York in shipbuilding throughout the first part of the century, Boston took great pride in its clipper ships and the output of its yards in the fifties. Boston sought glory for itself; in McKay it had a builder of big and fast ships that it could boost, for his vessels were winning honors for speed on the Seven Seas and McKay was seeing to it that the press was being constantly fed with news of claimed record runs. Thus a sort of propaganda machine was developed and went assiduously to work to bring honor and prestige to Boston through the achievements of McKay. Samuel H. Pook and other worthy Boston builders were not so much in the public eye. They were not sensational advertisers and had relatively little news value, so their work was practically ignored as the Boston-McKay publicity machine concentrated on McKay and broadcast the quality and performance of his ships—often decidedly biased and colored—throughout the world.

McKay's big extreme clipper ships, generally favored by their size, made many splendid fast passages under sailing conditions and in waters suitable to their lines and sail spread. They made some excellent North Atlantic crossings, all eastbound and running before very heavy winds, but no McKay clipper made any speed record crossing the Atlantic westbound—the hard way. The fastest run of a McKay clipper to Australia was that of the *James Baines* from Liverpool to Melbourne in the winter of 1854-1855. A passage of 58 days from land to land was claimed and 63 days from Liverpool to Melbourne; but the *"Baines"* sailed from Liverpool December 10, 1854, and arrived at Hobson's Bay February 12, 1855, and this makes a run of 64 days. The little British clipper *Thermopylae,* built for the China-Britain tea trade, is credited with a Liverpool-Melbourne passage of 63 days. The *James Baines's* 12-day crossing of the Atlantic in 1854 was given a great deal of publicity as "an all-time record." This was undoubtedly a fine performance, but it was over the short course from Boston Light to Rock Light, and the claimed time was 12 days 6 hours. During the same year, the *Red Jacket,* a Maine-built clipper designed by Pook and of 300 tons less register, made a transatlantic run over the longer course from New York to Liverpool, dock to dock (not light to light),

in the record time of 13 days 1 hour 25 minutes, and the *Red Jacket* arrived off the bell buoy at the Mersey only 12 days out from Sandy Hook.

The *Flying Cloud,* McKay's most highly publicized "greyhound of the ocean," is credited with two 89-day passages from New York around the Horn to California. In 1851 an 89-day 21-hour run and in 1854 an 89-day 8-hour run were claimed, but they were, in fact, 90-day runs and, while splendid, outstanding performances, should be considered in relation to the passage of the Mystic (Conn.)-built, much fuller, and in every way less extreme clipper *Andrew Jackson.* Sailing from Sandy Hook at noon on December 25, 1859, this vessel arrived at the pilot ground, San Francisco, at 4:00 P.M., March 23, 1860, after an all-time record run between the ports of 89 days 4 hours.

The *Red Jacket,* on her eastbound transatlantic crossing in 1854, made 413 miles in twenty-four hours. Promptly afterwards, the McKay clipper *Lightning* claimed a day's run of 436 miles, and it was announced to the world with enthusiasm as the greatest distance ever covered by a sailing ship in twenty-four hours. Later, when the Maine-built clipper *Flying Scud* of 1,713 tons (said to have been built from a "Pook model"), commanded by a capable, experienced, and honorable skipper, Captain Bearse, claimed a run for a day ending at noon of November 6, 1854, of 449 nautical miles in the South Atlantic, the Boston-McKay propaganda machine sought to discredit the claim that, if accepted, would detract from the jealously and ardently built-up glory of Boston and of its great builder of clipper ships.

The extreme clipper ship of the fifties did not originate in New York, Boston, Baltimore, or elsewhere; it merely took form and developed by evolution, and it was not a successful and worthy type of ship except in the realm of speed. During the California Gold Rush and the Australia gold boom days—which covered a period of only a very few years—"speed was king," and in the design of ships, for a while, everything was sacrificed in order to obtain greater speed. The extreme clipper came into existence when carrying capacity and the cost of operation, maintenance and repairs were subordinated to speed. Shipowners and shipbuilders gambled in the construction and operation of ships, building sharp-lined models to make fast passages and taking chances that Dame Fortune and Neptune would be kind, that the hulls, spars and rigging would stand hard driving, and that the ships built primarily and almost solely for speed would make good runs to their destinations. During this period and when this type of ship was being built in quantity, Boston gained and held leadership in the country and the world in the construction of ships; but even when Boston was reaching toward and attaining the height of its glory and the peak of its fame, Maine, from the Piscataqua (including Portsmouth, N.H.) to the Passamaquoddy, was accelerating more rapidly than Massachusetts in the number of bottoms and tonnage built. As the clipper ship boom died, Maine gained leadership and supremacy in the building of ships and continued for many years to build and gradually to improve its long advocated type of good-carrying and good-sailing Down Easter. Following the Civil War, the state of Maine became the world's biggest builder of wood ships and Bath, Maine, the acknowledged leader in the design and construction of wood sailing vessels. That the quality of the product was high and the ships built profitable to operate are proved by the fact that, notwithstanding the increased cost of operating under the Stars and Stripes, New England-built and owned wood Down Easters competed with British iron sail and steam into the twentieth century and Bath-built and owned steel square-riggers survived in world trade on the Seven Seas until the end of sail and the World War of 1914-1918.

XII.

SALEM, MASSACHUSETTS

The Founding of Salem in 1626 as "a Refuge for Those Oppressed for Conscience' Sake" and the First Salem Seagoing Vessels

SALEM, MASS., one of the oldest cities in the United States, is on the coast about fifteen miles northeast of Boston. It was founded in 1626 by Roger Conant (an individualist who had left the Pilgrim Colony of Plymouth) as a commercial venture, partly agricultural but primarily to provide a self-supporting wintering place for the Banks fishermen. Originally known as Naumkeag, its name was soon changed to the biblical Salem (probably chosen in allusion to the second verse of the 76th Psalm). In 1628, two years before the Massachusetts Bay Colony was settled by the Puritans, a patent for the territory was granted by the New England Council to the Dorchester Company, which promptly sent out a number of colonists, but this patent was superseded the following year (1629) by the charter for the colony of Massachusetts Bay. The first settlers were attracted to Naumkeag (or Salem) as "a refuge for those oppressed for conscience' sake." With their brave and resolute leader, Roger Conant, they struggled to establish themselves, but they lacked money, numbers, and political influence. The title of their little colony was transferred, over their protest, to the bigger and more powerful Puritan group that formed the New England, or Massachusetts Bay, colony. These early settlers objected vigorously to being transferred along with the land and to being treated as "slaves"; but they could do nothing in opposition to "the iron-handed zealot and aristocrat," John Endecott, who, supported by an effective group of yeoman colonists, was sent out from England as governor in 1629 to rule over them. Nature was most unkind during Endecott's first winter in Salem. We are told that "eighty settlers perished of hunger and disease" and that when a new governor, John Winthrop, arrived from England in 1630, with seventeen ships and a thousand people, he passed by "afflicted Salem" and moved the seat of government to Charlestown and later to Boston.

It is generally held that the first ocean-going vessel built in the Plymouth (Pilgrim) and Massachusetts Bay (Puritan) colonies was the *Blessing of the Bay,* launched at what is now known as Medford, Mass., on July 4, 1631; but letters indicate that two years previous to this time, a bark, "already built in the country," had gone to sea "to bring back the fishermen." Moreover, the ship carpenter sent from England to the Plymouth (Pilgrim) colonists in 1624 promptly built two shallops for fishing and trading, and in 1626 one of these shallops was enlarged, decked over, and fitted with "sayles and anchors," so that she was used with success for trading voyages up and down the coast for several years. Letters suggest that an ocean-going ship was built at Naumkeag (or Salem) in 1628 and that the West Indian trader *Desire* of 120 tons, built in Salem or Marblehead in 1636, was not as generally believed "the first vessel built in Salem." At the end of the seventeenth century, Salem had become a port of importance, particularly in the West Indian trade. It was the center of a fanatical witch hunt

in 1692, and before the fiendish hysteria was eradicated, hundreds of respectable, law-abiding, and essentially religious persons had been arrested, of whom nineteen were hanged and one "pressed to death for refusing to plead." Salem's greatest merchant and shipowner, Philip English, who then owned twenty-one vessels engaged in deep-sea trade, saved his life and that of his wife by flight; but Governor Phelps's decree of May 1693 restored sanity, liberated all prisoners, and put a stop to the outrageous persecution by state and church leaders.

Salem seamen fought pirates in the late seventeenth and early eighteenth centuries, and during the Seven Years' War (1756-1763), which can be termed with truth "the first World War," Salem privateers were conspicuous for bravery and effectiveness as they were later during the Revolution (1775-1783) and the War of 1812. Salem has been described as "the most famous port of the New World" in the days of the young republic, and much has been written of those "red-blooded Americans who won honor for their flag and renown for their nation during the era of its struggle for very existence." Claims are made that, prior to the War of 1812, Salem-owned ships made the first voyages of any American vessels to Japan, India, the Philippines, Guam, the Cape of Good Hope, Sumatra, Arabia, and the South Seas. After the Revolutionary War, the merchants of Salem, Boston, New York, and Philadelphia vied with each other in sending their ships upon distant and hazardous voyages. Notwithstanding the natural difficulties of navigating "unknown seas" and the obstacles in the form of obstructive laws, the merchant marine of the United States steadily increased not only in bulk but also in the high standard of the men and ships engaged in it.

A Salem-owned ship, the *Astrea* of 360 tons, built in 1782 in Pembroke, Mass., commanded by a Salem man, Capt. John Derby, is said to have made a westbound Atlantic crossing from France to Salem during the spring of 1783 in the amazingly fast time of 22 days; on one outbound voyage to the Baltic, she made a run of 11 days from Salem to the Irish coast.

Elias Hasket Derby did pioneer trading when he sent his bark *Light Horse* to St. Petersburg in 1784 and shortly afterwards dispatched the *Grand Turk* first to Cape Town and then on to China. In 1789 the *Atlantic,* under the command of Elias H. Derby, Jr., was the first ship to fly the Stars and Stripes at Calcutta and Bombay. She was soon followed by another Salem ship, the *Peggy,* which brought the first cargo of Bombay cotton into Massachusetts Bay. Capt. Jonathan Carnes, in the schooner *Rajah,* brought the first cargo of pepper to Salem from Sumatra in 1799 and made that New England port a profitable world center of the pepper trade for many years.

A Salem-built and owned vessel, the *Margaret* of 295 tons, entering the port of Nagasaki in 1801, is generally credited with being the first vessel sailing under the Stars and Stripes to attempt to trade with Japan. The *Astrea II* of Salem (391 tons; built in 1795) opened up the American-Philippine Island trade and, it has been claimed, was the first American vessel to visit Manila, arriving at that port in 1796.

During the Wars with Britain, Salem Sends Its Privateers to Sea

Salem was much more in revolt against British policies toward the colonies, and later toward the young nation, than Boston or New York. Salem shipowners—and Salem lived on its ships—were enormously hampered by the policies of Great Britain, which deliberately endeavored to crush colonial shipping by means of various tonnage, customs, and neutrality regulations. "It was a merciless jealousy that sought pretexts to confiscate every Yankee mer-

chantman and ruin her owners." In spite of handicaps, humiliations, injustice, the might of the British Navy, and the all-too-frequent depredations of powerful pirates, American ships and merchants multiplied and prospered. They were engaged in a hazardous game, but the Yankees met conditions as they found them, with courage and resourcefulness, and did not waste breath by saying, "We cannot, neither can anyone else, compete with the favored and protected merchant navies of Britain and the Continent." The Americans saw how the cards were stacked against them, but they would not quit; they played the game and soon gave the British lion and Britannia cause to know that what the sailors of the new Western World really wanted, they would go to sea and get and that the whole British Empire with its magnificent fleet, hidebound in tradition, could not stop them.

For a generation following the Revolution, Salem played a conspicuous part in marine matters, and her activities overshadowed those of all other American seaports. The southern states were prosperous agricultural regions, and the Old World was eager for their rice, tobacco, indigo, tar, and, later, cotton. Slavery was firmly established in these states, and one-fifth of the inhabitants were black. The northern states were interested primarily in forest products, fish, ship, and ocean trade. The industrial era had not arrived, and the inhabitants of these states between the sea and an unexplored wilderness, in which the Indians were an ever-present peril, were concerned with commerce as the very lifeblood of their existence. As Ralph D. Paine says:

> It was a matter of life and death that ships should freely come and go with cargoes to exchange. All other resources were trifling in comparison. In such compelling circumstances as these, necessity became the mother of achievement. There is nothing finer in American history than the dogged fortitude and high-hearted endeavor with which the merchant seamen returned to their work after the Revolution and sought and found new markets for their wares.

England, chafing because of the loss of its colonies, was determined to kill American shipping and worked bitterly toward this end through navigation acts, with embargo restrictions and arbitrary, prejudiced decrees. The United States, with, in fact, the thirteen separate states united only in name (until after the new Federal Constitution of 1789 became operative and effective), fought back for its national existence and very life; but as far as foreign trade and the mercantile marine were concerned, it was New England that led the fight and the shippers and seamen of Salem who won the greatest glory for a period of several years. We are told that six thousand privateersmen had signed articles in the taverns of Salem during the Revolution and that the port was filled "with a spirit of enterprise and daring." To Salem sailors, hazardous ventures beckoned, and they sought in the days of the young republic "havens and islands unvexed by trade where bold men might win profit and perhaps fight for life and cargo."

The young republic of the United States had a hard time of it on the seas, and it was not until the war with Britain had been fought in 1812-1815 and won, following the Undeclared War with France, that the United States achieved the dignity of a separate national marine power and won its complete and acknowledged independence from Britain. In 1806-1807, six thousand American seamen were being forced against their wills to serve among the crews of British war vessels. At this time, the navies of both France and Britain were harassing and constantly irritating and humiliating the merchant marine of the United States, which was helpless, as the new nation had no navy to protect it. The Embargo of 1808, which was the most humiliating example of President Jefferson's appeasement policy with Britain and France, the world's two great naval powers, forbade the departure of an American merchant vessel for any foreign port. Jefferson argued that the only way to protect American lives and property at sea was to withdraw United States shipping from the trade routes of the world. This measure paralyzed American trade, as expected, and filled the ports of New England — including Salem — with dismantled ships, empty warehouses, deserted wharves, and starving seamen. But America refused to be mortified and debased even in the interest of so-called international peace. It is said that when the Embargo of 1808 was proclaimed "as a counter-

blow to Britain's unofficial war on American commerce and her wholesale impressment of American seamen," the house flags of Salem merchants flew over 152 vessels engaged in foreign trade. At this time, William Gray, merchant of Salem, owned entirely (excluding fractional interests in many other craft) 15 ships, 7 barks, 13 brigs, and 1 schooner — all engaged in foreign trade. It is said, "Mr. Gray's fleet represented one-quarter of the total Salem marine tonnage of the time." The embargo fell with blighting effects not only upon the imposing Salem fleet but also upon "the allied activities interwoven throughout the life and business of the town, and the square-riggers lay empty and idle at the wharves as sailors, mutinous minded against the government, walked the streets and plotted in pubs." Many miles away, Bath, Maine, another exclusively deep-sea square-rigged shipping community, was undergoing a similar experience, with such reactions of threatening revolt that the government had to man forts and patrol the river with armed vessels to keep Maine seamen from defying their federal authority.

In 1808 the foreign commerce of the United States had dropped to $79,000,000 from $246,000,000. Because of marine pressure on Congress, the embargo was removed in the spring of 1809, and once more Yankee ships spread their white wings over the Seven Seas. But there was no such thing as peaceful trading or fair rules applying to sea trade. France, under Napoleon, gave as much trouble to American shipping as did Britain. It was a case of "out of the frying pan into the fire." Traps were set by the French, and American shipping in the ports of France, Spain, Italy, Denmark, Prussia, and Norway was confiscated and plundered under flimsy pretext of violations of paper blockades, etc. Napoleon officially ordered the Prussian Government: "Let the American ships enter your ports. Seize them afterward. You shall deliver the cargoes to me and I will take them in part payment of the Prussian war debt." John Quincy Adams declared that fifty American ships were taken in this fashion in Norway and Denmark alone. In 1809-1810, fifty-one American ships were seized and confiscated in the ports of France, forty-four in Spain, twenty-eight in Italy, and eleven in Holland — a loss to helpless American shipowners of over ten million dollars. It is said that Salem shipowners and merchants lost $783,000 by the condemnation of Salem vessels and their cargoes at the port of Naples alone, but "the stouthearted merchants of Salem" rallied bravely from the outrageous treatment received at the hands of both Britain and France. "Which was the more unfair, arbitrary, and inhuman in their dealings with us, God only knows — we don't."

Salem, in common with other ports and marine centers of the United States, rebelled against the actions on the seas of both Britain and France, and when war came, the men who manned American ships held an all-permeating bitterness against the British and a hatred of the French. The war declared against Britain, the Mistress of the Seas, by the young republic, which had no navy, was not popular generally among American merchants, as it was ill-timed and the country was entirely unprepared both on land and at sea; nevertheless, it was welcomed by some forty thousand native American merchant seamen, "who, eager for revenge for the wrongs they had suffered, were ready to crowd the ships of the navy and overflow into the fleets of privateers" that hurried to sea from every deep-water port. The War of 1812 was defended and publicized by the administration as "a sailors' war" fought by the United States for free trade, the rights of seafaring men, and the freedom of the seas. A slogan frequently used was: "Free trade and sailors' rights." To many of the men of New England the land was as Josiah Quincy described it: "A shelter from the storm, a perch on which they build their eyrie and hide their mate and their young, while they skim the surface of the ocean in trade or hunt in the deep."

It has been said that during the war, Salem placed forty privateers in commission, of which "more than half had been built in its own shipyards." Other available records place the number at thirty-one vessels of various types and sizes, and this fighting fleet mounted 147 guns, all told, and carried 2,081 men. Among the largest privately owned armed vessels

hailing from Salem that fought in the War of 1812 were the ship *America* (22 guns; 150 men), brig *Grand Turk* (18 guns; 150 men), ship *Alexander* (18 guns; 140 men), and ship *Alfred* (16 guns; 110 men). This fighting force of privately owned ships of war is, nevertheless, relatively small — even considering the much shorter duration of the war — compared with Salem's accredited contribution of privateers and letter-of-marque vessels that fought in the War of the Revolution, the total of which has been placed at "196 ships of all types and size, mounting 1,965 guns and carrying 7,631 men." The War of 1812 may have been popular with a majority of New England and Salem sailors, but evidently the shipowners of the port of Salem, Massachusetts marine investors, and foreign trade merchants in general did not particularly relish the idea of fighting and thereby weakening Britain at a time when their democratic American principles urged the defeat of Napoleon, "the unscrupulous, dictatorial upstart." New Englanders rightly sensed that Britain's land campaign against France on the continent of Europe and its determination to drive all French vessels from the seas were aimed at the overthrow of Napoleonism in the world — an objective with which they were in sympathy. "Mr. Madison's war" was ill-timed, and New England, while hating British domination and oppression, was much less inclined to support it than the more French-loving South and the insincere and incompetent administration, which looked to the Northeast to do most of the fighting as it resorted to propaganda and labeled the war as a fight for seamen's rights and security and the freedom of the seas.

One of the most famous and successful of the Salem privateers that fought in the War of 1812 was the *America,* whose audacious cruising ground was from the English Channel to the Canary Islands. She destroyed at least two million dollars worth of British shipping, fought ships of her own weight, ran away from powerful British frigates, and proved both extremely deadly and elusive. Originally built in 1804 for the merchant marine and East Indian service, she carried "a crew of thirty-five men and ten guns." As a privateer, she carried "a crew of one hundred fifty men and twenty-two guns." She sent safely into American ports twenty-seven captured British vessels, but her total captures far exceeded this number; many were destroyed at sea, and six of the prizes were retaken by the enemy. The officers and crew of the Salem privateer *America* divided more than half a million dollars in prize money. The *America* was sold at public auction as she lay alongside Crowninshield Wharf, Salem, on June 16, 1831, and evidently the fine and fast full-rigged three-masted ship (with five yards on each mast) was broken up.

One of the finest privateers sailing out of Salem, Mass., during the War of 1812 was the famous *Grand Turk* (third of the name), later owned by William Gray, the merchant who, in 1798, had been largely responsible for building the frigate *Essex* at Salem at the expense of the shipping community. The *Grand Turk* was a full-rigged brig of 309 tons, which was constructed in 1812 at Wiscasset, Maine, "near the timber." After one of her many eventful and successful cruises aimed at British merchant shipping, she returned home after 103 days with a crew of only 44 men, "the remainder of her initial complement of 150 men having been put aboard eight valuable prizes, one of which had a cargo invoiced at a hundred and fifty thousand dollars." The log of the *Grand Turk* shows that she was, as generally reported, "a tall sailing wasp with a deadly sting"; moreover, she showed a nimble pair of heels and made astonishing escapes from fast British frigates and corvettes. The British Admiralty described her as "one of the fastest and most troublesome armed ships afloat."

The History of Salem as a Port — a Story of Audacious Sailing

The story of Salem is not one of the building of great or of numerous ships but of the audacious sailing of any ship that had Salem, Mass., painted as hailing or home port on her stern. The reputation of Salem was made not only with privateers and letter-of-marque ships but also with merchantmen during a period when every Salem ship putting to sea carried a battery of cannon behind stout bulwarks and had seamen trained to handle them and the cutlasses, boarding pikes, and muskets with which she was well equipped — for use, not for show. During the early colonial days, Salem was one of the most important shipbuilding towns in the Massachusetts region. As the years advanced through the period of the Revolution, the turn of the century, the Jefferson appeasement era with its embargo, and the War of 1812, Salem was primarily a great trading port, and it continued as such as long as vessels were small enough to use its harbors and natural facilities advantageously. It can be said that the War of the Revolution and the early years of the new republic practically obliterated Newport, R.I., as a port and shipbuilding center in favor of the fast-growing and much better geographically located city and port of New York. In Massachusetts the same sort of change, although less abrupt and slower in operation, caused the relative eclipse and final, virtual extermination of Salem as a port in favor of Boston. At the end of the first decade of the nineteenth century, the registered tonnage of Salem was 43,537 tons, but that of Boston had risen to 133,257 tons. Boston as a port and marine center had become second only to New York and operated a tonnage 10 per cent greater than that of Philadelphia and 30 per cent larger than Baltimore; Salem, however, held the position of the country's fifth largest port. When the War of 1812 began, Salem merchants owned 126 ships, of which 58 were East Indiamen. The war with Britain naturally played havoc with this fleet, and in 1815 only 57 of these ships were left in foreign commerce. The Salem customhouse cleared 42 square-rigged ships for the East Indies and other parts of the Orient, but Salem's glory had waned, and it never recovered its prestige as a port following the War of 1812. Salem's richest decade of shipping was the first of the nineteenth century, during which "the duties paid on foreign cargoes amounted to $7,272,633 and the entries to the port numbered 1,758" — or an average of almost three ships per day signaling their homecoming from beyond seas.

Salem fought for several decades to maintain itself as a harbor of prime importance, but it did not enjoy the natural advantages that were essential, as ships grew larger and required deep water, or a geographically advantageous location for receiving and dispatching economically by land and rail the relatively big cargoes carried by ocean traders. Boston was better located than was Salem as a port and had a superior harbor with much deeper water; hence, it was inevitable that, of the two ports located so close together, Boston should survive and grow in importance with the years and that Salem should gradually decline and ultimately fade out of the picture. Salem, however, did not discontinue as a port handling ocean commerce without a bitter and protracted struggle. It is said that the first marine railway built in America for hauling ships out of the water for cleaning and repairing was built and placed in operation at Salem in 1822. It has been said that in spite of its natural handicap and the steadily increasing call for bigger ships, Salem fought to maintain itself as a port for half a century after the tide had begun to ebb and it was evident that "the golden age was waning" that has been associated with a great pioneering and pathfinding era of Salem sail. Gradually, Salem was overshadowed by Boston as a trading port, and as Salem had never been "a great creator of ships" but primarily a user of them, it had nothing but history and tradition with which to fight in competition with better located harbors and merchandising marine centers. There was a time when the natives of Zanzibar, Sumatra, Calcutta, Manila, Cayenne, Siam, Ceylon, the Gold Coast, and the Rio Grande "believed America to consist chiefly of a vast commercial metropolis called Salem"; just as in the 1870's and 1880's the natives of a large

number of the world's greatest ports, seeing Bath, Maine, more than the name of any other city on the sterns of American sailing ships, imagined Bath to be the marine metropolis of the United States and a much greater and more important city than New York.

By 1850 the foreign entries to the port of Salem from Nova Scotia far outnumbered those from all other ports, and at the dawn of the clipper ship era, Salem — which had never been much of a community for shipbuilding — had also ceased to be of importance as a port. Surprisingly, nearby Marblehead built three clipper ships during the fifties, but Salem did not build or either load or discharge a single clipper. The *Witchcraft,* an extreme clipper of 1,310 tons, built at Chelsea, Mass., in 1850, was owned in Salem and hailed from that port for a few years, and the *Witch of the Wave* of 1,498 tons, built at Portsmouth, N.H., in 1851 for Boston owners, was registered at Salem on May 1, 1851, presumably because of the historical significance of the name and the friendship of the majority of managing owners for Capt. John Bertram, of Salem, in whose honor another clipper ship (the *John Bertram* of 1,080 tons) was named. This ship, also constructed in 1851, was built in Boston, where she was owned and managed. The Salem shipping firm of the Silsbees, Stones, Pickman, and Sanders (also given in some records as Saunders) owned four clippers and medium clippers built at Medford and Chelsea in 1851-1855; but this prominent association of Salem merchants — with a record of a century in business — built few ships in Salem, their last being the 440-ton *Sooloo I,* launched in 1840. Of a much earlier period, William Gray, Salem's greatest and most progressive shipowner of his era, built only a very few of his large fleet of ships at Salem. Gray saw its limitations as a trading port of the first rank a long time before his Salem contemporaries, and when he moved to Boston in the second decade of the nineteenth century, he embittered "those worthy but prejudiced Salemites who were yearly growing more self-satisfied, arrogant, and isolated."

The Salem Shipbuilding Record of Ebenezer Mann—Forty-one Vessels— and Christopher Turner—Eighteen Vessels

During the days of Salem's prominence and glory, it was more outstanding as a port and for its merchants, shipmasters, and the caliber of its seamen than for the output of its shipyards, and it was populated more by trading seamen than by shipwrights and mechanics. Salem merchants or traders built some ships at Salem (where they felt that they must keep some excellent repair crews to recondition returning ships at the home port), but they were hard-headed businessmen and built their vessels "where they could get the sort and quality desired at the lowest possible cost."

Ebenezer Mann (1758-1836), a shipbuilder of Pembroke, Mass. (known as "the Nursery of Massachusetts Shipbuilders"), moved to Salem and commenced building vessels there in 1783, when only twenty-five years old. During the next seventeen years and prior to his retirement in 1800, he is said to have built forty-one vessels, the largest being the square-rigged ship *Hazard* of 215 tons. The Mann yard was located on the North River, at Frye's Mills, at a site where William Leavitt, writing during the Civil War on the shipbuilding history of Salem, said that then there was "not water enough to float any of his [Mann's] vessels within a mile of where the yard was."

The following table gives a list of the vessels built by Ebenezer Mann at Frye's Mills, Salem, Mass., 1783-1800:

Name	Rig	Tonnage	Owner
BETSEY	Schooner	91	Peter Lander
DISPATCH	Brig	96	Johnson Briggs
SALLY	Schooner	59	Ephraim Very
SALLY	Schooner	65	John Leach
WILLIAM	Brig	182	William Gray
SUKEY & BETSEY	Schooner	88	S. Ingersoll
SUCCESS	Brig	103	Hugh Hill
FANNY	Brig	152	Benj. Goodhue
BETSEY	Schooner	91	Daniel Pierce
POLLY	Schooner	71	John Norris
BETSEY	Schooner	66	John Tucker
HANNAH	Schooner	50	Jas. Buffington
BEE	Schooner	68	William Gray
DILIGENT	Schooner	82	Jos. Sprague
WHIM	Schooner	78	Samuel Gray
BETSEY	Schooner	60	Hugh Hill
GOOD INTENT	Bark	171	Simon Forrester
TRYALL	Brig	119	Weld Gardner
RUTHY	Brig	148	Johnson Briggs
BETSEY	Schooner	108	Jerathmiel Peirce
LUCY	Brig	152	Caleb Low
OLIVE BRANCH	Brig	158	Jos. Sprague
CATHARINE	Schooner	87	Robert Leach
HOPEWELL	Schooner	96	William Orne
TRIALL	Schooner	100	John Norris
BETSEY	Schooner	190	Daniel Pierce
VENUS	Brig	151	J. W. Fawsatt
FRIENDSHIP	Schooner	111	Benj. Lovett
HIND	Brig	136	William Orne
FAVORITE	Brig	141	Peter Lander
GOOD HOPE	Ship	187	Nathaniel West
GEORGE	Brig	185	Josiah Orne
ADVENTURE	Ship	184	John Norris
ELIZA	Bark	187	Jos. White
HAZARD*	Ship	215	J. and R. Gardner
RAMBLER	Brig	165	I. Thorndike
FAME	Brig	144	John Collins
PRUDENT	Ship	214	Nathaniel West
BORNEO	Ship	213	John Gibaut
SUCCESS	Schooner	92	Timothy Brooks
MARY	Ship	176	John Norris

*This ship, built in 1798, was sold in 1799 and promptly replaced by the owner with the ship HAZARD of 325 tons.

The total number of vessels here recorded as built by Ebenezer Mann at Salem is forty-one, with an aggregate tonnage of 5,232 tons and an average of 128 tons per vessel. Of the forty-one vessels listed, six were ships of from 176 tons to 215 tons, the largest being the *Hazard* of 215 tons, with a peculiar model, which was built in 1798 and was sold in 1799 to Newport, R.I., parties. The *Prudent* of 214 tons, built in 1799, was Mann's largest successful ship. Whereas built for and managed by Nathaniel West, Clifford Crowninshield was a part owner, and the vessel's first captain was Benjamin Crowninshield. Old records say that the ship "was taken by British and condemned at Ceylon in January 1806." The ship *Borneo* of 213 tons was built by Mann in 1799 and first registered on September 13, 1799, with John Gibaut, the managing owner, as master; other part owners were James Dunlop and George G. Smith, both of Boston. The last and the smallest of the recorded Mann-built three-masted full-rigged ships was the *Mary* of 176 tons, built in 1800 and first registered on December 23, 1800, with John Burchmore as master; she is known to have been in service in 1806, but was later "lost at sea." Of the other vessels built by Ebenezer Mann at Salem, two were barks of 187 and 171 tons, respectively, fourteen were brigs of from 96 to 185 tons, and nineteen were schooners of from 50 to 190 tons. Of the schooners, six were named *Betsey,* and another was named the *Sukey & Betsey.* Among the first vessels built by Ebenezer Mann at Salem was the sizable brig *William* of 182 tons, constructed for William Gray, Salem's greatest, most versatile and discriminating shipowner; the brig *Success* of 103 tons for Hugh Hill, of Beverly, the old privateersman; and the brig *Fanny* of 152 tons for Benjamin Goodhue, later United States senator. Mann also built four vessels for John Norris, the prominent merchant and philanthropist, of which two were full-rigged ships of 184 and 176 tons, respectively, but the larger ship, the *Adventure,* built in 1796, was originally rigged as a brigantine and was changed to a ship in March 1799.

Christopher Turner, like Ebenezer Mann, was born at Pembroke, Mass., and when Mann moved to Salem to build ships, Turner went with him (or soon followed him) as an apprentice. It is said that Ebenezer Mann, in addition to the forty-one vessels as herein set forth, "built others not recorded and also vessels for out-of-town orders." Apparently, no reason

has ever been advanced for Mann's retiring in 1800 at the age of only forty-two and being content to operate a grocery store on Boston Street for the next thirty-six years. The fact remains, however, that in 1800, after building a big fleet of good, sturdy, and successful vessels, Ebenezer Mann discontinued building ships, and Christopher Turner took over the Frye's Mills shipyard and continued to operate it until he died in 1812.

The following table gives a list of the vessels said to have been built by Christopher Turner at the Frye's Mills yard, Salem, during the years 1800-1812:

Name	Rig	Tonnage	Owner	Name	Rig	Tonnage	Owner
GOOD INTENT	Schooner	89	James Silver	ENDEAVOUR	Ship	234	Simon Forrester
ST. MICHAEL	Brig	177	Edward Allen	HOPE	Ship	282	J. and Jas. Barr
BROTHERS	Ship	256	O. & A. Mitchell	FORRESTER	Brig	252	G. Nichols
ESSEX	Schooner	114	William Fabens	BRUTUS	Brig	198	Nathaniel Garland
ELIZA	Schooner	132	T. Whitteridge	HUNTER	Ship	296	Waitt and Peirce
HOPE	Schooner	92	Asa Hooper	ROMP	Brig	213	Ropes and Wellman
LYDIA	Schooner	78	Tyler Parsons	INDE-PENDENCE	Brig	223	Nathaniel L. Rogers
MARY	Brig	202	Samuel Gray	RAMBLER	Ship	286	G. Nichols and T. Bryant
POMPEY	Brig	188	The Wards, Devereux, and Gilchrist	GLEANER	Brig	147	Joseph Winn

The total number of vessels here recorded as built by Christopher Turner at Salem is eighteen, aggregating 3,459 tons and averaging 192 tons per vessel. Of these stated eighteen vessels, five were ships, eight brigs, and five schooners. The largest of the ships was the *Hunter* of 296 tons, built in 1807. The *Hope* of 282 tons was built in 1805 and was operated by her Salem owners until December 1829, when she was sold to New Bedford for the whaling trade. Apparently, she did good work and lived to a ripe old age, as it is reported that the ship was at Peru in the late seventies, when over seventy-three years old. The *Hope* was a good sailer and is credited with a voyage to Calcutta and return in less than seven months and another to Sumatra and back in seven months and nine days. The ship *Endeavour* of 234 tons, built in 1803, was also sold about 1830 to New Bedford parties as a whaler and was still afloat after the Civil War. The ship *Rambler* of 286 (or 285) tons, built by Turner in 1811 and at times erroneously referred to in early records as a schooner, was registered on December 19, 1811, and captured by the British in 1812. The brig *Romp* of 213 tons, built in 1809, was confiscated at Naples on her maiden voyage, and the brig *Independence* of 223 tons, built at the same time and launched within two days of the unfortunate *Romp,* was last registered on August 6, 1810, and disappeared shortly thereafter.

The largest brig reported to have been built by Turner at Salem was the *Forrester* of 252 tons; but this vessel and the *Brutus* of 198 tons, both of which, it is said, were built by Turner in 1805-1806, do not appear in the Salem ship register. The largest of the Turner-built schooners was the *Eliza* of 132 tons, built in 1802. This vessel gave good service. When registered in December 1827 (being then twenty-five years old), her tonnage was changed to 137 tons, and Stephen Gale was her master and part owner. The last vessel said to have been built by Christopher Turner, the brig *Gleaner* of 147 tons, is not recorded in the Salem ship registers. She was probably on the stocks when the war broke out and her builder died; evidently, she was sold and her name changed.

One of Christopher Turner's last jobs was the modeling of the fast and famous *George* of 328 tons (length 111 ft., beam 27 ft., depth 13½ ft.), which became known during the years as "the Salem School Ship" and the "Salem-Calcutta packet." In 1814, following Turner's death and the outbreak of the war with Britain, this vessel was built as a privateer by an asso-

ciation of Salem ship carpenters who had been deprived of work because of the stagnation of shipbuilding due to the war. The carpenters intended to operate her as a privateer so that she could earn her way by force of arms when peaceable merchantmen were driven from the high seas, but peace was declared before the enterprising shipwrights could arm and equip the ship and send her to sea. She was sold for the merchant trade and bought by Joseph Peabody at the low bargain price of $16 per ton. The *George* was first registered on May 22, 1815, with William Haskell as master and promptly sailed from Salem for Calcutta with hardly a man of her complement, from quarter-deck to forecastle, more than twenty-one years of age. Every man aboard the ship could read and write, most of the seamen had studied navigation, and all were versed in the science of navigation by the time the *George* returned home. This famous vessel made twenty-one Indian round voyages, but upon her return to Salem from Calcutta on May 17, 1837, when her hull was about twenty-three years old, she was sold for the South American trade and was condemned at Rio de Janeiro January 12, 1838. When Capt. Joseph Peabody, who owned the *George,* died on January 5, 1844, he was reported to have owned fifty-nine vessels at various times (nineteen ships, one bark, twenty-eight brigs, nine schooners, and two sloops) and to have built twenty-six of them (twelve ships, eleven brigs, and three schooners). Henry L. Williams, one-time mayor of Salem, published a list of all the vessels owned by Joseph Peabody, at some time or other during his career, and they total fifty-nine; so the statement made during relatively recent years that "during the early years of the nineteenth century, Joseph Peabody built and owned some eighty-three ships, which he freighted on his own account and sent to every corner of the world," is erroneous.

Salem-born Retire Becket Is the Reported Builder of Twenty-five Vessels at Salem, 1784-1818

Retire Becket, usually called "Tirey" Becket, was one of the few shipbuilders of prominence who were born in Salem. He established his yard on the harbor side of the town at a site that had been occupied as a shipyard by the Beckets since about the middle of the seventeenth century or even earlier, for John Becket built his house there in 1655. Retire Becket launched his first ship in 1784 and discontinued building in 1818, but lived until 1831. He is reported to have built twenty-five vessels — all at Salem — during the years 1784-1818, a period of some thirty-four years, and possibly he built some vessels for out-of-town owners that are not credited to him. The best-known ships built by Becket were the famous merchant ship and privateer *America* (473 tons; later reduced to 331 tons), constructed in 1803-1804 for George Crowninshield and his many sons; the ship *Active* of 206 tons (launched August 3, 1799), which in 1810-1812 made the first trading voyage to the Fiji Islands and Canton; the ship *Recovery* of 284 tons, built in 1794, which visited Mocha in 1798 and was the first American vessel to visit Arabia; the *Brutus,* a ship of 303 tons built in 1797, which left Salem on February 21, 1802, in company with the *Ulysses* of 163 tons and *Volusia* of 273 tons (all three ships were cast ashore on Cape Cod the next day during a severe snowstorm); the ship *Margaret* of 295 tons, built in 1800 and one of the earliest American vessels to visit Japan (she was lost at sea in May 1810 under distressing circumstances); the ship *Mount Vernon* of 355 tons, built in 1798, a successful, fast, and favorite vessel owned by Elias Hasket Derby; the ship *Fame* of 363 tons, built in 1802, whose launching was quite an event; and *Cleopatra's Barge,* the well-known brigantine-rigged yacht of 191 tons, owned by George Crowninshield and built in 1816. The Salem ship register says that the brig *Becket* of 128 tons, built at Salem

in 1818 and registered December 10, 1818, with John Crowninshield and John Dodge as owners and Benjamin Shillaber, Jr., master, was "the last vessel built by the celebrated Retire Becket."

Retire Becket had the reputation of being an excellent, careful builder. He built good, fast, seaworthy ships that were economical to operate and usually had a long life; but he was unfortunate in his launchings, and his vessels often stuck on the ways — to the great disappointment of spectators. It was said that, whereas he did not build many ships, in his thirty-four active years as a builder his product was outstanding, and it would seem that his costs were comparatively high.

A Record of the Fifty-one Vessels Constructed by Enos Briggs, Prominent Shipbuilder of Salem, 1790-1817

Enos Briggs was the most prominent shipbuilder of Salem at the end of the eighteenth and during the greater part of the first two decades of the nineteenth century. Briggs, of an old Plymouth County family, was born in Pembroke, Mass., on July 29, 1746, served an apprenticeship with his father, and in 1790, when forty-four years of age, was influenced by Elias H. Derby to go to Salem and build for him a "500-ton three-deck East Indiaman." At that time, apparently, Salem had very limited shipbuilding or even ship-repairing facilities and few outstanding shipwrights. Having finished "Mr. Derby's big ship," the *Grand Turk II* of 564 tons (at least three Salem ships bore this name during the Revolution, the days of the young republic, and the War of 1812), Briggs returned to Pembroke, Mass., for his family and arrived again at Salem, this time to stay permanently, on July 4, 1791. Enos Briggs built some fifty-two vessels at Salem, Mass., during the twenty-eight-year period 1790-1817 inclusive. The following table gives a list of the vessels constructed by him as set forth on his own records (with actual measured and official registered tonnage substituted in some cases for Briggs's estimated tonnage):

Builder's Number	Name, Tonnage, and Trade	Type	Began Construction	Date Launched	Owner
1	GRAND TURK II (564 tons; Indiaman)	Ship; 3-decker	Mar. 27, 1790	May 21, 1791	E. H. Derby
2	HENRY (190 tons; Indiaman)	Ship	1790	1791	E. H. Derby
3	BALTIMORE PACKET (128 tons; coastwise packet)	Schooner	June 1791	Sept. 1791	Dennis, Spofford & Jones
4	PEGGY (132 tons)	Brigantine	1791	Spring 1792	Samuel Derby, of Salem, with Samuel Barton, of Boston
5	BETSEY (108 tons)	Schooner (later a 122-ton brig)	1791	Spring 1792	Peirce and Waitt
6	BENJAMIN (161 tons; later 169 tons; Indiaman)	Ship	June 1792	Nov. 1792	E. H. Derby

(Continued on next page)

Builder's Number	Name, Tonnage, and Trade	Type	Began Construction	Date Launched	Owner
7	CYNTHIA (96 tons)	Schooner (later a 128-ton brigantine)	Jan. 1793	June 1793	Perkins & Peabody
8	PATTY (111 tons; Indiaman)	Schooner	Dec. 1793	Apr. 1794	Nathaniel West
9	ELIZA (184 tons; Indiaman)	Ketch	Apr. 1794	June 1794	E. H. Derby
10	BELISARIUS (209 tons; Indiaman)	Ship	June 1794	Oct. 1, 1794	Capt. George Crowninshield
11	FRIENDSHIP (128 tons; Indiaman)	Brig (brigantine)	Aug. 1794	Dec. 11, 1794	Hodges and Nichols
12	JOHN (258 tons; Indiaman)	Ketch	Dec. 1794	Apr. 21, 1795	E. H. Derby
13	THE BROTHERS (148 tons)	Ketch	May 13, 1795	Oct. 1795	E. H. Derby
14	MARTHA (340 tons; Indiaman)	Ship	Jan. 1796	June 4, 1796	E. H. Derby
15	FRIENDSHIP (342 tons; Indiaman)	Ship	Aug. 4, 1796	May 23, 1797	Peirce and Waitt
16	ATLANTA (120 tons)	Brig	Apr. 1797	June 28, 1797	Daniel Sargent & Son, Boston
17	AMAZON (338 tons)	Ship	Aug. 1797	May 28, 1798	Marston Watson, Boston
18	SALLY (104 tons)	Schooner	Dec. 1797	July 1798	Enos Briggs et al. (sold to Perkins & Peabody)
19	NEPTUNE (160 tons)	Brig (brigantine)	June 1, 1798	Aug. 29, 1798	Perkins & Peabody
20	ROVER (135 tons)	Brig (brigantine)	Sept. 1798	Dec. 4, 1798	Israel Thorndike (Lovett & Kilham)
21	ESSEX (850 tons)	Frigate	Apr. 13, 1799	Sept. 10, 1799	Built by subscription of citizens of Salem
22	CYRUS (305 tons; Indiaman)	Ship	Jan. 20, 1800	June 8, 1800	Israel Thorndike
23	POLLY (111 tons)	Schooner	June 25, 1800	Sept. 22, 1800	Enos Briggs et al.
24	COMMERCE (239 tons; Indiaman)	Ship	Oct. 1800	Mar. 17, 1801	Capt. Nathaniel West
25	AMETHYST (247 tons)	Ship	Dec. 1800	June 14, 1801	Capt. William B. Rogers, Charlestown, Mass.
26	CATHARINE (158 tons; Indiaman)	Brig	June 1801	Oct. 13, 1801	Peabody & Tucker
27	CARAVAN (267 tons; Indiaman)	Brig	Oct. 1801	June 17, 1802	Joseph Lee, Jr.
28	MOUNT VERNON II (240 tons; Indiaman)	Ship	Oct. 1802	May 10, 1803	Joseph Peabody et al.
29	DERBY (300 tons; Indiaman)	Ship	May 1803	Sept. 29, 1803	Benjamin Pickman, Jr.
30	(105 tons; fisherman)	Schooner	Oct. 1, 1803	Apr. 15, 1804	Enos Briggs (sold to Wm. Dolliver)
31	ARGUS (206 tons)	Brig	Nov. 1803	May 11, 1804	Israel Thorndike

(Continued on next page)

Builder's Number	Name, Tonnage, and Trade	Type	Began Construction	Date Launched	Owner
32	JANUS (277 tons; Indiaman)	Ship	May 1804	Sept. 28, 1804	Peabody & Tucker
33	MESSENGER (277 tons; Indiaman)	Ship	Dec. 1804	June 3, 1805	Simon Forrester
34	AUGUSTUS (246 tons; Indiaman)	Ship (later a bark)	June 25, 1805	Oct. 19, 1805	Peabody & Tucker
35	JOHN ADAMS (100 tons)	Schooner	Nov. 1805	May 12, 1806	Enos Briggs, Samuel Briggs, and Amariah Leland
36	FOUR SONS (125 tons)	Schooner	Dec. 1805	May 19, 1806	Jonathan Neal
37	PACTOLUS (288 tons; Indiaman)	Ship	June 26, 1806	Nov. 15, 1806	William Gray
38	MENTOR (213 tons; Indiaman)	Ship	Dec. 1806	June 6, 1807	Jacob Ashton
39	FRANCIS (297 tons; Indiaman)	Ship	June 1, 1807	Oct. 31, 1807	Peabody & Tucker
	No building in 1808 due to the embargo.				
40	PERSEVERANCE (241 tons; Indiaman)	Ship	June 12, 1809	Nov. 9, 1809	Willard Peele, Capt. Richard Wheatland, and James Silver
41	GALATEA (300 tons; Indiaman)	Ship	Jan. 1, 1810	May 22, 1810	Sold to Henry Gray
42	COROMANDEL (315 tons)	Brig	June 1, 1810	Oct. 15, 1810	John Derby and Capt. John Prince
43	FOSTER (380 tons)	Ship	Nov. 1810	Apr. 22, 1811	Ebenezer Preble and John Bryant
44	GLIDE (306 tons; Indiaman)	Ship	June 1, 1811	Dec. 3, 1811	Peabody & Tucker
45	LEVANT (265 tons)	Brig	June 6, 1812	Sept. 8, 1812	Peabody & Tucker
	No activity from fall of 1812 to June of 1815 due to the War of 1812 with Britain.				
46	AURORA (137 tons)	Schooner	During 1812	July 11, 1815	Sold to Stephen Brown et al.
47	CUBA (142 tons)	Brig (brigantine)	July 9, 1815	Nov. 14, 1815	John Andrew
48	PLATO (125 tons; later 140 tons)	Schooner	May 1, 1816	June 18, 1816	Enos Briggs, Samuel Briggs, Isaac Cushing, and Benjamin Dix
49	PALLADIUM (341½ tons; built as transatlantic packet; became Indiaman on first voyage)	Ship	June 1, 1816	Oct. 19, 1816	Built by subscribers and owned in company; Ebenezer Seccomb, Benjamin Hawkes, Stephen White, Committee (sold in Boston, Dec. 1817)
	No. 50 omitted in Enos Briggs's original list of vessels built by him at Salem.				
51	CHINA (370 tons; Indiaman)	Ship	May 15, 1816	Nov. 7, 1816	Peabody & Tucker
52	HAZARD (122 tons)	Schooner	Dec. 24, 1816	May 27, 1817	Enos Briggs and carpenters (sold to Isaac Cushing)

The following statement is a recapitulation of the fifty-one vessels as described above:

Type	Number	Percentage of Total	Tonnage		
			Total	Percentage of Total	Average per Vessel
Frigate (warship) 3-masted square-rigger	1	2	850	7	850
Ships	24	47	7,011	59	292
Brigs	11	21½	2,028	17	184
Ketches	3	6	590	5	197
Schooners	12	23½	1,372	12	114
Total	51	100	11,851	100	233

The *Grand Turk (II)* of 564 tons, the first vessel built by Enos Briggs at Salem, was constructed on land beside Derby Wharf, with her bowsprit sticking out across Derby Street, for at that time there was no Briggs shipyard. She was the largest vessel that had been built at Salem. Her keel was laid March 27, 1790, and her launching, in May 1791, proved very difficult and expensive, as it required several days to put the vessel into the water. The *Grand Turk* was built by Elias Hasket Derby to compare favorably in size and quality with the great ships of the British, Dutch, and French East India companies. She was 124 ft. long, 32 ft. beam, and 16 ft. deep and was far too large not only for Salem trade but also for the United States merchant marine of the 1790's. After completion, the ship lay idle at Salem for some nine months awaiting a favorable opportunity to load and go to sea, and she did not commence her maiden voyage until March 11, 1792, when she sailed for Calcutta under Capt. Benjamin Hodges. She reached Calcutta on August 24, and was detained at anchor in the Hooghly River for four months while unloading and loading. It was December 30, 1792, when the vessel started for home and January 7, 1793, before she was clear of Saugor Roads and the pilot. On June 12, the *Grand Turk* was off Salem, and the lightering of cargo soon commenced. She remained laid up during the summer and on November 10, 1793, left for Virginia under Captain Moseley to try to pick up a load of tobacco for Europe. Troubles developed in finding cargo for the ship, and she was sent to New York on her westward transatlantic run and advertised for sale. On March 12, 1795, she was sold for $22,000, and Mr. Derby was relieved to be rid of his big ship, even at a substantial loss to him.

While the *Grand Turk* was building, Briggs started a smaller ship named the *Henry* farther down Derby Wharf. She was built mostly of pine, and this ship of 190 tons, registered June 24, 1791, was known as "the pine ship." She was launched sideways, having three sets of ways (bow, midships, and stern), and, we are told, "fell on her side into the water, but quickly righted herself." There was only one person aboard her when she was launched, as the operation was deemed as dangerous as it was novel. Capt. Jacob Crowninshield was her original master, but when last registered at Salem on August 8, 1808, she had new owners, and Capt. James Meagher was in command.

The *Belisarius* of 209 tons, launched October 4, 1794, was generally felt to be one of the best ships built by Enos Briggs. She was not very large but unusually well designed and constructed, with her bottom coppered, and was put overboard "with all her masts standing." In 1798, during the quasi-war with France, the *Belisarius* was offered by her owners, the Crowninshields, to the United States Government for use as a sloop of war. Her tonnage was increased to 261 tons in November 1795. She made several successful Sumatra and East Indian voyages. Bentley, in his diary, has written: "The beautiful *Belisarius,* one of the richest ships of our port, went ashore and to pieces in a gale in the Bay of Tunis in April, 1810."

The ketch *John,* built in 1795, with a tonnage of 258 tons, was a large vessel for that rig, and she was altered and made ship-rigged on June 25, 1799. This ship was a privateer in the War of 1812, carrying 16 guns and 160 men, and after a short and eminently successful career,

she was captured by a British frigate in February 1813. The ketch *Eliza* of 184 tons, built in 1794, arrived at Salem on October 8, 1795, from India and was reported as "the first vessel to enter at Salem from Calcutta direct."

The schooner *Four Sons* of 125 tons, built in 1806, was captured during the War of 1812, but while sailing under the British flag, she was recaptured by an American privateer and, being again owned in Salem, "was topped, rigged as a brig, and called the *Dawn.*" The brig *Coromandel* of 315 tons, built in 1810, was also captured by the British during the same war, but Captain Messervy and his crew, when prisoners, again won possession of their ship and sailed her safely into Salem with her British officers and crew aboard.

Enos Briggs considered that his Hull No. 49, the *Palladium,* launched October 19, 1816, was probably the finest and most original of his creations. This ship, designed to operate as a transatlantic sailing packet between Salem and Liverpool, England, and built for a syndicate of numerous Salem businessmen, he described as "a very extraordinary built ship." Salem was no suitable American terminus for a Western Ocean packet line, and the ambitious undertaking never saw birth, the new vessel being put into service as an Indiaman on her very first voyage. She was sold to Boston parties in December 1817.

Because of the attitude of both France and Britain, the Undeclared War with France, and the struggle of America for freedom of the seas, William Gray, of Salem, one of the foremost shipping merchants in the United States, decided in the fall of 1798 to raise money in Salem "to build a wooden ship of war." The United States Government had no navy and was "too poor to build from Treasury funds." Elias H. Derby promptly supported William Gray in the latter's plan, each subscribed $10,000, and in a few weeks' time the sum of $74,700 was in a committee's hands "to build a frigate of thirty-two guns and to loan the same to the Government." Enos Briggs was selected as master builder. The keel of the frigate was laid April 13, 1799, and she was launched and christened *Essex* on September 30, 1799. The *Essex* was a large vessel for her time, "measuring 850 tons; she was 146 ft. long, 37 ft. beam, and 12 ft. 8 in. depth of hold." (The height between decks was only 5 ft. 9 in.) Her spars were long, and the main yard measured 80 ft. She was rigged as a three-masted ship and was built for possible use as a fast protected and armed merchantman.

Enos Briggs, when building the frigate *Essex* in 1798-1799 at Salem, inserted the following notice in a newspaper that had circulation in that part of Massachusetts:

> THE SALEM FRIGATE TAKE NOTICE.
> Ye Sons of Freedom! all true lovers of the Liberty of your Country step forth, and give your assistance in building the Frigate, to oppose French insolence and piracy. Let every man in possession of a White Oak Tree, be ambitious to be foremost in hurrying down the timber to Salem, and fill the complement wanting, where the noble structure is to be fabricated to maintain your rights upon the Seas, and make the name of America respected among the nations of the world. Your largest and longest trees are wanted, and the arms of them for Knees and Rising Timber. Four trees are wanted for the keel, which all together will measure 146 feet in length, and hew 16 inches square. Please to call on the Subscriber, who wants to make contracts for large or small quantities, as may suit best, and will pay the Ready Cash.
>
> Enos Briggs.
>
> Salem, November 23, 1798.

The *Essex* was on the stocks building for only five and a half months. During this period, Gen. George Washington visited the yard and drove some treenails in the vessel. The paper describing the launching of September 30, 1799, says:

> There was a great concourse of spectators, and the heartfelt satisfaction of the beholders of the launching of this beautiful ship was evinced by the concording shouts and huzzas of thousands. . . . The unremitting zeal of Mr. Briggs, the architect and builder, cannot be too highly applauded, and for bringing her into such a state of perfection, in so short a time, he is entitled to the grateful thanks of his country.

Of all the merchant ships constructed by Enos Briggs at Salem, only one, the *Pactolus* (288 tons; built in 1806) was either built for or taken over direct from the shipyard by

William Gray, of Salem, then the leading shipowner of the United States. William Gray did not think much of Salem as a shipbuilding town, and he constructed his ships wherever he could have them built the best and the cheapest, with no delay, in other parts of Massachusetts and Maine. Later, William Gray felt that Salem did not compare or compete with Boston as a port and center for shipping and trading, so — greatly to the distress of the merchants of Salem—he moved his residence and business activities to Boston.

Evidently, Enos Briggs launched his last ship (his No. 52) at Salem on May 27, 1817, and he died at Southfield (where his shipyard was established) on October 11, 1819, aged seventy-three years. Bentley, in his diary, says of Briggs: "He acquired a good estate but speculations in which his children involved him and perhaps in part his own consent, were not favorable to him. He was an excellent, practical workman and if not independent and original, he built many excellent vessels and died in the public favor."

The shipyard of Enos Briggs at Salem was located on the South River, where many years later the Naumkeag Cotton Mills were built. Briggs's first Salem ship, the *Grand Turk (II),* was constructed on Elias H. Derby's wharf and the largest vessel, the frigate *Essex* (built in 1799), on Salem Neck. At the death of Enos Briggs, a cousin, Elijah Briggs, took over the Briggs shipyard and built twelve vessels aggregating some 3,600 tons. Elias Jenks and Ichabod R. Hoyt built sixteen vessels at Salem between the years 1825 and 1843, and most of these keels were laid in the old Enos Briggs shipyard.

Barker, Magoun & Company, Competitor of Enos Briggs

In addition to putting Salem "on the map" as a shipbuilding town of some importance during the period between the two wars with Britain, Enos Briggs is entitled to the credit of training for five years (1793-1798) as an apprentice in his shipyard at Salem a young man, Thatcher Magoun, also a native of Pembroke (born June 17, 1775). Magoun located in Greater Boston at the turn of the century, starting a yard at Medford, Mass., in 1802. He came into prominence there and later became known as "the father of shipbuilders in Medford and on the Mystic River." Magoun built in 1803 the first ship, the *Mount Aetna* (188 tons), to be launched at Medford after the Revolution, and she was constructed on about the spot where the first ship was built in 1631 by the Plymouth colonists.

In the early years of the nineteenth century, David and Thomas Magoun arrived at Salem from Plymouth County and joined forces with Thomas Barker, a local builder with a small yard between Becket and Turner streets. After building a few small craft, the Magouns and Barker contracted to build the 260-ton ship *Alfred* for Capt. Joseph White on the Neck. This vessel, completed in 1805, was built largely of spruce and hackmatack, and she lacked the strength and longevity of the ships built of oak. Because of an accident, the ship stopped and hung on the ways when launching and was hogged when she finally got clear. It is said that she was straightened out and repaired and that during the War of 1812 she was a privateer and cut down to 217 tons. She carried 16 guns and 100 men and sent in several prizes, but was captured February 23, 1814, by two British warships—a frigate and a sloop of war. Another ship built by Barker, Magoun & Company at Salem was the *Herald II* of 274 tons, constructed in 1807 for James Devereux and Zachariah Silsbee. This vessel was primarily a Sumatra pepper ship; she survived the war, and when registered on October 20, 1815, William Gray, of Boston, was one of her owners and Capt. Eleazer Graves her master.

Evidently, Salem shipowners or leaders of subscribers for ships' shares (or fractions) generally built, operated, overhauled and repaired their own ships; hence, in the records of Salem, emphasis was placed on owners rather than on builders. In the first two decades of the nineteenth century, Salem usually had two or three small shipyards and "about fifty to seventy ship carpenters" engaged in new construction and the conditioning of old Salem-owned ships.

In the diary written by Dr. Bentley, of Salem, under date of July 8, 1816, we read: "In passing to Beverly on Saturday, I observed a Vessel on the stocks on the Beverly side, near the Bridge, almost finished, & above 100 tons. The Master Builder from Ipswich. Our four Vessels, one at Becket's & the other three in Southfields, two of them at Briggs & the other near S[outh] Bridge, by Barker & Magoun's, are said to be specimens of excellent ship building. It is said that more of this work is going on in town than for many years & in superior execution." The shipbuilding firm of Barker, Magoun & Company, a competitor of Enos Briggs, is of particular interest; for, as before stated, the Magoun members of the firm were relatives of Thatcher Magoun of Medford fame and came—as did Enos Briggs—from Pembroke, Mass., where many ships had been built for Salem owners. When Thatcher Magoun left Salem in 1798, he went to Boston to work in a shipyard for a Mr. Barker, who was probably also a Pembroke man and a relative of the Barker of the later Salem firm of Barker, Magoun & Company. On October 31, 1807, Dr. Bentley chronicles in his diary:

> This day, Mr. Briggs, in South Fields, launched the ship *(Francis)* for Mr. Peabody, Merchant of this town of Salem, into South River. And about an hour afterwards, Barker, Magoun & Co. launched at the entrance of the Neck, into the lower harbor a ship *(Herald)* for Nathaniel Silsbee, Merchant of this Town. . . . We have been so long accustomed to see Retire Becket build good ships and launch them badly, that the sight has new pleasures when free from the alarms which have often prevented the gay circle of friends from anticipating any real enjoyment from the noblest sight man can exhibit.

A Supplementary Record of the Sizable and More Important Vessels Built in the Salem Area

It has been said that Salem was the center of an important shipbuilding section, but as a matter of fact the district consisted of Salem, Beverly, Marblehead, and Danvers, and in its prime Salem overshadowed its nearby neighbors. Beverly vied with Salem in privateer operations, but Beverly could not build ships; Marblehead was a fishing village, and Danvers, back from the coast, was more successful in building ships than in operating them. According to Bentley, a few sizable ships were built in the environs of Salem prior to the War of 1812, and he mentions two ships built at New Mills in Danvers. This section for building, it was said, enjoyed a shorter haul of timber than did Salem proper from such sources of supply as Topsfield and Middleton. Many small vessels, probably most of them fishermen, were constructed during this general period in North Fields, near the North Bridge, and many fishermen lived at North Salem. Among the sizable ships for the period constructed at Danvers can be mentioned the ship *Putnam* of 266 tons, built in 1802, and the ship *Bolina* of 260 tons, built in 1811. The *Putnam,* built for the Sumatra pepper trade, was commanded by Nathaniel Bowditch, "The Yankee Stargazer," who was one of the four owners of record. This ship added to the fame of her captain when he succeeded in making port on Christmas Day at 9:00 P.M., having taken the vessel in, deep laden, during a heavy snowstorm—an achievement in navigation believed to have been impossible. The Salem ship register (1789-1900) shows 199 vessels built in Salem and 42, or 21 per cent as many, in Danvers.

The firm of Elias Jenks & Company built vessels at South Salem for many years, and among its product can be mentioned the two following full-rigged first-class ships for important Salem owners. In 1828 it launched the *Crusoe* of 294 tons. When she was registered on December 23, 1828, the owners of record were John W., Nathaniel L., and Richard S. Rogers, with Charles Hill, the master, as a part owner. This ship was driven ashore at Manila in 1831 during a severe typhoon and was abandoned. The Spanish governor thereupon determined to float the vessel by digging channels around her as she lay, "high and dry," and to the sea. The undertaking, with a multitude of cheap laborers, was successful, and the vessel operated under Spanish colors for "something like thirty years." She was reported at Valparaiso, Chile, in the forties, at Bangor, Maine, in 1855, and at San Francisco in the sixties, at which port she was finally broken up.

The famous *Sooloo* of 440 tons was launched November 12, 1840, by Elias Jenks & Company for the Manila trade. When registered on January 15, 1841, the owners of record were John B., John H., and Benjamin H. Silsbee, Benjamin W. Stone, and William D. Pickman; this vessel was lost on the west coast of Sumatra on May 14, 1855, after making such a good record that her owners, when building another ship at Boston in 1861, decided to perpetuate the name.

One of the last builders of ships in Salem and vicinity was Edward F. Miller, born in Dartmouth, Nova Scotia, in 1821. He was apprenticed to Shipbuilder Lyle at Halifax when fourteen years of age and in 1840 went to sea. Later, he worked for Donald McKay, East Boston, and had a small subcontract for repairing the frigate *Constitution* at the Navy Yard. In 1848, he went to California and, returning east with some capital, began shipbuilding at Marblehead. Soon after, Miller established himself on the site of Enos Briggs's old yard in South Salem, where he built vessels for Capt. John Bertram, Robert Brookhouse, Pickman, Silsbees, Stone, and others. Miller's ships were used mostly in the South American, African, and East Indian trade.

The bark *Glide* of 492 tons gross and 468 tons net register, launched from the Miller South Salem yard on April 25, 1861, made history and was a profitable vessel, even though she commenced her sea life at the beginning of the Civil War. Built for Capt. John Bertram et al., with Capt. John McMullan in command, she sailed from Salem on May 10, 1861, for Zanzibar. She was a thorough Salem product, having been built at Salem and being owned and operated by Salem men. The *Glide* was 129.8 ft. long, 29.2 ft. beam, and 17.4 ft. deep. She made twenty-nine complete voyages to east coast of Africa and western Indian Ocean ports and on her thirtieth voyage, when twenty-seven years old, was wrecked on February 25, 1888, as she neared her Madagascar destination.

It is said that the bark *La Plata* of 496 tons, attributed to Miller and registered as being built at Salem in 1850, held the sailing record for the Rio Plata. The bark *Taria Topan* of 631.7 tons, launched from the South Salem yard of Edward F. Miller on April 2, 1870, was the largest vessel constructed by that builder and was the last vessel of any size belonging to Salem owners. The *Taria Topan* was owned by John Bertram et al. and built to trade to the east coast of Africa, Zanzibar, and Madagascar. She was the twelfth vessel constructed by Miller in Salem and the fourth built by him for John Bertram. She sailed from Salem on her maiden voyage on May 12, 1870, and made twenty-six voyages for her Salem owners. She was sold in 1893 for the South American trade.

Edward F. Miller closed his business in Salem in 1878 and moved to Newton, Mass., where he became interested in the publishing business. He died there in 1908, when approaching eighty-eight years of age.

The following table gives an incomplete and supplementary list of the sizable and more important vessels hailing from Salem, which were built at that port, in addition to those that have been previously and specifically mentioned in this section.

Name	Rig	Year Built	Tonnage	Owner
LIGHT HORSE	Ship	1784	266	Elias H. Derby
SUKEY & BETSEY	Schooner	1784	120	Edward Allen
POLLY AND BETSEY	Brigantine	1791	129	Joseph White
HIND	Bark	1795	157	The Crowninshields (Benjamin, George, George, Jr.)
BETSEY	Ship	1795	189	Daniel Pierce
EXCHANGE	Brigantine	1796	185	William Richardson and Elias H. Derby
SALLY	Schooner	1798	143	Peabody & Tucker
INDUSTRY	Schooner	1799	110	John and Edward Norris; Peter Lander
FAME	Brig	1799	144	Collins, Hovey, Archer
ANTELOPE	Brig	1799	212	Elias H. and Richard Derby
ACTIVE	Ship	1799	206	Nichols, Hodges, Allen
JAVA	Ship	1801	222	John Derby and John Prince, Jr.
UNION	Ship	1802	250	Crowninshield, Nichols, Hodges, Peirce
MARY & ELIZA	Ship	1803	233	Joseph White
BELLEISLE	Brigantine	1803	119	Robert Leach & Son
BOSTON PACKET	Ship	1805	184	Archer, Parker, Chase, Pope, et al.
DAWN	Schooner	1806	163	Benjamin Shreve
ELIZA	Ship	1806	512	Cook, Devereux, Wheatland, White, Saunders
LOUISA	Ship	1807	156	Saunders, Devereux, Stone, White
CRESCENT	Bark	1809	203	For Beverly and Boston owners
DIOMEDE	Brig	1809	223	John Crowninshield
WITCH	Brig	1810	207	William and Charles H. Orne
RAMBLER	Ship	1811	285	Nichols, Peirce, Bryant
BENGAL	Ship	1816	304	Pickering Dodge
BLAKELEY	Brig	1816	233	William Fabens
PLATO	Schooner	1816	125	Cushing, Briggs, Robbins
TWO BROTHERS	Ship	1816	288	John and Thomas H. Forrester
ARGO	Schooner	1817	140	William B. Parker
ELIZA	Ship	1817	262	Stephen Phillips
BECKET	Brig	1818	128	John Crowninshield and John Dodge
CAMBRIAN	Brig	1818	196	Joseph Peabody and Gideon Tucker
CATHARINE	Ship	1818	315	Joseph Peabody and Gideon Tucker
LAURA	Brig	1818	201	John Derby and Benjamin Pickman, Jr.
GOVERNOR ENDICOTT	Ship	1819	297	Pickering Dodge
TIME	Brig	1819	212	Benjamin Hawkes
JAVA	Brig	1820	225	Jonathan Neal and Benjamin Hawkes
ACASTA	Ship	1821	286	Henry Pickering, Humphrey and James Devereux
LEANDER	Brig	1821	223	Joseph Peabody et al.
ROSCOE	Brig	1821	235	Saunders, Richardson, Briggs
CYGNET	Brig	1822	215	Stephen White
HERALD	Brig	1822	241	Pickering Dodge
EFFORT	Brig	1823	271	Benjamin Hawkes
ELIZA	Bark	1823	240	Joseph and Stephen White
EMERALD	Ship	1823	271	John and Thomas H. Forrester
PERU	Brig	1823	210	Stephen C. Phillips
WASHINGTON	Brig	1823	236	Benjamin Shreve and John Frost
AMAZON	Brig	1824	202	Joseph and Joseph A. Peabody
MEXICAN	Brig	1824	227	Joseph and Joseph A. Peabody
DERBY	Bark	1825	225	Stephen C. Phillips
OLINDA	Brig	1825	178	Gideon and Samuel Tucker; Daniel H. Mansfield
RICHMOND	Brig	1825	153	William Fabens, Jr.
SCION	Brig	1825	145	Nathaniel West
RICHARD	Bark	1826	252	Joseph and John Hodges
SUMATRA	Ship	1827	287	Joseph, Joseph A., and George Peabody
CRUSOE	Ship	1828	294	John, Nathaniel, and Richard Rogers; Charles Hill
LOTOS	Ship	1828	266	Pickering Dodge
MANDARIN	Ship	1828	295	Pickering Dodge

(Continued on next page)

Name	Rig	Year Built	Tonnage	Owner
ITALY	Ship	1829	298	Andrews, Phillips, Putnam, Page
ECLIPSE	Ship	1831	326	Joseph and George Peabody
SAXON	Ship	1832	344	Thomas P. Bancroft; Edward and Richard E. Orne
NAPLES	Ship	1833	309	Peabodys and Daland, of Salem; Gardner, of Boston
TRENTON	Bark	1835	274	Edward and John F. Allen; J. F. Putnam
CARTHAGE	Ship	1837	426	Joseph Peabody et al.
THREE BROTHERS	Bark	1841	263	David Pingree
LA PLATA	Bark	1850	496	R. W. Ropes & Co. and Luther Crowell
ARGENTINE	Bark	1850	298	James, Robert, Luther, and George Upton
M. SHEPARD	Brig	1850	167	John Bertram and James B. Curwin
WITCH	Bark	1854	210	Edward D. Kimball
MARY WILKINS	Brig	1855	265	Ripley, Charles A., and Reuben W. Ropes
ARABIA	Bark	1857	382	West, Cushing, Moore, Brown, et al.
GUIDE	Bark	1857	495	John Bertram et al.
GLIDE	Bark	1861	492.4	John Bertram et al.
STAR	Brig	1862	250	Osgood, Miller, and Sparrow
JERSEY	Bark	1868	599.2	John Bertram et al.
TARIA TOPAN	Bark	1870	631.7	John Bertram et al.

The relative importance of Salem as a shipping center of adventurous men, even as late as the mid-nineteenth century, is suggested by the fact that a Salem-owned brig, the *Mary & Ellen* of 183 tons, was the first of nine reported vessels that sailed from an East Coast U.S.A. port for San Francisco during the latter part of 1848 and made fast passages to California in the early days of the Gold Rush. Although it is reported that eighty vessels cleared Atlantic U.S.A. ports for California in 1848, many of them went only to the Isthmus of Panama, some carried only troops and government supplies, and several that sailed bound for California never reached their destination. The *Mary & Ellen* was built at Dorchester, Md., in 1848, and when registered at Salem on October 27, 1848, her owners of record were John H. Proctor and John H. Eagleston, the latter being the master of the brig. The *Mary & Ellen* sailed from Salem on October 28, 1848, for "California and the Sandwich Islands" and reached San Francisco March 26, 1849, after a good passage around the Horn of 149 days. (The vessel was sold in California in 1849.) On December 23, 1848, the bark *Eliza* of 240 tons, built at Salem in 1823 for Joseph and Stephen White (and with Michael Shepard, George and Benjamin A. West, A. S. Perkins, David Moore, Jr., A. and J. Ward, and John Bertram as the registered owners in September 1846), sailed from Salem for San Francisco, which was the second such departure in 1848. She carried a load of gold hunters and their belongings on board and reached San Francisco June 2, 1849, after a Cape Horn passage of 161 days. Capt. A. S. Perkins, one of the owners, was in command. It is said that the *Eliza* was the first vessel to reach San Francisco. As most of the "good runs" from an East Coast U.S.A. port to San Francisco about this time—including departures during the first quarter of 1849—required 200 days or more and as the first nine fast passages (before mentioned) averaged 156 days, the runs of the brig *Mary & Ellen* in 149 days and the old bark *Eliza* in 161 days were evidently good performances at the time, especially for vessels of their small size.

As before stated, no clipper ships were launched at Salem, Mass., during the clipper shipbuilding decade of 1850-1859 inclusive, but at Marblehead, close by, three such vessels were built. Benjamin Dutton, who in 1851 had built the little clipper *Victory* of 670 tons at Newburyport, moved his yard to Marblehead and there, in 1854, launched the clipper ship *Mary* of 1,148 tons (length 179 ft., beam 37 ft., depth 21 ft.) for Edward Kimball and associates, of Salem and Boston, Mass. The previous year (1853), Edward Dutton had built the clipper *Elizabeth Kimball* (998 tons) likewise for Edward Kimball et al. In 1857 the last, largest,

and most noteworthy of the trio of Marblehead clippers was built—the *Belle of the Sea* of 1,255 tons. This ship, which measured 189.3 ft. long, 37.6 ft. beam, and 23.5 ft. deep, was constructed by Ewall & Dutton. The *Belle of the Sea* made two westbound passages around the Horn in the so-called clipper ship decade; the first, in 1857, she covered in 128 days, and the second, in 1860, occupied 134 days. The *"Belle"* was sold to Liverpool, England, owners in 1864 (because of the Civil War's serious effect on American shipping), and she is credited with a very fast passage of 64 days between London and Melbourne, Australia. The three Marblehead-built clippers, launched during the period 1853-1857 inclusive, had an aggregate registered tonnage of 3,391 tons—an average of 1,130 tons per ship. Whereas Salem during the Revolution, the War of 1812, and the early days of the republic was a city entirely different from and independent of Boston, with pronounced jealousy existing between the two communities and shipping centers (even though only about fifteen miles apart), by the time that Marblehead, Salem's nearby neighbor to the eastward, commenced building a few clippers in the 1850's the whole general location, to the good citizens of Boston, was looked upon merely as "outlying Boston."

It is interesting to note that Salem was a transitional location of some importance in the movement of shipbuilding centers in Massachusetts. Although ships were built at Salem from the days of the earliest Puritan settlers, building lagged as the port grew in importance in the last half of the eighteenth century. At that time, vessels were being built in quantity on the North River, a small stream that flows between the towns of Scituate, Marshfield, Hanover, and Pembroke — southeast of Boston. Before the Revolution, many vessels that found a market in England were built on the North River. Between 1794 and 1804, 170 vessels were built there, and in the year 1801, 30 vessels were launched. The North River region could not build big ships because of lack of water, numerous shoals in the river, and a constantly shifting channel at the mouth, which increased the difficulty of getting vessels out of the river and safely to sea. Vessels of some 200 tons and over required careful kedging in working downstream and had to have scows or lighters lashed at their bows and sterns to raise them so that they could be floated and dragged over the bar. It sometimes required two or more tides to get a "large" ship of some 300 tons a few miles down the river to sea. Notwithstanding these pronounced disadvantages, which challenged the resourcefulness of builders, the proximity of excellent timber in the seventeenth and eighteenth centuries and the convenient location of the yards made the North River, for many long years, the best center on the "South Shore" — and, in fact, the best in Massachusetts south of the Merrimac — for the construction of ships.

The North River became the greatest nursery for shipbuilders in the country, and it was Pembroke in the North River district that trained and supplied Salem with its leading and outstanding shipbuilders during the period of its most important building following the Revolution and during the first two decades of the nineteenth century. Ebenezer Mann, Christopher Turner, and Enos Briggs, all of Pembroke, were North River men, as were David and Thomas Magoun (and probably Barker, their later partner at Salem). Other North River men, such as Thatcher Magoun, received their training at Salem under North River-born and trained shipbuilders. But the change in location of shipyards was continuous as vessels grew in size and demanded a greater depth of water for launching and floating to the ocean.

Thatcher Magoun, impressed with the limitations of both the North River district and Salem as a site for the economic construction of "big ships of three, four and possibly five hundred tons," finally located at Medford, Mass., in the Greater Boston area and was boastful of the fact that he had "established a yard where ships of the largest possible size could be built for all time." But Thatcher Magoun lived to see his superior, "for-all-time" building location handicapped by depth of water as vessels grew larger in size with the years. He had laid his first keel at Medford on the Mystic River (near the site where the *Blessing of the Bay,* the first ship built in Massachusetts, had been built 172 years before), and this river, it was

said, "was free from rocks and shoals and could float a ship of over two thousand tons burthen at high tide." However, in mid-century, East Boston supplanted Medford as the greatest — and the last — shipbuilding district in the Greater Boston area.

When Magoun located at Medford, oak timber was procurable from nearby towns at a cost of only six dollars per ton. During his later building days, all of the timber and planking that he used had to be brought to his yard from remote locations — the Niagara region in western New York, Maine, Canada, and the South. Between 1830 and 1855, 516 vessels aggregating 232,206 tons were launched at Medford, but during the forties the depth of water in the Mystic commenced to give Medford builders concern. In 1845, 30 vessels were built in Medford yards, but progressive builders, conscious of the limitations of Medford and the Mystic and feeling convinced that wood ships of over 1,500 or even 2,000 tons would be in demand, commenced to move their shipyards. New yards were established at East Boston, where there was "more water and more room." The first sailing vessel built at an East Boston yard, the *Niagara* of 460 tons, was launched in 1835; twenty years later, the yards there had some 30,000 tons of shipping in course of construction at the same time. During the period 1835-1858, there were constructed at East Boston 211 sailing vessels, including the largest square-riggers built in the country prior to the construction, during the years 1881-1902 inclusive, of the big Sewall fleet of ships (both wood and steel), which were the last and largest deep-sea sailing vessels to be built on the American continent.

William Gray, the Largest Single Operator of the Port of Salem Prior to His Removal to Boston in 1809

We are told by contemporary authority that Salem, in November 1806, had 73 ships, 11 barks, and 48 brigs, or 132 square-rigged vessels in all, engaged in foreign commerce. Records show that in 1807 Salem possessed 182 sail in its overseas trading fleet and in 1808 reported 152 vessels engaged in foreign trade; but it is authoritatively said to have had in 1812 "126 ships, of which 58 were East Indiamen." However, we are told that in 1815 Salem owned only "57 ships in foreign commerce, having suffered a loss of a hundred sail in seven years" and that "never again did Salem attain the tonnage or the entries of pre-embargo days." In 1816 the Salem customhouse "cleared 42 square-rigged vessels for the East Indies and other ports of the Orient," and in 1832 the port was said to own 111 vessels. From Felt's ANNALS OF SALEM, we read:

> July 1, 1833. Nearly half our commercial capital is employed in other ports. During the past year, there sailed from Salem 14 ships, 10 of them for India, 2 on whaling voyages to the Pacific; 5 barks, 4 of them for India; 94 brigs, 14 of them for India; and 23 schooners. Fourteen ships, 6 barks, 27 brigs and 6 schooners belonging to this place sailed from other ports on foreign voyages.

If William Gray (1750-1825) had been born in Salem instead of at nearby Lynn (where his father was the pioneer shoe manufacturer), he would, as the greatest United States shipowner and merchant of his era, most probably have been proclaimed as Salem's most illustrious son; for he lived in Salem from 1761 (when a boy of eleven) and received his business training in the countinghouse of Richard Derby (father of Elias H.), of Salem. William Gray was a lieutenant in the militia that fought the British during their retreat from Lexington, and he was the only private citizen of Salem who contributed cash toward the cost of sending the fast Derby schooner *Quero* to England in April 1775 with news of the clash at arms that

led to the Revolution and the colonists' account of the event and the reasons that led to it. William Gray was the principal owner of at least eight privately owned armed vessels commissioned and bonded during the period from November 18, 1781, to December 31, 1782. The first ship register record that appears in the Salem customhouse is dated October 6, 1789. In that year, William Gray registered as owner of eleven vessels; in 1790, seven more; and during the period 1789-1800, sixty-one vessels. An additional twenty-one vessels were registered by him at Salem during 1801-1804 and a few more before and after the Embargo of 1807-1809. William Gray launched into foreign trade as soon as the Revolution was over and peace was declared, and by 1792 the commerce handled reached large proportions. He was one of the first Salem merchants to trade with India and China, and in 1792, when Salem established its first bank, William Gray was elected its president.

The limitations of Salem as a port became evident to Gray in the early 1790's, and he loaded some of his vessels in New York. In 1794, Gray seriously considered moving to New York because of its superior geographical position and better facilities, but after a visit there in the fall, with his wife, decided for family reasons to remain at Salem. At the time of the quasi-war with France (1798), William Gray's shipping had reached such large proportions that Henry Cabot Lodge, of Boston, speaks of him as the greatest merchant in Massachusetts. Gray, when fifty years old (1800), although fully conscious of Salem's limitations as a port and shipping center, built his house in the town. In 1798-1799, he had been chairman of the committee that had charge of building the frigate *Essex* for the community to loan to the U.S. Government. He was one of the incorporators of the Essex Fire and Marine Insurance Company, which elected Nathaniel Bowditch as its president. In 1803, Gray, feeling the need of a better shipping port than Salem and not being desirous of going as far away as New York, bought a wharf at Charlestown (Boston) and registered some of his vessels from that port. In November 1806, Felt's ANNALS OF SALEM tells us, William Gray owned one-fourth of the 132 Salem-registered square-riggers engaged in foreign commerce, and he was by far the largest single operator of the port. Political feeling ran high in Salem, and in 1802 Gray fought the policies of the party in power, which sought to humiliate Crowninshield of the opposition. Gray, because of his character and personal influence, succeeded in having fairness and justice put ahead of party animosities. As a result of the Jefferson embargo and William Gray's support of a highly unpopular federal law (which he thought might be wise, although he declared it to be ruinous), the Salem politicians, with small-town vindictiveness and witch-hunting frenzy, made life very unpleasant for him and his family. In the spring of 1809, Gray moved his business to Boston, sold his house, and made his home at Cambridge. He had been inclined to do this for some time and had put up with Salem's relative inconveniences as a port for some fifteen years; now he could move for social reasons, benefit by business advantages, live in an atmosphere of less fanatical fervor, and have less direct contact with narrow small-town minds.

When William Gray changed his residence and prime seat of business operations from Salem to Boston, Diarist Bentley said that his estate was valued at three million dollars — or three times the wealth of Elias Hasket Derby when he died in 1799. Felt's ANNALS OF SALEM says that Gray was the owner in 1807 of "15 ships, 7 barques, 13 brigs, and 1 schooner." This fleet of 36 vessels can be compared in size with that of Elias H. Derby, who at his death in the fall of 1799, at the age of sixty and at the height of his career, owned "a large fleet of 13 vessels totaling 2,280 tons." They consisted of 6 ships, 1 bark, 4 brigs, 1 ketch, and 1 schooner, or about one-third the number of seagoing vessels and marine tonnage owned by William Gray in 1807, when he was fifty-seven years old and far from the peak of his career. From June 22, 1804, to the change of his address, William Gray had registered 7 of his newly acquired ships in the Boston customhouse, and in 1810-1812 (when the war with Britain broke out), he registered 16 more such vessels in Boston. In 1815 and 1816, following the close of the war, he registered 23 vessels at Boston, and he continued registering new vessels up to the time of his death in 1825, when he was seventy-five years old. Many of Gray's

vessels were evidently registered at ports other than Salem and Boston, for in the one letter book of William Gray (1809-1811) that survived the Boston fire of 1872, the vessels that he registered at Boston during these three years numbered 13, with 1 registered at Salem (1809), a total for the period of 14 vessels. However, the year book salvaged mentions 10 other vessels owned and operated by Gray during this period that he at no time registered at either Salem or Boston. Morison, in MARITIME HISTORY OF MASSACHUSETTS, remarks that William Gray is said to have owned 113 vessels prior to 1815, which means the end of the War of 1812, and adds that only 10 of these vessels were of over 300 tons and that the largest registered 425 tons. Of the 7 vessels of over 300 tons registered by Gray at Salem (1795-1815), the largest were the *Laurel* of 425 tons (1800) and the *Horace* of 382 tons (1802). Of the 17 vessels of over 300 tons that he registered at Boston during 1805-1824, 5 had also been registered at Salem during 1805-1815, and of the other dozen ships, the largest were the *Union* of 619 tons and the *Saco* of 528 tons, each registered in 1815, while the *Fawn* of 436 tons was registered the following year.

William Gray supported the government during the War of 1812, and the INDEPENDENT CHRONICLE (Boston) of March 7, 1814, says that he lost more money by the war than any man in the Union. Before the war, Gray employed more than forty vessels, and his losses due to enemy captures were very heavy. At his death, he had claims against European governments amounting to $645,821 for spoliation of property owned by him, which included claims of $422,500 against France. He subscribed heavily to government war loans (there are records of at least half a million dollars), and when the frigate *Constitution* put into Boston after her escape from the British squadron and the government had no money to spend to equip her again for sea, William Gray personally supplied the needed funds, so that America's finest frigate could put to sea again and destroy the British frigate *Guerrière* of equal force (August 1812). William Gray was always a strong supporter of the government, even when its measures were positively against his business interest and when support of the government made him the center of bitter attacks. He had the courage to live up to his convictions, but his love of truth and square-dealing made him universally respected. Upon his death, it was freely admitted that his enterprise and good fortune had done much to promote the prosperity of both Salem and Boston, and we read: "Salem even envies Lynn the honor of being his birthplace."

Salem and Lynn for Gray's birth now contest;
Lynn gains the palm, but Salem fares the best.

William Gray was the first and the greatest Salem shipowner and merchant to see the limitations of the town as a shipbuilding center and as a deep-sea port, and lesser men followed in his footsteps and either partially or completely deserted Salem as a port. As New Bedford displaced Nantucket as the country's leading whaling port because of geographical advantages and a better harbor, with deeper water, which permitted the use of the bigger ships demanded by the trade, so Boston (and New York) displaced Salem as a foreign trade port. William Gray's departure from Salem to Boston in 1808-1809 and his gradual switching of business from the smaller to the larger port (from 1803-1804 on) began an exodus of important shipping men and volume of marine business from Salem that did not stop. A major transference following the end of the War of 1812 was the moving in about 1825 of the Lows, a leading family of merchants and shipmasters, to Brooklyn, where they established the prominent merchant shipping firm of A. A. Low & Bro., of New York. During the years 1844-1853, the Lows had built for their account the finest fleet of eight clippers flying the Stars and Stripes, and in 1854 they acquired Donald McKay's mammoth clipper *Great Republic* (the largest ship in the world) and in 1856 the *Jacob Bell* of 1,381 tons. These ten fast clippers, ranging in size from the *Houqua* of 581 tons to the *Great Republic* of 3,356 tons, were all outstanding vessels of the first flight, and many of them were record-breakers.

The Derbys of Salem—Father and Sons

The outstandingly great man of the eighteenth century in Salem's marine history was Richard Derby (1712-1783), shipmaster, merchant, and patriot. He retired from active service on the sea in 1757, when forty-five years old. Derby armed his vessels, ran the gauntlet of the privateers during the French war (1756-1763), and resisted the interference in American commerce of the British shipping laws. He was one of the leaders who answered the complaint of the English Lords of Plantations, made against the Salem and Boston merchants, by saying "that they were His Majesty's Vice Admirals in those seas and they would do that which seemed good to them." Early in 1775 and some time prior to the Lexington clash, Capt. Richard Derby defied a British force sent to Salem to seize armaments believed to be there, and this was a notable incident, as a British publication of April 17, 1775, said: "It is reported that the Americans have hoisted the standard of liberty at Salem." It was Capt. Richard Derby's third son, Captain John (1741-1812), who sailed with dispatch on April 27, 1775, after the Battle of Lexington, in the Derby's swift schooner *Quero* to take the first tidings to Britain of the clash at arms, which meant the loss of an American empire. Richard Derby lived just long enough to see the colonies victorious in their fight for liberty. He died in 1783 about the time that his big and fast armed ship *Astrea* (20 guns; 50 men) under the command of his son, Captain John, brought the first tidings of peace to the United States, with definite news from France that a treaty had been signed.

Richard Derby's second son, Elias Hasket Derby (1739-1799), succeeded his father in handling the Derby shipping business at Salem. He was a man of initiative and a successful merchant, who built and managed an important fleet of sizable ships in foreign trade and accumulated a fortune in doing so. In his later life, because of his autocratic bearing, the mansion that he was building, and his reputed wealth, the shipping magnate was popularly referred to by contemporaries as "King" Derby. Elias H. Derby has been much publicized as the greatest of Salem's merchants, which can be questioned and is certainly not true if William Gray is eligible to be considered a "Salem merchant." The Derbys were the foremost owners of privately owned armed ships in Salem during the Revolution, being the accredited owners of 2 privateers and 4 letter-of-marque vessels and reportedly part owners of 11 other privateers and 6 other letter-of-marque armed vessels of various sizes and rigs owned in Salem. This represents an ownership or a managing majority ownership of 6 privately owned armed vessels and a subscription, or fractional, ownership in 17 other privateers and letters of marque during the period of six and a half years from June 13, 1776, to December 16, 1782. Elias H. Derby, because of the patriotism of his father, found himself called upon, at the end of the war and following his father's death, to operate several large and swift ships built to conform to the needs of the war, but which were not suitable for coastwise and West Indian trade. It was necessary for the Derby estate to take heavy losses on this tonnage or find some new markets for it "on the other side of the globe." Elias H. Derby undertook some courageous things and had some good captains to attain the desired objective. He made some mistakes, such as the building of the three-decked *Grand Turk II* of 560 tons (launched in May 1791 with great difficulty) to compete with the British East Indiamen. The "big ship" proved to be far too large, with too great a draft, for Salem waters. He could not get cargoes for her, and he could not devise any system of operating her profitably; so he sold a vessel of which he had been proud, but which was "a white elephant" in his hands, at a heavy loss to parties in New York.

In fourteen years (1785-1799), we are told, the Derby vessels owned or managed by Elias H. made 125 voyages to ports in Europe, Africa, India, the East Indies, and the Orient, and there were, from first to last, 35 vessels under the Derby flag at various times during this

period. This indicates that Elias H. Derby's averaged only some 3½ voyages per vessel during this period of time, which is low, and the number of vessels is small compared with the fleet owned and operated by William Gray. Elias H. Derby made money, however, built an impressive mansion in Salem, and died in 1799, when sixty years old, at about the time that his palatial home was finished. Following the death of Elias H., the Derby vessels were sold and the fortune split up. Neither Capt. Richard Derby, Jr., the elder brother, nor Capt. John Derby, the younger brother, who lived until 1812, was interested in the operation of Derby ships during Elias H. Derby's reign in the Derby countinghouse at Salem. Elias H. Derby, Jr., who was forced along by his father and who, it was planned, was to succeed him, showed no ability as a shipping merchant.

The Crowninshield Family of Sea Captains, Shipowners, and Operators

George Crowninshield, the father of the famous Crowninshield family of six brothers, was himself the son of a sea captain. Historians have said that when he retired from the sea at the age of fifty-five, he "was soon to rival 'King' Derby as a merchant shipowner of Salem" and also in the realm of politics. All of the six Crowninshield brothers went to sea, and five of them became shipmasters about the time that they reached their majority (one died of fever at Guadeloupe when fourteen years old and serving as clerk on a Salem ship). Historian Ralph D. Paine tells us that at one time Capt. George Crowninshield's five surviving sons were all absent from Salem, each in his own vessel, and three of them were on voyages in the East India trade. The eldest of the brothers, George, Jr., rose from forecastle to cabin and later retired from active service at sea to take up duties as a shipping merchant ashore. Capt. George Crowninshield, Jr., was the patriotic son of Salem who chartered the brig *Henry*, manned her with a crew of shipmasters, and sailed from Boston to Halifax, Nova Scotia, under a flag of truce, to bring back to the United States the body of Capt. James Lawrence of "Don't give up the ship" fame. He had died at sea from wounds sustained in the engagement between the ill-fated U.S.S. *Chesapeake* and H.M.S. *Shannon*. Capt. George Crowninshield, Jr., was the first yacht owner in the United States. In 1801 he built in Salem a 36-foot sloop yacht named the *Jefferson* and cruised in her for many years; this little vessel was converted into a privateer during the War of 1812, carrying one sizable gun and a crew of 20 men. With the shipping firm founded by his father dissolved and his occupation gone, Captain George, at forty-nine years of age, found himself with much wealth and leisure. Being passionately fond of the sea, he built in 1816-1817 his second yacht to cruise and live aboard for the remainder of his days. This vessel was the world-famous brigantine *Cleopatra's Barge* of 191 tons, which had an eventful career. She made a voyage to the Mediterranean, and Captain George died aboard her while she was being prepared for another voyage abroad. The vessel was sold to parties in Rio de Janeiro, then rounded the Horn, and later became the royal yacht of King Kamehameha of the Sandwich Islands.

Another son of old George Crowninshield, Captain Jacob (born in 1770), was one of the committee members of the East India Marine Society, "sagacious and experienced shipmasters, veterans of the seas beyond the Capes of Good Hope and the Horn," that on May 13, 1801, enthusiastically endorsed THE NEW AMERICAN PRACTICAL NAVIGATOR by Nathaniel Bowditch and recommended it "to the attention of navigators and the public at large." When twenty-one years old, Capt. Jacob Crowninshield was the master of Elias H. Derby's ship *Henry* of 190 tons, which cleared from Salem for the Isle of France (Mauritius). In 1804,

President Thomas Jefferson offered Captain Jacob the office of Secretary of the Navy, but ill health caused by long voyages in tropical waters obliged him to decline. It is a strange coincidence that later the same honor was bestowed by President Madison on a younger brother, Captain Benjamin W., who accepted the high office and served his country with distinction. Both Captain Jacob and Captain Benjamin W. were elected and served as Congressmen in the 1800's, and Capt. Jacob Crowninshield won a popular kind of fame in 1797 by bringing from India the first live elephant ever seen in America.

During the Revolution, Derby's big full-rigged ship *Grand Turk (I)* of some 300 tons, built in 1781 by Thomas Barstow at Hanover, Mass., mounted 28 carriage guns and was manned by 140 men. On her fourth and last voyage as a privateer, under the command of Captain Pratt, she made her last capture on March 12, 1783, off Saint Kitts in the West Indies. The prize taken, without armed resistance, was the British ship *Pompey* of some 400 tons (20 guns) bound from London to the West Indies with a valuable cargo aboard. This ship, with a prize crew aboard, was sent to Salem, where she arrived April 3, 1783. As the *Pompey* had been taken some twelve days before Congress issued an order recalling "all armed vessels cruising under commission for the United States of America," the court declared the British ship to be a legitimate prize of the *Grand Turk* and ordered her sold "as a fair capture." Elias H. Derby wanted to "buy her in," but many interests were part owners of the *Grand Turk* and wanted the maximum possible prize money (as did the crew), and in the bidding for the ship, the Crowninshields obtained possession. She was renamed *America* and became the first of four vessels of that name owned by the Crowninshield family. This vessel was sold to New York owners. The second *America* was a ship purchased in France by Elias H. Derby and sold to Jacob and Benjamin Crowninshield, with Jacob becoming master of her. (It was in this ship that the first elephant ever seen in the United States reached New York in April 1797.) The Crowninshield's third ship named *America* was of 654 tons and was purchased as the ship *Blonde* in Bordeaux in late 1798. She carried 20 guns in the French war. Commissioned July 30, 1800, at Salem, she was said to be "the largest vessel in the merchant service in the United States." Her registered owners were all members of the Crowninshield family — George, George, Jr., Jacob, John, Benjamin, Jr., and Richard. She was sold in France in 1802. The last and most famous of the Crowninshield quartet of ships named *America* was the privateer of the War of 1812, built in 1803-1804 by Retire Becket, of Salem, under the supervision of Capt. George Crowninshield, Jr., and described as "the fastest Yankee ship afloat during the war." This vessel of 473 tons, under the command of Capt. Benjamin Crowninshield, Jr., left Salem July 2, 1804, and although she intended to load pepper at Sumatra, she switched when in the Indian Ocean, went to Mocha for coffee, and returned to Salem with a highly valuable cargo at a time when the market was glutted with pepper and the price correspondingly low.

Joseph Peabody, Merchant Shipowner, and His Associates, Gideon Tucker and Thomas M. Saunders

The last of Salem's generally proclaimed quartet of great merchants and shipowners following the Derby family (Richard and his son Elias H.), William Gray, and George Crowninshield, Sr., and his sons, was Joseph Peabody. He was particularly favored by his Salem contemporaries because from the time of the embargo (and William Gray's departure from Salem to Boston), he fought with zeal to keep Salem "on the map" as a first-class foreign trade

port. Peabody died in 1844, sixty-one years after Richard Derby, forty-five years after Elias H. Derby, some thirty-six years after Jefferson's embargo and William Gray's departure from Salem, and nineteen years after Gray — America's greatest shipping merchant — had passed away in Boston. The memory and record of Joseph Peabody's career have been favored by the highly prejudiced local patriotism of a small town, on the down-grade, living on its past glory (with undue emphasis on its achievements following the War of 1812), and by the bequests to local institutions of George Peabody, a cousin of Joseph. George Peabody was not a shipbuilder, shipowner, or shipping merchant. He was born of poor parents in 1795 at Danvers in the west environs of Salem, and this part of Danvers later was named Peabody in honor of George, its illustrious son and benefactor. George Peabody became great because of an uncanny faculty in making money, and this not in Salem or in any part of New England but in Maryland and Britain. George Peabody was successful in a mercantile business at Baltimore during 1815-1837; he accumulated wealth and at the end of this period established himself in London as an American banking competitor of the British firm of Baring Brothers, well known throughout the world. Peabody and his partner, Morgan, were well patronized by American shipping merchants and others. Peabody freed them of dependence upon British credit, and his firm was very successful. In the 1820's and 1830's, George was a registered owner of record, with Joseph, of some of the Peabody ships of Salem, and Joseph Peabody, in his later years, benefited by his cousin George's backing. Upon George Peabody's death, he, being a bachelor, bequeathed the bulk of his fortune of some nine million dollars to various funds, libraries, institutions, and museums that now bear his name.

Joseph Peabody began his sea life when a boy during the War of the Revolution on privateers owned by the Derbys, of Salem, and the Cabots, of Beverly. In 1782, as second officer on the letter-of-marque schooner *Ranger* (7 guns; 20 men), owned by Boston and Salem parties and engaged in trade between the Potomac and Cuba, young Peabody fought well in the repulse of a boarding party of Tories at the mouth of the Potomac. He later became chief officer of the *Ranger* under Thomas Perkins, of Salem, who in 1789 was supercargo on the Derby ship *Astrea.* After the war, Joseph Peabody sailed out of Salem for several years and at length bought into a schooner, the *Three Friends,* in which he traded to the West Indies and Europe. Later, Peabody entered into a business partnership with his old friend Thomas Perkins, and in 1793 they became the owners of record of the 96-ton schooner *Cynthia,* built for them by Enos Briggs. Later, they bought from Briggs, the builder, and his friends the schooner *Sally* of 104 tons, which had been constructed in 1798, and about this time Enos Briggs built for Perkins & Peabody the 160-ton brigantine *Neptune.* From 1801 to 1816, Briggs built eight vessels for Joseph Peabody and his partners and business associates. This fleet consisted of five ships classed as Indiamen of from 240 to 370 tons, a bark (Indiaman) of 246 tons, and two brigs of 158 and 265 tons, respectively.

Gideon Tucker was, with Joseph Peabody, the registered owner of record of the two sizable Peabody vessels built in 1818 — the 315-ton ship *Laura* and the 196-ton brig *Cambrian.* Joseph Peabody et al. built the well-known 223-ton brig *Leander* in 1821, and three years later Joseph and Joseph A. Peabody were the registered owners of the two brigs built of 227 and 202 tons, respectively. George Peabody was one of the recorded Peabody owners of the 287-ton ship *Sumatra,* built in 1827, and Joseph and George Peabody were the registered owners of the ship *Eclipse* of 326 tons, built at Salem in 1831. In 1833 the Peabodys and Daland, of Salem, and Gardner, of Boston, were recorded as owners of the new 309-ton ship *Naples.* Four years later (1837), Joseph Peabody et al. built the ship *Carthage* of 426 tons, and this seems to have been the last sizable vessel built by the Peabodys and associates in Salem. It has been critically said that Joseph Peabody, "a Christian merchant of Salem," had his ships carry Smyrna opium to Canton; but in this respect Peabody was no different from the other Christian merchants, shipowners, and shipmasters of his day, whose ships hailed from Salem, Boston, or any other United States port. American ships of the period apparently handled

all the opium that they could get; this, however, in the aggregate was a very small quantity compared with the amount handled by British ships, which enjoyed a monopoly in the Indian oriental opium trade. During the second quarter of the nineteenth century and for most of the time following the War of 1812 to Joseph Peabody's death in 1844, he was almost alone among the Salem merchants who continued to ship out of Salem, all other merchants, it has been said, "having transferred their fortunes to the high noon of Boston or the vigorous dawn of New York."

Much has been written of Joseph Peabody's character and his helpfulness in advancing his men and giving them opportunities to command ships and, later, become owners of ships and merchants. Ralph D. Paine, in THE SHIPS AND SAILORS OF OLD SALEM, says that during the career of Joseph Peabody as a shipowner, he "advanced to the rank of master thirty-five of his fellow townsmen who had entered his employ as cabin boys and seamen. Every one of these shipmasters, 'if he had the stuff in him,' became an owner of shipping, a merchant with his own business on shore." We read: "Typical of the ships which won wealth and prestige for Joseph Peabody, was the redoubtable *George* which was the most successful vessel of her period." Peabody bought the ship *George* at a very low price. (She had been built during the war by a group of Salem shipwrights to give them employment when Salem shipyards and shipping were dead.) As before mentioned, she was sent to India on her maiden voyage in 1815, "with hardly a man in her company, from quarter-deck to forecastle, more than twenty-one years of age." It is evident that in manning his new ship, Peabody took full advantage of the times. He employed only Salem men and selected only young, educated, sturdy individuals of experience. Salem shipowners demanded Salem masters and officers for their vessels and Salem seamen as long as they were available. In their choice, youth was deemed a great asset, and Peabody hired his men cheap, paying no more for services than he had to.

It is interesting to record that the clerk (Samuel Endicott) and six members of the crew on the maiden voyage of the *George* later became shipmasters, and Putnam writes that "forty-five graduates of this training school [1815-1837] became masters of ships and twenty-six others became mates." Typical of the men engaged as seamen for the *George* on her maiden voyage was Thomas Mason Saunders, son of Daniel Saunders, Jr., a grandson of Daniel Saunders, both well-known master mariners. Thomas was born in Salem in June 1795 and, therefore, was twenty years old when he first sailed on the *George,* which operated with packet-like regularity for twenty-two years in the East Indian trade and became popularly known as "Peabody's School Ship." Thomas Mason Saunders, after the usual school education, had worked in the office of the ESSEX REGISTER; but feeling the call of the sea, he had shipped in 1811, when sixteen years old, in the brig *Betsey* and later in the brig *Levant,* each engaged in the Salem-West Indies trade. When war broke out, Thomas sailed as a junior mate on the famous Crowninshield privateer *America* on her first two cruises and later on Peabody's brig *Speed,* engaged in the Havana trade. This vessel was captured by a British frigate, and young Saunders suffered imprisonment at Bermuda. At the close of the war, Mate Saunders, needing employment and privateering days being over, shipped before the mast on the *George.* On her he made "a round dozen of Calcutta voyages," rising through every grade of service from able seaman to master and commanding her on her four passages in the years 1824, 1825, 1827, and 1828. Thomas Mason Saunders was twenty-nine years old when he first took command of the *George.* The circumstances of his finally quitting Joseph Peabody's employ and chartering in Boston a vessel for himself and a few friends are described by historian George Granville Putnam in SALEM VESSELS AND THEIR VOYAGES as follows: "Tucker Daland was then in the management of the Peabody counting room and, during a period of depression, suggested a reduction of pay. Captain Saunders said nothing, but started for Boston by the next conveyance, and, before his return, had become a merchant on his own account."

The vessel that Captain Saunders first chartered was the ship *Georgia,* and it is significant that to get started on his own, Saunders felt required to go to Boston and away from Salem influences and prejudices. He quit the sea at the age of forty-five years and died when over eighty-four years old, having outlived all of his three sons, who also followed the sea.

Gideon Tucker was a partner of Joseph Peabody for many long years, and he was a registered owner of record in the vast majority of the vessels popularly designated as "Peabody ships." A manuscript book of historic value is in existence showing the records of officers and crews of several vessels "owned by Gideon Tucker during the period Dec. 6, 1820-June 3, 1845," and written by him. These records cover nine vessels making sixty-eight voyages, of which two vessels making fifteen voyages are not in the Salem register and, therefore, hailed from some other port. A brief synopsis of the vessels whose voyages are covered by Gideon Tucker's personal record is presented herewith: .

Name of Vessel, Rig, and Tonnage	Built	Ownership of Vessel as per Salem Register	No. of Voyages Recorded	Remarks
OLINDA (brig; 178 tons)	Salem 1825	1825: Gideon and Samuel Tucker; Daniel H. Mansfield 1838: Gideon Tucker	20	Sold to Boston owners, Jan. 1847.
JANUS (ship; 277 tons)	Salem 1804	1804: Peabody & Tucker 1820: Gideon Tucker	12	Sold as whaler to New Bedford, Jan. 1833.
ABBY M. (brig)			14	Not in Salem ship register.
AUGUSTA (brig; 127 tons)	Duxbury 1800	1809: Peabody & Tucker 1820: Gideon Tucker	9	A ship AUGUSTUS of 246 tons, built at Salem in 1805, recorded owned by Joseph Peabody and Gideon Tucker.
CENTURION (brig; 205 tons)	Haverhill 1822	1829: Gideon Tucker	4	Sold to Boston owners, Jan. 1832.
ROTUND (brig; 146 tons)	Bowdoinham 1810	1811: Peabody & Tucker 1821: Gideon Tucker	3	Sold 1824 to local owners, who resold to Boston, 1831.
SICILY (brig; 163 tons)	Medford 1820	1824: Gideon Tucker	3	
NEVA (brig; 227 tons)	Captured War of 1812	1822: Gideon and Samuel Tucker; two Mansfields	2	Sold to New York owners, 1824.
ARIEL (brig)				Not in Salem ship register.

On these voyages, the vessels listed were apparently owned and managed by Gideon Tucker and do not include vessels making voyages under a joint ownership with Joseph Peabody or under any other shipping merchant's management.

Salem Merchants and Shipmasters Dominate the Sumatra Pepper Trade

The Rogers brothers and Capt. John Bertram, of Salem, opened up the United States trade with Zanzibar and for years dominated the gum-copal market. The Salem firm of Silsbees, Pickman & Stone did much to develop the Manila trade, with sugar and hemp shipped to the United States, but probably the most profitable market that Salem dominated with its ships and the initiative of its merchants and shipmasters was that of Sumatra pepper. William Vans, a Salem boy, shipped as supercargo on the Derby ship *Grand Turk* of 300 tons (built

at the South Shore in 1781) when she sailed under Capt. Ebenezer West on December 3, 1785, for the Isle of France and points beyond. This was the first Salem vessel to round the Cape of Good Hope and the first vessel from New England to visit Canton or any China port. She returned to Salem on May 22, 1787. William Vans, in his autobiography, written and published in 1832, says that upon the completion of the voyage of the *Grand Turk,* in partnership with Jonathan Freeman, he fitted out the brig *Cadet* in Boston for India and that this was "the first vessel from America to Bencoolen, Moco, Paddang, Tappannooly, and other ports on the west coast of Sumatra, where I bought cassia, cinnamon, gum benzoin, pepper, and other goods, and opened a trade with that island, which has been so beneficial to the United States, and particularly to the town of Salem." Vans adds that the *Cadet* returned to the U.S.A. in 1788 "from India" and "left in 1789 for London." In regard to the claim of William Vans that he brought the first pepper to the United States in the brig *Cadet* in 1788, it is of interest to note that old Salem records state that Jonathan Carnes, master mariner, died Friday, December 10, 1827, at the age of seventy years, and we read: "He was one of the earliest navigators to the East Indies. In 1788 he commanded the brig *Cadet* — the first vessel to visit the west coast of Sumatra. Married, April 26, 1784, to Rebecca Vans." From this, it would seem that the *Cadet* referred to by William Vans was commanded by Capt. Jonathan Carnes, who shortly before had married William Vans's sister and that Vans was probably shipped as supercargo. It is also of interest to note that William Vans's autobiography was not published until five years after Capt. Jonathan Carnes's death.

Capt. Jonathan Carnes, of Salem, is generally credited, most properly, with opening up the United States-Sumatra pepper trade. He took a Salem schooner out from Salem to the East Indies in 1795 and learned much of the possibilities of obtaining pepper in northwest Sumatra. His vessel was lost on a reef in the West Indies when returning home, but upon his arrival at Salem, Captain Carnes induced Jonathan Peele, a wealthy distiller of Salem, to fit out a 120-ton schooner built at Salisbury in 1795 and re-rig her as a brigantine. The historic *Rajah* was registered July 14, 1798, with Willard Peele and Jonathan Peele as owners and Jonathan Carnes, master. The *Rajah* sailed to Sumatra on July 20, 1798, as the pioneer pepper trader and returned October 15, 1799, with a cargo of 158,544 pounds of pepper. It sold in Salem for 37 cents a pound, which gave a profit of 700 per cent on the cargo. (The duty paid on pepper was $9,512.64.) Captain Carnes reached Salem in the *Rajah* on July 18, 1801, to complete his second pepper voyage; the "brig" carried 147,776 pounds of pepper and paid duty of $8,938.46. After this voyage, the Peeles sold their most profitable brig to other Salem owners; she again changed hands in August 1803, and New York owners bought the *Rajah* in 1804. Captain Carnes made no voyages in the famous vessel other than the two Sumatra pepper voyages for the Peeles.

The *Concord,* a ship of 171 tons built at Salisbury in 1795 and owned at one time by William Gray and later by the Dodges, Gideon Tucker, et al., of Salem, was registered September 9, 1802, with Richard, George, George, Jr., Jacob, John, and Benjamin Crowninshield as owners and Jonathan Carnes as master. She was promptly put in the Sumatra pepper trade and returned to Salem November 16, 1803, with 252,570 pounds of pepper for the Crowninshields and 9,367 pounds for Captain Carnes, the total duty paid being $15,727.40.

The *Belisarius* of 261 tons (Capt. Samuel Skerry, Jr.), owned by George Crowninshield & Sons, sailed to Sumatra from Salem November 25, 1800, for pepper and returned July 28, 1801, after a round voyage of 8 months 3 days. She brought home 336,497 pounds of pepper, the duties on which amounted to $20,357.16. A year later, she was back with a similar big cargo of pepper (duties paid, $20,916.40) and on September 20, 1803, reached Salem with 295,824 pounds of pepper, on which duties of $17,749.44 were paid. The *America* (654 tons), purchased in Bordeaux in 1798 and also owned by the Crowninshields, reached Salem on November 6, 1801, with 844,918 pounds of pepper aboard and paid $56,348.82 duties, and the following year she returned to Salem on October 9, 1802, with 760,000 pounds of pepper, on which the duties paid were $50,031.76.

The ship *Cincinnatus* of 226 tons, built at Hanover in 1799 and owned by Joseph Peabody et al., with Capt. Samuel Endicott in command, arrived at Salem September 11, 1803, with 307,824 pounds of pepper, and in November 1807 she returned home (Capt. William Haskell in command) with 347,000 pounds of pepper aboard. A historian has said: "In 1805, Salem exported to European ports 7,559,244 lbs. of pepper, which Salem ships had brought home and then reshipped across the Atlantic." Other ships in which Peabody and Tucker were owners of record brought pepper to Salem during the period 1809-1810 as follows:

Name of Ship and Tonnage	Built	Captain	Arrival Date at Salem	Cargo of Pepper in Pounds
JANUS (277 tons)	Salem 1804	John Endicott	Dec. 1809	537,989
FRANKLIN (296 tons)	Salisbury 1800	Samuel Tucker	Sept. 1810	539,835
JANUS (277 tons)	Salem 1804	John Endicott	Dec. 1810*	547,795

*The round voyage reported as occupying 7 months 25 days.

The Sumatra trade proved very profitable to Salem shipping merchants and continued for decades. The ship *Australia* of 534 tons, built at Medford in 1849 and owned by the Stones, Silsbees, Pickman, and Sanders, made three voyages (her eighth, ninth, and tenth) between Boston and Sumatra in 1857-1860 under the command of Capt. Josiah Dudley, and this was the last Salem ship to visit the coast of Sumatra. The bark *Tarquin,* owned by John L. Graham and under the command of Capt. Thomas Kimball, of Salem (with the first mate as William F. Jelly, also of Salem), arrived at New York in 1867 with a cargo of pepper, and this was the last to come to this country.

During the height of the Sumatra pepper trade, the duties paid at Salem on a cargo were deemed very high. The amounts, however, were small compared with the duties paid by ships in the China trade. In 1825 the brig *Leander* of 223 tons, back from Canton, paid duties of $86,847 to the Salem customhouse and, on the next arrival in 1826, paid $92,392, which was heralded as a record. As the vessels used in the oriental trade became larger, the duties naturally advanced, and the ship *Sumatra* of 287 tons, built at Salem in 1827 and put in the oriental trade, paid customs duties of $128,363, $138,480, and $140,761 per voyage on her return to Salem from China in the years 1829, 1830, and 1831, respectively. It is evident that whether or not this business was profitable to the Salem shipping merchants, it was extremely lucrative to the United States Government.

The Phillips Family—Prominent Shipowners of Salem for Generations

The interest of the Phillips family of Salem in marine matters is indicated by a perusal of the membership of the Salem Marine Society, which was founded in 1766 by eighteen shipmasters and incorporated in 1772. Capt. Stephen Phillips became identified with the society in January 1798, and his son, Stephen Clarendon Phillips, became a member in June 1828; both father and son were very active merchants of ability and shipowners of prominence. Stephen H., grandson of Captain Phillips, turned to law and is not among the society's members. However, after becoming city solicitor of Salem and attorney general of Massachusetts,

he became interested in the lands beyond the seas, for he served as attorney general of and minister of foreign affairs at the Hawaiian Islands. Of the next generation of the Phillips family who were members of the society were Stephen Willard and James Duncan Phillips, great-grandsons of Captain Phillips, and they were followed by Stephen Phillips, Jr., a great-great-grandson of old Captain Phillips.

The Stephen Phillips' of Salem have a long, fine record as shipowners and merchants. On January 3, 1798, the brigantine *Rajah* reached Salem from Bordeaux with a cargo consigned to Willard Peele & Company, Stephen Phillips, and George Crowninshield. This vessel then cleared Salem under Captain Carnes on the first direct voyage of the *Rajah* to the northwest coast of Sumatra. As before stated, she returned to Salem October 15, 1799, with pepper, which was consigned to Jonathan Peele. On February 24, 1817, the ship *Union,* with a cargo of pepper for Stephen Phillips, struck on Baker's Island while entering Salem and was wrecked; some of the pepper and most of the block tin aboard were salvaged, but the owners (Phillips and Peirce) lost their vessel. On September 7, 1823, the bark *Patriot* reached Salem, after an eventful passage from Sumatra, with 105,042 pounds of pepper for Stephen Phillips and J. H. Andrews.

Stephen Clarendon Phillips, son of Capt. Stephen Phillips, born in Salem November 4, 1801, and graduated from Harvard in 1819, was "an honorable, high-minded merchant of Salem," interested and active in politics and public matters. He was a member of the Massachusetts House and Senate; from 1834 to 1838, a representative to Congress; and from 1838 to 1842, mayor of Salem. Stephen C. Phillips is credited with building the brig *Peru* of 210 tons in 1823 and the bark *Derby* of 225 tons in 1825, launched from Salem yards. He was also part owner of the ship *Italy* of 298 tons, built at Salem in 1829. Phillips engaged in the Manila trade, and his brig *Peru* and bark *Derby* entered at the Salem customhouse in 1826 and 1827 from Manila, with cargoes consigned to him, and were followed by other Phillips vessels in subsequent years. Stephen C. Phillips engaged in the whale fishery, and George G. Putnam tells us that he "became interested in the ships *Elizabeth* and *Sapphire* and the barks *Emerald, Eliza, Henry,* and *Malay.*"

The *Elizabeth,* a ship of 397 tons built at Boston in 1827, was used as a whaler in the Pacific during the years 1836-1848. She sailed to California on April 3, 1849, with a party of gold seekers and was sold there. The *Sapphire* was a ship of 365 tons, built at Medford in 1825; she was acquired by Phillips in 1832 and operated as a whaler in the Pacific (1836-1842). She foundered in the West Indies in March 1842 while on a voyage from Salem to Mobile. The *Emerald* of 271 tons, built at Salem in 1823 as a ship, was bought by Phillips in 1833 and changed to a bark; she was used as a whaler (1835-1845) and was lost on the coast of Madagascar in March 1845. The *Eliza* was built for Capt. Stephen Phillips at Salem in 1817. She was a ship of 262 tons, but was altered to a whaling bark in 1838 and was condemned at Tahiti on January 30, 1843. Stephen Willard Phillips has said that this was a favorite ship of both Captain Stephen and Hon. Stephen C. Phillips and that she kept the seas continuously for almost twenty-six years, rounding the Cape of Good Hope seventeen times and Cape Horn six times and traversing around the world three times. The *Henry* was of 262 tons, built at Bradford in 1823; she was originally brig-rigged and changed to a bark in November 1834. Apparently, Stephen C. Phillips bought into this vessel in 1837 through Capt. James W. Cheever, his wharfinger; she was used as a whaler (1841-1847) and was lost on the island of Noahsuva in July 1847. The *Malay,* a brig of 268 tons built at Salem in 1818 for the Silsbees, Pickman & Stone, was altered to a bark in June 1834, and Phillips became the principal owner in early 1837. She was promptly used as a whaler and was lost in the Mozambique Channel on July 27, 1842.

The ship *Brookline* of 349 tons was built at Medford in 1831, and she was registered at Salem with Stephen C. Phillips as owner and George Peirce as master on June 29, 1833. Phillips either built or, soon after her construction, acquired this ship for the Manila and

oriental trade. This vessel was sold in Boston in early May 1844; she later became a whaler out of New London and was sold at Buenos Aires at the commencement of the Civil War, when thirty years old.

In November 1835, with the Phillips business "extensively increasing," the elder Stephen Phillips, father of Stephen C., decided to purchase the big ship *St. Paul* of 463 tons (length 129 ft., beam 22 ft., depth 12 ft.), built in Boston in 1833 for the New York-New Orleans-Liverpool triangular cotton trade and under the command of Capt. Joel Woodbury, of Beverly. This vessel was of full model and heavily built, and Stephen Phillips, Sr., wanted the ship for the sole purpose of placing her in the Manila trade. On her first voyage under the Phillips colors, the *St. Paul* sailed to Manila from New York and returned to that port, from which she commenced her second voyage to Manila via Mobile and Liverpool; from Manila she sailed to Salem, sugar laden. Her next voyage (June 1838-April 1839) was from Salem to Manila and return, and she carried both sugar and hemp on her homeward passage. She continued in this service until 1851. The master in command on her Voyage No. 8 under the Phillips flag was Capt. Charles H. Allen, of Salem, a typical Salem boy, sailor, and shipmaster, who had been on the famous "school ship" *George* for five voyages between Salem and Calcutta, the last two as second mate; he also sailed in Peabody's *Leander* and became first mate on Stephen C. Phillips' ship *Brookline.* Later, he commanded that vessel for several voyages in the Salem, China, and Manila trade before taking command of the *St. Paul* and sailing from Salem in April 1844.

The complexion of the crews of Salem ships had gradually been changing; while the captains and officers continued to be Salem men, but few Salem boys were going to sea. When the *St. Paul* sailed from Salem in April 1845 on her ninth voyage (completed in March 1846), the carpenter was an Englishman, who had been a convicted felon and had served his time of transportation at Australia. Of the able seamen, only two were Salem men, one was from Boston, and one from Philadelphia; but two were Italians, one a Swede, and one a Dane. Of the ordinary seamen, one was from Salem and one an Irishman; the steward was from New London, the cook from Nova Scotia, and there were two boys aboard, both from Salem. For the return passage, there were shipped at Manila four able seamen, of whom two were Danes, one French, and one Irish, and a new steward signed on there was French. Three of the men on the ship were classed by Captain Allen as "villains," and the forecastle was no longer a pleasant place for Salem seamen. That the personnel before the mast on this voyage of the *St. Paul* was not unusual is proved by the foreign flavor of the forecastle hands on the ship's Voyage No. 13, which occupied from November 1849 to January 1851 and was her last completed voyage. The carpenter was French and the steward and cook, whereas American, were not from Salem or Massachusetts. The able seamen were all Scotch, English, Portuguese, and Italian. Of the two men shipped as ordinary seamen, both were Salem youths, and one left the ship at Manila to go as second mate on another vessel. There was one Salem boy aboard. For the return passage, Captain Allen shipped at Manila five seamen, four of whom were English and one an American, but not from Salem or Massachusetts.

After completing thirteen successful Manila voyages for the Phillips', the *St. Paul* sailed July 5, 1851, from Salem for Manila on her fourteenth voyage. She went ashore December 9, 1851, in the Straits of Bernardino and was wrecked. The *St. Paul* has been described as the greatest and most successful vessel in the Salem-Manila trade, ranking in favor and as a leader and outstanding vessel with the ship *Sumatra* and brig *Leander* in the Salem-China trade and the ship *George* in the Salem-Calcutta trade.

Stephen C. Phillips lost his life by the burning of the steamer *Montreal* on the St. Lawrence River in June 1857, when in his fifty-sixth year. His body was brought to Salem and was accorded public honors, and the Salem REGISTER, in a published tribute, said: "Salem owes him a debt of gratitude which can never be obliterated"; also, "The numerous public improvements which he instituted and persevered in until their accomplishment . . . are acknowledged as blessings to the community."

The last arrival at Salem from Manila was the bark *Dragon* (Captain Dunn) in July 1858 with a cargo of hemp consigned to Benjamin A. West. Some Salem merchants continued in the Manila trade for years, but their vessels did not bring their cargoes to Salem. Among them were Tucker Daland, Henry L. Williams (later mayor of Salem), Henry Gardner, Benjamin W. Stone & Brothers, and Silsbees, Pickman & Allen. Four ships of the last firm, the *Sooloo II, Mindoro, Formosa,* and *Panay,* built 1861-1877, were of from 784 to 1,252 tons and were either wrecked or sold for conversion into coal barges during the period 1880-1898. Stone's big half clipper *Highlander* (1,352 tons) reached New York with her last cargo of hemp from Manila in 1886, when she was laid up for a couple of years and then "sold foreign."

In historic papers we read that Philip English, Salem's first great shipowner-merchant, built a wharf that was the forerunner of the Crowninshield wharf, from which went forth to "the rich ports of the far east the argosies of the Crowninshield and Phillips families." Records show that Capt. James W. Cheever, formerly captain of the privateer *America* (owned by the Crowninshields), sailed on his last voyage in the ship *Sapphire,* owned by Stephen C. Phillips, in 1834. In 1836-1837, Captain Cheever "superintended for Mr. Phillips the extension of the Crowninshield wharf and for the next twenty years was wharfinger there and agent for the railroads and for the whalers, in which Mr. Phillips owned largely or in which he had a financial interest."

Capt. John Bertram, "Salem's Last Great Shipping Merchant," Local Patriot and Philanthropist

Capt. John Bertram (1796-1882) was Salem's greatest merchant who endeavored to keep Salem operating as a shipbuilding community and a port after the passing of Joseph Peabody; but Bertram was financially interested in the building of only four vessels at Salem during the years 1850-1868, and by far the largest of these was the bark *Jersey* of 599 tons, built in 1868. Capt. John Bertram, because of his local patriotism and philanthropy following an active and successful career as a merchant, with scattering and wide-flung interests, has been popularly proclaimed as "Salem's last great shipping merchant." By a strange coincidence, he was born on the island of Jersey in the English Channel, off the coast of France, as was Capt. Philip English, who is historically known as "Salem's first great shipping merchant." Apparently, he arrived in Salem during the latter part of the 1660's. In July 1807, John Bertram's father, mother, and their six children sailed for Baltimore in the ship *Alert,* which put into Boston on September 1, leaking. The Bertrams disembarked and set up their home in Salem, when John was eleven years old. At sixteen, he went to sea and in November 1813, when seventeen years of age, shipped on the privately armed schooner *Monkey.* During the war, he was on the privateer *Herald* (300 tons) and, when on a prize, was captured by the British. When peace was declared, young Bertram returned from England to Salem and sailed on various vessels engaged in foreign trade. He ventured in the South American trade, and it is said that for some three years he "lived on the coast of Patagonia, directing the operations of a little fleet."

It has been said that John Bertram opened up trade with Zanzibar in the early thirties and made a fortune because of his vision and initiative. This is not entirely correct. The pioneer in the Zanzibar trade was the three-masted 91-ton schooner *Spy,* built at Essex in

1823 and owned by John W., Nathaniel L., and Richard S. Rogers. Under the command of Capt. Andrew Ward, the *Spy* arrived at Salem August 11, 1827, and this was the first entry from Zanzibar and the first importation, in quantity, of the prized gum-copal (used by varnish-makers). The ship *Black Warrior* of 231 tons, built at Duxbury in 1825 for the same owners, was to have sailed in 1830 for Zanzibar under the command of Capt. Henry Leavitt, but while awaiting the arrival of his ship, Captain Leavitt went south for a trip and was drowned. The Rogers' thereupon offered command of the *Black Warrior,* then scheduled to make a voyage to Madagascar, Zanzibar, the Red Sea, etc., to Capt. John Bertram, provided he would buy (or raise the money to cover) a quarter interest in the vessel. Captain Bertram accepted the offer, and the Rogers' placed a competent clerk aboard and the journals of the *Spy,* with all known information in regard to gum-copal and the possibilities of trade with Zanzibar. The *Black Warrior* returned to Salem in March 1832, completing what was considered "a great voyage" and bringing the first large quantity of uncleaned copal to Salem from Zanzibar. (The ship *Black Warrior* was over two and a half times the size of the schooner *Spy.*) This was followed by another voyage of the *Black Warrior* to Bombay, Red Sea, etc., with Capt. John Endicott as master. Capt. John Bertram had made his last voyage, retiring from the sea when thirty-six years old, and at the end of the voyage of the *Black Warrior* under Captain Endicott, Captain Bertram disposed of his interest in that vessel. The Zanzibar trade was over-tonnaged for a while, as "vessels from all directions" arrived there for cargoes, and many of the ventures, as a result, proved unprofitable. The Rogers' kept few vessels in the trade, but the *Black Warrior,* under Capt. William Driver (of "Old Glory" fame), was sent from Sydney, N.S.W., to Zanzibar in 1834-1835 and, it is said, made a profitable voyage as good as that of Captain Bertram.

During the period 1834-1837, Captain Bertram, with the brig *Waverly* of 232 tons (built at Marshfield in 1827) and with Timothy Bryant, Jr., and Nathaniel Weston as part owners and Samuel V. Shreve as master, persevered, but "rather unsuccessfully," in the Zanzibar trade and, it is said, encountered "much rivalry and opposition." In July 1837, Michael Shepard and William Sutton bought into the *Waverly,* and Capt. Andrew Ward (of *Spy* fame), after sailing some twenty years for the Rogers', was placed in command. Captain Ward, Michael Shepard, and Captain Bertram as a partnership continued to run the Zanzibar trade, and upon the death of Shepard in October 1856 and of Ward in October 1860, the business "fell pretty much all into Captain Bertram's hands." He, with few exceptions, "as the House of Arnold, Hines & Co., of Providence, R.I., had nearly the whole control of it until his decease in 1882, at the age of 86, and is well known to have been the richest merchant who ever lived in Salem." Salem virtually controlled the gum-copal market for long years, but it was Capt. Nathaniel L. Rogers and not Capt. John Bertram who originated the Zanzibar trade, which, it has been rightly said, "first and last, has been a source of much wealth to Salem." Rogers took the initiative from knowledge gained during visits from 1804 to 1806 to the Isle of France, Bourbon, and Madagascar.

It can be argued that it was the brig *Ann* of 204 tons, built at Pembroke in 1815, that opened up American trade with Zanzibar. Seven different *Anns* were registered at Salem during the period September 1804-June 1824 (four brigs and three schooners—none of which was built in Salem). The sixth of these, first registered in July 1821 at Salem, with the Henry Princes (father and son) as owners and with Charles Millett as master, left Salem in March 1826 for Mocha, where, upon arrival, she found a scarcity of foodstuffs. The brig made a side trip to Zanzibar and Lammo, where she obtained a quantity of grain, etc., for Mocha and, while at these ports, acquired some ivory and miscellaneous materials for the home market. After returning from Zanzibar to Mocha and loading with the usual coffee and varied cargo, the *Ann* sailed thence to Salem, where she arrived May 9, 1827, being the first vessel to bring goods from Zanzibar. The brig *Ann* (Captain Millett) arrived at Salem three months and two days before the schooner *Spy,* owned by the Rogers', but the *Ann* did not bring a

cargo of gum-copal, and her entry was from Mocha rather than Zanzibar. Michael Shepard, Henry King, and Henry Ropes became the registered owners of the *Ann* on August 7, 1827, and with Captain Millett still in command, she sailed for Zanzibar and ports on the east coast of Africa. This departure on a second voyage, which included Zanzibar as a port of call, took place two days before the arrival of the *Spy* at Salem with gum-copal direct from Zanzibar. The *Ann* returned to Salem April 11, 1829, under jury rig, after being badly battered on her voyage home and was condemned and broken up. The *Spy* (Captain Ward) was sold at Madagascar in 1828.

Records show that from the arrival at Salem of the Rogers schooner *Spy* from Zanzibar in August 1827 until the bark *Glide* (the last vessel to enter the port of Salem) arrived in late April 1870 for Capt. John Bertram and his partners and associates, there were 189 arrivals at Salem from Zanzibar, and 145 of these entries were between 1840 and 1860—"the period of greatest activity in this trade." George G. Putnam, the Salem marine historian, in 1924 said: "The name that today comes first to one at all familiar with the facts is that of Captain John Bertram, Salem's eminent philanthropist and benefactor, as a merchant engaged in this trade. If, however, he should but scan the imposts books at the Salem Custom House, he will there find, with frequent recurrence, the names of Nathaniel L. Rogers & Brothers, Michael Shepard, David Pingree, Joseph Peabody, Andrew Ward, Nathaniel Weston, James B. Curwen, Ephraim Emmerton, Tucker Daland, George West, Benjamin A. West, Michael W. Shepard and other merchants."

Capt. John Bertram, with his partners (such as Michael Shepard, Nathaniel Weston, James B. Curwen, Andrew Ward, and others), continued in trade for years, sending vessels to Bombay, to Mocha, and to South America. In September 1846, he took a small interest in the bark *Eliza* of 240 tons, built at Salem in 1823, the principal owners being Michael Shepard, the Wests and Wards, and Augustine S. Perkins, who was her captain. In December 1848, during the early days of the Gold Rush, this vessel sailed with a party for California. It is incorrect to say that Capt. John Bertram, of Salem, "built seven ships for the California trade, most of them clippers and very large." Bertram's name is connected with the *Witch of the Wave* of 1,498 tons, built for Boston owners in Portsmouth, N.H., in 1851. She hailed from Salem for sentimental reasons because of her name, but the real owners and managers were Glidden & Williams and Hunt & Peabody, of Boston. Another clipper ship (1,080 tons), built at East Boston in late 1850 under the supervision of Captain Glidden for the "Glidden & Williams Line" of Boston-San Francisco packets, with Flint, Peabody & Company, of San Francisco, as joint owner, was named *John Bertram* "after the Salem sea captain and merchant" probably in an attempt to obtain his financial support to the Glidden & Williams plans. Neither of these vessels sailed from or to Salem; each was "sold foreign" in 1855, the "*Witch*" to the Dutch and the "*Bertram*" to the Germans. It is doubtful as to whether John Bertram ever invested any of his personal money in these Boston-owned clippers, but the Salem ship registers record John Bertram as one of the many owners of each of these vessels. George G. Putnam, in SALEM VESSELS AND THEIR VOYAGES, says that from 1852 to 1858 John Bertram "gradually narrowed the range of his commercial business until at last he confined it to Zanzibar."

Among the later vessels of which John Bertram was part owner and manager was the bark *Iosco* of 267 tons, built in Boston in 1847. The first registration at Salem in December 1849 records Michael Shepard and John Bertram as owners. In February 1852, John B. Silsbee, Andrew and Israel Ward, and James B. Curwen were included in the registered list of owners, and in October 1855 the name of Henry F. Shepard was added. The *Iosco* was wrecked on the coast of Madagascar July 2, 1858. In September 1850, John Bertram was registered as part owner, with James B. Curwen, of the 167-ton brig *M. Shepard,* built at Salem in 1850 (she was sold to Boston parties in May 1862). The bark *Peacock* of 301 tons, built in 1852, was originally owned by Robert and Charles Upton, but on September 27, 1853, the registered

owners were Michael W. Shepard, John B. Silsbee, John Bertram, Andrew and Israel Ward, and James B. Curwen, with Andrew A. Ward as master. This vessel was wrecked on the coast of Madagascar August 6, 1855, when Capt. Joseph Moseley was in command. Another so-called "Bertram bark," the *Storm King,* which was of 371 tons and built in 1855, was registered at Salem January 17, 1856, with owners recorded as Michael W. Shepard, John Bertram, John B. Silsbee, James B. Curwen, and Henry F. Shepard. This bark ran safely, with the *Glide,* during the Civil War between Salem and Zanzibar, Aden, Muscat, and Madagascar, bringing home valuable cargoes of "spices, ivory, hides, goatskins, gum-copal, ebony, coir, dates, senna, gum arabic, Mocha coffee, etc." All were in much demand in the United States, and it is said that Bertram and his associates (whether active and recorded or silent and non-publicized partners), "having it all their own way, must have reaped a fortune." Incidentally, the *Storm King* was placed under the British flag for protection during the Civil War, and her name was changed to *Natal.*

The *Sachem,* a bark of 450 tons, built at Boston in 1858, was first registered at Salem December 14, 1867, with John Bertram as the owner of record. She was employed in the Zanzibar trade and wrecked on the east coast of Africa in 1873. During the period 1857-1870, when the clipper shipbuilding boom had spent itself, Bertram and his associates built the following four barks of relatively small size and moderate fullness at Salem:

Name	Built	Tonnage	First Registered	End
GUIDE	1856-1857	495	Feb. 12, 1857	Wrecked on east coast of Africa, Sept. 4, 1860.
GLIDE	1860-1861	492.4 467.7	May 9, 1861	Wrecked at Tamatave, Madagascar, Feb. 25, 1888.
JERSEY*	1868	599.2	Mar. 1, 1869	Wrecked on the coast of Madagascar on her first voyage, 1869.
TARIA TOPAN**	1869-1870	631.7	May 7, 1870	Sold at Salem in Aug. 1893 for South American trade and wrecked Oct. 9, 1894.

*Named after the island of Jersey, where John Bertram was born.
**Named in honor of "a high-minded Hindoo merchant of Zanzibar."

The *Guide* came to her end after about three years of service and before the Civil War, but the other three Salem-built barks survived the war. The *Glide* made her first nine of twenty-nine completed voyages in the Zanzibar, Madagascar, and Indian Ocean (east coast of Africa) trade with Salem as the port of entry and departure generally, although she sailed from Boston in April 1864 (Voyage 4) and May 1867 (Voyage 7). On Voyages 10 to 30 inclusive, she sailed from Boston except that she ended Voyage 11 at New York and commenced Voyage 12 at that port. The *Taria Topan* made twenty-six voyages in the same trade, all from and to Boston, the last ending in July 1893. This was the last vessel of any size built at Salem.

Salem's marine historian, Ralph D. Paine, says that Captain Bertram, "as a young man, saw an average of a hundred square-rigged ships a year come home to Salem from the Orient, Africa, South America, Europe and the South Sea Islands. In his latter years he saw this noble commerce dwindle and American seamen vanish until . . . the bark *Glide* from Zanzibar recorded the last entry in the Salem Custom House [April 26, 1870] of a vessel from beyond the Cape of Good Hope, and, in 1877, the Schooner *Mattie F.* crept in from South America as the last vessel to fetch home [to Salem] a cargo from anywhere overseas. The Manila trade had become a memory in 1858, and the farewell voyage to Sumatra was made in 1860." Historian Paine also records that Capt. John Bertram, after the Civil War, "had foresight and wisdom to perceive that American ships in foreign trade were doomed to make a losing fight. Their day was past. He turned his energies into other and more profitable channels, and

keeping pace with the march of the times, engaged in railroad development and manufacturing enterprises, a shipping merchant of the old school who adapted himself to new conditions with a large measure of success."

Bertram built his last vessel, the *Taria Topan* of 631.7 tons, at Edward F. Miller's yard at South Salem in 1869-1870. While she hailed from Salem, she never loaded or discharged cargo there, and from her maiden voyage in 1870 to her sale in August 1893 for the South American trade, she was in service a Boston vessel (as was the *Glide* from 1870 to the time that she was wrecked in 1887). John Bertram died March 22, 1882, at the age of eighty-six years, and his shipping business was carried on to its close by his successors, Ropes, Emmerton & Company. The men forming this company were descendants of old Salem merchants, for the brigantine *Sukey* of 102 tons, with George Ropes as master, cleared Salem October 26, 1803, for Sumatra and returned October 23, 1804, with pepper, coffee, and indigo consigned to Ephraim Emmerton and George Ropes. Capt. E. Augustus Emmerton (born 1827), the son of Ephraim Emmerton, was resident agent at Aden for years, acting for the Bertram interests and, on his return to Salem, became interested in the business and became president of the Merchants National Bank. His brother, George R. (born 1830), was in the countinghouse of Glidden & Williams, Boston. George married a daughter of John Bertram and, in 1869, joined his father-in-law's firm engaged in East Indian commerce. The head of the firm of Ropes, Emmerton & Company was Edward Dehonde Ropes, born in Salem in 1838, who, after working in Boston, was employed by John Bertram and later became president of the Salem Savings Bank.

The Salem Shipowning Association of the Silsbees, Stones, Pickmans, Sanders, and Allen—1798-1898

Considering length of service and persistent loyalty to the port, the best-known Salem shipowners throughout the nineteenth century were a more or less flexible association made up of members of the Silsbee, Stone, and Pickman families, strengthened by George T. Sanders (or Saunders) prior to the Civil War and by George Henry Allen thereafter.

Robert S. Rantoul, in a sketch of Benjamin H. Silsbee, has written:

> The well established commercial house of Stone, Pickman & Silsbees began active business in 1798. . . . They had no articles of co-partnership. It was merely an association of gentlemen who could trust one another. It had for members, in the course of its long career, Robert Stone, Senior, with his sons Benjamin W. and William Stone; Dudley Leavitt Pickman, his son, William W. Pickman, and his grandson Dudley Leavitt Pickman; Senator Nathaniel Silsbee and his son, Mayor Nathaniel Silsbee; the Senator's brothers, Zachariah F. and William Silsbee, with the son of the former, George Z. Silsbee, and the sons of the latter, Benjamin H. and John H. Silsbee; George Henry Allen and George T. Sanders. They had a counting-room on the corner of Derby and Charter streets until 1845, when they moved to the Manning Block, which took the place of the Sun Tavern in 1828, and there they remained until 1855, when they took rooms in the new Asiatic Building, and there they continued to occupy until 1892. The association finally dissolved in 1898. [Their last office was in the Sears Building in Boston.]

The following table gives a list of vessels that had been owned by the Silsbees, Stones, Pickmans, Sanders, and Allen as prepared by George H. Allen from memory in his later years, with certain vessels added that are known to have been owned by the association of Salem merchants and ship operators in the first part of the nineteenth century:

Name	Rig	Built Year	Built Place	Tonnage	Registered Owners
DELPHOS	Ship	1818	Salem	338	Pickman, Silsbees, Stone & Sanders (or Saunders)
MALAY	Brig	1818	Salem	268	Silsbees, Pickman & Stone
PERSIA	Brig	1822	Salem	254	Silsbees, Pickman & Stone
ROME	Ship	1829	Salem	344	Silsbees, Stones, Pickman, and Nathaniel Brown
BORNEO	Ship	1831	Salem	297	Pickman, Silsbees & Stone
ELIZA ANN	Ship	1835	Baltimore	370	Stone, Silsbees & Pickman
COLUMBIA	Ship	1838	Portsmouth, N.H.	599	Richard S. Rogers, William D. Pickman, George T. Sanders, and Edward A. Silsbee
SOOLOO (I)	Ship	1840	Salem	440	Stone, Silsbees & Pickman
IANTHE	Ship	1840	Hingham	414	Stones, Silsbees, Pickman and George T. Sanders
AUGUSTINE HEARD	Ship	1843	Newbury	491	Silsbees, Stones, Pickman & Saunders (or Sanders)
SAPPHO	Bark	1844	Boston	319	Stones, Silsbees, Pickman & Sanders
AUSTRALIA	Ship	1849	Medford	534	Stones, Silsbees, Pickman & Sanders
EUROPA	Bark	1849	Cohasset	397	Stones, Silsbees, Pickman & Sanders
WITCHCRAFT	Clipper ship	1850	Chelsea	1,310	William D. Pickman and Richard S. Rogers
SHIRLEY	Ship	1850	Medford	910	Stones, Silsbees, Pickman, Sanders, et al.
SYREN	Clipper ship	1851	Medford	1,064	Silsbees, Pickman & Sanders
MALAY	Clipper ship	1852	Chelsea	868	Silsbees, Stone & Pickman
AURORA	Clipper ship	1853	Chelsea	1,396	Stones, Silsbees, Pickman & Sanders
DERBY	Clipper ship	1855	Chelsea	1,062	Stones, Silsbees, Pickman & Sanders
SUMATRA	Ship	1856	Chelsea	1,041	Stones, Silsbees, Pickman & Sanders
OCEAN ROVER	Ship	1860	Portsmouth, N.H.	776	Pickman, Silsbees & George H. Allen
NEW YORK	Brig	1860	Baltimore	293	Pickman, Silsbees & Allen
SOOLOO (II)	Ship	1861	Boston	784	Silsbees, Pickman & Allen
MINDORO	Ship	1864	Boston	1,065 G. (970 N.)	Pickman, Silsbees & Allen
FORMOSA	Ship	1868	Chelsea	1,252	Pickman, Silsbees & Allen
PANAY	Ship	1877	Boston	1,190	Pickman, Silsbees & Allen

George H. Allen is authority for the statement that the ship *Thomas Perkins* was owned by the firm. This vessel was of 595 tons, built at Portsmouth, N.H., in 1837, and was registered at Salem November 28, 1837; but the owners as stated in the record were David Pingree and Emery Johnson, with Capt. William Graves, Jr., her registered master.

The brig *Alert* of 120 tons, built at Salem in 1798, is said to have been the first vessel owned by the "firm" or, rather, association of businessmen, which, it is claimed, continued in business for a hundred years. However, the owners of record of the *Alert* were Robert Stone, William Parker, Joseph White, Jr., Jesse Richardson, Dudley L. Pickman, and Pickering Dodge, with the famous Robert Gray as master. The new brig was lost in her first year of operations because of French spoliations, but the heirs of the owners recovered compensation a century later.

In 1809 the Stones (father and son) were the recorded part owners of the ship *Mary Ann* of 240 tons, which had been built in 1794, and in 1810 Nathaniel Silsbee bought into this vessel.

A ship of 300 tons named the *Derby* was built at Salem in 1803. She was registered October 1, 1803, with Benjamin Pickman, of Salem, Timothy Williams, of Boston, and Dudley L. Pickman, of Salem, the owners of record and Thomas West, master.

The *Herald,* a ship of 274 tons built at Salem in 1807, was originally owned by James Devereux and Zachariah F. Silsbee. On February 1, 1810, Robert Stone, Jr., and Dudley L.

Pickman became part owners, and a year later the owners of record were Nathaniel and Zachariah F. Silsbee, James Devereux, Robert Stone, Jr., and Dudley L. Pickman, with Zachariah Silsbee as master. William R. Gray, of Boston, was part owner with Nathaniel and Zachariah Silsbee when she was registered October 20, 1815, just after the war.

The ship *Rome* was sent around the Horn to San Francisco in the Gold Rush of 1849 and, following her arrival, was drawn upon the shore and built into a wharf. The ship *Borneo* was later re-rigged as a bark and was abandoned in the North Atlantic January 1, 1854, when twenty-three years old. The ship *Eliza Ann* was sold at Melbourne November 24, 1855, when the vessel was some twenty years old. The ship *Columbia* was sold in 1852, when fourteen years old, and the ship *Sooloo (I)* was lost on the west coast of Sumatra on May 14, 1855, when fifteen years old. The ship *Ianthe* was sold in 1846, when only six years old, and she was lost in the China Sea in 1859. The ship *Augustine Heard* was sold to New York owners in 1857, when she was fourteen years old, and the bark *Sappho* was sold in 1849, when only five years old, to New Bedford to be used as a whaler. The ship *Australia* was sold to Boston owners in 1861, when she was twelve years old, and was wrecked seven years later. The bark *Europa* operated for her Salem owners for only four years before she was sold to Edgartown parties for whaling, and she was lost in the Okhotsk Sea in 1880, when thirty-one years old.

The clipper *Witchcraft* was sold in Boston when about four years old, and seven years later she was lost off Hatteras. The ship *Shirley,* when forty-seven years old, was towed to Alaska (in 1897) and converted into a hotel. The clipper ship *Syren* was sold to Boston owners in 1856, when five years old; the clipper ship *Malay* was condemned at Tahiti in 1891, when she was thirty-nine years old; and the clipper ship *Aurora* was sold at Melbourne to the British during the Civil War (in 1863) when she was ten years old. The last built of the Salem clippers, the *Derby,* was sold in 1865 at San Francisco, and she went under the German flag. The ship *Sumatra* was sold in 1874 at San Francisco, and she was broken up at Honolulu in 1890, when thirty-four years old. The ship *Ocean Rover* was sold to Boston owners when seven years old, and she was lost three years later. The brig *New York* was transferred to the British flag in 1865, renamed *Newsboy,* and was sold to Japan in 1868, when eight years old. The ship *Sooloo (II),* after sixteen years of service, was sold in 1887 for conversion into a coal barge, and the ship *Mindoro* was thirty-four years old when she was sold to New York also to be made into a barge. The ship *Formosa* was lost in Allas Straits, near Java, in 1880, when twelve years old, and the ship *Panay* was wrecked in the Philippines July 12, 1890, when thirteen years old.

The ship *Highlander* of 1,352 tons, described as a semi-clipper and built at Boston by Samuel Hall in 1869, was registered, as were many other Salem-owned ships, at both Boston and Salem. The owners of this vessel were members of the Stone family — Benjamin W., William, Jr., and Joseph W. She was later cut down to a coal barge and lost in September 1902. The original member of the Stone family of Salem interested in ships was Robert Stone, who was one of the leading owners of the brig *Alert* in 1798. His sons, led by Benjamin W. Stone, withdrew from their association with the Silsbees, Pickmans, and George T. Sanders (or Saunders) in 1860, and the ships *Shirley* (910 tons) and *Sumatra* (1,041 tons), jointly owned by the group, were transferred to Benjamin W. Stone & Bros., of Salem, in 1860 and 1861, respectively. The last ship owned by the Stones was the *Highlander,* which was laid up in New York with only watchmen aboard in 1886 and, in August 1888, was sold to the Germans at the Stones' asking price of $25,000. The New York EVENING SUN of August 31, 1888, in an article concerning the ship and her owners, said in part:

> The ancient ship was owned by the Stone family of Salem, Mass., the survivors of which are three bachelors, all over 70 years of age. The old gentlemen, who are worth many millions, have clung to the customs of their early days and live alone in state in their old homestead. They were great merchants in their day, but one by one their ships were lost or became unseaworthy until eventually the *Highlander* was the last of their fleet. . . . The Stones are of the extinct type of old school merchants. Benjamin Stone, the oldest, at least 80 years of age, is the head and transacts all the business.

The Stones bought and sold the cargoes that their ships carried; they would buy a product only when the market was low and sell only when the market permitted them to make a reasonable net profit on the transaction. The Stones did not hesitate to lay up their ships in bad or dull times or store their cargoes, if necessary, even for years, until they could sell at their price and at a profit. It is said that the *Highlander* was "a thorn in the side of the hemp people" in New York. She would remain a year or more in the Philippines, picking up about 8,000 bales of the best Manila hemp at low prices for cash, and would not sell upon her return to New York except at the Stones' stated price; on one occasion, it is said, the hemp was in storage for four years. On her last voyage, the cargo of the *Highlander* was in storage nearly two years, "when the hemp trust was forced to purchase it" at the Stones' figure. By these waiting tactics (and good fortune), Benjamin Stone finally disposed of both the *Highlander* and her last cargo at a net profit $15,000 in excess of the best market prices in effect for ship tonnage and hemp when the last vessel of the Stone fleet reached New York in 1886.

Benjamin W. Stone was the last individualistic shipping merchant of the old Salem school. Even his big *Highlander* (1,352 tons), for which he paid about $110,000, was operated after the clipper ship era and the Civil War as if she were a handy little brig of a couple of hundred tons trading in the early days of the republic. He sent his ships out carrying cargoes that he had bought "on spec," not consigned to anyone, and the goods would be hawked around at oriental ports of call until sold at an acceptable profit. For a return cargo, the ship would wait until the owner could buy goods at a low price during a market sag, and Stone would not dispose of them in the United States until he could obtain his price and his profits. He followed and carried to an extreme the policies of famous old Salem shipping merchants, who were prosperous in their day of little ships. Benjamin W. Stone never seemed to care about laying up his big ships in home or foreign markets to wait for a propitious time either to buy or sell trading goods.

The old Salem association of shipowners, generally known as Stone, Silsbee & Pickman or Silsbee, Stone & Pickman, gave much emphasis to the Silsbees and the Stones. The Silsbees were a remarkable seafaring family, with Nathaniel (later a senator from Massachusetts) master of the new ship *Benjamin* of 161 tons in the East Indies trade in 1792, when he was only nineteen years of age. Each of three Silsbee brothers "obtained the command of vessels and the consignment of their cargoes before attaining the age of twenty years"; Nathaniel at 18½, William at 19½, and Zachariah before he was 20. The three brothers, who started their ship careers as boys, "left off going to sea before reaching the age of 29 years"; Nathaniel at 28½ years, William at 28 years, and Zachariah at 28½ years. As the Salem marine historian Ralph D. Paine says: "These three brothers of Salem made their fortunes before they were thirty years old and were ready to stay ashore as merchants and shipowners, backed by their own capital." The Pickmans, for three generations, were shipowners of initiative and courage, but little publicity has been given the fact that for many long years George T. Sanders was a member of the Stone, Silsbee & Pickman association of Salem merchants and shipowners and was a joint owner in practically every ship that this group owned and managed from the late thirties to the late fifties. In about 1860, the Stones withdrew, and Sanders' name ceased to appear as part owner of the new ships acquired and managed. It was at about this time that George Henry Allen, the firm's accountant and assistant to Benjamin H. Silsbee, became the junior member of the firm of Silsbee, Pickman & Allen. It is said: "The concern continued until 1898, when it closed up its affairs, having existed more than one hundred years." George H. Allen died at Manchester, Mass., on April 30, 1925. He was the son of Capt. Charles Henry Allen, a prominent Salem shipmaster.

Of the twenty-six vessels enumerated in the table as being owned and managed jointly by the Stones, Silsbees, Pickmans, Sanders, and Allen, of Salem, it is interesting to note that only six of them were built at Salem (five in the years 1818-1831) and that the last and largest one to be constructed at the home port was the *Sooloo (I)* of 440 tons, built in 1840.

Five of the stated twenty-three vessels built during the years 1850-1855 were classified as clipper ships. The *Witchcraft* was an extreme clipper built by Paul Curtis, of Chelsea, in 1850, but the owners of record were Richard S. Rogers and William D. Pickman, of Salem, and the Stones, Silsbees, and Sanders apparently had no financial interest in her. This ship was sold to T. Magoun & Son, of Boston, March 1, 1854, and she was lost off Hatteras in April 1861. The *Aurora* was also classified as an extreme clipper. She was built by John Taylor, of Chelsea, in 1853 and sold to the British in 1863. The *Syren,* built in 1851, the *Malay* in 1852, and the *Derby* in 1855 were all designated as medium clippers and were also constructed by John Taylor, the *Syren* at Medford and the others at Chelsea.

Other clipper ships that had some association with Salem were the *Witch of the Wave* of 1,498 tons, an extreme clipper built by George Raynes, of Portsmouth, N.H., in 1851 for Glidden & Williams and Hunt & Peabody, of Salem. Evidently, Capt. John Bertram, of Salem, either had a small interest in the ship or sold some fractions for the Boston managing owners, and because of the name and to please Captain Bertram, the ship was registered to hail from Salem, but she did not load or discharge at Salem or sail from or to that port. The Boston managing owners, Glidden & Williams, in co-operation with Flint, Peabody & Company, of San Francisco, built the clipper ship *John Bertram* in the Jackson yard at East Boston in 1850; the vessel was named after the Salem captain, but she was neither owned in Salem nor registered at that port.

Nathaniel Hawthorne, Famous Son of Salem

Nathaniel Hawthorne (1804-1864), who has been described as the "most distinguished craftsman of the New England school of letters," was a native of Salem and in the early twentieth century has been referred to as "the greatest of its children." Whether such a eulogy of relative distinction is warranted or not, it is interesting to note that Nathaniel Hawthorne (who added a "w" to his surname) was the son of Capt. Nathaniel Hathorne, a by no means outstanding shipmaster of Salem in its days of real greatness. In 1820, as a boy of sixteen, Nathaniel Hawthorne wrote the title page for his father's log inscribed as "Nathaniel Hathorne's Book" and "A Journal of a Passage from Bengall to America In the Ship *America* of Salem, 1798." Later, he was moved to pay this tribute to his "stout-hearted forebears":

> From father to son, for above a hundred years, they followed the sea; a gray-headed shipmaster in each generation retiring from the quarter-deck to the homestead, while a boy of fourteen took the hereditary place before the mast, confronting the salt spray and the gale which had blustered against his sire and grandsire.

However, the writer son broke the chain and did not go to sea. Whether he was physically too frail, too much of a student and a dreamer, or too conscious of the setting and of "a melancholy process of decay" in Salem's shipping cannot be said. Nathaniel spent some of his boyhood in the Sebago Lake region of Maine, and he was sent by his uncles for four years to Bowdoin College, Brunswick, Maine, graduating in 1825. When in his prime, Hawthorne was employed in the Salem customhouse, and we are told that after holding this political job for between two and three years and losing it, "he quitted Salem with its depressing memories after writing THE SCARLET LETTER [in 1849-1850] when 46 years old." Hawthorne lived a life detached from the major activities of the time; he went abroad in 1853 (to fill another political job) and was away from his native land for seven years, spending about five and a half years in England and one and a half years in Italy. He returned — but not to Salem — some four years before his death, which occurred at Plymouth, N.H., in May

1864. Around the middle of the century, the glory of Salem had long since departed, and Nathaniel Hawthorne wrote the following epitaph of the town as a deep-water seaport when he was in a position not only to observe but also to know the nature and extent of Salem's maritime activities:

> In my native town of Salem, at the head of what, half a century ago, in the days of old King Derby, was a bustling wharf, but which is now burdened with decayed wooden warehouses, and exhibits few or no symptoms of commercial life; except, perhaps, a bark or brig, half way down its melancholy length, discharging hides; or, nearer at hand, a Nova Scotia schooner pitching out her cargo of firewood — at the head, I say, of this dilapidated wharf, which the tide often overflows, and along which, at the base and in the rear of the row of buildings, the track of many languid years is seen in a border of unthrifty grass — here, with a view from its front windows adown the not very enlivening prospect, and thence across the harbor, stands a spacious edifice of brick. . . .
>
> The pavement round about the above-described edifice — which we may as well name at once as the Custom House of the port — has grass enough growing in its chinks to show that it has not, of late days, been worn by any multitudinous resort of business. In some months of the year, however, there often chances a forenoon when affairs move onward with a livelier tread. Such occasions might remind the elderly citizen of that period before the last war with England, when Salem was a port by itself; not scorned, as she is now, by her own merchants and ship-owners, who permit her wharves to crumble to ruin, while their ventures go to swell, needlessly and imperceptibly, the mighty flood of commerce at New York or Boston. On some such morning, when three or four vessels happen to have arrived at once — usually from Africa or South America — or to be on the verge of their departure thitherward, there is a sound of frequent feet, passing briskly up and down the granite steps. Here before his own wife has greeted him, you may greet the sea-flushed shipmaster, just in port, with his vessel's papers under his arm in a tarnished tin box. Here, too, comes his owner, cheerful or somber, gracious or in the sulks, accordingly as his scheme of the now accomplished voyage has been realized in merchandise that will readily be turned into gold, or has buried him under a bulk of commodities such as nobody will care to rid him of.

We are told that in the first decade of the century, which included the unprecedented period of trade depression caused by Jefferson's embargo of 1808 and 1809, the foreign entries at Salem numbered 1,758 deep-sea vessels, and the total amount of duties paid on these cargoes was reported as $7,272,633. Referring to the imposing Salem customhouse, "with its classic and pillared bulk," built in 1818, when the tide of Salem's deep-sea commerce had already begun to ebb, Nathaniel Hawthorne wrote: "It was intended to accommodate an hoped for increase in the commercial prosperity of the place, hopes destined never to be realized, and was built a world too large for any necessary purpose." When employed in the customhouse, Hawthorne wrote of some of the old shipmasters who were associated with him in government service as derelicts "who after being tost on every sea and standing sturdily against life's tempestuous blast had finally drifted into this quiet nook where with little to disturb them except the periodical terrors of a Presidential election, they one and all acquired a new lease of life." And again Hawthorne wrote of them: "They spent a good deal of time asleep in their accustomed corners, with their chairs tilted back against the wall; awaking, however, once or twice in a forenoon to bore one another with the several thousandth repetition of old sea stories and mouldy jokes that had grown to be passwords and counter-signs among them." This is a picture of the staff of the Salem customhouse as Hawthorne saw it in 1848 and 1849. Evidently, Hawthorne spent some of his abundance of spare time, when "holding down a government job," writing for publication and personal gain; but the shipmasters of advanced years, with nothing to do apparently, "loafed openly and honestly" while waiting for an opportunity to work. Hawthorne admits that the men who had lived an active, wearing life at sea were physically benefited by their customhouse jobs and, as he says, "acquired a new lease of life."

Politics was responsible for the fact that Hawthorne, as well as the several old seamen, was both put on and removed from the public pay roll. Hawthorne's earnings with his pen had been meager and uncertain prior to his securing the Salem customhouse job through the political influence of friends. This marked the beginning of a period when his works gained public favor. After losing his government job because of politics, Hawthorne left Salem, but his pen was evidently inadequate to meet the author's expense of living. Upon the election

of Franklin Pierce as president, Hawthorne (in 1853), again because of the influence of friends, received another political job and was appointed to the Liverpool consulate, where he remained for four years or until removed when James Buchanan became president in 1857. After spending some time in Italy and England, Hawthorne returned to the United States in the summer of 1860; but his health was breaking, he accomplished little with his pen, and he died in New Hampshire during the Civil War when in his sixtieth year.

Nathaniel Bowditch—Genius, Self-taught Mathematician and Navigator—the Greatest of Salem's Sons to Benefit Humanity by His Pen

To men who know the sea and the history of the United States, the greatest of Salem's sons to benefit his fellowman by his pen was Nathaniel Bowditch (1773-1838). He was not a craftsman in letters, like his fellow townsman, Nathaniel Hawthorne, but a practical mathematician of genius, of whom it has been said: "As long as ships shall sail, the needle point to the north, and the stars go through their wonted courses in the heavens, the name of Dr. Bowditch will be revered." Bowditch's ancestors had been shipmasters in Salem for three generations and had lived there for over a century before he was born. The boy Nathaniel (born thirty-four years before Nathaniel Hawthorne) was sickly, and his parents were poor. He did not have the educational advantages of young Hawthorne and lived a pinched early life. The elder Bowditch took to drink as his failures piled up on him, and Nathaniel's mother died when he was ten years old. The boy was too delicate to be considered physically fit to go to sea and at twelve years of age was apprenticed to a ship chandler. Bowditch had a mind for study and developed early a taste for mathematics, but was self-taught. When thirteen years old, he undertook the study of navigation, but his reading and studies were broad, as he was determined "to be a scholar and a man of learning." At fourteen, he did some practical land surveying and was deep in the study of algebra, and at sixteen he produced an astronomical calendar. Young Bowditch studied Euclid and, while still in his teens, mastered both Latin and French. When the young scholar and mathematician reached his majority on March 26, 1794, his apprenticeship was over, and he promptly terminated his connection with ship chandlery.

Bowditch's first job was on a survey of the town of Salem ordered by the state in 1794 and conducted under the direction of the Rev. William Bentley and a local shipmaster, Capt. John Gibaut. Bentley, the diarist and historian and a highly educated man, was much impressed with Bowditch, who did most of the practical work. Bentley wrote: "We found him powerful in calculation"; and, "No proofs did he neglect to confirm his results." During the survey, Captain Gibaut, who rightly sensed that the self-taught Nathaniel Bowditch was "the foremost mathematician in America" notwithstanding his youth, urged him to go to sea. Elias Hasket Derby, Salem shipping magnate, offered him a job as clerk on the Derby ship *Henry* bound for Indian Ocean ports, and on January 11, 1795, he sailed on his first voyage—a young frail man of diminutive stature, with a high forehead and vivid, intense eyes. Bentley wrote of him: "He was in person small, without anything prepossessing in his manner, but with a head and countenance in his favor." Salem ships were run economically, and Bowditch, who had never been to sea, was, nevertheless, signed on under Capt. Henry Prince as both clerk and second mate and was required to stand watch. On his first voyage, Bowditch developed a new way of making a lunar observation to determine the longitude of a ship's position. In those days, reliable chronometers had not been commercially developed for marine use.

In early 1796, Bowditch sailed from Salem on his second voyage with Captain Prince, but this time he was in a big new ship of Derby's, the *Astrea (II)*, bound to Manila via Lisbon and Madeira. On this voyage, Bowditch discovered pronounced errors in charts and in available and believedly authentic records for navigators and, unaware that he was doing so, started compiling a book on navigation. His third voyage—and his second on the *Astrea*—was made during the quasi-war with France and was short (August 1798-April 1799). Upon his return, Nathaniel Bowditch was honored for his original mathematical work by being elected a member of the American Academy of Arts and Sciences. Because of Elias H. Derby's ill health, the *Astrea* was sold to Boston people, and Captain Prince remained in command, with Bowditch as supercargo. In late July 1799, the fourth voyage of the outstanding marine mathematician of his day commenced. On the passage out, he undertook, in addition to work upon his forthcoming book (THE NEW AMERICAN PRACTICAL NAVIGATOR), to teach the members of the crew the mysteries of navigation. In doing this, Bowditch learned to simplify his instructions and to talk and write in terms easy to understand. He became a great teacher, and his zest for learning he readily communicated to others. Nathaniel Bowditch bridged the gulf between the forecastle and the quarter-deck. From Batavia, the *Astrea* proceeded through dangerous waters to Manila against the strong northeast monsoon, and upon arrival a Scotchman named Murray criticized Captain Prince, at Agent Kerr's house, for the American's foolhardiness in attempting such a passage under the conditions existing. Prince explained that he had not proceeded by dead reckoning, but that the ship had been scientifically navigated. He staggered Murray by saying that every one of the twelve men of his ship's crew could take and work a lunar observation as well as Britain's greatest scientist.

On the passage home, Bowditch, checking John Hamilton Moore's book on navigation (the accepted authoritative British work), found "over eight thousand errors" in it as he prepared the manuscript, with tables, for his own work on practical navigation. Discovering a new, accurate, and relatively simple way of working lunars, which made easier the difficult task of finding longitude, Bowditch had become in a few years the leading authority on lunars for obtaining the longitude. In the early nineteenth century, even the best commercially available chronometers or marine clocks were unreliable. Bowditch wrote that the method of using a watch (or clock) set on Greenwich time for obtaining the longitude of a ship's position "is useful in a short run; but in a long voyage implicit faith cannot be placed in an instrument of such delicate construction and liable to so many accidents."

Nathaniel Bowditch's book, THE NEW AMERICAN PRACTICAL NAVIGATOR, with its 247 pages of instruction on navigation and 29 pages of tables with a mass of highly valued practical information, soon acquired the informal popular name of "the Seaman's Bible," although most marine men referred to it as "Bowditch." This work of the self-taught Salem mathematician was not literature as were the writings of Nathaniel Hawthorne, of Salem, but it was much more useful and needed in an expanding world. The book went with little coasters, West Indian schooners, transatlantic packets, East Indian, Indian, and oriental square-riggers, and later with clipper ships on the various trade routes of the Seven Seas. Capt. Robert Bennet Forbes, Boston's great shipmaster and an authority on the China Seas and oriental trade, wrote of his early days: "Beginning in 1817, with a capital consisting of a Testament, a 'Bowditch,' quadrant, chest of sea clothes and a mother's blessing, I left the paternal home full of hope and good resolution." The "Bowditch" was deemed necessary standard equipment for every master and officer of a ship and was to be found in every boy's and intelligent seaman's chest in the forecastle.

Robert Elton Berry's authoritative, conservative, and unemotional work on the life of Nathaniel Bowditch, YANKEE STARGAZER, says:

> The appearance of THE NEW AMERICAN PRACTICAL NAVIGATOR gave impetus to American navigation. During the years that Nathaniel Bowditch continued to edit and revise his book on navigation, the old school of sailing by dead reckoning slowly gave way to a new generation of shipmasters who used celestial navigation. . . . And many a man before the mast labored through his "Bowditch"

with his eyes and his hopes fastened on an officer's berth aft. . . . It was due to Bowditch more than any other man that Yankee shipmasters came to be admired for their ingenuity as navigators. When Bowditch came along, Yankee shipmasters were already known in most ports of the world for their smart seamanship. They handled their vessels exceedingly well. Most of the great shipping ports had heard stories of the skilled sailing of the Yankee. . . . The principal weakness of the Yankee shipmaster was his navigation. Bowditch was a major influence in changing this weakness into a strong point. . . . The American seaman wanted to navigate by the stars, and Bowditch made it possible for the seaman to learn. He gave the American seaman a book that could be both understood and trusted.

The famous Bowditch book was printed in the United States and Britain simultaneously and immediately proved of tremendous benefit to the maritime world and contributed greatly to the safety of human life and property and to economic marine transport. In 1802, Harvard University honored Nathaniel Bowditch with a Master of Arts degree in recognition of his brilliant mathematical work applied to benefit humanity. About this time, Bowditch commenced the translation and elaboration of a noted work of many volumes by Laplace, the French scientist, entitled MÉCANIQUE CÉLESTE, and this was a tremendous, laborious, and highly technical undertaking.

On November 21, 1802, Bowditch commenced his fifth and last ocean voyage. He was twenty-nine years old and was captain and supercargo combined of the new 262-ton ship *Putnam,* of which he owned "a piece." The vessel had been built in Danvers for the Sumatra pepper trade, and Bowditch sailed in her not only to navigate, keep records, trade and make money but also to have long non-interrupted periods aboard ship for astronomical studies and his work on MÉCANIQUE CÉLESTE. Returning from Sumatra via Ile de France, where he added 42,000 pounds of coffee to his cargo of 425,000 pounds of pepper, Bowditch reached Salem in the late evening (9:00 P.M.) of December 25, 1803, in a blinding snowstorm. In bringing his ship into the harbor, "the little navigator executed one of the most daring feats of seamanship in the history of New England shipping," and his brilliant and courageous handling of his ship was such that thereafter there was to be no question but that "Nathaniel Bowditch was a superb navigator, altogether fit to give counsel to anyone on the subject." (A more detailed account of this voyage of the *Putnam* and also an authoritative description of this feat by Robert E. Berry are given in the historical section of this work in Volume II, pages 1065-1070 inclusive, under the heading, "Nathaniel Bowditch—Scientific Navigator.")

After this highly successful voyage, the *Putnam* was sold, and Bowditch was through with his life at sea when thirty years old. In January 1804, the famous mathematician and navigator was appointed president of the Essex Fire and Marine Insurance Company, of Salem, and filled this position for two decades. It is said that during this period he lived a dual life. "He was a mathematician interested in insurance during his office hours, and he was a mathematician interested in astronomy during his leisure. The world remembers not his work in insurance but his work in astronomy."

Bowditch did not work on his original PRACTICAL NAVIGATOR for money, and he was surprised as well as highly pleased at the financial reward that flowed to him as a result of the publication of the completed volume. His scientific work in astronomy in Salem, following his retirement from the sea, did nothing whatever to line his pocket; but Bowditch took a large part of the money that he acquired through years of thrift and put it aside to make possible the publication of his translation of Laplace, with annotations and elaborations, so that the very few people who could use and understand this high-class French scientific work on astronomy would be able to obtain a copy of this classic. Bowditch dabbled a little in politics as a free American citizen conscious of his inheritance and his obligations (he was elected as justice of the peace and finally a member of the Executive Council of Massachusetts), and in rating the relative importance of Bowditch in the list of Salem's great sons, it is of interest to note that Bowditch considered Laplace a much greater man than Napoleon and "an eclipse of greater interest than a national election." For relaxation and a change of

activity, coupled with public usefulness, Bowditch surveyed and made charts and maps of the harbors of Salem, Beverly, Marblehead, and Manchester. This side issue of a busy man occupied over three years, but, with complete sailing directions, constituted work of a high nature performed in the public interest.

Bowditch was elected secretary of the East India Marine Society in 1802 and, as its "most scholarly member," was chosen inspector of its journals. In 1820, he became the society's president. In 1806, Salem's great self-taught mathematician was invited to fill the position of Professor of Mathematics and Natural Philosophy at Harvard, but the offer was declined. In 1810, Harvard elected Bowditch an overseer. In 1826, he was elected to membership in the Corporation of Harvard, a group of seven men who controlled the university. In 1818, Jefferson sought to get him for the University of Virginia, and with Calhoun as Secretary of War, the U.S. Government asked him in 1820 to go to West Point. In 1823, Bowditch, then fifty years of age, went to Boston to live and accepted positions as president of the Commercial Insurance Company (handling marine and fire policies) and actuary of the Massachusetts Hospital Life Insurance Company.

Nathaniel Bowditch made a brilliant success in business in Boston and was invaluable in straightening out affairs at Harvard College. He was also elected president of the American Academy of Arts and Sciences. The four volumes of his work on astronomy, which were an elaborated translation of Laplace's immortal work, were not published until 1829, 1832, 1834, and 1839, respectively, the last one shortly after Bowditch's death. To publish this work cost Bowditch $12,000, which represented a third of his life's savings, and the character of the man is evidenced when it is known that Bowditch had refused offers of the American Academy of Arts and Sciences to publish the books for him by subscription. Bowditch well knew that a work on pure science would have very few readers, and he did not enjoy the idea of a layman's subscribing for the book and then saying, "I patronized Bowditch by buying his book, which I cannot read." The dedication of Bowditch's great work on astronomy reveals much of the man and his life. He wrote:

> This translation and commentary are dedicated, by the author, to the memory of his wife, Mary Bowditch; who devoted herself to her domestic avocations with great judgment, unceasing kindness, and a zeal which could not be surpassed; taking upon herself the whole care of her family, and thus procuring for him the leisure hours to prepare the work; and securing to him, by her prudent management, the means for its publication in its present form, which she fully approved; and without her approbation the work would not have been undertaken.

In the late 1890's, Simon Newcomb, the American astronomer, wrote: "While the great mathematical astronomers of Europe were laying the foundation of celestial mechanics their writings were a sealed book to everyone on this side of the Atlantic [and throughout the English-speaking world], and so remained until Bowditch appeared. . . . His translation of 'MÉCANIQUE CÉLESTE' made an epoch in American science by bringing the great work of La Place down to the reach of the best American [and English-speaking] students of his time." It has been said that Bowditch's work, annotations, commentary, and explanations on MÉCANIQUE CÉLESTE "again made Britain bow to an American publication. His book on navigation had made British shipmasters dependent on America. His MÉCANIQUE CÉLESTE became an essential of British astronomy."

Nathaniel Bowditch was a great scholar and a mathematician but not a literary man; he was a linguist and became a really cultured man. He had always a philosophic bent and during the last years of his life spent much time with the poets. His wife died April 17, 1834, of tuberculosis, and after that the frail Nathaniel's life slowed down. He still worked hard, but from the summer of 1837 he suffered much and on March 16, 1838, when sixty-five years old, died of cancer. As news of his death spread around the world, the flags of ships of all nations in American, British, and foreign ports were lowered to half-mast, and the cadets of the U.S. Naval School wore an official badge of mourning out of respect for the writer of "the Seaman's Bible" and the friend of all seafaring men and in memory of a great mathematician

and public benefactor. Expert opinion pronounced Bowditch's work in navigation, in the realm of practical utility, as "second to no work of man ever published." Ralph D. Paine has written:

> This apparently extravagant estimate of its importance appears but just, when we consider the countless millions of treasure and of human lives which it has conducted and will conduct in safety through the perils of the ocean. But it is not only the best guide of the mariner in traversing the ocean; it is also the best instructor and companion everywhere, containing within itself a complete scientific library for his study and improvement in his profession. Such a work was as worthy of the cultured author's mind as it is illustrative of his character, unostentatious, yet profoundly scientific and thoroughly practical, with an effective power and influence of incalculable value.

Robert Elton Berry, in the epilogue of the YANKEE STARGAZER (1941), has said:

> Nathaniel Bowditch's THE NEW AMERICAN PRACTICAL NAVIGATOR has continued to live. It has been revised and reissued through the present day. It has gone to sea more than any shipmaster and made more voyages around the globe than any fleet of ships. It stands in the charthouses of liners of vast tonnage and in the charthouses of little black-and-buff freighters. The grey-haired master owns one, and so does the thick-set third mate, who slowly mumbles mathematical formulas to himself when he stands on the rolling bridge taking his noon sights. The book is now a publication of the United States Hydrographic Office at Washington, its title has been changed to AMERICAN PRACTICAL NAVIGATOR, and its title page states that the text was "originally by Nathaniel Bowditch, LL.D." It is familiarly known as "H.O. No. 9."

The Bowditch work continues to live when most of the preceding Hydrographic Office publications have passed their usefulness and been completely forgotten. As long as vessels shall go to sea, "the name of Dr. Bowditch will be revered." It would seem that if we ignore the claims of many of Salem's distinguished merchants, shipmasters, and fighting men to the honor, Nathaniel Bowditch as a scholar, mathematician, astronomer, navigator, and teacher of shipmasters and seamen was a greater man in the history of the world and contributed more to its progress than Nathaniel Hawthorne, "a distinguished craftsman of the New England school of letters," who has been acclaimed as "the greatest of Salem's children." Salem, in its period of greatness, had a world-wide vision, and Nathaniel Bowditch, notwithstanding formidable handicaps, contributed to make Salem greater. He has proved to be not only an outstanding and useful practical mathematician in the history and progress of the world but also an international benefactor to contemporary and later generations in the realm of safer navigation on the Seven Seas.

Salem—the Country's Foremost Foreign Trade Seaport for Two Decades

Whereas a most important port in late colonial days and in the early days of the young republic and the first part of the nineteenth century, Salem was never a great shipbuilding center. As a port, it was handicapped, as vessels became larger, by depth of water and later by being much inferior to nearby Boston in the economical handling of freight both to and from the ship. Salem was never more than a village and, therefore, as a consuming center was of no consequence. As a distributing point to markets buying for consumption and a receiving point from centers of production, it was geographically and economically inferior to Boston. Salem as a port survived for years in competition with Boston and other New England and U.S.A. ports because of the outstanding quality of Salem merchants, shipmasters, and seamen. Because of the initiative, courage, and competency of its men engaged in the operation of ships, Salem, for about a couple of decades, was America's greatest foreign trade port and, considering size and population, led the world. At no time, however, was Salem a great shipbuilding center, and nature never intended Salem to build large ships or to construct and launch even moderate-sized or small ships in numbers. The topography of the district and

depth of water were unfavorable, and the town was never well located for the economic supply of vital shipbuilding materials. From early days, shipwrights at the active foreign trade port of Salem were generally employed in repairing, altering, and reconditioning ships more than in building new ships, and Salem could never in its history boast of owning an ideally situated shipyard capable of constructing and launching sizable ships economically, reliably, and safely. An examination of the available ship registers of the Salem-Beverly district for the period 1789-1900 most definitely shows that Salem was at one time a great marine port, but it was never a shipbuilding center of outstanding prominence. Although it built small and so-called moderate-sized ships until after the Civil War, the building following the War of 1812 and the post-war boom was intermittent and halfhearted, but it was stimulated by a vast measure of local pride.

During the clipper ship decade of the 1850's, Salem built no clippers when the yards throughout the country were frantically engaged in producing them in large numbers to supply an unprecedented demand for fast ships. Moreover, during the first half of the fifties, when the call of the times was for bigger ships of from 1,000 to some 3,000 tons, Salem built a very few small barks and brigs, such as the *Argentine* of 298 tons in 1850, the *Witch* of 210 tons in 1854, and the *Mary Wilkins* of 265 tons in 1855. Capt. John Bertram, merchant of Salem, was interested in clippers of size built outside of Salem, but the largest vessels that he felt justified in attempting to build in Salem during the fifties and sixties were two barks of 495 tons, built in 1857 and 1861, and the bark *Salem* of 599 tons, constructed in 1868. The last vessel of any size either built or owned by Salem marine interests and the largest vessel ever constructed in the Salem district was the bark *Taria Topan* of 631.7 tons, built for John Bertram et al. in 1870 by Edward F. Miller at South Salem.

The ship register of Salem covers the region that includes Beverly (about two miles to the north), and the maritime district also comprises the port of Danvers. The first register record that appears in the Salem customhouse is dated October 6, 1789, and prior to the act of March 1799 the Customs District of Salem included the port of Ipswich as well as Beverly and Danvers. The ship register of Salem includes many vessels that have never sailed into or out of Salem Harbor. Of the 1,646 vessels registered in the district of Salem-Beverly for the period 1789-1900, only 199 were registered as built at Salem; this represents only 12.09 per cent of the total and clearly proves that Salem was primarily a port and not a shipbuilding community. Whereas many vessels appearing in the Salem-Beverly register were owned by Beverly parties and hailed from the port of Beverly, yet Beverly was less of a shipbuilding village than the village (and later city) of Salem, for only 3 vessels appearing in the Salem-Beverly register were built at Beverly. The town of Salem originally included Marblehead (set off in 1649), Beverly (set off in 1668), and Danvers (which withdrew in 1752), and in a maritime sense the ports of Salem, Beverly, and Danvers have continued as one district. However, they have maintained a separate identity in shipbuilding, and in the Salem ship register the vessels constructed in Salem, Beverly, and Danvers and hailing from the port are recorded the same as if they had been built at Boston, Newbury, Maine, or New York.

Beverly, which like Salem was founded or settled by Roger Conant in 1626, was for many years in the eighteenth and the early nineteenth centuries a port famed for its privateers, and it has been named "the birthplace of the American Navy." Salem as a maritime community can be said to include Beverly, which is contiguous thereto "across the inlet," but Greater Salem would also include Marblehead, on the nearby outlying cape, and Danvers. Whereas the Greater Boston marine district is considered to run from Nantasket to Winthrop or even to Nahant, that of Salem covers the tidewaters from Nahant to Magnolia (southeast of Gloucester) and can be said to include Swampscott, Marblehead, Salem, Beverly, Danvers, and Manchester. Ship registers of the district of Salem and Beverly (1789-1900) show no vessels hailing from these ports that were built at either Marblehead or Swampscott, and only Salem and Danvers built ships in any quantity that were registered at Salem during this period (which dates from the earliest official records of the young republic to the end of marine

activity at the port). Out of 1,646 vessels registered at Salem-Beverly, Salem built 199, Danvers 42, Manchester 5, and Beverly 3—a total of 249, or only 15.1 per cent of the vessels registered in the district that were built in the entire geographical area considered as the greater marine district or scope of influence of Salem. Clearly, Salem, although for years a great port for ocean trade, was never an important shipbuilding community, for its vessels were built for it in all parts of the country.

The following table gives a list showing the number of vessels recorded in the ship register of Salem-Beverly, 1789-1900, as being built in the various United States shipbuilding communities that produced four or more vessels for the ports of Salem and Beverly. As a matter of general interest, the number of vessels captured in wars (48) and rehabilitated as merchant vessels hailing from the American ports of Salem and Beverly is set forth. No mention is made of the ships purchased from France, such as the two large *Americas* acquired in 1797 and 1798; neither is there any mention of a very few other vessels that, originally owned in Britain and Holland, were later acquired by purchase and sailed from Salem under the American flag.

Where Built	No. of Vessels	Where Built	No. of Vessels	Where Built	No. of Vessels
Salem, Mass.	199	Portland, Maine	12	Saybrook, Conn.	5
Newbury and Newburyport, Mass.	101	Cohasset, Mass.	12	Wiscasset, Maine	5
Salisbury, Mass.	81	Thomaston, Maine	11	Bluehill, Maine	5
Duxbury, Mass.	69	Bristol, R.I. or Maine	11	Westbrook, Maine	5
Amesbury, Mass.	61	York, Maine	10	Gloucester, Mass.	5
Essex, Mass.	56	Nobleboro, Maine	10	Manchester, Mass.	5
Captured in the war	48	Kingston, Mass.	10	Belfast, Maine	5
Haverhill, Mass.	46	Plymouth, Mass.	10	Harpswell, Maine	5
Danvers, Mass.	42	Georgetown, Maine and Mass.	10	Casco Bay, Maine	5
Boston, Mass.	36	Bowdoinham, Maine	10	Biddeford, Maine	5
Scituate, Mass.	35	Weymouth, Mass.	9	Pembroke, Maine	5
Medford, Mass.	34	Pittston, Maine	8	Castine, Maine	5
Ipswich, Mass.	25	Brunswick, Maine	8	Dighton, Mass.	4
Kennebunk, Maine	25	Scarborough, Maine	8	Quincy, Mass.	4
Falmouth, Maine	24	Sedgwick, Maine	8	Exeter, N.H.	4
Bradford (R.I.?)	23	Yarmouth, Mass. and Maine	7	Brewer, Maine	4
Baltimore, Md.	21	Pepperellborough, Maine	7	Steuben, Maine	4
Portsmouth, N.H.	17	New York, N.Y.	7	Deer Isle, Maine	4
Hanover, Mass.	17	Dover, N.H.	7	Bucksport, Maine	4
Pembroke, Mass.	17	Philadelphia, Pa.	7	Frankfort, Maine	4
Bath, Maine	16	Barnstable, Mass.	6	Robbinston, Maine	4
Newcastle, N.H. or Maine	16	Lynn, Mass.	6	Prospect, Maine	4
Wells, Maine	15	Newmarket, N.H.	6	Bangor, Maine	4
Charlestown, Mass.	14	Hampton, N.H.	6	Hampden, Maine	4
Marshfield, Mass.	13	Braintree, Mass.	6	Columbia, Maine	4
Eden (Bar Harbor), Maine	13	Freeport, Maine	6	Jonesborough, Maine	4
Rochester, Mass. or N.H.	13	Machias, Maine	6	Saco, Maine	4
Hingham, Mass.	13	Dorchester County, Md.	6	Connecticut (no town stated)	4
Waldoboro, Maine	12	Chelsea, Mass.	6	Mathews County, Va.	4

There are sixteen stated locations that built three each of the vessels registered at Salem; eleven were in the state of Maine, three in Massachusetts, and one each in New Hampshire and Rhode Island. There are also twenty-four stated locations that each built two of the vessels registered at Salem; eleven were in the state of Maine, five in Connecticut, four in Massachusetts, two in Ohio, and one each in New York and Delaware. In addition, the records show seventy-five other locations that built a vessel hailing from Salem and registered at that port. These vessels were built in thirteen different states. Maine built twenty-one of them, Massachusetts fourteen, New York State nine, Connecticut seven, Maryland and Virginia five each. Four were constructed in New Hampshire, three in the Carolinas, two in

each of Rhode Island and New Jersey, and one in each of Delaware, Kentucky, and in faraway Wisconsin.

It has been said that "the Salem shipyards were located in all parts of the United States east of the Mississippi," and this is virtually correct in regard to the portions of the country where ocean-going sailing ships were built. Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, the District of Columbia, Maryland, Virginia, North Carolina, and South Carolina all built ships for Salem owners or at least produced ships that were acquired by Salem owners, who evidently were interested in obtaining good tonnage at an attractive price. However, seven vessels were launched into the Ohio River and, after reaching the Atlantic Ocean via the Mississippi and the Gulf of Mexico, were later acquired by Salem owners. Two of these vessels were built at Marietta, Ohio, two at Cincinnati, Ohio, and one at Covington, Ky.; while the other two were built on the bank of the Ohio River in either Kentucky or West Virginia. Another vessel hailing from Salem and appearing in the register is recorded as having been built at Milwaukee, Wis.

On the Atlantic seaboard, ships in the Salem register were built as far south as Charleston, S.C., and at Beaufort and Carteret County, N.C.; also as far north and east as the Passamaquoddy at Calais, Robbinston, Pembroke, Eastport, and Lubec, and at Machias, etc. To the customs office staff at Salem and the Salem owners, Pembroke might be the town of that name in the famous old shipbuilding section of Massachusetts, lying between Boston and Plymouth to the south, or Pembroke, Maine, near the Canada line and the northeastern border of the United States. Negligence was displayed in the records in naming the states where Salem-owned out-of-town ships were built, and there is confusion in regard to the birthplace of ships when towns of the same name are located in two or more states and only the town name was recorded. Sometimes an unknown town is given as the place of construction without the name of the state to help in identifying it; sometimes the name of the state is given (such as Massachusetts, Maryland, or Connecticut), but no town or village; and at times the names of both the county and state are recorded, but no town or village (such as Accomack County, Va., Mathews County, Va., Talbot County, Md., Dorchester County, Md., and Sussex County, Del.). In the old days, ships were built far inland in many sections of the New England States; but whereas it is well known that sizable ships were built far from deep water, the Salem register records that one of its ships was built at Worcester, Mass., and the little Blackstone River (or brook) would be the only way to get the vessel out to the ocean by way of Pawtucket and Narragansett Bay.

Of 1,590 vessels appearing in the Salem ship register that were built in the United States, 199, or only one-eighth, were built at Salem, the balance having been built (as near as can be determined from available records) in the various parts of the country as follows:

Section of the Country Where Built	Number of Vessels	Percentage of U.S.A.-built Vessels Registered at Salem
Salem	199	12.516
Merrimac River basin, Mass.	292	18.365
East South Shore of Massachusetts to Plymouth and the North River, etc., section	174	10.943
Boston and environs from Nantasket on the east and extending west	136	8.553
North of Salem and below the Merrimac River basin	132	8.302
Kennebec River district in Maine from Freeport on the west to the Medomak on the east	124	7.799
Penobscot River area in Maine	82	5.157
Southeastern Maine region—south of Scarboro	71	4.465
Northeastern Maine from Bluehill Bay to the Passamaquoddy and Canadian border	69	4.340
Casco Bay and the Portland region in Maine	59	3.711
State of New Hampshire—the Piscataqua	54	3.396
State of Rhode Island	39	2.453
State of Maryland	32	2.013
The Cape Cod area and east of Plymouth, Mass	29	1.824

(Continued on next page)

Section of the Country Where Built	Number of Vessels	Percentage of U.S.A.-built Vessels Registered at Salem
State of Connecticut	26	1.635
Southern Massachusetts between Rhode Island and Cape Cod	22	1.384
State of New York	17	1.070
State of Virginia	9	.566
Philadelphia, Pa.	7	.440
The Ohio River; Ohio, West Virginia, and Kentucky	7	.440
North and South Carolina	3	.188
State of Delaware	3	.188
State of New Jersey	2	.126
District of Columbia	1	.063
State of Wisconsin	1	.063
Total	1,590	100.000

Of the vessels registered at the port of Salem, forty-seven per cent more were built on the Merrimac River in northern Massachusetts than were constructed at Salem, and the Boston, South Shore (north of Plymouth), and North River regions combined built nearly fifty-six per cent more vessels registered at Salem than did the town (and city) of Salem itself. The state of Maine, however, built 2.04 times as many vessels as Salem to receive registry at that famous old Massachusetts port.

Although Capt. John Bertram is popularly referred to as "Salem's last great shipping merchant," it is well to note that in the sixties and seventies the Salem firm of Silsbee, Pickman & Allen built a fleet of good, fast, sizable ships hailing from Salem for the Philippine hemp trade; but these ships were all built in Boston, and "they never knew their own port." The vessels of this fleet, built after mid-century, were larger than those constructed or acquired and managed by John Bertram. Of these last sizable ships, the *Formosa* of 1,252 tons was lost near Java in 1880 (when twelve years old), the *Panay* of 1,190 tons was wrecked in the Philippines in July 1890 (when thirteen years old), the *Sooloo (II)* of 784 tons was sold for conversion into a coal barge in 1887 (when twenty-seven years old), and the *Mindoro* of 1,065 tons, the last of the fleet, was towed to Derby Wharf, Salem, in 1896 "to rot in idleness" (when thirty-two years old). However, in 1897 she was sold to New York parties, who cut her down for a barge. (She was lost off Barnegat in April 1902.) The last great Salem firm of shipping merchants consisted of Pickman, Silsbees, and Allen (with the Stones). From 1798 to about the commencement of the Civil War, the partnership of the Silsbees, Pickman, and Stones was active and effective. From that time, the Stones withdrew and operated on their own until the end of 1888, and the firm of Pickman, Silsbees & Allen continued until dissolved in 1898. These Salem merchants discontinued building their vessels at Salem about 1831, although they built one more ship there, the *Sooloo I* of 440 tons, in 1840. This group of Salem merchants had their ships hail from Salem, but they loaded and discharged the vessels at other ports favored by deeper water and better geographic locations in relation to markets. The outstanding man among the founders of this association of Salem merchants was Capt. Nathaniel Silsbee, whose record as a ship captain in the Indian trade at nineteen, his retirement from the sea at twenty-nine to become a shipowner and merchant, and his business success thereafter, with that of his brothers, warrant the ranking of the Silsbees with the Derbys, William Gray, the Crowninshields, and Joseph Peabody in making Salem a great port in the early days of the republic.

With the establishment of the Naumkeag Steam Cotton Mills in Salem in 1848, the famous old port entered the factory era, and, as Samuel Eliot Morison says, "a fluttering drone of spindles began to dominate the empty harbor and idle wharves." But Salem has a magnificent maritime history, and the seal of the city, which carries the motto, *"Divitis Indiæ usque ad ultimum sinum"* (to the farthest port of the rich East), should remind the present manufacturing population of the days when Salem was "the foremost foreign trade seaport of the United States."

XIII.

THE MERRIMAC RIVER AND NEWBURYPORT, MASSACHUSETTS

The Beginning of Shipbuilding in 1650 and Its Continuance through the Packet and Clipper Ship Eras and into the Down Easter Period

THE MERRIMAC RIVER, with its source in the White Mountains (not far from that of Maine's Saco River), runs in a southerly direction through the center of the state of New Hampshire, passes into Massachusetts, and runs to the east and north until it reaches the ocean about 120 miles from the point of origination. Numerous falls throughout the river's course give water-power sites and life and activity to manufacturing cities such as Manchester and Nashua in New Hampshire and Lowell and Lawrence in Massachusetts. The tide flows to the first fall, known as Mitchell's Fall, a few miles above Haverhill, and the river is navigable for small vessels to this point, which is about 20 miles from the open ocean. Between the first river falls and the sea, the towns of Haverhill, Merrimac, Amesbury, and Salisbury lie along the north side of the river, with Bradford, Groveland, West Newbury, and Newburyport (or Newbury) on the south side. (Previous to 1764, when the town of Newburyport was incorporated, Newbury embraced all the territory on the south side of the river from Bradford to the sea.)

Among the vessels registered during the years 1698-1714 by the authority of the Provincial Government of Massachusetts Bay, 130 craft were recorded as built on the Merrimac River or in its immediate vicinity during the period 1681-1714. Of these 130 vessels, 16 were recorded as ships, 6 as barques, 1 as a snow, 31 as briganteens (or brigantines), 9 as katches (ketches), and 67 as sloops. All were described as "square sterned" with the exception of 7, of which 6 were designated as "round sterned" and one as "pinke sterned." In tonnage, most of these vessels were between 25 and 100 tons, but they ranged in size from the little 15-ton sloop *Adventure,* built at Newbury in 1712, to the sizable ship *Bond* of London, built at Newbury in 1708, and the ship *Abigail and Rebecca,* built also at Newbury in 1710 for Boston owners. Other sizable ships of the period built on the Merrimac for the British were the *Prince Eugene* of 160 tons, built in 1709, and the *Rowlandson* of 150 tons, built in 1712 — both for London owners. Most of the vessels in the register were for Boston owners, and about 100 of the 130 recorded craft were built at Newbury. Aside from other sizable vessels built for London shipowners and merchants, the 40-ton sloop *Ann* was built in 1698 for Portsmouth, England, owners, and the little 20-ton sloop *Mary and Sarah* was built in 1713 for the Barbados, during which year 40- and 50-ton sloops were built for Glasgow, Scotland, and London owners. During this period, 12 of the registered ships were built inland at Ipswich, generally of about 30 tons, but in 1713 a brigantine of 100 tons was built there. At nearby Rowley, two sloops of 25 and 30 tons were recorded built in 1704 and 1713, respectively; while a 35-ton brigantine was built at Amesbury in 1692 and a 25-ton sloop at Salisbury in 1694.

In the last decade of the seventeenth century and throughout the early eighteenth century, vessels were registered as built at Haverhill and the adjoining town of Bradford, and records

show that the seagoing ketch *Patience & Betty* was built at Haverhill as early as 1671. Evidently, the first shipbuilder to carry on a regular business at Haverhill was Henry Springer, who on June 18, 1733, petitioned the town, saying that he was willing and desirous of settling in the community and of carrying on the trade of ship carpenter if the town would give him suitable encouragement and land for a building yard "betwixt the highway, by the burrying place and the river." This petition was granted. The "speedy and competent" *Minerva* of 224 tons was launched at Haverhill in 1798. This ship, 84 ft. long, 25 ft. beam, and 12½ ft. deep, was constructed by master builders at Haverhill under contract for Richard Crowninshield and associates, of Salem, Mass. Another famous ship built at Haverhill for Salem owners was the *Perseverance I,* launched in 1794 for Simon Forrester. (This ship should not be confused with a vessel of the same name built by Enos Briggs at Salem in 1809, fifteen years later, for Peele, Wheatland, Silver, et al.) In 1828-1829, Haverhill built the first steamboat to ply on the Merrimac, the *Merrimac* of 70 tons, which made her pioneer run from Haverhill to Newburyport on April 8, 1829. Haverhill, considering its location and the depth of water in the river, built some sizable vessels and, on November 9, 1840, launched the *North Bend,* a square-rigged ship of 400 tons. This, it would seem, was the last vessel built in the town until 1875, when John C. Tilton, of Haverhill, employed Eben Manson, a Newburyport master carpenter, to build at Haverhill the two schooners *Eliza Ann* of 196 tons and *Lucy May* of 184 tons.

In Amesbury, on the north bank and about eight miles from the river's mouth, shipbuilding "was going on apace at the turn of the century, principally for owners in other states." There was actually built at Amesbury in 1803 "a fast sailer for Chesapeake Bay owners." This ship, named the *Mandarin,* was of 320 tons (length 98 ft., beam 27 ft.) and was constructed to the order of Joseph King and associates, of Baltimore, Md., for use in oriental trade. The following year (1804), Amesbury launched a really big vessel, the ship *Dromo* of 493 tons (length 122 ft., beam 30 ft.), built for George de Wolf "and friends," of Bristol, R.I., and the Narragansett.

Shipbuilding was established about 1650 at Newbury, which continued as a shipbuilding center (at Newburyport) of increasing importance in the nineteenth century, during the sailing packet and clipper ship eras well into the Down Easter period of construction, and lasted almost as long as American wood square-rigged merchant sail was constructed on the banks of the Kennebec River in Maine. Shipbuilding was thriving at Newbury from early days, but competitive conditions and "the demand of the times" later caused that town to be supplanted as an active shipbuilding and shipping community by Newburyport because of deeper water and better facilities for building sizable ships. Good oak grew abundantly in this region, and this oak not only was used for the building of Merrimac vessels but also was exported to England in large quantities.

Samuel Moggaridge began building ships in Newbury on the Merrimac as early as 1730. His yard was located at what is now known as Moggaridge's Point, and he continued to build there until his death in 1754. Moggaridge and his shipyard are of historic interest. A painting of a ship building on the Merrimac, with Indians working as carpenters (preserved at the Public Library Building in Newburyport), was taken from over the mantel in Moggaridge's old house. As slavery was lawful in Massachusetts prior to the Revolution, Negroes were employed in the Moggaridge shipyard, and upon the death of Moggaridge, the inventory of his estate included the following item: "three negroes valued at £133, 6s, 8d." After his death, the name of Moggaridge continued to be associated with "unusual happenings on the Merrimac," for it was at his old yard that "Jew's rafts" of timber were built around the 1760's and 1770's. A few of these rude rafts made of shipbuilding timbers, bought by a "Mr. Levi of London" and assembled in the form of a ship, were constructed on the Merrimac and safely navigated across the Atlantic. The British press announced in 1700 the arrival of one of these queer craft, the *Newbury* (Captain Rose), at Blackwell, England, after a transatlantic crossing under her own canvas "from Newbury to soundings in twenty-six days."

There is a record of Samuel Moggaridge's making an agreement with Witter Cummings and Benjamin Harris in 1741 to build a ship, the owners to supply all the ironwork, nails, pitch, tar, turpentine, and oakum and to pay Moggaridge in settlement: "three hundred pounds in cash, three hundred pounds by order on good shops in Boston, two-thirds money; four hundred pounds by orders up the river for timber and plank, ten barrels of flour, fifty pounds weight of loaf sugar; one bag of cotton wool, one hundred bushels of corn, in the spring; one h'hd of rum; one hundred weight of cheese; the remainder part to be drawn out of said Cummings and Harris shop." The payment of ships was a very involved business in those days. In Douglass' HISTORICAL AND POLITICAL SUMMARY OF AMERICA, we read that in Newbury shipbuilding contractors "are generally paid in goods; . . . thus a noted builder, T. W., jocosely said that he had built for ———— 'a Calicoe Ship' " (i.e., he was paid wholly, or in part, with "calicoes"). It is evident, therefore, that some shipbuilders, in order to get money for their work, had to become merchants. Cash was scarce and credits low. Barter prevailed, and shipbuilders sought in every way to compel owners to purchase all possible shipbuilding materials direct and, in addition, to supply the builders and their men with needed foodstuffs, etc., at attractive prices in part payment for their services.

Stephen Greenleaf, a shipwright of importance, built ships at Newbury for many years around the middle of the eighteenth century. Gideon Woodwell is credited with building 52 vessels during the period 1763-1773 "at the lower end of the town." Among Woodwell's accounts is a queer entry, for Eleazer Kezer is credited on October 10, 1765, with building "one-half a ship of 200 tons burthen at ten pounds, ten shillings per ton." This building site, it is said, had been used long before Gideon Woodwell commenced operations there, and some records indicate that Woodwell was building on it as early as 1759. After Gideon's death, his son continued the business and, it is said, built on the site "about a hundred vessels of from 50 to 320 tons burthen."

In the mid-eighteenth century, another prominent shipbuilder who owned a yard in the lower part of the town of Newbury was William Gerrish. He owned "extensive tracts of farming land in Methuen and the neighboring towns" and was a slaveholder, many slaves, it is said, being "born in his own house." Ralph Cross was a builder of prominence about this time, and his sons Stephen and Ralph built the frigates *Hancock, Boston,* and *Protector* during the struggle with Britain for freedom. Other early Newbury shipbuilders (not previously mentioned here) were Richard Carr, Ezra Cottle, Thomas Johnson, John Stickney, and Joseph Clement.

In 1778, during the War of the Revolution, a frigate named *Alliance,* to commemorate the alliance between France and the proclaimed independent United States, was built at Salisbury, Mass., which is near the mouth of the Merrimac River and opposite Newburyport. The builders were William and John Hackett, and history says that they produced a fine vessel — "a favorite with the whole navy by reason of her speed and beauty." There is a tradition that in 1782, being chased by a much larger and more powerful fast British frigate, "she ran fifteen knots by the log, with the wind abeam, in making her escape." The *Alliance* had a measurement of 125 ft. length of keel and 36 ft. beam, with 12½ ft. depth of hold, and she drew 9 ft. of water forward and 14 ft. 8 in. aft. She was modeled, under water, after "a fast French lugger." On her first voyage, the *Alliance* had the honor of conveying Lafayette to France. (At first, she was put under the command of Captain Landais, "a crazy Frenchman.") At the close of the war, she was sold by the government and became a merchantman "famous in the China and India trade."

Orlando B. Merrill, the originator of the water-line builder's model, was a prominent builder contemporary with Elias Jackman, but Merrill's yard was between Moggaridge's Point and the site later owned by John Currier. When, because of the attitude of European powers toward the young American republic, the United States felt impelled to take up arms for the protection from France of the life and property of American citizens on the high seas, the brig *Pickering* was built by the Merrills (Orlando and his brothers, Jonathan and Nathan)

for the national government. Under date of July 27, 1798, the local paper tells us that the *Pickering,* commanded by Capt. Jonathan Chapman and designed to carry 14 guns and 70 men, had sailed for Boston "to take in her guns and complement of men" and that "the Messrs. Merrill deserve credit for the punctual manner in which the work was executed" well under the contracted period of 90 days. Because of the crippled condition of the national treasury, the citizens of Newburyport, during the early summer of 1798, raised cash to build a ship of 355 tons burthen, to be mounted with twenty "6-pound cannon," and "offered her to the government of the United States for their use." Interest of "six per cent per annum on the net cost of the ship and equipments" was specified, with "a final re-imbursement of said net cost at the convenience of the government." The Newburyport offer was promptly accepted, and the *Merrimack* was built under the direction of William Hackett, as master builder and superintendent, by Major Cross, contractor, at the Federal Street shipyard. The keel was laid July 9 and the vessel launched October 12, 1798 (95 days thereafter). Her cost of $46,170 was said to be "considerably less than that of any other vessel of similar size built in any part of the country for the use of the Navy Department at that time." In 1799, during her cruise to the West Indies, the *Merrimack* captured many valuable prizes, among which were the *Magicienne* (14 guns), the *Phenix* (14 guns), and *Le Bonaparte* (14 guns), besides retaking many American vessels that had been made prizes by the French. The *Merrimack* was in the U.S. naval service for five years, following which she was sold in Boston for $21,154 and under the name of *Monticello* was soon afterwards wrecked on Cape Cod when engaged as a merchantman.

In 1799 the ship *Warren* (18 guns), built by Daniel Webster at Salisbury, was launched on September 26. She was commanded by Capt. Timothy Newman, of Newburyport, and after a few cruises to Mexico and the West Indies, she was sold by a very shortsighted and apparently "economy-minded" administration to the merchant service. In the local press of Tuesday, August 20, 1799 (the HERALD), is the notice of the launching of the big ship *Massachusetts* of 616 tons, "designed for the East India trade and fitted to carry twenty-four guns. She was built by Capt. O. B. Merrill [of Newburyport], whose skill as a naval architect is generally acknowledged." At this time, every American vessel, even though "on peaceful trade intent," was obliged when leaving port, because of the insecurity of the times, to go fully or at least well armed to protect herself and as a precaution against capture and confiscation.

Orlando B. Merrill was never in the public eye, although he designed and built a lot of fine vessels and was a naval architect of distinction. It seems that when Merrill (born in 1763) was thirty-one years of age (1794), he made what is said to be "the world's first built-up, water-line builder's half model." This form of model, which came quickly into general use wherever ships were built, displaced the old form of skeleton model composed of pieces that showed the shape of occasional frames, with the keel, stem, and sternposts, and did not completely or even adequately reveal a trued-up form of the vessel. Moreover, it was extremely difficult (outside of the shape of a few frames) to transfer the lines from a skeleton model to the mold loft. Merrill's water-line or built-up model was composed of lifts or boards of a suitable thickness joined together, originally by dowels and later by screws. These could be taken apart and the sheer, body, water lines, and half-breadth plans easily transferred to paper, from which the working lines, transverse, horizontal, vertical, and diagonal sections, etc., were laid down and faired up in the mold loft. The idea was the essence of simplicity, but evidently no one here or abroad had thought of it before. Possibly because it was so simple and such a logical procedure, Orlando Merrill never received any pecuniary reward for his idea and evidently no recognition during his lifetime. He died in 1855 at the age of ninety-two, and two years before his death the original "water-line model" made by him in 1794 was presented to the New York Historical Society.

At the close of the Revolution, when the independence of the colonies was established, shipbuilding became active on the Merrimac River. In 1790 the tonnage belonging to New-

buryport totaled 11,870 tons and consisted of 6 ships, 45 brigantines, 39 schooners, and 28 sloops. About this time, the yards were improved and new ones built. About 1790, Elias Jackman established his shipyard near the Chain Bridge and built many vessels during a period of more than thirty years. From available records, including the lists of vessels enrolled or registered at the customhouse in Newburyport, Mass., as being built on the Merrimac River during the period 1783-1790 inclusive, the following list has been prepared to show the type, size, and place of construction of the vessels authoritatively reported to have been built in the Merrimac territory during the first eight years of the young republic. A few of the vessels appearing in the list are evidently duplicated, but it is known that a large number of craft, both sizable and small, is not included. It is difficult to make a distinction between the designations "brig" and "brigantine," and occasionally in the early days brigs and brigantines were referred to as "ships" and topsail schooners as "brigantines." Errors crept into early records, and it would seem that the tonnage of the schooner *Hancock,* built in 1790 at Newburyport, was more than the 19 tons stated. It is also noted that three vessels named *Unity* were recorded as being built at Amesbury in 1785 — one a brigantine of 32 tons, another a schooner of 91 tons, and the third a brig of 132 tons; possibly only one or two of these recorded vessels were actually built. It is strange that more than one vessel bearing the name *Unity* was built in any one town in the same year; yet it has been suggested that Amesbury built a 91-ton schooner and a 132-ton brigantine in the year 1785, each bearing the name *Unity,* and that possibly the vessel reported as a brigantine of 32 tons refers to a vessel of the same name and rig whose tonnage was 132 tons. It is difficult to understand why three schooners named *Hope* (of 59, 66, and 83 tons, respectively) are recorded as being built in Newbury in 1786; but Newbury covered a lot of territory, and builders naming a vessel were likely to be very stubborn about changing the name. In the early days of the republic, *Hope* and *Unity* were common and popularly expressed political sentiments. The most popular names for vessels built on the Merrimac during the first few years of the newborn republic (1783-1790 inclusive), as per the following list, were *Sally* (8), *Polly* (7), *Hope* (6), *Betsey* (4), *Hannah* (4), *Nancy* (4), and *William* (4). There were three vessels each bearing the following names: *Lively, Unity,* and *Industry,* and one schooner had the compound name of *Peggy and Polly.*

Year Built	Stated Rig	Name	Tonnage	Where Built
1783	Sloop	PORT PACKET	46	Newbury
1783	Schooner	ADAMS	50	Newbury
1783	Sloop	PORT PACKET	63	Newbury
1783	Schooner	HIBERNIA	78	Newburyport
1783	Schooner	HOPE	95	Newburyport
1783	Brigantine	HIBERNIA	108	Newburyport
1783	Brigantine	BEE	143	Newburyport
1783	Brigantine	ESSEX	143	Newburyport
1783	Brigantine	WILLIAM	183	Newburyport
1784	Schooner	RANGER	23	Amesbury
1784	Sloop	SALLY	62	Salisbury
1784	Schooner	DOLPHIN	70	Amesbury
1784	Brigantine	HOPE	125	Newburyport
1784	Brig	POMONA	127	Newbury
1784	Brig	SUCCESS	147	Newburyport
1784	Brigantine	VULTURE	172	Newburyport
1784	Brigantine	SWAN	178	Newburyport
1784	Ship	THOMAS	230	Newburyport
1785	Schooner	SALLY	29	Amesbury
1785	Brigantine	UNITY	32	Amesbury
1785	Schooner	NANCY	51	Newbury
1785	Schooner	HAWK	63	Newbury
1785	Brigantine (built as schooner)	POLLY	66	Bradford

(Continued on next page)

Year Built	Stated Rig	Name	Tonnage	Where Built
1785	Sloop	WASHINGTON	67	Newburyport
1785	Schooner	THREE FRIENDS	72	Amesbury
1785	Sloop	HAVERHILL PACKET	77	Haverhill
1785	Schooner	NANCY	79	Newburyport
1785	Schooner	HOPE	83	Bradford
1785	Brigantine	POLLY	87	Bradford
1785	Sloop	RANGER	87	Newburyport
1785	Sloop	KATY	90	Newburyport
1785	Schooner	UNITY	91	Amesbury
1785	Sloop	BETSEY	93	Salisbury
1785	Brigantine	SPEEDWELL	100	Newburyport
1785	Brigantine	SALLY	106	Newburyport
1785	Brig	UNITY	132	Amesbury
1785	Brig	SALLY	137	Newburyport
1785	Brigantine	BETSEY	140	Newburyport
1785	Snow	FANNY	148	Newburyport
1786	Schooner	DELIGHT	24	Bradford
1786	Schooner	LIVELY	24	Amesbury
1786	Sloop	SALLY	42	Newburyport
1786	Schooner	TWO BROTHERS	52	Newburyport
1786	Schooner	HOPE	59	Newbury
1786	Schooner	HOPE	66	Newbury
1786	Schooner	ABIGAIL	73	Newburyport
1786	Sloop	HARRIOT	75	Bradford
1786	Schooner	INDUSTRY	75	Newbury
1786	Schooner	HOPE	83	Newbury
1786	Sloop (altered to brigantine; 176 tons)	STORK	91	Newburyport
1786	Schooner	SUSANNA	96	Newbury
1787	Schooner	BETSEY	22	Newbury
1787	Schooner	BLOSSOM	22	Newbury
1787	Schooner	ROBIN	30	Salisbury
1787	Schooner	POLLY	35	Amesbury
1787	Schooner	SUCCESS	38	Newburyport
1787	Schooner	POLLY	68	Haverhill
1787	Sloop	NANCY	70	Amesbury
1787	Brigantine	POLLY	159	Salisbury
1787	Brig	MARY	166	Newbury
1788	Schooner	BETSEY	21	Newburyport
1788	Schooner	SALLY	22	Newbury
1788	Schooner	POLLY	44	Newburyport
1788	Schooner	LARK	46	Amesbury
1788	Sloop	INDUSTRY	48	Haverhill
1788	Schooner	JOSEPH	57	Newbury
1788	Schooner	JOHN	90	Newbury
1788	Brigantine	EDWARD	123	Salisbury
1789	Schooner	PILGRIM	58	Newburyport
1789	Sloop	POLLY	63	Bradford
1789	Schooner	HANNAH	63	Amesbury
1789	Schooner	SUSAN	64	Amesbury
1789	Sloop	WILLIAM	65	Newbury
1789	Schooner	HANNAH	82	Newburyport
1789	Sloop	NANCY	83	Newburyport
1789	Brigantine	WILLIAM	94	Newbury
1789	Schooner	LIVELY	97	Amesbury
1789	Brigantine	LIVELY	130	Salisbury
1789	Brigantine	HANNAH	140	Newburyport
1789	Ship (brigantine)	INDUSTRY	206	Newburyport
1789	Ship	PEACE	229	Amesbury
1789	Ship	WILLIAM	277	Newbury

(Continued on next page)

Year Built	Stated Rig	Name	Tonnage	Where Built
1790	Schooner	HANCOCK	19	Newburyport
1790	Sloop	RUBY	33	Amesbury
1790	Schooner	PEGGY	60	Newburyport
1790	Schooner	PEGGY AND POLLY	79	Newbury
1790	Brigantine	SALLY	88	Newbury
1790	Schooner	HANNAH	99	Amesbury
1790	Brigantine	SALLY	121	Newburyport
1790	Brig	LUCY	125	Amesbury
1790	Brigantine	OLIVE BRANCH	140	Newburyport
1790	Brigantine	MEHITABLE	172	Salisbury
1790	Brigantine	MARTHA	173	Newbury
1790	Brigantine	COMMERCE	173	Newburyport
1790	Ship	SARAH	195	Newburyport
1790	Brigantine	MARY	206	Newburyport
1790	Ship	ELIZA*	About 425	Newburyport

*A very big ship for the time, the registered dimensions being length 105 ft., beam 30 ft. 4 in., depth 15 ft. 2 in. The only bigger ship built at Newburyport and the Merrimac prior to 1810 was the ship JOHN of 490 tons, built in 1792, which was 112 ft. 10 in. long, 31 ft. 6 in. beam, and 15 ft. 9 in. deep. In 1810 the ship VOLANT of 457 tons was built at Newburyport; in 1823, the TALLY HO of 430 tons; and in 1837, the TALBOT of 623 tons.

In November 1805, there were registered in the Newburyport Customs District as belonging to inhabitants of the town 173 vessels other than sloops and small craft; of these, 41 were ships, 62 brigs, 2 barks, 2 snows, and 66 schooners. In 1805 the local press reported the launching of 7 ships of from 217 to 350 tons and 2 brigs of 187 and 110 tons, respectively. The largest ships were the *Caledonia* of 350 tons, *Moses Brown* of 330 tons, *Maria* of 300 tons, and *Merrimack* of 288 tons. In addition to the 9 square-riggers launched, the press reported 3 ships, 3 brigs, and 9 schooners remaining on the stocks at the year end "in process of construction." The Embargo Act of 1807 was naturally a serious blow to the commercial and shipbuilding activities and the prosperity of the town. However, Elisha Briggs settled in Newburyport during the depressing year of 1807 and occupied the Moggaridge yard for a time, later acquiring another site. He is credited with building 40 vessels (17 ships, 13 brigs, and 10 schooners) prior to 1837. This Briggs yard was occupied by William Currier and James L. Townsend during the years 1843-1856, and many famous ships, with clipper models, were built there. Later, George E. Currier, Charles H. Currier, and John Currier, 3rd, built some thirty vessels in about half of the old yard, and John Colby and Enoch Lunt built some twenty schooners and fishing craft prior to 1876 in the other half of the one-time Elisha Briggs yard.

There is confusion in records as to whether certain ships, in the early days of the republic, were built at Newbury or at Newburyport; but this is natural, as Newburyport was merely the most suitable part of Newbury for the building of sizable ships. The fast sailer *Restitution* of 248 tons (length 89 ft., beam 25 ft.) was said to have been constructed in 1803 for Simon Forrester, of Salem, by the builder of the *Massachusetts*. However, as in the case of many other vessels (such as the transatlantic sailing packet ship *Meteor* of 325 tons, built in 1819), some records say that the *Restitution* was laid down at Newbury; others, at Newburyport. Other fast or well-known ships built at Newbury or Newburyport during this period include the following:

Year Built	Name of Ship	Tonnage	Registered Dimensions in Feet		Owner
			Length	Beam	
1811	MILO	398	107	29	David Hinckley, Boston
1819	FAMA	363	110	27	Benj. T. Reed, Boston
1822	AMERICA	418	119	28	William Goddard, Boston

It is said that at the turn of the century "Capt. J. Woodwell was building at the lower end of the town, and Elias Jackman was occupied at his yard near the Chain Bridge; while at intermediate points there were at least six or eight yards in full operation, among which may be named those of Joseph Coffin, Elisha Briggs, Stephen Dutton and Messrs. Jonathan and Thomas Merrill." Construction on the river, it is recorded, was also taking place at Salisbury, on the banks of the Powow, and at Haverhill.

The embargo was repealed on March 1, 1809, and shipping, including shipbuilding, promptly boomed. Records show that by 1810 Newbury and Newburyport merchants "owned forty-one ships, forty-nine brigs, and fifty schooners"; that this vicinity was the "seat of extensive commerce with the East Indies and other ports of the Orient"; and that twenty-one deep-water sailing ships for foreign trade were built on the Merrimac River in that one year "together with thirteen brigs, one schooner, and seven other small craft, the whole aggregating over 12,000 tons."

During the War of 1812, Orlando B. Merrill launched in September 1813 the U.S. sloop-of-war *Wasp,* which, after being delayed in receiving her armament, put to sea at the end of February 1814. During her brief and eventful career, she captured thirteen British merchantmen, destroyed twelve of them, and sent one into port. She herself was sunk, during the night, in September 1814 after a severe and one-sided engagement with a powerful British frigate. It is said: "Two years later, a government agent was at Newburyport with $50,000 prize money and 12 months' wages seeking to distribute it equitably among the heirs of the *Wasp's* officers and crew." Stephen Coffin also built two gunboats at Belleville, Newbury, during the war; these little vessels each carried one long 24-pounder, a 12-pound carronade, and a crew of 16 men. It is said that following the proclamation of peace, "the first ship to sail from the United States for India was the *Indus,* which went out to Calcutta." However, Newburyport and the mouth of the Merrimac River quickly declined as a foreign trade shipping port, and because of "the superior commercial advantages of New York, Boston, and Salem, trade gradually concentrated at these ports." Shipbuilding continued prosperous on the banks of the Merrimac, "although the vessels constructed were mainly used by merchants residing elsewhere."

Stephen Jackman succeeded Elias Jackman and built about thirty vessels in the Jackman yard between the years 1830 and 1848, "among which were thirteen brigs for John N. Cushing of this town and two steamers for the coastwise trade, the *Ohio* and *Decatur.*" George W. Jackman, Jr., succeeded his brother Stephen as a shipbuilder. From 1849 to 1876, he built some "twenty-seven vessels of considerable tonnage at the yard," including two gunboats for the U.S. Government (the *Marblehead* of 529 tons in 1862 and the *Ascutney* of 1,040 tons in 1863); the steamers *Ontario* and *Erie,* each of "about three thousand tons burthen" for Boston merchants in 1866 and 1867, respectively; several sizable clipper ships in the fifties; and some full-rigged Cape Horners of the Down Easter type in the seventies.

It is said that "until well into the 19th century" and again "until about 1840," Merrimac River vessels "were built almost entirely of oak, their decks being of native white pine." The ribs, outside planking, inside ceiling, beams, and knees were cut from oak timber, floated down the river or hauled by ox teams from nearby towns. The steadily increasing scarcity and exhaustion due to cutting in the valley of the Merrimac and the building of railroads led to the introduction and use of New Hampshire, Maine, and Canadian oak from sources farther and farther afield and later from Ohio and the South, with hackmatack knees from Maine and Canada, white pine decking from Maine, Pennsylvania, and Michigan, oak keels from Ohio, and hard pine from Georgia and the Carolinas. In the mid-seventies, it was said that "a ship that was once wholly constructed from the forests of the Merrimac Valley is now the manufacture of materials of widely separated states." At this time, it was said that the shipbuilding industry of Gloucester, Salem, Ipswich, Salisbury, and Haverhill "is practically extinct" and that "Newburyport has gradually gathered within her limits the shipbuilding

interests of Essex County." However, Newburyport was destined not to live long as a shipbuilding center in its "glory of supremacy" as a Massachusetts shipbuilding town; for although it survived into the eighties and built ships in the end with all the planking, ceiling, and decking of hard pine from the South and the framing generally of Canadian and southern oak, its last square-rigged ship, the *Mary L. Cushing* of 1,650 gross tons and Down Easter type, was built by George E. Currier in 1883.

Packet Ships and Seaworthy Vessels Built by the Curriers and Other Shipbuilders at Newburyport

There have been many shipbuilders in Newbury or Newburyport of the name of Currier. William Currier achieved a measure of fame when he built in partnership with James L. Townsend and produced from 1843 to 1856 a fleet of prominent big ships, including the famous transatlantic clipper packet *Dreadnought*. C. H., George E., John, and George E. Currier, Jr., continued operating part of the old Currier & Townsend yard at the foot of Ashland Street from 1857 until well into the eighties. There was an Albert Currier among the list of Newburyport owners and a John J. Currier as a talented historian, but it was John Currier, Jr., in his yard on Merrimac Court after he moved from the old Merrill yard just below Moggaridge's in late 1834, who made the name of Currier of Newburyport favorably known in shipping circles the world over. John Currier, Jr., "the Merrimac's greatest builder of ships," began constructing vessels in 1831. He continued to be active for fifty-two years, and in 1882 he launched his last ship, which at that time was said to be "his ninety-seventh vessel and the last of a big fleet totaling over ninety thousand registered tons." The first twelve vessels built by John Currier, Jr., of which we have records were as follows:

Year Built	Name of Ship	Tonnage	Year Built	Name of Ship	Tonnage	Year Built	Name of Ship	Tonnage
1831	BRENDA	375	1834	ST. CLAIR	422	1838	FLAVIO	635
1832	REPUBLIC	397	1835	LEANORE	375	1838	NAVIGATOR	414
1833	OBERLIN (bark)	350	1836	COLUMBUS*	597	1839	HUNTRESS	543
1834	NEWBURYPORT	330	1837	TALBOT	622	1839	STRABO	437

* Also reported as of 663 tons and built in 1834; also credited to New York.

That part of the Merrimac (and its tributaries) where there were waters of sufficient depth and suitable river banks was used for building ships in numbers following the Revolution, and it has been said that "most of them were for Boston, New York, Philadelphia, and Baltimore owners." For several decades during the first half of the nineteenth century, Boston and, in fact, Massachusetts generally looked upon Newburyport on the Merrimac River as "its shipbuilding town," and before Boston became particularly interested in building as well as in owning and operating ships, it "fathered" and sought to monopolize Newburyport's shipyards and shipbuilders. Some of the best shipwrights of Boston and the operators of yards established at "The Hub" during the thirties, forties, and fifties received their practical training on the banks of the Merrimac River. It was in Newburyport and not New York that Donald McKay obtained his first experience as a responsible foreman builder, and he used to say, "From Newburyport I graduated to Boston." Attempts by Boston historians and publicists to make Donald McKay — a truly great practical shipwright — into a type of man

that he could never have been, a technical naval architect, and an originator have affected the true history of shipbuilding in sections where McKay was active, one of which was Newburyport. McKay was employed by one of the Curriers at Newburyport in the early forties, but histories have been written suggesting that Currier worked for McKay — and was lucky to have the opportunity to do so. Donald McKay was a hard man for any partner to co-operate with or for any boss to handle. He was a law unto himself. When he wanted more money, he "ditched" his apprenticeship agreement with Isaac Webb. When he could not get either the authority or the pay that he wanted as a foreman shipwright, he left New York "for a smaller place" where there was more opportunity and less competition. McKay had no money; he could not finance his share of any partnership as a shipbuilder while at Newburyport. He could do nothing to meet a pay roll or a bill of materials; yet some historians put this man as a partner of William Currier and, later, of William Pickett, while, in reality, McKay was working for his wages as a foreman shipwright.

William Currier, of Newburyport, built the bark *Mary Broughton* (323 tons) in 1841 for N. Broughton, of Marblehead, the bark *Behring* of 276 tons (length 103 ft., beam 24½ ft.) in 1842 for William H. Boardman, of Boston, and the ship *Ashburton* (449 tons) also in 1842, followed by the *Courier* of 392 tons (length 116 ft., beam 27 ft.), built for Foster & Elliott, of New York. McKay always claimed that he had a hand in the modeling of the *Courier;* in other words, he whittled on a builder's half model. About the same time that the *Courier* was built, Newburyport constructed the bigger *Amity* of 499 tons (length 134 ft., beam 28⅕ ft.) for "M. Lunt and others," but actually for Robert B. and John M. Forbes, of Boston. While with William Currier in Newburyport, Donald McKay became acquainted with Dennis Condry and, through Condry, later got in touch with Enoch Train, of Boston, for whom William Pickett and his master builder, McKay, built the packet ship *Joshua Bates* (620 tons). When the *"Bates"* was successfully launched, Train and McKay made a deal, by which McKay moved to Boston to establish his own shipyard at East Boston, being financed, endorsed, and backed in the venture by Enoch Train, the well-known and influential Boston shipowner. McKay wanted badly to leave Newburyport, which had by that time grown too small for him; he wanted power, authority, opportunity, and "a good angel to furnish the money and the needed backing." Enoch Train proved to be the "good angel" and a wonderful friend to Donald McKay; indeed, he put McKay on his feet and made a fortune for him. Unfortunately, in backing McKay "to move to Boston and build ships there," Train himself lost heavily and ultimately became insolvent. Although a great and courageous builder of wood ships, McKay had no sense of economics as applied to ship design, construction, and operation for making money—for which ships were presumably built.

The builders of Newburyport and the Merrimac were known as the producers of seaworthy, fairly fast ships that were good money-makers. They leaned to carriers rather than privateers and to a packet type of carrier rather than to clippers; yet, when necessary, Merrimac shipbuilders turned out craft that could sail in competition with the Chesapeake clippers, whose prime field for many long decades was illegitimate trade. William Pickett, of Newburyport, with Donald McKay as foreman builder, built the big packet ships *St. George* of 845 tons in 1843 and the *John R. Skiddy* of 930 tons and *Joshua Bates* of 620 tons in 1844. (McKay was not technically a real partner nor the contracting master builder, for he had neither money nor credit and could not finance himself.) The *"Skiddy"* was built for the New York-Liverpool Red Star Line and was 173 ft. long, 35 ft. beam, and 17 ft. 8 in. deep. She served in the transatlantic "shuttle" about five years (1845-1850) or until wrecked on the Irish coast near Wexford on March 30, 1850. Her length of average westbound passage for the period was 32 days (best crossing, 25 days; slowest, 44 days).

One of the early sailing packets that saw service as a pioneer in the New York-Liverpool transatlantic Red Star Line (1822-1825) was the ship *Meteor,* built at Newburyport, Mass., in 1819. This square-rigger was of 325 tons register, 106 ft. 5 in. long, 26 ft. 1 in. beam, and 13 ft. deep. She was built as a "general packet trader" or a "transient packet" (i.e., to carry

a good volume and deadweight of cargo "and some passengers comfortably") and was not built for speed. She had the fullness of model, bluff bow, flat floor, and big midship section that made so many of the early sailing packets such good sea boats and reliable sailers on the rough waters of the Western Ocean. Her model was ideal for a whaler, and after over three years of operating on schedule for the Red Star Line and some four years as a transient or general trader, the *Meteor* served as a whaler for thirty years (1827-1856). During the Civil War, she was deliberately sunk with other whalers in the blockading "Stone Fleet." In transatlantic service, the length of her passages averaged well with those of packets built prior to 1820 (excluding, of course, the fast *Albion* built the same year by Sidney Wright, of New York). The *Meteor* made a westbound "uphill" crossing in 30 days, and while her all-time average in the line was 40 days, her longest passage from Liverpool to New York was only 51 days as against 67 days for the *Manhattan,* 65 days for the *Birmingham,* and 63 days for the *Panthea* (all of the Red Star Line), 61 days for the *Pacific I,* and 60 days for the *Courier* (of the Black Ball Line).

The New York regularly scheduled sailing packet *Columbus* of the Black Ball Line, before referred to as being built by John Currier, Jr., was launched at Newburyport in the mid-thirties. She was a sizable full-rigged ship of 663 registered tons and measured 138 ft. 10 in. long, 32 ft. 6 in. beam, and 16 ft. 3 in. deep. The *Columbus* is reported to have operated in the Black Ball Line between New York and Liverpool for over eleven years (1834-1845). She was a fair but not a fast sailer, and while her best westbound passage was 28 days, her average for all westward crossings was 36 days for eleven years. Her slowest run in this entire period was of only 50 days' duration; the bigger and newer *Ashburton* took 89 days on one passage, the *London* 85 days, the *Victoria* 84 days, the *Switzerland* 82 days, the *Francis Depau* 79 days, the *Baltimore* 78 days, etc. The fastest of all transatlantic packets, the crack *Yorkshire,* built nine years after the *Columbus* and of 50 per cent greater tonnage, had one 58-day westbound crossing, which was eight days longer than the slowest similar passage of the *Columbus.* According to Lloyd's Register, the *Columbus* was an unusually well and durably built American packet, being constructed throughout of "live oak, white oak, locust, cedar, and pitch pine." She was a large carrier for her tonnage and in 1835 took the biggest cargo eastward to Liverpool officially recorded for any transatlantic packet; this freight loading consisted of 1,132 bales of cotton, 1,004 barrels of naval stores, 120 barrels of iron ore, and 10,000 treenails.

In the forties, the two following well-known New York coastal sailing packets were built at Newburyport for the New Orleans lines:

Name of Ship	Year Built	Tonnage	Registered Dimensions In Feet			Years in Line	Westbound Passages in Days		
			Length	Beam	Depth		Average	Best	Slowest
PACIFIC	1843	531	138	29	14.6	9	17.9	12	29
FAR WEST	1846	598	144.3	30	15	7	18.8	13	28

The *Pacific* ran in the New Orleans Holmes Line from 1851 to 1860; the *Far West* in the New York and New Orleans Line, 1854-1861. She was sold to the British during the Civil War and in 1866 hailed from Newport, Wales. The *Pacific* was a good carrier and on a draft of 17 ft. carried "a good paying cargo, both volume goods and weight, for her inches and tonnage." Her tonnage on the new customhouse measurement was 635 tons, or 19.6 per cent more than the old measurement. The *Far West,* modeled similarly to the *Pacific,* was not quite so fast, even though she was 67 tons, or 12.6 per cent, larger. The *Far West* loaded to 17½ ft., and when remeasured her tonnage on the new customhouse rules was 664 tons, or 11 per cent more than the old measurement of 598 tons.

The outstanding shipbuilder of the Merrimac, as before stated, was John Currier, Jr., "the builder of a hundred good ships" that reflected credit on the master shipwright responsible

for their production and "gave glory as well as prominence to the town of Newburyport in the trade routes and ports of the Seven Seas." William Currier, who employed Donald McKay during 1840-1843 and "just couldn't get along with the man," found a congenial partner in James L. Townsend, of Newburyport, and this firm gained a splendid reputation for building good ships during the years 1843-1856. It was the boast of Newburyport when Donald McKay became famous as a builder of "the world's fastest clippers" at East Boston that "McKay never has built a ship that can sail in the North Atlantic with the medium clipper packet *Dreadnought,* built by Currier & Townsend, of Newburyport." Whereas the firm of Currier & Townsend is better known for the big clippers that it constructed in the fifties, it launched some splendid, fast vessels during the forties, among which were the following well-known ships:

Name of Ship	Year Built	Tonnage	Registered Dimensions in Feet			Owner	Notes
			Length	Beam	Depth		
ARIEL*	1846	572	136.3	30.3	15	Minot & Hooper, Boston	Sold Shanghai, 1857.
TSAR	1847	470	131	28	14	Wm. Ropes, Boston	Sold to Russian Fur Co.
RADUGA	1848	587	150	29	15.5	John E. Lodge, Boston	Lost, 1890.

*The ARIEL made a record run of 90 days from Canton to New York.

Eben Manson, in a yard at the foot of Oakland Street, Newburyport, built vessels during the years 1853-1873, many of which were sizable ships and barks. Among the vessels built were the ship *Edith* of 1,116 tons in 1864 for Charles Carver (said to be for Griswold, New York) and the *Albert Edward* of 840 tons and *Sarah Chase* of 568 tons, both in 1860, for Albert Currier et al.

A shipyard at the foot of Titcomb Street was established in Newburyport by Fillmore & McQuillen in 1862. In 1868 it was taken over by B. F. Atkinson and J. T. Fillmore (or Filmore), who between 1869 and 1876 built 11 vessels of 9,990 aggregate tons, including the ship *Brown Brothers* of 1,493 tons in 1875 and 10 barks of from 520 to 1,204 tons, the largest of which were the *Susan Gilmore* of 1,204 tons and the *Edward Kidder* of 1,014 tons, both built in 1874, and the *William Hales* of 875 tons with the *Haydn Brown* of 864 tons, both built in 1876.

John Currier, Jr., built his first 1,000-ton ship, the *Merrimac* of 1,105 tons, in 1854, and she was said to be his "42nd vessel." Ten years later, he launched his first 1,200-ton ship, the *Sapphire* of 1,204 tons, reported as his 73rd vessel, and two years later (in 1866) the *United States* of 1,314 tons was put overboard. In 1873 the *Thomas Dana* of 1,445 tons was built as his 86th vessel, and his next construction, in the following year, was the *Radiant* of 1,607 tons; but this was eclipsed in size by the *Daniel I. Tenney* of 1,686 tons, built in 1875 and announced as his "91st vessel." His last big ship was evidently the *John Currier,* named after himself, which was of 1,945 tons gross and 1,848 tons net, and launched at Newburyport in October 1882 for Thayer & Lincoln, of Boston. In January 1877, John J. Currier lists 94 vessels totaling 85,315 tons (net) built or building by John Currier, Jr., at that time.

At the old Currier & Townsend shipyard, four other members of the Currier family built 28 vessels totaling 13,702 tons during the years 1857-1876. The list includes 3 ships of 970, 925, and 900 tons, respectively, 12 barks of from 390 to 916 tons, 1 brig of 173 tons, 11 schooners of from 98 to 550 tons, and a barge of 200 tons. In 1873 and thereafter, George E. Currier evidently built at the yard alone and launched 9 vessels during the years 1873-1876 inclusive. Another part of the old Currier & Townsend yard, occupied by J. W. S. Colby and E. P. Lunt during the years 1866-1876, built 20 small schooners of from 51 to 191 tons and totaling 2,415 tons.

During the years 1850-1874, George W. Jackman, Jr., in his yard on Merrimac Street at the foot of Forrester Street, built 27 vessels aggregating 26,570 tons. Of this fleet, 15 were ships of from 525 to 1,170 tons, 6 were barks of from 330 to 550 tons, 1 was the brig *Newbury* of 220 tons, 2 were U.S. gunboats, and 2 steamships each of 3,000 tons.

A Comparison of the Proportions and Dimensions of Merrimac-built Vessels from 1783 to Down Easter Days

The proportions and relative dimensions of Newbury- and Newburyport-built vessels during the days of the young republic are of interest; so representative sizable vessels constructed during the period 1783-1883 are set forth herewith, with the dimensions as officially measured. The tonnage stated is not truly comparative, as the formula was changed in 1865, and from that date confusion also arises from uncertainty as to whether the gross or net registered tonnage is stipulated.

Year Built	Name	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1783	ESSEX	143	68.2	22.3	11.2
1784	THOMAS	230	86.4	24.8	12.4
1785	FANNY	148	71.3	22	11
1786	INDUSTRY	75	62.1	17.8	7.8
1787	MARY	166	75	22.8	11.3
1788	JOHN	90	65	20.8	7.8
1789	WILLIAM	277	95	25.8	12.9
1790	ELIZA	About 425	105	30.3	15.2
1791	MARY	230	85.2	25	12.5
1792	JOHN	490	112.8	31.5	15.8
1793	PEGGY	212	81.3	24.7	12.3
1794	CHARLES	224	85.1	24.7	12.3
1795	HIBERNIA	185	79	23.3	11.7
1796	HANNAH AND ELIZA	262	88.3	26.3	13.1
1797	PACKET	287	95.1	26.3	13.1
1798	RUFUS	161	74.3	22.5	11.3
1799	ALLIGATOR	196	79.2	24	12
1800	ANGELINA	238	87.9	24.9	12.5
1801	ESSEX	256	87.6	26.2	13.1
1803	EDWIN	276	91.6	26.3	13.2
1805	MOSES BROWN	336	101.7	27.5	13.7
1807	MARYLAND	395	106.9	29	14.5
1810	VOLANT	457	116.9	30.4	14.5
1815	CAROLINE	321	100.7	26.9	13.4
1819	GLIDE	282	95.6	25.9	12.9
1823	TALLY HO	430	119.1	28.3	14.1
1828	WAYLAND	217	92.1	23	11.5
1833	EMERALD	435	127.7	27.3	13.6
1837	TALBOT	623	140.8	31.2	15.6
1841	FARWELL	698	153	31.5	15.7
1843	ST. GEORGE	845	149.3	35.4	17.7
1844	JOHN R. SKIDDY	980	173	35	17.5
1847	FANCHON	968	171.3	34	17.5
1850	CASTILIAN	999	176	35	17.5
1851	RACER	1,669	207	41.8	20.9
1863	VALPARAISO	1,158	191.5	36	18
1873	THOMAS DANA	1,445	203.4	39.4	24.2
1882	JOHN CURRIER	1,848	235.7	42	26.7

The growth of the Merrimac-built merchant ship from the small craft built in the seventeenth century to the 1,700-ton Down Easters built at Newburyport in the 1870's and 1880's is referred to by John J. Currier in his historical sketch of shipbuilding on the river, of which the following is a digest:

The progress was very slow at first; and for more than a century after 1650 the increase in size was only about 100 tons. During the year 1795, two ships, each of 311 tons register, were launched upon the Merrimac. One of these, called the *"Industry,"* was built at Amesbury for Archibald Gracie, of New York, and the other, named the *"Lucia,"* was built at Salisbury for William Gray, Jr., of Salem. They were considered large ships for the times. Most of the vessels previously built were of much smaller tonnage, ranging from 100 to 250 tons register. Gradually, however, the dimensions

were increased, and the capacity of ships cautiously enlarged, until the year 1810, when the ship *"Volant"* of 457 tons register . . . was built at Newbury. It is twenty-five years later, however, before any further decided increase in the size of vessels becomes apparent. In 1836, John Currier, Jr., built the ship *"Columbus,"* 594 tons register, at Newburyport. This was a monster ship for the times, being 100 tons larger than any vessel previously built on the river. Next came the ship *"Flavio,"* 698 tons register, built in 1839 by the same builder. In 1843, the ship *"St. George,"* 845 tons, was built by McKay and Pickett for New York owners. It was several years later, however, before a vessel so large as 1,000 tons measurement was constructed on the Merrimac. In 1850, the ship *"Castilian,"* built by John Currier, Jr., reached that tonnage. . . .

The discovery of gold on the Pacific coast, and the great impetus given to trade and traffic in consequence of that discovery, created a demand for the larger and sharper class of vessels known as clippers. In 1851, William Currier and James L. Townsend built the ship *"Racer,"* 1,669 tons register, for David Ogden and others, of New York. She was a sharp, clipper-like model, with three decks and a round stern. The *"Racer"* was followed by several other vessels of this description, but of smaller tonnage. Among them the *"Dreadnought,"* 1,414 tons register, built by the same builders, in 1853, and under the command of Captain Samuels, made many famous passages across the Atlantic. Notwithstanding the depression and disasters that followed the breaking out of the late civil war, ship-building on the Merrimac River has continued without interference to the present day. At this date (December 1876) the largest merchant ship ever launched on the Merrimac is the *"Daniel I. Tenney,"* 1,687 tons register, built by John Currier, Jr., in 1875. The two steamships (the *Ontario* in 1866 and the *Erie* in 1867), built by George W. Jackman, Jr., for a company of Boston merchants, are of much larger tonnage, each of them measuring nearly 3,000 tons.

A Record of the Clippers and Reputed Clippers Built on the Merrimac

During the so-called clipper ship decade of 1850-1859 inclusive, twenty-five clippers and reputed clippers, aggregating 24,214 tons register, were built on the Merrimac River, Mass., of which twenty-four ships — totaling 23,876 tons register — were constructed at Newburyport, Mass. The following statement covers all clippers built on the Merrimac and gives their record on westbound passages around Cape Horn; the ships are arranged chronologically and according to builders.

Name, Year Built, and Tonnage	Registered Dimensions in Feet			Owner	Notes	Passages Westbound to San Francisco				
								Length in Days		
	Length	Beam	Depth			Years	Number	Average	Fastest	Slowest
A. 1. *Built by Currier & Townsend*										
DRAGON (bark; 1850; 290 tons)	105	24	12	Williams & Deland, Boston	A small unimportant general trading bark.	—	—	—	—	—
FALCON (bark; 1851; 509 tons)	137.6	28.3	15	John E. Lodge, Boston	Not the British-owned clipper FALCON.	—	—	—	—	—
RACER (1851; 1,699 tons)	207	42.7	28	Red Cross Line (Morgan, Ogden, et al.)	First transatlantic clipper packet; lost May 6, 1856.	1852	1	134	134	134
DREAD-NOUGHT (1853; 1,414 tons)	200	39	26.5	Red Cross Line (David Ogden et al.)	Transatlantic medium clipper packet; lost off Cape Horn July 4, 1869.	—	—	—	—	—

(Continued on next page)

Name, Year Built, and Tonnage	Registered Dimensions in Feet			Owner	Notes	Passages Westbound to San Francisco				
								Length in Days		
	Length	Beam	Depth			Years	Number	Average	Fastest	Slowest
A. 1. *Built by Currier & Townsend*—Continued										
HIGHFLYER (1853; 1,195 tons)	183	38	25	David Ogden et al., New York	Disappeared in Pacific; lost with all hands, 1855.	1853-1855	2	146.5	144	149
ELOISA (1854; 725 tons)	151.3	32.3	17	A trading yacht for Valparaiso owners	Helped salvage SOVEREIGN OF THE SEAS when wrecked Malacca Reefs, 1859.	—	—	—	—	—
TROUBADOUR (1854; 1,200 tons)	182	38	25	Fisher & Co., Boston	Practically nothing known of this ship; evidently short-lived or name changed.	—	—	—	—	—
DRIVER (1854; 1,595 tons)	209	40.5	27	David Ogden et al., New York	Lost with all crew and passengers (372 all told), Feb. 1856.	—	—	—	—	—
BREWSTER (1855; 984 tons)	171	35	23	W. Clark et al., Boston	Sold to Norway in 1886.	1855	1	126	126	126
COURIER (1855; 554 tons)	135	30	15	Foster, Elliott & Co., New York	In 1859, ran from Rio to Philadelphia in 25 days.	—	—	—	—	—
EAST INDIAN (1856; 897 tons)	172	33.5	22	Stephen Tilton & Co., Boston	Sold to Calcutta, India, in 1864.	—	—	—	—	—
EDDYSTONE (1856; 949 tons)	173	34.5	22	J. C. Stubbs et al., Newburyport	Sold to British in 1861.	—	—	—	—	—
VICTORY (1857; 1,314 tons)	180	40	25	David Ogden et al., New York	A packet type.	—	—	—	—	—
2. *Built by J. Currier*										
GUIDING STAR* (1853; 900 tons)	165	33	23	Moses Davenport, Newburyport	Condemned Hong Kong in 1870.	—	—	—	—	—
3. *Built by N. Currier, Jr.*										
STAR OF PEACE* (1858; 941 tons)	170	34	23	Hill and Davenport, Boston	Burned by the Confederate raider FLORIDA, 1863.	—	—	—	—	—
*Historian John J. Currier credits both the GUIDING STAR and STAR OF PEACE to John Currier, Jr.										
Total and averages—15 Currier-built clippers (total tonnage, 15,166; average, 1,011 per ship)						1852-1855	4	138.2	126	149
B. *Built by George W. Jackman, Jr.*										
HUSSAR (1852; 721 tons)	151	32	23	Bush & Wildes, Boston	Sold Singapore, 1864.	1852-1854	2	125	115	135
WHISTLER (1853; 820 tons)	171	36	22	Bush & Wildes, Boston	Lost May 23, 1855.	1853	1	130	130	130

(Continued on next page)

Name, Year Built, and Tonnage	Registered Dimensions in Feet			Owner	Notes	Passages Westbound to San Francisco				
								Length in Days		
	Length	Beam	Depth			Years	Number	Average	Fastest	Slowest
B. *Built by George W. Jackman, Jr.*—Continued										
CHARMER (1854; 1,055 tons)	181.1	35.4	23.2	Bush & Wildes, Boston	Sold Liverpool, 1863.	1854-1857	3	130.3	119	139
STARR KING (1854; 1,171 tons)	180	39	22.5	Baker & Morrill et al., Boston	Lost in Pacific, June 1862.	1854-1855	2	125	120	130
DARING (1855; 1,094 tons)	181	36	23	Bush & Comstock, Boston	Sold to British in 1865.	1855-1859	3	131.3	112	151
WAR HAWK (1855; 1,067 tons)	182	35.5	23	Bush & Comstock, Boston	Sold San Francisco, 1871; burned 1883.	1855-1859	4	137.5	129	148
BLACK PRINCE (1856; 1,061 tons)	180	36	22	Bush & Wildes, Boston	Lost North Atlantic, Feb. 1865.	1856-1860	3	153	148	160
REYNARD (1856; 1,051 tons)	182.5	37	23	Bush & Comstock, Boston	Sold to Canadians and went under British flag about 1878; listed 1886.	1856-1859	3	145.3	132	164
Total and averages—8 Jackman-built clippers (total tonnage, 8,040; average, 1,005 tons per ship)						1852-1860	21	136.2	112	164
C. *Built by Benjamin Dutton* (before he moved to Marblehead)										
VICTORY (1851; 670 tons)	151	31	16.5	Benj. A. Gould et al., Boston	Lost Cape Henry, Feb. 9, 1861.	1852-1855	4	152.7	134	190
Total and averages—24 Newburyport-built clippers (total tonnage, 23,876)						1852-1860	29	138.9	112	190
D. *Built at Amesbury, Mass., on the Merrimac River*										
WILDFIRE (bark; 1853; 338 tons)	128.3	27.3	10.5	Peter A. Hargous, New York	In 1853 made record run of 14 days, Boston to Gibraltar.	—	—	—	—	—
Total and averages of 25 clippers built on the Merrimac River (total tonnage, 24,214)						1852-1860	29	138.9	112	190

Recapitulation

Name of Builder	Number of Clippers Built	During Years	Total Registered Tonnage	Average Tonnage per Ship
Currier & Townsend (including one vessel credited to J. Currier and one to N. Currier, Jr.)	15	1850-1858	15,166	1,011
George W. Jackman, Jr.	8	1852-1856	8,040	1,005
Benjamin Dutton	1	1851	670	670
Amesbury (Merrimac)	1	1853	338	338
Total	25	1850-1858	24,214	968

The Newburyport-built Jackman clippers were not fast in the California run, and it is generally felt that Down East influences affected the sharpness of the models and moderated the sail plans so that Merrimac clippers were more like the Bath "half clipper" or — as Captain Samuels said of the *Dreadnought* — a "semi-clipper." No Newburyport-built "clipper" was outstandingly fast, but on the other hand no ship could be separated from the rest and branded particularly slow. Considering the cargo carried, the condition in which the cargo was delivered, the low cost of repairs to hull and spars, and the absence of lay-ups in foreign ports for refitting, the record of Merrimac clippers, while not emotionally appealing in a speed-crazy era, must have furnished some ultimate economic solace to the pocketbooks of hardheaded, thrifty owners.

Currier & Townsend was the leading shipbuilding firm of Newburyport during the clipper ship decade, and it was organized around the Currier who had employed McKay "and given the Scotchman from Canada a good chance" in the early forties. Long after Donald McKay had built his last wooden ship, his shipyard had closed, and his star had waned in East Boston, Mass., a member of the Currier family of Newburyport on the Merrimac (John Currier, Jr., who commenced building "on his own" in 1831) was "going strong," building ships, and making money. When the soundly designed Bath, Maine, type of Down Easter *Jabez Howes* was launched into the Merrimac River in October 1877 (over eight years after Donald McKay built his last vessel and twenty-one years after his virtual retirement of 1856 from the building of wood sail), it was announced, "This fine ship is the ninety-third vessel built by John Currier, Jr., of Newburyport." But the *Jabez Howes* was not the last big ship of John Currier, Jr. He continued building and launched the fine large Down Easter *John Currier* in October 1882. As before mentioned, another of the Currier family, George E., is credited by American historians with building in 1883, at Newburyport, the Down Easter *Mary L. Cushing* of 1,650 gross tons register — the last full-rigged ship built in Massachusetts.

The British marine writer Basil Lubbock, in his book entitled THE DOWN EASTERS — AMERICAN DEEP-WATER SAILING SHIPS, 1869-1929, says that the little speedy wood bark *Adam W. Spies* of 1,232 tons (length 185 ft., beam 38.3 ft., depth 22.7 ft.) was built at Newburyport, Mass., in 1884 for J. Cautillion. He writes: "She might almost be said to have been clipper-built, for speed rather than capacity for cargo was evidently the desire of her owner. She had a tremendously tall sail plan; whilst loading coal at Newcastle, N.S.W., in December, 1888, she was the tallest ship in port out of a fleet of 151 vessels, most of which registered considerably more than her tonnage. On this occasion she made the run from Newcastle to Hong Kong in 31 days, a record which has only been beaten by the famous [extreme] tea clipper, *Thermopylae*." Lubbock's description of the *Adam W. Spies* is not that of a Down Easter and positively not of a Currier-built or Merrimac-built craft.

Currier and Townsend did not build clippers, as did George W. Jackman, Jr., primarily for the California trade. They were more packet-ship-minded and dreamed of a fleet of fast medium-full and medium-sparred and canvased ships in the transatlantic service to fight off the competition of British iron steam. As a result, they tied up with New York transatlantic sailing packet interests (David Ogden, Morgan, et al.) and in the years 1851-1854 built the *Racer, Highflyer, Dreadnought,* and *Driver* — a fine quartet of ships, but ill-fated.

The *Racer,* the first clipper type of packet ever built, and the *Highflyer* made voyages in the profitable California around-the-Horn service. Built for the transatlantic sailing packet fleet and intended to operate under the Red Cross Line, these vessels were diverted to other trades; for evidently that line was indifferently managed as far as catering to the demands of the Western Ocean packet service was concerned and never became the factor in transatlantic trade that its promoters had anticipated. It had no regular ships and no regular sailings, and soon the Red Cross Line centered on one packet, the *Dreadnought.* Whether it was the superior quality of design and construction of Currier & Townsend's *Dreadnought* or the resourceful driving force, persistency, executive ability, seamanship, and good luck of

her command, Capt. Samuel Samuels — or a combination of both ship and captain — the fact remains that the *Dreadnought* made a wonderful name for herself as a sailing packet in the fifties and sixties. If there had been four *Dreadnoughts* commanded by four Captain Samuels' of equal luck, the story of the Red Cross Line would have been very different. The *Highflyer* sailed in late 1855 from San Francisco for Hong Kong and was never heard of again. The *Driver* was lost in February 1856 with all hands, passengers and crew, 372 all told. On May 6, 1856, the *Racer* was wrecked on the coast of Ireland. One after another, splendid, new Red Cross ships disappeared until, within the space of a few months, only the *Dreadnought*, with her indomitable captain, remained.

The *Dreadnought* has been described by enthusiastic marine historians as "the most celebrated sailing ship that ever flew the American flag." Captain Samuels wrote of her, "She was never passed in anything over a four-knot breeze. She was what might be termed a semi-clipper and possessed the merit of being able to bear driving as long as her sails and spars would stand. By the sailors she was called 'The Wild Boat of the Atlantic,' while others called her 'The Flying Dutchman.' " The *Dreadnought* carried 2,000 tons of cargo with 1,413 tons register (old rule), made 345 miles in one day, and averaged 24½ days on her first eight westbound transatlantic passages. It is strange that this "Wild Boat of the Atlantic," removed from north transatlantic packet service (with Captain Samuels retired and no longer in command), on a passage around the usually "wild" Cape Horn, should be becalmed and later driven ashore by strong currents and wrecked in placid surroundings — no wind or sea.

Newburyport as an Important Builder of Down Easters, 1863-1883

Whereas the depression and panic of 1858 and national conditions leading to the Civil War (1861-1865) seriously upset shipbuilding on the Merrimac as they did everywhere else in America, Newburyport, Mass., holds with Bath, Maine, the distinction of fighting on with wood sail on the Seven Seas when most other wood shipbuilding centers had "thrown up the sponge" and left the trade to British iron steam. The following table gives a list of outstanding deep-sea square-rigged Down Easters built at Newburyport, Mass., during the years 1863-1883 inclusive. Sixteen of these twenty-three ships are identified as having been built by John Currier, Jr., of Newburyport, one of America's truly great wood shipbuilders. (It is possible that other ships built at Newburyport with no builder stated were constructed by him and that many others said to have been Newburyport-built ships, records of which cannot be verified, were built by Currier.) At the time of his death, John Currier, Jr., was referred to as a man who had built "a hundred ships."

Year Built	Name of Ship and Tonnage	Registered Dimensions in Feet			Builder	Owner
		Length	Beam	Depth		
1863	VALPARAISO (1,158 tons net)	190	37	24	John Currier, Jr.	Fabri & Chauncey, New York
1864	ELCANO (1,228 tons net)	196	38	24	John Currier, Jr.	John N. and William Cushing, Newburyport
1864	WINGED HUNTER (1,170 tons net)	191.5	36.4	23	John Currier, Jr.	Chas. Hill & Son, Boston
1865	TENNYSON (1,246 tons net)	196	36.5	24	John Currier, Jr.	William Graves, Newburyport

(Continued on next page)

Year Built	Name of Ship and Tonnage	Registered Dimensions in Feet			Builder	Owner
		Length	Beam	Depth		
1866	UNITED STATES (1,246 tons net)	197	36.5	24	John Currier, Jr.	Charles Lunt, Newburyport
1868	AUGUSTA (1,326 tons net)	200	37	24	John Currier, Jr.	E. S. Moseley et al.
1869	WHITTIER (1,297 tons net)	200	37	24	John Currier, Jr.	John N. and William Cushing, Newburyport
1870	IMPORTER (1,216 tons net)	196.5	36.2	23.7	John Currier, Jr.	Sumner, Swasey & Currier, Newburyport
1873	THOMAS DANA (1,445 tons gross)	203.4	39.4	24.2	John Currier, Jr.	W. H. Lincoln & Co.
1873	NEARCHUS (1,315 tons gross)	199.1	37.3	24.2	John Currier, Jr.	Stephan, of Bremen
1874	EXPORTER (1,369 tons gross)	199	38.2	24	George W. Jackman, Jr.	Sumner, Swasey & Currier, Newburyport
1874	SUSAN GILMORE (1,204 tons net)	190	36	23	Atkinson & Fillmore	Gilmore, Kingsbury & Co., Boston
1874	LANDSEER (1,418 tons gross)	200.4	39.1	24.2	George W. Jackman, Jr.	Charles W. Lord
1875	REPORTER (1,250 tons net)	190	37	23.5	George W. Jackman, Jr.	Sumner, Swasey & Currier, Newburyport
1875	BROWN BROTHERS (1,420 tons net)	208	40	24	Atkinson & Fillmore	Searsport, Maine, parties
1875	BIG BONANZA (1,399 tons net)	210.2	40.2	24	John Currier, Jr.	James Madison, San Francisco
1875	DANIEL I. TENNEY (1,686 tons gross)	212.3	40.3	22	John Currier, Jr.	W. Currier, Newburyport
1876	FARRAGUT (1,549 tons net)	212.6	40	25.2	John Currier, Jr.	Thayer & Lincoln, Boston
1877	JABEZ HOWES (1,581 tons net)	218.7	40.1	26	John Currier, Jr.	George Howes & Co., New York and San Francisco
1878	McLAURIN (1,374 tons gross)	200.7	39	21	Atkinson & Fillmore	Capt. McLaurin Pickering, Boston
1878	FRANK N. THAYER (No. 2; 1,648 tons gross)	220	40	26.2	John Currier, Jr.	Thayer & Lincoln, Boston
1882	JOHN CURRIER (1,945 tons gross)	235.7	42	26.7	John Currier, Jr.	Thayer & Lincoln et al., Boston
1883	MARY L. CUSHING (1,650 tons gross)	228.6	40.3	25.6	George E. Currier	Recorded as John M. Cushing, Newburyport

The *Valparaiso* was a good carrier and a fast sailer and made money for her owners. One series of voyages was remarkable. Leaving San Francisco in August 1868, she ran to New York in 96 days, then back to San Francisco in 116 days, thence to New York in 117 days, back again to San Francisco in 108 days, then to New York in 111 days, back to San Francisco in 114 days, then to Liverpool in 110 days, and back once more to San Francisco from Newport, Wales, in 107 days. This would have been a wonderful sailing performance for an extreme clipper. The average time of four westbound around-the-Horn passages was only 111¼ days (fastest, 108 days; slowest, 116 days) and for four eastward passages 108½ days (fastest, 96 days; slowest, 117 days). The total gross time taken for these four round voyages was 3 years 5 months 11 days, and the net sailing time at sea was 2 years 4 months 28 days. One of the voyages of the *Valparaiso* from New York to San Francisco and return was accomplished in 8 months 14 days and two others in less than nine months each. During the calendar year of 1882, when nineteen years old, she passed twice through the Golden Gate on passages from Europe — an unusual occurrence. In that year, she ran from San Francisco to St. Nazaire in 111 days and then returned around the Horn westbound in the reported time of only 106 days at sea. The *Valparaiso* was sold to the Germans in 1883, renamed *Caroline,* and put in transatlantic trade.

The ship *Elcano* was built for the East India trade and proved to be a good sailer and a successful ship. Her most spectacular sailing performance was a run, in ballast, across the Atlantic from Havre to New York in only 16½ days during the winter of 1879-1880. After eighteen years' service under the American flag, she was sold to the Germans in 1882. The *Winged Hunter* was wrongly named; she was a full-modeled and relatively slow ship. The *Tennyson* was built for merchants extensively engaged in trade with India. She made an eastbound voyage around the Horn from San Francisco to Liverpool in 118 days, on one passage from Hong Kong to San Francisco had 565 coolies aboard, and on her last voyage took a cargo of ice from Boston to Madras and Calcutta. Returning home on February 22, 1873, when eight years old, she foundered during a violent hurricane south of Mauritius. The *United States* was a well-built and expensive ship (sold by Currier, her builder, for $100,000). She operated with success as a general trader, but on September 18, 1876, when ten years old, she was destroyed by fire when southeast of Cape Horn bound to San Francisco from Liverpool.

The *Augusta* was "a lean and narrow ship," her model being classified as that of a "medium clipper." She was employed in the Indian trade and evidently never came up to her builder's and owners' expectations for speed, as she made no fast passages and her voyages were made in only "fair average time." The *Whittier* traded with Australia, India, and the Philippines — generally from Liverpool. She made one passage around Cape Horn westward from New York to San Francisco, and that was a disastrous one. She sailed from New York March 22, 1875, and on May 16 fire was discovered in the cargo of the fore hold. The ship was put into Montevideo, the fire extinguished, the cargo checked, and most of it reloaded after necessary repairs to hull were made; leaving Montevideo October 6, the *Whittier* arrived at San Francisco on January 4, 1876, 288 days out from New York. On July 14, 1880, when eleven years old, the ship was lost by striking Saracen Reef, off the Borneo coast, while bound from Batavia to Cebu. The *Importer* was another "lean ship," but she made only average voyages; however, it is said that she was a successful ship and "paid for herself in four years." She was built for the East Indian trade and made only one Cape Horn passage — a run from New York to San Francisco in 1875 in 119 days. The *Importer* was changed to a bark in 1883 and in 1889, when nineteen years old, was sold to the Germans and renamed *F. E. Hagenmeyer.*

The *Exporter* was described when built as "a medium clipper with sharp entrance lines, flaring bow, and a good long run aft." Her performances under canvas were disappointing, as she did not sail as fast as a "part clipper" was expected to do. She traded generally between eastern Atlantic ports and the East Indies, most of her voyages being to Calcutta and Bombay. She cannot be deemed a successful ship and was often laid up. After being laid up and offered for sale in London in 1894, the *Exporter* was finally sold to the Norwegians for less than eight thousand dollars. In 1908 she was still in existence as the Italian bark *Fantasie,* but the next year was dropped from the registry. It is said that the *Exporter* was the last full-rigged ship owned in Newburyport. The *Susan Gilmore* was an ordinary ship and an ordinary sailer that, most of her life, was engaged in the coal and case oil trade with the Far East. On July 3, 1884, when a scant ten years of age, the *"Gilmore,"* in tow during a hard blow, parted the towing hawser, went ashore at Nobby's Head at the entrance of Newcastle Harbor, Australia, and became a total loss.

The *Brown Brothers* was one of several ships built at Newburyport for owners of Searsport, Maine (on the Penobscot), itself a one-time important shipbuilding town, but lacking in depth of water to launch and float large vessels or those of even ordinary size required for trading in the seventies and on. At times, jealousy among the smaller marine centers of Maine was aimed at Bath, which had shown its superiority so decidedly because of its natural advantages and had encouraged skilled artisans to settle there. When Searsport parties decided in the winter of 1874-1875 to build a big ship, they agreed on just two points: (1) she must be a very good ship — as good as could be built; (2) she must not be built in Bath, Maine, or on the Kennebec River. Apparently, Searsport citizens cared nothing about patron-

izing state of Maine industries, employing Maine labor, paying Maine taxes, or "buying Maine." Capt. Daniel S. Goodell, Sr., was sent around the country and, it is said, had the plans for the new ship drawn by New York designers. As there were no first-class wood ship designers and builders in New York in 1874-1875, it is not surprising that Captain Goodell "finally fetched up at Newburyport, Mass." (the closest that he could go to Maine and the Piscataqua, which in shipbuilding can be considered as part of Maine), and there contracted with Atkinson & Fillmore, competent firm of builders, to construct a ship to be named *Brown Brothers.* No vessel was ever more fussily supervised in building. Captain Goodell — with Bath shipbuilders, in his mind, constantly grinning at him — employed master builders to supervise workmanship and experts to pass on all materials, and the yard carried the red tape of a government job. The carpentry bills reached $83,000, and the ship cost her owners (bare) $110,000.

The *Brown Brothers* was especially built for carrying large timbers, including long and big-diameter poles for masting. She was named after the officials of the Brown Brothers Lumber Company. The vessel was not fast, and for her size and deadweight capacity she proved to be merely "an average sailer." She made one good run around the Horn eastbound from the Golden Gate to Havre in 104 days and from San Francisco to the equator in the Atlantic in 69 days. In 1877 she made a passage from Cardiff to Hong Kong in 99 days. The *Brown Brothers,* when eleven years old, was sold to Bremen parties and, after being transferred to German registry, was renamed *Columbus.*

The *Big Bonanza* was a sturdy, well-built ship that operated under canvas for thirty-four years and then for eleven years more as a towing barge. Her last trip was a tow in 1920 from San Francisco to the Hawaiian Islands and return, following which, at the ripe old age of forty-five years, she was laid up and disintegrated from age and neglect. The vessel was a good carrier and "a fair average sailer." The *Farragut* was reported, when launched in September 1876, as "the 92nd vessel built by John Currier, Jr., at Newburyport, Mass." Her first round voyage was a passage around the Horn westbound from New York to San Francisco in 124 days; thence 46 days to Manila, followed by a run of 114 days to Boston. On the next two voyages, she took ice from Boston to Indian ports, the first one being negotiated in 106 days to Madras. On her fourth voyage, she made a westward around-the-Horn passage to the Golden Gate from New York in 135 days and returned to Queenstown in the North Atlantic in 114 days. The other passages of the vessel were generally slower than average; but, all in all, she was a fair performer under canvas and, it is said, proved to be "a successful, money-making ship." On January 20, 1888, the *Farragut,* when about eleven and a half years old, sailed from Calcutta for New York with twenty-five persons aboard (including the captain's family), and nothing definite has been heard of her or of those aboard her since that time.

The *Jabez Howes* was a well-built ship of rather sharp model for her day. Although classified as "a lean ship," she carried rather good cargoes and, it is said, loaded 2,250 tons (or 1.36 times her net registered tonnage) on a passage around the Horn and 2,600 tons of coal in the Pacific coastwise trade. It was generally felt by contemporary marine interests that the *Jabez Howes* was Newburyport's best merchant ship built in the seventies and ranked close behind such famous Massachusetts ships as the *Great Admiral, South American,* and *North American* and, later, the Bath-built leading Down Easters of all time — the *Henry B. Hyde* and *A. G. Ropes.* The *Jabez Howes* made some fast passages. On her first run eastward around the Horn, she beat the Boston ship *Governor Goodwin* in a matched race and in 1893 beat the big full-bodied Sewall four-masted shipentines *Susquehanna* and *Roanoke* in a westbound passage to San Francisco with a fast run out in 106 days. (This was to be expected, for the Sewall ships were built to carry tremendous cargoes and not for speed; the "*Howes*" was designed as "a speedy good carrier.") The *Jabez Howes* made seventeen westbound passages around the Horn to San Francisco and two to Southern California; she averaged 126½ days on these runs, the two fastest being made in 106 and 109 days. Eastbound, her eighteen passages from the Golden Gate to North Atlantic ports averaged 110 days, the

fastest being runs to New York in 95, 97, 100, and 101 days. She made one Cape of Good Hope voyage, going from New York to Melbourne in 1887 in 80 days. The *"Howes"* made her last rounding of the Horn in 1899; from 1900 to 1907, she carried lumber on the Pacific. In 1907, after a round voyage between Puget Sound and South Africa, she was acquired by the Columbia River Packers Association for its Alaskan salmon canneries. While engaged in this service, she was driven ashore in a gale at Chignik on April 17, 1911, and became a total loss after an active career of about thirty-four years.

The ship *McLaurin* was modeled for speed rather than large deadweight capacity, and she was built for the China and East India trade. She proved to be a well-constructed ship, somewhat unfortunate as to weather and the obtaining of cargoes, and she did no fast sailing. The *McLaurin* is credited with a run, in ballast, from Yokohama to San Francisco in 28 days; thence, loaded with wheat, to Queenstown in 111 days. (The outward passage to Yokohama had been 116 days from Cardiff, Wales, and 37 days from Anjer, during which she experienced a cyclone and lost her mizzenmast.) After a long period of lay-up, she was sold to L. A. Pederson, of San Francisco, who operated her in the Alaska salmon cannery industry until 1922, when she was laid up and finally put out of commission. The vessel was burned for her metal in 1927, when forty-nine years of age.

The *Frank N. Thayer (II)* is more famous because of her surprisingly tragic end than for the making of any unusually good voyages. On November 1, 1885, when seven years old, she sailed from Manila for New York with Captain Clarke, his wife and young daughter, the usual mates, and sixteen men before the mast, two of whom were Filipinos and became troublesome from the start. One night these Manila sailors ran amuck, stabbed the first and second mates to death, and cut up Captain Clarke so badly that he was left for dead; they then killed the quartermaster (or helmsman), carpenter, and lookout, stabbed four of the seamen, drove the rest of the crew to their quarters, and barricaded the forecastle. Three days later, a seaman who was hiding in the cabin, firing at random around the deck with the captain's pistol, shot one of the Filipinos, who either jumped overboard or fell into the sea. His mate ran forward out of range of the gun firing from the poop, set the hemp cargo afire, and then jumped into the sea. Efforts to control the fire were futile; the two ship's boats were hastily provisioned and launched, but one promptly capsized and was lost. However, the second boat safely carried the captain and his family and the small number of surviving men; after six days under sail, they made land.

It was said at the time of launching the *John Currier,* in October 1882, that she was the finest ship ever built at Newburyport; she was named after her builder and Newburyport's all-time leading shipbuilder, who launched at least ninety-five vessels. The *"Currier"* was a Down Easter in general design — model and sail plan. She was considered a good carrier, and she made fair passages. Some of her voyages showed very good speed, such as the run in 1902 from Puget Sound to Cape Town, South Africa, in 76 days; thence to Newcastle, N.S.W., Australia, in 30 days, followed by a run to Honolulu in 35 days, on which she was detained by lack of wind two or three days at the end of the voyage with Oahu in sight. The *John Currier* was not a fortunate ship in avoiding accidents; she had many mishaps, on some of which, it has been said, "her escape from total destruction was almost miraculous." The *"Currier"* ended her career in the salmon packing or cannery trade after an intermediate period as a Pacific export lumber carrier. On August 9, 1907, when twenty-five years old, she was driven ashore in a gale at Nelson's Lagoon, Alaska, and became a total loss.

The *Mary L. Cushing* — the last full-rigged ship built in Massachusetts — was launched April 1883 and constructed by George E. Currier. The *"Cushing"* was built a year before the *Henry B. Hyde* and *A. G. Ropes* (the finest Down Easters of all time, which were launched from Bath, Maine, shipyards in 1884), and, strange as it may seem for a ship generally known as "the Merrimac River's last Down Easter," the *"Cushing"* was never employed in the Cape Horn trade. Prior to her purchase in May 1900 for carrying lumber on the Pacific, all her voyages were to the Far East. In the Pacific service, she loaded lumber at Puget Sound for

Australia or South Africa and generally returned to American West Coast ports or Honolulu with coal. Her last passage was a run from Newcastle, Australia, to Mazatlan, Mexico, in the record time of 53 days; other than this passage, there is no evidence that the *"Cushing"* did any fast sailing. Both her cargo-carrying capacity and her speed under canvas were considered average. She was originally a handsome vessel; later, her skysails were removed, and a spike bowsprit displaced her bowsprit and jib boom. In July 1902, she was re-rigged as a bark. Soon after the arrival of the *Mary L. Cushing,* coal laden, at Mazatlan on August 18, 1906, a heavy gale, which sprang up, caused the ship to drag her anchors and go ashore, where she became a total wreck after a life of twenty-three years at sea.

A Summary of the Number and Tonnage of Vessels Built on the Merrimac

Many more vessels were built on the Merrimac than shown on the available and preserved customhouse lists of registered (for foreign trade) and enrolled vessels. Registers between the years 1789 and 1793 have been lost, but the record of registered vessels must of necessity be incomplete, as many vessels built for owners in other ports were not registered at Newburyport. John J. Currier, in HISTORICAL SKETCH OF SHIP BUILDING ON THE MERRIMAC RIVER (1877), gives a list of 64 vessels totaling 38,933 tons that are known to have been built on the banks of the Merrimac, but that do not appear in the customhouse records of Newburyport, Mass., or of the district, and he rightly adds: "Many others, doubtless, should be added to make a list [of Merrimac-built vessels] full and complete." As an illustration of omissions in the Newburyport customhouse records, the following ships built by one local builder, George W. Jackman, Jr., in his Merrimac Street shipyard during the years 1850-1864 do not appear therein:

Year Built	Rig	Name	Tonnage	Year Built	Rig	Name	Tonnage
1850	Ship	ARAB	525	1855	Ship	WAR HAWK	1,060
1851	Ship	HUSSAR	725	1856	Ship	DARING	1,070
1853	Ship	WHISTLER	820	1857	Ship	REYNARD	1,051
1854	Ship	BLACK PRINCE	1,050	1858	Ship	RENOWN	1,040
1854	Ship	STARR KING	1,170	1864	Ship	FEAR NOT	1,012
1855	Ship	CHARMER	1,060				
				Also many other vessels aggregating well over 8,000 tons during the years 1860-1867 inclusive.			

John J. Currier tabulates 1,089 vessels with a registered tonnage totaling 310,044 tons and an enrolled tonnage of 33,379 tons up to 1876 according to the available and preserved records of the Newburyport, Mass., customhouse. George Francis Dow, in THE SAILING SHIPS OF NEW ENGLAND, says:

> During the hundred years ending with 1880, over 1,600 vessels, large enough to be registered, were built on the Merrimac River, measuring over 380,000 tons and not including a large number of small fishing craft. These vessels were built in the following towns: Newbury, 473; Newburyport, 427; Salisbury, 291; Amesbury, 256; Haverhill, 120; Bradford, 30; Rowley, 2; Ipswich, 2. To this list should be added an unknown number of vessels delivered on order to other ports in the United States and registered there. Vessels were also built on foreign order that were not registered at the Newburyport Custom House.

XIV.

PORTSMOUTH, NEW HAMPSHIRE, AND THE PISCATAQUA

Shipping and Shipbuilding during the Revolution

IN EARLY DAYS, shipping credited to Portsmouth, N.H., refers more accurately to the Piscataqua River and its tributaries. The lower east bank of the Piscataqua is in the state of Maine, and shipbuilding in colonial times and during the infancy of the young republic in Kittery and Eliot, Maine, being Piscataqua construction, was grouped with that of Portsmouth and the localities on the New Hampshire side of the river. The Piscataqua, a noble stream, was conspicuous in the early history of the country and was the only navigable river of note between the Merrimac and Kennebec. The Merrimac, with Newbury at its mouth, was deemed a Massachusetts river, but the Piscataqua was considered a New Hampshire stream notwithstanding that one of its banks was in the territory of Maine. For a long period of time, Portsmouth, N.H., was the most important seaport east of Boston, and its influence extended from the Merrimac to the port of Falmouth, Maine (the predecessor of Portland), which had no navigable river but was a shipping center of prominence. Later, the Saco and Kennebunk rivers in Maine developed to be important shipbuilding and shipping centers, and gradually such Maine coast towns as Wells and York became distinctly Maine marine communities and independent of Portsmouth, N.H., but to this day Kittery, Maine, being on the Piscataqua, is generally considered as inseparable from Portsmouth, N.H.

During the Revolution, the seal of New Hampshire was somewhat midway in design between the seals of Massachusetts and Maine and showed both a codfish and a pine tree. It is significant, however, that the independent state has had, from the first, a seal showing a ship on the stocks notwithstanding the fact that New Hampshire, as far as geographical area and setting are concerned, is an inland state with the smallest usable coast line of any state of the Union that has any ocean frontage.

Piscataqua shipping and shipbuilding naturally suffered during the Revolution. In 1778, Portsmouth — anxious to decrease taxes — reported that of the 12,000 tons of shipping owned before the war, only 800 tons remained; the following year it was undeniably still less, and we read, "At least seven-eighths of the shipping which sailed from this port since last fall has since been taken or lost." Some trading ships were still built in the Piscataqua region, for the papers carried advertisements of Piscataqua-built vessels — new as well as old. However, there was little demand for merchant tonnage, for insurance policies preserved in the County Records Building, Exeter, N.H., show rates of from 40 to 70 per cent (premiums payable in lawful money or West India rum). Portsmouth did build three good vessels for the Continental Navy during the war and with her upriver sister towns built, manned, and took to sea many privateers, which "not only preyed on British commerce but also made huge amounts of money for their practical, if not piratical, owners."

On December 11, 1775, the Continental Congress decided to build thirteen frigates, and one of the largest, a 32-gun vessel to be named the *Raleigh,* was assigned to Portsmouth. John

Langdon, the government representative deputized to direct the building, contracted with three Portsmouth master builders, Hackett, Hill, and Paul, to do the work and with Thompson to supervise the construction. James Hackett was the leading master shipwright of Portsmouth, and Thomas Thompson was a well-known Portsmouth shipbuilder and master, who was placed in command of the ship when she was completed. The keel of the *Raleigh* was laid at Rindge's Wharf on March 21, 1776, and the frigate was launched on May 21, after a period of only sixty-one days, Sundays included. The vessel was of 696 tons and measured 131.5 ft. length on the gun deck, 34.5 ft. beam, and 11 ft. depth of hold. Her hull construction was rushed with enthusiasm in almost record time for a vessel of her size, but after launching the *Raleigh,* while waiting for her armament, was idle about a year and a half before putting to sea. When she was finally supplied by the government with guns, they came from Connecticut and not from either Pennsylvania or Rhode Island, which had contracted to make them. The *Raleigh,* described by contemporaries as a "28-gun frigate," proved to be a well-built and very fast ship. Unfortunately, she ran ashore on Wooden Ball Island, off the Maine coast, in September 1778 after a seven-hour running fight with two British frigates and was lost to the American Navy. The English gained possession of her, and she was so highly considered by the officers of the British fleet that, when the ship was at a navy dockyard, the British Admiralty "took off her lines with great care and measured in detail the ship's hull, spars, sails, and important gear so they could be copied in the building of fast frigates for the Royal Navy."

The *Ranger,* a 20-gun sloop of war of 308 tons, was launched from a yard on Langdon's Island at Portsmouth in May 1777 and followed the *Raleigh* into the water by about a year. She is said to have been built in 114 days and to have been designed by William Hackett, a cousin of James Hackett, the master builder. Capt. John Paul Jones was appointed to her command. The *Ranger* fought well and took many prizes, but on May 12, 1780, she was captured at Charleston, S.C., by a large British squadron. Among the vessels, by the irony of fate, was the Portsmouth-built frigate *Raleigh,* which the English had refloated, repaired, and commissioned as a unit of the Royal Navy. The *Ranger* was modeled after the Brittany privateers and smugglers and the fast-sailing French 200- and 300-tonners, which gave Americans ideas in regard to both hull and rig, and they were used along the entire American coast line to produce speedy privateers and letter-of-marque brigs and topsail schooners. The *Ranger,* using spars intended for a much larger vessel and being in some respects crank and unbalanced, was, nevertheless, the same type of craft in all essentials, and in appearance and performance, as that which later became known as the "Baltimore clipper."

The Continental Congress, in 1776, ordered the construction of three 74-gun ships of the line, and the *America,* built at Portsmouth, was the only one of the three that was completed. Two months after launching, she was presented by Congress to Louis XVI of France to express the appreciation of America for the help of its ally and, evidently, to replace in the French Navy the French ship-of-the-line *Magnifique,* which had been run aground and lost in Boston Harbor. The *America* was the first ship of the line built by the American Government and, it was said, "the largest 74-gun ship of her day." Her construction was a long drawn-out affair, quite different from the rapid building of the *Raleigh.* James Hackett was the builder, assisted by master shipwright Benjamin Remick, William Hanscomb, and William Hackett—the designer. She was laid down in 1777, but "with only twenty men in the yard construction was slow." For much of 1778, work was suspended because of lack of funds; but in June 1779, Congress acted to have work resumed and pushed, and once more Capt. John Paul Jones was ordered to Portsmouth. Upon arrival, he found the vessel in frame and planking barely started; only two dozen men were at work on the ship, and materials needed for construction were lacking. It was no wonder that Captain Jones was exasperated, for he had been told that the *America* was about ready for launching and that his job was to get the ship ready for sea. It was not until November 5, 1782, over five years from the time that actual building commenced, that the *America* was put into the water; she was not ready for sea

until May 1783—almost seven years after Congress had ordered her construction. Contemporary comment regarding this ship asserted that she was "not inferior in appearance, design, or workmanship to any vessel afloat." (Another fast sailing vessel named *America*—which was not a naval vessel—was built at Portsmouth, N.H., in the early nineteenth century. This merchantman, one of many fine ships built in the United States to bear the name, was of 346.3 tons register with a measured length of 107 ft. and a beam of 27 ft.; she was constructed by contract for George A. Talbot and associates, New York.) Saltonstall says:

> Of Piscataqua's three continentals, the *Raleigh* appears to have been the fastest sailer for her size, the *Ranger* had the most colorful career, and the *America* was the largest. They were all built in Portsmouth, but in a very real sense each was the product of the whole Piscataqua district. Timber and masts came down to the yards from Newfields, Newmarket, and Berwick. Colonel Hackett [James Hackett, the master builder] lived in Exeter. Kittery, Newcastle, Dover, Eliot, and Somersworth all contributed toward the building and manning of these three continental war vessels.

Upwards of a hundred privateers of from 50 to over 300 tons and manned by over three thousand men sailed out of Portsmouth during the Revolutionary War. It was a hazardous but very profitable business, and a great amount of damage was inflicted upon enemy shipping by these volunteer war vessels. British insurance rates "soared to prohibitive new heights," and convoys became necessary to protect British slow-sailing merchant ships from "the rebel's fast sea hornets." Many American craft were lost and crews captured or killed; but much harm was done to the British, and privateering proved so profitable to the American participants as to create almost a scandal.

The Revival of Shipbuilding Following the Peace of 1783

Defebaugh says that at the close of the war Portsmouth did not own a single square-rigged vessel in seaworthy condition. From the "Langdon Papers" (New Hampshire Historical Society), we learn that John Langdon contracted in March 1784 with James Hackett, of Exeter, for "a good well-built ship" to be delivered at Langdon's Island complete in all respects and ready for sea. The terms of payment are queer; for, within a year of the peace, the leading merchant of Portsmouth, in a contract with the outstanding master builder of the Piscataqua, stipulated payment in only part cash and the balance in rum, molasses, coffee, sugar, tea, and dry goods. John Peck acquired a shipyard at Spinney's Creek, Kittery, in 1784 and practiced his theories of model design. He built a boat for Boston people that was dubbed "Peck's-Folly." He is also credited with the construction of the *Empress of China,* intended for the China trade, for New York parties. It is said that in the 1780's a vessel could be built on the Piscataqua for "less than $25 per ton"; whereas the merchants of England, France, and Holland—the three great maritime nations—had to pay their builders $50 per ton. Building under these conditions naturally revived, and it was not long before Exeter, Berwick, and other upriver towns as well as Portsmouth and Kittery had vessels on the stocks. In the last decade of the eighteenth century, Piscataqua exports, consisting primarily of forest products, increased fourfold, and customs dues collected on imports trebled. The registered tonnage of vessels engaged in foreign trade increased from 12,521 in 1793 to 18,379 in 1801, and about sixteen thousand tons of shipping entered the port of Portsmouth per year.

At Dover, N.H., the fast brig *Maria and Eliza* of 215 tons was built in 1789 for Francis Boardman and Nathaniel West, of Salem, Mass. This vessel had a registered measured length of 83 ft., a beam of 24½ ft., and a depth of 12¼ ft. She was loftily sparred, carried a good spread of sail, and was a good light-draft carrier. But vessels were getting larger. Eliphalet

Giddings and Ephraim Robinson built at Exeter the 500-ton ship *Hercules* for Eliphalet Ladd in 1793, and it is said that a 900-ton ship was laid down at Portsmouth about 1791. We are further told that Exeter alone produced twenty-one vessels between 1791 and 1800 and that at the close of the century Portsmouth merchants owned and operated twenty-eight ships, one bark, forty-seven brigs, ten schooners, and two sloops—some eighty-eight vessels. Saltonstall writes: "Eight new ships were built in Piscataqua in 1790; twenty in 1791; and thirty-three ships over one hundred tons were owned there in 1791." According to the contemporary press, the *Hercules* was a three-decked, square-sterned ship built as an East Indiaman. She was by far the largest vessel ever constructed on the Squamscot and evidently was launched into the river sideways. As the vessel was built "at the head of tidewater," it was a difficult job to get her down to Portsmouth, which could be done only by "buoying her up with empty hogsheads."

In addition to the three continental war vessels *Raleigh, Ranger,* and *America* built at Portsmouth by James Hackett during the Revolutionary War, the New Hampshire GAZETTE mentions two other war craft, the *Portsmouth* and *Bellona,* as being built by Hackett on the Piscataqua during that period and gives the aggregate tonnage and armament of this quintet of vessels as 3,400 tons and 160 guns. During the years 1796 and 1799, James Hackett built at Portsmouth four more war vessels totaling 2,500 tons and 110 guns for the United States Government, which made a total of nine war vessels aggregating 5,900 tons and 270 guns. The GAZETTE editorially asks (August 20, 1799): "What naval constructor could show a nobler list? Whose workmanship will compare with Hackett's? Let the government examine the bills and determine whose are cheapest. An experienced, tried, faithful servant merits steady employ." The four vessels referred to as having been built by Hackett between 1796 and 1799 were the *Crescent, Scammel, Portsmouth II,* and *Congress.* The *Crescent* was a 32-gun frigate built by him at Portsmouth and presented by the United States to the dey of Algiers as a gesture looking toward more cordial relations. Adams, in ANNALS OF PORTSMOUTH, says that the *Crescent* was considered "the finest specimen of naval architecture that ever floated on the waters of the Piscataqua"; she was built in 1797. She sailed from Portsmouth in January 1798 and crossed to Algiers in 29 days. The *Scammel* was a 187-ton schooner built in 1798. She mounted 14 guns and was essentially a revenue cutter. The *Portsmouth,* also built in 1798, was a 24-gun ship of 593 tons burden carrying a crew of 220 men; she was constructed at a cost of $59,000.

Congress provided for the building of the 36-gun frigate *Congress* on Langdon's Island, Portsmouth, in 1794; but, because of improved conditions in the Mediterranean, work moved forward slowly and intermittently, so that the vessel was not launched until August 1799. The New Hampshire GAZETTE, issue of August 20, 1799, reporting the successful launching, gives the length of the vessel as 145 ft. keel; beam, 41 ft.; depth to upper deck, 26 ft. 7 in.; tonnage, 1,250 tons; armament, thirty-six 18-pounders. The GAZETTE adds that she "may easily carry 44 guns, or in fact be rendered equal to any 50 gun ship." This paper also rather surprisingly says of construction that had been notoriously slow because of lack of government interest and necessary funds: "Exactly 258 working days were employed in the building of this noble ship. The number of shipwrights never exceeded 100, and frequently did not average more than 60 per diem." We also read elsewhere: "During January 1799, some eighty men were employed on the frigate. They worked six days a week from dawn to dusk. In the morning they were allowed thirty minutes for breakfast, ten minutes at 11:00 A.M. for grog, and the usual hour at noon. Their wages ranged from $4.32 to $7.20 per week." The *Congress* sailed from Newport January 6, 1800, to serve with the *Essex* in convoying vessels in the East India trade to and from Batavia. She was dismasted and limped into Hampton Roads under jury rig in late February. After being re-rigged, the frigate sailed May 31 to relieve the *Constitution* on the West India station.

At Newmarket, N.H., on the Great Bay (about eleven miles inshore and to the west of Newcastle), a fast merchantman named *Grand Turk*—a common name around the turn of the century for square-rigged privateers and letter-of-marque brigs and ships—was built in

1806 for Jacob P. Girand, Andrew Foster, and other New Yorkers. This ship of 271 tons measured 90.6 ft. long and 26.2 ft. beam and was "very strongly built to carry guns and defend herself."

In the War of 1812, New Hampshire Sends Its Privateers to Sea While Shipbuilding and Commerce Slump

The United States Government purchased Dennet's Island in Portsmouth Harbor for a Navy Yard at the turn of the century, and henceforth the Piscataqua became a naval base and closely identified with the building, conditioning, and operation of United States naval vessels. What has been well termed "the Jeffersonian and Madisonian attempts at the peaceful coercion of England" caused a stagnation of trade and building during much of the early nineteenth century prior to the outbreak of war with England in 1812. The amount of Portsmouth floating tonnage engaged in foreign trade increased from 12,000 tons in 1793 to double that figure in 1810 notwithstanding the quasi-war, the decrees and acts of the British and French, and the American appeasement policy that culminated in the humiliating Jefferson embargo. However, the Piscataqua collections from customs dropped from $143,000 in 1800 to $100,000 in 1807 and sank suddenly—with the embargo—to $20,000 in 1808. The value of New Hampshire exports at this same period of collapse of foreign trade dropped from $680,000 (already well down from the high) to $125,000 in a year. The surprising, white-livered embargo that Jefferson's government saw fit to impose on all American foreign trade was said to be "an effort to force Britain by economic pressure rather than actual warfare to stop impressing American sailors." The embargo and all nonintercourse acts and policies failed and injured the self-humiliated young republic far more than they did Britain. Finally, the American people would no longer stand appeasement and being trodden upon or kicked about. They forced the repeal of the embargo, and once more self-respect asserted itself and was seen hand in hand with courage, which, even when woefully absent in the acts of the country's executives, always had been present in abundance in the souls of the people, particularly those constituting the marine fraternity.

Congress declared war on Britain in June 1812, and Governor William Plumer of New Hampshire, addressing the House of Representatives shortly thereafter, said: "The aggravated wrongs, the flagrant acts of injustice, the gross insults, inflicted by Britain on the United States, and their frequent repetition, have at length induced Congress, in vindication of our violated rights, to appeal to the last resort of injured nations." John Sullivan, however, in a later speech to the Friends of Peace in New Hampshire, said that, while the Madison administration had plunged the young nation into war "for the professed purpose of protecting the rights of our merchants," the whole mercantile interest from one end of the country to the other was against the war. The country was decidedly divided in its attitude toward the war. The South had never forgotten or forgiven the crude, dominating, and arbitrary attitude of the commander of the British frigate *Leopard* and his unprovoked gun attack on the U.S.S. *Chesapeake,* when incomplete and lying helpless, in an attempt to impress some seamen and actually take them by force from the crew of an American warship. Much of the country called the conflict "a war to stop impressment"; generally it was referred to as "Mr. Madison's war," but no matter what it was called or what it was, most of the shipping interests preferred the open hostilities of 1812-1815 to the humiliating peace and inactivity of the period of nonintercourse and the embargo. Naturally, foreign trade and construction of deep-sea tonnage again

slumped. Piscataqua exports, which had risen to $369,000 in 1811, stood at only one-twelfth of that two years later, and the tonnage registered in foreign trade in the same period dropped from 26,000 to 18,000 tons, or over 30 per cent. Privateering was again a popular channel through which the owners, officers, and crew of a ship could substantially express their patriotism; they took great risks, but, nevertheless, had an opportunity to make a lot of money.

The 74-gun ship-of-the-line *Washington* was built in 1814-1815 at Portsmouth by William Badger, then described as "the most experienced and reputable shipbuilder in Portsmouth." The keel, which was 155 ft. long, was laid in March 1814, and she was launched in July 1815, work having slowed up as soon as peace seemed imminent. She is said to have cost $335,000; when completed, the war being over, she was sent to the Mediterranean for three years, following which she returned to New York, where she was laid up "in ordinary." She was finally broken up in 1843 after a life of twenty-eight years, twenty-five of which were spent in inactivity.

Notwithstanding the existence of the Navy Yard at Portsmouth (N.H.) or Kittery (Maine), the real energy of the Piscataqua was spent in the building, financing, and operation of a good number of privateers. Some twenty or more were operating out of Portsmouth at the same time, and it is said that ten Piscataqua privateers captured over four hundred prizes. Four of them (the *Thomas, Fox, Harpy,* and *Squando*), with fifteen prizes, realized $2,250,000 as a result of their captures. There were not as many Piscataqua privateers during the War of 1812 as during the Revolution, but notwithstanding the shorter period (for the Peace Treaty of Ghent was signed on December 24, 1814), it is said that they made their owners and crew as much or more money. By the end of 1814, both England and the United States were tired of the war and wanted peace; England so that she could concentrate her energies on the European continent, America so that she could resume and develop legitimate ocean commerce.

Trade and Shipbuilding Improve Following 1817

A memorial dated January 7, 1817, prepared by fifty-five Piscataqua shipowners, shipbuilders, and merchants on "the present embarrassed condition of American navigation," says that not a single vessel was being built in New Hampshire that winter; that clearances for the West Indies in 1816 had been only 44 as against 103 in 1806; that import duties had declined during this period from $169,000 to $23,000; and that the tonnage built and registered per year in the district had dropped from 3,270 to only 1,176 tons. Conditions seem to have improved promptly; clearances for the West Indies advanced to 64 in 1817, and William Badger, William Curtis, William Hanscomb, and Robert Smith launched seven vessels. In 1818 twenty vessels were built in the district (three ships, six brigs, ten schooners, and one sloop), and 23,000 tons of merchant tonnage were owned in the port. Portsmouth continued to build ships during the early decades of the nineteenth century following the war with Britain. However, while a pronounced recovery was evident for a few years after the period of the embargo and war, foreign trade never again approached the magnitude of that enjoyed earlier in the century. The year 1822 marked the peak of post-war foreign trade; the volume was about twice that of 1816, but small in comparison with the volume of 1806. By 1840 the West Indies trade and most of the foreign trade on which the Piscataqua had flourished were practically dead. Forty-nine square-riggers (37 ships, 1 bark, and 11 brigs) and 150 fore-and-afters (147 schooners and 3 sloops) were owned in the district; also 2 steamboats. Of these 201 vessels, 35 were engaged in general freighting to foreign ports, only 3 were in the

West Indian and 2 in the East Indian trade, 1 was in the South American run, 1 in the whaling service, 63 were engaged in the coasting trade, and 96 were in the cod and mackerel fisheries.

Piscataqua shipyards were kept busy and were seemingly prosperous long after commerce began to dwindle and Portsmouth to decline as an important port. Saltonstall, in PORTS OF PISCATAQUA, says in referring to shipbuilding activities between 1819 and 1839:

> In this period an average of about four ships a year was constructed on the Piscataqua, a total of seventy-seven ships. Five barks, twenty-six brigs, sixty-seven schooners, and two sloops were locally built in the same period, bringing the grand total to one hundred and seventy-seven vessels, an average of about nine per year. Upriver yards still competed with Portsmouth and Kittery. Ninety-five of the vessels constructed between 1819 and 1839 were built in Portsmouth (including Badger's and Shapley's Island) and Kittery, while sixty-four were launched at South Berwick, Eliot, Dover, Durham, Newmarket, or Exeter. The other eighteen were mostly Hampton, Seabrook, or York vessels, not built on Piscataqua waters. The master-builders who produced the greater portion of these craft were George Raynes, whose ways sloped down into the North Millpond at Portsmouth; William and Samuel Badger, with their yards on the island to which they gave their name; Joseph Coe, busiest of the Durham builders; William Hanscom, an itinerant shipwright who launched vessels at South Berwick, Durham, and Shapley's Island; and Jacob Remick, who produced a dozen vessels at Kittery during the period concerned. Between forty and fifty master-builders took part in this business, a number which insured stiff competition.

Most of the Portsmouth builders named by Saltonstall were active during only the latter part of the period mentioned. In 1835 the fast trading ship *Hindoo* of 580 tons register was built at Portsmouth for Daniel Bacon et al., of Boston, Mass. This ship, later owned by Francis Burritt, of New York, had a length of 136 ft. and a beam of 30½ ft. In addition to making some fast passages, she proved to be a good carrier. Certain Portsmouth yards evidently moved quite energetically in the thirties, for the Portsmouth JOURNAL in 1836, reporting the launching of the ship *Isaac Newton* of 600 tons, built by Raynes & Neal for Goodwin & Coues, says that within two hours of the time the vessel had left the ways, "another keel was laid and the stem and stern posts raised for another ship of 700 tons." Sizable vessels were in demand for the transatlantic triangle trade—local produce to a southern port, thence cotton or tobacco to Europe, and iron or salt on the return passage. The New Hampshire GAZETTE of April 29, 1834, reported that the 520-ton ship *Portsmouth,* "recently built by George Raynes for Raynes & Neal," had cleared from Savannah "with 2,050 bales of cotton for Liverpool, weighing 673,756 pounds and valued at $83,546.42, being the largest cargo ever shipped from that port for a vessel of her tonnage."

As foreign trade diminished, Portsmouth revived its interest in the cod and mackerel fisheries, building and operating small schooners of some 20 to 60 tons. Capt. Thomas E. Oliver, of Newcastle, was interested in about a hundred such vessels. There was a little whaling interest (the Portsmouth Whaling Company was formed in 1832), but Portsmouth never became a real whaling port. Although more than twenty whalers were built at Piscataqua yards for New Bedford, Nantucket, Salem, and Boston owners, only four whaling ships (the *Ann Parry,* 348 tons; *Triton,* 344 tons; *Pocahontas,* 300 tons; and *Plato,* 240 tons) operated out of Portsmouth, and evidently only two (the *Ann Parry* and *Triton*) had been built on the Piscataqua. The last whaler out of Portsmouth was the *Ann Parry.* She had been built by William Badger on Badger's Island in 1825 as a general merchant vessel. She did well when put in the whaling trade, but in 1848 was sold for $3,600 to Salem parties who reconditioned her and sent her around the Horn in the early days of the California Gold Rush.

Although Portsmouth, N.H., with its Navy Yard, was not to realize the ambitious prediction of Chastellux that it would become to New England "what the other Portsmouth was to the old," it did build several war vessels of note following the close of the War of 1812 and prior to the secession of the southern states. Some few years after the completion of the *Washington,* another 74-gun ship of the line, renamed *New Hampshire,* was built of similar size and type. The *Porpoise* of 198 tons was built in 1820 at a cost of $25,000 to sail against

West Indian pirates. In the late twenties, the *Concord,* a 700-ton 18-gun sloop of war, was built, followed ten years later by the sloop-of-war *Preble.* The 50-gun frigate *Congress,* sunk in the Civil War by the rebel ironclad *Merrimac,* was built at the Kittery (Portsmouth) Navy Yard in the forties as were the sloops-of-war *Saratoga* and *Portsmouth* and the 6-gun side-wheeler *Saranac* of 1,446 tons, which cost approaching half a million dollars and was the first steam vessel built at the yard. In 1859 the screw steam sloop-of-war *Mohican* was built and in 1861 the generally similar but more famous U.S.S. *Kearsarge,* which tracked down and sank on Sunday, June 19, 1864, the Confederate raider and commerce destroyer *Alabama* off Cherbourg, France. Incidentally, several Portsmouth-built clippers and merchant sailers had been sunk or blockaded by this British-encouraged rebel raider of northern shipping, and the *Alabama's* last prize was the ship *Rockingham* of Portsmouth.

By mid-century ships had so increased in size that shipbuilding on the Piscataqua was practically confined to Portsmouth and vicinity. There was not a sufficient depth of water at the upriver yards of Exeter, Newmarket, Durham, Newfields, and Dover to launch the sizable clipper ships that were in demand and not water enough in all parts of the river to float them safely and economically to the ocean. In the sixth decade of the nineteenth century, Portsmouth constructed virtually all the Piscataqua-built ships; but of some 552 vessels launched into the Piscataqua and its tributaries between 1800 and 1860, only half (276) were constructed at Portsmouth, the remainder being built in upriver and other Piscataqua towns. The golden age of Piscataqua trade was the period between the end of the American Revolution and the War of 1812. Following "thirty thriving years," Piscataqua shipbuilding and foreign trade had declined steadily to the middle of the forties. Prior to the war with Britain (1812-1815), there were approximately three decades when "more ships were launched, more lumber and fish were exported, more fortunes were made than at any other time." All this was achieved in spite of British and French harassment, antagonism, and persecution, with the impressment of American sailors and confiscation of American ships; of wars between the powers which affected all trade on the Seven Seas; of the embargoes of 1794 and 1807; and of the American government's timid and humiliating appeasement policies that were destructive to American commerce.

The Piscataqua Launches Twenty-seven Real Clipper Ships, 1850-1859

The demand for good fast ships in the China and kindred trades in the forties, followed by the California Gold Rush and the sudden trade development with Australia incidental to the finding of gold on that continent and its rapid colonization, caused the shipowners of New York, Boston, and other active American ports "to look Down East" for some of their ships. It was known that the Maine (and New Hampshire) yards were near the timber, good shipwrights unspoiled by city life were available, and ships could be built cheaply and with good dispatch if the harsh winters did not interrupt the work too much. After years of virtual inactivity, approaching somnolence, Portsmouth quite suddenly came to life again as a shipbuilding town, and between 1843 and 1853 the annual tonnage of vessels built rose from less than one thousand to almost ten thousand tons. Saltonstall says, "The very ports which seemed about to force Portsmouth merchants out of business began to order more and more vessels from Piscataqua yards." Three up-to-date, aggressive as well as competent shipbuilding firms (George Raynes, Fernald & Pettigrew, and Tobey & Littlefield) were operating Portsmouth yards; other master builders were active and looking for work, such as Samuel Hanscomb, Jr.,

of Eliot, Maine, a few miles upstream, Samuel Badger, Daniel Moulton, E. G. Pearce, etc. The most important yards were practically within view of each other (Fernald & Pettigrew on the west of Badger's Island, George Raynes on Nobles Island, and Tobey & Littlefield opposite Nobles Island at the mouth of North Millpond), and the rivalry and competition among them were naturally keen. Of the twenty-seven real clipper ships built at Portsmouth, N.H. (and Eliot, Maine), from 1850 to 1859 inclusive, Boston owners took thirteen, New York seven, and some of the others hailed from Newburyport and Salem, Mass., and one from faraway New Orleans, La. At mid-century Portsmouth was evidently quite reconciled to the fact that it was no longer a major seaport as far as trading was concerned and that its day of foreign shipping and of merchants engaged in commerce on the Seven Seas was over. Its shipbuilders, however, struggled to keep their ways occupied. They built good ships with care, enthusiastically boosted their product, and sought the good will and patronage of the large shipping concerns of the big and active ports. The toast given at the launching at Portsmouth in 1851 of a prominent clipper ship, built for New York owners, is both eloquent and significant: "Portsmouth-built ships and New York merchants—the superiority of the one is equaled only by the enterprise of the other. Possessed of the former, the latter may safely defy the competition of the world."

During the clipper shipbuilding decade of 1850-1859, there were launched at Portsmouth, N.H., twenty-five clippers and on the Maine side of the river, in the general vicinity of Portsmouth, two other clippers, making a total of twenty-seven vessels of this type aggregating 30,292 tons register that were launched into the Piscataqua. George Raynes built eleven of these fine-lined, heavily canvased ships—aggregating 11,046 tons register—of which the largest were the *Witch of the Wave* (1,498 tons), built in 1851, and the *Sea Serpent* (1,402 tons), launched in 1850.

Fernald & Pettigrew (or Petigrew) built seven clippers aggregating 8,240 tons, the largest being the first, the *Typhoon* of 1,611 tons, built in 1851. The next largest sharp-modeled and heavily canvased ships built by this firm were the *Water Witch* of 1,204 tons, built in 1853, the *Noonday* of 1,189 tons, launched in 1855, and the long-lived *Dashing Wave* of 1,180 tons, built in 1853.

Tobey & Littlefield built three clippers at Portsmouth totaling 4,432 tons, the largest being the fast *Sierra Nevada* of 1,942 tons (the Piscataqua's largest vessel), built in 1854, a year after the firm had built the *Morning Light* of 1,713 tons. Samuel Hanscomb, Jr., built in 1851 the famous clipper *Nightingale* (1,066 tons) on the Eliot, Maine, shore of Long Reach, just below Mast Cove, three miles upstream from Badger's Island (where the Fernald & Pettigrew yard was located), and a year later laid down the smaller *Josephine* of 947 tons for Salem owners.

Other builders of clipper ships at Portsmouth, N.H., in the fifties were Samuel Badger, who in 1853 launched the *Granite State* of 1,108 tons, and E. G. Pearce, who built the *Charger* of 1,136 tons for Henry Hastings, Boston, in 1856. The *Morning Glory* of 1,119 tons was constructed in Portsmouth in 1854 for local owners headed by J. Goodwin, and the *Star of Hope* of 1,198 tons was launched the following year for Charles H. Coffin, of Newburyport, Mass., and associates.

The following table gives a list of the clipper ships built at Portsmouth, N.H., and Eliot, Maine, and launched into the Piscataqua during the clipper shipbuilding decade of 1850-1859 inclusive. The performances of the clippers in westbound passages around the Horn to California are set forth, and it will be seen that twenty-two of the twenty-seven clippers built on the banks of the Piscataqua entered the Cape Horn service and collectively made sixty-two passages westbound to the Golden Gate.

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860			
				Time in Days		
			Number	Average	Shortest	Longest
		A. *George Raynes*				
1850	ROMAN (775 tons)	Taylor and the Olyphants, New York	1	120	120	120
1850	SEA SERPENT (1,402 tons)	Grinnell, Minturn & Co., New York	6	123½	109	147
1851	WILD PIGEON (996 tons)	Olyphant & Co., New York	4	123	109	135
1851	WITCH OF THE WAVE (1,498 tons)	Glidden & Williams et al., Boston	3	119½	117	123
1852	FLEETWOOD (663 tons)	Sewall, Johnson & Co., Boston	1	130	130	130
1852	TINQUA (668 tons)	Olyphant & Co., New York	2	119	115	123
1853	WILD DUCK (860 tons)	Olyphant & Co., New York	3	130	129	132
1854	COEUR DE LION (1,098 tons)	W. F. Parrott et al., Boston	3	127½	119	134
1854	EMILY FARNUM (1,119 tons)	W. Jones & Co., Portsmouth	—	—	—	—
1856	WITCH OF THE WAVE II (1,020 tons)	Titcomb and Coffin, Newburyport	1	135	135	135
1859	SHOOTING STAR II (947 tons)	Reed, Wade & Co., Boston	1	142	142	142
1850-1859	Eleven ships totaling 11,046 registered tons—an average of 1,004 tons per ship		25	125	109	147
		B. *Fernald & Pettigrew*				
1851	TYPHOON (1,611 tons)	D. & A. Kingsland, New York	2	120	108	133
1852	RED ROVER (1,021 tons)	R. L. Taylor et al., New York	5	116½	109	124
1853	DASHING WAVE (1,180 tons)	Samuel Tilton & Co., Boston	6	121	107	141
1853	WATER WITCH (1,204 tons)	Stephen Tilton et al., Boston	2	172½	126	228
1854	EXPRESS (1,073 tons)	Peter Marcy, New Orleans	—	—	—	—
1854	MIDNIGHT (962 tons)	Henry Hastings, Boston	5	129½	117	144
1855	NOONDAY (1,189 tons)	Henry Hastings, Boston	3	127	117	139
1851-1855	Seven ships totaling 8,240 registered tons—an average of 1,177 tons per ship		23	127	107	228
		C. *Tobey & Littlefield*				
1853	MORNING LIGHT (1,713 tons)	Glidden & Williams, Boston	4	124	112	131
1854	OCEAN ROVER (777 tons)	R. H. Tucker et al., Boston	—	—	—	—
1854	SIERRA NEVADA (1,942 tons)	Glidden & Williams, Boston	4	121	98	140
1853-1854	Three ships totaling 4,432 registered tons—an average of 1,477 tons per ship		8	122½	98	140

(Continued on next page)

Year Built	Name and Registered Tonnage	Owner	Westbound Passages around the Horn to California, 1850-1860: Number	Time in Days: Average	Shortest	Longest
		D. *Samuel Hanscomb, Jr.* (yard at Eliot, Maine)				
1851	NIGHTINGALE (1,066 tons)	Sampson & Tappan, Boston	1	148	148	148
1852	JOSEPHINE (947 tons)	Gen. Jos. Andrews, Salem	1	147	147	147
1851-1852	Two ships totaling 2,013 registered tons—an average of 1,006 tons per ship		2	147½	147	148
		E. *Samuel Badger*				
1853	GRANITE STATE (1,108 tons)	Edw. Size and Capt. John Chase	—	—	—	—
		F. *E. G. Pearce*				
1856	CHARGER (1,136 tons)	Henry Hastings, Boston	3	122	117	124
		G. *Built at Portsmouth, N.H.—Builder Unidentified*				
1854	MORNING GLORY (1,119 tons)	J. Goodwin, Portsmouth, N.H.	—	—	—	—
1855	STAR OF HOPE (1,198 tons)	Chas. H. Coffin et al., Newburyport, Mass.	1	301	301	301
1853-1856	Four ships built by Badger, Pearce, and two unidentified builders totaling 4,561 registered tons—an average of 1,140 tons per ship		4	166½	117	301

Recapitulation

Years Built	Name of Builder	Number of Ships Built	Registered Tonnage: Total	Average per Ship	Westbound Passages around the Horn to California, 1850-1860: Number	Time in Days: Average	Shortest	Longest
1850-1859	George Raynes	11	11,046	1,004	25	125	109	147
1851-1855	Fernald & Pettigrew	7	8,240	1,177	23	127	107	228
1853-1854	Tobey & Littlefield	3	4,432	1,477	8	122½	98	140
1851-1852	Samuel Hanscomb, Jr.	2	2,013	1,006	2	147½	147	148
1853-1856	Miscellaneous	4	4,561	1,140	4	166½	117	301
1850-1859	Total	27	30,292	1,122	62	129	98	301

Some of the fastest clippers in the world were built at Portsmouth, N.H., and George Raynes, Fernald & Pettigrew, and Tobey & Littlefield all built ships that had good records in the Cape Horn California service and over other ocean trade routes. The *Red Rover,* built by Fernald & Pettigrew, with an average of 116½ days for five westbound passages to San Francisco, heads the performance list of Portsmouth-built clippers in the California trade. This is surprising, for the *Red Rover,* although known to be a consistently good fast sailer, made no sensational runs and was seldom in the public eye. Her best westbound around-the-Horn passage was a run of 109 days, but her longest was of only 124 days, and this was considered a good passage for any ship. (It was six days better than Maury's estimate of 130 days westbound over this course.) The next best averages of Portsmouth-built clippers over

the westbound Cape Horn route to California were as follows (only ships making two or more passages are included):

Name of Ship	Name of Builder	Number of Westward Passages	Average Length of Passages in Days	Fastest Passage in Days
RED ROVER	Fernald & Pettigrew	5	116½	109
TINQUA	George Raynes	2	119	115
WITCH OF THE WAVE	George Raynes	3	119½	117
TYPHOON	Fernald & Pettigrew	2	120	108
DASHING WAVE	Fernald & Pettigrew	6	121	107
SIERRA NEVADA	Tobey & Littlefield	4	121	98
CHARGER	E. G. Pearce	3	122	117
WILD PIGEON	George Raynes	4	123	109
SEA SERPENT	George Raynes	6	123½	109

The clipper ships built by George Raynes not only showed up well in speed averages in Cape Horn service but also made sailing records or near records over other ocean trade routes as follows:

TINQUA: *New York to point near the Atlantic equator*—13 days.

Sailed from New York November 24, 1852, and Capt. J. D. Whitmore reported on December 7, in Lat. 2-33 N. and Long. 31-10 W., as being 153 miles from the equator in only 13 days.

WITCH OF THE WAVE: 1. *Calcutta to Cape of Good Hope*—37 days.

Sailed from Saugor April 13, 1853.

Passed Cape of Good Hope May 20, 1853—a record as reported by Capt. Benjamin Tay.

2. *Calcutta to Boston*—81 days.

Sailed from Saugor April 13, 1853, and—continuing voyage mentioned above—arrived Boston July 3, 1853, a record.

It has been said of these runs of the *Witch of the Wave* from Calcutta to the Cape of Good Hope and to Boston, "A double record never equaled again by any ship under sail." (The *Typhoon*, built by Fernald & Pettigrew, of Portsmouth, N.H., equaled the first stage of the *Witch of the Wave's* record passage by also sailing from Saugor to the Cape in 37 days.)

SEA SERPENT: *Hong Kong to New York*—79 days.

Sailed from Hong Kong January 3, 1856.

Arrived New York March 22, 1856.

Capt. J. D. Whitmore reported "a fast and near record run of 79 days."

WILD PIGEON: 1. *Pisagua to New York*—51 days.

Sailed from Pisagua August 31, 1858.

Arrived New York October 21, 1858—a record as reported by Capt. P. N. Mayhew.

2. *Talcahuano to New York*—50 days.

Arrived New York April 28, 1860.

Capt. P. N. Mayhew reported "50 days from Talcahuano, the record."

Other clipper ships constructed at Portsmouth, N.H., in addition to showing up well in the Cape Horn service, did some very fast sailing on various trade routes of the Seven Seas. The *Typhoon* (built by Fernald & Pettigrew) equaled the record run between Calcutta and the Cape of Good Hope of the *Witch of the Wave* (built by George Raynes). The following outstandingly fast runs were made by the *Typhoon* and the *Sierra Nevada* (built by Tobey & Littlefield):

TYPHOON: 1. *Portsmouth, N.H., to Liverpool*—13½ days.

Sailed from Portsmouth, N.H., March 12, 1851.

Arrived Liverpool early A.M., March 26, 1851.

Capt. Charles H. Salter reported, "Was off Holyhead—detained by fog—in less than 13 days."

2. *The Lizard, England, to Calcutta*—80 days.

Sailed from Deal May 13, 1854.

Reported by Capt. Samuel Goodhue as "80 days from the Lizard to Sand Heads."

SIERRA NEVADA: *Hampton Roads to Liverpool*—15 days.

Arrived at Liverpool April 11, 1855.

Captain Penhallow reported "15 days from the Chesapeake."

George Raynes, Builder of the First, the Last, and the Most Clipper Ships in Portsmouth

George Raynes's shipyard at Portsmouth was on the old Meserve-Boyd estate near the North Mill Bridge, and the site had been used for building ships for a century or more before Raynes located there in the mid-thirties. Writers have said that he made a historic site, which had launched the 74-gun ship-of-the-line *America* (1777-1782) and was the scene of the most active building in the golden days of Portsmouth's greatest prosperity (subsequent to the Revolution and prior to the War of 1812), even more famous by building thereon "over twenty clippers between 1846 and 1854." Raynes may have built twenty fast sailing vessels in the period mentioned, but he did not build "twenty clippers" in his entire lifetime. The word "clipper" has been very lightly used by "enthusiastic" contemporary writers expressing local pride, and the designation has been blindly accepted by non-technical marine historians. George Raynes actually built eleven "clippers" of all types (extreme and medium), and only nine of them were built during the stated period of 1846-1854. Of the total of eleven clippers launched by him, only three were sizable (i.e., around 1,000 tons or more) "extreme" clippers, but these—*Sea Serpent, Witch of the Wave,* and *Wild Pigeon*—were outstanding vessels in design, performance, quality of construction, and beauty.

The clipper ship *Sea Serpent,* launched by George Raynes in December 1850, measured 212 ft. long over-all, 194 ft. 6 in. between perpendiculars, 39 ft. 3 in. beam, and 20 ft. 8 in. depth of hold. The registered tonnage was 1,402 tons, but is also given as 1,337 tons old and 975 tons new measurement. This ship had a 40-in. deadrise and 2-ft. sheer, and she was unusually loftily sparred. The *"Serpent"* was not only a fast ship but also a very consistent performer and a long-lived vessel. Although not classed after 1886 (when thirty-six years old), she was still listed in register in 1890. Her original owners, Grinnell, Minturn & Company, owned and operated her for twenty-four years, and the last westbound Cape Horn run that the ship made (1871-1872) before she was sold in May 1874 was her second fastest passage (108 days) between New York and San Francisco in twenty-one years' time. The *Sea Serpent* made six westbound Cape Horn passages during the clipper ship decade of 1850-1860 and eight thereafter. A comparison of the ship's passages—actual time from port to port—in these two periods and figures showing her all-time record over this severe trade route, westbound, are of interest:

		Length of Passages in Days—New York to San Francisco					
Period	Number of Passages	Fastest	Second Best	Third Best	Average All Runs	Slowest	Second Slowest
Prior to 1860	6	109	112	116	123½	147	130
From 1861 to 1872	8	101	108	115	121¼	146	135
Total—from 1851 to 1872	14	101	108	109	122	147	146

The *"Serpent"* did some fast sailing over other ocean trade routes. On March 22, 1856, she arrived at New York 79 days from Whampoa, China, 69 days from Java Head, and 39 days from the Cape of Good Hope; only two ships, the *Sea Witch* in 1849 and the *Natchez* in 1845, have ever beaten this time of the *"Serpent"* from China to a North Atlantic port in the entire history of sail. On her second voyage, the *"Serpent"* made an around-the-world voyage in 9 months 25 days, including detention in ports, and only 249 sailing days; they consisted of 112 days from New York to San Francisco, thence 12 days to Honolulu and 37 days more to Hong Kong, followed by 88 days from Whampoa to New York—the fastest

passage of the year and a remarkable run considering the season of the year. On June 19, 1859, the "*Serpent*" sailed from Foochow for London in the China-Britain tea trade in the height of the adverse monsoon, and naturally a slow passage was expected. She reached London in 130 days and beat all the four British clippers that had left Foochow between June 9 and June 19 by four, six, nine, and seventeen days, respectively. The *Sea Serpent* was bought by the Norwegians for $22,500 in 1874 and renamed *Progress,* with Tonsberg as her hailing port. For several years, she was engaged in the north transatlantic service and in 1879, under Capt. P. A. Hall, left New York June 24 and passed Gravesend July 11, only 17 days out. This shows that the ship, even with her spars cut down and under foreign ownership, still possessed good speed after nearly thirty years of hard driving and severe service.

The *Witch of the Wave* was George Raynes's largest clipper ship and was launched from his yard on April 5, 1851, fully coppered and with lower masts stepped. She was a ship with many joint owners (viz., Glidden & Williams, Boston; Hunt & Peabody, Boston; and Capt. John Bertram, Salem), and surprisingly Salem, Mass., was made her hailing port. The price paid her builders was said to be $80,000, or about $53⅓ per registered ton. The "*Witch*" was of 1,498 tons old measurement (997 tons foreign measurement) and was 220 ft. long, 40 ft. beam, and 21 ft. deep; the deadrise was 40 in. and the sheer 42 in. On her maiden voyage, the "*Witch*" sailed from Boston May 20, 1851, for San Francisco with, it was said, a cargo of 1,900 tons, and she was evidently overloaded, for "her deck seemed barely afloat." The passage was made in 123 days (claimed 121 days), and she arrived at San Francisco September 20. This performance, while creditable and much better than the average, is made to look mediocre when compared with that of the *Flying Cloud,* which left New York thirteen days after the *Witch of the Wave* sailed from Boston and passed through the Golden Gate just twenty days before her, making a passage of 90 days as compared with that of 123 days for the "*Witch.*" Passages of other clippers over the same course about the same time were: *N. B. Palmer,* 106 days; *Witchcraft* (via Rio), 127 days gross and 103 days net at sea; *Southern Cross,* 136 days; *Syren,* 141 days; *Eureka* (via Valparaiso), 174 days gross and 129 days net at sea; *Game Cock* (via Rio), 185 days gross and 128 days net at sea. The "*Witch,*" leaving San Francisco, ran over to Hong Kong in the fast time of 40 days, and sailing from Whampoa January 5, 1852, in the China-Britain tea trade, she passed the Cape of Good Hope in 37 days. She took pilot off Dungeness April 4 in 90 days from Whampoa and reached London the next day, having made the record fast passage from China to England up to that time. It is said that on this run the "*Witch*" beat her closest competitors by two weeks; that she reached the English Channel in 86 days and in beating up the channel in four days "passed some four hundred British sail." The London TIMES said that the *Witch of the Wave,* from the Chops to the Thames River, had covered in four days a distance that "some of our large English vessels were two weeks" in traversing.

The second westbound passage of the "*Witch*" around the Horn was a run in 1852 of 119 days (reported by Capt. Benjamin Tay as 116 days). On this passage, she had no "lucky" *Flying Cloud* to throw her into the shadows, and her run compared with all other sailings of about the same time was as follows:

Name	Sailed	Arrived San Francisco	Passage in Days	Name	Sailed	Arrived San Francisco	Passage in Days
RACER	June 5	Oct. 19	134	WITCH OF THE WAVE	June 22	Oct. 19	119
GREY HOUND	June 13	Oct. 20	125	SOUTHERN CROSS	June 25	Nov. 28	155
COHOTA	June 16	Nov. 2	138	DEFIANCE	June 25	Dec. 2	160
EUREKA	June 22	Nov. 7	138	GREENFIELD (bark)	June 29	Oct. 31	122

The SOUTHERN CROSS had to put into Montevideo and the DEFIANCE into Rio de Janeiro en route for repairs.

The *"Witch,"* returning home on her second voyage, left Sand Heads (Calcutta) April 13, 1853, passed the Cape of Good Hope in 37 days (a record never beaten, but equaled once and that by the Portsmouth-built clipper *Typhoon*), and reached Boston 81 days out from Sand Heads—the all-time record run from Calcutta to any North Atlantic port.

On her third voyage outbound, the *"Witch,"* sailing from Boston August 16, 1853, made her best passage to San Francisco, a run of 117 days, which can be compared with all other clipper ship passages made about the same time as follows:

Name	Sailed	Arrived San Francisco	Passage in Days	Name	Sailed	Arrived San Francisco	Passage in Days
COMET and TRADE WIND	Aug. 4	Dec. 10	128	NORTHERN LIGHT	Aug. 15	Dec. 16	123
HURRICANE	Aug. 9	Dec. 12	125	WITCH OF THE WAVE	Aug. 16	Dec. 11	117
MANDARIN	Aug. 9	Dec. 11	124	SOUTHERN CROSS	Aug. 19	Jan. 11, 1854	145
FLYING ARROW	Aug. 10	Dec. 31	143	WIDE AWAKE	Aug. 21	Dec. 13	113
RAVEN	Aug. 13	Dec. 11	120	JOHN WADE	Aug. 21	Dec. 22	123

The ONWARD, THOMAS WATTSON, and ROVER'S BRIDE, sailing on Aug. 27, 1853, made passages of 151, 155, and 152 days, respectively.

The *Witch of the Wave* returned home via Singapore and Calcutta; she then sailed for Batavia September 6, 1854, which she reached 76 days out from Boston, and there loaded for Amsterdam. On arrival at Holland, the *"Witch"* made a great impression and was chartered at a good price for a round voyage to Batavia, following which she was bought by Dutch merchants who renamed her *Electra.* The ship was listed in the early seventies under this name, the registered owner being Van Eighen & Company, of Amsterdam.

George Raynes launched the extreme clipper ship *Wild Pigeon* on July 31, 1851. She measured 189 ft. long over-all, 39 ft. 9 in. beam, and 20 ft. deep, with a tonnage of 996 tons American and 768 tons British measurement; the deadrise was 26 in. and sheer 3 ft. The *"Pigeon"* sailed from Portsmouth, N.H., to New York in just 40 hours to load for her first passage, and her maiden voyage westbound to San Francisco was a smart run of 109 days elapsed time, but reported by Capt. George W. Putnam as "a passage of 107 days in light winds"; he gave the date of actual departure as October 13, 1851, and arrival as January 28, 1852. The first three voyages of the *Wild Pigeon* were around the world: (1) New York to San Francisco, (2) San Francisco to Hong Kong, (3) Whampoa back to New York; she made good time on each leg of all voyages. On her fourth passage, she sailed from China to London and then made a round voyage to China, following which she was put in trade around the Horn between New York and Chile and became very popular with both freight shippers and passengers. In 1862 the *"Pigeon"* made her fifth and last westbound Cape Horn run (New York to San Francisco), going out in 130 days, which gave her a lifetime average over this course of 124 days. Upon her return to New York on February 21, 1863, via Valparaiso, she was put under the British flag because of the Civil War and the fear of Confederate commerce raiders. On April 7, 1865, the *Wild Pigeon,* when fourteen years old, was sold at Valparaiso for $35,000, and she became the Spanish ship *Bella Juana* of Barcelona. Later, her name was changed to *Voladora,* and she was re-rigged as a bark. On February 17, 1892, when forty-one years old, the vessel was abandoned in a sinking condition in Lat. 27° N., Long. 68° W.

The medium clipper ship *Fleetwood,* built by George Raynes in 1852, was of only 663 tons register (length 146.7 ft., beam 31.4 ft., depth 19 ft.) and too small for Cape Horn work. She made one westbound passage over this course, however, sailing from Boston December 1, 1852, and her time of 130 days was slower than the average time of 120 days made by the thirteen other clippers that sailed from North Atlantic ports between November

15 and December 15 of that year. Only one run was of longer time than that of the *Fleetwood,* and that was an unfortunate passage of the *Golden Eagle;* she had to put into Rio de Janeiro for repairs and required 157 days for the voyage, of which, however, only 129 days were spent at sea. The fastest passages at the time were: *Contest,* 100 days; *Golden Gate,* 104 days; and *Winged Racer,* 108 days. The *Fleetwood's* other voyages, generally to India, were made in relatively slow time for a clipper. On February 12, 1859, the ship sailed from Boston for Tahiti and Honolulu. Off Cape Horn, she encountered heavy weather, was driven backward, and at 5:00 A.M. on May 3, in Lat. 60° S., Long. 71° W., she collided with an iceberg and filled rapidly. A boat, with the mate and four seamen, was picked up by the British bark *Imogene* on May 8; but the captain's boat, with sixteen officers and seamen and one passenger besides the captain's wife and child, was lost. The *Fleetwood,* seven years old when sunk, was insured for $30,000, her cargo for $71,266, and freight money $10,000.

The *Tinqua,* which was the same size and built about the same time as the *Fleetwood,* may have been a sister ship, for their tonnage and dimensions were virtually the same:

Name	Registered Tonnage	Stated Measurements in Feet		
		Length	Beam	Depth
TINQUA	668	145	31.7	19
FLEETWOOD	663.47	146.7	31.4	19

The *Tinqua,* launched October 2, 1852, was described by George Raynes, her builder, as an "extreme clipper" of generally similar model to the *Wild Pigeon* "save that clear forward the lines of the *Tinqua* are hardly as fine as those of Olyphant's earlier and bigger ship." The *Fleetwood,* which had been put overboard a few months earlier for Sewall, Johnson & Company, of Boston, had been described by Raynes as a "medium clipper." The *Tinqua* was just as fast as her sister (in dimensions and tonnage) was slow. On her first westbound Cape Horn passage from New York to San Francisco, the *Tinqua* sailed November 24, 1852, and passed through the Golden Gate on March 19, 1853, after a run of 115 days. (She was delayed about twelve days by calms on the Pacific just north of the equator.) The only other clippers sailing from North Atlantic ports between November 18 and December 2, with the length of their passages, were: *Alboni* (November 21), 129 days; *Living Age* (November 25), 127 days; and the *Tinqua's* sister, or half sister, *Fleetwood* (December 1), 130 days. At the commencement of her maiden voyage, the *Tinqua* made one of the most noteworthy short runs of the period. Thirteen days after leaving New York, she was spoken (December 7, 1852) in Lat. 2° 33′ N., Long. 31° 10′ W. within 153 miles of the equator. On her second and last run around the Horn to California, sailing from Philadelphia February 9, 1854, the *Tinqua* did not do so well. She made a passage of 123 days, port to port, but her commander (Captain Whitmore) reported a run of "122 days and only 118 days, land to land," and added, "Between the entrance to the Straits of Magellan and Le Maire was detained 10 days by strong head gales and took 22 days from 50° to 50°; later was 4 days off the Golden Gate in fogs and calms." The average length of passages of the other eight clippers sailing from North Atlantic ports between February 1 and March 2 was 128½ days; the fastest runs were 112 days for the *Challenger* and 117 days for the *Sea Serpent,* and the slowest passages were 151 days for the *Golden Racer* from Baltimore and 135 days for the *Coeur de Lion* from Boston. The *Tinqua* sailed from Shanghai September 14, 1854, bound for New York with a cargo valued at $300,000. During the night of January 12, 1855, she struck on the outer shoal off Cape Hatteras and became a total loss when only a little over two years old.

When George Raynes launched the clipper ship *Wild Duck* on April 13, 1853, the announcement was made that this was his "fiftieth vessel." She was a small ship like the other clippers built by Raynes for the same owners, Olyphant & Company, New York. The *Wild Duck* was bigger than the *Tinqua,* but not as large as the *Wild Pigeon,* and was of 860 tons

register (175 ft. long, 33½ ft. beam, and 20 ft. deep). The little clipper made three westbound Cape Horn passages, with an average of 130 days. On the first run in 1853, the *"Duck"* beat the *Andalusia* — which sailed with her — twelve days to San Francisco, and the *"Duck's"* time of passage, stated as both 130 and 134 days, seems quite good compared with that of the *Arab,* which, sailing three days after the Olyphant clipper, made a slow passage, port to port, of 184 days. On the second westbound passage, the *Wild Duck* sailed from New York August 13, 1854, was within 600 miles of her destination for fifteen days, and finally completed the passage in 129 days; the average length of passage for the six other clippers that sailed between August 1 and September 1 was 135 days, the best run being that of the *Red Gauntlet* (120 days) and the slowest that of the *Osborne Howes* (151 days). The third and last westbound Cape Horn run of the *"Duck,"* sailing from New York October 30, 1855, was negotiated in 132 days (claimed 131 days). The clipper *Victory,* which sailed one day ahead of her, reached San Francisco twenty-three days after her. The *"Duck"* cleared San Francisco March 22, 1856, for Hong Kong, went to Foochow to load for New York, and when sailing thence about October 1, 1856, went ashore on the bank of the River Min; she was sold as she lay, "as it seemed impossible to get her afloat." It was reported later that the vessel—only three and a half years old at the time of the accident — was floated and towed to Foochow. Evidently, she never sailed again, although it is possible that the hull was used in China for a barge or hulk for a time.

The medium clipper *Coeur de Lion* was launched from the yard of George Raynes in January 1854. She was built for W. F. Parrott, of Boston, et al., and Capt. George W. Tucker, of Portsmouth, her master, "held a good piece of her." She was of 1,098 tons register old and 915 tons new measurement; length 178 ft. 4 in., beam 36 ft. 2 in., and depth 21 ft. 6 in. The deadrise was 15 in. and sheer 3 ft. The *"Lion"* made three westbound Cape Horn passages to San Francisco in 1854-1856 and averaged 127½ days from port to port. The first passage was made in 134 days (claimed 133 days) and was comparatively slow, the average of eight other clipper passages made about that time being 121 days (best, 112 days; slowest, 129 days). Her second passage to California was made in 1855 in 119 days, and this was an unusually creditable sailing performance compared with that of all the other seven clippers covering the course at approximately the same time, as the following record shows:

Name	Sailed	Arrived San Francisco	Passage in Days	Name	Sailed	Arrived San Francisco	Passage in Days
CORINGA	Mar. 31	Aug. 30	152	STARLIGHT	Apr. 7	Aug. 30	145
GAME COCK	Apr. 1	Aug. 24	145	SEA SERPENT	Apr. 9	Sept. 7 (via Rio)	149
MESSENGER	Apr. 3	Aug. 2	121	B. F. HOXIE	Apr. 9	Sept. 17	161
COEUR DE LION	Apr. 6	Aug. 2	118	CARRINGTON	Apr. 13	Sept. 16	156

The *Coeur de Lion* made the best passage of all the clippers that sailed from a North Atlantic port between March 22 and May 9, 1855, and the *Messenger,* with a run of 121 days, had the only passage that compared favorably with the 118-day run of the *"Lion."* The average of the above-recorded eight passages was 143½ days, or 25½ days longer than the run of the *Coeur de Lion.* On her third and last Cape Horn voyage, the *"Lion"* sailed from New York April 18, 1856, and reached San Francisco on August 26, 130 days out; she had very heavy weather off the Horn and encountered much ice, and her sailing performance was not as good as that of several other clippers which covered the course and sailed ten to thirteen days ahead of her. However, she defeated the only clipper sailing with her, the *Competitor,* by seventeen days, and of the six clippers that sailed after her (from April 26 to May 7) only the *Eureka,* with 120 days, and the *Sea Serpent,* with 129 days, beat the time of the *"Lion."* The average length of passage of all sailings from April 9 to May 9 (nine of them) was 137½ days, or 7½ days longer than the run of the *"Lion."* Leaving San Francisco, she sailed to Hong Kong and carried British troops from there to Calcutta, where she arrived

December 8, 1856, after "a phenomenally fast passage of 26 days." On the run from India to Falmouth, England, the *"Lion"* came up with the Dutch bark *Henrietta Maria,* which had been the scene of a mutiny on the part of coolies that she was carrying to Havana. The coolies had taken possession of the ship and secured all the firearms aboard; the captain and most of the crew had taken to the boats and deserted the ship, and later the *"Henrietta"* had been sailed or had drifted close enough to land to permit the coolies to escape to the shore. The mate of the *"Lion"* and a skeleton crew, assisted by a few men left on the bark, worked the *Henrietta Maria* into Singapore.

In 1858 the *Coeur de Lion* was sold to the Germans and Hamburg made her home port. In 1860 she was owned by the Russian American Fur Company and was renamed *Zaritza.* While still under the Russian flag in 1869, she made a "middle route" passage from Newcastle, N.S.W., to Hong Kong loaded with coal and covered 5,500 miles at an average speed of 6 knots per hour. During the ensuing five years, this run was beaten only once and that by the extreme British clipper *Thermopylae,* which carried but little paying cargo. In 1874 the *Zaritza* went under the Swedish flag and a few years later was re-rigged as a bark. In 1913 she was owned by S. M. L. Bjorkegren, hailing port Simrishamm, and engaging in the "split wood trade" between Baltic and British ports. In August 1915, when sixty-one and a half years old, she was wrecked by collision off the Skag in the Baltic Sea.

The clipper *Emily Farnum* of 1,119 registered tons, built by George Raynes in 1854, was 194 ft. long, 35 ft. beam, and 23 ft. deep. She was wrecked near Cape Flattery in November 1875, when twenty-one years old. Raynes's earliest clipper, designated by him in later years as "a little full-bodied medium clipper," was the *Roman,* launched in 1850 and built for Joseph D. Taylor and D. W. C. and Robert M. Olyphant, all of New York. She registered 774½ tons and was 152.7 ft. long, 33.3 ft. beam, and 16.6 ft. deep. The *Roman* made one westbound passage around the Horn in the winter of 1852-1853 in 120 days (reported by Captain Hepburn as 115 days), which was fast sailing for a ship of her tonnage. In 1850 and again in 1851, she was in the China-Britain tea trade and made good runs from Whampoa and Woosung to London. Carl C. Cutler, in GREYHOUNDS OF THE SEA, in his chapter on "Oriental Trade Expansion" and writing of the tea voyages of 1851, says:

> Among the full built American tea ships perhaps the best work, all things considered, was that of the *Roman,* still under Putnam. She left Woosung on the 23rd of July, exactly thirteen days after the little British clipper *Reindeer* is reported as having left, and arrived at London on December 1st, five days after the arrival of the *Reindeer.* For a ship of her type, her passage of 120 days against the monsoon must be considered good. It will be remembered that Woosung is nearly 850 miles farther up the coast than Canton. In the favorable monsoon this usually involves only four or five days' sailing at the most, but with the monsoon ahead it may extend the passage for weeks.

George Raynes built his second *Witch of the Wave* in 1856 for Newburyport owners. She was much smaller, fuller, and slower than the famous *Witch of the Wave* built in 1851 at Portsmouth, but which, in 1857, was renamed *Electra* and went under the Dutch flag. The second *"Witch"* was of 1,020 tons register, 190 ft. long, 33 ft. 2 in. beam, and 22 ft. deep. She made one westbound around-the-Horn passage during the clipper ship decade of 1850-1860, and her sailing performance compared with that of any other clipper that sailed about the same time is stated herewith.

Name	Year Built	Registered Tonnage	Port of Departure	Time of Sailing	Time of Arrival San Francisco	Passage in Days
				1859	1859	
CHALLENGER	1853	1,334	New York	Apr. 16	Aug. 15	121
CHARGER	1856	1,136	Boston	Apr. 20	Aug. 23	125
WITCH OF THE WAVE II	1856	1,020	New York	Apr. 25	Sept. 7	135
VIKING	1853	1,350	New York	Apr. 30	Sept. 12	135
B. F. HOXIE	1854	1,387	New York	May 2	Sept. 16	137

George Raynes's last so-called "clipper" was a small, rather full-bodied vessel of the type called on the Kennebec River "a half clipper," with lines less fine and carrying smaller spars and less canvas than a medium clipper. This vessel, named the *Shooting Star II,* was launched in 1859 and, it can be said, was the last ship designated as a clipper built in the United States. Only ten clippers were built in America in 1857, six in 1858, and three in 1859, and they were all medium or half clippers; practically no extreme clippers were built after 1854. The first clipper *Shooting Star,* a ship of 903 tons (164 ft. long, 35 ft. beam, 18½ ft. deep), had been built for Reed, Wade & Company, Boston, by James O. Curtis, of Medford, Mass., in 1851. She had been sold to Siam in 1856, and Reed, Wade & Company, building in 1859 a second ship to perpetuate the name, gave the order for construction, not to a Medford or Boston builder but to George Raynes, Portsmouth, N.H. The *Shooting Star II* was of 947 tons register, 182 ft. long, 36½ ft. beam, and 23½ ft. deep. She made one westbound Cape Horn passage in the clipper ship decade in 144 days (claimed 142 days), which was slow sailing; but all the other clippers sailing from North Atlantic ports between June 8 and September 15—and there were sixteen of them—made slow passages with the solitary exception of the *Golden Fleece,* which ran out from New York to the Golden Gate in 121 days. The average time of passage to San Francisco of five clippers sailing from North Atlantic ports from June 8 to June 25 was 142½ days, and that of eleven clippers sailing from June 30 to September 15 was 148 days. Only four of seventeen passages originating from June 8 to September 15 were completed in less than 140 days. The *Shooting Star II* was burned by the Confederate raider *Chickamauga* on October 31, 1863.

George Raynes launched two 300-ton topsail schooners in September 1851, the *Minna* and *Brenda,* for John M. Forbes et al., of Boston. They were not clippers, although Basil Lubbock, the English marine historian, describes them as "opium clippers" and says that they were "beautifully modelled and equipped with long raking masts and plenty of canvas." These little vessels were a "throwback" in model and rig to the American privateers of the late years of the Rebellion and of the War of 1812 and were of the type that were popularly known as "Baltimore clippers." These schooners carried large crews and were heavily armed. To guard against capture by pirates in calms, they carried 40-foot sweeps, which were operated with six men each through the gun ports in the vessels' sides. Ships engaged in an illegal trade and plying in waters both well patrolled by government vessels and infested with pirates had to be fast and handy, and these little topsail schooners were built for and operated successfully by Americans in such a nefarious trade. They are said to have been "great moneymakers."

The Shipbuilding Firm of Frederick W. Fernald and William Pettigrew Launches Seven Clipper Ships at Portsmouth

Next to George Raynes, who built the first (*Roman* in 1850), the last (*Shooting Star II* in 1859), and the most clippers in Portsmouth, N.H. (eleven ships totaling 11,046 registered tons), the shipbuilding firm of outstanding prominence at Portsmouth during the clipper shipbuilding decade was Fernald & Pettigrew, which built seven clipper ships in the five years 1851-1855 aggregating 8,240 registered tons. Some of them were outstanding, and one, the *Typhoon* of 1,611 tons (the first and the largest clipper ship built by this firm), achieved an

international reputation and ranks among the best clippers ever launched. The partnership of Frederick W. Fernald and William Pettigrew (or Petigrew) was formed in 1845, and the new firm acquired the old shipyard on Badger's Island where John Langdon had built his vessels in the 1760's. Fred Fernald had received his training as a shipbuilder under Charles Raynes, and William Pettigrew had grown to be a master shipwright in the employ of the more famous, aggressive, and successful George Raynes. A historian has said that the firm of Fernald & Pettigrew in ten years produced eight or more clipper ships for New York, New Orleans, Newburyport, Boston, and Portsmouth owners. "The average price was approximately $40,000. The tonnage ranged from 550 (the *Piscataqua*) to 1,600 (the *Typhoon*), and the cost was about $45 per ton. Between 50 and 100 men were employed at the yard at wages of about $1.50 per day. It took them from four to six months to build one of these clippers, most of which were used in the California or China trade." The *Piscataqua* referred to was not a recognized clipper; however, the firm did build seven clippers, not in ten but in five years, and if the average cost of the ships was $45 per ton, then the average cost per clipper would be somewhat over $50,000 and not $40,000, as these seven vessels averaged 1,177 tons register.

Fernald & Pettigrew's first clipper ship, the famous *Typhoon,* seems to have had many persons contribute toward her design. It has been said that the original lines "were obtained by Fred Fernald from Samuel Pook, of Boston, through Navy Yard friends." The Fernalds have been associated with the navy for generations, young Pook's father was a naval constructor, and the son himself became associated with the navy when clipper shipbuilding declined. A model of the *Typhoon*—probably shaped from Pook's lines or possibly made by Pook himself—was apparently placed on exhibition in the Portsmouth Athenaeum, "where local nautical men spoke very favorably of it," and was then sent to Kingsland & Company, New York, which had given Fernald & Pettigrew the order to build the vessel. The Kingsland firm included Daniel C. and Ambrose C. Kingsland and Cornelius K. Sutton, and these men knew quite a lot about ships and evidently also knew what they wanted. By letter of September 27, 1850, they approved the model of the *Typhoon* as submitted after keeping it a little while "to sight." They hoped the ship would prove "a fast one," but they wrote to the builders, "Will also give you the dimensions of the spars, etc., soon." Evidently, young Pook did not furnish a spar and sail plan to Fernald & Pettigrew, either direct or through Navy Yard friends, and Kingsland & Company obtained expert advice on this matter from New York designer-builders or sea captains; for in early October, we are told, "Kingsland & Company sent complete dimensions of spars for the *Typhoon,*" with the rake of masts, etc. (Nothing is said about the all-important position of the masts, so probably the Pook model showed the mast steppings.) The records of the builders also show that on October 8, 1850, they received instructions "accompanied by a careful drawing" covering some special construction and arrangement of stern timbers; for the members of Kingsland & Company were progressive owners and, looking far ahead, wanted their big new ship to be built so that at some future time auxiliary power could be installed, if wanted, at minimum expense.

All the work on the *Typhoon* was performed by contract other than the prime physical work of the ship carpenters, and the ship was framed, planked, ceiled, and decked in the wintertime (November 1850-February 1851). While other Portsmouth shipbuilders were idle, Fernald & Pettigrew employed about a hundred men on the *Typhoon* and worked in an exposed yard on an island in the middle of Portsmouth Harbor "through a three-foot snowstorm in December and a run of sub-zero weather in January." In the list of work let out by contract were not only the usual sparmaking and rigging, joiner work and interior finish, painting and decorations but also the "building of the decks" and "the boring and driving of treenails," etc. The owners sent three schooner-loads and numerous carloads of equipment, furnishings, etc., from New York. William Dorrian, of Portsmouth, was "the ryger" of the

Typhoon (by contract), but it would seem that the rigging, chains and anchors, belaying-pins, etc., were sent from New York and that the sailmaking contract was placed with a New York firm. The figurehead of a race horse, with "trail boards and stern moulding," was done by S. W. Gleason & Son, of Boston, at a cost of $272.

The New Hampshire GAZETTE says that the *Typhoon* was launched February 18, 1851, at 12:30 P.M. It continues:

> The great size of the ship, and the fact that she was full-rigged upon the stocks, attracted a very large concourse of people. . . . The *Typhoon* is 2100 tons carpenter's measurement and 1611-59/95ths tons register. Her length over all is 225 feet, keel 207 feet, extreme breadth 42½ feet, depth 23 feet, deadrise 30 inches; and she is the largest merchant ship of her character ever built in the United States.

The registered dimensions of the ship show less beam (i.e., 41 ft.), and the tonnage based on new measurement is given as 1,215 tons as against a tonnage based on old measurement rules of 1,611 tons. Under the exhilaration of the launching banquet, C. W. Brewster, of the Portsmouth JOURNAL, said of "the enterprising builders of the *Typhoon*":

> They have within a few years done a gigantic business. They have made a *Western World* and a *Columbus* to sail after it. They have launched a *Germania,* and set afloat the *Danube.* The *Granite State* they have put in sailing trim, and sent the *Empire State* across the ocean. But their last effort is the crowner of the whole—to put the good qualities of all former works to the test, they have now launched a *Typhoon* to compass the world.

The vessels mentioned in this toast were all built by Fernald & Pettigrew during the years 1845-1850 inclusive.

Under command of Capt. Charles H. Salter, of Portsmouth, the *Typhoon,* at 9:00 A.M. on March 12, 1851, dropped down the harbor behind the steam tug *R. B. Forbes* and commenced her maiden voyage—a transatlantic crossing to Liverpool. The ship anchored in the Mersey at 10:00 A.M. on March 26, having completed "a passage called 13 days and 20 hours, port to port, allowing for difference in time." The *Typhoon* made Cape Clear, the southern tip of Ireland, in 11½ days and was off Holyhead in less than 13 days. Owing to fog in the Channel, she "did not tie up in Liverpool till the morning of March 26, but still took less than two weeks from dock to dock." Capt. Charles H. Salter reported, "Sailing from Portsmouth May 12, was off Holyhead detained by fog in less than 13 days, and made Liverpool May 26, 13½ days port to port." It would seem that the *Typhoon* was detained two hours with windlass trouble at the start of the voyage, was becalmed later for twelve hours, had to change the course and run to the southward because of sighting icebergs, and was shorthanded as well as having a very poor crew. Supercargo E. F. Sise wrote from Liverpool on March 27 to Fernald & Pettigrew, "We left our Harbour at least 10 in number short of what her crew should have been." Of the crew of thirty, including boys, only nine were seamen, and one of the "sailors" had never been to sea before. "The fact is they were the most miserable set I have ever seen, and never after the first day out have we had less than 4 laid up including the second mate." Much time was lost, as it was impossible "to make or take in sail when required." Sise continued, "The *Typhoon's* sailing and working qualities cannot be surpassed, . . . and I do not hesitate to say that had the Ship been properly manned she would easily have made the Passage in eleven or not over twelve days. She works beautifully, is very easy, and with a good wind on her quarter I think she would hold her way with any Steam Boat. I have held the Reel when she quick took off 13 knots — I have seen her go 16 . . . and very often 15 knots. At first our line was only marked 15 knots, afterward it was altered."

On this crossing, the *Typhoon* made 313 and 346 nautical miles on consecutive days; best day's average speed, 14.4 knots per hour. The log shows that speed frequently reached 15½ knots per hour, and the chief mate said that when the log showed 16 knots and over, Captain Salter ordered that nothing be written up giving speeds in excess of 15½ knots, for "anything higher than that would not be believed." Twice the clipper was struck by lightning on March 16, one of the crew being burned and the cabin damaged. ("The marks are left in

many places in our beautiful cabin.") The *Typhoon* was "greatly admired" in Liverpool, and it was said, "She attracts much attention not only on account of her fast passage but also because she is the first American clipper and the largest merchant ship that has ever called here." It would seem that the Boston, Mass., press, as early as 1850, had its propaganda mill grinding and, while boosting Boston-built ships, was going out of its way to make disparaging remarks about ships built elsewhere and to discredit them. The Boston ATLAS had earlier described the *Typhoon,* then building at Portsmouth, N.H., as "an ordinary merchant ship and no clipper"; but after the March 1851 transatlantic crossing of the vessel, this newspaper was taken severely to task by the jubilant Portsmouth press, which suggested that it might be a long time before a Boston "clipper" would better the performance of a Portsmouth "ordinary merchant ship." After her fast transatlantic passage, the *Typhoon* was quite frequently referred to as "the Portsmouth flyer." But Supercargo E. F. Sise, in his report to the builders on the performance of the *Typhoon* on her maiden voyage, had much to say besides "honeyed words" about her speed and seagoing qualities. He bluntly said:

> She has defects. The Iron work is constantly breaking and must be bad. . . . Again she leaks very badly, and never has she been freed without one Hour's pumping in each Watch, which has completely disheartened some of our best men. One night I went out and six men were sitting down by the Pumps and told me they were really beat out. . . . Capt. Salter told me tonight [March 27] she had 3 feet of water in her. . . . Her pumps are badly fitted so much water runs back again under the Flanges.

The "knowing ones" in Portsmouth, hearing of the leaks in the *Typhoon,* said, "I told you so"; for many a shipwright had predicted just that trouble with a ship framed and planked during the severe weather that Portsmouth experienced in the winter of 1850-1851 and launched (February 18) and sent to sea (March 12) in the wintertime.

The *Typhoon* made only two westbound Cape Horn passages. The first originated in New York August 2, 1851, and she reached San Francisco on November 18 after a good passage of 108 days, which, however, was "dimmed in glory" because of the amazing sailing performance of two small clippers that covered the course with her. The following table gives a comparison of the passages of the only clippers sailing from North Atlantic ports between July 15 and August 21, 1851:

Name of Ship	Year Built	Registered Tonnage	Sailed from	Date of Sailing	Date of Arrival San Francisco	Length of Passage in Days
SEA WITCH	1846	908	New York	Aug. 1	Nov. 20	111
TYPHOON	1851	1,611	New York	Aug. 2	Nov. 18	108
RAVEN	1851	712	Boston	Aug. 5	Nov. 19	106
HORNET	1851	1,427	New York	Aug. 21	Jan. 23, 1852	155

The *Typhoon* crossed the Pacific, made Calcutta in 79 days from San Francisco, and thence was 107 days to London; from Sand Heads to the Cape of Good Hope, she was only 37 days, a record never beaten in the era of sail and equaled only once and that by the *Witch of the Wave*—another Portsmouth-built clipper. After crossing the Atlantic in 25 days (a good westbound run), the *Typhoon* loaded and sailed from New York January 22, 1853, on her second and last westbound Cape Horn passage to California. She arrived in San Francisco June 8 after a run of 137 days, which was not fast time for a big clipper ship. However, Captain Salter reported an arrival off the Heads on June 4, 133 days out, and "detention of 4 days off San Francisco by fog." A comparison of this outbound Cape Horn voyage of the *Typhoon* with the sailing record of all other clipper ships sailing from North Atlantic ports between January 15 and 31, 1853, is of interest:

Name of Ship	Year Built	Registered Tonnage	Sailed from	Date of Sailing	Date of Arrival San Francisco	Length of Passage in Days
ALERT	1850	764	New York	Jan. 15	June 14	150
MOUNTAIN WAVE	1852	634	Boston	Jan. 17	May 28	131
SIMOON	1852	1,436	New York	Jan. 19	June 1	133
WINGS OF THE MORNING	1852	916	New York	Jan. 21	July 23 (via Rio)	183
TYPHOON	1851	1,611	New York	Jan. 22	June 8	137 (log says 133)
ORIENTAL	1849	1,003	New York	Jan. 26	May 7	101
QUEEN OF THE PACIFIC	1852	1,357	Boston	Jan. 26	Aug. 9 (via Valparaiso)	195
GOLDEN RACER	1852	837	Boston	Jan. 29	June 9	131
STAR OF THE UNION	1852	1,057	New York	Jan. 29	June 2	124

The passage of the *Carrier Pigeon,* sailing from Boston on January 28, 1853, is omitted; for the voyage, generally reported as "a run of 132 days," was not completed, as the ship went ashore below San Francisco and was a total loss. Another ship, named the *Lucknow* (of which particulars are not available), is reported to have sailed from Boston January 15, 1853, and reached San Francisco June 4; if these dates are correct, then the *Lucknow* made a passage of 140 days and comes within the period covered.

The average length of passage of the nine vessels as enumerated above was 143 days. The shortest run was the magnificent sailing performance of the *Oriental* (built by Jacob Bell, New York) with a passage of only 101 days; the next best runs were 124 days, 131 days (two), 133 days, and then the *Typhoon* with 137 days (133 days as claimed). Two of the clippers had to make ports en route for needed repairs. Leaving San Francisco in ballast for China on June 27, 1853, in a fog, the *Typhoon* struck Mile Rock, off the South Head, and stove a hole in her bottom. After repairs, she again sailed on August 16 and reached Shanghai 28 days out from Honolulu and 44 days from San Francisco. She then made a passage of 104 days from Shanghai to Deal, where she arrived February 16, 1854. Under Capt. Samuel Goodhue, the *Typhoon* made a fast round voyage between England and Calcutta — 87 days out and 94 days return; on the passage out, the ship made the run from the Lizard to Sand Heads (Calcutta) in the record time of 80 days. In 1853, when the *Typhoon* was in the China-Britain tea trade and made her 104-day run from Shanghai to Deal, the fast Boston-built clipper *Flying Childers* ran from Whampoa to London in 106 days, and the Baltimore clipper *Architect* made a passage of 107 days from Macao to London. None of the much-vaunted British tea clippers at the time made a passage in less than 108 days.

During 1856-1857, the *Typhoon* was engaged in transatlantic trade, following which she returned to the British trade with India and China. On April 2, 1858, she lost all three topmasts in a heavy squall in the North Atlantic and on December 24, 1862, put into Fayal in distress, "damaged and leaking badly." She had lost the first officer and five men "through overexertion," and shortly afterwards several other members of the crew died. In the fall of 1863, because of Civil War conditions, she was sold while inactive at Singapore — when twelve and a half years old — for $39,000. In 1869, the vessel was registered as the British ship *Indomitable* of Dublin; John Martin & Sons, owners.

The *Red Rover,* launched by Fernald & Pettigrew in November 1852, was of 1,021 registered tons old and 766 tons new measurement and was 172 ft. long, 35.9 ft. beam, and 23 ft. deep. This ship had an enviable record for speedy voyages, and although she was probably not the fastest clipper built at Portsmouth, she, nevertheless, holds the best average record for westbound passages around Cape Horn. On her maiden voyage, the "*Rover*" sailed from New

York in December 1852 and arrived at San Francisco April 19, 1853, after "a passage of 117 days." It was an eventful trip. When 36 hours out, she lost main-topmast and two topgallant masts with all yards attached. She was battling gales and heavy seas off Cape Horn for 19 days and, when 79 days out, had to put into Juan Fernandez (two days) for water; later, having made a remarkable run from the Pacific equator north, she was held off the Golden Gate for three days in heavy gales, which stripped the ship of much canvas. Returning east, the *"Rover"* made quick runs of 43 days to Callao and thence 70 days to New York. When loading at New York for her second voyage, she suffered some damage from the fire of December 26, 1853, which necessitated the scuttling of Donald McKay's big new clipper *Great Republic*. The *"Rover"* cleared New York January 22, 1854, and arrived at San Francisco on May 24, which was 122 days later, but the passage was reported as 120 days. On the westbound run of her third voyage, clearing New York February 24, 1855, she was only 80 days to the crossing of the Pacific equator and on the 92nd day was a scant nine hundred miles from the Golden Gate, with every prospect of making a better than 100-day passage; but there good luck left her, and because of light winds and calms she required 16 days to cover the remaining short distance. After covering some fifteen thousand miles at a speed of nearly 7 knots per hour, she "crawled along" for the last nine hundred miles at only 2⅓ knots per hour. The time of the passage was stated at 108 days (it figures 109 days from clearance to arrival). That this passage of the *Red Rover* was a good one is indicated by a comparison of her record with that of all the other clippers that traveled the course about the same time during the year 1855:

Name of Ship	Year Built	Registered Tonnage	Sailed from	Date of Sailing	Date of Arrival San Francisco	Length of Passage in Days
DASHING WAVE	1853	1,180	Boston	Feb. 18	June 19	121
ATALANTA	1852	1,289	New York	Feb. 24	June 30	126
RED ROVER	1852	1,021	New York	Feb. 24	June 13	109
JOHN MILTON	1855	1,445	Boston	Feb. 26	July 14	138
MONSOON	1851	773	New York	Feb. 27	Aug. 2	156
LOOKOUT	1853	1,291	New York	Mar. 1	Aug. 2	154
POLYNESIA	1852	1,084	Boston	Mar. 6	July 16	132
ELLEN FOSTER	1852	996	Boston	Mar. 8	Aug. 2	147
PANAMA	1853	1,139	New York	Mar. 8	June 29	113
WITCHCRAFT	1850	1,310	New York	Mar. 10	July 13	125

The *Keystone* (Capt. William McFarland) sailed from Boston on February 23, 1855, one day ahead of the *Red Rover,* had to turn back to New York for repairs, and, resuming her voyage, did not reach San Francisco until December 10, being 290 days out of Boston. The *White Squall* also sailed from New York February 17, one week ahead of the *Red Rover,* but she was dismasted and put into Rio de Janeiro; she was re-rigged as a bark and, discontinuing her voyage to California, returned to New York.

The *Red Rover,* returning east on her third voyage, made a good run of 98 days from San Francisco to New York, where she arrived October 21, 1855. The fourth westbound passage was an unpleasant one. When three days out from New York, a very heavy gale struck the ship, threw her on her beam ends, carried away the main yard, tore sails to shreds from the bolt ropes, and shifted the cargo. The ship continued her voyage with a bad list, which naturally affected her speed. Off the Horn, she experienced severe gales and had her new main yard sprung, but she reached San Francisco 112 days after clearing from New York and after a passage of 110 days according to Captain Logan and the ship's log. On her fifth and last westward rounding of the Horn, the *"Rover"* made good time to 50° S. Pacific, after which she had no wind and was absolutely becalmed for seven days in the North Pacific; she arrived at San Francisco 124 days out from New York (Captain Logan reported a passage of 123 days). Returning east, the ship went to Valparaiso in 52 days and then made a fine run

of only 65 days from Iquique to London. While riding at anchor in the Thames, the *"Rover"* went adrift and stranded; to add to her troubles, a German steamer ran into her, and the serious damage sustained necessitated dry-docking. In 1859 the vessel went to the Pacific and, in January 1861, was in New York for new spars and overhauling. Shortly afterwards, she was sold for $25,000 to James Baines & Company, Liverpool, for operation in its Black Ball Line of Australian packets as a running mate of several other American-built clippers. Her name was changed to *Young Australia* when she went under British registry, and the old *"Rover"* sustained her reputation for speed in the Australia service. In 1862 the *Young Australia* left Sydney for London one day after Britain's crack clipper *Stornoway,* overtook her, and reached London two days ahead of her. The *Young Australia* was wrecked on Moreton Island, near Brisbane, Australia, on May 31, 1872, when twenty years old.

The medium clipper ship *Dashing Wave,* built by Fernald & Pettigrew and launched July 15, 1853, was of 1,180 registered tons old and 1,054 tons new measurement, 181 ft. 8 in. long, 39 ft. 6 in. beam, and 21 ft. 3 in. deep. This ship had many owners. Built originally for Samuel Tilton & Company et al., of Boston, she was sold in April 1866 to Washington Libby and others; in 1870 she was registered in the name of G. D. S. Trask, of New York, and later was owned by Hanson Ackerson & Company, of San Francisco, and her hailing port became Port Townsend and afterwards Tacoma. (She is said to have been the first deep-sea vessel having Tacoma, Wash., for her home port.) The *Dashing Wave* lived to a ripe old age. As a barge with 1,200 tons aboard, in tow of the tug *San Juan* and engaged in the Alaskan fisheries trade, she stranded on the mud flats of Seymour Narrows and became a total loss in the spring of 1920, when sixty-seven years old. Only a few weeks before, following an examination in dry dock at Seattle, Wash., her hull had been pronounced sound and "in first-class condition from stem to stern and keel to deck." This ship made six westbound Cape Horn passages in the clipper ship decade, averaging 121 days according to the ship's log (and a scant 123 days from records of clearances and arrivals). Following 1860, she continued to make an occasional Cape Horn run to California and all together has to her credit eleven passages from North Atlantic East Coast ports to San Francisco, which were made during the years 1853-1870. On her last run in this service, she had a distressing time and was obliged to put into both Rio de Janeiro (on the East Coast) and Valparaiso (on the West Coast) in distress and leaking badly, so that she did not pass through the Golden Gate until February 15, 1870, and 341 days out of New York. Ignoring this unfortunate passage, the average for the clipper's other ten runs is 127 days; of these ten passages, two were made under very adverse sailing conditions and occupied 155 days (in 1863) and 143 days (in 1860). If these two relatively long passages are eliminated, the ship's average for the remaining eight westbound Cape Horn runs to San Francisco is 122 days, the fastest being 107 days from Boston in 1858 and the slowest 133 days in 1868.

The maiden voyage of the *Dashing Wave* was a passage from Philadelphia to San Francisco of 122 days from clearance to arrival, but she stopped at Valparaiso en route and covered the distance in 118 sailing days. Returning from San Francisco, she generally traveled westward — China, India, Singapore, Manila, or Australia — and completed around-the-world voyages. In 1861, 1866, and 1868, the ship sailed eastward around Cape Horn to New York and made passages of 115, 99, and 116 days, respectively. In 1854 the *"Wave"* ran from San Francisco to Calcutta in 76 days under anything but favorable sailing conditions, and that she sailed well is proved by the fact that on this run she beat, among other fast clippers, the *Polynesia, Syren,* and *Westward Ho,* the latter — proclaimed by some authorities as the fastest of all clippers—by eleven days. In 1856 the *Dashing Wave* made "a smart run" of 26 days from Melbourne to Batavia. Her 1857 passage of 84 days from Calcutta to Boston has been beaten only twice, and the record of 81 days was made by the Portsmouth-built clipper *Witch of the Wave.*

The *Dashing Wave's* best westbound Cape Horn run of 107 days in 1858 has been said by historians to have been "the fastest passage of that year." It was a highly creditable sail-

ing performance, but such a statement is incorrect; for the clippers *Twilight* (1,482 tons; built in 1857) and *Andrew Jackson* (1,679 tons; built in 1855) each made passages of 101 days, each sailed — as did the *Dashing Wave* — in January 1858 (between the 1st and the 16th), and by a queer coincidence each of these ships was built at Mystic, Conn. It would seem that the 107-day passage of the *Dashing Wave* was the year's third best performance, but that it was an unusually fast run is attested by the fact that it was over twenty days shorter than the average length of passage of all the acknowledged sixteen clipper ships that cleared North Atlantic East Coast ports during the months of December 1857 and January 1858. Of these sixteen passages (including the run of the *Dashing Wave*), four were under 110 days, three from 111 to 120, three from 121 to 130, three from 131 to 140 days, while the balance were slow runs of 160, 165, and 178 days, respectively. On the *Dashing Wave's* 1859 westbound passage around Cape Horn (120 days), Captain Lecraw reported covering the distance from 50° S. Pacific to the equator in only 15 days 16 hours, which was record time. (The *Live Yankee* and *Mary L. Sutton,* each with a record of 16 days, are generally given the honor of having done the fastest sailing between these points.) The "*Wave*" was within five hundred miles of the Golden Gate 102 days out from Boston, but light winds and fogs were responsible for the ship's requiring 18 days to cover this distance, her speed toward destination being reduced to only 28 miles per day, or 1⅙ knots per hour.

It is said that as a lumber drogher on the Pacific the *Dashing Wave* "was considered the fastest of the fleet, which included many smart ships and former Cape Horn clippers." Engaged in coastwise work, she did some fast sailing between San Francisco and Tacoma, and she holds the record for a ship under canvas between San Francisco and Cape Flattery, having made this 676-mile run in 54 hours — an average speed of 12½ knots per hour.

The *Dashing Wave,* even though she had a long life and was surveyed as sound to the end, had many mishaps. In 1857 she went ashore when leaving Calcutta and had to put back with four feet of water in the hold; the cargo had to be discharged, and repairs required two months. She was at Singapore for four months in the winter of 1864-1865 while repairing damages sustained in the China Seas. In February 1867, she went ashore off Barnegat and, when pulled off the shoals, sank in five fathoms of water, where she remained until, after seven months, she was raised and towed to New York for repairs; this accident cost the insurance companies $122,000 for damage to the ship and her cargo. The last westbound Cape Horn passage of the "*Wave,*" before referred to, was "a classic of misfortune." Leaving New York March 11, 1869, she reached 50° S. Atlantic in 42 days, the voyage starting out most auspiciously, but then trouble overtook the vessel. Captain Mayhew became ill, and in a succession of violent gales the "*Wave,*" greatly battered, lost spars and canvas and started to leak badly. She put about and made for Rio de Janeiro, which she reached on July 6, 117 days out from New York and 75 days after being at Lat. 50° S. Here part of her cargo was discharged and repairs made at a cost of $37,000, and after a port detention of 97 days she resumed her voyage, sailing October 11 for San Francisco. Off Cape Horn the "*Wave*" encountered "atrocious weather, violent gales, and heavy seas"; she sustained severe damages to spars and hull, lost much canvas, and again sprang a leak. Captain Mayhew, who had by this time become a very sick man, had to turn the ship over to Chief Mate Morton. The crew had become mutinous, and conditions on board—both ship and men—were most serious, so Acting Captain Morton took the vessel into Valparaiso. The "*Wave*" reached Valparaiso December 5—55 days out from Rio; Captain Mayhew was taken ashore and died December 10. The ship was repaired at a cost of $7,000, and after being 28 days in port, she sailed January 2, 1870, for San Francisco, which she reached on February 15—44 days out from Valparaiso. The passage had required 341 days from New York, of which 216 days had been spent at sea and 125 days in two ports en route undergoing repairs, and during the voyage the captain had died and the crew become mutinous, thus forcing the mate to make for Valparaiso.

The clipper ship *Water Witch* was launched from Fernald & Pettigrew's yard on May 6, 1853. She was 178 ft. long at the keel, 182 ft. 6 in. on deck and 192 ft. over-all, 38 ft. beam,

21 ft. deep, and of 1,204 registered tons old measurement. This ship's career was as short as that of the *Dashing Wave* was long, for the *Water Witch* was lost at Ypala (where she was loading dyewoods) on June 1, 1855, when only two years old. When she was half loaded, a violent gale sprang up during the night, and the ship dragged both anchors. The masts were cut away, and everything done to save her, but she was driven on the rocks and "the bottom cut out of her." Two lives were lost, and the ship, insured for $68,000, was sold "as she lay" for $500.

The maiden voyage of the *Water Witch* westbound around Cape Horn to San Francisco was an unfortunate one. Sailing from Boston July 31, 1853, under Capt. Washington Plummer, the ship did not arrive at San Francisco until March 16, 1854, or 228 days out from Boston; but Captain Plummer reported the passage as only "116 sailing days from Boston and 76 days from Rio de Janeiro," where she was compelled to put in for repairs en route. Actually, the *Water Witch* entered the harbor of Rio, dismasted and with four feet of water in the hold, on September 16 — or 47 days out of Boston. She was detained in port 106 days undergoing repairs and resumed her voyage on December 31, 1853. Upon arriving at San Francisco March 16, 1854, she had been 122 sailing days at sea. Evidently, when at sea, she sailed well on this long drawn-out passage, for she had ten days of strong gales off the Horn and was "within three days' sail of the Golden Gate for ten days." Traveling eastward on the return leg of her maiden voyage, the "*Witch*" went from San Francisco to Callao, Peru, in 52 days, thence 64 days to Hampton Roads and 75 days to New York, where she arrived October 20, 1854, after detention at the Roads. On her second and last westbound Cape Horn passage, the "*Witch*" cleared New York December 6, 1854, and arrived at San Francisco April 11, 1855, which is an elapsed time of 126 days; but Captain Plummer reported "a passage of 120 days with ten days of heavy gales off the Horn and held back by light airs in the North Pacific." Sailing from San Francisco, the *Water Witch* did some fast sailing to San Blas and the roadstead of Ypala, where she met disaster and came to an untimely end.

Fernald & Pettigrew launched two medium clipper ships in 1854. The *Express* of 1,072½ tons register was 183 ft. long, 35½ ft. beam, and 21½ ft. deep; she was built for a New Orleans, La., group headed by Peter Marcy. The *Midnight,* put overboard on April 17, was of 962 tons old and 838 tons new measurement (length 175 ft., beam 36 ft., depth 20 ft. 10 in.) and was built for Henry Hastings, of Boston. The *Midnight* made five westbound passages around the Horn to California in the clipper ship decade, ending with her 120-day passage in 1860. These five runs were made in 117, 144, 143, 124, and 120 days, respectively — an average of 129½ days. Between 1862 and 1866, the ship made four more such passages in 142, 132, 142, and 119 days, respectively — an average of somewhat less than 134 days. The all-time average length of the nine westbound Cape Horn passages of the *Midnight* was 131½ days. On some of the ship's relatively long passages, her runs compared favorably with those of other clippers covering the course at about the same time. On her third passage, leaving New York August 13, 1856, she arrived at San Francisco January 3, 1857, after a run of 143 days. The five other clippers that sailed between August 1 and September 1 made passages as follows: *Ocean Pearl,* 157 days; *Ocean Telegraph,* 154 days; *Bostonian,* 142 days; *Cyclone,* 140 days; *Starlight,* 135 days. The average for all the six August sailings was over 145 days. The *Midnight* made three eastbound Cape Horn passages from San Francisco (two to New York and one to Boston) during the years 1856-1866 in 99, 111, and 112 days, respectively — an average of 107⅓ days. While on a voyage from New York to Yokohama in the winter of 1877-1878 loaded with oil, coal, etc., the *Midnight* put into Amboyna (January 1878) in distress and leaking beyond the capacity of the ship's pumps to handle. The cargo was discharged, and the vessel, after being surveyed, was condemned, given up to the underwriters, and sold for $2,625. The ship was approaching an age of twenty-four years at the time and, it is said, "was well insured."

Fernald & Pettigrew's last clipper ship was the medium clipper *Noonday,* built in 1855 for Henry Hastings, of Boston, the owner of the *Midnight.* The *Noonday* was a bigger ship

in every way than her year-older sister, with a trifle fuller model; she was 185 ft. long (200 ft. over-all), 38 ft. 6 in. beam, and 23 ft. 6 in. deep, with a registered tonnage of 1,189 tons old measurement. It is said that she carried 1,340 tons deadweight, or 1.13 times her measured registered tonnage, and 2,100 tons "measurement general cargo for California." The *Noonday* made four complete westbound passages to California around the Horn. On New Year's Day of 1863, she was wrecked on an uncharted rock (eighteen feet under water), off the Farallones and within two miles of the pilot boat *Relief,* as she was completing her fifth passage — a run of 139 days from Boston to the Golden Gate. When she struck, the *Noonday* was under full sail with studding sails set and was making 10 knots per hour. She hit the rock hard and went clear, but her bottom was stove in, and she filled rapidly and sank in forty fathoms of water. Why the rock — whose existence, it is said, was known to pilots — was not charted is a mystery; this calamity brought it conspicuously to the attention of the government and the marine fraternity, and it has since been known as Noonday Rock. At the time of her loss, the *Noonday,* vessel and cargo, represented a value of $450,000. The following table gives a record of the five westbound passages of the *Noonday* around Cape Horn:

Voyage No.	Sailed from	Date of Sailing	Date of Arrival San Francisco	Length of Passage in Days
1	Boston	Oct. 17, 1855	Mar. 4, 1856	139
2	Boston	Jan. 16, 1857	May 13, 1857	117
3	Boston	Oct. 7, 1859	Feb. 10, 1860	126
4	New York	Apr. 2, 1861	Aug. 26, 1861	146
5	Boston	Aug. 14, 1862	Jan. 1, 1863	139

The average length of the *Noonday's* five passages was 133½ days, which can be compared with an average of 129½ days for five similar passages made by the somewhat finer-lined and smaller *Midnight* prior to the close of 1860 and an all-time average of 131½ days for the total of nine passages of the *Midnight.* The 1857 and second westbound passage of the *Noonday* was reported by her owners as "a smart run out of 113 days." Carl C. Cutler so records the passage, but his supporting dates figure 118 days, and Captain Brock apparently reported "a passage of 117 days, port to port." This, the best run of the *Noonday* westbound, can be compared with the sailing performances of all clippers sailing from North Atlantic East Coast ports between January 6 and February 8, 1857 (the *Noonday* left Boston on January 15), as follows:

Name of Clipper	Year Built	Registered Tonnage	Port of Departure	Date of Sailing	Arrival at San Francisco	Length of Passage in Days
				1857	1857	
ELECTRIC SPARK	1855	1,216	New York	Jan. 7	May 7	120
MAMELUKE	1855	1,303	New York	Jan. 13	July 5	173
NOONDAY	1855	1,189	Boston	Jan. 15 (cleared)	May 13	118
COMET	1851	1,836	New York	Jan. 30	June 22	143
COURSER	1851	1,024	New York	Jan. 30	July 4	155
SOUTHERN CROSS	1851	938	Boston	Feb. 4	June 22	138

The average time of the five clippers sailing over the course at about the same time as the *Noonday* was 146 days, or twenty-eight days more than the elapsed time between clearance and arrival of the *Noonday* and twenty-nine days more than Captain Brock's reported passage of 117 days (verified by O. T. Howe and F. C. Matthews). The *Noonday* not only was lost by striking a sunken, uncharted rock but also on her second voyage in August 1857,

on a passage from San Francisco to Calcutta, was damaged by striking a rock near the Banda Islands and had to put into Batavia for repairs. It was here in the Banda Sea that her sister, the clipper *Midnight,* met her fate in January 1878, or twenty-one years later.

Among the vessels other than clippers and transatlantic sailing packets built by Fernald & Pettigrew on Badger's Island was the *Samoset,* which most surprisingly was built to the order of Tucker & Stone, of Wiscasset, Maine, a shipbuilding town of prominence. The owners, it is said, "came in for an uncommon share of slander by the gossiping part of the village when it became known that they had contracted out of town for their vessel."

The Portsmouth Firm of Tobey & Littlefield Builds Three Clippers

The third important firm of shipbuilders at Portsmouth, N.H., during the clipper shipbuilding decade was Tobey & Littlefield (recorded also as Toby & Littlefield), and its yard was located on Nobles Island in the harbor north of the George Raynes yard and west of Badger's Island, where the Fernald & Pettigrew yard was in operation. This firm built three clippers during the two years 1853 and 1854 aggregating 4,432 registered tons, and two of them, the fast *Sierra Nevada* of 1,942 tons and the uniform, speedy sailer *Morning Light* of 1,713 tons, were the largest clippers and the largest vessels built on the Piscataqua. The first clipper ship built by Tobey & Littlefield was the *Morning Light,* built to the order of Glidden & Williams, of Boston, and launched August 25, 1853. She was of 1,713 tons old measurement (1,589 tons British measurement) and was 220 ft. long (235 ft. over-all; 205 ft. keel), 43 ft. extreme beam, and 27 ft. depth of hold; the deadrise was 20 in. and the sheer 3½ ft. This ship should not be confused with another, but much smaller, clipper *Morning Light,* which hailed from Philadelphia and was built the same year (1853) by William Cramp at his Kensington (Philadelphia) yard. This Philadelphia ship had a tonnage of only 938 tons and was 172 ft. long, 34.3 ft. beam, and 19 ft. deep; she was captured and burned in 1863, during the Civil War, by the Confederate forces.

The cost of the *Morning Light* of Boston was said to have been $117,000.00, or $68.30 per registered ton, and it was reported that "for solidity of construction this Tobey & Littlefield ship could not be excelled." The following table gives a record of the four westbound Cape Horn passages of the ship from East Coast ports to San Francisco:

Voyage No.	Sailed from	Date of Sailing (from log)	Date of Arrival San Francisco	Length of Passage in Days
1	Boston	Oct. 3, 1853	Feb. 11, 1854	131
2	New York	Dec. 21, 1854	Apr. 12, 1855	112
3	Boston	Oct. 29, 1856	Mar. 2, 1857	124
4	New York	Aug. 8, 1860	Dec. 14, 1860	128

The average length of these four passages was 123¾ days. Howe and Matthews, in AMERICAN CLIPPER SHIPS, say that the ship made five westward Cape Horn runs in 131, 112, 124, 141, and 128 days, respectively, an average of 127 days, but no date is given of this additional 141-day passage. Carl C. Cutler, in GREYHOUNDS OF THE SEA, says that the *Morning Light* of Boston made four westward Cape Horn passages in 136, 115, 126, and 129 days,

respectively. These lengths of passages seem to be based on customhouse clearances and entries.

The *Morning Light,* in making her fast run of 112 days to California in 1854, did not outclass her competition as she did in 1860. When sailing from New York August 8, she reached San Francisco December 14 after a passage of 128 days. The following table is a record giving the sailing performances of all clipper ships leaving an East Coast port for California between July 8 and September 8, 1860:

Name of Clipper	Year Built	Registered Tonnage	Port of Departure	Date of Sailing	Arrival at San Francisco	Length of Passage in Days
OCEAN EXPRESS	1854	1,697	New York	July 10, 1860	Nov. 30, 1860	143
FAIR WIND	1855	1,299	New York	July 27, 1860	Dec. 7, 1860	133
NOR'WESTER	1854	1,267	Boston	July 28, 1860	Dec. 14, 1860	139
MORNING LIGHT	1853	1,713	New York	Aug. 8, 1860	Dec. 14, 1860	128
ORPHEUS	1856	1,272	New York	Aug. 11, 1860	Dec. 31, 1860	142
DASHING WAVE	1853	1,180	Boston	Aug. 15, 1860	Jan. 5, 1861	143
AURORA	1853	1,396	New York	Aug. 30, 1860	Jan. 19, 1861	142

The average length of passage of the six clippers — other than the *Morning Light* — was 140½ days, or twelve and a half days longer than the time of the *Morning Light,* and none of the other clippers made a run within five days of that of the Tobey & Littlefield clipper. The last voyage of the *Morning Light* under the American flag was from Cardiff, Wales; she cleared this port August 21, 1861, for Valparaiso, which she made in 88 days after "her usual hard luck as to weather conditions." Continuing from the Chilean port up the Pacific, however, the ship made a splendid passage to San Francisco in 37 days, which is within one day of the record, and as the *Morning Light* was "becalmed for three days off the port of departure," her actual sailing time of 34 days is the fastest ever made between the two ports in the all-time history of sail. Returning to England via Callao and Queenstown, the ship was sold at London in April 1863, because of the Civil War, to James Baines & Company, of Liverpool; she was renamed *Queen of the South* and ran in the British colonial trade between Liverpool and Australia in the Black Ball Line.

Tobey & Littlefield built the little clipper *Ocean Rover* in 1854 for R. H. Tucker and associates, of Boston, Mass. She registered 777 tons old and 823 tons new measurement and was 162 ft. long, 33 ft. beam, and 23 ft. deep. She was sold to Salem parties and in March 1867 was acquired by Captain Carleton and others. The *"Rover"* was wrecked July 18, 1870, when sixteen years old, on a reef in the Guigana River, north of Pernambuco, Brazil, while bound from Hamburg to Baker's Island.

The third clipper built by Tobey & Littlefield was the *Sierra Nevada,* Portsmouth's longest vessel, which was launched May 29, 1854, for Glidden & Williams, of Boston, Mass. She was 222 ft. long, 44 ft. 4 in. beam, 26 ft. 4 in. deep; she drew 23 ft. of water, had a 20-in. deadrise and 4½ ft. sheer, and measured 1,942 tons (British measurement, 1,616 tons). The *Sierra Nevada* had a strange record of mishaps and fast sailing. She started with disaster, for on her first voyage, when at Liverpool, she collided with the *Jane Leach* and when entering Wellington Dock grounded on the sill, remained there for a week, and "broke her back." The dock owners, palpably at fault, denied responsibility. Suit to recover damages was brought by the owners, who finally won on every point after years of litigation, during which the defendants appealed twice. After her injury, the *"Nevada"* was sold for $43,750 and was thoroughly repaired. Another serious accident that came very close to being the end of the ship occurred April 29, 1862, while she was in ballast and fortunately light. In beating out

through the Golden Gate in a dense fog, she "missed stays" and went ashore on Fort Point. Luckily, the revenue cutter *Shubrick* was near by and was able quickly to get lines aboard the ship and pull her off before she became a wreck. She was taken to the Mare Island Navy Yard for dry-docking, and repairs cost $22,000. But ill-fortune still pursued the vessel; when again ready for sea and at anchor, she dragged onto the clipper ship *Phantom* and suffered further damage amounting to $3,000.

The *Sierra Nevada* made four westbound passages around Cape Horn to California during the years 1850-1860 and a fifth in the winter of 1861-1862. The difference between port records of clearances and arrivals, ship log records, and the published reports of the command and owners is exemplified by the following comparison of stated lengths of the first four outbound California passages of the "*Nevada.*" Variations of the same sort are noticeable in the records of passages of most clipper ships.

Voyage No.	Stated Date of Clearing at Port of Departure	Stated Date of Arrival at San Francisco	Length of Passage in Days			
			Elapsed Time Customhouse Records	As per Ship's Log	Published Statement	"Authoritative" Record
1	Mar. 9, 1856	July 15, 1856	128	128	128	129
2	June 16, 1857	Nov. 5, 1857	142	140	140	140
3	Dec. 24, 1859	Mar. 31, 1860	98	97	97	98
4	Oct. 26, 1860	Mar. 2, 1861	127	114	116	117

The *Sierra Nevada* left her port of departure March 10 (and cleared March 9), 1856, on her first outbound passage from New York to San Francisco, which Captain Penhallow reported as a run of 128 days, port to port. The clipper *Mastiff,* sailing March 7, made a run of 133 days; the *Syren,* leaving March 12, had a passage of 130 days; but Donald McKay's crack record-making clipper *Flying Cloud,* clearing New York on March 13, had an unfortunate time of it and did not reach San Francisco until September 14, or 185 days later. Having been partly dismasted, she put into Rio de Janeiro en route (June 5-22) for repairs.

The *Sierra Nevada's* third California voyage was an unusually good one both ways. Under Capt. James G. Foster, she ran out from Boston to San Francisco in 97 days and returned to New York in 98 days—a total of 195 days at sea for the round trip, which is very fast sailing. The strange thing about the ship's westward passage is that all the speed was shown in the Northern Hemisphere. Below the equator, the sailing performance was mediocre, but the ship ran to the equator in the Atlantic in only 17 days and 6 hours and from the equator in the Pacific to the Golden Gate in only 15 days—a total of 32 days in the Northern Hemisphere and 65 days in the Southern. On this passage, the ship experienced very light winds in the South Pacific and was held back by strong gales off the Horn, where the chain bobstays parted. The ship could not use head sails for ten days and had to be run into smooth water near the land before repairs could be made. On Voyage No. 4 in the California service, Captain Foster reported a passage of 114 days out from New York to San Francisco and a return of 101 days to New York—a total of 215 days at sea for the round trip. Captain Horton, on the ship's last westbound run to the Golden Gate, reported an arrival at San Francisco on March 25, 1862, "105 days out from New York." The average length of the five westbound Cape Horn passages of the *Sierra Nevada,* as per the ship's log and reports of her masters, was 117 days (fastest, 97 days; slowest, 140 days). The *Sierra Nevada* is also credited with a very fast and a claimed record transatlantic crossing from Hampton Roads to Liverpool. Upon the ship's arrival at Liverpool on April 11, 1855, Captain Penhallow reported "a record passage of 15 days from the Chesapeake."

Because of Civil War conditions and primarily because of the fear of northern shipowners due to the destructive operations and threats of Confederate commerce raiders, the *Sierra Nevada* was sold at London, in March 1863, to Mackay & Baines for $52,250. Her name was

changed to *Royal Dane,* and she was placed in the Black Ball Line's Liverpool-Australia service. Later, she was owned by John Harris, hailing port London, and she was wrecked on the coast of Chile in 1877, when twenty-three years old, while carrying guano from Callao, Peru, to Liverpool.

The Famous Yacht-like Clipper NIGHTINGALE, *Built on the Piscataqua by Samuel Hanscomb, Jr., Has an Eventful Career of Forty-two Years, 1851-1893*

The *Nightingale,* built by Samuel Hanscomb, Jr., and associates, including a host of contractors and subcontractors (most of whom became unwilling financial partners in the venture), was constructed at the William Hanscomb yard at Eliot on Long Reach, on the Maine side of the Piscataqua, some three miles above Badger's Island (where the Fernald & Pettigrew shipyard was located) and just below historic Mast Cove, which was so important to the community in colonial days. A great deal of mystery surrounds the conception, design, building, and ownership of the *Nightingale.* It was said that Hanscomb was associated with the "Navy Yard crowd," who got ideas "from young Sam Pook, of Boston" (the elder Pook was a U.S. Navy constructor), and passed on to Hanscomb a model or lines and a sail plan for "a thousand-ton yacht-like clipper." He interested Capt. F. A. (also recorded as T. A.) Miller and others in putting up some capital to build, and Captain Miller was promised the command. In order to obtain financial support from a certain quarter, the ship was named *Sarah Cowles.*

Work on the vessel was commenced at the Eliot shipyard in late January, and the ship was launched June 16, 1851, after some "seven or eight weeks of bickering among those interested in the undertaking and who had advanced the money to build, the promoters, and the contractors." The plan was not going well, the builders were in financial difficulties, Captain Miller and Hanscomb were at loggerheads, and the contractors and subcontractors were demanding payments—and the workmen, wages—which were not forthcoming.

The Boston JOURNAL ran the following advertisement from mid-February to April 18, 1851, when most significantly the name was changed from *Sarah Cowles* to *Nightingale:*

TRANS-ATLANTIC EXCURSION TO LONDON

The elegant new clipper ship, *Sarah Cowles,* 1100 tons burthen, commanded by Captain F. A. Miller, now building expressly for conveyance of passengers on the GRAND TRANS-ATLANTIC EXCURSION to the WORLD'S FAIR, landing the same at the port of Southampton, England, will be despatched from this port about May 20th. In the designing and construction of this splendid specimen of naval architecture, intended for this great mission, nothing will be overlooked. Parties, families and all who contemplate joining the excursion, are informed that the model and drawings of the ship with plan of cabin, staterooms and berths may be seen and rates of passage made known at the office of DAVIS & COMPANY, 76 STATE STREET.

On May 7, 1851, forty days before the ship was launched, the New York COMMERCIAL ADVERTISER carried this advertisement:

TRANS-ATLANTIC EXCURSION TO THE WORLD'S FAIR

Rare opportunity for a cheap and delightful trip to London. Captain Miller, so favorably known to the public on both sides the Atlantic as a noble navigator and gentleman, goes out in command of the *Nightingale.* To sail from Boston on or about June 10th. Rate of passage to London and back: first cabin staterooms, $125. Ladies' cabin, berths, $125. Saloon staterooms, $110. Saloon berths, $100.

For tickets apply to Adams & Company, 16 Wall Street.

It would seem that the public did not show a great deal of interest in booking accommodations on what was evidently originally planned to be the world's finest cruise ship. The *Nightingale* was planned and modeled not as a Cape Horner or even as a trading or merchant vessel but as a yacht. The original idea of Miller and Hanscomb was to sail the ship, with a company of "selected and exclusive passengers" aboard, to London and anchor her in the Thames so that the passengers could use the vessel as a hotel during a few weeks' stay in London while the International Exhibition, or World's Fair, was open and attracting visitors. But the promoters' plan went further. The ship was to be luxuriously equipped and a thing of rare beauty, appealing to the eye. While in London, she would be featured by clever advertising as the finest example of the latest and fastest American clipper ship construction; no expense or skill was to be spared in her building, equipment, fittings and furnishings to make her distinctive and impressive. The promoters were banking on being able readily to sell such a beautiful and fast vessel for a good big price if she could be properly presented in the heart of the world's greatest city at a time when people were flocking there from all parts of the world.

Unfortunately, the promoters were short of both money and credit. Hanscomb had practically none, and as a promoter Captain Miller was not so effective as anticipated. A ship like the *Nightingale* could not be built "on a shoestring," and the money gave out long before the ship was ready for launching. The promoters and backers fought among themselves, Captain Miller became "disillusioned," Hanscomb was cantankerous, and the contractors, creditors, and workmen were belligerent. Governor Goodwin was appealed to, and it was agreed by all interested parties that the ship must be completed if they were to obtain anything on their claims, realize any return from their investments, or obtain something for their work. Goodwin persuaded them to finish the ship, to put the entire matter, with their claims, in his and Captain Yates's hands, and, further, to accept a pro rata share of the net proceeds from sale after the ship was sold. It was to be understood that he, the governor, Captain Yates, Hanscomb (the master builder), and Capt. F. A. Miller (the superintendent of construction) would pass upon the legitimacy of each claim for supplying materials, labor, and services. The cruise idea to London was abandoned. Money, covered by a mortgage on the vessel, was borrowed in Boston to finance the finishing of the ship, but no funds could be obtained for operating the clipper as a yacht. Moreover, inquiries soon brought to the foreground the fact that American shipowners did not rate the ship highly for any purpose except yachting or possibly the China tea trade; no house would consider her for a moment for the California trade or even for the transatlantic service.

The *Nightingale* was towed to Boston July 19, 1851, and for some six weeks she lay at a dock while parties financially interested in the ship wrangled over her and agents and conciliators sought to unravel the financial tangle. On September 6, she was sold by auction for $43,500 to Davis & Company, ship brokers, who had advanced money on the vessel; for none of the shipowners present at the sale would bid without a firm guarantee of title free from all possible litigation. Davis & Company alone, co-operating with Governor Goodwin, could clear up all the mess, which this company proceeded to do, and in a short time the *Nightingale* was sold to Sampson & Tappan for the good price of $75,000, or $70 per registered ton. This shipping firm, which was interested in the oriental trade, saw possibilities in the yacht-like craft and bought her during the height of the boom when prices were high. It was said at the time that the *Nightingale* was put on the market, "Any clipper ship today can be sold for a price well in excess of any contract price, provided prompt delivery is made." The excellent realization by the community of interests with liens on the *Nightingale* "settled all claims against the ship handsomely," and even Hanscomb and Miller were "paid in full for their work." After paying all approved and verified bills, Governor Goodwin divided the money on hand, on a percentage and pro rata basis, among the contractors—shipwrights, caulkers, spar-, sail- and blockmakers, riggers, joiners, wood finishers and painters, etc. Samuel Hans-

comb, Jr., had bad luck in building the *Nightingale,* but he had amazingly good luck in disposing of her and in escaping insolvency.

The original naming of the ship as *Sarah Cowles* was apparently mere bait for funds; the final name was, of course, in honor of Jenny Lind, "the Swedish Nightingale" ("the Golden Voice" and "the Soul of Song"), who made a sensation with her wonderful voice in Castle Garden, New York. The *Nightingale* was connected with several of the great events of the fifties. The American concert tour of her namesake, the great London "World's Fair," the California Gold Rush, and the colonization and development of Australia following the Victoria gold find there all touched her career. It has been said of the *Nightingale,* "Her story is more checkered, more mysterious, more exciting and romantic than that of any other clipper ship." Howe and Matthews, in AMERICAN CLIPPER SHIPS, have this to say of her:

> Constructed with all the finish and luxury of a yacht; launched under a load of debt which necessitated an early sale at auction; a pioneer to the gold fields of Australia; a winner in the English tea races; a slave ship, war vessel and California clipper, the *Nightingale,* wherever she went, excited admiration and interest. During her 42 years of strenuous service she sailed on every ocean; the Pacific (or Behring) sea knew her as far north as 65°; the Indian Ocean had her keel cleaving its waters in the high latitudes of 54° and up to nearly 56° South; in the Atlantic she had been to 58°, off the Horn, while her last hailing port, Krageroe, is about the same latitude North. The elements were not always kind to her and underwriters had to pay many heavy claims. She had more than her share of mutinies and for a time the "taint of a musky ship" stigmatized her; but up to the last of her long sea life she is said to have retained much of the beauty and speed that characterized her as a clipper of the fifties.

The *Nightingale* was 185 ft. long, 36 ft. beam, 20 ft. deep, and 1,066 tons old measurement. By the new measurement rules, the tonnage was 722 tons, which was later reduced by re-measurement to only 657 tons. (These tonnage figures are eloquent testimony of the ship's yacht-like model.) The deadrise was 36 in., load draft 19 ft. Her lines were unusually fine and her spars lofty, with a pronounced rake aft the mizzenmast, being on an angle from the vertical of 1¾ in. to the foot.

The *Nightingale* sailed on October 18, 1851, from Boston for Australia (clearing the previous day for "Oceania and China"), and she was the pioneer American vessel to enter the Australian trade. The maiden voyage of 90 days was considered slow, but sailing conditions were unfavorable. When she had a chance to move, she showed good speed. Sailing to Shanghai, she loaded tea for London and was 61 days getting clear of Sunda Straits. After that she sailed fast and reached her destination in only 72 days, beating all the ships that sailed about the same time except the Webb-built (New York) clipper ship *Challenge.* After this run, Sampson & Tappan offered to match the *Nightingale* for ten thousand pounds sterling against any clipper on a voyage from England to China and return, but there was no response from the British, who had been so boastful in the press of the prowess of their new clippers *Stornoway, Chrysolite* and *Challenger.*

The second voyage of the *Nightingale* was from London to Shanghai and return. Outbound, her passage of 80 days to Anjer beat the time of all other clippers except Webb's *Challenge,* which made the run in 78 days. Returning, the *Nightingale* beat the British clipper *Challenger* by two days. Crossing the Atlantic, the *Nightingale* loaded at New York and sailed for Melbourne on May 20, 1854, in R. W. Cameron & Company's Australian "Pioneer Line." The first part of the passage was slow because of lack of wind, but after crossing the equator she sailed well and made Hobson's Bay on August 2—75 days out from New York and only 46 days from the line. On many occasions, she exceeded 16 knots per hour, and she covered 365 miles in twenty-four hours at an average speed of over 15½ knots per hour.

In 1855 the *Nightingale* ran from Batavia Roads to London in 70 days, and in 1856 she ran from Shanghai to New York in the fast time of 88 days. She made her only westbound Cape Horn passage to California during the clipper ship decade in the winter of 1858-1859,

reaching San Francisco May 18, 1859, after a slow run of 148 days from Boston. Her good sailing performance in the tea trade and in tropical runs and her relatively slow run in the Cape Horn service well bore out the opinion of shipping men who had "admired the *Nightingale* as a yacht and pleasure vessel but wanted none of her for the Cape Horn trade." Even though the *Andrew Jackson, Comet,* and *Nonpareil* beat the *Nightingale* badly in the passage around the Horn, the Portsmouth-built yacht-like clipper beat both the *Golden Rocket* and *Aspasia* by ten days on the run. Later, when twenty-five years old and far from being "in the pink" of condition, the *Nightingale* made her second and last run westbound around the Horn in 119 days. Crossing the Pacific from San Francisco to China, the *Nightingale* loaded at Foochow for New York and on the home run beat the clipper *Argonaut* by eight days. In 1860 the *Nightingale* was sold under mysterious circumstances at New York, with the purchaser unknown. Commodore George H. Perkins, U.S.N., when acting master of the U.S.S. *Sumter,* wrote on April 15, 1860: "The clipper ship *Nightingale* of Salem, shipped a cargo of 2,000 negroes and has gone clear with them. . . . She is a powerful clipper and is the property of the Captain, Bowen, who is called the 'Prince of Slavers.'"

It would seem that the common report floating around in 1860-1861 was incorrect. This report placed the ship under Brazilian registry and said that the *Nightingale,* after being sold at New York, sailed to Rio de Janeiro and was there owned by a Brazilian merchant, who employed her in the slave trade under the flag of his country. Howe and Matthews say that from the evidence, "we are driven to the conclusion that the *Nightingale* fitted out as a slave ship at New York and sailed from that or some other Eastern port direct to the west coast of Africa." Other reports suggest that she was fitted out as a slaver in London, and it would seem that her commander, Capt. Francis Bowen (sometimes referred to as Frederick Bowers), was an experienced slaver, knew the African west coast well, and had operated there as the master of the slave ship *Sultana.*

The records show that the *Nightingale* was again in New York in the late summer of 1860, where she loaded grain, and sailed September 18 for London. The London TIMES refers to the arrival at Liverpool of the ship *Nightingale* of Boston (Captain Bowers) and her sailing from there November 24, 1860, "for St. Thomas with a cargo valued at $21,000 consisting of guns, powder and cotton cloth." The paper boldly adds, "It was well known in certain circles before she sailed that she was a slaver." The *Nightingale* was at St. Thomas in January 1861, where she was boarded by both British and American navy officers and "her papers found in order." She aroused suspicion by dodging about the African coast until the night of April 20, when she was seized by the U.S.S. *Saratoga,* a sloop of war. The following letter from Captain Taylor to the judge of the District Court at New York tells how the capture was made:

U.S.S. *Saratoga,* Kabenda, April 21, 1861.

To the Judge of the U.S. District Court at New York City:

For some time the American ship *Nightingale* of Boston, Francis Bowen, Master, has been watched on this coast under the suspicion of being engaged in the slave trade. Several times we have fallen in with her and although fully assured that she was about to engage in this illicit trade she has had the benefit of the doubt. A few days ago observing her at anchor at this port, I came in and boarded her and was induced to believe she was then preparing to receive slaves aboard. Under this impression the ship was got under way and went some distance off but with the intention of returning under cover of the night; which was done and at 10 P.M. we anchored and sent two boats under Lieutenant Guthrie to surprise her and it was found that she had 961 slaves aboard and was expecting more. Lieut. Guthrie took possession of her as a prize and I have directed him to take her to New York. She is a clipper of 1000 tons and has *Nightingale* of Boston on her stern and flies American colors.

Alfred Taylor, Commander U.S. Navy.

Lieutenant Guthrie was placed in command of the *Nightingale* with a prize crew and ordered to proceed to Monrovia, Liberia, and to liberate the slaves. The ship sailed from Kabenda on April 23. Fever broke out, and of the 961 African slaves only 801 were alive to

be landed at Monrovia on May 7; many of the prize crew were infected, and three later died. The *Nightingale* sailed from Monrovia May 13 and reached New York June 13, 1861. Lieutenant Guthrie says in his report to the Secretary of the Navy:

> The *Nightingale* was seized in the act of receiving their negroes aboard on the night of the 20th of April, about midnight, and I regret to say that an American named Francis Bowen and a Spaniard named Valentino Cortina effected their escape during my watch on deck on the night of the 22nd of April. . . . The first person named was known to be the commander of the *Nightingale* prior to her capture, and the latter was represented as such at the time.

The *Nightingale* case came before the court June 26, 1861, and no defense was offered. The ship was promptly condemned and sold at marshal's sale on July 6, for $13,000, to an agent of the U.S. Government. Having been armed with four 32-pound guns, she was sent south with coal for the blockading fleet and went ashore early in October at the Southwest Pass of the Mississippi River. After being lightened, she was pulled off the bank and made a fast run of 10 days to New York. During the war, the ship acted as a coaling ship, a supply and store ship, and as an ordnance vessel. She was armed with four 8-inch guns. In May 1864, she was ordered from Key West, Fla., to Boston, the Navy Department's instruction reading in part, "The *Nightingale* is sent north because she is supposed to be infected with yellow fever, which for the safety of the squadron requires her to be withdrawn from the neighborhood."

On February 11, 1865, after lying in Boston eight months, the *Nightingale* was sold at auction for $11,000 to Capt. D. E. Mayo, who took her once more around Cape Horn to San Francisco. She arrived at San Francisco March 9, 1866, after a good run of 119 days from Boston with "a freight list amounting to $21,107." The *Nightingale* was soon afterwards purchased for $23,381 by the Western Union Telegraph Company, then exploring to run a cable line via Bering Strait "to unite the New and Old World." Early in 1868, the *Nightingale* sailed from Victoria for New York and put into Valparaiso, where damages were repaired at an expense of $6,000; proceeding, she ran to New York in 63 days and arrived there September 7, 1868. The ship was then sold to Samuel G. Reed & Company, of Boston, and operated to the Pacific and the Orient. On one occasion, on a passage from Hong Kong to San Francisco, she put into Yokohama for repairs, which cost $22,000. In 1871 she was at the Falklands leaking badly, with a mutinous crew aboard and a murdered mate. In 1876 she was sold at auction in San Francisco for $11,500, and her purchaser, George Howes, sent her with oil to New York, where she was again sold—this time for $15,000—to Norwegians, who re-rigged her as a bark. In 1877 she went ashore in the Delaware, but was re-floated. During the last year of her eventful life, the *Nightingale* was engaged in the lumber trade in the North Atlantic, which was severe work for a ship of her age. She hailed from Krageroe, Norway, and on April 17, 1893, when forty-two years old, was abandoned at sea while on a voyage from Liverpool to Halifax.

Samuel Hanscomb, Jr., built a second clipper at the yard on the Eliot, Maine, shore, below Mast Cove, the year following the building of the *Nightingale.* This vessel, the *Josephine,* proved to be the antithesis of the first Hanscomb-built clipper; she was never in the public eye, and little is known of her. The ship, built for Gen. Joseph Andrews, of Salem, Mass., was of 947 tons, 170 ft. long, 33 ft. beam, and 23 ft. deep. She made one westbound run around Cape Horn, sailing from New York May 25 and reaching San Francisco October 19, 1852. During this passage of 147 days, she was at Valparaiso August 22-25; her sailing time between ports was 143 days. The *Josephine* was destroyed by fire in St. Louis Harbor, Mauritius, in June 1859, when only seven years old.

The Portsmouth-built GRANITE STATE, CHARGER, MORNING GLORY, *and* STAR OF HOPE

The *Granite State,* the first of two full-rigged ships built on the Piscataqua to bear this good New Hampshire name, was constructed in 1853 by Samuel Badger (or Badger & Company) at the Badger yard in Portsmouth for Edward Size and Capt. John Chase, who was both the master and part owner. (H. D. Walker & Company, of Portsmouth, N.H., has also been mentioned as owner.) The vessel, a medium clipper, was of 1,108 tons register and measured 174 ft. long, 34 ft. beam, and 24 ft. deep. She was wrecked in 1868, when fifteen years old.

The medium clipper ship *Charger,* built by E. G. Pearce at Portsmouth for Henry Hastings, of Boston, Mass., was launched October 25, 1856. She was 190 ft. long, 38 ft. beam, 23 ft. 4 in. deep, and measured 1,136 tons old measurement and 1,169 tons new measurement. The *Charger* was a good-carrying ship, and she was a good sailer for a vessel of her model fullness. During the clipper ship decade, she made three westbound Cape Horn passages to California in the years 1857, 1858, and 1859 in 124, 117, and 124 days, respectively. In the sixties, the ship made six more such passages in 126, 125, 108, 133, 125, and 127 days, respectively, giving a total of nine westbound passages and an average of 123¼ days. Eastward around the Horn, the *Charger* made fast passages — all between 1863 and the winter of 1872-1873. These consisted of three runs to Boston in 107, 99, and 96 days, respectively; one to Liverpool in 97 days; and two to Queenstown in 108 and 114 days, respectively—a total of six passages from San Francisco to North Atlantic ports with an average of only 103½ days. The *Charger* made a fast passage of only 84 days from Calcutta to Boston, sailing from Sand Heads on Christmas Day, 1858, and reaching Boston March 19, 1859. This passage has been beaten only twice in the history of sail. On December 14, 1873, when bound for Cebu to complete loading for Boston, the *Charger* piled up on a reef ten miles from Cebu and a week later commenced to break up. The wreck was sold for $7,595, and a portion of the thousand bales of hemp aboard the vessel was saved. The ship became a total loss when seventeen years old.

The medium clipper ship *Morning Glory,* built at Portsmouth, N.H., in 1854 for J. Goodwin, was of 1,119 registered tons and measured 182 ft. long, 36 ft. 6 in. beam, and 26 ft. 9 in. deep. She was sold in 1864 to go under the British flag and renamed the *British Crown.*

The *Star of Hope,* a medium clipper built at Portsmouth, N.H., in 1855, was of 1,198 registered tons and measured 191 ft. long, 36 ft. 8 in. beam, and 24 ft. deep. The *"Star"* made only one westbound Cape Horn passage to California, and that was a disastrous one. She sailed from New York February 10, 1856, and, on fire, had to put into Montevideo April 14, where she discharged her cargo and underwent repairs. She finally reached San Francisco on December 7 — 301 days out from New York. She was abandoned near the Cape of Good Hope on June 13, 1861, when only six years old, while on a voyage from Liverpool to Calcutta with a cargo of railroad materials.

Portsmouth Builds Five Packets for New York Transatlantic Lines

During the fifties of the last century and concurrently with the boom in clipper ship construction, Portsmouth, N.H., built five sailing packets for the regular transatlantic lines operating on advertised schedule out of the port of New York — America's great and practically only successful port of departure and arrival of ocean sailing packets. These vessels, with their dimensions and ownership, were as follows:

Name	Year Built	Tonnage	Registered Dimensions in Feet			Line
			Length	Beam	Depth	
CONSTANTINE	1850	1,161	186.7	36.6	18.3	Blue Swallowtail, Liverpool
GERMANIA	1850	996	170.7	35.5	17.7	Whitlock, Havre
ORIENT	1852	1,560	201	41	20	Dramatic, Liverpool
WEBSTER	1853	1,727	206.7	43.5	21.5	Dramatic, Liverpool
ARKWRIGHT	1855	1,266	197	37.5	24.3	Dramatic, Liverpool

The *Constantine* operated successfully thirty-one consecutive years as a sailing packet in the strenuous Atlantic "shuttle." During 1850-1867, she ran in the Liverpool Blue Swallowtail Line and in the period 1868-1880 sailed in the London Swallowtail service. She was a rather slow but excellent sea boat and, although comfortable for passengers, made no fast runs. The *Germania* ran thirteen years in the Havre Whitlock Line (1850-1863) and later continued under the same owners as a Whitlock transatlantic transient, or sailing tramp, and general trader. During the period that she was running regularly on schedule between New York and France, she proved to be a reliable and sturdy packet, but never showed much speed; her average length of transatlantic westbound passages for the thirteen years of service running from Havre to New York was 38 days (fastest run, 26 days; slowest, 52 days).

The *Orient* was a quite sizable packet and operated in the Dramatic Liverpool-New York packet line for fifteen years (1853-1867 inclusive). She made one very good transatlantic westbound passage in 20 days, but the average time of all her homeward "uphill" crossings was relatively slow — 38 days; her slowest passage was a westward run of 51 days. The largest Portsmouth-built sailing packet was the *Webster,* which operated twelve years (1853-1865) in the New York-Liverpool Dramatic Line service and then continued as a transient. During the period that she sailed on regular schedule as one of the Dramatic Line fleet of transatlantic packets, she averaged 35 days for her westward passages; but her fastest crossing was 27 days and her slowest 51 days. The last of the regular line packets launched from a Portsmouth, N.H., shipyard for the New York transatlantic service was the *Arkwright,* built in 1855. This ship was not built expressly (as were the larger packets *Webster* and *Orient)* for the New York-Liverpool Dramatic Line, and she did not operate in this service until 1863-1868 — a period of about six years.

Another transatlantic sailing packet built at Portsmouth was the *Levi Woodbury,* constructed by Fernald & Pettigrew for Enoch Train's White Diamond (Boston-to-Liverpool) Line.

A Summary of Piscataqua Construction of Full-rigged Three-masted Ships from 1825 to the End of the Clipper Ship Decade

From the Portsmouth city directories, the following figures have been compiled showing the number, aggregate tonnage, and average size of full-rigged three-masted ships built at Portsmouth (and environs) during each five-year period for the years 1825-1859. The period ends at the close of the California clipper ship decade and during the time of business depression and national disharmony that immediately preceded the Civil War.

	Ships Built during Period		
Five-Year Period	Number	Registered Tonnage Total	Registered Tonnage Average per Ship
1825-1829	19	6,859	361
1830-1834	16	7,328	458
1835-1839	24	13,728	572
1840-1844	12	7,860	655
1845-1849	23	19,159	833
1850-1854	43	45,709	1,063
1855-1859	31	33,697	1,087
Total 1825-1859	168	134,340	800
Recapitulation in Three Prime Periods — a Total of 35 Years			
Before 1840 (1825-1839)	59	27,915	473
The 1840's (1840-1849)	35	27,019	772
The 1850's (1850-1859)	74	79,406	1,073

The Down Easter Type of Wood Ships Built by Portsmouth Shipyards

The shipbuilding yards of Portsmouth, N.H., continued to operate during the sixties and seventies and, after constructing packets and clippers, built wood sailing general traders of the Down Easter type. The outstanding Portsmouth-built ships of this general class were:

Name	Year Built	Tonnage	Registered Dimensions in Feet			Owners
			Length	Beam	Depth	
RICHARD 3RD	1859	898	175	34	23.5	Richard H. Tucker, Wiscasset, Maine
YOSEMITE	1867	1,104	183	37.2	23.4	Samuel Blair
GRANDEE	1873	1,255	193.5	38.4	23.7	C. H. Mendum, Portsmouth, N.H.
FRANK JONES*	1874	1,453	210	40	24.5	Daniel Marcy, Portsmouth, N.H.
PAUL JONES II	1877	1,258	202	39	23.5	C. H. Mendum, Portsmouth, N.H.

*A sister ship named the WILLIAM H. MARCY was built in 1875.

The *Richard 3rd* was a good carrier for her dimensions, loading 1,300 tons of coal on her deep-sea voyages (around Cape Horn, etc.); as a coal drogher on the Pacific Coast (1897-1907), she carried 1,700 tons. She was lost by going ashore in Clarence Straits when forty-eight years of age. The *Grandee,* on her maiden voyage, ran around the Horn from New York to Callao, Peru, in 84 days; thence to San Francisco in 37 days and from that port to Liverpool in 118 days. On her second voyage, she made a very fast run of 69 days from New York to Callao and returned to Hampton Roads with a cargo of guano in 86 days. On her third voyage, she ran from New York to Melbourne in 81 days, and the good sailing record of the *Grandee* established in her early years seems to have been well sustained throughout her life at sea. On January 22, 1877, while on the before-mentioned passage from New York to Melbourne, when in Lat. 49° 25′ S. and Long. 2° 5′ E., the *Grandee* collided with an iceberg that towered above the ship. She was moving through the water about 5 knots per hour at the time and was extremely fortunate to escape with no great damage beyond that to her jib boom, bowsprit, fore spars and rigging, and the forward deck, which was subjected to a bombardment of dropping ice from the berg. The *Grandee* suffered no serious hull damage and completed a fast run to Australia; she lasted well into the twentieth century.

The *Frank Jones* was built at the Portsmouth, N.H., shipyard of Daniel Marcy, her owner, and the master builder was G. B. W. Jackson. She made two voyages over the often used triangular course from New York to San Francisco, thence to Liverpool and back to New York, and on the second passage around the Horn westbound ran out in 126 days. Leaving San Francisco in ballast for Manila on March 30, 1877, to load for home, the *Frank Jones,* when less than three years old, went ashore in a heavy blow while under tow on the south shore of the Golden Gate and became a total loss.

The *Paul Jones II* was built by W. F. Fernald at the old Fernald & Pettigrew yard, Portsmouth, N.H. She was more of a medium clipper than a Down Easter in model, with hollow lines forward, and was nicknamed the "*Razor Face.*" She is reputed to have been a fast ship, but few records of her sailing performances are available. She made no Cape Horn passages, being employed entirely in trade with China and the East Indies. In 1879 the *Paul Jones II* was 103 days from New York to Batavia and in 1880 ran from New York to Shanghai in 105 days. These were ordinary sailing performances. In 1883 the *Paul Jones II* was 83 days from Anjer to New York on her run from Hong Kong, but on this ordinary passage she did some good sailing in the Atlantic, running from St. Helena to New York in 38 days and making port in 22 days after crossing the equator. On the passage to Shanghai in 1880, the *Paul Jones II,* which had a reputation of being "a smart sailer" modeled with "sharp lines for speed," sailed from New York in company with the Bath-built Down Easter *Oracle,* bound for California. The two ships were together intermittently until south of Rio de Janeiro, where they parted because of changing courses. During the entire period of many weeks that they sailed in company, the sharp-lined *Paul Jones II* — with carrying capacity sacrificed in an endeavor to obtain speed — was unable to draw away from the fuller-bodied but excellently modeled real Down Easter, which at the time was carrying 2,060 tons deadweight, or 1.33 times her registered net tonnage. The *Paul Jones II,* while equally well loaded, had only about 1,450 tons of paying cargo aboard, or 1.15 times her registered tonnage. The *Paul Jones II* was burned at sea in 1885, when only eight years old, during a passage from Melbourne to China.

Shipbuilding and Activities on the Maine Side of the Piscataqua

Merchant shipbuilding on the Piscataqua generally has been concentrated on the New Hampshire side of the river and during the nineteenth century almost solely at Portsmouth. The Navy Yard, known now as the Portsmouth, N.H., Navy Yard, is located at Kittery on the Maine side of the Piscataqua. War vessels of wood — both sail and steam — have been built there, but aside from small craft, few merchant vessels of importance have been launched into the Piscataqua from its north or east bank since the early part of the nineteenth century. As before mentioned, Samuel Hanscomb, Jr., built the clipper ships *Nightingale* and *Josephine* in 1851-1852 at Eliot on the east bank (and Maine side) of the Piscataqua, about three miles to the northwest of Kittery and upstream. Saltonstall, in his historical work on the Piscataqua, refers to a William Hanscom who was an assistant master shipwright to James Hackett, the master builder, during the construction of the 74-gun ship-of-the-line *America* at Portsmouth in 1777-1782; also to a William Hanscom, "an itinerant shipwright who launched vessels at South Berwick, Durham, and Shapley's Island" on the Piscataqua during the twenties and thirties of the nineteenth century; and to a William Hanscom who built in the late forties on the Eliot (Maine) shore of Long Reach, where "ships had been built since the middle of the seventeenth century." This William Hanscom (or Hanscomb), who left the East for California during the Gold Rush of 1849 (and who, it is said, later built the first merchant and the first naval war steamers on the Pacific Coast), built some good vessels at the Eliot yard during the late forties (1846-1849), including the ship *Elizabeth Hamilton* and the fine-lined, loftily sparred topsail schooners *Lamartine* and *Sacramento,* designed as fast sailers for the Mediterranean fruit trade. Upon William Hanscomb's departure for San Francisco, his uncle, Capt. Samuel Hanscomb, took charge of and continued to operate the shipyard, which was brought into the public eye when it built the yacht-like clipper *Nightingale* in 1851. Notwithstanding the lack of capital and the embarrassment associated with the construction and finishing of the *Nightingale,* Hanscomb, a year later, built the clipper ship *Josephine* of 947 tons for Gen. Joseph Andrews, of Salem, Mass.

One large Down Easter was built on the Maine side of the Piscataqua, the *Granite State II,* constructed at Kittery by J. Neal for Daniel Marcy in 1877. (The first *Granite State* was a clipper of 1,108 tons, built by Samuel Badger at Portsmouth, N.H., in 1853 and wrecked in 1868.) The *Granite State II,* built twenty-four years after the first *Granite State* and laid down on the opposite side of the river, was a rather full-bodied good carrier of good speed, considering her model and spar plan. She was 228 ft. 9 in. long, 41 ft. 4 in. beam, 24 ft. deep, and she registered 1,684 tons. Commanded by Capt. William Ross, Jr., who supervised her construction, owned a substantial interest in her, and was for many years the managing owner, the *Granite State* gained the reputation of being a "very smart craft." She was a profitable ship and, after a successful career, was wrecked in November 1895, off the Cornish coast of England, when about eighteen and a half years old.

XV.

MAINE—THE GREAT WOOD SHIPBUILDING STATE

The Pine Tree State Initiates Shipbuilding in the United States in 1607 and Maintains Its Supremacy to the End of Merchant Sail

THE STATE OF MAINE, with a great coast line and almost innumerable inlets and tidewater creeks, is drained by two sizable rivers: (1) the Kennebec, which runs through Skowhegan, Waterville, Augusta (the state capital), Gardiner, Richmond, and Bath, and (2) the Penobscot, which flows through a less developed and less historic country, with Bangor the only city of size and importance on its banks before the Penobscot River flows into the impressive Penobscot Bay. Each river flows from north to south and is about one hundred fifty miles long. These two great water courses practically divide the state into three fairly equal parts. The Penobscot has no large tributary, but the Kennebec is fed by the "lively" and important Androscoggin, which flows from New Hampshire and runs east about fifty-five miles from the state's western border and south about forty-five miles. The Androscoggin empties into the Kennebec River at Merrymeeting Bay some five miles north of Bath and seventeen miles north of Popham and the mouth of Maine's greatest river. The Kennebec is all river up to the point where it empties into the ocean; it is difficult to say where the Penobscot River ends and Penobscot Bay begins. When zoning or dividing the state into districts, or geographical areas, from a shipbuilding and trading standpoint, the Kennebec River, with its natural marine metropolis at Bath ("The City of Ships"), should be expected to cover the territory from a point about halfway between Bath and Portland to the west, to Waldoboro on the east, and as far inland as the Kennebec River, its tributary the Androscoggin River, and all associated streams and salt-water inlets permit of handling water-borne traffic.

The present decidedly restricted geographical area known as the city of Bath is not the complete real Bath but only an important part of a great natural shipbuilding center. Customhouse records show that as we advance upstream from the river's mouth, sizable ships have been built at sometime in the nineteenth century at the following cities, towns, and communities: Georgetown, Phippsburg, Arrowsic, Bath, Woolwich, Bowdoinham, Dresden, Richmond, Pittston, Gardiner, Farmingdale, Hallowell, Augusta, Vassalboro, Waterville, Kennebec, etc. Up the Androscoggin above Bath, sizable ships were built at Topsham and Brunswick, and on an ocean inlet west of the Kennebec, ships were built at Harpswell and considered in the Bath customhouse district. Old records show that in the early days of the life of the republic, Bath vessels were built also at Ponnasboro—a place difficult to identify today.

Through the English settlement founded in Maine by George Popham and Raleigh Gilbert in 1607, Maine initiated the shipbuilding industry of America and the New World. This English expedition, successfully undertaken thirteen and a half years before the landing of the Pilgrims at Plymouth (December 1620), planted in the wilds at the mouth of the Sagadahoc (Sagadahock, or Kennebec) River "the first English village in New England—a town of [120 settlers

and] fifteen buildings of all kinds, defended by a fort mounted with great guns, having a village church and a shipyard." Under the direction of "Digby from London, a master shipwright," the colonists at once proceeded to build America's first ship, the *Virginia* of 30 tons (often referred to as the *Virginia of Sagadahock*). Carl C. Cutler has written:

> As Maine became settled, shipbuilding rapidly became the major industry of the colony, and during its later years is said to have produced approximately one-half the tonnage built in the United States. Following the indentations of its navigable creeks and rivers, Maine has a shore front of 2,500 miles and, from early colonial days, there was hardly a suitable cove or river bend which lacked its shipyard. The yards of Maine are to be numbered, literally, by the hundreds. Shipbuilding was carried on in virtually every tide water town from Kittery to Eastport.

The "Province of Maine," as defined in the grant of the Council of New England to Sir Ferdinando Gorges and John Mason, ran from the Merrimac to the Kennebec River and extended inland to a depth of sixty miles. In 1629 the area was divided, Mason taking title to the land between the Merrimac and Piscataqua River and Gorges the territory from the Piscataqua to the Kennebec. The land farther east was generally known as Acadia, which was claimed and partially settled by the French. In the 1650's the whole of Maine was annexed to Massachusetts; in 1672, the province extended to the Penobscot and, in 1691, to the Saint Croix River, with Maine an integral part of Massachusetts. However, with the area east of the Penobscot being claimed by France, it became disputed territory and a battleground between British colonists and French settlers and, later, between the colonial revolutionists and the young American republic and the British-owned Dominion of Canada. The controversy in regard to boundaries was not finally settled until well into the nineteenth century.

In 1820 the Province of Maine seceded from the Commonwealth of Massachusetts and became a separate state of the Union, but prior to that time, in the early days of the republic, the Congress of the United States had divided Massachusetts into twenty districts, of which nine were in Maine. These Maine districts, according to their geographic settings from southwest to northeast, were:

(1) York
(2) Biddeford and Pepperellborough (Saco)
(3) Portland and Falmouth
(4) Bath
(5) Wiscasset
(6) Penobscot
(7) Frenchmans Bay
(8) Machias
(9) Passamaquoddy

It is generally felt (and so stated by some historians) that Maine came into prominence as a shipbuilding state following the clipper ship decade of the 1850's and virtually after the Civil War, but such opinions and statements are incorrect as to time. As far as the annual construction of ships is concerned, the state of Maine took the lead of all the states in the production of new ships as early as 1820, when it built 27,705 tons of shipping worth $1,100,000. From that year to the end of merchant sail, the Pine Tree State never lost its supremacy. During the next thirty-two years (1820-1852), the annual new tonnage and value of Maine-built ships quadrupled, the tonnage for 1852 being stated as 110,047 tons for "new vessels built," with a value of $4,400,000. This fleet, it was reported, consisted of 138 ships, 63 brigs, 148 schooners, and 15 sloops, or 364 vessels in all, of which 201 were square-riggers. The height of the clipper shipbuilding boom or, rather, the last year of the frenzied construction of wooden ships built primarily for speed in all eastern coast line parts of the United States (from Florida in the South to the Canadian border in the North) can be stated as 1854. In this year, Donald McKay, of Boston, built a fleet of big American clippers for the British. William Willis, addressing the Maine Historical Society on February 2, 1855, gave figures to show that instead of leading the country in shipbuilding in 1854, Massachusetts was, in fact, a poor third as far as tonnage of new construction and number of deep-sea vessels built were concerned. During 1854 the state of Maine constructed 168,631 tons of new shipping. New York State was second with 72,073 tons, while Massachusetts was third with 48,000 tons. According to these figures, the supremacy of Maine as a shipbuilding state during the year that clearly marked the peak of the shipbuilding and shipping boom is convincing and was unchallenged by the contemporary enthusiasts of rival states, even though Boston and New York claimed a superiority of "quality

of construction, particularly in the realm of speed"; for the overwhelming bulk of Maine-built ships, it was proudly boasted by their builders and owners, "was constructed not solely for speed but rather to sail and carry well and make money."

Whereas New York built 26 square-rigged ships in 1854, Maine built 156 and, in addition, turned out 2 barks, 78 brigs, 99 schooners, 12 sloops, and 3 steamers, or 350 vessels in all, of which 236 (or 67½ per cent) were square-riggers. The average tonnage per vessel had increased some 55 per cent in the last two years (from an average of 311 tons to 482 tons for all types of floating tonnage enumerated—a high figure for average size of all vessels, which no other state could approach). In 1854 the state of Maine turned out 2.34 times as much new tonnage as the state of New York and 3.51 times as much as Massachusetts, and this overwhelming superiority of Maine as a shipbuilding state was no "flash in the pan." It merely reflected a steady, maintained trend, which had been in evidence for decades and was to continue at an increasing pace to the end of wood merchant sail.

In 1855, with a national depression in shipbuilding setting in due to over-production of fast clippers, the state of Maine built 213 ships and barks. Of this number, the Bath, Waldoboro, Portland, and Wiscasset areas produced 144 (or 152 from the Piscataqua to Waldoboro, which territories are designated as the Portland and Bath geographical areas, or zones, of shipbuilding). The Rockland, or Penobscot, region (from Waldoboro east to Acadia Point) built 32 of these three-masted square-riggers and the Machias zone (from Acadia Point to the Canadian border) the remaining 29 of the ships and barks built in 1855. That it was not the clipper ship boom that was responsible for the tonnage supremacy of Maine as a shipbuilding state is indicated by relative tonnage figures for the period 1820-1855 and by the record of building in 1849—before the clipper shipbuilding boom got under way. In 1849, Maine was strongly in the lead as a shipbuilding state with 82,256 tons, and in that year Maine built no clippers or part clippers. New York was second with 44,104 tons, Pennsylvania third, and Massachusetts fourth with 23,888 tons. In this analysis, Massachusetts really held third position as far as the construction of deep-sea square-riggers was concerned, as most of the Pennsylvania tonnage was in small river craft and much of it in tow barges, etc. Massachusetts shipbuilding boomed during the clipper ship era, but Maine continued steadily to pull away from both New York and Massachusetts and from all other shipbuilding states as time advanced from 1820 to the end of merchant sail. In 1849, immediately prior to the clipper ship boom, Maine built 1.87 times as much tonnage as New York State construction (which also included much non-seagoing and small craft) and 3.44 times as much as Massachusetts.

Maine's Four Wood Shipbuilding Districts—Portland, Bath, Rockland, and Machias

Bath, Maine, with its environs, i.e., the Kennebec River and adjacent waters, was the most important shipbuilding center in the United States throughout the nineteenth century and the days of wood sail. The Maine "City of Ships" has always had a relatively small customhouse and registry territory, but it has been in fact the marine capital of a shipbuilding territory that stretched from Casco Bay on the west, through deep ocean inlets and the Boothbay region, to and including Muscongus Bay and Medomak River on the east and inland up the Kennebec River and its tributary, the Androscoggin, as far as navigable. Brunswick and Topsham, Bowdoinham, Waterville (and all river points), Wiscasset, Damariscotta, Newcastle, Waldoboro, Bristol, etc., are within this territory.

The Pine Tree State of Maine can be divided into four geographical areas, or principal districts, as far as wood shipbuilding in the nineteenth century was concerned. These divisions, or zones, can be defined as follows:

(1) *Portland:* From Portsmouth, N.H., and the Piscataqua River northeast to Freeport, located on Casco Bay, some sixteen and a half miles from Portland and fifteen miles from Bath (straight distance—as the crow flies—from Portsmouth to Freeport, about sixty-two miles).

(2) *Bath:* From Freeport—on Casco Bay—east to Waldoboro and Muscongus Bay (straight distance from Freeport to Waldoboro, about thirty-nine miles).

(3) *Rockland:* From Muscongus Bay and Waldoboro east to Winter Harbor (across from and east of Bar Harbor) and Acadia National Park Point (straight distance from Waldoboro to Acadia Point, about sixty-six miles).

(4) *Machias:* From Acadia Point east to Eastport, Passamaquoddy Bay and the Canadian border (straight distance from Acadia Point to Robbinston, about sixty-nine miles).

Reputed Clippers and "Half" Clippers Built in Twenty-nine Towns of Maine's Four Shipbuilding Areas

Shipbuilders of Maine—and particularly the leaders with yards in the city of Bath—were never in favor of building clipper ships with (1) oversharp models, (2) extreme spar and sail plans, (3) small deadweight and bulk-carrying capacity, and (4) the necessity of large crews to handle them. With a relatively short life, these clippers had inevitably high operating, repair and maintenance charges. Between the Piscataqua and Passamaquoddy (i.e., Portsmouth, N.H., and Robbinston, Maine), only one builder, George Thomas, of Rockland, Maine, was enthusiastic about clippers. Apparently, he lost his head when his very sharp-modeled and heavily canvased, big *Defiance* (1,691 tons; built in 1852 from the plans and model supplied by Samuel Harte Pook, of Boston) reported a speed of 20 knots per hour, in heavy favorable winds, while sailing light "in ballast" from Rockland, Maine, to New York to load cargo for her maiden deep-sea voyage. After completing in 1853 the famous and still larger clipper ship *Red Jacket* of 2,305 tons (also designed by Pook), George Thomas, known as "The Deacon," transferred his shipbuilding operations to Quincy, Mass., in the metropolitan Boston shipbuilding and shipping area. There "speed was king," and he wanted to be at "The Hub" with such builders as Donald McKay, Samuel Hall, etc., and in close contact with the Boston marine fraternity, which was boosting the new clipper type of ships that were proving veritable "greyhounds" of the sea.

During the national craze for speed in ships, there were built, all told, during the years 1850-1853 in what we have designated the Portland territory eight so-called clippers totaling 6,206 tons register, of which five were laid down in the region then known as Cape Elizabeth. The largest of these vessels was the *Phoenix* (1,458 tons), built by Thomas E. Knight, and the only other of the clippers exceeding 750 tons register was the *Portland* (998 tons). The Butlers (Alfred and C. B.) were prominent builders at Cape Elizabeth during this period. The *Josephine* of 947 tons was built at Eliot, Maine, in 1852 by Samuel Hanscomb, Jr., the builder of the famous *Nightingale* (generally credited to Portsmouth, N.H.). The *Roebuck* of 815 tons was built by Bourne & Kingsbury at Kennebunk in 1851 and the fast little clipper type *Grapeshot* of 345 tons at Cumberland in 1853.

Earlier in the century, Portland, Maine, is credited with building some speedy deep-sea ships of character, such as the fast and beautiful *Friendship* of 366 tons (length 105 ft., beam 28 ft.), built for Jerathmiel Pierce in 1815, and the speedy and successful *Packet* of 230 tons (length 89 ft., beam 24½ ft., depth 12¼ ft.), built in 1803 for William Gray, Jr., of Salem (and later of Boston), Mass.

At Kennebunk, Maine (about twenty-five miles southwest of Portland, Maine, and about twenty-two miles northeast of Portsmouth, N.H., and the Piscataqua), the well-known fast *Atahualpa* of 209 tons was built in 1800 for Theodore Lyman, Kirk Boot, and William Pratt, of Boston, Mass. This vessel measured 85 ft. 5 in. long, 23 ft. 7 in. beam, with 11 ft. 10 in. depth of hold. On April 13, 1810, Boston was treated to the unprecedented sight of the sailing into port together of three of her fine Indiamen. They were the *William* (Captain Emery), the *Mandarin* (Captain Nash), and the *Atahualpa* (Captain Sturgis). All were from Canton, China, and between 128 and 130 days out. This was fine, close sailing, with a finish as dramatic as anything staged later by faster and much larger ships of clipper type. In the spring of 1811, the *Atahualpa* made a run of 106 days in the Canton trade, and we are told: "The *Atahualpa* still followed the Cape Horn and Northwest coast route to China—a run which demanded good sailors and hard fighters, and got them. They were no tinselled mannikins, these men of the old breed."

Ships that were built on the Piscataqua River, on both the New Hampshire and Maine side of the river, are more closely allied with Maine than with Massachusetts. (Most of the present state of Maine was at one time—and this during active shipbuilding days—a part of Massachusetts.) The influence of Boston in wood shipbuilding days should properly be considered as not extending north and eastward of the Merrimac; all ships built northeast of that river were in spirit Maine ships and influenced by the history and traditions of the Pine Tree and Shipbuilding State, which were originated and, it can be said, were centered at Bath and the Kennebec River.

Saco, which is on the north (or east) bank of the Saco River, opposite Biddeford, about fourteen miles southwest of Portland and some four or five miles from open ocean, was an important shipbuilding and shipping center in post-revolutionary days and during the early part of the nineteenth century, as were many other ocean and river tidewater communities of Maine that flourished in both colonial days and the early days of the republic. However, as the demand for larger and still larger ships continued, they were handicapped by depth of water and at the time of the clipper ship era were constructing only relatively unimportant craft, primarily for the coasting trade. Early in the century, the *Castor* of 450 tons, one of the largest ships built in Maine up to that time, was launched at Saco. She operated with pronounced success in the transatlantic trade between Charleston, S.C., and Liverpool.

The *Haidee* of 648 tons, a "fast, big sailer and good carrier," was built in 1843 for Isaac T. Smith, New York, at Freeport, Maine (located at what we designate the end of the Portland and the commencement of the Bath district); this ship was 142 ft. long and 31 ft. 8 in. beam. In 1849, Enos Soule, of Freeport, built the *Tam O'Shanter (I)*, a medium full-modeled ship of 777 tons, for his own account; she foundered off Cape Cod in December 1853. Freeport's only clipper, the *Quickstep* of 823 tons, was built by Enos Soule in 1853. The Soule family built a second *Tam O'Shanter* of 1,522 tons in 1875. She was a fast-sailing Down Easter and was popularly described by Freeport enthusiasts as a "clipper"; but she had neither the model nor the rig of even a medium or half clipper, and her performances under canvas can be compared only with vessels of her class (i.e., rather full-bodied and moderately canvased Down Easters).

In the city of Bath, only one firm, Trufant & Drummond, could be influenced to turn out sharp, heavily sparred ships in quantity. It constructed six ships during the years 1851-1854 that were described as "half clippers." The largest were the *Emerald Isle* (1,736 tons), *Mary Robinson* (1,371 tons), and *Viking* (1,350 tons); the most talked-of was the *Flying Dragon* (1,127 tons), built in 1853; and the smallest were the *Monsoon* of 773 tons, built in 1851, and *Windward* of 818 tons, launched in 1854. Hall, Snow & Company built the so-called half clippers *Carrier Pigeon* (844 tons) in 1852 and *Undaunted* (1,371 tons) in 1853, and M. Simpson laid down in 1859 the diminutive *Maid of the Sea* (661 tons), the only other Bath-built reputed clipper or half clipper. During the clipper ship decade 1850-1859, the city of Bath (which is not the Bath Customs District or the geographical area known as the Bath shipbuilding terri-

tory) built only eight half or pseudo-clippers and one medium clipper (the *Flying Dragon*), nine in all, and they had a combined registered tonnage of 10,051 tons.

Up the Kennebec River, six reputed clippers were built at Richmond (on the west bank, about thirteen miles north of Bath). Here Thomas J. Southard built the *Gauntlet* (1,854 tons) in 1853 and the *Wizard King* (1,398 tons) the following year. Patten & Sturdevant's contributions to the so-called Richmond "clipper" fleet consisted of the small *Peerless* (633 tons), built in 1852, and the quite large *Pride of America* (1,826 tons), laid down in 1854. G. H. Ferrin, of the same town, built the *Wild Wave* of 1,547 tons, and all together Richmond turned out six rather sharp-modeled and heavily sparred fast sailers with a total registered tonnage of 7,972 tons.

Pittston (on the east bank of the river, about twenty miles north of Bath) launched the *White Falcon* of 1,372 tons in 1853, and J. Rideout built the *Dashaway* of 1,012 tons at Hallowell (about six miles north of Pittston and on the west bank) in 1854. The *Miss Mag* of 727 tons was laid down in 1853 at George Pierce's yard in Farmingdale (three and a half miles downstream from Hallowell). These three nineteenth century shipbuilding towns are all on the Kennebec River in the vicinity of Gardiner and Augusta; Hallowell, the farthest inland, is twenty-five miles north of the city of Bath and thirty-seven miles from the river's mouth.

In the Greater Bath area, G. Skolfield constructed the clipper ship *Rising Sun* of 1,310 tons in 1856 at Brunswick—not on the Androscoggin, which is a tributary of the Kennebec River, but on the shore of Casco Bay about seven miles (as the crow flies) west-southwest of Bath.

Wiscasset, Maine, about ten miles northeast of Bath, was a shipbuilding town and shipping center of prominence in the 1700's and at the turn of the century following the Revolution. One historian says that before 1800 the name of Wiscasset appeared more frequently in marine reports than that of any other "Down East" locality. Wiscasset ships were built for service on the Seven Seas and made long and profitable foreign voyages. Very often they returned to the port of Wiscasset to discharge. In 1812 the famous brig *Grand Turk* (309 tons) was built at Wiscasset "on spec" and sold to Salem, Mass., owners (Francis Boardman et al.). She was later acquired by William Gray, of Salem and Boston, who, after trading with her for a while, sold the vessel at a big profit to Havana parties. The *Grand Turk* was 102 ft. long, 28 ft. beam, and 12½ ft. depth of hold.

At Damariscotta, some sixteen or seventeen miles to the northeast of the city of Bath, nine clipper ships, totaling 11,831 tons, were built during the years 1850-1854 inclusive. The famous and fast *Flying Scud* (1,713 tons) was built by Metcalf & Norris at Damariscotta in 1853. This firm turned out four other reputed clippers: *Alert* (764 tons), *Levanter* (868 tons), *Queen of the East* (1,275 tons), and *Talisman* (1,238 tons), the total tonnage of the five Metcalf & Norris-built ships of this class being 5,858 tons. Other builders at Damariscotta were Austin & Company, Austin & Hall, Cyrus Cotter, and Hitchcock & Company. At Newcastle, across the ocean inlet and opposite Damariscotta, William Hitchcock laid down two so-called clippers, and his total contribution to the clipper fleet—built on each side of the inlet—was three ships aggregating 3,585 tons; Hitchcock's biggest vessel of the clipper class was the *Criterion* (1,387 tons), built at Damariscotta in 1855. He built the *Golden Rule* (1,194 tons) in 1854 and the *Flying Eagle* (1,004 tons) in 1852. Abner Stetson built the *Western Empire* (1,398 tons) at Newcastle in 1852.

At Bristol, to the south of Damariscotta and Newcastle, the clipper ship *Sparkling Sea* of 893 tons was built in 1854 for Alfred Blanchard and associates, of Boston, Mass. Alna, a village on the Dyer River and a few miles from North Newcastle (a mile or so from the significantly named village of Head Tide and twenty-two miles—as the crow flies—from Newagen and the open ocean), launched the so-called clipper ship *King Philip* of 1,194 tons in 1856 for Glidden & Williams, of Boston.

Waldoboro, which lies twenty-five miles northeast of Bath near the mouth of the Medomak River, turned out three reputed clippers aggregating 2,902 tons register in the years 1852-1853. The largest of the trio was the *Woodcock* (1,091 tons), built by Achorn & Gleason,

and the others were the *Wings of the Morning* (916 tons) and the still smaller *Spark of the Ocean* of 895 tons, built by Edward Achorn.

George Thomas built four clippers aggregating 5,487 tons register at his Rockland, Maine, yard, and during the years 1851-1855, Rockland constructed, all told, ten clippers totaling 13,179 registered tons. F. W. Rhodes (or Rhoades) built three measuring 3,362 tons, and records credit Horace Merriam with two of 3,622 tons. In the larger Rockland territory during the fifties, Frankfort built five clippers of 6,255 tons total register and Thomaston five of 5,475 tons; Belfast built two clippers totaling 1,385 tons—*Seaman's Bride* (759 tons) and *Sportsman* (626 tons); and Orland built one, the *Stornaway* of 750 tons. The largest Rockland clippers were the *Red Jacket* of 2,305 tons and the *Defiance* of 1,691 tons, built by George Thomas; the *Euterpe* of 1,985 tons and the *Live Yankee* of 1,637 tons, built by Horace Merriam; and the *Young Mechanic* of 1,375 tons, built by T. W. (or F. W.) Rhoades (or Rhodes). The largest Frankfort clippers were the *Spitfire* (1,520 tons), built by James Arey & Company, the *Nonpareil* (1,431 tons), laid down by Dunham & Co., and the *Arey* (1,123 tons), built by Williams & Arey. The largest Thomaston-built clipper was the *Empire* of 1,272 tons, and it was at Thomaston that Chapman and Flint, who later became famous as Bath shipbuilders and New York shipping merchants, built in 1853 their only clipper, the *Oracle I.* of 1,196 tons. There was also built by J. & C. Morton at Thomaston, Maine, in 1854, for the firm's own account, the clipper ship *Ocean Chief* of 1,228 tons. This vessel, designed by Samuel H. Pook, of Boston, was 190 ft. long, 39 ft. beam, and 23 ft. deep and was sold soon after launching to James Baines & Company, Liverpool, England (for which Donald McKay built several clippers at East Boston). The *Ocean Chief* never sailed as an American ship in the Cape Horn service to California, for which trade she was designed and built. At Warren, the clipper *Stephen Crowell* of 936 tons was built in 1855 by Burgess & Clark, and at Brewer—on the Penobscot, opposite Bangor—a clipper of 608 tons was launched.

In the eastern Maine shipbuilding territory, designated as the Machias region and running from Acadia Point to the Canadian border, Machias itself and its immediate environs did but little shipbuilding. During the period of clipper ship construction and, later, in the era of the Down Easter, all of the building in this general area was well to the eastward. Robbinston, between Eastport and Calais, Maine (opposite St. Andrews and Passamaquoddy Bay), built five reputed clippers in the years 1852-1854 totaling 4,106 registered tons. The largest were the *Dictator* (1,293 tons) and the *Red Gauntlet* (1,038 tons), both constructed by James W. Cox. Rose is credited with building the next largest craft, the *Virginia* of 959 tons, launched in 1854.

At Pembroke, during the years 1852-1853, two clipper ships and a clipper bark were built. Isaac Ewell launched the *Queen of the Pacific* of 1,357 tons in 1852 and S. C. Foster the *Western Continent* of 1,272 tons in 1853. The bark was a very small craft of only 536 tons named the *Comet,* built in 1852 for Edward C. Bates and associates, of Boston, but she did some wonderful sailing and participated in one of the finest and most exciting long-distance ocean races in history.

At Eastport, C. S. Husten built the *Grey Feather* of 587 tons in 1850, and no other clipper was built in that most easterly shipbuilding town other than another small craft, the *Crystal Palace* (653 tons), launched there in 1854. Near Eastport, at Trescott, Maine, the two reputed clippers *Kate Hayes* (700 tons) and *Sea Lark* (973 tons) were built in 1851 and 1852, respectively.

Although the most easterly (and northern) of the four geographical Maine shipbuilding areas is named the Machias territory, it is significant that in the clipper ship decade of 1850-1859 no such vessels were built in this area except in four towns, all located near the Canadian border; no clippers were laid down in yards located between Orland on the Penobscot and Trescott "way down east," a distance—as the crow flies—of about eighty-three miles. Therefore, the easterly Maine shipbuilding geographical area in the mid-nineteenth century could be better described as the Eastport rather than the Machias territory, for Bar Harbor and Machias had by that time become inactive and have so remained during the years following.

The number of clipper ships, with their total registered tonnage, built in the state of Maine and in each town of four prime marine divisions of the state during the clipper shipbuilding decade 1850-1859 inclusive is stated herewith. The so-called "clipper ship" tonnage includes far more "half" and "medium" clippers than real "out-and-out" and "extreme" clippers.

District No. 1—the Portland Area

	Number of "Clippers" Built	Total Registered Tonnage
Cape Elizabeth	5	4,099
Eliot	1	947
Kennebunk	1	815
Cumberland	1	345
Total	8	6,206

District No. 2—the Bath Area

Damariscotta	9	11,831
Bath (city)	9	10,051
Richmond	6	7,972
Newcastle	3	3,596
Waldoboro	3	2,902
Pittston	1	1,372
Brunswick	1	1,310
Alna	1	1,194
Wiscasset	1	1,193
Hallowell	1	1,012
Bristol	1	893
Freeport	1	823
Farmingdale	1	727
Miscellaneous	1	293
Total	39	45,169

District No. 3—the Rockland Area

	Number of "Clippers" Built	Total Registered Tonnage
Rockland	10	13,179
Frankfort	5	6,255
Thomaston	5	5,475
Belfast	2	1,385
Warren	1	936
Orland	1	750
Brewer	1	608
Total	25	28,588

District No. 4—the Machias Area

Robbinston (including a 1,038-ton ship not included in earlier compilations)	5	4,106
Pembroke	3	3,165
Trescott	2	1,673
Eastport	2	1,240
Total	12	10,184

Recapitulation "A"

Town	Number of "Clippers" Built 1850-1859	Total Registered Tonnage
Rockland	10	13,179
Damariscotta	9	11,831
Bath (city)	9	10,051
Richmond	6	7,972
Frankfort	5	6,255
Thomaston	5	5,475
Robbinston	5	4,106
Cape Elizabeth	5	4,099
Newcastle	3	3,596
Pembroke	3	3,165
Waldoboro	3	2,902
Trescott	2	1,673
Belfast	2	1,385
Pittston	1	1,372
Brunswick	1	1,310
Eastport	2	1,240
Alna	1	1,194
Wiscasset	1	1,193
Hallowell	1	1,012
Eliot	1	947
Warren	1	936
Bristol	1	893
Freeport	1	823
Kennebunk	1	815
Orland	1	750
Farmingdale	1	727
Brewer	1	608
Cumberland	1	345
Kingston	1	293
Total	84	90,147

Recapitulation "B"

Geographical District No.	Name	Number of "Clippers" Built 1850-1859	Total Registered Tonnage
1	Portland	8	6,206
2	Bath	39	45,169
3	Rockland	25	28,588
4	Machias	12	10,184
Total for state		84	90,147

Maine Shipyards Concentrate on Their Own Type of Reliable Ocean Carriers and Build Few Ships That Sailed in Regular New York Packet Lines during the Sailing Packet Era

It has been said that during the clipper ship era and prior thereto, Maine built a type of ship that closely resembled the Atlantic packets and that these Maine-built vessels were usually "short and beamy, full-modeled and bluff-bowed with a moderate rig." This statement is only partially true and is in essence incorrect. Maine built neither clippers nor Western Ocean (or coastwise) packets in quantity, but concentrated on the construction of sailing square-riggers adapted for economic operation and making money as transients or general traders on the Seven Seas. This Maine type of ship, which gradually improved in model and rig as a result of building and operating experience, became known as the "Down Easter" and reached its perfection in the early 1880's with the building at Bath, Maine, of the *Henry B. Hyde* and *A. G. Ropes*. These were fast, able, handy three-masted full-rigged ships of about 2,500 tons register, which carried big cargoes and small crews and were admirable sea boats and reliable ocean carriers over any sea route in the world. The Down Easter was not a medium clipper (or a half, or partial, clipper); neither was it a packet of the type that won renown on the North Atlantic.

Robert G. Albion, in SQUARE-RIGGERS ON SCHEDULE, shows that of 301 listed New York sailing packets that entered the transatlantic and coastal service of real packet lines during the sailing packet era (1818-1858), Maine shipyards built only 6 transatlantic and 2 coastal packets, or 8 in all, and only 2⅔ per cent of the number of ships and 4⅓ per cent of the total tonnage. Moreover, all of these Maine-built New York packets were built during the later years of the sailing packet era. Of the sailing packets bought for the established New York transatlantic lines that entered the service after 1860, 4 of 11 such ships (or 36 per cent) were built in Maine (at Waldoboro, Thomaston, and Newcastle), and these packets ran in the Black Ball (New York-Liverpool) and Red Swallowtail (New York-London) lines from the early sixties (1861-1863) until the lines suspended service in 1878 and 1881, respectively. The last sailing packet to make a transatlantic passage in a regular New York packet line was the *Ne Plus Ultra* of 1,396 tons old and 1,534 tons new measurement, built at Thomaston, Maine, in 1863. She reached New York April 18, 1881, from London and was then sold to the Germans. The following table gives a list, with particulars, of the above-stated 8 Maine-built sailing packets that operated on schedule in the regular and established New York transatlantic and coastal lines during the sailing packet era:

Name of Packet, Year Built, and Tonnage	Line	Where Built	Years in Service	Dimensions in Feet			Passage in Days		
				Length	Beam	Depth	Average	Fastest	Slowest
AMERICAN CONGRESS (1849; 863 tons)	London Red Swallowtail	Newcastle	30 1850-1879	162.3	34	17	36	21	77
HELVETIA (1850; 971 tons)	Havre Whitlock-Union	Kennebunk	13 1851-1864	169.1	35.3	17.7	36	28	53
AMERICAN UNION (1851; 1,146 tons)	Liverpool Blue Swallowtail; London Red Swallowtail	Damariscotta	25 1852-1877	181	37.1	18.5	37	21	49
WILLIAM FROTHINGHAM (1851; 830 tons)	Havre Second Line	Belfast	11 1857-1868	163	33.5	21.5	—	—	—

(Continued on next page)

Name of Packet, Year Built, and Tonnage	Line	Where Built	Years in Service	Dimensions in Feet			Passage in Days		
				Length	Beam	Depth	Average	Fastest	Slowest
CAROLUS MAGNUS (1,349 tons)	Havre Whitlock-Union	Newcastle	10 1853-1863	196.8	40	20	34	22	53
ELLEN AUSTIN (1854; 1,626 tons)	Liverpool Dramatic; London Red Swallowtail	Damariscotta	25 1856-1881	209.8	40.7	29	—	—	—
ANDOVER (1849; 484 tons)	New Orleans Holmes	Bath	8 1853-1861	130.7	28.3	14.2	19	15	26
TOULON (1852; 744 tons)	New Orleans Louisiana	Waldoboro	5 1853-1858	154.6	32.2	16.2	17.5	14	22

The Pine Tree State Builds Vessels "to the Demands of the Trade"

Much has been written by marine historians prejudiced in favor of the shipbuilders of other sections of the country about the "cheap wood ships built in Maine" after the Revolution and preceding the Civil War. Because of natural advantages—both material and men—and owing to local conditions, a large number of Maine ships were built either on order from, or with a view to sale in, other states (or abroad) much as were the wood ships built in eastern Canada. Maine shipbuilders turned out ships as ordered by Massachusetts and other New England, New York, Delaware, Chesapeake, and southern merchants and shippers and "gave them all they paid for." Maine built many ships and "skimped" on finish and nonessentials, but on the other hand no other state in the Union approached the Pine Tree Shipbuilding State either in the number and total tonnage of good wood ships built or in the quality of design, construction, and finish of its best and admittedly high-class output. Cutler says that Maine built vessels "to the demands of the trade" and that when it built cheap craft, it was "not due to lack of skill or knowledge." When the call was for the highest quality of wood ship construction, Maine, and particularly Bath, was in its element and built ships that were marvels of the master shipwright's art, splendidly sparred, rigged and canvased, with excellent and efficient deck fittings and equipment and with cabins and finish as beautiful as anything afloat. "Following the Civil War, Maine developed a distinctive class of exceptionally seaworthy ships —the Down Easter—which, combining large carrying capacity with good speed, rapidly won the favor of American sea captains and merchants everywhere."

Frederick C. Matthews, in the introduction to his most excellent work, AMERICAN MERCHANT SHIPS (Salem, Mass., Marine Research Society, 1930), refers to the post-clipper type of ship, which became generally known on the Seven Seas as the Down Easter, as a "worthy successor" to the clipper ships that "had been built to make speedy passages without regard to their carrying capacity." Matthews illustrates the craze for speed in the clipper ship era by referring to the statement made by Capt. William Lester that, when the clipper ship *Pampero* left port, "she always had three complete extra sets of light spars, and it was expected that these would be used up on the voyage." (The *Pampero* of 1,375 tons, built in 1853 by Charles Mallory, Mystic, Conn., averaged 118⅓ days on her three westbound passages to San Francisco. Her best run was 108 days on her maiden voyage; slowest, 126 days.) Captain Lester said that the commander of the *Pampero* (during the time that Lester was first mate), Capt. Calvin

Coggin, would come up on deck when a fair wind was breezing up and, "standing to windward, holding on to the royal backstay, would talk to himself: 'Blow, good wind, blow! Hold, good spars, hold!' This would continue until something carried away, when he would say, 'Rig her up, Mr. Lester; rig her up.' " Captain Lester affirmed that on one occasion, when the *Pampero* "had topgallant studding sails rigged out on both sides, all three topgallant masts were carried away, and several days were required before everything was again made shipshape."

The captains of the clipper ships were hard drivers, and they had to be to hold their jobs and please the owners (and builders) of vessels that were designed as "greyhounds of the sea." The motto in effect on clipper ships during the early years and a good part of the fifties was, "What she can't carry, she can drag." The result was expensive operation of ships that had but little carrying capacity and required a large crew, big replacements and expensive repairs, high maintenance and amortization charges, and this with a relatively small return from paying cargo—all to save a few days' time on a four months' voyage of some 16,000 miles.

During the latter part of the fifties, the policy of sail carrying had to be changed because of the heavy losses being sustained by the operators of clipper ships, and the use of studding sails, moonsails, and skyscrapers had to be restricted. Loftily sparred ships, with long yards, had their spars cut down and sail spread reduced because of the owners' insistence that repair bills and maintenance expenses be greatly lessened. Again, owners were sensing the fact that dismastings were extremely expensive and were too common. The policy that had been prevalent of "Drive if you drive her under but don't shorten sail" seemed good when freight rates were high and a passage of 100 days or so around the Horn paid a premium. It seemed a good policy to pursue when the *Flying Cloud,* driven hard in 1854, with a small but paying cargo, ran from New York to San Francisco in 89 or 90 days; it was denounced as a foolish practice two years later when the same clipper ship, driven hard, with a similar small cargo but with a relatively small freight revenue, was dismasted, had to put into Rio de Janeiro for repairs, and did not reach the Golden Gate until 185 days had elapsed since her sailing from Sandy Hook. Upon her return to New York, the much heralded *Flying Cloud,* "the fastest ship in the world" and Donald McKay's "masterpiece," was laid up because she was "too expensive to operate." Later, when freight rates improved, her spars were cut down, and she was again put in service; but the vessel was too sharp-lined, too poor a carrier, and during her early years had been driven too hard. She could not compete with ships that had been designed and built on less extreme lines.

The well-built and less extreme clipper *Young America,* designed and built by Webb, of New York, as a moderate clipper, carried plenty of sail and enough to cause much trouble if driven too hard. Under Captain Babcock in 1856, she ran to San Francisco, experiencing the weather that dismasted the *Flying Cloud.* The *Young America* was badly battered, her bulwarks stove, and jib boom broken. However, she held her masts and made a good passage of 107 days. On her next outbound voyage, under Captain Brown, the *Young America* was dismasted. She put into Rio de Janeiro for repairs and reached San Francisco 174 days out from New York after outrageous delays at Rio. This was an expensive experience for the owners, so the *Young America's* spars were cut down to make a larger factor of safety and give increased protection against the driving tendency and bad judgment of the command. The *Young America,* operated under a reduced spar plan with less sail spread and by more economy-minded skippers, continued in the Cape Horn service until 1883. A fairly good cargo carrier, she made very good runs and, what was of still greater importance, some money for her owners.

Some of the Record and Near Record Passages and Fast Runs of Maine-built Ships

Maine did not build many clipper ships, but the few that were built made fast record and near record runs in a number much in excess of what would be expected considering the numerically small Maine-built fleet of this type of ship. The following list shows some of the outstanding sailing performances of clippers and half clippers built in the state of Maine:

A. *Built by George Thomas, Rockland*

RED JACKET (2,305 tons; built 1853)

1. *New York to Liverpool*—13 days 1 hour 25 minutes.
   Sailed New York January 11, 1854.
   Arrived Liverpool January 23, 1854.
   Capt. Asa Eldridge reported passage as "13 days 1 hour 25 minutes, dock to dock, the record."
2. *Atlantic equator to Melbourne*—44 days.
   Sailed London September 20, 1855.
   Arrived Melbourne December 4, 1855.
   Captain Milward reported upon arrival at Melbourne, "A passage of 75 days, but ran from the Atlantic equator to Melbourne in the record time of 44 days."
3. *England-Australia round voyage*—5 months 10 days 22½ hours.
   Owners reported a round voyage in 1854 in 5 months 10 days 22½ hours, including detention in port (unloading and loading, etc.); command claimed an average of over 203 miles per day at sea for entire voyage and an average speed of 8.46 knots per hour.

DEFIANCE (1,691 tons; built 1852)

Chincha Islands to Hampton Roads, Va.—52 days.
Sailed Chincha Islands February 27, 1855.
Arrived Hampton Roads April 20, 1855.
Capt. John Kendrick reported passage as 52 days. (New York HERALD, April 26, 1855)

RATTLER (1,121 tons; built 1852)

Callao, Peru, to San Francisco—28 days.
Reported by owners and published in press, "Record run from Callao to San Francisco was made by *Rattler* in 1878."

B. *Built by Metcalf & Norris, Damariscotta*

FLYING SCUD (1,713 tons; built 1853)

1. *New York to Bombay*—81 days.
   Sailed New York April 14, 1856.
   Arrived Bombay July 4, 1856.
   Capt. Rodney Baxter, upon arrival, reported a passage of 81 days.
2. *New York to Marseilles*—19 days 20 hours.
   Sailed New York December 20, 1855.
   Arrived Marseilles January 9, 1856.
   Capt. Rodney Baxter, upon arrival, reported, "A record passage of 19 days 20 hours, port to port, deep laden, drawing 22 ft."

C. *Built by Trufant & Drummond, Bath*

FLYING DRAGON (1,127 tons; built 1853)

Sydney, Australia, to Hampton Roads, Va.—75 days.
Arrived Hampton Roads October 28, 1860.
Capt. Horace H. Watson, Jr., reported on arrival, "A fast passage between ports of 75 days."

D. *Built by Thomas E. Knight, Cape Elizabeth* (Portland)

PHOENIX (1,458 tons; built 1853)

Savannah, Ga., to Cork (Queenstown)—14 days 9 hours.
Arrived Queenstown January 24, 1859.
Capt. John Hoxie reported on arrival, "A record crossing of 14 days 9 hours from Savannah—equivalent to 13 days New York to Liverpool; averaged 352 miles a day and 14.7 knots per hour for several consecutive days."

E. 1. *Built by Alfred Butler, Cape Elizabeth* (Portland)

SNOW SQUALL (742 tons; built 1851)

New York to Rio de Janeiro—29 days.
Sailed New York February 21, 1856.
Arrived Rio de Janeiro March 21, 1856.
Captain Gerard reported on arrival, "Left New York the afternoon of February 21 and have made what I think is a record run of 29 days to Rio."
The *Snow Squall* is also credited with making a record round voyage between New York and Rio de Janeiro as a "coffee clipper" in 63 sailing days.

2. *Built by C. B. Butler, Cape Elizabeth* (Portland)

BLACK SQUALL (400 tons; built 1850)

1. *Equator* (Atlantic) *to New York*—15 days.
   Arrived New York June 9, 1852.

Owners and press reported, "A record run of 15 days from the equator."

2. *Rio de Janeiro to New York*—26 days.
Owners and press reported, "Took pilot at noon June 9, 1852, after a record run of 26 days from Rio. The *Black Squall* covered 5,136 miles on the passage—an average of 197½ miles per day and 8¼ knots per hour."

F. *Built at Cape Elizabeth* (Portland)

WARNER (500 tons; built 1851)
Atlantic 36° S. (southeast of Montevideo) *to New York*—27 days.
Arrived New York July 9, 1853.

Capt. Luther Ripley, Jr., reported upon arrival, "We have made a good passage of 67 days from Valparaiso and a record run of 27 days from Lat. 36° South Atlantic."

G. *Built by James Arey & Company, Frankfort*

SPITFIRE (1,520 tons; built 1853)
Rio de Janeiro to San Francisco—65 days.
Sailed Rio de Janeiro December 16, 1853.
Arrived San Francisco February 20, 1854.

Capt. John Arey reported upon arrival "a record or near record run between the ports of 65 days," and the press said "a performance never equaled or beaten by any loaded ship except *Witchcraft.*"

H. *Built by Dunham & Company, Frankfort*

NONPAREIL (1,431 tons; built 1853)
Delaware Capes to Liverpool—13 days.
Sailed Philadelphia March 27, 1855.
Passed Delaware Capes March 30, 1855.
Arrived Liverpool April 12, 1855.

Capt. Edward Dunn reported upon arrival, "A very fast passage of 16 days from Philadelphia and a record transatlantic run of 13 days from Delaware Capes to Liverpool, which is equivalent to a 12-day run from New York."

I. *Built by James W. Cox, Robbinston*

RED GAUNTLET (1,038 tons; built 1853)
Honolulu to Hong Kong—19 days.
Sailed Honolulu April 24, 1856.
Arrived Hong Kong May 14, 1856.

Reported by owners and press as "a run of 19 days, equaling the record run of the *Memnon* made in December 1850 and being 2½ days faster than the 21-day 13-hour run of the *R. B. Forbes* in 1852, when she reported traversing 5,400 miles between the ports and averaging 250 miles per day and a scant 10½ knots per hour for the entire passage."

J. *Built by William Hitchcock, Newcastle*

FLYING EAGLE (1,004 tons; built 1852)
San Francisco to Honolulu—9 days 22 hours.
Sailed San Francisco July 9, 1858.
Arrived Honolulu July 19, 1858.

Captain Bates reported upon arrival "a fast and near record run of 9 days 22 hours."

K. *Built by George H. Ferrin, Richmond*

WILD WAVE (1,547 tons; built in 1853)
Callao, Peru, to Plymouth, England—70 days.
Reported as making a passage of 70 days in 1856—"a time never equaled by any ship before or since."

L. *Built by C. S. Husten, Eastport*

GREY FEATHER (587 tons; built in 1850)
Melbourne to Calcutta—36 days.
Sailed Melbourne June 8, 1854.
Arrived Calcutta July 14, 1854.

Capt. Daniel McLaughlin reported upon arrival, "Dropped pilot leaving Melbourne at 6 P.M., June 8; picked up pilot here at 11:45 P.M., July 14, making a passage of 36 days 5¾ hours and the quickest run ever made between the two ports."

The *Flying Scud,* built at Damariscotta, was an extremely fast ship. According to claims advanced, she holds the honor of traveling in a day a greater mileage than any other sailing vessel in the maritime history of the world. During the run from the shipyard in Maine to New York to take on cargo, the vessel showed such "amazing speed" that her "officers could not believe their findings of position and decided that the ship chronometer must be out of order." On her first voyage to Australia, when abominably laden "with a heavy deck load, scuppers almost awash, and trimmed two feet by the head—actually overloaded as well as badly stowed and in no fit condition to go to sea," the "*Scud*" made a fast run of 76 days to Melbourne. She arrived at Port Phillip Heads December 14, 1854, notwithstanding the fact that, in addition to her overlading and bad trim, the ship was delayed several days because her

compass was deranged by lightning. On this passage, the *"Scud"* covered "4,625 miles in sixteen consecutive days, an average of 289 miles per day and over 12 knots per hour." During the twenty-four hours ending at noon on November 6, 1854, the log of the *Flying Scud,* verified by her able master, Capt. Warren H. Bearse, of Hyannis, Cape Cod, shows that she traversed 449 nautical miles in a day (exceeding by thirteen miles the 436 miles for maximum day's mileage claimed for the *Lightning*) and averaged over 18.7 knots per hour for twenty-four hours—an all-time world's record.

It was generally believed in Maine and Boston in the fifties that Samuel Harte Pook, the talented naval architect of Boston, sold a model, lines and spar plan to Metcalf & Norris that were used by the frugally minded Damariscotta shipbuilders in the production of the *Flying Scud* and *Talisman.* That the *Talisman,* as well as the *Flying Scud,* was a fast ship is proved by the fact that, sailing from San Francisco in February 1859 in company with Donald McKay's biggest clipper, the *Great Republic,* the *Talisman* beat the McKay ship by four days in the around-the-Horn passage to New York and made the run in the fast time of 96 days.

Capt. Arthur H. Clark, in THE CLIPPER SHIP ERA, gives the credit to the *Flying Dragon,* built in Bath, Maine, for the fastest passage around the Horn westbound to California in 1857. He states the length of this fast run of the Maine medium clipper as 97 days and compares it with the next best runs of the year, which, he states, were 100 days for the *Andrew Jackson, Westward Ho,* and *Flying Fish,* 102 days for the *Flying Dutchman,* 104 days for the *John Land,* and 110 days for the *Reporter.* (In this comparison, Clark evidently ignores the run of the *Great Republic* made in 94 days elapsed time and generally recorded as 92 days.) Clark also affirms that, covering a period of some four years, i.e., from the arrival in San Francisco of the *Sweepstakes* on May 25, 1856 (after a 94-day run), to the passing through the Golden Gate of the *Andrew Jackson* on March 23, 1860, when that ship made the all-time record run to San Francisco from a North Atlantic port, no faster passage westbound to California than that of the Bath-built *Flying Dragon* was made.

The little Maine-built clipper *Snow Squall* (742 tons) sailed from Shanghai March 22, 1859, one day behind the big and powerful Donald McKay-built clipper *Sovereign of the Seas,* which had been heralded as "the fastest ship in the world." The McKay clipper was three times the size of the diminutive Maine clipper, built by Alfred Butler, Cape Elizabeth (Portland), but she was bested in a race to New York by the Maine-built ship. The *Snow Squall* arrived at New York June 22 after a 92-day passage, whereas the *Sovereign of the Seas* made port the following day and required 94 days for the run home.

Maine Shipyards Gain and Hold Leadership in the Production of the Highest Development of the Merchant Sailing Ship — the Down Easter

Frederick C. Matthews gives some figures to show "how closely some of the later-day ships [i.e., Down Easters] approached the records of the famous clippers, . . . which were considered the fastest of their class."

The seven passages made by Captain Wilbur in the *M. P. Grace,* averaging 115 days, and the five made by Captain Nichols in the *S. P. Hitchcock,* in 111 days, compare very favorably with the eight made by the *Mary L. Sutton,* 118½ days, and by the *Ocean Telegraph,* 121 days. The sixteen passages made by the *Jabez Howes,* at an average of 124 days, and the fourteen made by the *Henry B. Hyde,* in the same time, may be placed against the 125-day average made by the *Sea Serpent* and the *Herald of the Morning,* each making fourteen runs. The *Seminole's* twenty passages, made in an aver-

age of 126 days, are longer by only eight days than the same number made by the celebrated *Young America.* All passages referred to were between New York and San Francisco.

The *M. P. Grace, S. P. Hitchcock,* and *Henry B. Hyde* referred to above were typical Down Easters built at Bath, Maine. The *Jabez Howes* was also a Down Easter, both in model and spar plan, but the *Seminole,* built in 1865 at Mystic, Conn., was what Maine shipbuilders used to call a "half" clipper; she was a little fuller in model lines than a medium clipper, but did not have the hull below-water block coefficient of a typical Down Easter.

Following the clipper ship decade (1850-1859 inclusive) and the Civil War and throughout the remaining years of the era of sail, shipbuilding in the United States was conducted almost entirely in the states of Maine and Massachusetts, with Maine becoming more and more important as the years rolled by until, from 1875 to 1902, the end of American deep-sea merchant sailing ship construction, it launched about seven-eighths of all the square-riggers built in the country. Basil Lubbock, the English marine historian, in THE DOWN EASTERS—AMERICAN DEEP-WATER SAILING SHIPS, 1869-1929, gives data on 237 featured square-riggers built in the United States from 1862 to the end of sail. Of these ships, 189, or 80 per cent of the total, were built in Maine, 41, or 17 per cent, in Massachusetts, and only 7, or 3 per cent, elsewhere (New Hampshire, Connecticut, Pennsylvania, and South Carolina). From a list of important American deep-sea sailing ships compiled by Lubbock, the following table has been prepared to show the dominant position of Maine in the building of square-riggers during the years 1862-1902 inclusive and the increasing importance of the state and of the city of Bath in the production of American deep-sea ships following the depression that came as an inevitable reaction to the California Gold Rush and its associated clipper shipbuilding boom.

	Number of Ships Mentioned and Identified Built in			Percentages		
Years	U.S.A.	Maine	City of Bath	Maine-built Ships to U.S.A. Total As Stated	Bath-built Ships to Maine Total As Stated	Bath-built Ships to U.S.A. Total As Stated
1862-1869	21	12	4	57.2	33.3	19.1
1870-1874	51	34	17	66.7	50.0	33.3
1875-1879	82	68	28	82.9	41.2	34.2
1880-1884	56	49	30	87.5	61.2	53.6
1885-1889	8	8	8	100.0	100.0	100.0
1890-1894	11	10	8	90.9	80.0	72.7
1895-1899	4	4	4	100.0	100.0	100.0
1900-1902	4	4	4	100.0	100.0	100.0
Total 1862-1902	237	189	103	79.8	54.5	43.5

Frederick C. Matthews, in AMERICAN MERCHANT SHIPS, mentions 300 square-riggers built in the United States from 1860 to the end of wood deep-sea merchant sail; to this number have been added 9 steel square-riggers built in Bath (1894-1902), thus making a total of 309 ships mentioned as important or featured typical ships launched in America following the clipper ship decade of 1850-1859 inclusive. Matthews is Massachusetts-minded and, as far as Maine-built ships are concerned, gives greater attention to ships built outside of Bath than to vessels launched in "The City of Ships"; but, notwithstanding this fact, Matthews' list of American-built deep-sea sailers shows that 76 per cent of the total mentioned was built in Maine, 18 per cent in Massachusetts, and 6 per cent elsewhere (New Hampshire, Connecticut, New York, California, and South Carolina). Of the 234 ships featured that were built in Maine, 118, or 50.4 per cent, were launched in Bath. Of the total of 309 stated typical and important ships built in the United States from 1860 to 1902, Bath laid down 38.2 per cent. Whereas the numbers of ships in the Lubbock and Matthews compilations vary greatly, the percentages agree quite closely, as the following comparison shows. (Lubbock, when preparing his list of important American square-riggers of the post-clipper period, had to obtain most of his data from sources influenced by Boston prejudice, leanings, and one-time propaganda.)

	Lubbock	Matthews
Number of ships stated	237	309
Maine-built ships — percentage of stated total	79.8	75.7
City of Bath-built ships — percentage of Maine-built ships	54.5	50.4
City of Bath-built ships — percentage of stated national total	43.5	38.2

The Lubbock list of Down Easters includes 103 ships built in the city of Bath and 111 in the Bath Customs District. The Matthews list includes 118 ships built in the city of Bath and 130 constructed in the customhouse district. These numbers are, of course, much less than the actual total of Down Easters built in Bath, as the following figures clearly show. They have been taken from customhouse records of "sizable square-riggers—both full-rigged ships and barks"—with all ships under 1,000 tons register and all "small vessels" of each type eliminated.

	Bath Customs District			City of Bath		
Years	Ships	Barks	Total	Ships	Barks	Total
1860-1864	30	13	43	23	9	32
1865-1869	45	26	71	37	20	57
1870-1874	27	15	42	22	14	36
1875-1879	49	20	69	40	20	60
1880-1884	38	6	44	34	5	39
1885-1902	18	6	24	16	6	22
Total 1860-1902	207	86	293	172	74	246

Both Matthews and Lubbock, in their statistics of post-clipper American-built square-riggers, make Massachusetts the only state that launched such vessels—which became popularly known as Down Easters—in any quantity. They record the shipbuilding locations in Massachusetts as (1) Greater Boston, which includes East Boston, South Boston, Charlestown, Chelsea, and Medford; (2) Newburyport, on the Merrimac River; and (3) Quincy, which is on the outskirts of Boston and could be added to the Greater Boston area. Matthews features Connecticut, with the product of its Mystic shipyard, as the third important state that built deep-sea square-riggers after 1860, and Lubbock practically ignores the ships produced in that state, mentioning only one vessel (the *Seminole* of 1,439 tons, built in 1865 by Maxson, Fish & Company, Mystic) as against ten referred to by Matthews that were launched at Mystic, Conn., in the sixties and seventies. Lubbock includes in his "Register of American-built Ships" the trio of iron full-rigged ships built in Philadelphia (1883-1884) for W. H. Starbuck, which slow sailing vessels Matthews ignores. Lubbock makes no mention of two ships of Down Easter type constructed in each of the states of New Hampshire and California that Matthews enumerates, although each historian refers to the lone merchant ship that was built in the South, the *Henrietta* (1,203 tons), built in 1875 by Maine shipwrights and Maine capital at Bucksville, S.C.

In recording ships built in Maine, these two authorities are in agreement in placing Thomaston and Kennebunk (and Kennebunkport) as the second and third important building centers in Maine, following the city of Bath. Matthews then places other Maine shipbuilding towns, in order of importance as to the number of Down Easters built, as follows: (4) Yarmouth, (5) Searsport or Belfast, (6) Waldoboro or Freeport, (7) Phippsburg (part of Bath) or Richmond (on the Kennebec), (8) Rockport or Brunswick. The Lubbock list is quite different, for the British historian places Freeport third, followed by Belfast and Rockport (tied), then Phippsburg, Richmond, Newcastle and Searsport (tied), followed by Waldoboro, Brunswick, Damariscotta, and Camden with three ships each.

The following list of the number of sizable ships of the Down Easter type worthy of attention has been prepared by combining the lists of important Down Easters and American deep-sea square-riggers launched following the clipper shipbuilding decade of 1850-1859 inclusive as set forth by Lubbock, Matthews, and other writers, investigators, and historians. It

gives an approximation of the number of such ships built during the period 1860-1902 and where they were laid down.

State	Number of Important Ships	Percentage of Total
Maine		
District No. 1 — Portland	31	8.83
" No. 2 — Bath	181	51.57
" No. 3 — Rockland	62	17.66
" No. 4 — Machias	1	0.29
Total	275	78.35
Massachusetts		
Greater Boston	32	
Newburyport	17	
Quincy	5	
Total	54	15.39
Connecticut		
Mystic	10	2.85
New York		
New York	3	0.85
Pennsylvania		
Philadelphia	2	
Chester	1	
Total	3	0.85
New Hampshire		
Portsmouth	3	0.85
California		
San Francisco	2	0.57
South Carolina		
Bucksville	1	0.29
Total	351	100.00

We have seen that during the clipper shipbuilding decade (1850-1859 inclusive), Massachusetts built this class of ship with enthusiasm, launching over 48 per cent of the clippers built in the country, and that Maine, which disapproved of the sharp-lined, overcanvased, and small-carrying ships (and was cool to their construction even by contract, with the owner's assuming all responsibility for performance), built only some 18 per cent and Bath only 2 per cent of the national total. A comparison between the figures showing where all the clipper ships were built during the years 1850-1859 inclusive and where the more important and featured fuller merchant vessels of the general Down Easter type were constructed is of interest. It shows conspicuously the state of Maine's disdain for the emotional, impractical, and unprofitable type of highly publicized clipper ship, or "greyhound of the seas," and its overwhelming dominance in the realm of construction of good-carrying and money-making square-riggers during the years 1860-1902. These years cover the period of the Civil War and post-war depression and boom; the opening of the Suez Canal, which so seriously affected sailing craft the world over; the spanning of the American continent with steel rails, which substituted a 3,000-mile railroad freight haul from the Atlantic to the Pacific Coast for a hazardous 16,000-mile voyage around Cape Horn; and the period of the clipper ship depression to the all-time end of construction of American deep-sea sail—both wood and steel.

States	Percentage of National Total: Number Built — Clipper Ships	Percentage of National Total: Number Recorded — Down Easters
Massachusetts	48.14	15.39
Maine	18.17	78.35
New York and New Jersey	14.87	0.85
New Hampshire	5.91	0.85
Maryland	5.69	—
Connecticut and Rhode Island	6.12	2.85
Pennsylvania	0.66	0.85
Southern States	0.44	0.29
California	—	0.57
Total	100.00	100.00

As far as publicized construction is concerned, New York led the country in shipbuilding in the first half of the nineteenth century and during what may be termed the packet sailing ship era; but Massachusetts, with Boston as its marine metropolis, gained leadership in the importance of its ships built in the clipper ship decade (1850-1860). However, throughout

the century, Maine was steadily driving to the fore and gaining in importance. Following 1860, the Pine Tree State occupied first place in the number and tonnage of wood ships built, a position that it held with conspicuous honor and with steadily lessening competition to the end of sail. During the period of Maine's leadership, the importance and domination of Bath —Maine's marine metropolis and "The City of Ships"—grew gradually more evident, and ultimately, following the Civil War, Maine and Bath stood alone, with no other state and community to challenge their supremacy in wood sail.

The relative importance of Maine ports in the ownership of wood square-riggers in 1887 (or virtually at the end of the era of building wood full-rigged ships of the post-clipper ship Down Easter type) is set forth in the following comparative record of the number and tonnage of such vessels owned in the various leading Maine marine communities:

Owned in	Number	Registered Tonnage	Owned in	Number	Registered Tonnage
Bath	58	96,520	Belfast	3	4,624
Thomaston	16	31,769	Nobleborough	2	2,523
Portland	15	23,063	Kennebunk	1	1,925
Searsport	11	14,873	Wiscasset	1	1,527
Camden	4	8,743	Bangor	1	1,393
Damariscotta	4	5,624	Waldoborough	1	1,209

In 1887, Bath owned the largest tonnage of full-rigged ships of any port in the country, with New York second, Boston third, Thomaston (Maine) fourth, San Francisco fifth, Portland (Maine) sixth, and Searsport (Maine) seventh. These were the only ports owning more than 10,000 registered tons of full-rigged sailing ships. The three next most important ports in the ownership of such tonnage were Newburyport, Mass. (6 ships of 8,983 tons), Camden, Maine (4 ships of 8,743 tons), and Damariscotta, Maine (4 ships of 5,624 tons). These were followed by Port Townsend on Puget Sound, New Bedford, Mass., Philadelphia, Pa., Belfast, Maine, Salem, Mass., Portsmouth, N.H., and Portland, Ore., in the order named. Of a national total of 262 ships aggregating 412,167 registered tons, the state of Maine owned 117 ships totaling 193,793 tons, or 47 per cent of the total national tonnage of full-rigged sailing ships.

Bath, Maine, not only built the best and the last real Down Easters, the only big wood square-riggers of a post-Down Easter type, and the only steel square-riggers built in America but also, during the last decade of the building of deep-sea merchant sail, launched the only square-riggers constructed in the United States and on the American continent.

XVI.

THE KENNEBUNK RIVER AREA — IMPORTANT IN SHIPBUILDING FROM EARLY MAST-SHIPPING COLONIAL DAYS

The "Port and District of Kennebunk" Becomes a Separate District in 1800

MIDWAY BETWEEN THE Piscataqua River and Portland, Maine, about twenty-three and one-half miles from each (as the crow flies) and eight and one-half miles southeast of the Saco River, is the Kennebunk River, where vessels have been built since early colonial days. As far back as history and tradition go, Kennebunk has been the most important shipping and shipbuilding locality between the Piscataqua River and Cape Elizabeth, but at many other points on this part of the Maine coast vessels have been built from early days. Moreover, along this strip of coast, white pine masts were collected for shipment to British dockyards for use in the building and repairing of vessels for the Royal Navy. York—the site of America's first sawmill in 1623—was both a timber and lumber manufacturing center and a trading and fishing port as early as or earlier than Portsmouth or even Newcastle or Pannaway. In the mast-shipping colonial days, the important lumber and mast-making points between the Piscataqua and Falmouth (Portland) on Casco Bay were officially said to be "York, Wells, Keinbank [Kennebunk], Saco, and Scarborough." Whereas York, Maine, has always been more or less associated with and deemed part of the Piscataqua district in marine matters, Wells—only about five miles southwest of Kennebunkport—has generally been considered in conjunction with Kennebunk. Wells furnished mastings for the British fleet and built ships from early days, up to the middle of the nineteenth century, not only for local owners but also by contract for shipowners in distant ports.

In 1809, James Remich arrived at Kennebunk and established a newspaper, THE WEEKLY VISITOR. He and his son Daniel conducted this paper and its successor, the Kennebunk GAZETTE, until 1842. Between them, these newspaper writers had access to other men whose memories and written records ran well back into the eighteenth century, and the material gathered was incorporated into a HISTORY OF KENNEBUNK, written by Daniel Remich. In this work, we read that shipbuilding on the Mousam undoubtedly preceded shipbuilding on the Kennebunk River; the first seagoing ship built on the Mousam was constructed in around 1730 or 1740, and the Kennebunk saw its first launching of such a vessel in about 1755. The Kennebunk River is an outlet of Kennebunk Pond, situated in the town of Lyman some fourteen miles from the town of Kennebunk. The Mousam and Kennebunk rivers, for some distance from their mouths, are only about a couple of miles apart. Kennebunk is located between the two rivers, Kennebunkport is near the mouth of the Kennebunk River, and Kennebunk Beach is on the ocean about midway between the points at which the Kennebunk and Mousam rivers enter the Atlantic Ocean. The location on the Kennebunk River considered the most suitable for the building of wood vessels in early days became known as Kennebunk Landing and,

during the first half of the nineteenth century, achieved some fame for building "good, sound ocean traders up to 1,273 tons."

Vessels were being built on the Piscataqua well before 1650, at York soon thereafter, and at Casco (and probably at Wells) by 1700 or earlier. Kennebunk, being slower in getting started as a shipbuilding center and as a port, was a town in the customs district of Biddeford and Pepperellborough (Saco) during the eighteenth century. At Kennebunk Landing, small vessels were built rather steadily from 1755 on, as the site was well located for obtaining timber by teams from the forests. An important schooner was built here in 1766 and a sizable sloop in 1767; the first vessel constructed in Kennebunk of more than 100 tons register was a brig launched at the Landing in 1773. So many vessels were being built at Kennebunk and the port had become so active by 1799 that it—with its neighbor town Wells some five miles to the southwest—petitioned for a separate customs district, citing the extra travel made necessary (with associated expense and delays) by having to report at the office in Biddeford. Congress set up the "Port and District of Kennebunk" in 1800.

Vessels Built in the Kennebunk Area and Registered by William Gray, of Salem and Boston, the Greatest Shipowner of His Day

William Gray, during the early nineteenth century, was the largest shipowner in the United States, an outstanding merchant, and a skillful operator of sailing vessels in foreign trade. Born at Lynn, Mass., June 27, 1750, he lived at Salem, Mass., during the period 1760-1809 and then moved to Boston, making that shipping center his home and the scene of his activities until his death on November 3, 1825, at the age of seventy-five years. William Gray obeyed the mandate of the unpopular embargo laws in effect from December 22, 1807, to March 1, 1809, but became active again in foreign trade in 1809 and continued to operate his ships and acquire new ones during the War of 1812-1814 with Britain. After peace was made with Britain in accordance with the Treaty of Ghent (December 24, 1814) and word of it reached Boston in the middle of February 1815, Gray—in his sixty-fifth year—acquired and registered twenty-one vessels during the period May 15, 1815-May 17, 1816, of which seven were built at Kennebunk.

Before the war, the INDEPENDENT CHRONICLE, issue of February 17, 1814, published a list of seventeen prominent New England shipowners, with the number of seamen employed annually by each. William Gray, of Boston, headed the list with 50 per cent more seamen on his ships than the next great merchant, Israel Thorndike, of Boston, and twice as many as any one of the next big trio; i.e., Eben Parsons, of Boston, J. and T. H. Perkins, of Boston, and Joseph Peabody, of Salem. Furthermore, the number of seamen employed by William Gray was 67½ per cent as many as the total on the ships of the seven stated leading shipping merchants outside of Boston; i.e., two of Salem, two of Marblehead, and one each of Plymouth, Kennebunk (Joseph Moody), and Castine.

Outside of eighteen ships unidentified as to place of building, the following twenty-four vessels owned by William Gray, of Salem and Boston, are known to have been built at Kennebunk during the years 1784-1823 inclusive and acquired and registered by Gray during the thirty-four-year period 1789-1823:

Name	Rig	Tonnage	Year Built	Date of Registry William Gray Owner
FREEDOM	Schooner	91	1784	Dec. 17, 1789
ENTERPRISE	Brigantine	176	1788	June 20, 1794
DISPATCH	Sloop	70	1794	Jan. 28, 1795
VOLANT	Brig	138	1795	May 4, 1795
AMERICAN HERO*	Ship	251	1796	May 1, 1797
IRIS	Ship	227	1797	June 19, 1799
ROVER	Brigantine	204	1802	Dec. 23, 1802
VENGEANCE	Brigantine	181	1800	Apr. 2, 1803
COMMERCE	Brig	167	1795	July 12, 1803
HARPER**	Bark	141	1801	Oct. 20, 1803
THOMAS	Schooner	103	1801	Sept. 21, 1804
WILLIAM	Brig	162	1806	Jan. 10, 1810
LUDLOW	Brig	207	1814	May 15, 1815
RUBICON	Ship	407	1810	June 20, 1815
BEE	Schooner	82	1812	Nov. 11, 1815
LAWRENCE	Brig	181	1814	Dec. 13, 1815
CONCORD	Brig	230	1806	Mar. 15, 1816
HOPE†	Brig	153	1812	Mar. 25, 1816
ROVER	Brig	204	1802	Apr. 8, 1816
RAMBLER	Brig	147	1816	Aug. 6, 1817
ADVANCE	Brig	193	1807	Apr. 25, 1820
MAINE	Ship	294	1819	June 20, 1820
AUGUSTUS	Brig	143	1820	June 17, 1823
HOPE II	Brig	186	1823	Oct. 21, 1823

*In French War, carried 11 guns. Was commissioned as privateer during War of 1812.
**Registered as built at Arundel—the old name for Kennebunkport, or the "Port" of the Kennebunk.
†Enlarged to 200 tons and re-measured and registered Sept. 26, 1816.

At Wells, a few miles to the southwest of Kennebunk, William Gray purchased two full-rigged ships as they were ready for service. One was the *Betsey* of 218 tons, built in 1795 and registered by Gray at Salem on June 18, and the other was the *Wells* of 205 tons, built in the winter of 1800-1801 and registered by him (also at Salem) on June 6, 1801.

Sailing Vessels Constructed at Wells, Lyman, and Cape Porpoise

The schooner *Nancy* of 22-71/95 tons (length 40 ft. 6 in., beam 11 ft. 5 in., depth 5 ft. 5 in.), according to ship registers, was built at Wells in 1795 and the schooner *Olive* of 100 tons (length 69 ft., beam 21 ft., depth 8 ft.) in 1800. Another early schooner, the *America* of 71-93/95 tons, is recorded, but the date of building is not given. Among the vessels appearing in official registers as built at Wells during the period 1815-1860, the following are typical:

Year Built	Name	Rig	Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1815	PEACE	Schooner	38-15/95	47- 8	14- 4½	6- 5½
1824	SALLY	Schooner	38-60/95	48	14- 4	6- 6
1836	PEARL	Schooner	38-52/95	48- 1	15	6- 3
1841	SUSAN FRANCES	Schooner	49	61- 8	19- 5	6- 1
1846	SAMUEL B.	Schooner	126-11/95	80- 4	23	7-10
1852	VILLAGE BELLE	Schooner	30-22/95	43	14- 5	5- 9
1860	WEBSTER	Schooner	52-74/95	67- 5	20- 4	7- 3

Of the several vessels built at Lyman and probably launched into Kennebunk Pond before they were taken down the Kennebunk River to the ocean (about fifteen miles to the southeast), the *Lyman* is registered as of 20-59/95 tons, built in 1818. This schooner was 36 ft. 11 in. long, 11 ft. 2 in. beam, and 5 ft. deep. Cape Porpoise, about two miles (as the crow flies) from Kennebunkport and up the coast from the Kennebunk in the direction of the Saco, built some vessels, among which was the *Otho,* a schooner of 44-41/95 tons, registered as 49 ft. 2 in. long, 14 ft. 2½ in. beam, and 7 ft. 3½ in. deep and constructed in 1814.

Deep-Sea Craft Built Inland Many Miles from "Mother Ocean"

James Remich's Kennebunk newspaper, THE WEEKLY VISITOR, issue of January 15, 1820, gives the following authoritative account of the building of a deep-sea craft many miles inland and far from tidewater or a navigable stream and the hauling of the vessel to deep water that would float her and carry her to the ocean. This vessel was built in Waterboro, on the east side of the Ossipee Mountain, and was dragged by oxen to tidewater:

Internal Navigation of Maine

Yesterday arrived in this village a schooner of about forty tons, from the upper part of Waterborough, twenty miles from this, built and owned by Mr. Josiah Swett, an industrious and enterprising farmer of that town—the vessel was drawn on two large sleds by fifty oxen, accompanied by thirty hardy yeomen attached to the expedition—we have the pleasure to state that no accident has happened, since the commencement of the enterprise, which was on Tuesday last—her arrival was greeted by three hearty cheers from a large concourse of citizens assembled to witness the novel spectacle—we wish her safely deposited in the bosom of "Old Ocean" and prosperous voyages to her future owner—when we contrast the present improved and flourishing condition of the interior of this county, with its wilderness state, at a period within the recollection of citizens yet in active life—we are reminded of the almost incredible progress of our country to wealth and greatness.

The editor of the Kennebunk newspaper in 1820 was evidently more interested in the proof—afforded in the building of a schooner—that people could live and work some twenty miles inland from "Mother Ocean" than he was in the vessel herself and in the transporting of her to tidewater. Seventy-five years later, Daniel Remich, son of the old editor of THE WEEKLY VISITOR, in his HISTORY OF KENNEBUNK (1895), gave the following terse and unemotional summary of what, in these days, would be considered a most interesting and noteworthy event:

A schooner called the "Waterborough," of about forty-three tons burden, was built in Waterborough, under the supervision of Aaron Bourne, of Wells, during the fall and winter of 1819 and '20, which was drawn on sleds to tidewater, a distance of about eighteen miles. On her land passage the oxen were unyoked at nightfall on "Zion's Hill," and the vessel remained there until the following morning, while the men employed found accommodations at the "victualling cellar" and the oxen were furnished with food and shelter in the "long barn" belonging to that establishment. All were on duty in good season the next morning, when the craft was drawn to the Landing, where she was successfully launched just below Durrell's Bridge.

Kenneth Roberts, in TRENDING INTO MAINE, gives a more readable but probably less authoritative version of the affair. He says the schooner *Waterborough* was built by Josiah and William Swett (father and son) on the side of the Ossipee Mountain in Waterboro. The keel was laid in 1818, and in February 1820 the vessel was put on gigantic wooden sleds and dragged by fifty yoke of oxen twenty-five miles to Durrell's Bridge, Kennebunk. The hold of the vessel was stocked with hay and grain for the oxen. The men camped the first night (February 18) on the shore of Shaker Pond in Alfred and the second night on the outskirts of Kennebunk.

Roberts says that the schooner was launched February 20, 1820, at Arundel (now Kennebunkport); that her masts were stepped and she was rigged at Kennebunk; and that William Swett, the son of the builder, who had worked on the construction of the vessel, although only twenty years of age, captained the schooner on her first voyage to the West Indies.

Shipbuilders of Kennebunk Landing and the Construction of a Lock for Floating Sizable Vessels Downstream

Kennebunk Landing, whereas a suitable location for the construction of small craft, was a poor site for the building of vessels of over 500 tons; but evidently, for long years, more thought was given the ease of obtaining timber by teaming than the flotation of a completed hull. In the early nineteenth century, four different shipyards, a short distance apart, were in operation at Kennebunk Landing. In that of David Little, only small vessels were built. It is reported that three vessels of a few hundred tons each were in course of construction at the same time in the yard of George W. Bourne and Henry Kingsbury. George and Ivory Lord, with Robert Smith, Jr., also built ships in this location, including the brig *Lima,* in which Capt. Nathaniel L. Thompson went to sea as a sailor in March 1830. The shipyard of the Lords and Smith was later taken over by James and George Titcomb and was the largest and most prominent of the Kennebunk Landing shipbuilding plants.

The river was so narrow at the Landing that vessels were launched stern first upstream, turned in the bend where the river doubles, and then towed down the river as light as possible and without top hamper. The masts were stepped, and the vessels were rigged, canvased, finished, and equipped at Kennebunkport. In the 1840's, it became evident that, if the yards at Kennebunk Landing were to continue to build seagoing ships, some means would have to be developed to obtain water enough to float them down to the port. The demand was for vessels of 500 tons and over for deep-sea trade, and the building of ships of this size at the Landing had become hazardous. The idea of building a lock to permit the continuation of constructing wood hulls at Kennebunk Landing and floating them downstream originated with G. P. and Joseph Titcomb. A permit and charter were granted by the legislature of Maine, and 294 shares of stock were subscribed by twenty-eight individuals. The work of building the lock at a location where the river widens and "makes easy passing to the ocean" was performed in 1848 at a cost of $5,500. This lock was in active use for nineteen years, during which time twenty-nine vessels aggregating 2,380 tons—and paying a toll of 20 cents per ton—were floated down the stream from above and released by its gates. Below the lock, the river widened for a length of about two hundred feet, and here there was soft bottom and seven feet of water at low tide. But after reaching this point, the difficulty of floating a sizable ship to the port and the ocean was not overcome, as there were shallows in the river, which at extreme low water oxen have forded, and it is said that there was also "a rock of some danger." A ship leaving the lock, therefore, would at times be required to lie close to the discharging gates for many days awaiting a high tide or rise of fresh water so that she could continue with safety her journey downstream.

When the *Golden Eagle,* a three-decker of 1,273 tons with a length of 188.8 ft. and beam of 38.2 ft., was launched from the Titcomb yard at the Landing in 1852, the ship remained for a week with bow and stern touching the bend of the river before there was water enough to swing her and tow the "bare lightened hull" to the lock, which had been widened to let this craft pass through, and at the lock gates she was compelled to lie a week for water sufficient

to float her over the sills. The *Golden Eagle* was the largest vessel ever built at Kennebunk Landing, but notwithstanding all the physical difficulties experienced in launching and floating the vessel down to the sea, the Titcomb shipyard at the Landing built the ship *Helios* of 1,133 tons the following year.

For several years, Capt. Nathaniel Lord Thompson was associated in business with James and George Titcomb, but in 1854 he severed his connection with these builders and with Kennebunk Landing. He purchased the Emmons and Littlefield yard on the Kennebunk side of the river at the "Port." For twenty-seven years thereafter, all of the Thompson vessels were launched from that yard. The most prominent of Captain Thompson's master shipwrights was Benjamin Jackson, of Kennebunkport.

A Summary of Number and Tonnage of Full-rigged Wood Ships Built on the Kennebunk River in Periods from 1825 to 1859 Inclusive

Compilations from the result of investigations by S. E. Bryant give the following data of the number, aggregate tonnage, and average size of full-rigged three-masted wood ships built on the Kennebunk River during the thirty-five-year period 1825-1859 inclusive, which ends at the close of the clipper shipbuilding decade and at the time of national depression and uncertainty that immediately preceded the Civil War:

	Ships Built during Period				Ships Built during Period		
Period	Number	Total Registered Tonnage	Average Registered Tonnage per Ship	Period	Number	Total Registered Tonnage	Average Registered Tonnage per Ship
1825-1829	3	900	300	1845-1849	22	12,650	575
1830-1834	5	1,620	324	1850-1854	28	24,920	890
1835-1839	7	2,604	372	1855-1859	21	19,005	905
1840-1844	4	1,808	452	Total 1825-1859	90	63,507	706

The following table is a recapitulation in three prime periods (a total of thirty-five years) of the full-rigged wood ships built on the Kennebunk:

	Number	Total Registered Tonnage	Average Registered Tonnage per Ship
Prior to 1840—1825-1839	15	5,124	342
The 1840's—1840-1849	26	14,458	556
The 1850's—1850-1859	49	43,925	896

At Mid-Century, the Kennebunk Builds the Packet Ship HELVETIA *and Its Only Clipper Ship — the Medium Clipper* ROEBUCK

There was built at Kennebunk Landing in 1850 the ship *Helvetia,* which operated for thirteen years (1851-1864) as a regular transatlantic sailing packet between New York and Havre, France, in the Whitlock and, later, in the Union Line. The *Helvetia* was a full-rigged ship of 971 tons register, measuring 169 ft. long, 35.3 ft. beam, and 17.7 ft. deep. Her average westbound length of passage in transatlantic service was 36 days; her best crossing westbound, or "uphill," was made in 28 days, and her longest passage took 53 days. Later, the *Helvetia* operated in Sutton's San Francisco line.

Only one clipper ship was built on the Kennebunk River, and that was the little medium clipper *Roebuck* of 815 tons (length 170 ft., beam 33 ft., depth 22 ft.), constructed in 1851 by Bourne & Kingsbury at the town of Kennebunk for Thaddeus Nichols and Thomas Curtis, of Boston, Mass. In 1852 the *Roebuck* made a westbound passage of 150 days around the Horn, sailing from Boston on February 4 and arriving at San Francisco on July 3. In 1855 she made a run in the British China tea trade, clearing Shanghai on May 13 and arriving at London (not at some Channel port) on October 10 after a rather slow passage of 150 days. That the sailing conditions were poor during this run—with the performance of the *Roebuck* under Captain Walden highly creditable—is proved by the fact that Donald McKay's big extreme clipper *Sovereign of the Seas,* one of the fastest vessels afloat, left Shanghai ten days after the *Roebuck* (i.e., on May 23) and did not reach London until November 9, or thirty days after the *Roebuck* had arrived there. The *Sovereign of the Seas* was beaten on the run by twenty days by the little Maine ship, which made no pretensions for high speed. The *Roebuck* was lost off Cohasset on January 28, 1859.

Noteworthy Down Easters Built at Kennebunk and Kennebunkport, Maine

Ships with Down Easter models and spar plans were built at Kennebunk and Kennebunkport after the Civil War and up to 1881, when the *Reuce* (1,829 tons), the last ship to be built in this locality, was launched.

The following list gives the most important vessels built on the Kennebunk following the clipper ship era, the depression of the late fifties, and the Civil War. Of the eighteen vessels mentioned, ten were built or bought by Boston owners (as Captain Thompson built several of his ships "on spec"), four for J. S. Winslow & Company, Portland, Maine, two for other Maine owners, and one each for a New York and a San Francisco merchant.

			Registered Dimensions				
Name	Year Built	Builder	Tonnage Net	Length	Beam	Depth	Owner
EL DORADO	1865	Nathaniel L. Thompson	1,147	186	36	23.6	George Plummer, San Francisco
ALASKA	1867	Nathaniel L. Thompson	1,316	188.2	39	23.8	Thayer & Lincoln, Boston
FRANK N. THAYER (I)	1868	David Clark	1,160	188	36.2	23.3	Thayer & Lincoln, Boston

(Continued on next page)

Name	Year Built	Builder	Registered Dimensions				Owner
			Tonnage Net	Length	Beam	Depth	
MOGUL	1869	Nathaniel L. Thompson	1,365	203	39	24	J. Henry Sears & Co., Boston
REPUBLIC	1869	Crawford & Perkins	1,203	193.6	39.6	23.7	Geo. C. Lord & Co., Boston
COLUMBUS (2nd)	1870	Nathaniel L. Thompson	1,854	213.6	40.8	28.6	Thayer & Lincoln, Boston
CARRIE REED	1870	David Clark	1,352	200	39.3	24.6	J. S. Winslow & Co., Portland
FRIEDLANDER	1872	Nathaniel L. Thompson	1,638	215.8	39.4	26.4	Thayer & Lincoln, Boston
OCEAN KING	1874	Nathaniel L. Thompson	2,516	250.5	42.3	30.1	J. Henry Sears & Co., Boston
ST. JOHN SMITH	1874	Nathaniel L. Thompson	2,220	236	42.6	29.8	J. S. Winslow & Co., Portland
J. B. BROWN	1874	Titcomb & Thompson	1,551	207.5	40.5	24	J. S. Winslow & Co., Portland
PHILENA WINSLOW	1876	Nathaniel L. Thompson	2,170 (gross)	235	41	28.5	J. S. Winslow & Co., Portland
GRECIAN	1876	Titcomb & Thompson	1,677	215.8	40.5	26.9	J. Henry Sears & Co., Boston
VIGILANT	1877	Nathaniel L. Thompson	1,723	224	40	28	Thayer & Lincoln, Boston
PHAROS	1877	Nathaniel L. Thompson	2,002	235	40	27.6	Thos. Nickerson & Co., Boston
L. SCHEPP	1878	Titcomb & Thompson	1,776	224.3	42.1	27.1	I. F. Chapman & Co., New York
GLENDON	1880	Nathaniel L. Thompson	1,897	225	43.7	28.4	Howes & Crowell, Boston
REUCE	1881	Nathaniel L. Thompson	1,829	229.2	41	27.1	Geo. H. Theobald, Bowdoinham

Most of the Kennebunk Down Easters were good carriers and fair sailers, but being average vessels, they did little to put themselves in the public eye. That they were well-designed and built ships is proved by the fact that Thayer & Lincoln, the highly competent and discriminating Boston firm of merchants, shipowners and operators, having built the *Frank N. Thayer* on the Kennebunk in 1868, continued to place orders for and purchase on the stocks Kennebunk ships during a period of eleven years. In that time, Thayer & Lincoln acquired ownership to five Kennebunk-built vessels, four of which were built by Capt. Nathaniel L. Thompson. Another prominent firm came back with repeat orders, and J. S. Winslow & Company, of Portland, Maine, acquired four Kennebunk-built square-riggers during the years 1870-1876 inclusive.

The ship *El Dorado* (1,147 tons) was built in 1865 to the order of an eastern group, with William L. Thompson, New York, the principal owner. She was sold to San Francisco parties in 1868 and when fifteen years old (1880) was lost in the Straits of Juan de Fuca. The *Alaska* (1,316 tons) was built in 1867-1868 "on spec" by Capt. N. L. Thompson. She was sold in 1874 to California interests and was lost on the West Coast in 1893, when twenty-five years old. The *Mogul* (1,365 tons) was burned in the Pacific in 1874 and destroyed when only five years old.

The *Republic* (1,203 tons) was in the public prints in 1871 because of her being overdue and making a slow passage of 232 days around the Horn from Newport, Wales, to San Francisco. She suffered damages in battling heavy gales and seas off Cape Horn for five weeks and had to put back to Port Stanley for repairs. In 1883 the *Republic* made a good run of 127 days from Liverpool to Wilmington, Calif. She continued in service, using her sails, for thirty years and, renamed *Geographe,* operated as a coal barge in Australia until 1930, when at sixty-one years of age she was broken up.

The *Columbus* (1,854 tons) was a profitable ship and a good sailer. During the thirteen years that she was operated by Thayer & Lincoln, she made five passages from New York to

San Francisco with an average of 135 days, and she made a fast run of 116 days from Hull, England, around the Horn to the Golden Gate. The *Columbus* made an eastbound run from San Francisco to Liverpool in 117 days and two in 119 days. In 1883 she was sold to the Germans and, after ten years' service in the North Atlantic oil trade, was again sold and put under the Norwegian flag.

The *Carrie Reed,* J. S. Winslow's first Kennebunk-built Down Easter, is credited with a westbound around-the-Horn passage of 119 days from Liverpool to San Francisco in 1871. She was in the transatlantic cotton trade and the general Cape Horn service between California and New York and European ports. She was sold in 1876 to the Germans and, later, to the Chileans. The old *Carrie Reed,* then known as the *Adela,* was carrying lumber from Puget Sound to Valparaiso in 1907 (when thirty-seven years old) and possibly later.

The ship *Friedlander* (1,638 tons) was named after Isaac Friedlander, who, prior to his death in August 1878, was the principal charterer of ships and exporter of wheat at San Francisco and was popularly known as "The Wheat King." The *Friedlander* ran from Liverpool to Calcutta in 96 days in 1876 and on her maiden voyage made a fine passage of 122 days around the Horn from New York to San Francisco. The vessel had a disastrous and bad-luck period starting in January 1875. She suffered terrific weather on her passage from New York to California and was nearly six months at Rio de Janeiro undergoing repairs. She reached San Francisco on November 9, 301 days out from New York but after a good run of 84 days from Rio. On the second half of the following voyage from San Francisco and Peru (for guano) to Hamburg, the ship's mainmast was badly sprung off Cape Horn, and she was forced to put back and make Valparaiso for repairs. The *Friedlander* was sold to the Germans in 1877, and at the close of the century she was operating as the Dutch ship *Friede.*

The *Ocean King,* built in 1874, is important because of size—2,516 tons—and the fact that she was the first four-masted square-rigged vessel (a shipentine) built in the United States following McKay's *Great Republic,* similarly rigged, built in 1853. The *Ocean King* was the largest sailing ship built following the construction of McKay's big clippers *Great Republic* (3,357 tons gross; 2,751 tons net) and *Donald McKay* (2,595 tons) in the first half of the fifties, and she was within a few tons of being as large as the finest of all the Down Easters, the *Henry B. Hyde* of 2,580 tons, built at Bath, Maine, in 1884. The *Ocean King* was not a good Down Easter; her lines were too fine and her cargo capacity much too small for her tonnage. Moreover, she did not have "compensating speed" and was a slow and an unprofitable ship. Her best westbound passage to California was made in 130 days, and her average was 145 days; eastbound she was comparatively slower still, her best run being 132 days and the average length of the passages 141 days. Of the first eight years of her career, over three and a half years were spent in port. From June 1883 to March 1886, the *Ocean King* was laid up at San Francisco, following which she was chartered for the Pacific Coast coal trade. Overladen and drawing 28 ft. of water, she encountered a succession of southeast gales after passing Cape Flattery, sprang a leak, and foundered on May 8, 1887.

The *St. John Smith* (2,220 tons) gained the reputation of being both a slow and a "weak" ship. She was not a good Down Easter and did not gain any laurels for Capt. Nathaniel L. Thompson as a builder other than a fast run of 107 days from New York to San Francisco sandwiched between slow passages. The *"Smith"* met several mishaps and was branded "of weak construction." In 1881, at San Francisco, she was surveyed and ordered docked for the strengthening of her hull. In July 1882, she sailed from Liverpool with coal for San Francisco and evidently foundered, as she and her crew were never heard of thereafter. Incidentally, this ship does not appear in the Thompson family records as having been built by Capt. Nathaniel Lord Thompson, but she is generally credited with having been launched from Thompson's Kennebunkport yard in April 1874, built for J. S. Winslow, of Portland, Maine, and named after a prominent resident of that city.

The *J. B. Brown* had an unfortunate maiden voyage. She met violent gales off Cape Horn, suffered injuries, and put back into Montevideo for repairs and to salvage part of the cargo.

After a detention of forty-five days, she resumed her passage and, after a slow run, reached San Francisco, 124 days out from Montevideo and 290 from Boston. The *"Brown,"* throughout her thirty years of sea life, was engaged in the hardest kind of service. During her later years, leaking and in distress, she had to put into port on several occasions. Her last voyage before she was laid up (and later dismantled and broken up) was a slow passage of 110 days from Newcastle, N.S.W., Australia, to San Francisco loaded with coal.

The *Philena Winslow* (2,170 tons) was launched from the shipyard of Nathaniel L. Thompson at Kennebunk, Maine, during the summer of 1876, being at that time named *Mary E. Manton.* On her first long-distance voyage, the *"Winslow"* made a fine run of 113 days around the Horn from Liverpool to San Francisco and was one hundred miles from the Golden Gate when 109 days out. On her second voyage outbound, she left Cardiff loaded with 2,860 tons of coal for Singapore and was wrecked and lost on Gough's Island of the Tristan da Acunha group in the South Atlantic when 53 days out. The surprising thing about this calamity is that, when Captain Cheney "heard the sound of breakers and saw the loom of something ahead," he thought it was an iceberg and had no idea of being near land. All of the officers and crew were, fortunately, saved in the ship's three small boats.

The *Grecian* (1,677 tons) was a good sailer and a profitable ship and, in Capt. Albert H. Dunbar, had a capable skipper and a driver. Her two best passages were a "smart" run of 102 days from San Francisco to Queenstown and a run of 104 days from Cardiff, Wales, to Hong Kong, deeply laden with coal. In March 1885, when only nine years old, the *Grecian*—bound from Iloilo to New York—stranded on Great Danger Bank, off the Philippine Islands, and became a total loss. All hands were saved.

The *Vigilant* (1,723 tons) was an outstanding ship, a handsome, rather fine-lined vessel, but a good carrier. It is said that she loaded "close to 2,400 long tons of wheat or 3,100 tons of East India raw sugar in bags." Evidently, she had faults in her design, and her records indicate that she was lacking in stability. (With a cargo of wheat, 300 tons of deadweight to act as ballast had to be put in the hold.) Her stern lines were too sharp, for in heavy weather she would "dip her lee counter under and nearly swamp the poop." The *Vigilant* made two westbound passages to San Francisco around Cape Horn, the first being a run of 118 days from New York and the second a run of 122 days from Liverpool. She made three eastbound runs from San Francisco to Atlantic ports, all in very good time, two being to Liverpool in 108 and 114 days, respectively, and the third a run to Havre in 117 days. Capt. William H. Gould, her master, said, "In light or moderate winds, nothing under sail ever passed the *Vigilant,* but in strong winds she had to be nursed." In 1899, when twenty-two years old, the *Vigilant* took a cargo of coal to Manila for Admiral Dewey's fleet and reached port with the coal on fire. The ship was scuttled and later refloated, but her sailing days were over; she was sold and converted into a hulk for the storage of kerosene.

The *Pharos* (2,002 tons) was launched from Captain Thompson's yard on October 31, 1877, as the *Free Trade,* but the name was changed by the owner, Thomas Nickerson & Company, Boston, Mass., before the ship sailed. The *Pharos* was "a good-sized three-decker, classed at French Lloyd's for 12 years." Although described as Nickerson's "largest and finest ship," we are told that she had been "unlucky ever since her launching" until Capt. James Collier took command of her in 1879, when he was sixty-six years of age. During the seven years that he was master, he "changed her luck," evidently by a high order of seamanship.

The *L. Schepp* was named after the chocolate and cocoa manufacturer of New York, often referred to as "The Cocoanut King." She was built for a syndicate headed by Capt. Moses Maling, of Kennebunkport, who started to manage her, but she was soon sold to I. F. Chapman, of New York. Prior to 1893, the *"Schepp"* was in the Cape Horn trade. She made seven westbound runs to San Francisco (six from New York and one from Baltimore) with an average length of passage of 143 days; the fastest was 121 days and the slowest 160 days. On her eastbound runs, she averaged 131 days, the fastest being 119 days (two of them) and the slowest 155 days. In 1901 she ran from New York to Manila in 134 days, being 102 days

from New York to Anjer. The *"Schepp"* traded between North Atlantic ports and the Orient from 1893 to the time that she was driven ashore on the coast of Long Island in the big blizzard of February 17, 1902. The ship was so badly damaged that she was condemned and sold to T. J. Scully, who converted her into a coal barge. While in this service and under tow, she foundered off Cape Henlopen on January 24, 1908, when thirty years of age.

The *Glendon* (1,897 tons) was said to be a good carrier and a good sailer. Her best passage around the Horn was an eastbound run of 110 days from San Francisco to Liverpool. Capt. Edwin Thatcher, skipper of the *Glendon,* claimed that on a voyage in the North Atlantic he sighted the Yarmouth (Maine)-built *P. N. Blanchard* (1,589 tons) ahead, bound in the same direction, and "during the course of the following day ran her out of sight astern." The *Glendon* was wrecked on the Japanese coast in March 1890, when she was only ten years old.

The *Reuce* was the last vessel built by Capt. Nathaniel L. Thompson at Kennebunkport and was launched in November 1881, when the builder was seventy years old. In October 1883, the *Reuce* sailed from Astoria for Nagoya, Japan, and experienced westerly gales for several weeks. After sixty-two days, the fresh water was exhausted, and when 110 days out, the ship sought refuge in Suruga Bay on the Japanese coast. Four days later, a hurricane drove her ashore near Omsk, and the crew got ashore by means of a breeches buoy. Later, the ship was lightened, floated, and repaired. She operated in the Cape Horn trade, making eleven round voyages between Atlantic ports and San Francisco, which averaged 146 days westbound (best, 120 days; longest, 178 days) and 128 days eastbound (best, 110 days; longest, 161 days). She then made voyages to China and Japan, after which she entered the Pacific lumber trade and, later, became a salmon packer. When she was owned by the Columbia River Association, of Astoria, and engaged in the Alaska fisheries trade, her name was changed to *Astoria.* In 1923, on a voyage from Portland, Ore., to Japan, the ship was wrecked once more on the Japanese coast; but this time, at the ripe age of forty-two years, she became a total loss.

Capt. Nathaniel Lord Thompson, the Kennebunk's Most Outstanding Wood Shipbuilder, Who Knew a Ship "from Keel to Truck"

Capt. Nathaniel Lord Thompson is credited with being "instrumental in the building of over a hundred sailing vessels, the greater number of which were square-rigged ships for the ocean-carrying trade." He was born in North Kennebunkport, Maine, July 24, 1811, the son of Nathaniel Thompson, sea captain and shipowner, who died at sea of yellow fever in June 1819. Young Nathaniel, when fifteen years of age, went to sea on the brig *York.* Five years later, he was second mate on the brig *Export* and was later promoted to first mate. He obtained his first command, the bark *Nimrod,* in 1834 at the age of twenty-three. Captain Thompson then followed the sea steadily for eleven more years, commanding in succession the ship *Ruthelia,* the brig *Caroline,* and the ships *Marcia Cleves* and *Bornholm.* In December 1844, he "came ashore" for a while and, becoming interested in shipbuilding, worked with James and George Titcomb at their yard at Kennebunk Landing. He did some work on the bark *Ariana* (266 tons) and the ship *James Titcomb* (492 tons) and, upon completion of the latter vessel, had command of her for thirteen months. He returned to Kennebunk in December 1847. Captain Thompson was interested, with the Titcomb brothers, in the building of the ship *Lexington* (842 tons) and commanded her on her first trip to Havre via New Orleans for cotton. In 1850, when thirty-nine years old, he left the sea for good and devoted the remainder of his life to the building of ships. He died at Kennebunk on February 8, 1889, at the age of seventy-eight.

The following table gives a summary of vessels that, according to family records, "were built by Captain Nathaniel Lord Thompson, either as contractor or principal owner, from 1846 to 1881." In 1854, Captain Thompson established his own shipyard at Kennebunkport and, it is said, "operated it alone until 1881." Prior to 1854, Thompson either worked for or was associated with James and George Titcomb and others, and the vessels were built at Kennebunk Landing.

	Number of Vessels							Tonnage						
Period Inclusive	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Steam-ers	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Steam-ers	Total
1846-1849	3	1	—	—	—	—	4	1,880	266	—	—	—	—	2,146
1850-1854	7	—	—	3	—	—	10	6,916	—	—	848	—	—	7,764
1855-1859	5	—	—	—	4	—	9	5,231	—	—	—	303	—	5,534
1860-1864	6	3	—	1	5	3	18	6,642	1,648	—	309	397	1,732	10,728
1865-1869	7	3	—	1	21	—	32	8,967	1,718	—	311	1,947	—	12,943
1870-1874	7	—	1	—	9	—	17	11,474	—	336	—	3,543	—	15,353
1875-1879	5	3	1	—	—	—	9	9,711	2,672	223	—	—	—	12,606
1880-1881	1	1	—	—	—	—	2	1,925	1,081	—	—	—	—	3,006
Total 1846-1881 (a period of 36 years)	41	11	2	5	39	3	101	52,746	7,385	559	1,468	6,190	1,732	70,080

The following table gives a list of vessels with which Capt. Nathaniel L. Thompson was connected in some capacity or other and which were built at the James and George Titcomb shipyard at Kennebunk Landing.

Year	Name	Rig	Tonnage	Year	Name	Rig	Tonnage
1846	JAMES TITCOMB	Ship	492	1852	GOLDEN EAGLE	Ship	1,273
1846	ARIANA	Bark	266	1852	ROYAL SOUTHWICK	Brig	275
1848	NATHANIEL THOMPSON	Ship	546	1853	HELIOS	Ship	1,133
1849	LEXINGTON	Ship	842	1854	LUNA	Ship	626
1850	HELVETIA	Ship	972	1854	LIZZIE THOMPSON	Ship	766
1850	HORIZON	Ship	963				

Total in nine years of 11 vessels (9 of them ships). Total tonnage, 8,154 tons; average per vessel, 741 tons.

Captain Thompson, after establishing his own yard at Kennebunkport in 1854, built the following sizable square-riggers in addition to the fifteen credited to him (or to Titcomb & Thompson) previously classified as noteworthy Down Easters built following the close of the Civil War and during the years 1865-1881 inclusive.

Year	Name	Rig	Tonnage Gross	Year	Name	Rig	Tonnage Gross
1854	INA RUSSELL	Ship	1,183	1864	STERLING	Ship	890
1855	SEA BELLE	Ship	822	1868	LATHLY RICH	Ship	1,328
1855	REGULUS	Ship	599	1868	SITKA	Bark	869
1856	GOLDEN STAR	Ship	1,187	1869	TITAN	Ship	1,229
1858	ELIZABETH	Ship	1,040	1870	EMPIRE	Ship	1,132
1859	ARMADA	Ship	1,583	1871	HAMILTON	Ship	1,262
1860	BIRMINGHAM	Ship	1,186	1874	SIERRA NEVADA	Ship	1,672
1861	STAR OF THE SEA	Ship	1,237	1875	DEFIANT	Ship	1,898
1863	COLUMBUS I	Ship	932	1876	JOHN L. HASBROUCK	Bark	790
1863	SORRENTO	Ship	1,226	1877	HIRAM EMERY	Bark	799
1863	DELHI	Bark	655	1878	FURNESS ABBEY	Bark	1,083
1864	STAFFORDSHIRE	Ship	1,171	1880	SARANAC	Bark	1,081

Of the vessels included in the list of noteworthy Down Easters built at Kennebunk or Kennebunkport, the family records of Capt. Nathaniel L. Thompson credit him with building the following ships for which the records state other builders:

Year	Name	Tonnage Gross	Reported Builder
1869	FRANK N. THAYER I	1,221	David Clark
1869	REPUBLIC	1,361	Crawford & Perkins
1870	CARRIE REED	1,400	David Clark

The following three ships, reported as built by Titcomb & Thompson, are not included in the family records of the 101 ships built by Capt. Nathaniel L. Thompson: the *J. B. Brown* of 1,551 tons, built in 1874; *Grecian* of 1,677 tons, built in 1876; and *L. Schepp* of 1,776 tons, built in 1878.

Capt. N. L. Thompson also built the steamer *Franconia* of 808 tons in 1864 for the Portland Steamship Company, the steam gunboat *Aroostook* of 500 tons in 1861 for the United States Government, and the shallow-draft wood steamer *Iron Age* of 424 tons (launched at Kennebunk Landing), which was sold to the government during the Civil War. Prior to 1873, Captain Thompson built several small schooners, but during 1873-1874, he constructed seven schooners of from 408 to 602 tons register, the largest being the three-master (with centerboard) *Albert W. Smith* of Providence, R.I., built in 1873. Shipping registers record that the three-masted schooner *George V. Gordon* of 697 tons (builder not stated) was constructed at Kennebunk in 1874; this fore-and-after measured 158.6 ft. long, 35 ft. beam, and 16.7 ft. deep and was quite sizable for that rig and the period.

Capt. Nathaniel L. Thompson goes down in history as Kennebunk's outstanding wood shipbuilder. He is ranked in prominence, as far as the Kennebunk district is concerned, with the Sewalls and the Houghtons, of Bath; the Skolfields, of Brunswick; the Soules, of Freeport; the Wattses and O'Briens, of Thomaston; the McGilverys and Carvers, of Searsport; Carleton and Norwood, of Rockport, etc. All contributed, as builders and operators, to perpetuate American wood sail when great wood shipbuilders such as the highly publicized Donald McKay, of Boston, and William H. Webb, of New York, had declared that wood shipbuilding had reached its end. Captain Thompson was one of the noteworthy Maine men who knew a ship "from keel to truck," who sailed and owned his ships, and who knew how to build good ships and how to make money in both the building and the operation of them. He was a factor of prominence in keeping the Stars and Stripes flying over Down East wooden windjammers on the Seven Seas for a full quarter-century, without any government aid or support whatsoever, against the relentless competition of iron and steam, which received the strong economic support of foreign governments, insurance companies, etc.

Lincoln Colcord has written, "There is a whole phase of American maritime history which has not yet been written, covering the period of the revival of sail after the Civil War; and this period belongs to Maine alone. Captain Thompson was one of the important figures in it." Mr. Colcord continues:

> Every shipping town in New England had its Captain Thompson, a man who by energy and ability, by the sheer force of personality and the gift of command, had emerged in the midst of an adventurous and exacting enterprise as the leading individual of the community, the chief ship builder and owner and operator, the figure around whom centered the town's single-minded industrial and mercantile activity. But few of the shipping magnates of the American sailing marine embodied the era so completely as did Capt. Nathaniel Lord Thompson, or showed so clearly the strength and importance of the factor of personal initiative in the movement that during his lifetime carried the nation forward to signal achievements on the sea.
>
> From 1846 to 1881, Captain Thompson was instrumental in the building of over a hundred sailing vessels, the great number of which were square-rigged ships for the ocean carrying trade. He owned in most of these vessels, and operated many of them from Kennebunk as managing owner. And at odd times, especially in the early years, he had commanded some of them on foreign voyages; for like all New England seafaring men, he had started out

to sea as a youth before the mast and worked up to the position of master as a foundation of his career. He knew every item of his profession . . . in terms of hard experience. His life was filled with ceaseless activity, with heavy responsibility, with the multitude of duties and technical details involved in the building and handling of a fleet of vessels. . . .

In the period under discussion, America won the carrying trade of the world from Great Britain, only to lose it again during the Civil War. Two desperate economic depressions occurred, that of 1857 and that of 1873. The Civil War itself took place, with its disastrous effect for a decade on American shipping. Yet despite this devastating struggle, and despite the depression of 1873 which followed, the American sailing marine did undergo a strong revival, without government aid; wooden ship building came back, and the coast of Maine from 1875 to 1900 produced the finest and largest wooden vessels ever launched on any seaboard.

This was the economic ground on which Captain Thompson operated, a ground insecure and often unsubstantial, where fortunes varied with the men, and all depended on personal judgment, ability, courage and initiative. . . . Nothing about it was easy; everything had to be fought for, everything had to be won in a highly specialized field of competition, everything constantly was at the mercy of other men, of the jealous elements, and of economic forces beyond control. How it was possible to keep the enterprise going under these conditions, to hold one's head above water, to make money out of ships when freights were fluctuating wildly, to meet adverse circumstances with greater efforts, to build and launch ships when costs were high and business was low—these are the vital questions, which permit of only one answer. Only the highest quality of human efficiency could have produced such an amazing result, and made the record look easy and successful in historical perspective while in reality it set down a daily struggle with stubborn obstacles, a struggle of uneven proportions, of desperate chances, of brave decisions and heroic faith. And because of this outstanding human factor, it is plain to be seen that the men made the era, not the era the men. . . .

The men knew their way about the world, and the lore of their trade. They built beautiful and efficient ships, and made their living from them. . . . They lived largely and ably, helped sustain sterling communities, and laid down the substantial foundations on which the life of the Maine coast rests today. Everything they did contributed to the raising of standards and the enlargement of horizons.

XVII.

THE SACO RIVER AND BIDDEFORD, MAINE

"The Saco" Vies with Other New England Areas as a Fisheries and Timber Trading Center and a Builder of Sizable Deep-Sea Ships

ABOUT FOURTEEN MILES southwest of Portland Harbor, between Portland and the Kennebunk River, is the Saco River, with the companion towns of Saco on the northeast and Biddeford on the southwest bank. The Saco has been an important logging stream for approaching three centuries. The mouth of the Saco River, we know by tradition, was an important shipbuilding and shipping center in the latter part of the seventeenth century and continued as such practically to the end of the wood merchant shipbuilding era, with comparatively large full-rigged ships being built on its banks after the Civil War. From early days, the mouth of the Saco River was an important deep-sea fishing center, rivaling the Isles of Shoals and the Piscataqua, and the forest lands that the Saco tapped were soon favorably known for the extent, quality, and diversity of timber. The Saco Falls handicapped water transport on the river; but, nevertheless, Saco quickly became, like most other Maine coast and river settlements, not so much a fishing port (known as Winter Harbor) as a lumber and timber products community. It was but natural for ships to be built in the Saco settlements at an early date and for such ships to be used both in fishing and in carrying timber products to market. Farther south, in Massachusetts, the prime interest continued to be in the fisheries and in building ships for that trade; but Saco was a part of what became known as the Pine Tree State, and after the first decades of its struggle for survival, it concentrated on its forests, built ships from its timber, and used forest products as its principal item of trade and barter first with towns such as Boston, later with coastal ports farther south, and finally with the West Indies, Central and South America, and Europe. To the lumber and forest products industry and local activity was allied that of shipbuilding to such an extent that the Saco, from relatively early days, built not only ships to handle its own coastal and foreign trade but also ships for out-of-town or foreign merchants.

The falls of the Saco were an economic source of water power and determined the location of the mill towns of Saco and Biddeford, which, from the first, became interested in timber products. Down the coast at York, America's first sawmill was built in 1623, and in 1653 the first mill privileges were granted for operating locations "upon the great falls of the River of Saco." In the late sixties, Saco was shipping and selling "good pine boards" to London, and records show that in 1672 "pipe staves and clapboards" were being sent in quantity from the Saco River to the Canaries. At this time, Winter Harbor (now Biddeford Pool) was a thriving fisheries port, and Saco-built ships were engaged in carrying first-grade dried fish to important European Catholic countries together with "claw-board" (clapboard) and "pipe staves" for barrels or casks, for which there was a big demand in wine-making countries. To the West Indies, Saco ships took the second grade of Winter Harbor fish (to be consumed by Negro slaves) and such forest products for which a market could be found.

It is unfortunate that but few records—and these fragmentary—have been preserved to show the extent of shipbuilding operations on the Saco River; for in the eighteenth century

"The Saco" vied in importance with the towns on Casco Bay, to the east, and Kennebunk, to the west, as a shipbuilding and trading port and was one of the principal shipping and shipbuilding communities between the Piscataqua and Kennebec rivers—an area that at the time was part of Massachusetts. The port of Saco customhouse, which was in existence throughout the entire nineteenth century (located on either the Saco or Biddeford side of the river), was discontinued July 1, 1913, and certain records were removed to Portland and others, presumably, to Washington. Prior to the Revolution and for several years thereafter, Falmouth (Portland) was the official customs center for most of what is now the state of Maine, but neither in Portland nor in the towns of the Saco can be found any official records of ships built in the Saco region during colonial days. Neither can such records at this late day be unearthed covering vessels that it is positively known were built on the Saco during parts of the nineteenth and post-Revolutionary years of the eighteenth centuries. Moreover, the books found at the Portland customhouse of Saco port records, giving sales from February 1851 to April 1896, and the registry from September 1877 to September 1902 are incomplete as to marine construction on the Saco during the period covered; for certain vessels known to have been built—and for which private and press records exist—are not included in the official registry. Ships built in the Saco district for owners in other ports, such as Portland, Boston, etc., escaped the Saco records. The names of the builders are given for only one-third of the vessels covered by the Saco records now reposing at Portland, other required data are incomplete, and errors in regard to the place of building (i.e., Saco or Biddeford) are evident. Some earlier Saco port records are said to have been taken to Washington for "repairs" and, if still in existence, are "unavailable."

Mention is made of a "port inspector" located on the Saco before the Revolution. He was Capt. Philip Goldthwaite, who lived at Winter Harbor (now Biddeford Pool). Captain Goldthwaite served under the Colonial Government and left the Saco district early in the Revolution. It is said that he was "one of the only two Tories in the town."

Historian Folsom writes of the Saco collector of customs:

> Prior to the Revolutionary War, there appears to have been no collector of customs stationed at Saco River. The vessels were probably registered at Falmouth, but, the books not having been preserved, we are unable to refer to the state of navigation of this period. During the war, Mr. Nathaniel Scammon (of Saco) was commissioned for this purpose by the Provincial Legislature (of Massachusetts). The first collector under the Federal Government was Jeremiah Hill, Esq. (of Biddeford), who was appointed 1789 and retained the office until 1806. He was succeeded by Daniel Granger, Esq. (of Saco).

Before the assumption of customs jurisdiction by the Federal Government in 1789 and the establishment of the customhouse in Liberty Square, Biddeford, the neighboring, across-the-river town of Saco, or Pepperellborough, was the customs port. Before the Revolution, it was under the authoritative control of the Massachusetts Colonial Government, and following the Revolution and until 1789, it was under the Massachusetts State Government. Remich says that among the shipyards operating on the Saco River during the time that Jeremiah Hill, of Biddeford, was collector (1789-1806) was an important one owned and managed by James Coffin. After Jeremiah Hill's seventeen-year term as collector, the customhouse was returned to Saco, and the "Port and District of Kennebunk" was set up by Congress in 1800. Kennebunk (and Kennebunkport), which outclassed the Saco in the building of big wood vessels (square-rigged Down Easters) following the Civil War, was by no means as important a shipbuilding center as the Saco during the eighteenth and early nineteenth centuries, and—as before stated—its history does not go back as far.

Vessels were built in the Saco region well back inland—as they were in many other sections of the eastern part of New England—"where they were assured of good well-packed snow on the ground in the winter season." Although at times they were built fairly close to the river, the falls of the Saco at Biddeford had to be reckoned with, as they prevented the launching of such vessels into the Saco some distance upstream and their direct flotation to the ocean. The country well inland from Sanford (through Alfred, Waterboro, Hollis, and

Buxton) built some ships "among the timber," and tradition tells of the hauling of vessels by oxen over snow as far as twenty-five miles from building berth "on the farm" to tidewater where they were first put into the water. There are reports, impossible at this day to substantiate by written records, of the building far upstream, on or near the banks of the Saco, of sizable craft, which were launched into the Saco River, taken out of the river above the falls at Biddeford, hauled by oxen over the snow to a suitable place on the river bank below the falls, and there launched, rigged, and equipped for ocean trade.

In an old Biddeford diary, references are made to a "Hollis schooner" that apparently gave her owner-builder much trouble when being hauled out of the river above the falls, but the diary fails to tell of the final outcome. An entry of November 25, 1832, reads, "A schooner built at Union Falls came down river. They have got to haul her out and by the falls." Twenty days later (December 15), we learn from the diarist, "They made a third trial to haul the schooner out but got her only half way out of the river." It is to be regretted that, after making this entry, the writer of the diary lost interest in the matter. Old residents of Saco and Biddeford have spoken of the launching of vessels into the Saco well upstream and of their being taken out of the river above the falls and again launched into tidewater after being hauled "a few miles over the snow to get past the falls"; but others have mentioned great ways, or inclined skids, which were built "at the falls" and over which the vessels were gradually lowered. They were "held and controlled by powerful tackles and oxen" as they slid over the falls from the upper to the lower river level. The old Maine farmer-shipbuilders were resourceful men.

The Cutts family was prominent in shipbuilding and dates back to the days of early settlers. In 1650, Robert Cutts was building fishing boats at Crooked Lane, Kittery, on the Piscataqua, and vied in importance with John Bray as a pioneer in shipbuilding. Cutts launched more vessels, but they were smaller than the deep-sea trading craft built by Bray. On the death of Robert Cutts, his son Richard carried on in his father's Kittery shipyard, built some fishing boats for William Pepperell (the son-in-law of John Bray), and was associated with Pepperell in business enterprises.

Folsom mentions Col. Thomas Cutts as "entering into shipbuilding" on the Saco circa 1767 and refers to his timber trade with the West Indies. It is known that Foxwell Cutts, a son of Col. Thomas Cutts, carried on shipbuilding in connection with his own trading interests. We are told that Foxwell Cutts, who died in 1816 at the age of fifty-one, built, owned, and operated "large and costly ships," which carried profitable cargoes to "various ports of the world." In the second decade of the nineteenth century, Saco ships engaged in foreign trade were not limiting their voyages to the West Indies, South America, and Europe, but were trading on the Seven Seas.

During the War of 1812, the Saco River as a port and shipbuilding center had achieved such a reputation that in 1814 Biddeford Pool, where a prominent shipyard was located, was raided by a British punitive force. It "set fire to the hull of a new ship, 265 tons burthen, valued at $8,000; cut in pieces and destroyed another ship on the stocks, 540 tons burthen, and carried away a third—later ransomed for $6,000." This yard, which received the destructive attention of the British, was located at what is now called the Gut, Biddeford Pool, and the vessels destroyed were being built either by or for the Cutts's interests. A brother of Foxwell Cutts, Capt. Thomas Cutts, Jr., was in actual charge of the yard at the time.

The port of the Saco did not make privateering as much of a business—and did not so "profitably capitalize on patriotism"—as many other seacoast towns were accused of doing (including nearby Portsmouth on the Piscataqua); nevertheless, during both the Revolutionary struggle and the War of 1812, some fast sailers were built on the Saco that were handy and speedy enough to escape capture by more heavily armed enemy vessels and that later, as letter-of-marque ships or out-and-out privateers, were equipped with sufficient gun power to fight ships of their class and capture lightly armed as well as defenseless merchantmen. Folsom refers to Dr. Josiah Fairfield as being "engaged in fitting out privateers" during the Revolution. Colonel Morrill, according to records, fitted out privateers on the Saco. Elisha Ayer is reported to have built a cutter, used for privateering, on Main Street near the Thornton house.

However, as the craft was constructed, apparently, to the order of William Gray, of Salem, this cutter must have been a letter-of-marque vessel, as Gray never sent an armed craft to sea without a cargo to be delivered at a specified port. Of the privateers fitted out in the river during the War of the Revolution, the *Thrasher,* commanded by Capt. Benjamin Cole and partly owned in Salem, made two or three cruises, but her operations in preying on the enemy were evidently not very successful—at least in a financial sense.

A local diarist, writing during the period of the War of 1812, refers to the fitting-out of a privateer on the Saco and its being sent to sea August 4, 1812. In addition to commenting on the British raid on Biddeford Pool, he refers to the capture of several local vessels by "English privateers" operating out of Halifax, N.S., and to two Saco River vessels that were captured by the British Navy in West Indian waters.

In the early years of the republic, shipyards of importance are known to have been in active operation at Biddeford Pool and on what is now known as Factory Island, which lies between the two towns at the falls, five miles upstream. Shipyards were also located on the Saco side of the river, including a sizable one at Proprietor's Wharf. This yard was in operation for many long years and built vessels of small and moderate size. In official records, the name of the schooner *Marcia* appears as built and registered in Saco in 1819. She was of 89 tons and measured 69 ft. 1½ in. long, 20 ft. 7 in. beam, and 7 ft. 1½ in. deep. That Saco River vessels built around this time were good craft—well designed and constructed and profitable to their owners—is attested by the following news item printed in THE NAUTICAL GAZETTE, New York, September 1891: "The second oldest, if not the oldest, American schooner now in commission is now at this port with a cargo of lumber from a Down East lumber port. The good ship *Hiram* was launched at Biddeford, Maine, in 1819; when new she was hailed as one of the largest vessels afloat."

This press comment, it will be noted, was made when the Biddeford-built vessel was believed to be seventy-two years old. Contemporary records in diary form of a sawmill and shipowner of Biddeford refer to a schooner *Hiram* of 93 tons, launched in June 1811 and built at a cost of "about $3,400," exclusive of rigging (which, incidentally, came from Salem, Mass.). The diary, covering a period of more than ten years, mentions cutting lumber and shipping cargoes of it on the *Hiram* to the West Indies and the vessel's returning with rum and molasses. The time occupied for a round trip was about three months (best time, ten weeks). With boards selling at Biddeford at $9 to $10 per M ft., the *Hiram* obtained $26 in the West Indies, which the owner-diarist considered, evidently, only fair profit; but on one voyage the *Hiram* sold her cargo for $45 per M, and that was deemed "a handsome return." If this *Hiram* is the schooner that was in New York with a cargo of lumber in September 1891, she was then not seventy-two but over eighty years old; but this vessel could not by any stretch of the imagination be described when new "as one of the largest vessels afloat." In May 1912, however, the old *Hiram* (built in 1811) was still in existence. According to the press, she was bought at that time by Capt. J. A. Orne, of Calais, Maine, who proposed to refit the vessel to her original rig of a topsail schooner, sail her around Cape Horn, and have her at hand to exhibit at the San Francisco Exposition of 1915. The newspaper account of the purchase says that the hull timbers of the vessel "were still as good as the day the builders put them in." It is evident that the *Hiram,* after a century of service, was in fairly sound condition or Captain Orne would not have bought her. What became of his contemplated voyage in her to San Francisco is not a matter of record, but it probably was abandoned because of financial considerations; neither is the complete length of life nor the end of the old *Hiram* known.

Another Biddeford-built vessel that is known to have lived to a ripe old age is the schooner *Agricola,* constructed in 1836 by Cyrus Gordon, master carpenter. This vessel, originally owned in New York City, was described as of 91 tons; length 72 ft. 1 in., beam 21 ft. 10 in., depth 6 ft. 7¾ in. Later, she appears in the registry as of 64.41 tons; length 70.7 ft., beam 22.4 ft., depth 6.6 ft. She had "one deck, two masts, square stern," and in 1897 she hailed from Machias, Maine, and was in service, being then sixty-one years old.

A Record of Vessels Built on the Saco, 1780-1874

Folsom reports the registered tonnage of the Saco as increasing 70 per cent during the third decade of the nineteenth century, and he gives the marine tonnage constructed during the period as about 6,500 tons, with 1,679 tons built in 1825. That records available in 1942 grossly understate the number and the tonnage of vessels built on the Saco is indicated by the fact that such data of ships known to have been built on that river in the 1820's (as set forth in detail in a subsequent table) total 14 vessels of all types aggregating 1,771 tons, or only some 27 per cent of the tonnage reported by Folsom, and the total for the ten-year period ending 1829 (as herein recorded) is only 92 tons (or about 5½ per cent) more than the tonnage that Folsom states was actually constructed on the Saco River in the one year 1825. A contemporary newspaper gives a list of merchant vessels of Saco registry in the spring of 1829. Three deep-sea full-rigged ships are mentioned—the *Mordecai, Peru,* and *Sarah Thornton;* then there is the brig *Eunice* and the following topsail, or straight fore-and-aft, schooners—*Volga, Factor, Dauphin, Enterprise, Columbia, Henry, Milo, Norway,* and *Saco*—which were evidently all engaged in the coastwise trade or in runs to the Caribbean, etc. The *Boston Packet* was evidently a two-masted topsail schooner in regular service between the Saco and Boston, and another schooner of 111 tons, hailing from Saco, is advertised in the paper for sale. During the same year (1829), mention is made in the press of a vessel building on the Biddeford side of the river, and a line can be obtained on the extent of shipping on the Saco in the spring of the last year of the third decade of the century by a newspaper item (on April 15) to the effect that "there are thirty vessels loading" at Saco wharves. A directory of 1849 states that in 1845 there were "11 saws for boards, besides saws for shingles, laths, beading, etc.," in operation on both sides of the river and that the lumber cut was estimated at 4,500,000 bd. ft. annually.

The following table gives a list of vessels known to have been built on the Saco during the ninety-five-year period 1780-1874 inclusive and for which official records have been found in certain customhouse records (of Saco and various other ports of registry) and in three copies (1860, 1865, and 1870) of American Lloyd's REGISTRY OF AMERICAN AND FOREIGN SHIPPING (established 1857). It is known that the list presented herewith is far from complete.

Year Built	Name	Rig	Where Built	Tonnage	Registered Dimensions as Stated in Feet and Inches		
					Length	Beam	Depth
1780	FRANK	Schooner	Saco	24	40-10	11	5- 4
1781	ELIZA	Brigantine	Saco	133	68- 5	21- 4	10- 8
1783	SUSANNAH	Schooner	Saco	66			
1784	FOX	Schooner	Saco	93	67- 7	21- 2	7- 8
1784	NANCY	Brigantine	Saco	157	72- 8	22- 6	11- 3
1785	SALLY	Schooner	Saco	102	71- 6	21- 2	7-10
1786	LUCY	Schooner	Saco	60			
1787	BETSEY	Schooner	Saco	72			
1787	DOLPHIN	Schooner	Saco	22	37- 7	12- 5	5- 8
1788	CERES	Brigantine	Saco	173			
1788	PORGA	Schooner	Saco	68			
1791	BETSEY	Schooner	Saco	88			
1794	COMMERCE	Schooner	Saco	86			
1796	EAGLE	Schooner	Saco	98	68- 3	21- 4	7-11
1798	SALLY	Schooner	Saco	75	60- 5	19- 8	6-11

(Continued on next page)

Year Built	Name	Rig	Where Built	Tonnage	Registered Dimensions as Stated in Feet and Inches		
					Length	Beam	Depth
1800	LITTLE DICK	Schooner	Saco	109	71-10	20- 6	8- 6½
1800	OSSIPEE	Ship	Saco	152	73- 4	21-10	11
1803	FARMER	Schooner	Saco	88	69	21- 3	7
1803	INDEPENDENCE	Schooner	Biddeford	103	69- 9	22- 6	7- 9
1803	MIDAS	Schooner	Saco	116	76	20- 8½	9- 2½
1804	PERSEVERANCE	Sloop	Saco	79	56- 5	20- 5	6- 9
1804	WILLIAM	Brig	Saco	178			
1806	JOHN	Schooner	Biddeford	83	66- 4	20-10	7
1807	JANUS	Brig	Biddeford	89	68- 8	21- 4	7- 0½
1807	OTHO	Sloop	Saco	83	66- 5	20-11	7
1807	PHENIX	Brig	Saco	208			
1807	REINDEER	Schooner	Saco	82			
1807	SALLY	Schooner	Biddeford	93	69	20-10	7- 6¼
1809	CORA	Brig	Biddeford	153			
1809	WASP	Brig	Saco	163	72	23- 1½	11- 7½
1811	HIRAM	Schooner	Biddeford	95	72	22	7
1811	RESOLUTION	Brig	Biddeford	195	81	23- 7	11- 9½
1815	SABINE	Sloop	Biddeford	65	60- 7	19	6- 7
1815	SACO	Ship	Saco	528			
1816	CHANCE	Brig	Saco	235			
1816	CHARLES	Sloop	Biddeford	66	63- 2	19- 2½	6- 3
1816	IRO	Schooner	Biddeford	102	74-11	21- 7¾	7- 2½
1816	MELISSA	Schooner	Saco	96	71- 2¾	22- 4	7- 1¼
1816	PACKET	Sloop	Saco	85	70- 7	20- 9	6- 7½
1817	OSSIPEE	Schooner	Biddeford	87	70- 2½	21- 7¾	6- 8
1817	PATRIOT	Schooner	Saco	83	67- 3	19- 8	7- 2
1817	SYREN	Schooner	Biddeford	83	67- 7½	21- 0½	6- 9½
1817	TRITON	Sloop	Biddeford	78	60- 5	20-11	6- 6¼
1819	HIRAM	Schooner	Biddeford	94			
1819	JUBILEE	Schooner	Biddeford	123	69	21	9- 9
1819	MAINE	Schooner	Biddeford	102	73- 0½	21- 7	7- 5
1819	MARCIA	Schooner	Saco	89	69- 1½	21- 7	7- 0½
1819	MARIA	Brig	Saco	96			
1819	MOSES	Schooner	Biddeford	112	75- 7	22- 5½	7- 7
1822	ADNO	Schooner	Saco	105	73-10	20- 8⅙	7- 9½
1822	DELAWARE	Brig	Biddeford	214	84- 2	23-11	12- 3
1825	COLUMBIA	Schooner	Saco	84	72- 8	20- 7	6- 4½
1825	COSMO	Ship	Biddeford	409			
1825	SARAH LOUISA	Brig	Saco	143	80	22-11	9
1826	MARY	Schooner	Biddeford	87	70	21- 9	6- 8
1826	SPEED	Schooner	Biddeford	72	64- 7	19- 2¾	6- 7½
1826	SYREN	Brig	Biddeford	238			
1827	CASPIAN	Schooner	Saco	91	72- 2	20-10	6-11
1827	HENRY	Schooner	Biddeford	97	73	21- 6	7- 1
1827	NORWAY	Schooner	Saco	121	77	22- 6	8
1828	BOSTON PACKET	Schooner	Biddeford	88	67- 1	20- 6½	7- 4½
1828	OROLONG	Schooner	Biddeford	82	67	20	7
1828	SACO	Schooner	Biddeford	109	72-11	22- 5	7- 9
1829	FLEET	Schooner	Saco	69	66- 8½	18- 3½	7- 9¼
1831	ANN GREELEY	Schooner	Biddeford	60	51- 4½	16- 6	8- 3
1831	HALSEY	Schooner	Saco	116	71- 9½	22- 6½	8- 6
1831	WARSAW	Brig	Biddeford	180	82- 3	22	7
1832	ADNO	Schooner	Biddeford	110	75- 8½	21- 3	7- 9
1832	CAROLINA	Schooner	Saco	91	67- 9	20- 4½	7- 7½

(Continued on next page)

Year Built	Name	Rig	Where Built	Tonnage	Registered Dimensions as Stated in Feet and Inches		
					Length	Beam	Depth
1832	IMOGENE	Brig	Saco	171	87-10	22- 2	9-10½
1832	ISABELLA	Schooner	Biddeford	113	67- 9¼	20- 3	9- 7
1832	ISABELLA	Schooner	Biddeford	91	67- 9¼	21- 4½	7- 7¼
1832	LA PLATA	Brig	Biddeford	183			
1832	SEA MEW	Bark	Biddeford	232	114	26- 1	17
1832	WESTON	Brig	Biddeford	167	82- 8½	22-11¼	5- 4½
1833	GANZA	Brig	Saco	225	90- 8	23- 7½	11- 9¾
1833	IMOGENE	Brig	Biddeford	119	73- 4	20-10	8-11
1833	LEOPARD	Bark	Biddeford	218	97- 5	22- 2	7- 1
1834	HEBER	Brig	Saco	107	73- 8	20-11¼	8
1836	AGRICOLA	Schooner	Biddeford	91	72- 1	21-10	6- 7¾
1836	SEA EAGLE	Schooner	Biddeford	200	90- 6	22- 2	11- 1
1838	EDMUND PERKINS	Ship	Biddeford	617			
1838	ELIZA THORNTON	Bark	Biddeford	449	126	27-11½	13-11¾
1840	ROYAL TAR	Schooner	Biddeford	50	51- 8	17- 1¾	6- 7
1841	GORDON	Schooner	Biddeford	99	70- 3¾	20- 9	7-10
1844	CORSICA	Ship	Biddeford	438			
1845	ADELINE	Ship	Biddeford	480			
1845	KORET	Schooner	Biddeford	88	67- 6	22	7
1845	MARY ELLEN	Brig	Biddeford	250			
1845	OREGON	Schooner	Biddeford	82	64	21- 2	7- 3
1846	CAROLINE	Schooner	Biddeford	118	77	22- 5	7- 9
1846	CATHERINE & MARY	Brig	Biddeford	160			
1846	HARRIET NEWELL	Bark	Biddeford	200	97- 6	24- 7	9- 4
1846	SARAGOSSA	Bark	Biddeford	348			
1847	CARNATIC	Ship	Saco	602			
1847	LACONIA	Schooner	Biddeford	99	70- 6	22	7- 6
1847	SAM AND BEN	Brig	Biddeford	183	95- 2	24- 4	8-10
1847	SIX BROTHERS	Brig	Biddeford	150			
1848	E. & E. PERKINS	Ship	Biddeford	455			
1848	GEN. BOYD	Schooner	Biddeford	148	83- 6	23- 9	8- 6
1848	Unnamed	Ship	Biddeford	1,000			
1849	KOSSUTH	Schooner	Biddeford	104			
1850	CAROLINE SCHENK	Brig	Biddeford	257	99- 8	22- 8	14- 2
1850	DEVON	Schooner	Biddeford	106			
1851	AMIRAL	Bark	Biddeford	292			
1851	JUANA	Schooner	Biddeford	133	78	23- 3	8- 6
1851	SEA DUCK	Bark	Saco	399			
1852	FLORA	Schooner	Biddeford	144	80	19	16- 6
1852	LAVIVANDIERE	Brig	Biddeford	170			
1852	PEQUOT	Ship	Biddeford	955	171- 3	34- 9	17- 4½
1853	FRANK	Schooner	Saco	136	82-10	23- 8	7-11½
1853	MIRANDA	Schooner	Saco	147	85- 4	24- 4	8- 1
1853	PROTHESA	Brig	Biddeford	246	96- 9	22- 6	12- 6
1854	CATHERINE M. TYRER	Schooner	Biddeford	94			
1854	CLARA LOUISA	Brig	Biddeford	214	97- 8	21- 6	12- 8
1854	JOHN M. WOOD	Ship	Biddeford	1,146	178- 8	37	18- 6
1854	JULIE	Ship	Biddeford	668	185	30- 7	21- 8
1854	PEPPERELL	Ship	Biddeford	667	155- 7	30- 4¾	15- 2⅜
1855	ELLEN SOPHIA	Brig	Biddeford	245	109	22	13- 3
1855	JENNY LIND	Sloop	Biddeford	63	64- 8	21	5- 6
1855	NIAGARA	Schooner	Saco	174	91- 9	25- 7	8- 6

(Continued on next page)

Year Built	Name	Rig	Where Built	Tonnage	Registered Dimensions as Stated in Feet and Inches		
					Length	Beam	Depth
1856	FLOWN	Schooner	Biddeford	139			
1856	GILBERT WHEATON	Schooner	Biddeford	180			
1856	H. B. MILDMAY (ELPHINSTONE)	Ship	Saco	865	166	33- 7	21- 8
1856	KEARSARGE	Ship	Biddeford	672	157- 5½	30- 3½	15- 1¾
1856	ONLY SON	Brig	Biddeford	173			
1857	CRITERIA	Schooner	Biddeford	177	87	20	11
1857	PEARL	Schooner	Biddeford	121	81	23- 6	7- 6
1859	FLYING CLOUD	Brig	Biddeford	222			
1860	HUASCO	Bark	Biddeford	436	134- 3	27- 8	17
1861	DWIGHT	Schooner	Biddeford	139	80- 7	25- 3	8- 8
1861	KORET	Schooner	Biddeford	87			
1862	FLORENCE	Brig	Biddeford	163			
1862	SCOUT	Bark	Biddeford	460	136	28- 5	18
1864	RICHARD McMANUS	Ship	Biddeford	824	161	37- 6	22
1865	PRISCILLA	Ship	Biddeford	954	166	33	22- 6
1866	B. F. LOWELL	Schooner	Saco	325	117- 8	29	14
1866	DEVONSHIRE	Bark	Biddeford	643	138- 4	29-10	18
1866	ENTERPRISE	Steam schooner	Saco	204	114	28	8- 6
1866	LOGAS	Schooner	Biddeford	74		(Draft stated as 9 ft.)	
1867	CHOWAN	Schooner	Saco	47	67- 7	21-10	4- 7
1867	HENRIETTA	Schooner	Saco	190	113	27- 9	8-10
1867	MOUNT WASHINGTON	Ship	Saco	1,217	184- 7	37- 6	23- 1
1868	FRANCONIA	Schooner	Saco	227	116- 3	29- 9	8- 8
1869	AUGUSTA	Steamer	Saco	72	88- 4	18	4
1869	IDA LEWIS	Schooner	Saco	253	113- 4	29- 4	9- 6
1870	PHOENIX	Steamer	Saco	119	100	25	6- 6
1870	SAMUEL HARTLEY	Schooner	Saco	516	123- 8	29- 7	15- 5
1871	OLIVER DYER	Schooner	Saco	208	107- 6	28	7-10
1872	DELHI	Schooner	Saco	204	113- 1	28	8- 1
1873	ADDIE JORDAN	Schooner	Saco	288	132- 4	31- 7	9- 6
1874	CANTON	Schooner	Saco	268	117	29- 4	10- 8
1874	FRANK W. EMERY	Schooner	Saco	305	134	31- 2	9-11

The Saco customhouse books now in the archives at Portland, Maine, cover the period 1845-1874 only and include only ships of Saco River ownership and registry. The National Archives Project, Work Projects Administration, made available a volume entitled SHIP REGISTERS AND ENROLLMENTS OF THE DISTRICT OF SACO, MAINE, 1791-1915, compiled, it is said, from "original documents in the Customs House, Portland, Maine, and The National Archives, Washington, D.C." This N.A.P. report is admittedly incomplete. The local customs district was established in 1789, but the only records in the National Archives at Washington are those from 1815 to 1870, and the "two volumes" that the N.A.P. located at Portland, Maine, cover only the years 1876-1902. Whereas the N.A.P. report lists only 69 vessels as of known Biddeford or Saco origin, there is herein presented an accurate and reliable record of 153 vessels known to have been built in the region. It is known on contemporary evidence that, during the years 1845-1848, the Edmund and Elisha Perkins yard at Biddeford built 12 vessels aggregating 4,025 tons; while the N.A.P. list records only 4 vessels totaling 630 tons, thus underestimating the number of vessels actually built by 67 per cent and the tonnage by about 84½ per cent. This indicates the extent of omissions in the N.A.P. report. The explanation is that the larger vessels were built either for outside owners or for registry and operation outside the local port. The N.A.P. report lists a total of 336 different vessels obtaining Saco registry from 1791 to

1915, but these were largely schooners and were engaged only in coastal trade. Because of depth of water and a limited local demand for export and import tonnage, Saco became almost entirely a coastwise port early in the nineteenth century. Practically all the larger vessels built on the Saco were for Boston, New York, Salem, Portland, and similar registry, and thus they escaped local records. It is conservatively estimated that the output of Saco River shipyards was about 225 vessels, with a total tonnage of somewhere around 50,000 tons.

The American Lloyd's REGISTER OF AMERICAN AND FOREIGN SHIPPING records the *Rajah of Sarawak,* a ship of 525 tons (length 118 ft. 4 in., beam 27 ft. 7 in., depth 18 ft. 3 in.) owned in 1865 by Widdecomb & Co., Liverpool, England, and built at Bideford in 1850. Whereas British-built ships are invariably marked as built in "Eng." or "E." and this vessel carries no such designation, it is presumed that the ship was built at Bideford, England, and not at Biddeford, Maine, U.S.A., because of the spelling of the name of the town where built (i.e., Bideford and not Biddeford). However, many Saco-built vessels were owned in England, and as the nineteenth century advanced, more and more of the ships constructed on the banks of the Saco were for registry, ownership, and operation outside of the local port. Although built for American owners, several of the sizable ships, such as the *Pequot* of 955 tons, built at Biddeford in 1852, and the *H. B. Mildmay* of 865 tons (later renamed *Elphinstone*), launched at Saco in 1856, were later sold and registered abroad and operated under foreign flags.

As an illustration of the profitable operation of ships built on the Saco, there can be cited the record of cost and earnings of the full-rigged ship *Pequot* of 955 tons, built at Biddeford in 1852. The *Pequot* was the joint venture of eleven local investors, who "took fractions" in the ship varying from 1/32nd to 3/16ths. The cost of the vessel is stated at $46,302.00, of which amount $34,000.00, it is said, covered hull and spars and $11,802.00 rigging, sails, and equipment. When ready for sea on her initial voyage, the *Pequot* was insured for $52,000.00. The owners of the ship were paid dividends from earnings aggregating $50,794.23 during the period from April 21, 1853, to September 5, 1856. This amount represented profits of some four years of operation, or about 27½ per cent per annum on their investment. During the 1857 depression, there were no earnings to distribute to shareholders, but from 1858 to midyear of 1863 a further sum of $33,461.23 was disbursed as dividends (about 18¾ per cent per annum during a period of five years). Because of conditions brought about by the Civil War, the *Pequot* was sold in the summer of 1863 to Liverpool owners for a sum somewhat in excess of $35,000.00. (This amount represented about $37.00 per ton, based on old United States measurements, for a vessel eleven years old and some 76 per cent of the shareholders' original investment, the depreciation being only about $1,000.00, or less than 2.2 per cent per annum.) The original owners invested $46,302.00 of their capital and, when the ship was sold eleven years later, had received a return, with interest, totaling about $119,500.00, which represented a repayment of the original capital ($46,302.00) and a profit of some 14.4 per cent per annum during the full eleven-year period of ownership. The *Pequot,* during her American registry, was employed in the Indian, Californian, northern European, and Mediterranean trades.

The following tables give a recapitulation of the 153 vessels recorded above as built during the ninety-five years 1780-1874, divided into an early period of twenty years (1780-1799 inclusive), the first seven decades of the nineteenth century, and a late period of five years (1870-1874 inclusive). During the twelve-year period 1845-1856 inclusive, records are available showing the building on the Saco of 40 vessels, an average of 3⅓ per year. The following eight years (1857-1864) saw only 9 vessels built in the area, or about one per year. This was the period of business depression that followed as an inevitable reaction the clipper shipbuilding and California Gold Rush boom and was a time of political tension, division, and uncertainty that finally led to hostilities between the northern and southern states and the devastating Civil War. Following the declaration of peace in 1865, ship construction was relatively brisk for a couple of years (four vessels built in 1866 and three in 1867), but during the next seven years (1868-1874 inclusive) only 10 vessels were built according to the admittedly incomplete records.

Years	Number of Vessels							
	Ships	Barks	Brigs	Brigantines	Schooners	Sloops	Steamers	Total
1780-1799	—	—	—	3	12	—	—	15
1800-1809	1	—	5	—	7	2	—	15
1810-1819	1	—	3	—	11	4	—	19
1820-1829	1	—	3	—	11	—	—	15
1830-1839	1	3	7	—	8	—	—	19
1840-1849	5	2	4	—	8	—	—	19
1850-1859	6	2	7	—	11	1	—	27
1860-1869	3	3	1	—	8	—	2	17
1870-1874	—	—	—	—	6	—	1	7
Total 1780-1874 (a period of 95 yrs.)	18	10	30	3	82	7	3	153

Years	Registered Tonnage of Vessels							
	Ships	Barks	Brigs	Brigantines	Schooners	Sloops	Steamers	Total
1780-1799	—	—	—	463	854	—	—	1,317
1800-1809	152	—	791	—	674	162	—	1,779
1810-1819	528	—	526	—	1,066	294	—	2,414
1820-1829	409	—	595	—	1,005	—	—	2,009
1830-1839	617	899	1,252	—	872	—	—	3,640
1840-1849	2,975	548	743	—	788	—	—	5,054
1850-1859	4,973	691	1,527	—	1,526	63	—	8,780
1860-1869	2,995	1,539	163	—	1,342	—	276	6,315
1870-1874	—	—	—	—	1,789	—	119	1,908
Total 1780-1874 (a period of 95 yrs.)	12,649	3,677	5,597	463	9,916	519	395	33,216

An examination of certain records of William Gray, merchant of Salem (and later of Boston), Mass., shows that the following five vessels owned by him were built on the Saco during the period 1788-1816 (four of them during the years 1804-1816):

Year Built	Name	Rig	Tonnage
1788	CERES	Brigantine	173
1804	WILLIAM	Brig	178
1807	PHENIX	Brig	208
1815	SACO	Ship	528
1816	CHANCE	Brig	235

William Gray, who was the largest owner of ships on the American continent and an acknowledged authority on floating merchant tonnage, recognized, it would seem, the Saco yards as the builders of good deep-sea ships.

The brigantine *Ceres* of 173 tons, owned by William Gray, was lost at sea during the winter of 1791-1792; she was three and one-half years old at the time. This catastrophe, it was said, was due to no fault of the vessel herself. The brig *Wasp* of 163 tons, built at Saco in 1809 for New Bedford, Mass., owners, was captured by the British in 1813, and this fact gave some stimulus to developing plans on the Saco to arm some of the smartest locally owned sailers and make privateers out of them. The brig *Resolution* of 195 tons, built at Biddeford in 1811 for New Bedford parties, was wrecked abroad, condemned and sold in 1826, when fifteen years old. The brig *Sarah Louisa* of 143 tons, also owned in New Bedford, Mass., and

built at Saco in 1825, was lost in the Caribbean Sea, and the big bark *Eliza Thornton* of 449 tons (built in 1838 at Biddeford for New York owners), which had rounded the Horn and participated in the California Gold Rush, was destroyed by fire at San Francisco in 1853.

It would seem that the largest and most productive shipyard on the Saco (and certainly the one that launched the most sizable vessels) was that of Edmund and Elisha Perkins, who operated as E. & E. Perkins during the forties, fifties, and sixties at a site on the Biddeford side of the Saco River a short distance below the falls and Factory Island. Again, we are unfortunate in the fact that no records of the activities of the flourishing Perkins partnership in shipbuilding have been preserved for posterity. A Biddeford directory published in 1849, however, mentions the following vessels built by the Perkins shipyard during the four-year period 1845-1848 inclusive:

Year Built	Name	Rig	Tonnage	Value	Price per Ton
1845	ADELINE	Ship	480	$25,000	$52
1845	MARY ELLEN	Brig	250	16,000	64
1846	HARRIET NEWELL	Bark	200	9,000	45
1846	SARAGOSSA	Bark	300	17,000	56
1846	CATHERINE & MARY	Brig	160	8,000	50
1847	SAM AND BEN	Brig	180	9,000	50
1847	SIX BROTHERS	Brig	150	8,000	53
1847	LACONIA	Schooner	100	5,000	50
1847	CARNATIC	Ship	600	32,000	53
1848	E. & E. PERKINS	Ship	455	24,000	53
1848	GEN. BOYD	Schooner	150	7,000	47
1848	Unnamed ship on stocks (not launched)	Ship	1,000	48,000	48
Total 1845-1848 (4 years)	12 vessels	4 ships 2 barks 4 brigs 2 schooners	4,025	$208,000	$51⅔

In addition to the above twelve vessels, it is probable that the schooners *Oregon* of 82 tons and *Koret* of 88 tons, each built at Biddeford in 1845, were also laid down by the Perkins'. A total of probably fourteen vessels built in one shipyard during a period of four years (an average of three to four hulls launched per year) certainly indicates pronounced, maintained activity. The vessels were small, averaging 335 tons for the twelve as set forth above, but the four full-rigged ships averaged 634 tons each, and the last one laid down in 1848 was estimated to be of 1,000 tons register.

The Biddeford yard of E. & E. Perkins was actively engaged in building ships in the mid-sixties (and the last years of the Civil War), for the New York registry of 1875 gives the ship *Richard McManus* of 824 tons, built by the Perkins' at Biddeford, Maine, in 1864, and the Brunswick registry of 1875 records the ship *Priscilla* of 954 tons, built at the Perkins' Biddeford yard in 1865.

Other vessels are known to have been launched into the Saco River during each of the periods before mentioned. Capt. Richard F. C. Hartley, the son of Capt. Samuel Hartley (also a noted shipbuilder), left the sea at the outbreak of the Civil War and devoted himself to shipbuilding. He was then forty-nine years old, had been to sea since 1838, and was said to be experienced in both the building and operation of all types of merchant sail. His first yard was on the Biddeford side of the river, in the vicinity of the Perkins yard. For several years, he built primarily for outside interests, but in 1867 he launched the *Mount Washington,* a sizable full-rigged three-masted ship of 1,217 tons and a typical Down Easter, which seems to have been the largest vessel ever built on the Saco River; she was evidently launched from the

old Perkins yard at Biddeford. Shortly afterwards, Captain Hartley moved his yard to Saco, at what was known as Proprietor's Wharf, and organized the Saco Shipbuilding Company. Oldtimers say that Captain Hartley had such a fine reputation as a conscientious, thorough, and competent builder that "every ship was sold before he built it—and mostly to owners in other ports." Captain Hartley died at sea in September 1897, when eighty-five and a half years old, a passenger on board his own vessel, the schooner *Richard F. C. Hartley*—the only craft ever named after him. The two Hartleys, father and son, built ships on the Saco covering a period of a hundred years.

Shipbuilding on the Saco did not abruptly terminate in 1874 as the Portland customhouse records would seem to suggest, for a historian has said that shipbuilding continued on the Saco River until the late eighties of the nineteenth century. During the World War of 1914-1918, with its great demand for emergency tonnage, a four-masted schooner was built as a speculative enterprise on the site of the old Perkins yard at Biddeford. This vessel, named the *Jere G. Shaw,* was launched November 16, 1918. She was 165 ft. long, 36 ft. beam, 15 ft. 2 in. deep, 739 tons gross and 674 tons net register, and her deadweight cargo-carrying capacity was stated at 1,250 tons. The *Jere G. Shaw* was the last vessel built on the Saco River. She sailed to the Barbados on her first voyage and was owned in Biddeford for several years, following which she was sold to a Portland group.

XVIII.

PORTLAND, MAINE

Of Importance for Its Timber, Fish, and Ships, but Primarily as a Port and Harbor

PORTLAND, MAINE, which is located on Casco Bay about one hundred ten miles northeast of Boston, has never been a great shipbuilding center. At one time, Portland was a very important port and was well and favorably known in the West Indies. Indeed, it has been said: "Salem, Mass., had her East Indies and Portland, Maine, her West Indies." In colonial days, Portland (then a part of Falmouth) was of great importance as a collecting and shipping point for white pine mastings for the King's Navy. It has been said that through the years Portland has "both successfully and successively handled at least eleven different lines of commerce"; that masts for the Royal Navy were succeeded by timber and deals and they in turn by hoops and staves. As the years advanced, each type of Maine product gave way to some other form of merchandise, but "with every change in the winds of trade, Portland has been true to her motto, 'Resurgam,' which, being interpreted, merely states her ability to come back." In 1787, out of eighty-nine clearances from Portland Harbor, seventy-three were for the ports of West Indian islands. In 1826, about one-tenth of all the shipping passing Morro Castle and entering Havana from all parts of the world had sailed from Portland, Maine, and in 1860, just prior to the Civil War, over six million gallons of molasses entered the United States from the islands of the Caribbean Sea through the port of Portland.

Britain discouraged colonial shipbuilding for deep-sea trade, and in 1774 the tonnage of the port of Falmouth was reported as only some 2,555 tons. In 1775, during the War of Independence, the town of Falmouth (now Portland), which had ardently resisted the claims of the British, was bombarded and burned by the British fleet in "punishment for showing sympathy" for the patriotic cause. Steadily throughout the years of the Revolution, British forces harassed the loyalists of Casco Bay and the coast of Maine, and at the close of the war, it was said that "not a single vessel is owned in the town." Twenty years later, however, Portland had registered and enrolled 39,009 tons of shipping, counting vessels of 20 tons burden and over. Portland, at the turn of the century, was noted for its timber, fish, and ships. The destructive embargo and nonintercourse laws from 1807 to 1812 were a severe blow to Maine shipping, and "Mr. Madison's war" put an absolute stop to shipbuilding for two or three years, although it did cause the arming of American merchantmen and the commissioning of others as privateers. Maine suffered greatly in the War of 1812, and during that period, Eastport, Castine, Hampden, Bangor, and Machias fell to the British. After the declaration of peace, however, shipbuilding quickly revived, and Maine merchants went aggressively into foreign trade. In 1832, Portland boasted of a merchant fleet of 412 vessels (28 ships, 102 brigs, 242 schooners, 37 sloops, and 3 steamboats), giving employment to about 2,700 seamen.

A brigantine-rigged bomb ketch was built for the government in Portland by Moulton in 1806; she was named the *Etna* and measured 60 tons, 83 ft. long, 24 ft. beam, and 14 ft. depth.

Six gunboats of extremely low depth (74 ft. long and 18 ft. beam) were built about the same time. In 1809, Moulton built the *Rapid,* which became famous as a privateer. Near what was known as "Deerings Bridge," Hiram Jordon built the brig *Emblem* of 158 tons in 1825 and the bark *Canada* of 286 tons in 1849. From another yard nearby, the bark *Philomele* of 470 tons was launched in 1850. At the Thurston yard, many vessels were constructed in the forties, representatives of which were the ship *Elizabeth* of 531 tons, launched in 1844, and the brig *Henriette* of 158 tons and the schooner *Rechabite* of 125 tons, each built in 1845. The yard of W. and A. Curtis was where the East End Yacht Club once had its quarters, and from this site was launched the ship *Maggie Dalling* of 350 tons in 1874 and the revenue cutter *Alexander J. Dallas.* As late as 1883, the Brewers here built the barkentine *Payson Tucker* of 661 tons.

The Grand Trunk Station and railroad yards at Portland occupy a site where ships were built for more than one and a quarter centuries. Here, in 1838, the ship *Emblem* of 610 tons was built, and in 1846 the ship *Cordelia* of 708 tons was constructed by Lemuel Dyer and his son Joseph. Among the last builders to use this site was Joseph Dyer, and he launched from here in 1843-1844 two screw steamboats built for the Portland Steam Packet Company for its Boston line—the *Commodore Preble* of 282 tons and the *General Warren* of 309 tons.

Lemuel and Ezekiel Dyer had their early shipyard and marine railway at Clay Cove, and the vessels built were generally small brigs and brigantines for the West Indian trade. Historians tell us that these vessels "were launched into Clay Cove [bow first] which was filled with logs, which piling up before their bows lessened their momentum and prevented them from running on the flats. To get them out of the cove it was necessary to take up the planking which connected Thames Street with the marine railway, thus making a gap through which they passed out between Railway and Sturdivant's wharves into the harbor." Here, and under these restricting and handicapping conditions, Lemuel Dyer built such vessels as the brig *Olive Thompson* of 138 tons, launched in 1845. He died in January 1847 "from the blow of an axe while he was felling timber in Hiram preparatory to his next spring's work." Lemuel Dyer was "a highly esteemed man in the town," and the records state: "His funeral procession was one of the largest ever witnessed in Portland."

One of the best located building yards in old Portland was that of Robert Knight, who was noted in his generation in the community "for the size of the vessels which he constructed." Among the best known craft built by Knight were the ships *Astrachan* of 536 tons and the *Ozark* of 392 tons, launched in 1839 and 1847, respectively. During the years 1844-1846, the barks *Odd Fellow* of 242 tons, *R. H. Knight* of 221 tons, and *Janet* of 220 tons were built, and in 1848 the bark *Cabargo* of 269 tons was launched. The full-rigged ship *Astrachan* was built for the cotton-carrying trade, and her model was described as "kettle bottom and sides." She was generally considered a fast ship, but it is doubtful if the statement of a historian that "her log book relates that on a voyage home from Calcutta she made ten knots an hour ten days in succession" is correct and could ever have been substantiated by accurate navigation records.

Between Robert Knight's shipyard and Portland Bridge was located the sizable yard of Ralph Kelley, who built the ships *Cora Lynn* of 675 tons in 1848 and the *Dirigo* of 497 tons the following year. Kelley had previously built vessels at Yarmouth and on the bank of the Presumpscot, and after he sold his Portland yard to the railroad, he established a yard at East Deering and continued to build until 1866. The *Cora Lynn,* said to be one of the best ships ever built at Portland, became one of a line of transatlantic sailing packets operating between New York and Glasgow, Scotland. Close by the Kelley yard, Charles Jordan laid down the ship *Francis* of 395 tons, the brig *Margaret* of 169 tons, and the bark *Scott Dyer* of 251 tons during the years 1844-1848. Nathan Dyer built some vessels in this vicinity, including the brig *Almira* of 193 tons, which was launched fully rigged and practically ready for sea, and the steamer *Portland* (the first of that name) for the Boston line.

The largest vessels ever built in Portland were constructed by G. W. Lawrence during the fifties and sixties at a yard above the Portland Bridge on a site acquired later for the gas works.

Here were constructed the ship *Sebago* of 1,258 tons in 1854, the ship *Emily Hall* of 1,019 tons in 1855, the bark *Eugenie* of 434 tons in 1864, and the ship *Majestic* of 1,170 tons in 1866. The *Majestic* was the outstanding Down Easter built at Portland. She was launched in November 1866 and measured 177 ft. long, 36 ft. 9 in. beam, 23 ft. 6 in. deep, and registered 1,170 tons gross and 1,117 tons net. The *Majestic* was owned by Thayer & Lincoln, Boston, for twelve years, and she was sold in 1878 on the Pacific Coast to the Seattle Coal & Transportation Company. In 1884 she was acquired by A. P. Lorentzen, who operated the ship until her end, which came in December 1892, when she disappeared with all her crew while on a run from Seattle to San Francisco deeply laden with coal. The *Majestic* had the reputation of being a well-built ship and a good carrier; she made fair average passages in the general carrying trade on the Seven Seas.

It was at the Lawrence yard that several war vessels were built during the Civil War, including the 947-ton double-ended, side-wheel gunboats *Agawam* and *Pontoosac* in 1863 and the 614-ton light-draft ironclad monitor *Wassuc* in 1864. It is said that the Confederate raid into Portland Harbor on the night of June 27, 1863, had as one of its prime objects the destruction of the two gunboats built by Lawrence, which were practically completed at the time. Another warship built at Portland during the Civil War was the gunboat *Kineo,* launched in October 1861 by Joseph W. Dyer at Ferry Village.

A map of the Maine coast shows the main part or center of the city of Portland built between Casco Bay and the ocean to the east, a wide ocean inlet known as Fore River with the Stroudwater to the south and west, and back of the principal part of the city to the west and northwest a vast expanse of tidewater that on maps looks like an almost landlocked and perfect, large inner harbor stretching some mile and a half in each direction (i.e., north-south and east-west). Unfortunately, maps showing merely what is land and water do not reveal the depth of water, and no distinction is made between navigable waters and mud flats. If what is known as Back Bay had been a deep-water ocean inlet, Portland would have been favored with a splendid, large, and protected inner harbor that would have materially affected the development, business life, and history of the city. As a port, however, Portland has been compelled to ignore its Back Bay, for it could never afford to make a great artificial harbor out of a shallow ocean inlet and mud flats; hence Tukey's Bridge was built. It connects the northern part of the city (Eastern Promenade and Marginal Way) with what has during comparatively recent years become known as East Deering and is North Portland, just as much as an expanse of land lying to the south and reached by the Portland Bridge is South Portland.

In 1850, Portland, Maine, decided that its highest interest lay in its harbor and in developing Portland as a port rather than a shipbuilding city. Accordingly, as it was unable to make any use of Back Bay, it wiped out of existence the sites of the old yards on the bay frontage and facing South Portland and built the stone retaining wall of Commercial Street. Thereafter, ships were built not at Portland but in the vicinity of Portland—Fore River at Stroudwater, East Deering, Falmouth Foreside, Cumberland, etc. William H. Rowe has said: "Portland's maritime history is that of the sailing not of the building of ships. Her total tonnage for the entire time that vessels were launched from her shores does not aggregate that of even the smaller towns up and down the bay [Casco] that contributed the craft that made up the large fleets that have always hailed from her port. Her harbor has always been a busy place." We are told of "two hundred and fifty little barks and brigs that sailed out of the harbor on the twenty-ninth of April, 1844," and that "on the fourth of October, 1850, five hundred vessels sought shelter in Portland harbor, among them a part of the one hundred and eighty square-rigged vessels owned in the city."

Stroudwater's marine history dates back to the early colonial days. An old shipbuilding site, long known as "Ship Yard Point," was located at the junction of Mill Creek and Fore River. Jonathan Fickett and his sons built here. Several of the sons moved to New York following the War of 1812, and one of them, Frank Fickett, who had learned his trade at the Stroudwater yard, formed a partnership with Crockett and built ships at Corlear's Hook, New

York. The various firms of the Ficketts, of New York, became the greatest builders of coastal sailing packets in the country. (In August 1818, Frank Fickett, of Stroudwater, Portland, Maine, with his partner, launched a 382-ton vessel into the East River, New York, for a syndicate of Savannah, Ga., businessmen, who named the ship *Savannah* after their native city; they then installed steam machinery and paddle wheels, but made no change in the spars and rig, and thus was created the world's first ocean steamship, which made history when she successfully crossed the Atlantic.) It is said that in the second quarter of the nineteenth century, five shipyards were in operation at Stroudwater and that on one occasion sixteen vessels were undergoing construction in yards on each side of the river. The ships built were small, two of the largest and most important being the bark *Octavia* of 209 tons, built in 1846, and the ship *Charles Bartlett* of 398 tons, launched in 1849, each vessel being constructed by Bartlett & Chesley.

Five clipper ships were built at Portland during the clipper shipbuilding era (1850-1859 inclusive), and all were built in what was designated as Cape Elizabeth but was the South Portland section. The Butlers (Alfred and C. B.) built the *Black Squall* and the *Snow Squall* near where the Portsmouth division of the Boston & Maine Railroad tracks cross to Turner's Island. The *Black Squall* was quite famous for her speed in the Brazil coffee trade, and the *Snow Squall,* considering her small size, did well in the Australian trade, making a fast passage of 79 days between New York and Melbourne. At Knightville (near the site of the later South Portland Lumber Yard) another important and rather large clipper was built by Thomas E. Knight and Nathaniel Blanchard. It is said that in 1852 a clipper ship on the building stocks nearing completion and uninsured was destroyed by fire. Blanchard, undiscouraged, furnished the money to build a second vessel to replace the one burned and gave her the significant name *Phoenix.* The following table gives the size, ownership, and sailing record around Cape Horn westbound of the five clippers built in the Portland area (excluding the bark *Grapeshot* of 345 tons, built in 1853 at Cumberland, to the north, which, however, is located in the Greater Portland marine area, as is Cape Elizabeth to the south):

Name and Tonnage	Year Built	Builder	Registered Dimensions in Feet			Owner	Westbound Cape Horn Passages	
			Length	Beam	Depth		Number	Time in Days
BLACK SQUALL; 400 tons	1850	C. B. Butler	127	30.2	12.2	John Codman, New York	1 (including stop at Valparaiso)	156
SNOW SQUALL; 743 tons	1851	Alfred Butler	157	32	16.5	Chas. R. Green, New York	1 (60 days off the Horn)	155
WARNER; 500 tons	1851	Cape Elizabeth	138	28	14.5	Wm. H. Merritt, New York	1	140
PORTLAND; 998 tons	1853	Cape Elizabeth	174	35.2	19	N. F. Deering et al., Portland	—	—
PHOENIX; 1,458 tons	1853	Thos. E. Knight and Nathaniel Blanchard	205	41.5	24	N. Blanchard & Sons and Chas. Carow, Portland	1	127

A total of five ships aggregating 4,099 tons — an average of 820 tons per ship.

The *Phoenix* was built as a transatlantic clipper packet, and for two years she was operated steadily in the Red Star Line between New York and Liverpool. She was a very successful sailing packet. During over two years of service in the North Atlantic, she averaged 31 days for her westbound "uphill" passages; she made her best westbound crossing in 26 days, but her slowest crossing occupied only 35 days. This is a remarkable record of good uniform sailing against the westerlies. Many a transatlantic sailing packet had a record for average length of westbound passages much longer than that of the slowest crossing of the *Phoenix.* One of the best transatlantic runs of all time was made by the *Phoenix* under Capt. John Hoxie

when she arrived in Queenstown Harbor January 24, 1859, after a run of only 14 days 9 hours from Savannah, Ga. (a run equivalent to 13 days from Sandy Hook to Liverpool). On this crossing, the *Phoenix* maintained an average of 352 nautical miles a day and 14.7 knots per hour for several successive days. This fine vessel was destroyed by fire at Melbourne, Australia, on February 28, 1860.

It was at the old Blanchard yard that Daniel Brewer, one of Portland's most competent master builders, constructed square-riggers in the seventies for J. F. Randall. Among the vessels launched from this yard during the years 1874-1877 were the ships *Alice Cooper* (1,392 tons) and *Dorthea* (1,345 tons), the barks *Edith Davis* (823 tons) and *Grace Deering* (733 tons), the barkentines *Carrie Heckle* (498 tons) and *Golden Sheaf* (453 tons), and the schooner *Clara Leavitt* (455 tons). The *Alice Cooper* is credited with an amazingly fast transatlantic passage, and the *Edith Davis* was destroyed by fire under peculiar circumstances at Juan Fernandez ("Robinson Crusoe's Island").

It is said that, had it not been for the successful fight of the American colonies for independence, the British would have built at Cape Elizabeth "one of the largest naval stations in the world." Historians tell us that at Ferry Village, where many shipyards were located, the British Government talked of building and had full working plans all ready to construct a big, completely equipped naval station, with "large docks and an extensive plant to be used for the building and refitting of ships of the line and frigates for the Royal Navy."

The Dyer family, which was established for many years with an active yard and marine railway at Clay Cove, built on the Cape. It was here, near the ferry slip, that Capt. Ezekiel Dyer built the brig *Cordelia (I)*, which proved very successful in the West Indian trade and made, it is said, ninety profitable voyages. After Lemuel Dyer passed away and his old yard was obliterated by Portland Harbor developments, his son Joseph W. commenced to build on the Cape. Among the vessels launched by him during the years 1851-1856 were the ships *Kate Dyer* (1,278 tons), *Perseverance* (1,153 tons), *Bamberg* (1,119 tons), and *Corinthian* (1,098 tons); also the bark *White Sea* (577 tons). It was at this Cape Elizabeth yard that Joseph W. Dyer built the gunboat *Kineo* for the United States Government during the Civil War. Nathan Dyer, a builder of small schooners and steamers, also launched the bark *Wallace* of 638 tons in 1865. He owned the land on the Cape that was acquired for a marine railway and shipbuilding and repair plant when the old railway and yard at Clay Cove had to be moved. The old Portland Marine Railway became the Cape Elizabeth Wharf and Marine Railway (with Nathan R. Dyer one of its incorporators) and later the Portland Shipbuilding Company (with Nathan R. and Albert E. Dyer, of Cape Elizabeth, among the five incorporators of the company that commenced doing business in 1891). This firm specialized in marine machinery and in the building of small steamers, tugs, and trawlers.

George Turner, the builder of the ships *Remittance* and *Montreal* (392 tons), established what became the largest shipyard on Cape Elizabeth. In partnership with James B. Cahoon (a three-term mayor of Portland), he made extensive improvements at Ferry Village, building some twenty houses for workmen, and in the one year 1849 launched three full-rigged sister ships (the *Caroline Dow, George Turner,* and *Ada,* all of about 515 tons) and the brig *Fortunio* of 202 tons. This was the first vessel to sail from Portland around the Horn for California during the Gold Rush.

The master builder for Turner & Cahoon was Benjamin W. Pickett, who at Turner's death bought out Cahoon and acquired control of the shipyard. Between 1851 and 1866, when he retired from business, Pickett built some forty-five vessels, among which was the *Grecian* (1,150 tons), his largest ship (launched in 1851) and sufficiently sharp to be termed a half clipper by her New York purchasers. Thereafter, Pickett built relatively small craft that were generally conceded to be both good sailers and good carriers, such as the ship *Forest City* (492 tons), built in 1852; the barks *Ellen Stevens* (354 tons) and *Charles Edwin* (344 tons), built in 1856; the bark *Hunter* (396 tons), built in 1862; the bark *Artemisia* (447 tons), built in 1864; and his last vessel, the bark *Lizzie H. Jackson* (504 tons), built in 1866.

Some ships were built at Scarborough during the latter part of the eighteenth and first half of the nineteenth century, but they were small. In the late forties, however, some brigs and barks of 200 to 300 tons were launched, and the last vessel constructed there was the sizable bark *Oak Hill* of 909 tons, built by J. Milliken in 1855.

East Deering, which is practically North Portland and now reached by Tukey's Bridge, became a shipbuilding center following the improvements made to Portland Harbor and the driving of shipyards out of the city proper. William M. Merrill established a yard there in 1855 and built a few vessels for Capt. David Keazer, among which was the ship *Kittie Floyd* (1,117 tons), built in 1857. Merrill built several ships on his own account, but they were small, the largest being the bark *Brunswick* (506 tons), built in 1865, and the bark *Mary E. Libby* (428 tons), launched in 1864. At the death of William M. Merrill in 1865, his sons Lemuel and Edward (as Merrill Brothers) completed the brig *Clara M. Goodrich* then on the building stocks, constructed the brig *Gipsey Queen* (290 tons) in 1866, and discontinued building.

Ralph Kelley, after building vessels in several locations in and around Portland following his building of schooners and brigs at Yarmouth prior to 1834, constructed his last craft at East Deering. Here, in 1857, he launched two sister brigs of 578 tons, the *Martha Wenzel* and the *Enrico Cosimo.* The last vessel that he built was the fine-lined and beautiful little ship *Francis B. Fay* of 889 tons, which he put overboard in 1866. Kelley built his vessels "on spec" with no outside backing, and he felt most severely the depression following the Civil War. Furthermore, like many other shipbuilders of his time, he saw in 1866 no future for wood ships; so, as he was approaching sixty, "he quit the game, convinced that the era of iron and steam had arrived, and he saw no money in trying to fight it." Ralph Kelley lived to be ninety-one years old and long enough to see the more courageous and resourceful shipbuilders of Bath (located only twenty-eight miles away, on the Kennebec River) successfully fight iron and steam and build profitable wood ships for another quarter of a century and then turn to steel and build square-rigged steel sailing ships for another decade—as long as vessels propelled by the wind were constructed in any part of the world.

The biggest tonnage yard in the Portland area and the last to keep operating was that of George Russell in East Deering. When Capt. Jacob S. Winslow stopped going to sea and started to trade in ship stores and build, sell, and operate ships, he induced Russell, who had a shipyard at Pembroke near the Canadian border, to move—with his four brothers—to Portland and build ships for him. The Russell yard, backed by the very prosperous and influential Winslow firm, was a stayer. It built but very few sizable ships, and when Winslow wanted big ships, he went to Bath and other Maine shipbuilding communities for them. However, it is said that Russell, during the years 1864-1891, built fifty-one sailing vessels and one small steamer, of which the following appear to have been the largest and the most noteworthy:

Year Built	Name	Registered Tonnage	Rig	Year Built	Name	Registered Tonnage	Rig
1864	RACHEL	403	Bark	1876	PORTLAND LLOYDS	1,242	Ship
1865	HELEN O. PHINNEY	443	Brig	1877	WILLIAM G. DAVIS	1,668	Ship
1867	ADA GRAY	566	Bark	1878	E. L. PETTINGILL	814	Bark
1867	BLANCHE HOW	566	Bark	1880	CARRIE WINSLOW	943	Bark
1868	JANE ADELINE	300	Bark	1881	ANDREW J. YORK	217	Schooner
1869	J. S. WINSLOW	524	Bark	1882	SKOBELEFF	621	Barkentine
1870	MATTIE B. RUSSELL	370	Brig	1883	LUIS G. RABEL	553	Schooner
1871	PHILENA	515	Bark	1886	AUSABLE	568	Bark
1872	A. G. BEAN	580	Bark	1889	FLORENCE	664	Schooner
1873	EDMUND PHINNEY	751	Bark	1890	MAJOR PICANDS	935	Schooner
1874	ISAAC JACKSON	616	Bark	1891	RHODE ISLAND	643	Schooner
1875	RUFUS E. WOOD	1,477	Ship				

Only three vessels, apparently, of over 1,000 tons register were built by Russell, and they were square-rigged three-masted ships built during the boom years of 1875-1877. The con-

struction of these ships at East Deering proved that Russell could not compete with the product of Bath yards, and Russell resumed the building of smaller craft until his shipyard was closed following the construction of the small schooner *Rhode Island* in 1891. The biggest vessel ever built by George Russell was the ship *William G. Davis* of 1,668 tons, launched in 1877, but his best product was said to be the 1,477-ton ship *Rufus E. Wood,* built in 1875, which evidently was a good sailer and made several better-than-average passages. On one occasion, it is said, she ran from the Golden Gate to Queenstown in 108 days, and on another eastbound passage well laden with grain, she encountered a favorable breeze after rounding Cape Horn. It is claimed that she averaged over 200 miles per day for eight consecutive days. She is credited with two day's runs of 307 and 296 miles, respectively, or an average of 12.8 knots on the maximum mileage covered in twenty-four hours.

Capt. Russell Lewis, upon retiring from the sea, established a shipyard with two sets of ways to the eastward of the George Russell yard at East Deering and there built his fleet of white barks. Capt. Stephen Sargent, assisted by his sons Oscar and Edward, was the responsible builder. Captain Lewis had the schooner *Ellen Cruso* built at the William M. Merrill yards, but the following vessels were constructed at his own yard by the Sargents:

Year Built	Name	Registered Tonnage	Rig	Year Built	Name	Registered Tonnage	Rig
1866	JOSEPHINE	472	Bark	1873	SARMIENTO	606	Bark
1866	ELLA AND ANNIE	529	Bark	1873	CELINA	577	Bark
1866	TOOKOLITA	61	Schooner	1873	O. B. STILLMAN	326	Brig
1867	TATAY	582	Bark	1874	ANNIE LEWIS	671	Bark
1868	ARCHER	480	Bark	1875	CHARLES R. LEWIS	764	Bark
1869	ELLA	654	Bark	1880	HENRY WARNER	348	Barkentine
1870	SAMUEL B. HALE	566	Bark				

The *Ella and Annie* was lost on her maiden voyage. The vessels were generally engaged in the South American trade and were designed to carry lumber out and wool and hides on the return trip. The *Charles R. Lewis,* aside from being the largest vessel of the fleet, was generally deemed the best and had the reputation of being a fast sailer. She is said to have made a "record" passage of 35 days from Portland to Montevideo.

Strange as it may seem to a casual observer of the countryside in the environs of Portland today, there was a lot of shipbuilding on the Presumpscot in the first part and around the middle of the nineteenth century. Practically all the vessels were small, but Samuel N. Knight is credited with building in 1856 the ship *Artisan* of 923 tons. On the banks of the Presumpscot were laid down many full-rigged brigs in the 1830's for the West Indian trade. The *Hortense* (241 tons), *Portland* (218 tons), *Champion* (201 tons), *Othello* (183 tons), and *Pallas* (168 tons), all built in 1838 and 1839, were representative vessels of the once popular and highly successful little Portland-Caribbean Sea trading brigs.

Falmouth—north of the city of Portland—built in all over thirty vessels, among which were the bark *Astoria* (262 tons), built in 1838, the ship *Neptune* (498 tons), built in 1841, the bark *St. Mary* (279 tons), built in 1846, the ship *Evening Star* (404 tons), built in 1853, and the brig *George Cramp* (313 tons), built in 1855. All were relatively small craft and typical of the usual Portland construction.

At Cumberland, still farther north and up the Casco Bay, David Spear and his son built at Broad Cove some fifty vessels during a period of fifty years—seven ships, eighteen barks, seventeen brigs, and eight schooners. David Spear established the yard soon after the close of the War of 1812, and a majority of his vessels were of 250 tons register and made from the same model. Most of his creations were brig-rigged, but he built the full-rigged ships *Moscow, Elizabeth,* and *Ocean,* each of 300 tons, and his largest vessel was the ship *John Cadmus* of 400 tons. Upon the father's death, David Spear, Jr., who had been well trained, took over the business in 1842 and built the following vessels during the years 1842-1857 inclusive, when

he was in entire charge of the designing and building at the yard. Previous to 1842, David Spear, Jr., acted as master builder of the bark *Jane* of 230 tons.

Year Built	Name	Registered Tonnage	Rig	Year Built	Name	Registered Tonnage	Rig
1842	SABINE	268	Bark	1851	DAKOTA	1,054	Ship
1844	JUNIATA	315	Bark	1852	PEACOCK	301	Bark
1845	DILIGENCE	239	Bark	1853	STAR OF THE EAST	316	Bark
1846	CUMBERLAND	242	Bark	1853	GRAPESHOT	345	Bark
1847	ROMEO	115	Schooner	1854	POINTER	506	Bark
1847	I. FORBES	250	Bark	1855	UNCLE SAM	336	Bark
1848	SAN FRANCISCO	268	Bark	1856	STORM KING	372	Bark
1849	MARTHA'S VINEYARD	803	Ship	1856	ARIZONA	583	Bark
1850	CHIMERA	670	Ship	1857	LIBERTY	374	Bark

The finding of gold in California caused David Spear, Jr., to build during the rush that followed in 1849-1851 what for his Cumberland yard were three large vessels—all ship-rigged. Although these ships were not clippers, Spear, in 1852, resumed the building of small barks of about 300 tons register; but one of the second barks that he built in 1853 had lines sharp enough and she carried sufficient canvas to warrant her being classified as a medium clipper. This little bark, the *Grapeshot* of 345 tons (length 120 ft., beam 26½ ft., depth 12 ft.), was not built for the California trade, but she gained a great reputation for speed. She was built for Sebastian Lawrence et al., New London, Conn., but soon was sold to George Low, of New York, and the following story of one of her sailing achievements shows how she became recognized as a very fast vessel:

William Poole, a notorious and dangerous character, had eluded the authorities and found passage on the *Isabella Jewett,* a steamer bound for Europe. The United States government chartered the *Grapeshot* and she sailed in pursuit of the escaping criminal, leaving port a day later than had the steamer. The *Jewett* was scheduled to call at Fayal, one of the Azores, and hither the *Grapeshot* sailed and the steamer found her awaiting her when she arrived. Poole was immediately taken off and the *Grapeshot* returned with him to the United States.

David Spear, Jr., was unlucky with the last three barks that he built. The depression and panic so seriously affected the market that, being compelled to sell, he had to let them go at prices that resulted in a loss to him of "something over twenty thousand dollars" for two years' work. He was required to give up his yard and other property to satisfy his creditors, and he never re-established himself as a shipbuilder, notwithstanding his unquestioned ability to design and build good small square-riggers. The Spear yard was leased by other builders in the sixties, and here were built the brig *Minnie Traub* (288 tons) in 1862, the barks *Gertrude* (416 tons) and *M. M. Haven* (405 tons) in 1863, and the bark *Woodside* (609 tons) in 1866. The latter vessel became a member of Captain Lewis' fleet of Portland white barks.

The following list of vessels has been taken from an official ship register at the customhouse and shows vessels recorded as being built in what may be termed Greater Portland or the Portland area. This list, which is far from being complete, covers the vessels indexed as being built at Portland, Falmouth, Westbrook, Deering, East Deering, and Cape Elizabeth. (Some differences are evident in names, figures, etc., when they are checked with other records.)

Year Built	Name of Vessel	Where Built	Rig	Tonnage	Dimensions in Feet			Number of Masts
					Length	Beam	Depth	
1782	MARY	Falmouth	Schooner	26	33	12.3	6	2
1783	PARROT	Portland	Schooner	23	40.7	12.2	5.4	2
1790	FANNY	Falmouth	Schooner	31	37.8	13.3	5.8	2
1792	SALLY	Falmouth	Schooner	98	56.2	21.2	7.7	2
1797	NANCY	Falmouth	Schooner	37	48.7	14.7	6	2

(Continued on next page)

Year Built	Name of Vessel	Where Built	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1799	HANNAH	Falmouth	Schooner	29	42.5	13.9	5.9	2
1811	FAIR AMERICA	Falmouth	Brig	177	84.8	25	9.7	2
1811	INDUSTRY	Falmouth	Schooner	106				
1813	HOUND	Cape Elizabeth	Schooner	31	44	13.6	6	2
1815	OLIVE	Falmouth	Schooner	34	46.5	14	6	2
1816	LARK	Falmouth	Schooner	12 11	31	10	4.7	
1818	DOLPHIN	Falmouth	Schooner	64	60.3	17.3	7.1	2
1821	ALGELIA	Portland	Schooner	96	77.1	20.9	8	2
1825	BILLOW	Westbrook	Schooner	80	64.3	16.7	8.3	2
1825	PARAGON	Westbrook	Schooner	64	57.2	15.7	7.7	2
1826	ANGELIA	Portland	Schooner	96	77.1	20.9	8	2
1836	CORAL	Portland	Schooner	69	71.6	24.2	6.5	
1842	MARIA	Westbrook	Schooner	28 26	50	17.4	5	
1845	RECHABITE	Portland	Brig	126	82.2	23	7.6	2
1849	MOSES WARING	Falmouth	Schooner	93	73	23	7	
1849	ROSINA	Portland	Schooner	92	77	23	7.1	2
1850	GEORGIA	Cape Elizabeth	Schooner	128	89.4	25.2	8.5	2
1850	MOUNTAIN FAWN	Portland	Schooner	18 17	42	16	6	
1851	SUSAN	Westbrook	Schooner	160	95	25	7.7	
1856	WILLIAM WOODBURY	Portland	Ship	1,215 1,154	180.5	36.3	24.5	3
1859	E. G. WILLARD	Cape Elizabeth	Schooner	96 92	79.7	23.7	8.3	
1859	LETTIE M. GRAY	Westbrook	Schooner	49	66	20.4	6.2	
1861	MARY C. MARINER	Cape Elizabeth	Brig	288	110.4	25.7	14.7	2
1862	VETERAN	Portland	Bark	613 582	167	28	17	
1863	BRAMHALL	Westbrook	Schooner	143 135	94.2	23.7	8.2	2
1864	J. I. WORTHINGTON	Portland	Schooner	174 165	108	28	8.4	
1865	WALLACE	Cape Elizabeth	Bark	638 613	142	30.4	20.5	3
1866	DAVID CURRIE	Portland	Schooner	151 144	100	26.4	7.8	
1866	GEORGIA BERRY	Westbrook	Schooner	265 252	109.3	27.4	13.3	3
1866	GIPSEY QUEEN	Westbrook	Brig	360 342	117.9	27.7	11.6	2
1866	J. G. CRAIG	Cape Elizabeth	Schooner	77 73	76.8	22.3	8	
1866	MAJESTIC	Portland	Ship	1,170 1,117	177	36.9	23.6	3
1866	NELLIE STARR	Portland	Schooner	228 216	112.8	27.9	9.5	2
1866	TOOKOLITA	Westbrook	Schooner	62 59	71.5	21	7.6	
1867	ADA GRAY	Westbrook	Bark	566 538	129.3	30.3	18.6	3
1867	ADDIE HALE	Westbrook	Brig	351 334	120.3	27.7	12	2
1867	DREADNAUGHT	Cape Elizabeth	Schooner	42 40	70.1	19.1	6.6	
1867	FRANCIS B. FAY	Westbrook	Bark	889	159.9	33.4	20.9	3

(Continued on next page)

Year Built	Name of Vessel	Where Built	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1867	GRACE WEBSTER	Portland	Schooner	338 321	118.9	29.2	12.4	2
1867	MARCIA S. LEWIS	Portland	Schooner	347 330	123	29	10	3
1868	ARCHER	Westbrook	Bark	481 457	136.6	31.2	14.5	3
1868	JANE ADELINE	Westbrook	Brig	393 373	119.8	28.5	15.4	2
1868	J. L. BERRY	Portland	Schooner	8 8	32.9	12.7	4.5	
1869	CHILION	Westbrook	Schooner	78 74	74.1	22	6.9	
1869	ELLA	Westbrook	Bark	655 622	138	27.8	10.8	3
1869	MAGGIE POWER	Portland	Schooner	61 58	69	20.5	7.5	
1869	SAMUEL E. SPRING	Westbrook	Bark	504 479	126.4	30	17.2	3
1870	ERNEST	Westbrook	Brig	242	105.2	26.7	11	2
1870	MATTIE B. RUSSELL	Westbrook	Brig	370	115.9	28	14.5	2
1870	SAMUEL B. HALE	Westbrook	Bark	566 538	138.9	30.9	16.5	3
1872	A. G. BEAN	Deering	Bark	581 553	143.4	30.5	15.9	3
1872	MARY E. BURNHAM	Portland	Schooner	9 9	38	13.2	5.8	
1872	SARMIENTO	East Deering	Bark	606 576	150.2	31.6	16.8	3
1873	A. J. PETTENGILL	Deering	Brig	452	125.8	31.5	14.9	2
1873	CELINA	Deering	Bark	577 549	152.7	32.7	14.5	3
1873	EDMUND PHINNEY	Deering	Bark	751	156.5	33.6	18.7	3
1873	FRED JACKSON	Deering	Schooner	293 278	114.8	28.7	9.8	3
1874	ALICE	Deering	Bark	504 479	130.4	31.6	15.9	3
1874	ANNIE LEWIS	Deering	Bark	671 638	156.9	32.4	17.9	3
1874	CLARA LEAVITT	Cape Elizabeth	Schooner	456 433	127.7	31.1	11.4	2
1874	ELVA E. PETTENGILL	Deering	Schooner	336 319	118.2	29	9.8	3
1874	GOLDEN SHEAF	Cape Elizabeth	Barkentine	454 431	128.2	31.2	11.4	3
1874	ISAAC JACKSON	Deering	Bark	617	145.3	32.6	17.8	3
1874	J. H. CHADWICK	Deering	Bark	479 455	129.9	30.7	11.8	3
1874	JOSEFA	Deering	Brig	491 467	133.3	30	17.3	2
1874	LEONA	Portland	Schooner	202 192	114.5	29	8.3	
1874	MAGGIE DALLING	Portland	Schooner	350 333	128.4	30.4	9.1	3
1874	MAGGIE ELLEN	Cape Elizabeth	Schooner	217 207	110	28.8	8.6	3
1874	OCEAN PEARL	Deering	Barkentine	459 436	126.9	30.3	16.2	3
1875	ALICE D. COOPER	Cape Elizabeth	Ship	1,392 1,345	200.6	38.3	24	3
1875	CHARLES R. LEWIS	Deering	Bark	765 727	165.4	33.4	17.7	3

(Continued on next page)

Year Built	Name of Vessel	Where Built	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1875	JOSE RODRIGUEZ LOPEZ	Deering	Barkentine	418 397	126.4	31	14.3	3
1875	RUFUS E. WOOD	East Deering	Ship	1,477	200.1	40.4	24.5	3
1876	CARRIE L. PAYSON	Portland	Schooner	11 11	39.4	14	4.5	
1876	PORTLAND LLOYDS	East Deering	Ship	1,242	190.6	38.5	22	3
1877	CARRIE HECKLE	Cape Elizabeth	Barkentine	498	135.7	31.1	16.5	3
1877	GRACE DEERING	Cape Elizabeth	Bark	734	151.8	33.1	18.3	3
1877	WILLIAM G. DAVIS	East Deering	Ship	1,669	213.7	41.7	25.4	3
1878	E. L. PETTENGILL	Deering	Bark	842	161.8	34.3	20.3	3
1878	JOHN A. BRIGGS	Portland	Ship	2,110	234.2	44.1	20.5	
1879	HENRY WARNER	East Deering	Barkentine	349 331	129.8	27.4	14.9	3
1880	CARRIE WINSLOW	East Deering	Bark	944	173.7	34.5	20.7	3
1880	J. A. HATRY	Portland	Schooner	173 164	113.8	28	5.8	
1880	SARAH AND ELLEN	East Deering	Schooner	582 553	142.5	34.6	12.7	3
1881	ANDREW J. YORK	Deering	Schooner	229 217	114.9	30	9.4	3
1881	AUSABLE	East Deering	Barkentine	548 520	145.8	33.1	13.2	3
1881	ETHEL	Portland	Bark	654	161.6	35	13.2	3
1881	HELEN R. LOW	Portland	Schooner	59 56	67	20	7	
1882	BERTHA DEAN	Portland	Schooner	751 713	166.9	35	15.4	
1882	EMMA	Portland	Schooner	337 355	127.7	31	11.7	3
1882	JESSIE McGREGOR	East Deering	Schooner	609 579	151.1	33.5	12.4	3
1882	RALPH SINNET	East Deering	Schooner	307 292	123.1	31	10.6	3
1882	ROSA MUELLER	East Deering	Schooner	282 268	120	30.9	10.3	3
1882	SKOBELEFF	East Deering	Barkentine	621 590	154.5	33.5	12.2	3
1882	URANUS	East Deering	Schooner	363 344	115.9	29.9	10.1	3
1883	BENJAMIN C. CROMWELL	East Deering	Schooner	616 585	161.4	35.4	16.4	3
1883	BERTHA WARNER	East Deering	Schooner	452 429	140.2	30.1	16.1	3
1883	ELLEN CRUSOE (or CRUSO)	East Deering	Schooner	298 283	125.8	26.1	13.3	3
1883	FALMOUTH	East Deering	Schooner	448 425	139.8	30	16	3
1883	LUIS G. RABEL	East Deering	Schooner	583 553	152.4	33.5	12.8	3
1883	PAYSON TUCKER	Portland	Barkentine	695 661	166.9	35.6	17.3	3
1883	SEBAGO	East Deering	Schooner	307 292	123.2	31	10.6	3

Portland Harbor, with its substantial walled Commercial Street and docks and its breakwater running out northeast from the South Portland and the northern tip of the Cape shore, is a well-defined and fairly well-protected area today (except from northeasters); but much of Casco Bay west of the protecting islands, which run generally from northeast to southwest, is considered Portland's secondary anchorage ground in good weather and as part of Portland's

greater harbor. It is deemed to run from Falmouth, or even from Cumberland, on the north to South Portland and the protected part of the Cape on the south. That Portland is an important harbor is indicated by the fact that Canadian-British transatlantic liners have for long years used Portland as their American terminus during the winter months, when the St. Lawrence River is frozen over and navigation to Quebec and Montreal is impossible.

As far as shipbuilding is concerned, Scarborough has usually been considered in the Portland area, which includes Falmouth, Westbrook, Deering, Cape Elizabeth, Cumberland, and at times Yarmouth and even Freeport and Harpswell. Parts of the larger Scarborough area are contiguous to Portland territory, but other sections are closer to the Saco by water than they are to Portland. Shipbuilding in very early days on Richmond Isle and vicinity has been historically associated with the Falmouth (Portland) region, as has the building near Cape Elizabeth and points between Prout's Neck and the Cape, so vessels entering deep water between Prout's Neck and Pine Point (i.e., built at Scarborough or West Scarborough) have generally been classified as Falmouth or Portland tonnage. The following incomplete list of vessels has been taken from a shipping register, in which they were identified as having been built at Scarborough, Maine.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1783	SUKEY	Schooner	21	35	11.7	5	2
?	HOPE	Schooner	22-30/95	35.7	11.3	6.5	2
1807	MERCURY	Schooner	101-25/95	70.8	21.8	7.5	2
1815	ANT	Schooner	59-42/95	57.7	18.7	6.5	2
1816	ELIZA JANE	Schooner	40-37/95	53.7	15.7	5.5	2
1816	LUCINDA	Schooner	76-78/95	70	19.5	6.4	2
1816	SALLY	Schooner	72-79/95	68.5	19	6.3	2
1817	FLY	Schooner	27-22/95	43.8	14.5	5.1	2
1817	HANNAH	Schooner	64-34/95	65.3	18.3	6.2	2
1817	OCTAVO	Schooner	74-87/95	69.3	19.8	6.3	2
1819	REBECCA	Schooner	91-30/95	69.7	20.7	7.3	2
1820	ABIGAIL	Schooner	92-13/95	70	20.7	7.3	2
1823	PHAETON	Schooner	72-81/95	63.4	22.2	6.7	2
1825	AZOF	Schooner	94-15/95	72	20.4	7.3	2
1825	DAUPHIN	Schooner	48-36/95	50.4	15.8	6.3	2
1825	VOLGA	Schooner	82-10/95	68	20.3	6.9	2
1828	PHAETON	Schooner	78-74/95	69.8	20.3	6.4	2
1829	COLMA	Schooner	95-58/95	68.3	18.6	8.3	2
1829	JACK	Schooner	74-70/95	63.1	18	7.6	2
1850	WATCHMAN	Schooner	106-54/95	74.2	22.7	7.4	2

Solomon Hartford was the builder of record of the *Ant* (59 tons), constructed in 1815, and John Andrews was the registered builder of the *Phaeton (II)* of 79 tons, constructed in 1828. The only other recorded builders of vessels laid down at Scarborough as per the foregoing list were John and Isaac Waterhouse. John built the *Sally* (73 tons), *Lucinda* (77 tons), *Octavo* (75 tons), *Fly* (27 tons), *Dauphin* (48 tons), and *Colma* (96 tons) during the period 1816-1829 inclusive. Isaac is the registered builder of the *Eliza Jane* (40 tons), *Hannah* (64 tons), *Rebecca* (91 tons), and *Volga* (82 tons) during the years 1816-1825 inclusive and of the *Watchman* (107 tons), built in 1850.

XIX.

YARMOUTH, MAINE

An Important Record in Shipbuilding from the 1700's to 1890, with 1874 as the Biggest Construction Year

YARMOUTH, ON THE Royal River about ten miles northeast of Portland and some nineteen miles west-southwest of Bath, has an interesting and important record in building ships. However, like most other active sites used for constructing vessels on the shores of Casco Bay and on the banks of the streams flowing into it, Yarmouth possessed few natural advantages, when viewed in the light of the requirements of shipbuilding, during the period when the locality reached the height of its activity and produced its greatest tonnage (in the aggregate per year) and its largest individual vessels. Yarmouth's period of importance as a shipbuilding community was the third quarter of the nineteenth century. The high watermark of construction was reached in 1874, when twelve vessels (of which eight were three-masted ships) were built totaling 4,180 registered tons and eight were on the stocks at the same time. The biggest ship built in Yarmouth, the *Admiral* of 2,212 tons, was launched in 1875, and the last sizable Down Easter, the *Commodore* of 1,781 tons, was built in 1879. The last square-rigger, the bark *Onaway* of 932 tons, slid from the ways in 1883, at which time the construction of vessels at Yarmouth practically ceased, although two small schooners of 250 tons each were built in 1884. Yarmouth's last vessel, the little three-masted schooner *Damietta and Joanna* of 330 tons, was launched in September 1890 after six years of building inactivity.

Records referring to the operation of a Yarmouth vessel (a sloop named *Friendship*) date back to 1715. Reference is made in an old document dated 1740 to a shipyard on the eastern side of Royall's River, and on a map used in a lawsuit in 1795 a "building yard" is shown on the western side of the river near the mouth of Stony Brook. Payne Elwell located in North Yarmouth about 1782, and in an autobiography written in his old age he refers to building two vessels—the sloop *Packett* of 60 tons, built in 1795, and a larger brig, the *Rebeccah,* built "four or five years" later. The *Packett* was used for carrying lumber to Boston. "She once went seven trips in eight weeks," writes Elwell, "and averaged me one hundred dollars a trip or thereabouts." His bigger brig, however, proved an unfortunate investment and probably put a stop to his shipbuilding activities. He writes, "I having loaded her on my own account and having but little insurance, she was shipwrecked, which amounted to about a total loss."

There are records of the pinkies, or narrow-sterned schooners, *Union* of 81 tons, owned by Capt. John Prince in 1791, *Lucy* (Capt. Joseph Young), built up the river at North Yarmouth in 1792, and *Olive,* built in 1793 and operated by Capt. Perez Drinkwater. A sloop *Ranger* (Capt. Joseph York) was engaged in the coasting trade in 1794. The two-masted schooner *Sukey* of 42 tons (length 66 ft. 6 in., beam 16 ft. 10 in., depth 5 ft. 2 in.) appears in later registers as being built at Yarmouth in 1797.

Near the old Stockbridge wharf on the eastern bank of the river was built the 15-ton sloop *Betsey* in 1796, the schooner *Lucretia* of "some hundred tons burthen" in 1801, and "the big sloop *Columbia*" of 97 tons in 1803. These small vessels were of light draft, with "a beam

almost half their length"; they spread very large sails, were very slow, and carried relatively big cargoes.

In relatively late registers in which are records of early-built Yarmouth vessels, there are the 33-ton schooner *Rosa Wing* (length 49 ft., beam 16 ft., depth 5 ft.), built at Yarmouth in 1802, and the 34-ton schooner *Jane* (length 46 ft. 7 in., beam 13 ft. 5 in., depth 6 ft. 3 in.), built at North Yarmouth in 1813.

In SHIPBUILDING DAYS IN CASCO BAY by William H. Rowe, we read that John Webster, the grandfather of Capt. Benjamin Webster, built a sizable ship "in the very dooryard of his home on what is now known as the Webster road in the town of Freeport and hauling it over the fields on sleds launched it in Cousins River." Continuing, Rowe says: "Other ships were built in the vicinity of Walnut Hill and along the New Gloucester Road. One building yard of this type was near the site of the old Maine Central Station where several schooners up to one hundred tons burden were built."

In the eighteenth and first part of the nineteenth century, shallow water was not regarded by New England builders of vessels of medium size as a serious obstacle to the launching of their ships. The time-honored method along the coast, when shallow water and associated adverse conditions were encountered, was to buoy a vessel up and float her down to deep water. A common expedient resorted to in many building locations along the coast and up its inlets and rivers—as ships had to be built larger to meet the demand—was "to throw the vessels over on their beam ends (just as, in service, they were careened for cleaning the bottom and for repairs), place scows and casks under them at low water, and wait for the tide (or river) to rise, when the buoyancy of the casks would cause the ship to lighten in draft and permit of floating downstream at high water." The old farmer-residents for many miles inland from the coast of Maine (and its tidewater creeks, inlets, and navigable rivers) were amazingly ship-conscious, and well past the mid-century and clipper ship days, good, big wood square-rigged deep-sea ships were built in locations that were certainly not ideal as far as water frontage and launching opportunities were concerned—and this in the seventies (and even later) when burdensome Down Easters were making history. This is surprising, for Maine timber was not accessible for building such craft, natural facilities—outside of such unique locations as Bath on the Kennebec River—were not available, and the only influencing factors were the desire and ability to design and build and the presence in the community of highly skilled and well-trained shipwrights who wanted work and would build cheaply, well, and rapidly. It is said that Benjamin Webster, of Yarmouth, Maine, at the New Year of 1865, contracted with a merchant to carry a cargo from Portland, Maine, to the West Indian islands. He had men in the woods cutting the frame of a new vessel, the brig *Emma,* which was launched from the Hutchins & Stubbs yard in Yarmouth ninety days later. This vessel sailed "fully loaded out of Portland Harbor on April 3, 1865, with a fine northwest wind in time to get to Cuba and secure a return cargo."

Maine timber was rapidly being cut out, for historian Rowe tells us that when the *Admiral* of 2,212 tons (length 248 ft., beam 44 ft., depth 26.7 ft.), the largest vessel ever built in or around Yarmouth, was built by J. & A. Seabury (master builders) at the Blanchard Bros. yard in 1875, the timber and planking for her construction had to come from sources other than the state of Maine. "Her frame was of Maryland white oak and ceiling and planking of southern pine, and decks of Michigan pine." Even Maine white pine trees that "had sparred the Royal British Navy for more than a century" were not used for the masts, as the *Admiral* "was fitted with iron masts and yards." When well-designed and splendidly constructed and operated Maine-built Down Easters were successfully competing with British iron sail and steam for world trade in the seventies and eighties, Maine had lost all its original natural advantages of forests and handy needed materials; in this respect, it was at a disadvantage compared with the Chesapeake and all the American shipbuilding localities of old.

It was David Pratt who established shipbuilding as a business in Yarmouth and on the banks of Royall's River. Pratt moved from Freeport (a town some six miles to the northeast)

to Yarmouth sometime before 1818 and established a shipyard on the eastern side of the river. It is recorded that he built "a goodly number of vessels," but no reliable information is available as to names of the craft built, their size, type, or the year in which they were launched prior to the construction of the brig *Cornelia* of 160 tons in 1826. During the period of 1826-1845 inclusive, David Pratt is credited with building thirty identified vessels. These craft ranged in size from the little sloop *Milo* of 46 tons, constructed in 1826 (during the same year that the brigs *Cornelia* of 160 tons and the *Ilsley* of 135 tons were built), to the sizable full-rigged ship *David Pratt* of 787 tons, launched in 1838. The following record shows the vessels known to have been built by David Pratt during each of the five-year periods from 1826 to the time of his retirement from business:

	Number of Vessels Built							Tonnage		
Years	Ships	Barks	Brigs	Total Square-riggers	Schooners	Sloops	Total All Types	Square-riggers	Fore-and-afters	Total
1826-1830	1	—	3	4	5	2	11	765	691	1,456
1831-1835	—	—	2	2	4	—	6	310	431	741
1836-1840	1	1	4	6	1	—	7	1,774	150	1,924
1841-1845	—	1	2	3	3	—	6	663	245	908
Total 1826-1845	2	2	11	15	13	2	30	3,512	1,517	5,029

Average tonnage of square-riggers, 234 tons; of fore-and-afters, 101 tons; of all vessels, 167½ tons.

Two of the shipwrights working in the Pratt shipyard married daughters of the master builder and were important factors in the further development of Yarmouth as a shipbuilding community. In 1826 (the first year of which we have authentic records of the output of the David Pratt shipyard), Albion Seabury married Dorcas Pratt and five years later established his own yard on the northeast side of Royall's River. In 1832, George Dunham married Susan Pratt and ten years later (1842) entered into a partnership with Albion Seabury. As a firm, Seabury & Dunham constructed thirteen vessels in a period of six years. The partnership was dissolved in the winter of 1847-1848, and George Dunham formed a new partnership with Matthias Allen. In 1848 the firm of Dunham & Allen built the bark *Sunny Eye* (253 tons) and the brig *Harriet* (173 tons); but in early 1849 Dunham decided to leave Yarmouth, and he moved to Winterport, on the Penobscot River, to build ships by contract. During the clipper ship era, George Dunham, Isaac Dunham, and Dunham & Company were each the accredited builders of a clipper ship at Frankfort, Maine, a few miles downstream from Winterport. These ships were the *Ocean Spray* of 1,089 tons, the *Flying Arrow* of 1,092 tons, each built in 1852, and the *Nonpareil* of 1,431 tons, built the following year. (The *Nonpareil* was considered a very fast ship; she made a run to California in 115 days and a transatlantic passage in 19 days.)

The connection between the Seabury family of shipbuilders and the Blanchard family as owners and operators dates back to the mid-forties. In 1847 the ship *Blanchard* was built by Seabury & Dunham. Later, as Albion Seabury became inactive, Joseph Seabury built alone but most generally in partnership with his son Joseph Albert, and the firm of J. & J. A. Seabury became very prominent as a designer and constructor of sizable Down Easters. Many important vessels were built by the Seaburys at their old East Yarmouth yard for Capt. Sylvanus Blanchard. In 1856-1857, Captain Blanchard, having purchased the Union Wharf property, established his own shipyard there in an advantageous position and influenced Joseph Seabury and his son to discontinue their building operations at East Yarmouth and construct "big square-riggers" at the Union Wharf yard. From this time forward, there is some confusion as to whether the Blanchards or the Seaburys were the builders of the Blanchard ships launched from the Blanchard yard; but it is evident that the Seaburys were the designers and accredited builders, although the Blanchards owned the shipyard and most probably financed the Seaburys in their building operations.

Capt. Sylvanus Blanchard died in 1859, two years after he had established the Union Wharf shipyard, and three of his sons, Paul G., Sylvanus C., and Perez N., took up and carried on the business. The Blanchards, in their shipbuilding and shipping business, had associated with them many of the substantial citizens of Yarmouth, and gradually Blanchard ships built by the Seaburys at Yarmouth were looked upon as the best vessels built on Casco Bay and in the Portland territory.

The following table gives a record of the vessels built by the Seaburys during each of the five-year periods from 1831 to 1875 and throughout the entire time of their shipbuilding activities, 1831-1879 inclusive:

	Number of Vessels Built							Tonnage		
Years	Ships	Barks	Brigs	Total Square-riggers	Schooners	Sloops	Total All Types	Square-riggers	Fore-and-afters	Total
1831-1835	—	—	2	2	1	—	3	301	147	448
1836-1840	—	—	4	4	3	—	7	770	358	1,128
1841-1845	3	5	2	10	3	—	13	2,716	282	2,998
1846-1850	2	2	1	5	2	1	8	2,069	295	2,364
1851-1855	5	—	—	5	—	—	5	4,322	—	4,322
1856-1860	2	3	—	5	1	—	6	3,383	160	3,543
1861-1865	4	—	1	5	4	—	9	5,520	1,014	6,534
1866-1870	3	—	1	4	2	—	6	5,217	273	5,490
1871-1875	3	1	—	4	—	1	5	6,416	21	6,437
After 1875	2	—	—	2	—	—	2	3,561	—	3,561
Total 1831-1879 incl. (a period of 49 years)	24	11	11	46	16	2	64	34,275	2,550	36,825

Average tonnage of square-riggers, 745; of fore-and-afters, 142; of all vessels, 575 tons.

Of the sixty-four vessels constructed, Albion Seabury is the accredited builder of thirteen, Seabury & Dunham laid down thirteen, Joseph Seabury built seven, Albion Seabury, 2nd, constructed three, Albert Seabury one, and the firm of J. & J. A. Seabury launched twenty-seven. It is interesting to record that the ship *Milwaukee* of 736 tons, built by the Seaburys in the winter of 1852-1853, was constructed to the order of Capt. Enos Soule and the Soule Bros., their shipbuilding rivals of Freeport, located some six miles to the northeast of the Seabury yard at Yarmouth. Captain Blanchard began in 1853 to have constructed for his account "vessels of a larger type than any heretofore built in Yarmouth, of a capacity and seaworthiness as to be safely employed in the round-the-world service." The first vessels of this class, built by the Seaburys, were the *Sylvanus Blanchard* of 1,172 tons and the *Detroit* of 1,248 tons. The first vessels built at the new Union Wharf yard were the ship *Ceres* and the two barks *H. T. Venard* and *T. Venard,* launched in 1857, and the first "big" ships launched from the new yard were the *Star* of 1,214 tons, in 1861, and the *P. G. Blanchard* of 1,317 tons, built the following year.

Samuel Fisher built the brig *Neptune* of 180 tons at Yarmouth in 1825. The craft that appear in the records of construction in the first quarter of the century with the builders not identified are the schooner *Emigrant* (116 tons), built in 1821, and the bark *Skimmer of the Sea* (225 tons) and the schooner *Ann* (169 tons), each of which is reported as built in 1825. John Gooding built a dozen small vessels, commencing with the sloop *Elizabeth* (40 tons) and the schooner *Rachel Ann* (75 tons) in 1828. In 1841 he launched the brig *Alford* (200 tons), his largest vessel, and up to that time he had built three brigs, six schooners, and a sloop, or a total of 1,269 tons for the ten vessels built during a period of fourteen years. Continuing to build intermittently, John Gooding constructed the brig *Amon* (156 tons) in 1845 and the schooner *Tremont* (101 tons) in 1854. John Gooding, master shipwright, was a descendant of James Gooding of Portland, who was also a builder of only small craft but who was, nevertheless, termed "the father of shipbuilders" in the Portland area. In the list of the leading craftsmen of Yarmouth connected with shipbuilding appear the names of Henry Gooding and Samuel

Gooding as caulkers, and it was said that Henry Gooding was rated as "the second best caulker in Maine." William Gooding is recorded as an expert builder of ship's boats, and another Gooding of the following generation, by name Joseph, was the accredited builder in 1863 of the bark *Aid* of 412 tons.

Levi Mitchell was an early Yarmouth builder, launching the brig *Exertion* (165 tons) in 1826 and the schooners *Emerald* (127 tons) and *Citizen* (131 tons) in the years 1830 and 1831. Jonas Mitchell carried on during the years 1833-1837 inclusive and built the schooner *Washington* (137 tons) in 1833, followed by three brigs, *Superior* (140 tons), *Augusta* (199 tons), and *Richmond* (154 tons). Ralph Kelley, before he moved to Portland, built in Yarmouth the schooner *Harriet* (176 tons) in 1832 and during the following year the brig *Architect* (163 tons). Joseph Drinkwater built the brig *Ca Ira* (100 tons) in 1835. During the period 1835-1840, four schooners were launched with builders unidentified, the largest being the *Phoenix* of 121 tons. Jeremiah Baker and Benjamin Webster formed a partnership and built three full-rigged ships, the *Agenora* (600 tons) in 1848, the *Pumgustuk* (600 tons) in 1851, and the *Helios* (699 tons) in 1854. Samuel, another member of the Baker family, built the schooner *Oregon* (160 tons) in 1850.

In late registers appear the following schooners built at Yarmouth between 1817 and 1883, with the tonnage, dimensions, and stated particulars:

Name of Vessel	Built	Tonnage	Dimensions in Feet			Number of Masts
			Length	Beam	Depth	
JOHN BROOKS	1817 North Yarmouth	68	64	18.7	6.4	2
INO	1818 North Yarmouth	54	53.8	16.3	7.2	2
ARCOT	1832 North Yarmouth	146	87.8	22.4	8.3	2
BOSTON	1842 Yarmouth	74	65.8	20.2	6.5	2
EMBLEM	1846 North Yarmouth	82.2	68.3	24	6.7	2
E. G. BUXTON	1851 Yarmouth	96.3	72.8	21.4	7.1	2
WILLIE MARTIN	1866 Yarmouth	144.5	95.3	28.3	7.3	2
GRACE DAVIS	1873 Yarmouth	401	127.7	31.1	11.3	3
MATTIE J. ALLES	1883 Yarmouth	229	120.8	30	8.9	3

For many years, Sweetser & Jenks operated a yard in which Lyman Walker was employed as shipwright and later, in 1841, as master builder. There is no record of the ships launched from this yard prior to 1849, when ownership was acquired by Walker; but it is said that the yard that became prominent and known as the Walker yard probably holds the record in Yarmouth as to the number of vessels built. Lyman Walker and his son Lyman F. built fifteen vessels during the years 1849-1874 inclusive (three ships, four barks, one brig, two schooners, and five sloops) aggregating 5,148 tons—an average of 343 tons per vessel. The largest was the ship *Eldorado* (1,053 tons), built in 1864, and the other ships were the *Sam Locke* (806 tons), launched in 1856, and the *Rialto* (500 tons), built in 1851. Their largest bark was the *Eureka* (554 tons), built in 1861, and their last vessel was the schooner *Charles J. Willard* (416 tons), built in 1874. In 1880, John Walker was the builder of the 200-ton schooner *E. W. Hill.* Lyman Walker was an able ship designer and master builder and, moreover, a good businessman. He is credited with devising improvements in the method of drafting and laying down ship's frames, and he and his son carried on an extensive business, concurrently

with their shipbuilding operations, in getting out ship framing and timbers in Canada for Yarmouth, Deering (Portland), Bath, and other Maine shipbuilders.

After the partnership between George Dunham and Matthias Allen was dissolved, Allen associated himself in business with Henry Hutchins, and the firm of Hutchins & Allen built seven vessels of medium size, principally square-riggers, during the years 1851-1859. In 1865 this firm built its last and biggest ship, the *Bertha* of 955 tons, a vessel with an interesting history. In 1866, Henry Hutchins went into partnership with Edward J. Stubbs, and Hutchins & Stubbs launched twenty-one vessels during the period 1866-1884 inclusive. (The record shows that Hutchins & Allen built the barkentine *Fannie H. Loring* of 460 tons in 1872.) The following table gives a record of the thirty vessels built by Hutchins in partnership with either, Allen or Stubbs during the thirty-four years 1851-1884 inclusive:

	Number of Vessels Built								Tonnage		
Years	Ships	Barks	Barken-tines	Brigs	Brigan-tine	Total Square-riggers	Schooners	Total All Types	Square-riggers	Schooners	Total All Vessels
1851-1855	2	2	—	—	—	4	—	4	2,287	—	2,287
1856-1860	1	—	—	1	—	2	1	3	1,114	90	1,204
1861-1865	1	—	—	—	—	1	—	1	955	—	955
1866-1870	—	2	—	3	—	5	2	7	2,428	595	3,023
1871-1875	—	2	1	3	1	7	1	8	3,175	400	3,575
1876-1880	—	3	—	—	—	3	—	3	2,487	—	2,487
After 1880	—	—	1	—	—	1	3	4	400	1,349	1,749
Total 1851-1884 (a period of 34 years)	4	9	2	7	1	23	7	30	12,846	2,434	15,280

Average tonnage of square-riggers, 559 tons; of schooners, 348; of all vessels built, 509 tons.

The four ships built were the *Ben Bolt* of 709 tons in 1854, the *Reaper* of 686 tons in 1855, the *J. Baker* of 787 tons in 1857, and the *Bertha* of 955 tons in 1865—all by Hutchins & Allen. The largest barks were the *George A. Wright* of 921 tons, built in 1877, the *Itonus* of 851 tons in 1876, and the *Charles G. Rice* of 715 tons, launched in 1879—all by Hutchins & Stubbs.

One of the largest builders of vessels in Yarmouth in number of craft launched was Giles Loring, who built thirty-five vessels, generally of the medium size common in the Portland district, during the years 1854-1890 inclusive. Loring built quite steadily for twenty-one years, producing thirty-four vessels in that time, but during the last two years he constructed one vessel in partnership with John M. Cobb and Benjamin Chadsey and one with Cobb alone. After a suspension of operations for five years, Loring & Cobb built in 1890 the last vessel launched from the Loring yard and the last vessel to be constructed in Yarmouth, the schooner *Damietta and Joanna* of 330 tons. The following table shows a list of the thirty-five vessels built by Loring during the thirty-seven years 1854-1890 inclusive:

	Number of Vessels Built							Tonnage		
Years	Ships	Barks	Barken-tines	Brigs	Total Square-riggers	Schooners	Total All Types	Square-riggers	Schooners	Total All Vessels
1854-1860	1	1	—	1	3	2	5	1,870	160	2,030
1861-1865	—	3	—	6	9	1	10	4,401	480	4,881
1866-1870	—	2	—	3	5	—	5	2,352	—	2,352
1871-1875	—	2	—	4	6	—	6	2,858	—	2,858
1876-1880	—	2	—	1	3	—	3	1,713	—	1,713
1881-1885	—	1	1	—	2	3	5	1,570	1,093	2,663
1886-1890	—	—	—	—	—	1	1	—	330	330
Total 1854-1890 (a period of 37 years)	1	11	1	15	28	7	35	14,764	2,063	16,827

Average tonnage of square-riggers, 527 tons; of schooners, 295 tons; of all vessels, 481 tons.

The only full-rigged ship built by Giles Loring was the *Alice Venard* of 989 tons, launched in 1860. The biggest bark built was the *Onaway* of 932 tons—the last square-rigger—which was launched in 1883; other sizable barks were the *Alice Kelley* of 821 tons, built in 1865, and the *Effort* of 721 tons, built in 1866. The smallest bark, the *Phoebe Bucknam* of 431 tons, was built in 1857 and was the first square-rigger built by Loring. The only barkentine was the *Louisa Adelaide* of 638 tons, launched in 1882. Most of the brigs were between 400 and 450 tons register, but the largest was the *Ada L. White* of 505 tons, built in 1876, and one was very small, the *C. H. Kennedy,* launched in 1870 and measuring only 176 tons.

A large number of vessels were built in Yarmouth, the builders of which are unidentified. The largest were the bark *Grace* (960 tons), built 1854, the ship *Jacatro* (798 tons), built in 1856, the bark *Cluthabelle* (569 tons), built in 1858, the bark *Willard* (552 tons), built in 1854, the bark *Campsie* (535 tons), built in 1856, the brig *Screamer* (529 tons), built in 1877, the ship *Tuscany* (500 tons), built in 1860, and the bark *Volunteer* (288 tons), built in 1851.

The following table gives a list of the number and tonnage of the vessels of record built in Yarmouth from 1795 up to and including 1890—and the end of shipbuilding in that town and community—divided into classifications as to rig and set forth in certain periods of time, together with the totals covering a period of ninety-six years.

	Number of Vessels Built						Total Registered Tonnage					
Years	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schoon-ers	Sloops	Total
1795-1801	—	—	1	1	3	5	—	—	150	97	172	419
1811-1830	1	1	5	10	3	20	335	225	775	1,157	135	2,627
1831-1840	1	1	19	20	—	41	787	259	3,219	2,363	—	6,628
1841-1845	3	6	6	6	—	21	1,180	1,482	1,073	527	—	4,262
1846-1850	2	7	2	5	2	18	1,273	2,410	343	751	44	4,821
1851-1855	10	5	—	5	1	21	7,516	2,692	—	419	13	10,640
1856-1860	7	6	2	7	3	25	5,377	3,421	777	831	180	10,586
1861-1865	6	6	8	6	—	26	7,110	3,520	3,129	1,616	—	15,375
1866-1870	3	4	7	8	4	26	4,822	2,377	2,798	1,310	184	11,491
1871-1875	3	7	8	3	3	24	5,817	3,764	3,368	905	133	13,987
1876-1880	2	5	2	3	—	12	3,561	3,695	1,034	350	—	8,640
1881-1885	—	3	—	6	1	10	—	1,970	—	2,442	26	4,438
1886-1890	—	—	—	1	—	1	—	—	—	330	—	330
Total 1795-1890 (a period of 96 years)	38	51	60	81	20	250	37,778	25,815	16,666	13,098	887	94,244

The average tonnage of all the 250 vessels built is 377 tons; of the square-riggers, 539 tons; and of the fore-and-afters (schooners and sloops), 138½ tons. The 38 full-rigged ships averaged 994 tons per ship; the 51 barks, 506 tons; and the 60 brigs, 278 tons per vessel. The 81 schooners had an average registered tonnage of 162 tons, and the 20 sloops averaged 44 tons each.

The following table gives a list of the 24 largest vessels built at Yarmouth and includes all craft launched with a registered tonnage in excess of 800 tons. The names of the builders—as well as the tonnage, year built, and rig—are set forth, with slight variations in tonnage as given in other compilations. The bark *Grace* of 960 tons, built in 1854, is credited to J. & J. A. Seabury, as there is evidence that she was built at the old yard before the Seaburys moved to the Union Wharf site. Of the two dozen vessels enumerated, 16 were built by the Seaburys, and all of the 14 largest—all of which were full-rigged ships—are known to have been constructed by them.

Year Built	Name and Rig	Registered Tonnage	Name of Builder
1875	ADMIRAL (ship)	2,209	J. & J. A. Seabury
1879	COMMODORE (ship)	1,979	J. & J. A. Seabury
1871	S. C. BLANCHARD (ship)	1,904	J. & J. A. Seabury
1869	PACIFIC (ship)	1,812	J. & J. A. Seabury
1874	C. F. SARGENT (ship)	1,704	Albert Seabury
1876	P. N. BLANCHARD (ship)	1,582	J. & J. A. Seabury
1867	NELLIE HARDING (ship)	1,553	J. & J. A. Seabury
1864	DETROIT (ship)	1,494	J. & J. A. Seabury
1867	PERU (ship)	1,457	J. & J. A. Seabury
1862	P. G. BLANCHARD (ship)	1,317	J. & J. A. Seabury
1854	DETROIT (ship)	1,248	J. & J. A. Seabury
1861	STAR (ship)	1,214	J. & J. A. Seabury
1853	SYLVANUS BLANCHARD (ship)	1,172	J. & J. A. Seabury
1865	ANNA (ship)	1,077	J. & J. A. Seabury
1864	ELDORADO (ship)	1,053	Lyman Walker
1860	ALICE VENARD (ship)	989	Giles Loring
1854	GRACE (bark)	960	J. & J. A. Seabury
1865	BERTHA (ship)	955	Hutchins & Allen
1858	GRACE SARGENT (ship)	950	J. & J. A. Seabury
1883	ONAWAY (bark)	932	Loring, Cobb & Chadsey
1877	GEORGE A. WRIGHT (bark)	921	Hutchins & Stubbs
1876	ITONUS (bark)	851	Hutchins & Stubbs
1865	ALICE KELLEY (bark)	821	Giles Loring
1856	SAM LOCKE (ship)	806	Lyman Walker

Yarmouth Builds Eleven Noteworthy Down Easters, 1861-1879

Frederick C. Matthews, in AMERICAN MERCHANT SHIPS (1850-1900), deals with the ships built in New England that were fuller-bodied and less heavily canvased than the clippers and medium clippers and concentrates on this type of ship, which became generally known as the Down Easter. Matthews has selected eleven Yarmouth-built ships as worthy of mention in a work dealing with the product of all builders in the United States. The following list gives the ships especially mentioned by him, with their registered dimensions as set forth; all were built during the years 1861-1879 by the Seaburys in the Blanchard yard for the Blanchards (i.e., Blanchard Bros., following the death of Capt. Sylvanus Blanchard in 1859) with the lone exception of the ship *Eldorado* of 1,056 tons, built in 1864 by Lyman Walker for Cyrus F. Sargent and others, of Yarmouth.

Year Built	Name	Tonnage	Registered Dimensions in Feet		
			Length	Beam	Depth
1861	STAR	1,214	179	36	23.7
1862	P. G. BLANCHARD	1,317	185	35.7	25
1864	DETROIT (II)	1,321	198	38	27
1864	ELDORADO	1,056	185	35	23
1867	PERU	1,457	193	38	26
1869	PACIFIC	1,812	206	41	29
1871	S. C. BLANCHARD	1,904	220	41	27.7
1874	C. F. SARGENT	1,704	220	41	26
1875	ADMIRAL	2,212	248	44	27.8
1876	P. N. BLANCHARD	1,589	213	40	25
1879	COMMODORE (II)	1,781	226.7	41.7	27.5

The ship *Eldorado* (1,056 tons) built by Lyman Walker at Yarmouth should not be confused with another Maine-built ship *El Dorado* (1,147 tons), which was built by Capt.

Nathaniel L. Thompson at Kennebunk in 1865; both ships, incidentally, were lost in the North Pacific when engaged in the coastwise coal trade, the Yarmouth-built vessel foundering in April 1887 and the Kennebunk-built vessel being wrecked in July 1880.

The *Peru* was a large carrier, with a registered tonnage of 1,457 tons. It is said that she frequently loaded as high as 2,450 tons of guano. Capt. Samuel S. Thomas asserted that she was "the best American ship afloat for bulk cargoes." For a very full vessel, she made fair passages. Her voyages were generally between British and South American ports, carrying coal out and returning with guano. After sailing from Portland, Maine, for Liverpool in July 1867, the *Peru* did not enter any United States port for nineteen years except once, when she called at San Francisco from British Columbia. In her later years, the *Peru,* with Quebec ownership, operated in the trade between Canada and the River Plate, carrying lumber on the outward run. She was finally purchased by the Portuguese to operate between Rio de Janeiro and the Canary Islands, and she was wrecked on one of this group of islands in 1894 after a sea life of twenty-seven years.

The *S. C. Blanchard* was named after Sylvanus C. Blanchard, one of the Blanchard Bros. of Yarmouth, Maine, her owners. He was a son of Capt. Sylvanus Blanchard—the founder of the business—after whom one of the Blanchard fleet, the *Sylvanus Blanchard,* had been named when launched in 1853 (eighteen years before the *S. C. Blanchard* was built). The *S. C. Blanchard* was employed generally in trade with South America and San Francisco. She was a good carrier and made fair average passages. In a terrific storm in June 1882, when only eleven years old and with 2,600 long tons of wheat aboard, she foundered when bound from San Francisco to Antwerp in the South Atlantic about a thousand miles southeast of Montevideo.

The *C. F. Sargent* was built, it is said, with "the oak, birch, maple, etc., used in her frame cut in Canada, the hackmatack used for her top frames cut in Nova Scotia, and the yellow pine planking shipped by schooner from a Southern port." It is evident that in 1874 Maine was no longer a great shipbuilding state because of its forest products, for all the timber and wood generally used in the construction of the *C. F. Sargent* had to come from outside the state and long distances at that. Again, that Maine, with its cold and long winters, has never had an ideal climate for shipbuilding or any construction outdoors is brought to attention by the fact that the schooner that transported the hard pine planking from the South, to be used in the hull of the *C. F. Sargent,* found the river at Yarmouth frozen over; so she was compelled to discharge part of her cargo on the ice, whence it was hauled to the shipyard by ox teams. As this proved slow and expensive work, powerful and strongly built ice-breaking tugs were employed to clear a channel, and the schooner finally succeeded in discharging the remainder of her cargo on the wharf.

When the *C. F. Sargent* was only two and a half years old, she was sold to John Rosenfeld, of San Francisco. A year later, she again changed owners, becoming the property of George E. Plummer, also of San Francisco. In 1906, when thirty-two years old, she carried a cargo of western lumber to New York. At the completion of the voyage, she was sold to the Luckenbachs for conversion into a coal barge. During the first World War (October 1917), when forty-three years old, she was purchased by the United States Government. The *C. F. Sargent,* considering her lines, which were sharper than those of the usual Down Easter, was a rather slow sailer "year in and year out"; yet she made some good runs when benefited by unusually favorable conditions. Her greatest performance was rounding Cape Horn (from 50° S. Atlantic to 50° S. Pacific) in only 6 days 8 hours. Evidently, details of this splendid run are not available, although it was accepted by authorities as reported and as one unsurpassed in the history of sail and unequaled unless it was by the clipper *Young America,* which ran between the points in between 6 and 7 days. The Down Easter *Pactolus* is also credited with rounding the Horn in 6 days: from 50° S. Atlantic (64° W.) to 50° S. Pacific (89° W.). The Down Easter *John McDonald* and the clipper ship *Thatcher Magoun* are credited with runs of 6½ days. A run over 6 days and under 7 days was generally considered as 6 days, so the 6-day rounding by the *Pactolus* may or may not have been as short as the 6-day run of the *Young America*

and may have been fully as long as the roundings of 6½ days reported by the *Thatcher Magoun* and *John McDonald*. Captain Atherton of the *"Sargent"* was proud of the performance of his vessel in making the round voyage Cardiff-Hong Kong-San Francisco-Liverpool in the gross time of 12 months 21 days. On one occasion, the *"Sargent"* ran from San Francisco to the equator in 17 days, and she made a passage from the Golden Gate to Falmouth of 108 days—which was good work; later, she made a good run to Liverpool in 111 days, beating on this passage the British ship *Ennerdale* by three days. The *C. F. Sargent* had a rather eventful career. Whereas she made some good passages, she had many bad ones and met with many mishaps, such as grounding in 1877 and 1889, being dismasted in 1891 and 1895, and being afire in 1901.

The *Admiral* of 2,212 tons, Yarmouth's largest vessel, was generally considered a fine ship. Her lower masts and yards and lower topsail yards were of iron, although the ship was built in the Pine Tree State and at a place world famous before the Revolution for furnishing big pine trees for masting of the British Royal Navy. On her maiden voyage, the vessel was partly dismasted, losing her wood jib booms and fore- and main-topmasts, and had to put into Rio de Janeiro for repairs; resuming her voyage, the *Admiral* rounded Cape Horn in 18 days and made San Francisco 82 days out from Rio. On her return trip to the North Atlantic on this maiden voyage, the *Admiral,* laden with wheat, made a good passage from the Golden Gate to Liverpool in 111 days. The next voyage of the *Admiral* from New York bound for San Francisco was disastrous; the vessel went ashore during the night of February 8, 1877, on the Patagonian coast and was lost after only about one and a half years of service.

The last of the Blanchard ships, *Commodore (II),* was launched June 5, 1879. She was said to have been so strongly built and braced with "massive timbers and double diagonal hanging knees" that her stowage space suffered greatly, particularly for package freight, and only bulk cargoes, such as coal, could be loaded to advantage. The *Commodore,* outside of the ten years that she operated as a coal drogher along the Pacific Coast, seemed to have trouble with lading. One of her captains said that she would not load "enough raw sugar in bags to prevent her from being crank." When she was in the Pacific coastwise coal trade, there was a tendency to load her too deep, and it is said that, with 3,150 tons of coal aboard and down to 27½ ft. draft, she was "a very hard ship to handle." The *Commodore* was in the trade carrying wheat from San Francisco outbound and Welsh coal to California (or the Orient) on the return. On her fifth voyage, leaving Hong Kong for San Francisco April 7, 1885, she was partially dismasted and was sold soon after her arrival in port. In 1890 she again changed hands, being acquired by Middlemas & Boole, of San Francisco. On one occasion, she was badly burned when lying at the dock in San Francisco and was under heavy expense in reconditioning and the fitting of new masts and spars. It is said that in 1897 the *Commodore,* while light (in ballast), ran from the Golden Gate to Honolulu in 10 days without the royals set and without any of the sails having to be handled on this fast run. Loading sugar at Honolulu, she sailed August 20, 1897, for New York and at midnight, September 3, struck on the reefs of Malden Island and became a total loss when eighteen years old. The *Commodore* went ashore in good weather, but when it commenced to blow hard she quickly broke up, with a total loss of cargo, and the wreckage of the vessel was washed out to sea.

XX.

FREEPORT, MAINE

A Record of Its Most Prominent Shipbuilders and Their Product from the Early 1800's to the Down Easter Period

FREEPORT, MAINE, whereas in Casco Bay, located some sixteen miles (as the crow flies) northeast of Portland and six miles from Yarmouth, is only about fourteen miles west-southwest of Bath, the metropolis of shipbuilding in Maine. Freeport has a very definite shipbuilding history, and "a string of yards along the Harraseket, from Porter's Landing to Strout's Point," has sent privateers out into the Atlantic, small trading brigs to the West Indies, and sizable full-rigged wood Down Easters to round the Horn in the California run and battle with British iron and steam for markets on the Seven Seas. In colonial days, a locality named Mast Landing, on the easterly branch of the Harraseket, supplied timber for the British Navy, but it was on the westerly branch of the river that the history of Freeport shipbuilding begins.

Seward Porter settled in Freeport during the War of the Revolution. He had thirteen children, and they were primarily a seafaring family. One son, Joseph, was captain of the *America,* built by Seward Porter during the first decade of the nineteenth century. It is written that during the War of 1812, Joseph "was shut up in Russia for some time, after which he went to Turks Island to load and lost the *America* on his return home." Three other sons, John, Jeremiah, and Ebenezer, futilely raced in a fast privateer—the famous *Dash*—to meet death in a winter gale. When the wars with Britain were over, William was United States Consul at Tripoli. Another son, Seward, was a pioneer in steam navigation and a chartmaker. With his brothers Samuel and William, he engaged in business generally, and they were particularly active in the marine field as both shipbuilders and owners. When the War of 1812 broke out, Seward and Samuel Porter were in business as merchants on Union Wharf, Portland. They quickly sensed the fact that successful coast trading with the usual droghers was at an end, for such craft were sure to be picked up, the easy prey of any armed British vessel. Therefore, they decided to build a vessel whose prime defense would be in her speed and to arm her so that she could fight weaker craft as well as "show her heels" to more powerful armed vessels. They went to their old home at Porter's Landing, on the west branch of the Harraseket River in Freeport, and contracted with Master Builder Brewer to build for them a fast, lightly armed West Indian trader, constructed from their own plans. The *Dash* of 220 tons burden, launched early in 1813 and armed with a long 32-pounder, 6 broadside guns, and many wood dummy, or "Quaker," guns, was the result. She was originally a topsail schooner, but she was soon changed to a brigantine. She made many successful passages, running the blockade of the American coast, carrying paying cargoes, and bringing back goods greatly needed in the young republic. The Porters then decided to gamble further with the *Dash,* so they converted her into a privateer and increased her armament and crew. Under the command of John Porter, "one of the younger of the eleven Porter boys," the *Dash* captured many rich prizes and got them to port. She won fame and glory, becoming known as "The Pride of the Bay." It was said of her: "She never suffered defeat, never attacked an enemies' ship in vain, was never injured by a hostile shot and

knew no equal in speed." In 1814, the Porters built a larger privateer at Freeport named the *Tippoo Sahib*. When she was ready to sail and fight, the war was over and with it "the lusty days of the privateers"; so the craft passed her days in the West India trade, carrying pipe staves out and bringing coffee and molasses home.

For a quarter of a century or more, the Porters built at the Landing, and then Rufus Soule (known as "Honorable Rufus") used the yard in the forties and established shipbuilding as a commercial enterprise in Freeport. Rufus and, later, Rufus Soule & Son (Rufus Cushing Soule) constructed ships generally for Portland merchants. The Soules, it is said, "built a hundred ships" in the old Porter yard, and tradition has it that "Rufus Soule on his sixty-seventh birthday launched his sixty-seventh vessel." In the forties and fifties, the "Rufus Soules" launched some sizable vessels, the largest being their last ship, the *Daniel L. Choate* of 1,150 tons, built in 1859.

In late registers appear the records of the following six Freeport-built schooners constructed during the years 1830-1851 inclusive. Some are indexed under Cumberland, and all hailed from Portland, where the customhouse for vessels built and owned in Casco Bay was established.

Year Built	Name	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth
1830	LOVINA	52-29/95	57- 4	15- 8¾	6- 7
1832	MARGERET	73-85/95	64-10	18-11¼	7- 0½
1845	OREGON	57- 9/95	67- 2	21- 4	6- 4
1846	MARTIN	97-56/95	78	22	6- 6
1846	SARAH	58-60/95	58- 4	16- 9	6-10½
1851	LODUSKIA	108	86	24- 3	8- 2

Other registers record the following vessels built at Freeport: the two-masted brig *Fox* of 104 tons (72.8 ft. length, 21.4 ft. beam, 7.7 ft. depth), built in 1804, and the two-masted schooners *Friend* of 50 tons (56.2 ft. length, 15 ft. beam, 6 ft. depth), built in 1816, *Clio* of 67 tons (63.7 ft. length, 19.7 ft. beam, 6.3 ft. depth), built in 1826, *Galen* of 62 tons (60.6 ft. length, 16.6 ft. beam, 7 ft. depth), built in 1827, and *Harriet Rogers* of 57 tons (64.2 ft. length, 24.1 ft. beam, 6.4 ft. depth), built in 1846.

Rufus Soule and his son, who occupied the old Porter yard at Freeport, were a branch of the family separate from the Enos Soules, who for over forty years built at Strout's Point and were the most active and productive of all Freeport builders. Enos Soule, founder of the firm of Soule Bros., was a sea captain and as a lad was in the War of 1812. He suffered imprisonment in hulks on the Thames River and in Dartmoor Prison, England. He and his brothers, Henchman S. and Clement H. (all sons of Barnabas Soule), formed the firm of shipbuilders that operated until the death of Capt. Enos Soule in 1869. Thereafter, as Henchman S. had also passed away and Clement H. retired from shipbuilding, the yard and business were continued by Enos C. Soule, a son of Captain Soule, who had been in charge of building operations since 1860. The Soule yard at Strout's Point launched ships until 1879, when Enos C. Soule became convinced that the days of the wood ship were over. He moved to Newton, Mass., but continued as managing owner of the Soule fleet until his death, at the age of seventy-four, in 1894, fifteen years after he had built his last ship. (The last wood square-rigger was built in Bath in 1893, and the year of Enos C. Soule's death saw the building of Bath's first steel merchant sailing ship.) The Enos Soule yard was temporarily used once more for building wood vessels in the emergency—and need for any kind of floating bottoms—brought about by the World War of 1914-1918.

The Briggs-Means-Cushing shipyard was located on the Harraseket about a mile downriver below Porter's Landing. Here, John A. Briggs and Charles Cushing, in partnership as Briggs & Cushing, constructed the largest vessel ever built in Freeport—the ship *John A. Briggs* of 2,033 tons, launched in September 1878. Other large ships constructed at this yard were the *Jairus B. Lincoln* (1,814 tons), launched in 1869, the *John de Costa* (1,753 tons), laid down in 1876, and Briggs & Cushing's last vessel, which was the ship *Wilna* (1,483 tons), launched in 1880,

and the last ship built in Freeport. The master builder who designed and constructed all the vessels built at the Briggs-Means-Cushing yard was George Anderson, who was an able man and for a quarter of a century built many good ships for many owners.

The *John de Costa* was constructed for her builders' account. Fractions were sold to investors and were generally acquired by Portland interests. The ship hailed from Portland, Maine, but was managed by her builders and part owners. She was named after a prominent Liverpool shipping agent who did a large business with American ships. The *"De Costa"* was 217 ft. 2 in. long, 41 ft. 6 in. beam, and 25 ft. 4 in. deep and was launched in August 1876. On her sixth voyage, which started with a run out to Port Moody, British Columbia, with 2,300 tons of steel rails from Cardiff, Wales, she ran into bad weather and trouble off Cape Horn, turned about, and proceeded to her destination by way of the Cape of Good Hope and Bass Straits. Instead of the usual passage of some 16,000 miles, the *"De Costa"* covered some 24,000 miles and took 208 days instead of an anticipated 130 days or so. She was wrecked on July 18, 1885, off Cookstown, when carrying a cargo of horses from Melbourne to Calcutta, and at the time she was only nine years old. The *John de Costa* was a good carrier and made passages in fair average time.

The *John A. Briggs* (2,033 tons) was built, owned and managed by Briggs & Cushing, of Freeport, and was named after the senior member of the firm. She was launched August 31, 1878, and measured 234 ft. long, 44 ft. beam, and 28 ft. 2 in. deep. She was the largest vessel ever built in Freeport, and her launching was made a gala occasion. Governor Garcelon of Maine and James A. Garfield (later to become president of the United States) were among the thousands of people present, brought to Freeport by special trains, excursion boats, etc. The *"Briggs"* carried in ocean trade about 1.5 times her registered tonnage. She sailed from Baltimore in December 1895 with 3,000 tons of coal aboard and a draft of 27 ft. 8 in. Later, in the Pacific coastwise trade, where vessels were notoriously overloaded, she is reported to have carried 3,350 tons of coal. The *"Briggs"* was a full-bodied rather slow ship, although it has been said that "her sailing average was fair for a vessel of her class." When eight years old, the *"Briggs"* was sold to Capt. George Plummer at San Francisco for $37,000. She was kept in general deep-sea trade until 1901, when she was used in the Pacific lumber and coal business. The ship was generally fortunate in escaping damage, but on a voyage from Australia to San Francisco in 1902, she strained herself, started bad leaks, and had to put into Auckland, New Zealand, where her cargo was discharged and repairs made. The ship then proceeded to Puget Sound in ballast. From October 1903 to the end of 1905, the *John A. Briggs* was laid up in San Francisco. She then took a cargo of lumber from Port Blakely, Wash., around the Horn to New York, where she was converted into a coal barge. On December 26, 1909, when thirty-one years old, she foundered when in a tow off Barnegat, New Jersey. John A. Briggs, the builder, owner, and manager for whom the ship was named, died at Freeport, Maine, on October 15, 1885.

Capt. Enoch Talbot had a yard somewhat to the westward of that of Briggs & Cushing. Talbot built sizable vessels during the years 1848-1860 inclusive, the last three being his largest —the ship *Kentuckian* (1,049 tons) and the bark *Enoch Talbot* (1,242 tons), built in 1857, and the bark *P. C. Merryman* (922 tons), launched in 1860. The ship *Georgia* (448 tons), built in 1848, foundered in 1854 while crossing the Atlantic from Liverpool to Boston. The ship *Samuel Fales* (800 tons) was sold foreign, and the little bark *Occident* (208 tons), returning home on her first voyage after two years' absence, with hides and wool from the River Plate, was wrecked in Casco Bay because, it is said, changes had been made in 1856-1857 in the lights of Portland Harbor and Capt. A. T. Small had no knowledge of such changes.

Between the Talbot yard and that of Capt. Enos Soule at Strout's Point, Gershom and Charles Bliss established a yard and built, as Bliss Bros. and, later, as Charles Bliss and Company, many vessels—mostly fishing schooners and small craft. They did build some sizable barks, the largest and best known being the *Jennie S. Baker* (1,039 tons), built in 1869 (and

the biggest vessel laid down by the Bliss firm), the *Malville* (924 tons), launched in 1866, and the *Chalmette* (849 tons), built in 1865. The Bliss yard also turned out the brigs *Don Jacinto* (489 tons) in 1870, *Sarah Hobart* (453 tons) in 1864, and *Essex* (275 tons) in 1855.

The Enos Soule yard at Strout's Point was Freeport's greatest producer of ships, considering tonnage. The older Rufus Soule yard at Porter's Landing launched more vessels, but most of them, built in the first half of the century, were quite small. Briggs & Cushing built three ships that were 437 tons, 141 tons, and 80 tons, respectively, larger than Enos Soule's largest ship—the *Sintram* of 1,673 tons, launched in 1877; moreover, the firm of Briggs & Cushing laid down its last vessel, the ship *Wilna* of 1,483 tons, a year after Enos C. Soule had constructed his last vessel, the ship *Paramita* of 1,573 tons, and abandoned shipbuilding operations. The Soule Bros. and their successor, Enos C. Soule (also a sea captain like his father, Enos Soule), were primarily shipowners, merchants, and operators; but Briggs and Cushing were managing owners of most of the vessels that they built, some of which hailed from Portland, and were the owners of record of their biggest ship, the Down Easter *John A. Briggs* of 2,033 tons, named after the senior member of the firm and launched in 1878. The ship *Haidee* (655 tons), built by Soule Bros. in 1843, and the bark *Glen* (287 tons), built in 1848, figured in wild mutinies with gun play and death in mid-century. The ship *Lydia* (543 tons), built by Soule Bros., is of interest, as this vessel was the first command of Capt. Enos C. Soule, who, upon the death in 1869 of his father—the founder of the shipyard and the firm of shipbuilders and shipowners—carried on the business until his own death in 1894. The first *Tam O'Shanter* (777 tons), built in 1849, was also commanded by Capt. Enos C. Soule, but her life was short; she made a passage around the Horn from Boston to San Francisco (where she arrived March 26, 1853) in 130 days and crossed the Pacific. In the winter of 1853, returning to Boston from Calcutta, she had her deck stove in by heavy seas off Cape Cod and foundered. The clipper ship *Quickstep* of 823 tons was built by Enos Soule (i.e., Soule Bros.) in 1853. She was the only clipper built at Freeport. She measured 159 ft. 6 in. long and 33 ft. 9 in. beam and was owned by Dunham & Dimon, of New York.

The first *Uncle Toby* (1,144 tons), built in 1853 and the largest ship laid down by Soule Bros. up to that time, was lost at the mouth of the River Plate in 1862. The bark *Corporal Trim* (463 tons), built the year after the *Uncle Toby,* was wrecked on the Newfoundland coast in 1856. The ship *Superior* (1,240 tons), launched in 1854, was sold to Italian owners, and the ship *Sentinel* (929 tons), built the same year, was lost in 1857 on the island of Abaco, one of the Bahamas. The ship *Harraseket* (1,082 tons), built in 1856, was put under the British flag and her name changed to *Cosmopolite* during the Civil War to save her from Confederate commerce destroyers. The ship *Yorick* (1,287 tons), built in 1857, was sold to the British in 1862 because of conditions brought about by the Civil War. The ship *Lafayette* (1,160 tons), laid down in 1858, was a victim of the Confederate raider *Alabama* (Capt. Raphael Semmes). She was destroyed by fire in the Bay of Fundy in 1862, when carrying British-owned goods from New York to Belfast, Ireland. In 1876 the English Government paid the owners full indemnity for the vessel to the amount of $140,000, which covered the value of the ship in 1862 plus 4 per cent per annum interest for some thirteen and a half years. It was the loss of the *Lafayette* that caused Soule Bros. to put many of the fleet under the protection of the British flag. The ship *Southerner* (1,044 tons), built in 1859, was given British registry and during her career was also named *Dutchland* and, later, the *St. Lawrence.* The *H. S. Soule* (977 tons), built in 1861, became the *Suliot.* This full-rigged ship was destroyed by fire on the West Coast of South America in 1883, and the *Southerner* (previously mentioned and then named the *St. Lawrence*) was burned at New Orleans in the seventies. The *C. H. Soule* (977 tons), built in 1863 and a sister ship of the *H. S. Soule,* was sold to English owners. She foundered in the Indian Ocean in 1873, when ten years old.

The ship *Uncle Toby (II)* was launched in April 1866; she was 190 ft. long, 37 ft. beam, and 26½ ft. deep and registered 1,306 tons. For eleven years, she operated under the American flag in trade principally with the West Coast of South America and usually carried coal out, returning with guano. On May 10, 1877, while loading guano at Huanillos, she was severely

damaged, with many other vessels, by a great tidal wave. After being towed to Callao for survey and repairs, she was sold, renamed *Hermann,* and placed under the Costa Rican flag. For many years, the *Hermann* carried lumber on the Pacific. In January 1883, while on a passage from Puget Sound to Valparaiso, she put into Honolulu in distress, leaking badly and with her deck load lost. She was condemned and sold at auction for $3,700, but her buyers repaired the ship, renamed her the *Thomas R. Foster,* and put her again in the lumber and coal carrying business. On December 9, 1885, she sailed from Esquimault, British Columbia, with 1,650 tons of coal for Honolulu. On the 18th, the ship, with 12 ft. of water in her hold, was deliberately run ashore near Cape Cook. The old *Uncle Toby*—then a scant twenty years old—was a total loss, but all hands were saved.

The *Enos Soule,* built by Enos C. Soule and named after his father and the founder of the business of Soule Bros. of Freeport, was launched in November 1869, following old Captain Soule's death. She measured 1,518 tons gross and 1,443 tons net register and was 198 ft. 4 in. long, 38 ft. beam, and 26 ft. 9 in. deep. The *Enos Soule* made no fast passages. She was a full-bodied ship and, making fair average runs and carrying good cargoes, proved profitable to her owners. In December 1884, she left New York and did not again reach a North Atlantic port until she made Baltimore after an absence of three years and two months; in the meanwhile, she had entered and cleared Puget Sound, Callao (Peru), Tacoma, Sydney and Newcastle (Australia), Hong Kong, San Francisco, Tacoma, and Buenos Aires, whence she sailed to Baltimore. When she reached New York from the Pacific Coast in March 1889, the *Enos Soule* was re-rigged as a bark and used on shorter voyages. In 1894 she was rammed and sunk in New York Harbor by the German steamship *Aller,* but was raised and converted into a tow barge. Her end came on May 12, 1914, when, at the age of forty-five years, she struck on Brigantine Shoals, New Jersey, and became a total loss.

The most famous Soule ship, popularly described as "the clipper of the fleet," was the *Tam O'Shanter II,* launched September 18, 1875. This ship was a typical Down Easter of 1,602 tons gross and 1,522 tons net register and measured 213 ft. 8 in. long, 41 ft. 7 in. beam, and 24 ft. 3 in. deep. The *"Tam"* was a Cape Horner, with both a good carrying and a good sailing record. She made ten round voyages between North Atlantic ports and San Francisco and averaged 130 days for the westbound passage. One was a very slow run in 1882 of 163 days, made under unfavorable sailing conditions. She was 43 days in gales rounding Cape Horn. Her best passage occupied 111 days (reported as 110 days). On this her best run, she had a race to San Francisco with the *Shenandoah* and the *S. D. Carleton* and ran even with the big Bath shipentine, each of these vessels beating the *"Carleton"* by thirty-two days. (The *Shenandoah* sailed from New York, the *"Carleton"* from Philadelphia, and the *Tam O'Shanter* from Baltimore.) The *"Tam"* made a dozen eastbound passages from San Francisco around the Horn (three to New York and nine to British or European ports) and averaged 117 days, the shortest being a run from San Francisco to Queenstown in 107 days. Another good eastbound passage was a run from Tacoma to Queenstown in 122 days. The ship made one voyage to the Far East and three voyages to Japan; whence she returned to the North Atlantic by way of North Pacific ports. In 1895 the *Tam O'Shanter* sailed a race between Hong Kong and New York with the ship *Wandering Jew;* the vessels left port together and at times met and sailed side by side. They reached New York together after a passage of 95 days, so the race was declared a draw. In 1899, when twenty-four years old and on her fifth voyage in oriental trade, the *"Tam"* was lost in the Gaspar Straits.

The ship *Lucille* (1,394 tons), built by Enos C. Soule in 1874, is described as "the beautiful *Lucille";* she was sold to San Francisco owners. The *San Joaquin* (1,630 tons), built in 1876, had an unusual experience. In 1892, when bound to Portland, Maine, from the Pacific, she struck an iceberg off Cape Horn on a dark thick night. This floating berg, one of the largest reported, was said to be over nine miles long, and the *"Joaquin"* remained fast upon it until daylight the next morning, when Captain Larrabee succeeded in getting her clear by means of pulling on a line that he had carried to the berg. The ship was partially dismasted, her head gear carried away, and the bow badly stove. The pumps kept the water in the hold under

control, and she made her home port under jury rig. This vessel, like most of the sailing ships built in the sixties and seventies, was later converted into a coal barge, and she was engaged in this service when fifty-five years old.

The *Sintram* (1,673 tons) was built in 1877; she was a good carrier and an average performer and, when twenty-one years old (1898), was sold on the Pacific Coast.

The construction of the ship *Paramita* (1,573 tons) marked the end of operations in the shipyard that had been established by Capt. Enos Soule and his two brothers in 1839 and had built vessels fairly steadily for a period of forty years. The *Paramita* was launched in July 1879 and measured 216 ft. 6 in. long, 41 ft. 3 in. beam, and 23 ft. deep. Prior to 1900, when she was sold to Lewis, Anderson & Company, San Francisco, the *Paramita's* voyages were about equally divided between those to San Francisco and those to the Far East. During 1900-1904, the vessel was in the Pacific lumber and coal carrying trade, but she was then sold to L. A. Pedersen as an Alaskan salmon packer. On May 14, 1914, when engaged in this fisheries trade, she was driven ashore on Fox Island and became a total wreck when thirty-five years of age. The *Paramita* was a good Down Easter; she carried and handled well, and her voyages were made in reasonable time. In February 1897, she reached New York, 99 days out of Hong Kong, and it was reported that on this passage she made 350 miles per day on several days. The average length of passage from North Atlantic ports westbound to San Francisco was 129 days and eastbound 128½ days. (This small difference is surprising, if not unique, for eastbound passages have always been made in considerably less time than those to the westward.) The best passage of the *Paramita* westbound to the Golden Gate was an unusually good run of 112 days, in 1884, from Leith, Scotland; her best performance eastbound was a passage in 1881 of 113 days from San Francisco to Liverpool. The *Paramita* met with several mishaps. In 1885, when eastbound, she was badly battered in heavy gales off Cape Horn, with bulwarks stove and much damage about decks. Leaving Liverpool on her return to the Pacific Coast, she was in collision with an unknown vessel at the entrance to St. George's Channel, lost her jib boom and head gear, and suffered other damage, so that she had to put into Queenstown for repairs. In 1902, on a voyage from Newcastle, N.S.W., to San Francisco laden with coal, she put into Honolulu 82 days out with all three topmasts gone; her entire crew deserted the ship, and Captain Backus was required to discharge her cargo, rig jury topmasts on the fore and main, find new officers and a new crew, and sail to San Francisco in ballast.

The following table gives a list of the most important identified vessels built at Freeport, Maine, from 1839 to the end of the wood shipbuilding era, which terminated at Freeport (excluding the emergency war construction of 1917-1918) in 1880.

Year Built	Name and Tonnage	Rig	Builder	Year Built	Name and Tonnage	Rig	Builder
1839	ELLA; 299 tons	Bark	Soule Bros.	1850	CERRO GORDA; 576 tons	Ship	Rufus Soule
1841	SAN JUAN; 645 tons	Ship	Soule Bros.	1850	TAM O'SHANTER (I); 777 tons	Ship	Soule Bros.
1843	HAIDEE; 655 tons	Ship	Soule Bros.	1851	OXFORD; 517 tons	Bark	Rufus Soule & Son
1846	LYDIA; 543 tons	Ship	Soule Bros.	1851	SOUTER JONNY; 698 tons	Ship	Soule Bros.
1846	VENUS; 198 tons	Brig	Soule Bros.	1852	CHINA; 726 tons	Ship	Rufus Soule & Son
1847	ARTHUR; 579 tons	Ship	Soule Bros.	1853	ADJUSTA; 495 tons	Bark	Soule Bros.
1847	INCAS; 577 tons	Ship	Rufus Soule	1853	OCEAN HOME; 517 tons	Ship	Rufus Soule & Son
1848	GEORGIA; 448 tons	Ship	Enoch Talbot	1853	QUICKSTEP; 823 tons	Ship	Soule Bros.
1848	GLEN; 287 tons	Bark	Soule Bros.	1853	SAMUEL FALES; 800 tons	Ship	Enoch Talbot

(Continued on next page)

Year Built	Name and Tonnage	Rig	Builder
1853	UNCLE TOBY (I); 1,144 tons	Ship	Soule Bros.
1854	A. B. KIMBALL; 597 tons	Bark	Rufus Soule & Son
1854	CORPORAL TRIM; 463 tons	Bark	Soule Bros.
1854	SENTINEL; 929 tons	Ship	Soule Bros.
1854	SUPERIOR; 1,240 tons	Ship	Soule Bros.
1855	ESSEX; 275 tons	Brig	Bliss Bros.
1855	OCCIDENT; 208 tons	Bark	Enoch Talbot
1856	HARRASEKET; 1,082 tons	Ship	Soule Bros.
1856	OASIS (I); 679 tons	Ship	Briggs & Means
1856	RESOLUTE; 745 tons	Ship	Briggs & Means
1857	ENOCH TALBOT; 1,242 tons	Bark	Enoch Talbot
1857	KENTUCKIAN; 1,049 tons	Ship	Enoch Talbot
1857	YORICK; 1,287 tons	Ship	Soule Bros.
1858	LAFAYETTE; 1,160 tons	Ship	Soule Bros.
1859	C. M. DAVIS; 943 tons	Ship	Cushing, Briggs & Means
1859	DANIEL L. CHOATE; 1,150 tons	Ship	Rufus Soule & Son
1859	SOUTHERNER; 1,044 tons	Ship	Soule Bros.
1860	P. C. MERRYMAN; 922 tons	Bark	Enoch Talbot
1861	H. S. SOULE; 977 tons	Ship	Soule Bros.
1861	NORWEGIAN; 900 tons	Bark	Cushing, Briggs & Means
1863	C. H. SOULE; 977 tons	Ship	Soule Bros.
1863	ORSINA; 604 tons	Bark	Bliss Bros.
1864	JENNIE PRINCE; 953 tons	Bark	Briggs & Cushing
1864	SARAH HOBART; 453 tons	Brig	Bliss Bros.
1865	CHALMETTE; 849 tons	Bark	Bliss Bros.
1866	GENERAL FAIRCHILD; 1,100 tons	Bark	Briggs & Cushing
1866	MALVILLE; 924 tons	Bark	Bliss Bros.
1866	UNCLE TOBY (II); 1,306 tons	Ship	Soule Bros.
1867	NELLIE TRUE; 295 tons	Schooner	Soule Bros.
1867	TEASER; 137 tons	Schooner	Soule Bros.
1869	ENOS SOULE; 1,518 tons	Ship	Enos C. Soule
1869	JAIRUS B. LINCOLN; 1,814 tons	Ship	Briggs & Cushing
1869	JENNIE S. BAKER; 1,039 tons	Bark	Charles Bliss and Co.
1870	DON JACINTO; 489 tons	Brig	Charles Bliss and Co.
1871	OASIS (II); 1,105 tons	Bark	Briggs & Cushing
1874	LUCILLE; 1,394 tons	Ship	Enos C. Soule
1875	TAM O'SHANTER (II); 1,602 tons	Ship	Enos C. Soule
1876	JOHN DE COSTA; 1,753 tons	Ship	Briggs & Cushing
1876	SAN JOAQUIN; 1,630 tons	Ship	Enos C. Soule
1877	SINTRAM; 1,673 tons	Ship	Enos C. Soule
1878	JOHN A. BRIGGS; 2,033 tons	Ship	Briggs & Cushing
1879	PARAMITA; 1,573 tons	Ship	Enos C. Soule
1880	WILNA; 1,483 tons	Ship	Briggs & Cushing

Of the foregoing list of the best and most important sixty-one vessels built at Freeport, Maine, during the forty-two-year period of 1839-1880 inclusive, the old Rufus Soule yard built seven (five ships and two barks) totaling 4,660 tons; Capt. Enoch Talbot launched six (three ships and three barks) totaling 4,669 tons; Bliss Bros. and Charles Bliss and Company built seven (four barks and three brigs) totaling 4,633 tons, besides a fleet of fishing schooners and small craft; Briggs & Cushing (with Means) built eleven (seven ships and four barks) aggregating 13,508 tons; and Soule Bros., with the firm's successor, Enos C. Soule, launched thirty (twenty-three ships, four barks, one brig, and two schooners) totaling 27,430 tons register. The total list of sixty-one Freeport vessels is made up of thirty-eight full-rigged ships, seventeen barks, four brigs, and two schooners (unimportant craft being omitted), with an aggregate tonnage of 54,900 tons and an average size of the sixty-one vessels listed of 900 tons.

XXI.

THE KENNEBEC RIVER AND BATH, MAINE, "THE CITY OF SHIPS"

Early Explorations Are Followed by the Popham Expedition of Sea-minded Colonists and Their Launching of America's First Ship in 1607— the Seagoing VIRGINIA OF SAGADAHOCK

THE mouth of the Kennebec River was known in the sixteenth century for its fisheries and as a good location to dry or cure fish. In the northern latitudes, the excellent fishing was the magnet that brought European seafaring adventurers across the Atlantic, and in this respect the shores of the Kennebec (then known by its Indian name "Sagadahock") were in the same category of attractive land sites for curing fish in the seasonable months as were other locations in Newfoundland, Nova Scotia, and on the coast of Maine. The first European who is known to have landed at the site of Bath, the county seat of Sagadahoc County and the center of the shipbuilding industry in Maine, was Capt. George Waymouth (or Weymouth), who explored this part of the coast of Maine in the summer of 1605. He sailed up the Kennebec River and, wishing to know the quality of the soil and its adaptation to husbandry, took his boat and a part of the crew and landed. He reported that they passed over very good ground, "pleasant and fertile, and fit for pasture, having but little wood, and that oak, like that standing in our pastures in England, good and clear, fit timber for any use," and that there were also "some small birch, hazel, and brake, which could easily be cleared away and make good arable land." Captain Waymouth, in exploring the Kennebec region, had other things in mind besides fish. He dreamed of a self-supporting industrial and agricultural settlement and a trading center where ships could be built for both the fisheries and ocean commerce and the timber for building ships (and for their spars) sent to England. Waymouth was greatly impressed with the noble Kennebec River, whose deep water made a big sheltered and accessible harbor in which tremendous navies could ride in safety. He visioned a seaport and a shipbuilding and trading community rather than a site for curing fish, which, however, could be handled acceptably on the beaches near the mouth of the river.

Following Waymouth's enthusiastic report of the Kennebec (Sagadahock) River and territory, upon his return to England, the expeditions made to settle the region were different from generally similar adventures in the North Atlantic. While the prime object and basic source of maintenance continued to be the fisheries, the pioneer expedition that finally surmounted all handicaps and reached its goal in 1607 was intended and equipped to found a permanent colony similar to the contemporary adventure in southern Virginia (Jamestown) and the Plymouth (Pilgrim) and Massachusetts Bay (Puritan) colonies that followed it. The early Popham settlement of the Kennebec, influenced by a century of report and tradition, was fish-minded. It located at the mouth of the river at a site believed to be advantageous for the fisheries, for defense, and for ocean communications and trading, and the leaders gave but little thought, when selecting the site of their colony, to agriculture and permanent industry, protection from severe winter weather (of which they were grossly ignorant), and a host of

other considerations of vital importance in the location of a successful, permanent, and self-supporting settlement. The Popham expedition, which collapsed after experiencing one winter of severe weather in its exposed setting, was sea-minded, as the colonists brought an experienced shipwright with them. Although it was autumn when the adventurers landed and had to build a settlement within a protecting stockade, before the end of the year their first ship, the seagoing *Virginia,* was launched. This pioneer vessel—the first to be constructed in the New World—was built for both the fisheries and general trading. She was big and seaworthy enough to carry some of the discouraged and disillusioned adventurers back home in the spring of 1608 and make several transatlantic and long-distance ocean trading voyages thereafter.

The Development of Settlements Is Greatly Delayed by Indian Hostility, and Long Reach (Bath) Is Incorporated as a Parish in 1753 and as the Town of Bath in 1781

Whereas operations connected with the fisheries used locations around the mouth of the Kennebec following the abandonment of the well-built Popham settlement in 1608, evidently no attempt was made by Europeans to settle upriver on and about the Kennebec until 1630, when a company formed from the Plymouth Colony procured a grant covering acreage on each side of the river for a great distance from its mouth inland. The company was succeeded by the historic firm of Clark & Lake, which established a good business at Arrowsic and built and operated vessels. We are told that "in 1670 there were thirty families on the east side and twenty on the west side of the Sagadahoc, not counting Woolwich." This settlement, however, seems to have been destroyed by the Indians during "King Philip's War" in 1676. Later, they also burned down New Town, the first town organized on the Kennebec River in 1679. William Phips, who was later knighted and became governor of Massachusetts, built a ship at Phips Point (Woolwich) in 1674 for Boston parties, but by reason of the hostility of the Indians, when the ship was completed he took all the inhabitants of the place aboard the vessel and, with their "worldly goods," sailed for Boston and safety. A Robert Gutch had obtained title to the territory now comprising the city of Bath by a purchase from the Indians and a deed dated May 29, 1660, and there are records that a mill (or mills) was in operation at Woolwich, Sagadahoc County, on the east bank of the river opposite what later became known as Bath (which for years was known as the "West Bank" of the Long Reach of Georgetown). This settlement progressed so slowly that for upwards of three-quarters of a century only a sufficient number of persons had collected there to form a parish. However, it was most favorably situated for commercial enterprises, being located on the bank of a river extending far into the interior of a country abounding with valuable ship timber much sought after by the maritime powers of Europe.

Notwithstanding that land on the Kennebec was purchased by the settlers and traders from the Indians, the area was one of intermittent bloodshed for such a prolonged period of time that its steady development became impossible. Old records relate that in 1675 "the inhabitants were all destroyed or driven away by the savages"; in 1680, we read, the settlement was destroyed by Indians; in 1702 and 1704, battles were fought between the Indians and "Massachusetts troops." John Watts built a fort at Butler's Cove in 1714, and Jonathan Preble moved from old York to Arrowsic Island in 1716 and built a large two-story garrison and fortified home (42 ft. by 24 ft.), with flankers in the upper story. These two forts held out through the early eighteenth century period of Indian wars, and Preble lived and died (1768) in his garrison home. It was not until 1800 that Preble's grandson, Jonathan, built a house to

live in, and the old garrison home was not removed until 1804. It is recorded that in 1718 there were "but two houses on the island [Arrowsic], both of which were destroyed by fire," and it is stated in another record that in 1718 "there were but two houses on the West side of the Sagadahock." When John Lemont settled at New Meadows in 1722, he promptly built a garrison for a home. In August 1724, three captains, with 180 men, were sent to the lower Kennebec "to subdue the Indians," and in 1728 Major Denny built a fort near that of John Watts at Butler's Cove for defense against the savages. Fort Richmond was built at Dresden in 1710, and upriver forts were built at Augusta and opposite Waterville in 1754. In 1759, when the garrison at Mill Cove was taken down and three houses built of it, John Robinson's house was burned, and Joseph Berry, Jr., and Samuel Whitney were taken prisoner by the Indians. As late as May 1766, two settlers, Philbrook and Maloon, when plowing in the parish of Bath, were captured by Indians, carried to Canada, and sold to the French. Maloon returned to Bath in six weeks, while Philbrook, after being exchanged, returned the following October.

In September 1753, the Long Reach was incorporated as a parish and became the second distinct and defined parish of the larger area known as Georgetown, which had been incorporated in 1718. The parish of Long Reach took its present name of Bath and was the first town incorporated under the constitution of the state of Massachusetts. The Act of Incorporation was passed by the General Court on February 17, 1781. The defined boundaries of the town were: east by Sagadahock River, west by New Meadows (or Stevens) River, north by Merrymeeting Bay, and south by Winnegance Creek. Bath did not become part of the new state of Maine until 1820, being part of Massachusetts until that time, when the new Pine Tree State was taken into the Union.

Kennebec Shipbuilding from 1741 to the Years of the Revolution

Jonathan Philbrook and his sons built vessels at Bath during the period 1741-1755, and John Lemont is known to have built vessels at New Meadows as early as 1745. David Ring, who ran a sawmill, was building ships in 1760. In 1746, Capt. Benjamin Donnell took a vessel from the Kennebec (presumably Bath built), loaded with troops and supplies, to an appointed rendezvous at Boothbay and joined General Pepperell's forces, which sailed east to capture the French-held fortified port of Louisburg. This expedition of New Englanders was eminently successful. Sawmills were built on the Kennebec River in 1754, and shipbuilding was at times connected with the operation of the larger mills. During the last half of the eighteenth century, the manufacture of lumber on the river was carried on in a small way and did not assume major proportions until after the Jefferson embargo and the War of 1812.

Capt. William Swanton, who had been a captain in the army at the reduction of Louisburg, went to Bath from Massachusetts in 1760 and, in 1762, built the ship *Earl of Bute* on contract for a Scotch merchant. This is said to have been the first square-rigged ship ever built on the Kennebec River. Swanton, we are told, continued "to build a ship every year until the Revolutionary War." In 1763, he built a ship on contract for an English merchant named Jenness and, in 1764, built the *Rising Sun* for a man named Ayles, which was described as "a large ship." In 1765, he built a vessel named *Moon,* but a list of all the vessels constructed has not been preserved. In 1776, Swanton built the privateer *Black Prince* for Salem owners. This privately owned armed ship was an outstanding vessel and reflects great credit upon William Swanton in both design and construction. An early historian wrote that the *Black Prince* "for model and sailing was reported to be a masterpiece of workmanship," and Edgar S. Maclay, in A HISTORY of AMERICAN PRIVATEERS, says: "Perhaps one of the most formidable privateers that put to

sea in the year 1778 was the *Black Prince*. . . . This vessel was built expressly for privateering, being among the first of this class of formidable war craft to put to sea. She is said to have been an exceptionally handsome specimen of naval architecture." This privateer, according to both Bath and Salem records, carried 18 guns and had a complement of 160 men. Capt. Nathaniel West, of Salem, was her commander. When leaving the Kennebec, the *Black Prince* "had a smart battle" with an armed British ship of the same size and general class and captured her, sending the prize into port. John Donnell, of Bath, who worked on the ship during her construction, went to sea in her and tells how, to cut away the enemy rigging during her initial engagement, the commander of the *Black Prince* "put an ox chain into one of her guns." When the men boarded the enemy, "they found the chain stretched out in her bulwarks." Sailing from Salem in October 1778, the *Black Prince* quickly "captured a snow and two brigs," but the following year the ship was lost during the ill-advised and unfortunate Penobscot expedition. Capt. William Swanton was born in 1711. He was fifty-one years old when he built the ship *Earl of Bute* and sixty-five years old when he built the privateer *Black Prince*. He lived until he was ninety-nine years old and died in 1810.

Previous to the Revolution, the British, with a desire to discourage the development of a deep-sea American merchant marine and build up the British mercantile fleet with large units, decreed that of American vessels, only sloops would be permitted to carry timber from the colonies to Britain, and the British placed large ships (many colonial built) in the masting and timber trade. As the center of cutting and shipping large white pine trees for masts and spars, timber for shipbuilding, and both hard and soft woods for construction purposes moved east of lower Maine and as Falmouth, the Kennebec, Sheepscot, and Penobscot loaded many large British ships each year with masts, spars, and timbers, Major Harward's dock at Bath was called "The King's Dock." In April 1775, when news of the Battle of Lexington reached Bath, a large gang of men was loading white pine trees and timber into British ships in the Kennebec, and Harward's (The King's) Dock was the scene of great activity. At a town meeting, it was voted unanimously to discontinue the shipment of timber to Britain and order all British ships, seamen, and workmen to leave the river. Col. Dummer Sewall, with Capt. John Lemont, Lieut. Edward H. Page, and sixty well-armed men, put the wishes of the town meeting into effect promptly and, without any loss of life, drove the Britishers out of the Kennebec, following which Lieutenant Page, with ten men, was detailed to march to Cambridge and join the Continental Army.

A Record of Shipbuilding Activities from the Revolution to the Years Following the Second War with Britain

Very few vessels were built on the Kennebec during the War of the Revolution. A 140-ton sloop named *Union* (built by Joshua Raynes and owned in Bath), when loaded with molasses from the West Indies, was taken in 1775 off Seguin by a British warship. In 1776 a British sloop of war sailed well up the river, but was driven off by strategically placed cannon and harassing small armed craft. In 1781-1783, some vessels (at least a schooner and a sloop) were built at Mill Cove, and in the latter year a 100-ton schooner, built by Joshua Raynes for Dummer Sewall, Joshua Philbrook, Edward H. Page, and seven others, was described as "the first vessel built at Bath after the Revolution." On the conclusion of peace with Great Britain, when the restrictive measures that had been imposed upon American trade were generally removed and the channels of commercial enterprise opened, the inhabitants of Bath and the Kennebec area became actively and profitably engaged in lumbering and shipbuilding. Levi P.

Lemont, in 1400 HISTORICAL DATES OF THE TOWN AND CITY OF BATH, published in 1874, cites from old records the construction of the following vessels during the period 1783-1799 inclusive:

Year Built	Builder	Vessel
1783	Joshua Shaw	Schooner
1783	Joshua Raynes	100-ton schooner
1785	Ring & Mitchell	Brig
1785	John Clark	TWO FRIENDS (schooner)
1785	Jonathan Davis	LARK (81-ton sloop)
1787	Simeon Turner	SALLY (sloop)
1789	John Clark and Peleg Tallman	THERESA (178-ton brig)
1790	Jonathan Davis	UNION (schooner)
1790	Jonathan Davis	SPEEDWELL (61-ton schooner)
1790	A. Hawland (also recorded as Howland)	FLORA (schooner)
1790	Jonathan Davis & Son	ATLANTIC (254-ton ship)
1790	David Shaw	Schooner
1791	David Trufant	CHARLOTTE (181-ton brig)
1791	Sumner & Lowell	RUBY (sloop)
1792	Z. Lincoln	INDEPENDENCE (brig)
1792	Z. Lincoln	UNION (brig)
1793	Jonathan Davis & Son	MINERVA (83-ton schooner)
1793	Jonathan Davis	SPEEDWELL (170-ton brig)
1793	Stephen Sewall	LAURA (brig)
1793	Simeon Turner	DINAH (brig)
1793	John Clark	ROSANNA (391-ton ship)
1793	Jonathan Davis & Son	MARATON (224-ton ship)
1794	David Shaw	14-gun privateer
1794	Thomas Clapp	LAURA (brig)
1795	Jonathan Davis	DOLPHIN (80-ton sloop)
1795	John Clark	LOUISA (207-ton ship)
1795	David Sumner (also recorded as Davis)	UNION (brig)
1796	John Moody	MARCUS (schooner)
1796	John Clark	FRIENDSHIP (schooner)
1796	John Clark	NEUTRALITY (brig)
1796	Levi Peterson	MAYFLOWER (170-ton ship)
1797	David Trufant	SUCCESS (schooner)
1797	John Peterson	POLLY (166-ton ship)
1797	Charles Clapp	RECOVERY (207-ton ship)
1799	Peleg Tallman	MARY (schooner)
1799	Peleg Tallman	ARETHUSA
1799	Charles Clapp	GLIDE (schooner)
1799	Charles Clapp	CATHARINE (sloop)

The foregoing list of both builders and the vessels constructed during the period set forth is far from complete. Official customhouse records of sizable wood brigs and brigantines tell us that Thomas Agry built the 115-ton brigantine *Dolphin* in 1784; Jerome Loring was a shipbuilder as well as a blacksmith in 1787; and Charles Clapp (Senior) was building ships in 1788, when Samuel Oakman, according to the register, built the brigantine *Silvena* of 161 tons. Thomas Harward built the 167-ton brigantine *Polly* in 1790, and William Springer launched the brig *Hannah* of 178 tons the following year. David Shaw was building ships before 1794, and Samuel and Joshua as well as John M. Moody were building vessels in 1795. Zenas Wood constructed and registered the 169-ton brig *Hazard* and John Dunlap the 124-ton brig *Hannibal* in 1796. David Stinson was a builder in 1798, and in that year William King, who was an important builder at the end of the century, built and registered the 188-ton brig *Ferdinand.* Isaac Perkins, according to official records, built a brig of 133 tons in Topsham in 1799 for Boston owners, and as the century ended John Richardson and William Springer were each building a brig. A schooner named *Sea Flower* of 22 tons (length 41 ft. 1 in., beam 12 ft. 7 in., depth 5 ft. 2 in.) is officially recorded as having been built in the Bath district in 1780 by William Given; she hailed from Topsham. A 25-ton schooner *Betsy* was built by George Gardiner at Georgetown in 1783, and four schooners of from 61 to 116 tons were officially recorded as built in the Bath district in 1784. The schooners *Polly* of 119 tons and *Sally* of

99 tons were registered as built in 1785 and another *Sally* of 52 tons and the *Vassalborough* of 98 tons in 1786. Official customhouse records show that in 1787 Ephraim Delano built the 160-ton schooner *Woolwich* and that, in the same year, James Waterhouse built the little schooner *Dolphin* of 31 tons. Four schooners of from 56 to 100 tons appear in the customhouse records as built in the Bath district in 1788; four of from 72 to 108 tons in 1789; and three of from 33 to 87 tons in 1790. As these recorded vessels were registered some time after they were built and many were quite old when their names appear in customhouse records, it is obvious that all records of early vessel construction on the Kennebec, and generally throughout the United States, are most incomplete and that a perusal of all available government and private records tells us only a fraction of the story of early American shipbuilding.

Jonathan Hyde, of Bath and the Kennebec River at Long Reach, wrote in 1792: "I see a good many single-deck schooners and sloops passing up and down the river, deeply loaded with lumber. . . . There are three wharves. . . . The appearance along the river is quite interesting, a few farms having been cleared, mills and vessels are building." Hyde refers to the existence of the great store, owned by the elder Jonathan Davis, which "enjoys a large trade." The brick store with a wharf, built in 1783, is a historic landmark. It stood and still stands (in the 1930's) immediately south of the site of the Bath Iron Works and was in the wood shipyard owned for a good part of the nineteenth century by the Houghtons, builders of famous square-riggers known in all parts of the world. Charles Clapp, a shipbuilder and father of shipbuilders, located at Clapp's Point (North Bath) in the 1780's, and a century later his old property and yard became part of the Kelley, Spear & Company shipyard—the last great wood shipyard in Bath and the world. It survived until the end of 1923 and built two schooner-rigged tow barges that year and fifty-three vessels of similar type as well as twenty sailing schooners in the twentieth century (1900-1923). The three Moody brothers, Samuel, Joshua, and John M., were at Bath in 1795 and were located near what later became "the Moody place"—part of a tract of land that has launched more wood ships, over a long period of time, than any other plot of similar size in the world.

The following table gives particulars and dimensions of the most sizable brigs and brigantines built and registered in the Bath district prior to 1800 as taken from the Bath customhouse records; it is known to be very incomplete. Commencing with 1791, a vessel designated as a brig might be either a brig or brigantine, and the following list records only two-masted vessels with at least one of the masts completely square-rigged. Fore-and-aft-rigged vessels, schooners (straight or square topsail), sloops (with or without a yard), and three-masted vessels are not included; neither is any small craft.

Year Built	Name, Tonnage, and Stated Rig	Builder	Hailing from	Where Built	Registered Dimensions in Feet and Inches		
					Length	Beam	Depth
1784	DOLPHIN; 115 tons; brigantine	Thomas Agry	Kennebec	Pittston	71	21- 8	8-10
1788	SILVENA; 161 tons; brigantine	Sam'l Oakman	Pittston	Bath	74- 3	22- 6	11- 3
1788	UNION; 100 tons; brigantine	Jonathan Davis	Bath	Georgetown	68	22- 6	7- 9
1789	THERESA; 178 tons; brigantine	John Clark	Bath	Bath	78	23	11- 6
1790	POLLY; 167 tons; brigantine	Thos. Harward	Kennebec	Ponnasboro	74	23	11- 6
1791	HANNAH; 178 tons; brig	Wm. Springer	Kennebec	Pittston	78	23	11- 6
1791	CHARLOTTE; 181 tons; brig	David Trufant	New London	Bath	79	23	11- 6
1796	HAZARD; 169 tons; brig	Zenas Wood	Sandwich	Georgetown	76	22- 9	11- 4½
1796	HANNIBAL; 124 tons; brig	John Dunlap	Brunswick	Brunswick	74	23- 2	8- 6
1798	FERDINAND; 188 tons; brig	William King	Bath	Bath	77- 1	23-10½	11-11¼
1799	ANDROSCOGGIN; 133 tons; brig	Isaac Perkins	Boston	Topsham	75-10	22- 7	9

The Bath Customs District was established by act of Congress on July 31, 1789. An admittedly incomplete customhouse record shows the building of seventeen vessels during 1783-1790. Contemporary writers and historians mention the building, in quantity, of vessels

in Bath in this and following decades, which vessels cannot be identified with those mentioned in the official records. It is evident that if the complete family histories of wood shipbuilders and their output were available for the entire natural Bath, Maine, territory and all vessels were recorded, no matter where they were owned and registered, the number of vessels built on the Kennebec River and associated contiguous waters—following the building of the ocean-going *Virginia* of 30 tons in 1607—would be surprisingly great and far in excess of any estimates published in the past.

Vessels have been built at numerous points on the banks of the Kennebec River and communicating inland waters, and records show that even out at sea, some three miles from the mouth of the Kennebec, on the rocky island of Seguin a schooner was built in the summer of 1798 for the cod fisheries. This vessel was constructed by John Polereezky (or Polereczky) and Francis Goud (described as residents of that island) and Benjamin Emmons, merchant of Georgetown. The fishing schooner, named *Nancy,* was commanded by Capt. James Gould (recorded also as Goud).

Henry Hall, in his REPORT ON THE SHIPBUILDING INDUSTRY OF THE UNITED STATES, published in the eighth volume of the TENTH CENSUS OF THE UNITED STATES, 1880 (Washington, 1884), makes a number of interesting comments on shipbuilding in Bath. He says in his letter dated November 30, 1882, transmitting his report: "The work of this investigation began in November 1880 in the City of Bath, Maine, at which place the greatest number and the largest and finest wooden vessels in this country are built." In the body of his report, Henry Hall says:

> At Bath, the principal shipbuilding town of the United States, the business dates back to 1745, sloops and small schooners having been built at that early date for the coasting trade. This town enjoyed the advantages of a broad, deep river which seldom if ever froze over in winter, and of an abundant supply of the finest white oak and white pine timber, the banks of the river as well as the whole of the surrounding country being covered with dense forests of this valuable wood. The roads were bad, and traveling and trade were chiefly by water; but the town prospered more than any other on the coast. The first few experiments were successful, as the vessels made money, and the town went on building, increasing the size of its vessels and the field of their operations year by year. . . .
>
> Bath vessels are famous for their excellent model and their handsome appearance and are popular with captains on account of the pains which have been taken to fit up the cabins in style and comfort. . . .
>
> All the early Bath vessels were built of native oak and hard wood, with white pine houses, decks and masts. Oak and hard wood were put into the keels, elm rarely, and sometimes black gum from the south. The stems and stern-posts, as also the planking, were always of oak; and this fashion, even after the introduction of pitch-pine, was retained for a while for the bow. The knees were formerly of oak. But the local timber of any value has been all cleared away, a century and a half of active shipbuilding and a large export trade in lumber having destroyed the old forests of this region.

Henry Wilson Owen says that the shipbuilders of Bath in the eighties of the eighteenth century were Joshua Shaw, Joshua Raynes, Ring & Mitchell, John Clark, Jonathan Davis, Simeon Turner, and A. Howland. The tonnage he gives from admittedly incomplete records as 4,724. In the last decade of the eighteenth century, the new names appearing among the official records of shipbuilders in Bath proper were David Trufant, Stephen Sewall, John M. Moody, Charles Clapp, Jonathan and Samuel Davis, John Peterson, Peleg Tallman, William King, John Arnold, Davis Sumner and John Lowell (Sumner & Lowell), John and Isaac Snow, T. Fillebrown, George Crosby, John Sprague, William Ripley, John Shaw, and Edward Pettingill. In this decade, available statistics, which again grossly understate, give the tonnage in the Bath district as 27,219 tons. In those days, Bath shipbuilders generally owned and operated their own vessels, and at the turn of the century Bath—and the Kennebec River—was well started on the way to its maritime prominence.

The following table gives a list of sizable brigs (or brigantines) for the period taken from Bath customhouse records as being built in Bath and registered in the district during the five-year period 1800-1804 inclusive:

Year Built	Name of Brig and Tonnage	Builder	Hailing from	Where Built	Registered Dimensions in Feet and Inches		
					Length	Beam	Depth
1800	POLLY; 112 tons	Wm. Springer	Hallowell	Hallowell	68-10½	21- 7¾	8-10
	MINERVA; 137 tons	John Richardson	Topsham	Topsham	75-10	22-10	9- 2½
1801	TWO BROTHERS; 162 tons	Abias Banges	Manchester	Georgetown	76- 6	24- 3½	10- 3½
	NANCY; 136 tons	Jerome Loring	Bath	Bath	74- 5½	22-11½	9- 3½
	MARY; 124 tons	Sam'l Dunlap	Brunswick	Brunswick	73	22- 3¼	8-10¾
	ARGO; 158 tons	Cowen Lilly	Augusta	Pittston	78- 1	24	9-10
	BRILLIANT; 138 tons	Wm. Lee	Georgetown	Georgetown	72- 3	22- 0¼	10- 1
	MARY; 124 tons	John Mathews	Brunswick	Brunswick	73	22- 3¼	8-10¾
	WASHINGTON; 169 tons	Peter Grant	Hallowell	Hallowell	82- 7½	23- 4	10- 0½
	AMITY; 162 tons	John M. Moody	Bath	Bath	81- 9	23-10	9- 7
	VALERIUS; 137 tons	William King	Bath	Bath	78	22- 8½	8-11
1802	JOHN; 158 tons	John Pearsons	Newburyport	Bath	76	23- 8¾	10- 3½
	LITTLE JANE; 161 tons	Jotham Barnes	Boston	Bath	80	23-11	9- 9
	FOX; 124 tons	Zadock Lincoln	Bath	Bath	73- 3	21-11	9
	FRANKLIN; 139 tons	Stephen Jewett	Pittston	Pittston	78	22- 9	9- 1
	EDWARD; 190 tons	David Trufant	Bath	Bath	77- 8¾	24	12
	HARRIET; 162 tons	Stephen Pivington	Harpswell	Harpswell	80-10	23- 7	9-10
1803	MARY JANE; 156 tons	Thos. McCobb	Georgetown	Hallowell	78- 9	23- 6	9- 9¼
	HARRIOT; 126 tons	Sam'l Elwell	Gardiner	Augusta	74- 1½	22- 3¼	8-10½
	CENTRE; 155 tons	Jerome Loring	Bath	Bath	73- 8	22- 8	10- 9
	SUPERB; 170 tons	Robert Bosworth	Bath	Bath	78- 5½	22-11½	11- 5¾
	ENOCH; 122 tons	Wm. Lincoln	Bath	Bath	72- 3½	22- 4½	8- 8½
	FRANCES; 182 tons	Sam'l Davis	Bath	Bath	77- 3	23- 5	11- 8½
	ULYSSES; 156 tons	Patrick Drummond	Georgetown	Georgetown	79- 3	23- 8½	9- 7½
	TWO BETSYS; 141 tons	John S. Trott	Boston	Bath	74- 7	23- 5	9- 5½
	EDWARD & CHARLES; 149 tons	Jonathan Crooker	Bath	Bath	73	23- 1¾	10- 4¾
1804	HEBE; 174 tons	Aaron Kimball	Bath	Bath	82- 7	23-10½	10- 2
	WILLIAM & MARTHA; 134 tons	Jeremiah Fisher	Georgetown	Georgetown	74- 7	23- 3	9- 1
	ENTERPRISE; 128 tons	James Thatcher	Hallowell	Hallowell	71- 7½	23- 1	9- 1½
	HARMONY; 183 tons	Peleg Sprague	Woolwich	Bath	84- 3	24- 7¼	10- 2½
	EMMELINE; 202 tons	Benj. Folensbee	Hallowell	Pittston	80- 8	24- 1	12- 0½
	PAULINA; 132 tons	David Morrison	Augusta	Bath	76- 2	24- 1	8- 6
	DECATUR; 141 tons	David Trufant	Bath	Bath	78- 2	23	9- 1
	HAMILTON; 170 tons	Joseph White, Jr.	Bath	Bath	80- 8½	24- 5	10- 0½
	PALLAS; 242 tons	Joseph Mitchell	Bath	Woolwich	87- 7	25	12- 6
	ELIZA; 157 tons	Lemuel Standish	Bath	Bath	78	23- 3½	10
	LEOPARD; 155 tons	John Swett	Brunswick	Brunswick	82- 5	23- 7	9- 2½
	DIAN; 158 tons	Joseph Foster	Topsham	Topsham	79- 2	23- 9	9-10½
	RUFUS KING; 149 tons	Robert Trevitt	Bath	Bath	77- 3	23- 8	9- 6
	THOMAS; 187 tons	Wm. Flitner	Georgetown	Georgetown	85	24- 7	10- 4
	OLYMPUS; 170 tons	John Springer	Boston	Bowdoinham	81- 6	23- 6	10- 2½
	HAMLET; 204 tons	John Dunlap	Bath	Brunswick	82	24	12

This list is obviously far from being complete. Levi P. Lemont, in a list of important vessels built at Bath during the five-year period, mentions—in addition to fourteen ships and eleven schooners—ten brigs; but of the brigs specifically mentioned by him as important, five are not given at all in the foregoing list taken from customhouse records. The brig *Rufus King*, registered as built by Robert Trevitt in 1804, Lemont records as constructed by Enoch Jones. The brig *Edward* is recorded by Lemont as being built in 1803 by David Trufant and T. Jones. The five brigs recorded with prominence by Lemont, which are not included in the before-stated table, are:

Three Friends, a brig of 123 tons, built by Peleg Tallman in 1800.
Unanimous, a brig of 141 tons, built by Jerome Loring in 1801.
White Oak, a brig of 143 tons, built by John Peterson in 1801.
Androscoggin, a brig, built by William King in 1802.
Amity, a brig of 162 tons, built by J. M. Moody in 1802.

It is of interest to note that Levi P. Lemont considered that fourteen ships, ten brigs, and eleven schooners built in Bath during the years 1800-1804 were worthy of specific mention; this means a total of thirty-five sizable vessels in the first five years of the nineteenth century, or an average of seven important vessels per year.

The number, particulars, and averages of sizable wood brigs and brigantines recorded at the customhouse as built during the period 1784 to 1811 inclusive (or prior to the War of 1812) are set forth herewith. It should be noted that in this and similar lists of "sizable" vessels, all small craft have been omitted. In the records, all the vessels of this general class built after 1790 are designated as brigs, while the same rig on vessels built prior to 1790 is classified as that of a brigantine.

Year or Period	Range of Tonnage	Tonnage of Sizable 2-masted Square-riggers		No. of Vessels Considered	Aver. Dimensions in Ft. of Sizable 2-masted Square-riggers			Name and Tonnage of Largest Vessels	
		Total	Aver. per Vessel		Length	Beam	Depth		
1784-1791	100-181	1,080	154	7	74.6	22.6	10.6	CHARLOTTE	181
								HANNAH	178
								THERESA	178
1796-1800	112-188	863	144	6	74.6	22.8	9.8	FERDINAND	188
								HAZARD	169
								MINERVA	137
1801	124-169	1,310	146	9	76.6	23.1	9.5	WASHINGTON	169
								AMITY	162
								TWO BROTHERS	162
1802	124-190	934	156	6	77.6	23.3	10	EDWARD	190
								HARRIET	162
								LITTLE JANE	161
1803	122-182	1,357	151	9	75.7	23	10.1	FRANCES	182
								SUPERB	170
								MARY JANE	156
1804	128-242	2,686	168	16	80.1	23.9	10.1	PALLAS	242
								HAMLET	204
								EMMELINE	202
1805	129-221	1,510	168	9	78.3	23.5	10.6	RETRIEVE	221
								MINERVA	187
								HENRY	176
1806	128-203	2,481	165	15	80.4	23.8	10	WILLIAM KING	203
								REPUBLICAN	198
								ALMIRA	189
1807	149-226	1,604	178	9	83.1	24.3	10.2	NANCY & MARY	226
								FRANKLIN	197
								HENRY	180
1809	120-234	1,410	176	8	82.1	24.3	10.2	PERSEVERANCE	234
								CHANCE	199
								HARMONY	194

(Continued on next page)

Year or Period	Range of Tonnage	Tonnage of Sizable 2-masted Square-riggers		No. of Vessels Considered	Aver. Dimensions in Ft. of Sizable 2-masted Square-riggers			Name and Tonnage of Largest Vessels	
		Total	Aver. per Vessel		Length	Beam	Depth		
1810	121-293	3,653	183	20	81.8	24	10.6	ADELINE	293
								ANN	266
								HECTOR	232
1811	130-281	5,022	186	27	83.1	24.5	10.7	JOHN	281
								WILLIAM HENRY	264
								RISING HOPE	257

Because of the war, only five two-masted square-riggers of size (ranging from 143 to 183 tons) were built in Bath during the years 1812-1814 inclusive; but in 1815, seventeen sizable brigs and brigantines were built of from 110 to 252 tons (aggregating 2,790 tons and averaging 164 tons per vessel), the largest vessels being the *Minerva* of 252 tons, the *Huron* of 246 tons, and the *Visitor* of 210 tons.

Shipping was profitable for the Bath shipbuilder-merchant around the turn of the century. We are told that William King's ship *Reunion* of 281 tons, built in 1800, paid her total building cost and "cleared herself three times in three successive round voyages to England." Samuel Todd is mentioned as a blockmaker (for ships) in the records of 1786. A ropewalk was built about 1807 and a brass foundry about the same time. In 1802, William King opened up the cotton trade with New Orleans, which was to mean much to Bath for a period of some eighty years. The brig *Androscoggin,* we are told, with Nehemiah Harding as master, was ordered to New Orleans by William King in 1802. "Capt. Harding asked Mr. King where New Orleans was and was told that it was somewhere on the Gulf of Mexico. The difficulty was to find the mouth of the Mississippi river and he was lucky to find an old Spanish chart; by that he found the river and this was the first vessel that ever went from the state of Maine to New Orleans."

Some old records suggest that William Swanton's famous "first contract ship," the *Earl of Bute,* built in 1762, was not a full-rigged three-masted ship as generally stated by historians but a brigantine and that many of the early "ships" were in fact two-masted vessels of either brig or brigantine rig—some probably topsail schooners. John Clark is reported to have built a real full-rigged three-masted ship, the *Rosanna* of 391 tons, in 1793 and a smaller ship, the *Louisa* of 207 tons, in 1795 in addition to several brigs, brigantines, and schooners. However, it is generally felt that the first real full-rigged ship built at Bath was the *Atlantic* of 234 (or 254) tons, launched by Jonathan Davis in 1790; she was 84 ft. long and 25½ ft. beam. The next ship, it is said, was the *Charlotte* of 193 tons (length 80½ ft. and beam 19 ft.), built at Hallowell by John Arnold in 1791; but there may be confusion here, for a brig *Charlotte* of 181 tons was built the same year (1791) by David Trufant at Bath for New London owners.

Jonathan Davis, of old Bath (who has left historic landmarks), was primarily a merchant and after the Revolution began to build ships in addition to carrying on his other business. His sons Jonathan, Jr., and Samuel became his partners and succeeded him at his death. Earlier shipbuilding ventures in Bath on a commercial scale, such as that of Capt. William Swanton, had been brought to a halt by the Revolutionary War, but it was the Jefferson appeasing Embargo Act of December 22, 1807, that wrecked the Davis fortune, as it did that of a large number of other Bath men and families interested in the building and operation of ships. South Street in Bath is the old "Davis Lane," and at the head of it Samuel Davis—accounted at the turn of the century "one of the foremost merchants" in territory that grew to be the state of Maine—built in 1803 a mansion that is now the Bath Orphans' Home. The first record available of shipbuilding by Jonathan Davis is his launching of an 81-ton sloop in 1785. Statistics show that the Davis yard built at least nineteen ships during the twenty-two-year period of 1785-1806 inclusive, when the Embargo Act of 1807 operated to suspend

operations. Later, following the War of 1812 with England, the brothers, Samuel and Jonathan, built a sizable ship of 340 tons in 1815 and a brig of 205 tons in 1819. The fleet of ships reported to have been built by the Davis' is typical of the times:

Year	Name	Type	Tonnage	Year	Name	Type	Tonnage
1785	LARK	Sloop	81	1796	HERO	Schooner	130
1788	UNION	Brig	100	1799	ANTELOPE	Ship	252
1790	SPEEDWELL	Schooner	61	1800	HENRY	Brig	152
1790	UNION	Schooner	14	1801	SPARTAN	Ship	248
1790	ATLANTIC	Ship	235	1803	FRANCES	Brig	183
1792	MERCURY	Brig	193	1804	DECATUR	Brig	142
1793	SPEEDWELL	Brig	170	1804	SUFFOLK	Ship	203
1793	MERCATOR	Ship	224	1806	ANTELOPE	Ship	224
1793	MINERVA	Schooner	83	1815	THOMAS FOWLER	Ship	340
1795	DOLPHIN	Sloop	80	1819	BEAVER	Brig	205
1796	KINGSTON	Ship	409	Total (21 vessels)			3,729 tons

Many of the foregoing vessels do not appear in customhouse records, and of those set forth in such records, the brig *Frances,* built in 1803, is credited to Samuel Davis as the builder; but the brig *Decatur,* built in 1804, is credited to David Trufant, the ship *Thomas Fowler,* built in 1815, to John Bosworth, and the brig *Beaver* is recorded as built in 1819 by Peleg Sprague in Bath for Boston parties.

Shipbuilding in the Bath (Kennebec) district increased rapidly after the turn of the century, as the following incomplete records show:

Year	Number of Vessels Built	Number of Square-rigged Ships	Year	Number of Vessels Built	Number of Square-rigged Ships
1801	27	4	1807	29	4
1802	26	6	1808	8*	1
1803	26	5	1809	29	7
1804	37	8	1810	33	5
1805	32	11	1811	53	12
1806	34	13			

*Result of Jefferson's shipping embargo, which influenced building in 1807-1809.

Levi P. Lemont, the Bath historian, states that the following important vessels were built at Bath by William King during the first decade of the nineteenth century:

Year Built	Name of Vessel	Tonnage	Rig	Year Built	Name of Vessel	Tonnage	Rig
1800	REUNION	281	Ship	1804	FAIR AMERICA	186	Ship
1801	VALERIUS	137	Brig	1805	ALEXANDER	240	Ship
1802	CONFIDENCE	336	Ship	1809	VIGILANT	343	Ship
1802	ANDROSCOGGIN	—	Brig	1809	UNITED STATES	301	Ship
1803	UNITED STATES	301	Ship	1809	RESOLUTION	353	Ship

It would seem that whereas many ships named *United States* have been built, it is unlikely that William King built two ships of this name six years apart, each registering 301 tons; possibly the ship *United States* recorded as built in 1809 was the older vessel that was laid up because of Jefferson's absolute embargo of 1807 and reconditioned when she was again put in service in 1809. (John Richardson also appears in Bath records as the builder in 1811 of a 301-ton ship named *United States.*) Lemont credits William King with building the ship *Fair America* in 1804, but official records state that Joshua Shaw built this ship. Customhouse

records state that in 1806 John Bosworth built at Bath the 343-ton ship *Vigilant*, which Lemont says that William King built in 1809.

Lemont says that in addition to the ship *Reunion* of 281 tons, built by William King in 1800, an important ship named *Bath* of 262 tons was constructed by Joshua Shaw, of Bath, that year and that Z. Lincoln built the ship *Fox* of 180 tons. The following list, taken from customhouse records, gives the full-rigged ships of good size, for the period, built at Bath during each of the six years 1801-1806 inclusive:

Year Built	Name of Ship and Tonnage	Builder	Hailing from	Where Built	Registered Dimensions in Feet and Inches		
					Length	Beam	Depth
1801	HETTY; 235 tons	Cornelius King	Portland	Bath	85- 3	25- 2	12- 7
	PRINT; 215 tons	Benj. Emmons	Georgetown	Georgetown	82- 8	24- 7	12- 3
	CONFIDENCE; 336 tons	William King	Bath	Bath	95- 9	28- 6	14- 3
	JOHN & JAMES; 240 tons	John Winthrop	Boston	Brunswick	88	25- 0½	12- 6
1802	ROSE; 239 tons	Peleg Tallman	Boston	Bath	88- 2	24-11	12- 5½
	FAIR AMERICA; 186 tons	Joshua Shaw	Bath	Bath	79- 6	23- 6	11- 6½
	ANN; 232 tons	Charles Bradford	Boston	Topsham	86-10	24- 9	12- 4½
	WILLIAM; 257 tons	Thos. Nye, Jr.	New Bedford	Hallowell	88	26	13
	ALEXANDER; 275 tons	William King	Bath	Bath	89- 7	26- 8	13- 4
	SALLY; 204 tons	John Richardson	Topsham	Bath	82- 2	23-11	11-11½
1803	UNITED STATES; 301 tons	William King	Bath	Woolwich	96	26- 9	13- 4
	YORKSHIRE; 287 tons	William Lee	Georgetown	Georgetown	96- 6	26	13
1804	FAIR LADY; 305 tons	John Peterson	Bath	Bath	95- 9½	27	13- 6
	CHARLES; 400 tons	Charles Clapp	Bath	Bath	106- 6	29- 2½	20- 7
	RESERVE; 395 tons	John Bosworth	Bath	Bath	101- 7	30	15
1805	NALINE; 317 tons	Levi Peterson	Bath	Bath	97	27- 5½	13- 8¼
	SAVANNAH; 312 tons	Robert Trevitt	Bath	Bath	100-10	26- 5	13-10
	NEW PACKET; 333 tons	Nathaniel R. Thomas	Boston	Bath	99- 8½	27- 7½	13- 9¾
	SALLY; 341 tons	David Morrison	Bath	Bath	101- 1½	27- 8½	13-10
	MARY JANE; 302 tons	Jotham Dunnell (also recorded as Donnell)	Boston	Bath	96- 6	26- 6½	13- 3¼
1806	VIGILANT; 343 tons	John Bosworth	Bath	Bath	99- 8	28- 1	14- 0½
	WILLIAM; 365 tons	Charles Clapp	Bath	Bath	103- 7	28- 4	14- 2
	AJAX; 318 tons	Peleg Sprague	Boston	Bath	99- 2	27	13- 6
	ELIZA ANN; 309 tons	Peleg Sprague	Portland	Bath	96- 9	27- 0½	13- 6
	HAMILTON MOORE; 345 tons	Not given	Georgetown	Georgetown	100	28- 1	14- 1
	EDWARD; 315 tons	Not given	Portland	Bath	96- 4	27- 4¾	13- 8¾

Lemont, in historical notes on Bath (published in 1874), makes mention of the following full-rigged ships as important vessels built at Bath during the years 1801-1806 in addition to several mentioned in the foregoing list.

Year Built	Name of Ship	Tonnage	Builder	Year Built	Name of Ship	Tonnage	Builder
1801	STRANGER	209	Peleg Tallman	1805	SARAH	312	Peleg Tallman
1801	SPARTAN	248	Samuel Davis	1806	THOMAS	240	Levi Peterson
1804	SUFFOLK	203	Samuel Davis	1806	ANTELOPE	224	Samuel Davis
1805	ALEXANDER	240	William King				

Lemont reports the builder of the ship *New Packet* of 333 tons, constructed at Bath in 1805 for Boston owners, as Joseph Trott and the builder of the *Sally* of 341 tons as John Richardson, and he gives the name of the 317-ton ship *Naline*, before mentioned (built in

1805), as *Native* and the builder's name as Lewis Peterson instead of Levi Peterson. Lemont, who mentions three important ships (one brig and two schooners) as being built among others in Bath in 1800, refers especially to the following number of vessels as noteworthy and as being built during each of the next six years:

Year	Ships	Brigs	Schooners	Total	Year	Ships	Brigs	Schooners	Total
1801	2 209-248 tons	3 137-143 tons	3 92-108 tons	8 92-248 tons	1804	4 186-400 tons	1 149 tons	—	5 149-400 tons
1802	3 186-330 tons	3 136-162 tons	2 92-112 tons	8 92-330 tons	1805	5 240-341 tons	—	1 125 tons	6 125-341 tons
1803	2 204-301 tons	2 140-190 tons	4 97-124 tons	8 97-301 tons	1806	5 224-375 tons	—	1 141 tons	6 141-375 tons

In the list of important vessels built at Bath, Lemont mentions only the ship *Sabatty* of 225 tons as being built in 1807 by John Peterson and only the ship *Florida* of 325 tons in 1808 by Isaiah Mages. Lemont states that "the long embargo [1807-1809] on our vessels was a great detriment to the commerce of this country, and a check to the business of Bath, which put a stop to shipbuilding." However, he mentions six noteworthy square-rigged ships as being built in 1809 (the year that Jefferson's embargo was lifted), but two of the vessels recorded by Lemont as built in that year had been constructed in 1803 and 1806, respectively, and laid up during the embargo. There were, however, at least twenty-nine vessels, of which four were full-rigged ships, built at Bath in 1807. This number was reduced to eight vessels, including one ship, in the complete embargo year of 1808, and twenty-nine vessels, of which seven were ships, were built in 1809—after the embargo ended in the spring.

The Embargo Act of December 22, 1807, struck a blow at Kennebec shipbuilding. It was designed "to avoid war by withdrawing American shipping from the seas when our commerce was the victim of the efforts of Great Britain and France to destroy each other's trade." Bath regarded this futile measure as "a stab in the back by its own government," and the feeling among Kennebec shipping men was that they were not only willing but also anxious to put to sea, build and run ships, and brave all the dangers of the privateer-infested seas. Yankee Down East merchants and seafarers were prepared to continue to take their own chances on lawless seas, for their ships had never enjoyed any measure of government protection as had the ships of Britain, France, and all other maritime powers. In 1808 only four vessels, instead of the usual thirty, were launched in Bath, and "there were tied up at the wharves, or idly swinging at anchor, sixteen ships and twenty-seven brigs amounting to 9,000 tons of cargo space, besides a large number of schooners and sloops." The U.S. Government placed an armed cutter in the Kennebec River and manned the new fort at the river's mouth to enforce the law, "using the fort against the very citizens it had been built to protect."

It has been said that, "according to available but admittedly incomplete records, Bath, Maine, built 72 vessels during the period 1791-1800 and 107 vessels in the first decade of the nineteenth century." There is no way of determining, or even of estimating, either the number or the tonnage of vessels built prior to the nineteenth century. Bath customhouse records show that 32 sizable ship-rigged vessels were registered as built in the Bath district during the years 1801-1809 inclusive, and 23 of them were recorded as built in Bath proper. (The tonnage of these ships ran from a low of 186 and 215 tons to a high of 400 and 391 tons.) During this same decade, 83 sizable brigs and brigantines were registered as built in the district, and the tonnage of these sizable Bath-built brigs ranged from 122 to 234 tons. The sizable wood schooners registered at Bath as built in the district during the period numbered 62, and the tonnage varied from around 100 to 145 tons. The total number of these sizable two- and three-masted vessels built and registered in the Bath district during the first decade of the nineteenth century was 177, but it is known that the list is incomplete; for it considers only

good-sized vessels of each type, and even some relatively big vessels, for the period, are known to have been omitted.

Bath enjoyed a big shipbuilding year in 1811 following a fair year in 1810, but the War of 1812 put a stop to shipping and shipbuilding. Lemont records three important vessels, all ships, built at Bath in 1810 and four in 1811, one ship and one brig in 1812, one brig and one schooner in 1813, no vessels of note in 1814, and two ships and a brig of importance in 1815. He mentions the ship *Cleopatra* of 512 tons as built in 1811 by Sylvester & Lee, with James Robinson as master builder, and says: "She laid on the stocks until after the war, and was launched and sold by Gen. James McLellan to the Colombian Government for a Man of War." Bath customs records refer to the *Cleopatra* as a ship of 518 tons, built (that is, finished, measured, and registered) in 1816—the year after the war was concluded. James McLellan built the 370-ton ship *Swiftsure* and the 320-ton ship *Ellington* in 1811, but the war with England, we are told, "entirely put a stop to business in Bath, and the ships were all hauled up in the docks until the peace of 1815." At the close of the war, James McLellan built the brig *General Jackson* of 128 tons in late 1815 and the ship *Romeo* of 318 tons at the Upper Ferry, with Stetson as master shipwright, in 1816, and this was followed by the ship *Harriet* of 270 tons. Bath, definitely in the theater of military and naval operations, emerged from the War of 1812 with credit. In September 1814, all of Maine east of the Penobscot, as well as Bangor and Hampden, was in the possession of the enemy; but "constant vigilance and stout courage saved Bath from invasion and destruction, notwithstanding the importance to the young American nation of its shipyards."

During the war, the big, fast Salem privateer *America* (20 guns) made two visits to Bath for men and supplies and sent several prizes to that port. In 1813, Capt. James Hall went out in her as prizemaster, and one of the prizes brought into Bath was an English vessel fully laden with dry goods and silks. This was such a rich prize that a contract was made with Luke Lambard to take the captured goods overland to Boston for $10,000, to find a good market for them, because of the constant presence of British warships and their patrolling of the Maine and Massachusetts coast.

After the close of hostilities, the United States became interested in building a navy, as the need of a respectably sized fleet had become so painfully apparent during the war. In 1817, Green & Emerson, of Bath, made a contract with the U.S. Government to cut for it frames of live oak for several naval vessels to be built, one of them a ship of the line mounting 110 guns. The Bath contractor, with John Bosworth as master carpenter, sent a brig, two schooners, and a hundred skilled men, with oxen, carts, tools, equipment, and supplies, from the Kennebec to Florida and Georgia to get out the large live oak ship timbers needed, and the job occupied several years.

A Record of "Big" Ships Built and Registered at Bath for Certain Years (1807-1816) and for Various Periods (1801-1839)

The records of Bath shipbuilding indicate that around 1800 a 200-ton square-rigged ship was deemed a "sizable vessel"; by 1804 a "good, big ship" was of some 300 tons or more. Around 1830 a record of "large ships" consists of vessels of 400 tons or more, and by 1855 ships of importance were generally of 1,000 tons and over.

The following table gives the particulars of sizable full-rigged ships of over 300 tons built and registered at Bath, Maine, as per customhouse records, for each of the years 1807-1816, which include the period of the Jefferson embargo and the War of 1812.

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1807	CRITERION	360	103- 8	28- 1	14- 0½	David Colburn	Pittston
1808	FLORIDA	325	98-10	27- 5	13- 8½	David Morrison	Bath
1809	ANGERONA	391	108- 5	28- 6½	14- 3¼	John Lincoln	Bath
	RESOLUTION	353	100- 3	28- 5	14- 2½	John Bosworth	Bath
	CAROLINE	325	99	27- 4¼	13- 8	David Colburn	Pittston
	HURON	365	103- 9	28- 3	14- 1	Charles Clapp	Bath
1810	MOUNT HOPE	384	108- 5½	28- 3	14- 1½	Thomas McCobb	Georgetown
	SUPERIOR	384	108- 5	28- 3	14- 1½	Nathaniel Sprague	Bath
	LAPWING	441	109- 7	30- 3½	15- 1	Asa Nash	Bath
1811	SWIFTSURE*	370	103- 5	28- 6½	14- 3¼	Thomas P. Stetson	Bath
	TIPHYS	314	98	27	13- 6	Benjamin J. Porter	Bath
	WILHELMINA	309	95- 6	27- 0½	13- 6¼	Michael Fisher	Georgetown
	CAROLINE	351	108	28- 3	14- 1½	Charles Clapp	Bath
	HALLOWELL	397	107- 5	28-11	14- 5¾	Eben Mayo	Hallowell
	SEGUIN	336	101	27- 6	13- 9	William Denham	Bowdoinham
	PALLAS	350	103- 6	28	14	Asa Nash	Bath
	ELLINGTON	320	99- 4	27- 2	13- 7	Samuel Clark	Bath
	HOME	424	114-10	28- 9	14- 4½	Stephen Harris	Topsham
1815	LYDIA	464	110-11	30-11	15- 5½	George Robinson	Bath
	SUPERIOR	366	101	28-10	14- 5	Nehemiah Hilton	Vassalboro
	THOMAS FOWLER	339	102- 9	27- 4	13- 8	John Bosworth	Bath
	DIANA	382	103- 8	29	14- 6	Augustus Ballard	Hallowell
1816	ALBERT GALLATIN	488	115- 2	31	15- 6	David Colburn	Bath
	MARY	319	99- 4	27- 0½	13- 6	Joseph Mitchell	Bath
	CLEOPATRA	518	124- 8	30- 5	15- 2½	James McLellan	Bath

*The SWIFTSURE is generally credited to James McLellan. Possibly, Stetson was master shipwright as in the case of the building of the ship ROMEO in 1816.

The following three-masted square-rigged ships, which were classed as large (or at least quite sizable) vessels at the time of construction, were built and registered at Bath, Maine, as per customhouse records, during various periods from 1801 to 1839 inclusive. The tonnage range, total, and average tonnage for these "big" ships, with the number of such vessels built and their average dimensions, are presented for each of the periods of time set forth.

Period of Years	Tonnage: Range Considered Minimum up	Total of These Large Ships	Aver. per Ship	No. of Large Ships	Average Dimensions in Feet: Length	Beam	Depth	Name and Tonnage of Largest Ships	
1801-1803	186 to 336	3,007	251	12	88.2	25.5	12.7	CONFIDENCE	336
								UNITED STATES	301
								YORKSHIRE	287
1804-1810	305 to 441	8,028	349	23	101.5	27.9	14.3	LAPWING	441
								CHARLES	400
								RESERVE	395
1811-1815	309 to 464	4,722	363	13	103.8	28.2	14.1	LYDIA	464
								HOME	424
								HALLOWELL	397

(Continued on next page)

Period of Years	Tonnage: Range Considered Minimum up	Tonnage: Total of These Large Ships	Tonnage: Aver. per Ship	No. of Large Ships	Average Dimensions in Feet: Length	Average Dimensions in Feet: Beam	Average Dimensions in Feet: Depth	Name and Tonnage of Largest Ships	
1816-1825	313 to 518	3,802	380	10	109.2	27.8	13.9	CLEOPATRA	518
								ALBERT GALLATIN	488
								ARABELLA	404
1826-1830	316 to 395	2,560	366	7	110.2	27.2	13.5	NESTA	395
								MAJESTIC	389
								NEW ORLEANS	389
1831-1835	401 to 570	10,395	472	22	125.9	28.7	14.4	MANCHESTER	570
								EUROPE	557
								NEW ENGLAND	549
1836-1839	507 to 711	9,182	612	15	137.3	31.3	15.6	QUEEN VICTORIA	711
								UNITED STATES	684
								SWANTON	677

Steam Navigation Is Established in Maine Waters, 1816-1828

Although the Wiscasset-built screw steamer *Alpha* was the pioneer vessel to operate successfully under steam power on the Kennebec (when this experimental boat, known as "Morgan's Rattler," made her trial run from Wiscasset to Brunswick in 1816), yet steam power was not generally known on the Kennebec until 1818. In that year, the *Tom Thumb,* an open boat about 27 ft. long, driven by side wheels, with her machinery all in sight (and owned by a Mr. Dodd), left Boston in tow of a sailing packet destined for the Kennebec. At the mouth of the river, between Seguin and Popham, the little power boat was cast off "and steamed up the river against the tide." We are told that the *Tom Thumb* "created quite a sensation" upon her arrival at Bath, "as no one had ever seen a steamboat before." The little boat took excursions up and down the river. In 1822 steam machinery was placed "in a flat river scow," and this boat, named *Kennebec,* was used for excursions in shoal water; but it is said that "she had hardly power enough to stem the current, her engine being too small."

The following year (1823), steam navigation on the Kennebec really commenced. The steamer *Enterprise* ran up the river, and Captain Porter fitted up the steamer *Waterville.* Then, with Bath and Portland financial help, he went to New York and purchased the steamboat *Patent* to run between Bath, Portland, and Boston. This boat steamed from New York to the Kennebec and arrived at Bath on August 7, 1823. In 1825 the Kennebec Steam Navigation Company was established. The *Waterville* ran between Bath and Augusta; the *Maine* between Bath and points east (Boothbay, Owl's Head, Machias, and Eastport); the *Patent* between Bath and Portland; and the *Lexington* between Portland and Boston. In the same year, the packet steamer *Eastern Star* ran direct from Bath to Boston, and in 1826-1828 the *Lexington* ran between these two ports, with stops at Portland en route. In 1827 the *Patent* ran from Portland to the Kennebec and continued, with stops between Bath and Eastport. In that year, the *Experiment* appeared on the river, and in 1828 she, with the *Waterville* and the little pioneer *Tom Thumb,* was running between Bath and Augusta. Between 1816 (when the Wiscasset-built screw-propelled *Alpha* made an experimental trial run on the Kennebec) and 1828, steam navigation, with side-wheelers, became firmly established in Maine waters and between coast

and river ports extending from Boston to Eastport. The first marine railway for dry-docking purposes was built and located at Clapp's Point about 1832-1835. Steam ferry service was inaugurated across the Kennebec River in 1837 by the Sagadahoc Steam Ferry Company, incorporated March 7, 1834.

In the 1820's, Some of Bath's Greatest Shipbuilding Firms Are Founded, with Early Prominence to the Name of Patten, Houghton, Sewall, Rideout, Williams, McLellan, Turner, and Trufant

It was around 1820 that some of Bath's greatest shipping houses were founded. George F. Patten and brothers built the brig *Statira* (183 tons) at Muddy River, Topsham, in 1819, and this was the commencement of the Pattens' entry into shipbuilding, although historians say that the Pattens (George F. and John) launched their first vessel in Bath proper in 1821. The Houghtons built their first brig, the *Bolton,* in 1819. William D. Sewall launched his brig *Diana* in 1823 and laid what was in reality the foundation of the great shipbuilding and ship-operating career of the later Sewall family, who persisted as builders up to 1903. Johnson Rideout and Johnson Williams—Bath master builder of note—are said to have commenced important careers by constructing vessels in 1825; but Johnson Rideout, who died at Bath on December 21, 1865, after an active shipbuilding career of forty-two years, must have worked on his first ship in 1823. James McLellan and Dwelly Turner were important builders in the early twenties, and James H. McLellan built sizable, noteworthy ships up to mid-century. In the 1820's, it has been said, "commerce was of greater importance to Bath than shipbuilding"; yet 102 vessels were officially reported to have been built "in the town proper" (not in the district of Bath) during that decade. Bath had become a busy port, with ship arrivals in 1824 averaging 70 vessels per month (over 2 per day); many were from the West Indies and some from European and others from far-flung foreign ports. Levi P. Lemont mentions the following vessels, built at Bath in the twenties, that he considered especially noteworthy:

Year Built	Name of Vessel	Rig	Tonnage	Builder
1820	MARY	Ship	287	McLellan & Turner (W. G. Farrin, master shipwright)
1820	MINERVA	Brig	262	Gilbert Trufant
1821	LIMA	Ship	297	McLellan & Turner
1821	CUBA	Brig	216	Peleg Sprague & Son
1821	JASPER	Brig	222	G. F. & John Patten
1821	JANE	Brig	197	Wm. Richardson
1822	GRAND TURK	Ship	323	James McLellan
1823	ANN	Ship	299	D. Turner & J. McLellan
1823	MARY	Ship	—	D. Turner & J. McLellan
1824	HARRIET	Ship	227	Samuel Winter and D. C. Magoun
1824	CATHERINE	Ship	313	John, G. F., and James F. Patten
1825	McLELLAN	Ship	376	D. Turner
1828	MARIA	Ship	314	Isaac Elder
1828	CHAMPION	Ship	370	G. F. & James F. Patten
1829	MAJESTIC	Ship	389	G. F. Patten & Brother
1829	TRANSIT	Ship	199	Johnson Williams

In addition to the two ships MARY, which are mentioned above as being built by McLellan & Turner in 1820 and 1823, respectively, Charles Clapp built a ship MARY of 317 tons in 1816, and in addition to the ship HARRIET built by Winter and Magoun in 1824, James McLellan is credited with building a ship named HARRIET in 1819 that registered 270 tons.

Britain shut its West Indian ports against the trade of United States vessels in 1826, and this worked a great hardship on the inhabitants of British Caribbean Sea possessions and caused great damage to shipping interests in Bath. Shipbuilding was suspended on the Kennebec for some time, until other trade outlets could be developed; for, temporarily, Bath and United States shipowners in general had an oversupply of tonnage and had to lay up a large part of their fleet, which had been dependent for its existence (as Britain well knew) on the West Indian trade. A historian has said that no vessels were built in Bath in 1827 and for some time thereafter. "Consequently, ship carpenters were obliged to go to Nova Scotia for work; and because of failures in England, they decided to return to the Kennebec, where they worked for 50 to 75 cents per day when they could occasionally get jobs repairing old vessels" and, it was said, worked "from daylight in the morning to as long as they could see at night and took store pay at that."

The following sizable brigs and brigantines were built and registered at Bath during the years 1816-1828 according to available Bath customhouse records:

Year	Number of Sizable 2-masted Square-riggers	Range of Tonnage	Tonnage of These Sizable Vessels		Name and Tonnage of Two Largest Vessels	
			Total	Average		
1816	9	153 to 215	1,554	173	CHARLES EMELINE	215 188
1817	6	173 to 208	1,115	193	LYDIA ACTEON	208 205
1818	5	164 to 260	995	199	PALAFOX TRANSIT	260 199
1819-1820	7	150 to 205	1,230	176	BEAVER CONCORD	205 190
1821	8	180 to 263	1,667	208	PERUVIAN JASPER	263 222
1822	12	156 to 273	2,419	202	NOBLE ROXANNA	273 241
1823	18	154 to 296	3,687	205	FRANCES ARAB	296 275
1824	14	178 to 276	3,018	216	CLARISSA ANN PURINGTON	276 273
1825	19	178 to 290	4,069	214	NEPTUNE WOLGA	290 285
1826	9	178 to 284	2,015	224	WALTHAM JOHN	284 260
1827	11	177 to 298	2,534	230	AVIS MERIDIAN	298 292
1828	10	193 to 297	2,482	248	GRAND TURK CALEDONIA	297 290

Customhouse records show that during the years 1829-1833, Bath built and registered forty-nine brigs, totaling 8,595 tons and averaging 175 tons per vessel; the largest were the *Marengo* (303 tons), *Ceylon* (293 tons), and *Corinthian* (249 tons). During the period 1834-1839 (with some of the records known to be lost for the latter year), forty-eight brigs were built and registered, totaling 8,749 tons and averaging 182 tons per vessel; the largest were the *McLellan* (264 tons), *Margaret* (246 tons), and *Choctaw* (245 tons).

The sizable ships registered at Bath, as taken from the official customhouse records, were so few for the period 1817-1830 inclusive that it is evident that the following government records are most incomplete. No sizable ships are recorded for the years 1817-1821 inclusive;

whereas it is well known that full-rigged ships were built in Bath during this period and a great many more than are herein stated for the years 1822-1830 inclusive, although it is possible that many of the ships built in the 1820's registered under 300 tons. (Lemont's historical notes of important ships built at Bath mention twelve full-rigged ships built during the period 1820-1829, four of which were from 287 to 314 registered tons, and no mention is here made of eight of the twelve ships referred to by Lemont.)

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Builder	Where Built
			Length	Beam	Depth		
1822	GRAND TURK	323	103- 5	26- 6	13- 3	James McLellan	Bath
1823	AURORA	346	105- 1	27- 3	13- 7½	Stephen Haines	Bath
1824	CATHERINE	313	100- 6	26- 6½	13- 3½	George F. Patten	Bath
1824	OLIVE BRANCH	366	111	27- 1	13- 6½	John Bosworth	Bath
1825	McLELLAN	376	110- 6	27- 7	13- 9½	W. G. Farrin	Bath
1825	SHEPARD	349	108- 2	26-10	13- 5¼	George Shepard	Bath
1825	ARABELLA	404	114- 3	28- 1	14- 0½	Johnson Rideout	Bath
1826	ANDES	363	110	27- 2	13- 7	George F. Patten	Bath
1826	CARAVAN	316	103- 8	26- 1	13- 0¾	Jacob Robinson	Bath
1826	JAVA	331	105- 6	26- 6	13- 3	John Henry	Topsham
1827	NESTA	395	110-10	28- 3½	14- 1¾	W. G. Farrin	Bath
1828	CHAMPION	377	110- 4	27- 8	13- 3	Thos. M. Lewis	Bath
1829	MAJESTIC	389	114- 3	27- 6	13- 9	George F. Patten	Bath
1830	NEW ORLEANS	389	116- 9	27- 1½	13- 6¾	Dennis Lines	Bath

Lemont, in his historical notes, refers to the following important full-rigged ships among those built in Bath in the 1830's. The 637-ton ship that he named *Capt. Maxwell* was undoubtedly the *London*. The customhouse records give no names of builders for the ships built in 1836, 1838, 1839 (and 1841). There is much confusion in the recorded names of builders, as at times the managing owner who was financing the vessel is stated, at other times the owner of the yard where the vessel was built, and on other occasions the name of the master builder who was employed to build the ship is given.

Year Built	Name of Ship	Tonnage	Builder
1832	SARAH	450	Clapp & Boynton
1832	TROPIC	350	Clark & Sewall
1832	—	350	Levi Houghton
1832	SARAH	380	Chas. & Wm. D. Crooker
1832	WALTER SCOTT	455	Caleb Heath
1832	HARRIET	—	Mitchell L. Trott
1832	TRANSIT	—	Woodward and Williams
1833	BRAGANZA	353	Levi Houghton
1833	—	351	T. P. Stetson
1833	NORTH AMERICA	470	T. Harward
1833	PALESTINE	450	G. & J. Patten
1833	CARLON	420	Clark & Sewall
1833	—	350	J. H. McLellan
1834	MISSOURI	398	Levi Houghton
1834	PEVDONNET*	471	Clapp & Boynton
1834	NEW ENGLAND	549	T. D. Robinson & Co.
1834	CAPT. S. SWANTON	431	Gilbert Trufant & Son
1834	CASPIAN	529	John, G. F., & James Patten
1836	BIRMINGHAM	507	Gilbert Trufant
1836	SHEFFIELD	587	Noble Maxwell and Patten Bros.
1836	MOUNT ZION	449	C. & Wm. D. Crooker
1838	CAPT. MAXWELL (LONDON)	637	Patten Bros. and Morrill
1838	ONTARIO	605	William Richardson
1838	DELAWARE	661	John, G. F., & J. F. Patten
1839	SWANTON	677	C. & Wm. D. Crooker
1839	CANTON	298	James H. McLellan
1839	CHARLES	294	James H. McLellan

*Customhouse records and a historian other than Lemont give Johnson Rideout as the builder of a ship PERDONNET of 477 tons, built in 1833.

The following sizable full-rigged ships (for the period) were built and registered at Bath as per customhouse records during the years 1831-1839 inclusive. The builder's name is not stated in the records for ten of the ships built during 1836-1839.

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1831	EMPRICE	436	119- 9	28- 5	12- 2½	Thomas Harward	Bath
	FLORENCE	449	121	28- 8	14- 4	E. G. Pierce	Hallowell
	GLOBE	418	121- 4½	27- 6½	13- 6¼	Dennis Lines	Bath
	AUGUSTA	431	121- 7	28	14	Thos. M. Lewis	Bowdoinham
1832	PRINCESS	476	125- 1	29	14- 6	Johnson Rideout	Bath
	CONGRESS	401	120- 6	27- 0½	13- 6¼	Spencer Greenleaf	Pittston
	ATLANTIC	417	117- 1	28- 1½	14- 0¾	Thos. M. Lewis	Bath
	WALTER SCOTT	444	122- 9	28- 3	14- 1½	James Hall	Bath
	ANDES	444	125	27-11	13-11½	Geo. F. Patten	Bath
1833	BRAGANZA	445	124- 4	28- 1	14- 0½	Levi Houghton	Bath
	NORTH AMERICA	498	130- 1	29	14- 6	James Hall	Bath
	PALESTINE	469	127	28- 6	14- 3	Geo. F. Patten	Bath
	PERDONNET	477	128-10	28- 6	14- 3	Johnson Rideout	Bath
	CONSTITUTION	472	127	28- 4½	14- 2¼	Ebenezer Hinds	Pittston
1834	ST. LAWRENCE	461	127- 3	28- 2½	14- 1¼	Peleg Sprague	Bath
	MOUNT ZION	440	123- 3	28- 4	14- 2	James Sewall	Bath
	NEW ENGLAND	549	131- 4	30- 4½	15- 2¼	Thos. P. Stetson	Bath
	BYRON	492	130- 2	28- 9½	14- 4¾	W. G. Farrin	Bath
	CASPIAN	529	131-10	29- 8½	14-10¼	John Larrabee	Bath
1835	POWHATAN	520	127-11	30	15	James Rideout	Hallowell
	EUROPE	557	132-11	30- 4½	15- 2¼	Thos. Harward	Bath
	MANCHESTER	570	134- 6	30- 6½	15- 3¼	John Larrabee	Bath
1836	BIRMINGHAM	507	129-10	29- 3½	14- 7¾	Not given	Bath
	AMELIA	560	131	30- 9½	15- 4¾	Not given	Bath
	SHEFFIELD	589	135	31- 0½	15- 6¼	Not given	Bath
1837	ROCHESTER	563	131- 2	30-10	15- 5	Levi Houghton	Bath
	LIVERPOOL	623	137- 8	31- 7	15- 9½	Johnson Rideout	Bath
	GLASGOW	594	135	31- 2	15- 7	Benjamin Patten	Bath
	VILLE DE PARIS	537	130- 4	30- 2	15- 1	Stephen Larrabee	Bath
1838	LONDON	637	140	31- 7½	15- 9¾	Not given	Bath
	ONTARIO	605	138- 4	31	15- 6	Not given	Bath
	QUEEN VICTORIA	711	144	33	16- 6	Not given	Bath
	DIADEM	657	140- 7½	32- 1	16- 0½	Not given	Bath
	DELAWARE	661	142	32	16	Not given	Bath
	HANOVER	577	135	30- 8	15- 4	Levi Houghton	Bath
1839	SWANTON	677	144-10	32	16	Not given	Bath
	UNITED STATES	684	145	32- 2	16- 1	Not given	Bath

The population of Bath in 1800 was 1,225, and the preserved list of qualified voters for that year totals 259. In this list are twelve Lemonts, eight Donnells, seven Berrys, seven Browns, six Robinsons, and five each of the following names: Sewall, Swanton, Crooker, Ham, Mitchell, and Philbrook—all connected with ships. By 1822 the population, according to accepted authority, had risen to 3,100. When wood shipbuilding was booming, the Federal Census

showed a population of 8,000 in both 1850 and 1860; it dropped to less than 7,400 in 1870 and was below 8,000 in 1880. With the Bath Iron Works commencing to build steel vessels, the population rose to 8,723 in 1890, and with the Sewall company building steel sailing ships, it had advanced to 10,477 according to the count of 1900. During the first World War and the shipbuilding boom (both steel and wood), it was estimated that the population reached 20,000, but it had dropped to 14,731 in the census of 1920, was 9,396 in 1910, and was estimated at about 9,000 in 1935 before the second terrific war shipbuilding boom (of World War II) commenced.

In 1819, Levi Houghton acquired the Davis store, wharf and shipyard, and from the old Davis yard he and his sons Levi Warren, Silas Amory, Henry L., and John R. Houghton, from 1819-1891 (a period of seventy-three years), launched a great fleet of forty-five sailing vessels measuring about 40,000 tons. Records are incomplete and conflicting, and it would seem that Levi Houghton built some vessels before acquiring the Davis yard, but he launched the brig *Bolton* of 121 tons from the old Davis yard in 1819. It is reported that he built a brig of 214 tons in 1822 and another of 276 tons in 1823, each at the old Davis yard. In 1831 the ship *Cordova* (332 tons) was built, followed by the ship *Braganza* and, it is said, by "another ship of 353 tons" in 1832 and the ship *Missouri* of 398 tons in 1833. Between the years 1837 and 1891, the Houghtons built, according to family records, thirty-seven square-rigged deep-sea vessels (thirty-four ships and three barks), the ships ranging from the *Clara Ann* of 421 tons, built in 1851, to the *Parthia* of 2,495 tons (their last vessel), built in 1891. Levi Houghton was the builder until his death in 1857, after which his four sons either built separately in the Houghton yard or combined to build and operate as Houghton Brothers. It is significant that the only vessel constructed by the Houghtons during the Civil War was named the *Virginia.* After building the *Armenia* in 1877, the energy of the Houghton sons was on the wane. After that time, the brothers as a partnership built only three vessels, the *Arabia* in 1881, the *Servia* in 1883, and then again, after an inactivity of seven whole years, they built in their old age their biggest ship, the *Parthia* of 2,495 tons register, one of the largest full-rigged three-masted ships ever built in the world.

The partnership of George F. and John Patten has been referred to as the leading business house in Bath in the middle years of the nineteenth century. The Patten brothers came to Bath proper in 1820 after building two small vessels in Topsham (seven miles from the present city of Bath), where their grandfather was a pioneer shipbuilder. George F. was a shipwright and John of seafaring bent; one built and the other sailed and operated their vessels. James F. Patten also went to sea and was associated with his brothers. During the years 1821-1868, they built forty-six ships, and the entire Patten family has a record of constructing fifty-seven wood vessels in the town and city of Bath. In 1865 the Pattens built the steamer *Montana* of 1,003 tons, which ran out to California, followed the next year (1866) by the S.S. *Idaho* of 1,077 tons for the San Francisco-to-Oregon trade. The Pattens either held an interest in one or both of these vessels or built them "on spec," for we read in the history of the steamer *Idaho* that the Pattens "finally sold her in San Francisco." The Patten shipyard was at the "North End" between that of Clark & Sewall and the Moses yard. Oliver and William V. Moses had started their important shipbuilding career as a firm in 1844. John Patten and his son Gilbert operated another shipyard farther north, off Washington Street, during 1860-1870. The Pattens not only built fifty-seven vessels aggregating some 43,000 tons (almost all being full-rigged three-masted ships) but also, at one time, operated sixty-five vessels under their own house flag—at the time said to be the greatest merchant fleet under the American flag.

Johnson Rideout, during the years 1823-1865, was responsible either as shipyard owner or as contractor and master builder for the construction in Bath of at least seventy-two wood vessels. He began his career as a day laborer in the Peleg Tallman shipyard (which operated from 1789 to 1832) and learned the trade of shipwright with Thomas P. Stetson at his "North End" shipyard, which was active from 1809 to 1850. In 1823, Rideout contracted with the firm of Clapp & Boynton to build vessels for it at a certain agreed-upon price per ton;

later, he leased a yard of his own and ultimately purchased a site that, after his death, became the south end of the New England Shipbuilding Company yard. Johnson Rideout, during his forty-two years of building activity, constructed forty-nine ships, eight barks, ten brigs, one schooner (a total of sixty-eight sail), and four steamers.

Bath Booms as the Center of Maine Shipbuilding and Marine Activity, and Kennebec Ships Lead the World

Bath, from the first, has been the hub of the activity of the whole Kennebec basin and points beyond. The channels of the Sagadahoc, the Androscoggin, the New Meadows, the Sasanoa, and the tributaries of this extraordinary net of natural waterways, with all routes crossing at Long Reach (that is, the wide, straight river on the west bank of which Bath is located), make Bath the natural commercial center for a large part of central Maine. The harbor is unique, dredged by its own currents, ice free, accessible at all seasons from the sea (twelve miles away) for vessels of deep draft, yet sufficiently distant to be normally defensible from hostile interference. When rivers like the Hudson much farther south freeze over, the Kennebec is free and open for deep-draft marine traffic of any tonnage. Moreover, there has never been any occasion for dredging any part of the Kennebec River, either at or below Bath. "The sea brought hither the first colonists, and the noble river was the reason for their coming. The river and the sea continued for a century the only avenues of trade and communication, the forests invited the construction of ships, and out of the shipbuilding and operations of ships grew the city whose livelihood the ships and the making of ships have ever been." Bath, because of its geographical setting, its natural advantages, topography, etc., soon became one of the most important commercial, marine and shipbuilding centers in the territory now known as the state of Maine.

Bath boomed as a builder and operator of merchant ships following the War of 1812, in the twenties, thirties, and forties. Robert P. Tristram Coffin, in KENNEBEC—CRADLE OF AMERICANS, writes:

> There were panics and West Indian pirates, but nothing could stop the city [during the wood shipbuilding era]. The forests were full of the thunder of falling trees. Yankee ingenuity was flowering into every kind of mechanical device. Warehouses of ships' supplies sprang up overnight. The city reeked of hemp, and glistened with brass gadgets. Men good with jackknife turned out screaming American eagles and ladies with breasts big as pumpkins, to go on ships' prows and cut apart the winds of the world. The ships grew larger and larger—500 tons, 800, 1,000. . . .

Henry Wilson Owen, in HISTORY OF BATH, MAINE, writes:

> The ships [of Bath builder-merchants], ever extending their cruises, began pouring in wealth, and for more than half a century the operation of ships and [foreign sea] trade were the more important thing; though the expanding shipyards and the related industries were building up an important industrial community. After the Civil War, the commercial phase of local maritime activities entered upon its decline, but the shipyards and skill in shipbuilding which commerce had created here persisted and continued to grow, and for another half century Bath supplied the nation with its finest ships of wood. . . .
>
> It requires no little imagination now to envision the activity of Bath's harbor [in the 1840's] when 400 new vessels passed out to sea [in a decade], forming only a small part of the constant stream of marine traffic. Tall ships were constantly arriving from distant foreign ports and swarms of smaller vessels from points along the coast; vessels were loading and unloading at the wharves, swinging at their anchors in the stream, and passing in and out. Sailors filled the streets. When the census of 1850 was taken, 600 seamen were enumerated [in Bath in addition to the regular residents].

In 1841, Clark & Sewall launched the *Rappahannock* of 1,133 tons, the first Sewall ship of that name and the largest ship in the world for several years. In 1849, Trufant & Drummond built an even greater vessel, the ship *Saratoga* of 1,200 tons. Among the Bath-built ships constructed in the forties and mentioned by historian Lemont as important were the following:

Year Built	Name of Ship	Tonnage	Builder
1840	FRANCIS	441	John Henry
1840	AMAZON	569	William Richardson
1840	UNITED STATES	684	Samuel Swanton
1841	GENESEE	459	Clark & Sewall
1841	HANNIBAL	644	Thomas Harward
1841	RAPPAHANNOCK	1,133	Clark, Sewall, and Thos. M. Reed
1842	GIRARD	343	Clark, Sewall, and Benj. Robinson
1842	GEORGIA	363	Wm. V. & O. Moses
1842	LONDON	637	G. F. Patten & Brothers
1842	MONMOUTH	728	G. F. Patten & Brothers
1842	HALCYON	797	Pattens & Davenport
1843	HAMBURG	288	Wm. P. Larrabee
1843	VILLE DE PARIS	537	Mitchell L. Trott
1843	GLASGOW	594	James L. Lambert
1844	PRUSSIA	330	Wm. V. & O. Moses
1844	J. P. HARWARD	548	J. Harward
1845	BIRMINGHAM	507	Gilbert Trufant
1845	WINNEGANCE	283	J. P. Morse & Brothers
1845	B. C. BAILEY	471	Bernard C. Bailey
1845	CHARLOTTE REED	471	Levi Houghton & Sons
1846	RIO GRANDE	541	Clark & Sewall; Wm. M. and Thos. M. Reed
1846	SARAH BOYD	342	Trufant, Drummond & Co.
1846	SARAH & LOUISA	607	J. H. McLellan
1846	JANE TUDOR	349	Clapp & Magoun
1847	QUINNEBURG (bark)	—	James Drummond & Co.
1847	ALEX FRAZIER	406	J. B. Swanton, Jr., and M. L. Trott
1847	J. C. CALHOUN	708	Wm. D. Sewall & Co.
1848	SEA QUEEN	862	C. & Wm. D. Crooker
1848	WM. D. SEWALL	672	Clark, Sewall & Co.
1849	MORO	418	Wm. P. Larrabee
1849	CHARLES CROOKER	960	C. & Wm. D. Crooker
1849	SARATOGA	1,200	Jas. & Wm. Drummond
1849	RHINE	534	Chas. Clapp & D. C. Magoun
1849	NEW ENGLAND	921	Wm. V. & O. Moses
1849	ANDOVER	484	John Smith

The sizable full-rigged ships built and registered at Bath in the 1840's are briefly summarized in the following table. Ships of over 500 tons are set forth for the years 1841-1846. No ships of this size were built in either 1840 or 1845, although in 1845 eight ships and eight barks of 4,933 tons were constructed and registered at Bath. For the years 1847-1848, only ships of over 650 tons are herein set forth as sizable, and for the year 1849 only ships of over 700 tons are set forth. The number of ships registered at Bath of over 500 tons was seventeen in 1847, fourteen in 1848, and seventeen in 1849.

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Builder	Where Built
			Length	Beam	Depth		
1841	SOUTH CAROLINA	767	148-11	33- 8	16-10	Not given	Bath
	HANNIBAL	644	143- 6	31- 4	15- 8	Not given	Bath
	SHARON	553	135-11	29-10	14-11	Not given	Bath
	RAPPAHANNOCK	1,133	129- 6	37	18- 6	Clark & Sewall	Bath
1842	HALCYON	797	157	33- 3	16- 7½	John Larrabee	Bath
1843	LOUISIANA	747	149	33- 2	16- 7	John Larrabee	Bath
	DEVONSHIRE	745	148	33- 3	16- 7½	Johnson Rideout	Bath
1844	JAMES N. COOPER	549	142- 4	28-10¾	14- 5½	James N. Cooper	Pittston

(Continued on next page)

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1846	NEW ENGLAND	549	131- 4	30- 4½	15- 2¼	Stephen Larrabee	Bath
	SARAH & LOUISA	607	139-10	30-10	15- 5	Stephen Larrabee	Bath
	RIO GRANDE	541	135-10	29- 6	14- 9	Thomas Simpson	Bath
1847	ROME	673	142- 4	32- 3	16- 1½	Not given	Bath
	ELIZABETH	669	144- 7	31-10	15-11	Not given	Bath
	RICHARD ALSOP	835	157- 2	34- 1	17- 0½	Not given	Bath
	JOHN CALHOUN	708	143-11	32-11	16- 5½	Not given	Bath
	CYBELE	798	157- 4	33- 2¾	22- 8	Not given	Pittston
	MILAN	699	146	32- 5	16- 2½	Not given	Bath
1848	SEA QUEEN	862	160-10	34- 2	17- 1	Johnson Rideout	Bath
	ROCKAWAY	815	158- 9	33- 5	16- 8½	Thomas Harward	Bath
	GEORGE F. PATTEN	778	152- 2	33- 5½	16- 8¾	George F. Patten	Bath
	BUENA VISTA	660	142- 5	31-11	15-11½	T. J. Southard	Richmond
	NATHANIEL KIMBALL	783	156- 3	33- 0½	16- 6¼	Stephen Larrabee	Bath
	WILLIAM D. SEWALL	672	141	32- 5	16- 2¼	Thos. Simpson	Bath
	WILLIAM V. KENT	676	150- 7	31- 2¾	—	Joseph King	Pittston
	CAROLINE NESMITH	832	157- 3	34	17	James Drummond	Bath
1849	SHANNON	789	157- 7	33	16- 6	James Drummond	Bath
	OLD ENGLAND	917	164- 8	34- 9¾	17- 5	Amos L. Allen	Bath
	EMMA FIELDS	944	168- 9	34-10	17- 5	J. H. McLellan	Bath
	SARATOGA	1,200	183- 3¾	37- 8	18-10	James Drummond	Bath
	ELLEN MARIA	768	150- 9	33- 5⅛	16- 9½	Harrison Springer	Richmond
	FALCON	813	157- 6	33- 6½	16- 9¼	John Patten	Bath
	FOREST QUEEN	885	158- 5	35	17- 6	Thos. J. Southard	Bath
	NEW ENGLAND	921	166-10	34- 7½	17- 3¾	Oliver Moses	Bath
	CHARLES CROOKER	960	168- 8	35- 2	17- 7	Johnson Rideout	Bath
	HOUGHTON	787	156- 6	33- 1	16- 6½	Levi W. Houghton	Bath

The number of sizable full-rigged ships, with the total and average tonnage per vessel, built and registered at Bath, Maine, in the forties is set forth herewith. In the years omitted during this decade, whereas both ships and barks were built, none measured 500 tons or more.

Year	Range of Tonnage	Number of Ships	Tonnage: Total	Average	Year	Range of Tonnage	Number of Ships	Tonnage: Total	Average
1841	500-1,133	4	3,097	774	1846	500- 607	3	1,697	566
1842	500- 797	1	797	797	1847	500- 835	17	10,733	631
1843	500- 747	2	1,492	746	1848	500- 862	14	9,399	671
1844	500- 549	1	549	549	1849	500-1,200	17	13,425	790

No large brigs or brigantines were built and registered at Bath prior to the fifties, and whereas many two-masted square-riggers were built in the thirties and forties for the coastwise and West Indian trades, etc., they were generally of small size. In the first two decades of the century, some brigs were built of larger size than in the thirties and forties. Twenty-two brigs built in 1832 totaled 3,408 tons, an average of 155 tons per vessel, and for certain typical years the Bath brig construction recorded at the customhouse was as follows:

Year	Number of Brigs	Tonnage: Total	Average	Year	Number of Brigs	Tonnage: Total	Average	Year	Number of Brigs	Tonnage: Total	Average
1833	17	2,837	167	1836	9	1,547	172	1846	18	3,107	173
1834	15	2,431	162	1837	12	1,997	166	1847	16	2,711	169

Apparently, no sizable brigs of over 200 tons were built and registered in 1840-1844 inclusive or in 1847. According to Bath customhouse records, the number of such brigs built in each of the other years of the decade, with particulars of the largest of them, was as follows:

Year	Name of Brig or Brigantine	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1845	CARIBBEE	219	96- 7¼	24- 6	10- 5	Not given	Pittston
	GLOBE	208	92- 1	23- 3½	10-10½	Not given	Pittston
1846	JOHN COLBY	247	102- 6	23-11	11- 2	J. C. Coombs	Bowdoinham
	RIO	226	96- 9	23-11	10-11	Johnson Rideout	Bath
1848	VESTA	249	102- 2	25	10-10½	E. G. Pierce	Gardiner
	CARDIFF	201	95-11	24- 8	9- 7	John W. Avery	Richmond
	SOLOMON EATON	233	98- 4	24- 4	10-11	E. C. Coombs	Bowdoinham
	RACHAEL STEVENS	213	94- 8	24- 3	10- 5	Benj. Folensbee, Jr.	Pittston
	URANUS	218	95- 6	24	10- 8	Ebenezer Cannon	Hallowell
	MARY WILDER	213	94	24- 4½	10- 6	E. G. Pierce	Pittston
	CROCUS	221	104- 4	23- 4	10	Wm. Bradstreet	Gardiner
	MARY MELVILLE	235	100- 4	24- 8	10- 7½	Ebenezer Hinds	Pittston
	GLENCOE	222	97- 4	24- 2½	10- 6½	Thos. N. Atkins	Gardiner
1849	SARAH MOORES	221	98- 7	23- 6	10- 7	Charles Folensbee	Vassalboro

Whereas Bath proper (within the town itself) built four of the ten sizable brigs constructed in the district of Bath during the years 1830-1835 inclusive and one out of eight built during the years 1836-1839 inclusive, only one out of the stated fourteen sizable brigs or brigantines (i.e., of over 200 tons register) was built in Bath proper during the period 1845-1849 inclusive. As the small square-riggers increased in size, Bath proper constructed a large percentage of them, and of nineteen sizable brigs, brigantines, and barkentines built and registered at Bath during the period 1874-1892, fifteen of them were laid down in Bath proper.

Maine, the Pine Tree State (timber), separated from Massachusetts, the Codfish State (fisheries), in 1820, and the town of Bath was incorporated into a city in 1848, the year of the finding of gold in California and a momentous one in national affairs and in the history of shipbuilding. There were registered as hailing from Bath or enrolled and licensed in the port about 90,000 tons of shipping in 1849, representing more than 500 sailing vessels. Bath ranked seventh at this time—which was the real dawn of the brief clipper ship era—among the ports of the United States, being exceeded only by New York, Boston, Philadelphia, Baltimore, New Bedford, and Waldoboro (Maine) in the order named. (Waldoboro, twenty-five miles northeast of Bath, is really part of the Bath district.) Official statistics show that during the early part of the fifties, the relatively small "Down East" town of Bath actually ranked fifth as a national port (after New York, Boston, Philadelphia, and Baltimore), and Waldoboro, which rated about equal with Bath at the time, was virtually allied with and part of Bath. Whereas Bath was the leader and center of shipbuilding and marine activity and also both the pioneer and the last builder of wood ships in Maine, it was not the only big shipbuilding town in Maine, which included Waldoboro, Wiscasset, Casco Bay towns, the Saco, Kennebunk, etc., and not the only one on the Kennebec River; for Phippsburg, Georgetown, Arrowsic, Woolwich, Bowdoinham, Dresden, Richmond, Pittston, Gardiner, Farmingdale, Hallowell, Augusta, Vassalboro, and Waterville—and much of the country between these towns and along some sixty miles of the great river—built ships, as did Topsham and Brunswick on the Androscoggin (a tributary of the Kennebec).

The locations of the principal shipbuilding yards and kindred facilities in Bath when the town became a city, in 1848, were:

North End: Trufant, Drummond & Company just below Drummond Street; Stephen Larrabee; the Moody estate; the Marine Railway; two large docks; Johnson Rideout; Clark & Sewall; the Patten firm; then the Moses Brothers at the foot of Pearl Street, completing a historic group that launched a record tonnage of wood sail.

Central and South End: The McLellan yard was at the foot of Summer Street. William M. Rogers built just to the north of the foot of Shepard Street, Levi Houghton at the foot of South Street, and John Henry on the property later occupied by the Hyde Windlass Company—an offshoot of the Bath Iron Works. Thomas P. Stetson's yard was at the Upper Ferry, and Thomas Harward's was at the foot of Harward Street. Other yards were at the far south end.

Writing in KENNEBEC—CRADLE OF AMERICANS, Robert P. Tristram Coffin says of the days when wood merchant sail was in its prime and Americans were showing the world how to build and how to sail ships:

There were good reasons why Kennebec ships led the world. One was, they were better ships. They were built solid, they carried the biggest cargoes, being almost square in their holds amidships, their masts were very tall, and the seamen could pile on the canvas to a fare-you-well. And they did. They went past the best from Bristol and Liverpool and were gone over the horizon almost before the British could call them crazy Yankees. They could be built more economically than any ships going. They were honestly made, and yet full of gadgets for handling canvas and making sailing easy. They were as solid as Maine manhood. And they were beautiful. A bow high and fine and a sheer like a sea gull's wing. The clippers of Newburyport and Salem could beat them, but those boats carried smaller cargoes, they were for looks more than business, and they had faded like ghosts when the sturdy Bath ships were still swinging along on all the seas.

There were better reasons still. The Maine seamen were the world's best. They were native-born Americans, men with at least a common school education, and ambitious to get on. They were the best paid of all sailors. Yet they followed the sea for the love of it. They were mechanical-minded. They were lords of creation, living a hundred feet over the sea on the cobwebs of the rigging, among the American stars and close to the sun. They had the eagle in them and the great American pride.

Their masters were cut from the same cloth. They were not hired men. They were owners or part owners of the ships they sailed. They were business agents in foreign ports. They were shrewd buyers and sellers. They were democrats, and their men were their relatives and their friends. These Maine Yankee shipmasters were unique in still another way. No matter how high they rose or how rich they grew, they never lost their feeling for the land and home.

In the 1850's, Maine Alone Resists the Demand to Sacrifice Other Qualities of Ship Design for Speed and Continues to Build Sturdy Good-carrying Ships

The Gold Rush to California, with its associated demand for marine tonnage and great speed, developed in 1849 and 1850, and the shipbuilding craze of 1850-1854 in the United States was relatively as forced and emotional as that of 1916-1920 and 1940-1945. In the fifties of the last century, the entire East was consumed with the passion to participate in the gold find of the West and benefit personally and selfishly therefrom. In the years of the Great World Wars, the United States hysterically built every bit of tonnage of every kind and quality, urged on by a feverish desire and whipped into action to build ships to win the war. The passengers and freights from eastern ports to California during the Gold Rush called for speed. Vessels sailing the 16,000-mile journey around the Horn competed with the water-and-land route, which used the Isthmus of Panama.

It is said that during the California gold boom all the shipbuilders of the East Coast built or attempted to build sharp-lined, loftily rigged, and heavily canvased fast sailers that became known as "clippers," but this is not so. The shipbuilders of Bath, Maine, were pre-eminently shipowners and businessmen; they knew ships, and they also knew human nature and were well conversant with universal economic law. Bath—and in general the Kennebec region—alone

resisted to any great degree the national urge and popular demand for speed at the sacrifice of capacity, economy of operation, comfort, and seaworthiness. The Bath wood shipbuilding shipowners said, "We will build bigger and better ships that will sail well and fast and make money today—and tomorrow as well." A couple of yards in Bath built a few sharper-lined ships that were more heavily canvased than soundly designed mid-century Bath "Down Easters," and these they termed not "medium clippers" but "half clippers" or "part clippers." However, Bath did not build extreme clippers, as did all other American shipbuilders constructing for the California and, later, for the foreign trade. With the state of Maine in general following its leadership, Bath kept on building ships—and these of its own sound business type—when the "clipper yards" of New York, Massachusetts, Rhode Island, Connecticut, the Delaware, and the Chesapeake were closed down and the short-lived boom was followed by an awful depression, a financial panic, and, at its heels, the Civil War.

The state of Maine and the shipowners, operators, and builders "Down East," with Bath as the shipbuilding metropolis of this wood ship territory, had persisted in being profit-minded in the operation of their ships even when the rest of the country—and particularly New York and Boston and also the Chesapeake—went "speed crazy" and built sharp-lined, loftily sparred, and overcanvased clippers for speed. Such vessels, known as clippers, were built without any regard to cargo capacity (deadweight or volume), the cost of maintenance and repairs, and the number of men required to sail them. Bath, which had built 62 sizable three-masted full-rigged deep-sea vessels during the four years 1847-1850 (including the *Saratoga* of 1,200 tons and the *Continent* of 1,008 tons, each built by James Drummond), turned out a multitude of Cape Horners or deep-sea square-riggers—primarily good carriers and fast sailers but including a few half, or compromise, clippers—during the frenzied shipbuilding years of 1851-1854 (22 sizable vessels in 1851, 21 in 1852, 33 in 1853, and 41 in 1854). When the reaction to the boom, with its period of overconstruction, hit the entire country, Bath continued to build its advocated type of moderately full and conservatively sparred and manned craft (16 vessels in 1855, 14 in 1856, and 8 in 1857). Bath built 117 sizable three-masted square-riggers (not counting vessels of 500 tons and less) during the four-year period 1851-1854 inclusive, an average of over 29 big ships per year. During the ten-year period 1847-1856 inclusive, 211 sizable three-masted square-riggers were built (200 full-rigged ships and 11 barks), an average of over 21 big square-riggers and 20 sizable full-rigged ships per year.

The two largest full-rigged ships built at Bath during each of the years 1847-1856 inclusive were as follows:

Year	Name of Ship	Tonnage	Builder	Year	Name of Ship	Tonnage	Builder
1847	RICHARD ALSOP	835	Bath	1852	WILLIAM TAPSCOTT	1,524	Drummond, Bath
	CYBELE	798	Pittston		ARIEL	1,329	Rideout, Bath
1848	SEA QUEEN	862	Rideout, Bath	1853	GAUNTLET	2,031	Southard, Richmond
	CAROLINE NESMITH	832	Drummond, Bath		PRIDE OF AMERICA	1,826	Patten & Sturdevant, Richmond
1849	SARATOGA	1,200	Drummond, Bath	1854	NORMANDY	1,491	Richardson, Bath
	CHARLES CROOKER	960	Rideout, Bath		ESCORT	1,454	Berry, Bath
1850	CONTINENT	1,008	Drummond, Bath	1855	J. S. PARSONS	1,397	Rideout, Bath
	TEMPEST	861	Patten, Bath		CARAVAN	1,362	Hall, Bath
1851	JAMES L. BOGART	1,220	Rideout, Bath	1856	SUNSHINE	1,467	Hall, Bath
	MOBILE	960	Larrabee, Bath		WILLIAM J. MORRIS	1,187	Trafton, Bath
	MONGOLIA	960	Berry, Bath				

Bath, Maine, built no extreme, or "out-and-out," clippers at any time, but Trufant & Drummond did build in 1851-1854, under contract for Massachusetts and New York owners, a few ships with relatively sharp lines and much greater sail spread than the Bath or "Down

East" type of standard deep-sea square-rigged cargo carrier. These the builders termed "half clippers," and most were somewhat fuller and carried less canvas—and more cargo—than the clippers of Massachusetts, New York, Connecticut, New Hampshire, etc. These Trufant & Drummond "half clippers" were:

1. *Monsoon* (773 tons); length 158 ft., beam 32 ft. 7 in., depth 21 ft.; built in 1851 for New Bedford owners. She was much too small for the Cape Horn service, but nevertheless made three passages around the Horn in 1852-1855 in 130, 120, and 157 days, respectively.

2. *Flying Dragon* (1,127 tons); length 187 ft., beam 38 ft., depth 22 ft.; built in 1853 for Boston owners. This was the sharpest-lined ship ever built in Bath and, notwithstanding the statements of her builders, was undoubtedly more of a "medium" than a "half" clipper. She made five passages to the Golden Gate in 1854-1859 in 148, 119, 101, 126, and 119 days, respectively, clearance to entry. The report was generally circulated and evidently accepted by the shipping fraternity to the effect that the *Flying Dragon* made a run from New York to San Francisco in the fast time of 97 days. Carl C. Cutler, in GREYHOUNDS OF THE SEA (page 332), gives her credit for a passage of 97 days in 1856-1857 and for the second fastest run of the year. Arthur H. Clark, in THE CLIPPER SHIP ERA (page 295), says, "In 1857 the *Flying Dragon* made the passage to San Francisco in 97 days; the *Westward Ho* and *Andrew Jackson* in 100 days, both from New York, and the *Flying Fish* in 106 days from Boston." Clark gives the Bath-built "half clipper" speed honors for the year, but it would seem, according to the record of clearances and sailings from New York and arrivals at San Francisco, that the following times are probably more nearly correct:

Name of Ship	Sailed from New York 1856	Arrived San Francisco 1857	Length of Passage in Days
GREAT REPUBLIC	Dec. 5	Mar. 9	94
FLYING DRAGON	Nov. 24	Mar. 5	101
ANDREW JACKSON	Nov. 13	Feb. 28	107
WESTWARD HO	Dec. 6	Mar. 26	110

On her first trip around the Horn, the *Flying Dragon* experienced "terrific gales and seas" and was "31 days off Cape Stiff"; her captain died on this voyage, but the ship, although held back by adverse conditions, suffered no damage. Her average time for the next four westbound passages was 116½ days and her average speed about 6 knots per hour. On one passage, she averaged 6.6 knots per hour. In 1860 the *Flying Dragon* made a run of 75 days from Sydney, Australia, to Hampton Roads, Va.—a record.

3. *Mary Robinson* (1,371 tons); length 215 ft., beam 38 ft. 6 in., depth 22 ft. 6 in.; built in 1854 for New Bedford owners. She made four trips around the Horn in 1855-1860 in 136, 122, 144, and 120 days—an average length of passage of 130½ days.

4. *Viking* (1,350 tons); length 220 ft., beam 41 ft. 9 in., depth 22 ft. 9 in.; built in 1853 for New Bedford owners. She made four passages between New York and San Francisco westbound during 1854-1859 in 116, 123, 108, and 133 days, respectively, an average of 120 days, which is good time.

5. *Windward* (818 tons); length 159 ft., beam 35 ft., depth 21 ft.; built in 1854 and "quite full-modeled." She was a small vessel for the Cape Horn run and, when new, made a passage to the Golden Gate in 155 days. She had the distinction of holding the crack clipper *Young America* for 56 days (July 8-September 2) on the Atlantic side during this passage; but the *Young America,* when her command stopped experimenting and finally decided to follow Maury's sailing directions, beat the fuller and much less speedy little *Windward* 45 days to San Francisco.

Trufant & Drummond also built in 1853, for the Tapscott line of Liverpool-New York sailing packets, the *Emerald Isle* (1,736 tons; length 215 ft., beam 41 ft. 8 in., depth 20 ft.

10 in.), which was described as a "half clipper-packet." The five Trufant & Drummond-built Cape Horners, which were, rightly or not, classified as "half clippers," averaged only 1,088 tons. This was small for Cape Horn service; yet, including the 155-day run of the little *Windward* (818 tons), the 157-day run in atrocious weather—gales and seas—of the still smaller *Monsoon* (773 tons), and the awful experience of the *Flying Dragon* (1,127 tons) when she made the run in 148 days after being held off Cape Stiff 31 days and losing her skipper, these Trufant & Drummond well-built wood square-riggers averaged for all of their seventeen passages westbound to San Francisco only 128 days. This compares favorably with the theoretical average length of voyage between Sandy Hook and the Golden Gate of 130 days as set by Lieutenant Maury for clippers and fast well-handled ships.

Hall, Snow & Company, of Bath, Maine, built in 1852 the little full-rigged ship *Carrier Pigeon* of 844 tons (length 175 ft., beam 34 ft., depth 21 ft.) for Boston owners (Reed, Wade & Company). After practically completing her first passage around the Horn in 132 days, this small reputed "half clipper" went ashore fifty miles south of San Francisco in a heavy fog and was a total loss. A year later, the company built the *Undaunted* of 1,371 tons and of generally similar type (length 198 ft., beam 38 ft., depth 23 ft.), which made one run to the Golden Gate in 1856—also in 132 days. G. H. Ferrin, of Richmond, built the *Wild Wave* of 1,547 tons in 1853. This ship was said to be "no clipper but a good carrier that will sail fast." She made one run around the Horn to San Francisco in 140 days and in 1856, sailing from Callao, Peru, to Plymouth, England, made a record run of 70 days. She was wrecked off Pitcairn Island March 5, 1858. T. J. Southard built the *Gauntlet* of 1,854 tons (length 230 ft., beam 42 ft., depth 23 ft.) in 1853 at his Richmond yard; she made a slow run of 161 days to the Golden Gate. She was sold to the British in 1860. Southard also constructed the *Wizard King* of 1,398 tons (length 199 ft. 6 in., beam 38 ft. 10 in., depth 23 ft. 6 in.) in 1854. There is no record of any passage around the Horn to California, but she ran for years in the Australian service. The *Pride of America* (1,826 tons; length 213 ft., beam 38 ft., depth 22 ft.) was built by Patten & Sturdevant in 1853 and was promptly sold to the British. She gave good service for thirty years. One of the last craft generally described as a medium clipper built in the United States was the very small ship *Maid of the Sea,* recorded as built by M. Simpson, of Bath, Maine, in 1859. This vessel was 155 ft. long, 30 ft. 2 in. beam, 21 ft. 6 in. deep, and of 661 tons register, but records show that she was neither sharp-lined nor heavily canvased. (Lemont records the *Maid of the Sea* as built by "Henry W. Owen and others.") After 1854, Bath shipbuilders are not credited with the production of any medium clippers, half clippers, or pseudo-clippers (with the exception of the little *Maid of the Sea*) and at no time with the building of any real or extreme clippers where cargo carrying—both weight and volume—was sacrificed for the greatest possible speed and the number of the crew to man a vessel (also repair bills for hull, spars, canvas and rigging) was considered of little importance.

The peak of the era of wooden ships came with the clipper shipbuilding boom during the decade before the Civil War, but Bath reached the zenith of its importance as a builder of wood sail when other great shipbuilding centers were on the wane. As Robert P. Tristram Coffin says: "In 1857, 183,000 tons of shipping were owned in the city on the Kennebec. One-half of all the American wooden ships were Maine built, and Bath was the capital of this industry; 33,000 tons of ships went down the ways each year. The ships grew from 1,000 tons to 1,500. America was carrying most of the world's goods, and the American merchant marine stood first in the world, head and shoulders above the British. It was the Homeric Age of Sail."

At mid-century, Bath had so developed its shipbuilding industry and its foreign shipping interests—with its builder-owners—that the name of Bath on the sterns of fine-looking, sensibly modeled ships and barks was to be seen in all the harbors of the world. Bath shipyards accelerated their output and launched 40,415 tons of merchant sail (forty-six vessels) from city yards and 77,597 tons (ninety-eight vessels) from yards in the Bath district in 1854; production continued at a high level during the national depression of 1857 and the gloomy years that followed prior to the Civil War. Bath built ships in quantity when other American shipyards were closed and when even such great builders as Donald McKay at East Boston could not

obtain contracts to build for other owners (either American or foreign) or money to build on their own account. Bath ships built in the forties, fifties, and sixties established the great type of square-rigged deep-sea sailer that became known the world over as the "Down Easter." These vessels were gradually improved in design and construction until they were but little inferior in speed to the medium clippers, which displaced the extreme clippers in ocean service as the fifties advanced; but they had relatively large cargo (and, therefore, earning) capacity and excellent handling qualities—loaded, light, or in ballast. They were practical ships and well adapted for general trade. Designed to be operated economically (in man-power, repair bills, maintenance charges, and depreciation), they were built to make money on the Seven Seas. That they were both great and sensible ships is proved by the fact that, in harmony with the law of the survival of the fittest, they were being built and operated in the eighties, when the more spectacular clipper type of sharp-lined sailer, whether built of wood or iron (or of composite construction), had long since passed. The Bath type of square-rigged Down Easter fought with a measure of success even steam itself (and the handicap to sail of the Suez Canal) until well into the twentieth century.

Bath built many ships that for speed, on occasions, almost equaled clipper ship records. The *Pocahontas* of 1,087 tons, built by Houghton in 1855, was so fast that she was branded "a clipper," but whereas she had excellent sailing lines, she was a true Down Easter and a sturdy, commodious carrier. In 1853, Trufant & Drummond launched the *Emerald Isle* of 1,736 tons, a fast packet type of carrier of Down Easter characteristics and designated by her owners as a "clipper packet." This craft remained the largest vessel built in Bath until the middle sixties.

Because Bath, Maine, was primarily and almost solely a shipbuilding and seafaring town engaged in foreign trade with peoples in every part of the globe, it has been said:

> The community is the most cosmopolitan for its size and population in the entire world. Its leading citizens are internationalists and peculiarly world-minded in the broadest possible sense. No more tolerant attitude can be seen and felt in any other part of the old or new world. Every nationality can be seen on the Bath streets, the product of every country is to be seen in Bath homes, and the people generally think and talk of remote foreign lands as if they were geographically located next door. To visit and commune with Bath citizens is not only wonderfully pleasant but a liberal education. . . .
>
> The ships early brought the community in intimate contact with all the world and furnished the means for a superior culture, and before the middle of the nineteenth century Bath was known far and wide for its culture and hospitality. . . . No community in the state was more enterprising or more envied. Thus ships shaped not only the material aspect but also the character of the place.

The following table gives a list of the ships built in the Bath district in 1854 as published in a monthly marine journal in New York in the spring of 1855. The schedule of shipbuilding covers only the city of Bath and cities and towns in the vicinity located on the Kennebec River.

Denom.	Tonnage	Name of Builder	Where Built	Denom.	Tonnage	Name of Builder	Where Built
Ship	1,353	Johnson Rideout	Bath	Bark	544	Hall, Snow & Co.	Bath
Ship	1,400	Johnson Rideout	Bath	Brig	274	Hall, Snow & Co.	Bath
Brig	267	Johnson Rideout	Bath	Ship	1,150	Jenks & Harding	Bath
Brig	276	Johnson Rideout	Bath	Bark	350	Jenks & Harding	Bath
Ship	1,388	Trufant, Drummond & Co.	Bath	Bark	424	Jenks & Harding	Bath
Ship	1,500	Trufant, Drummond & Co.	Bath	Ship	883	Rogers & Son	Bath
Ship	863	Trufant, Drummond & Co.	Bath	Ship	980	Rogers & Son	Bath
Ship	800	Trufant, Drummond & Co.	Bath	Ship	1,050	Rogers & Son	Bath
Brig	309	Trufant, Drummond & Co.	Bath	Ship	769	Houghton & Sons	Bath
Brig	283	Trufant, Drummond & Co.	Bath	Ship	1,300	Houghton & Sons	Bath
Ship	908	Hall, Snow & Co.	Bath	Ship	1,083	Larrabee & Robinson	Bath

(Continued on next page)

Denom.	Tonnage	Name of Builder	Where Built
Ship	1,200	Larrabee & Robinson	Bath
Brig	286	Larrabee & Robinson	Bath
Ship	1,350	G. F. & J. Patten	Bath
Ship	1,000	Clark & Sewall	Bath
Ship	1,250	W. V. & O. Moses	Bath
Ship	1,119	W. V. & O. Moses	Bath
Ship	1,316	Harrison Springer	Bath
Ship	750	Harrison Springer	Bath
Ship	1,200	Lowell & Small	Bath
Ship	1,500	Berry & Richardson	Bath
Ship	1,327	H. & R. Hitchcock	Bath
Ship	1,400	H. & R. Hitchcock	Bath
Ship	1,096	Arnold & Co.	Bath
Ship	1,300	Arnold & Co.	Bath
Brig	275	Arnold & Co.	Bath
Ship	1,300	R. Morse & Sons	Bath
Ship	595	Lemont, Forsaith & Hall	Bath
Ship	600	Lemont, Forsaith & Hall	Bath
Ship	500	Randall & Bibber	Bath
Brig	276	Cox & Brother	Bath
Ship	1,400	Dinsmore	Bath
Ship	550	Lemont & Robinson	Bath
Ship	621	W. M. Reed & others	Bath
Schooner	50	H. Groves [or Grover]	Bath
Ship	1,005	Joseph Berry & Son	Bowdoinham
Ship	1,256	Joseph Berry & Son	Bowdoinham
Brig	237	Joseph Berry & Son	Bowdoinham
Ship	1,020	St. Vincent Given	Bowdoinham
Ship	883	Berry, Carr & Fuller	Bowdoinham
Ship	894	John Harward	Bowdoinham
Ship	550	Joseph C. Given	Brunswick
Ship	567	J. C. Humphries	Brunswick
Ship	1,398	T. J. Southard	Richmond
Ship	796	T. J. Southard	Richmond
Ship	1,000	T. J. Southard	Richmond
Schooner	168	T. J. Southard	Richmond
Ship	767	Foster & McFarlane	Richmond
Ship	960	Foster & McFarlane	Richmond
Ship	670	Foster & McFarlane	Richmond
Ship	825	Jack & Woodward	Richmond
Ship	650	Jack & Woodward	Richmond
Ship	850	G. H. Ferrin	Richmond
Ship	850	Patten & Sturdevant	Richmond
Ship	820	H. P. Toothaker	Richmond
Ship	769	H. P. Toothaker	Richmond
Ship	1,100	A. & D. Allen	Richmond
Ship	643	Thomas Spear, Jun.	Richmond
Brig	299	Thomas Spear, Jun.	Richmond
Brig	250	Barker & Parks	Richmond
Bark	528	Joseph Berry	Georgetown
Ship	1,500	Joseph Berry	Georgetown
Schooner	22	Noah Webber	Georgetown
Ship	1,200	F. & W. Stevens	Pittston
Ship	723	Wm. Cooper & others	Pittston
Ship	912	Smith & Hunter	Pittston
Brig	225	Smith & Hunter	Pittston
Brig	334	Daniel Blinn	Pittston
Ship	700	Fuller & Andrews	Hallowell
Ship	1,036	Reed & Page	Hallowell
Ship	1,100	Reed & Page	Hallowell
Ship	548	James Atkins & others	Hallowell
Ship	1,090	T. Ripley	Hallowell
Ship	900	T. Ripley	Hallowell
Ship	700	A. Merrill	Hallowell
Bark	350	Jonathan Kempton	Hallowell
Ship	700	Harvey, Prebble & Co.	Woolwich
Brig	304	Rodney C. Gould	Woolwich
Brig	248	Elwell P. Swett	Arrowsic
Ship	700	C. A. Lambard	Augusta
Ship	600	Blanding	Augusta
Ship	600	Chas. Winat & Co.	Phippsburg
Brig	315	Chas. Winat & Co.	Phippsburg
Ship	550	Pierson, Morrison & Co.	Phippsburg
Ship	750	W. L. Stone	Farmingdale
Ship	900	W. S. Grant	Farmingdale
Brig	420	E. G. Pierce	Farmingdale

RECAPITULATION

Section	Number of Vessels					Tonnage of Vessels				
	Ships	Barks	Brigs	Schooners	Total	Ships	Barks	Brigs	Schooners	Total
City of Bath	34	3	8	1	46	36,801	1,318	2,246	50	40,415
Phippsburg	2	—	1	—	3	1,150	—	315	—	1,465
Arrowsic	—	—	1	—	1	—	—	248	—	248
Georgetown	1	1	—	1	3	1,500	528	—	22	2,050
Woolwich	1	—	1	—	2	700	—	304	—	1,004
Brunswick	2	—	—	—	2	1,117	—	—	—	1,117
Bowdoinham	5	—	1	—	6	5,058	—	237	—	5,295
Richmond	14	—	2	1	17	12,098	—	549	168	12,815
Pittston	3	—	2	—	5	2,835	—	559	—	3,394
Farmingdale	2	—	1	—	3	1,650	—	420	—	2,070
Hallowell	7	1	—	—	8	6,074	350	—	—	6,424
Augusta	2	—	—	—	2	1,300	—	—	—	1,300
Total	73	5	17	3	98	70,283	2,196	4,878	240	77,597

Average tonnage per vessel: 3-masted ships, 963 tons; 3-masted barks, 439 tons; 2-masted brigs, 287 tons; 2-masted schooners, 80 tons; total all vessels, 792 tons.

Of the number of vessels built during the year, 74.49 per cent were full-rigged ships, 5.10 per cent were barks, 17.35 per cent were brigs (i.e., 96.94 per cent were square-riggers), and only 3.06 per cent were schooners. Considering registered tonnage, the figures are even more impressive, for 90.57 per cent of the total tonnage built were full-rigged ships and 99.69 per cent were square-riggers.

The year 1854 was the banner year for the construction of vessels in the district of Bath as per customhouse records. The next big years in number of vessels built and the aggregate registered tonnage per annum preceding the Civil War were 1855, 1853, and 1856 in the order named. The following table gives comparative data of the number and tonnage of vessels built and registered at Bath, Maine, during each of eight years, in the decade ending with 1858, for which statistics are available.

	Number and Type of Vessels Built								
Year	Ships	Barks	Brigs	Total Square-riggers	Schooners	Total Sail	Steamers	Total	Total Registered Tonnage
1849	37	—	12	49	6	55	2	57	20,240
1850	34	—	4	38	5	43	2	45	22,240
1852	40	—	5	45	3	48	—	48	24,339
1853	—	—	—	—	—	—	—	69	49,399
1854	73	5	17	95	3	98	—	98	77,597
1855	47	6	4	57	7	64	8	72	50,900
1856	42	1	5	48	6	54	8	62	39,856
1858	16	2	1	19	6	25	—	25	15,826

The tonnage built and registered at Bath "from 1855 to 1869" has been stated as 362,383 tons. If the tonnage reported was for a period of fourteen years, the average annual tonnage is 25,884 tons, and if for fifteen years, the average tonnage is 24,159 tons per year. The vessels built and registered at Bath in 1869 were reported as eleven ships of 15,890.45 tons, six barks of 4,187.76 tons, and nineteen schooners of 2,666.39 tons, a total of 22,744.60 tons for these thirty-six sizable vessels. An additional three sloops were built, but the tonnage is not at hand, although the total number of vessels built and registered during the year is stated as thirty-nine and the total tonnage owned in the district of Bath in 1869 was reported as 167,683 tons. The tonnage reported as owned in the port of Bath in 1794 was later stated as 5,407 tons, which probably materially understates the truth. Other ownership tonnage figures for the port for each of various years during the period 1804-1856 were officially reported as follows:

Year	Registered Tonnage Owned at Bath	Year	Registered Tonnage Owned at Bath	Year	Registered Tonnage Owned at Bath
1804	10,666	1830	30,218	1850	103,625
1815	20,258	1834	44,191	1852	111,241
1825	23,466	1849	88,820	1856	193,320

The following ships built in Bath in the 1850's were deemed by Lemont of sufficient importance to record in his historical notes. In all such lists of Bath-built vessels, the actual builders and the owners are confused. Many of the owners were the actual builders and hired both a master builder and a yard; others financed a builder, taking all the responsibility of construction. The owners of all the big yards were not content to be merely builders of ships, but they were builder-owners, and most owners did not make outright contracts to have ships built for them by a purely constructing firm. Generally, a managing owner of a ship would sell fractional parts of her to his friends, associates, or outside investors and then take the responsibility of building the ship himself after making arrangements with a competent and experienced master builder or master shipwright. Contractors working on a ship usually took a fraction of her as part payment for services, and it was at all times difficult to draw a line between the builder and the owner of a vessel.

Year Built	Name of Ship	Tonnage	Builder
1850	EMMA FIELD	944	Jas. H. McLellan
1850	TEMPEST	861	David Patten
1850	ST. PETER	437	Stephen Larrabee
1850	EVA	630	Lorenzo Parker
1850	CONTINENT	1,008	Wm. & Jas. Drummond
1851	KENNEBEC	925	Geo. W. Kendall and J. G. Richardson
1851	MARY FLORENCE	720	Wm. Rogers
1851	MOBILE	960	John & Geo. F. Patten
1851	RICHARD MORSE	872	Richard Morse & Sons
1851	TANARO	499	Willard Hall
1851	COSTILLA	587	Samuel D. Bailey
1851	MESSENGER	460	Otis Kimball
1851	TORRENT	641	Caleb S. Jenks
1851	MONGOLIA	960	Joseph Berry
1852	BENJAMIN ADAMS	1,170	Wm. & Jas. Drummond
1852	ELVIRA OWEN	873	J. P. Morse
1852	TAMQUIN	406	Chas. Clapp and D. C. Magoun
1852	ARAB	467	S. D. & B. C. Bailey
1852	OTSEONTHE	1,137	Wm. Rogers
1852	GERTRUDE	506	Adam Lemont
1852	ALBERT GALLATIN	533	John Smith
1852	LISBON	476	David Curtis
1852	SAGADAHOCK	574	Willard Hall
1853	HARVEST QUEEN	1,018	Wm. V. & O. Moses
1853	LADY FRANKLIN	549	Wm. M. Reed
1853	MERMAID	1,221	Chas. & Wm. D. Crooker
1853	FLYING DRAGON	1,197	Jas. & Wm. Drummond
1853	BERNARD	677	S. D. Bailey
1853	EMERALD ISLE	1,736	Wm. & Jas. Drummond
1853	G. B. LAMAR	933	Elijah D. Manson
1854	NORTHERN EMPIRE	1,499	John Crooker
1854	E. P. STRINGER	1,353	Johnson Rideout
1854	NEW ERA	1,327	Rufus Hitchcock
1854	VICTORIA REED	621	Wm. M. Reed
1854	SAMARITAN	1,219	W. D. Sewall and Thos. M. Reed
1854	DANUBE	908	Hall, Snow & Co.
1854	AQUILA	1,119	Wm. V. & O. Moses
1854	EMMA JANE	1,096	Clapp & Magoun
1854	GREENLAND	549	John H. Kimball
1854	OMAR PASHA	768	Lewis Blackmer
1854	REVENUE	1,316	Chas. S. Robinson
1854	WINDSOR FOREST	1,256	Joseph Berry
1854	ASSYRIA	1,363	Patten Brothers
1854	ARAMED SNOW	553	Alfred Lemont
1854	ROCK LIGHT	1,583	Wm. & Jas. Drummond
1855	WALTER SCOTT	1,196	J. P. Smith and Stephen Larrabee
1855	CAROLINE	848	Harrison Springer
1855	J. P. MORSE	1,451	Rufus Hitchcock
1855	CARLYLE	1,181	Harding and Simpson
1855	NORMANDY	1,491	G. L. Richardson
1855	CONTEST	582	C. V. Minott and Jas. Drummond
1855	PLEIADES	1,172	John C. Lowell
1855	MARIA [MESSINA]	1,243	Augustus Arnold & Co.
1855	INDEPENDENCE	1,277	J. P. Morse
1856	ADAM LEMONT	1,104	Adam Lemont
1856	CANOVA	581	John Fisher
1856	SUNSHINE	1,467	Hall, Snow & Co.
1856	WILLIAM V. MOSES	862	Wm. F. Moses
1856	HELLESPONT	767	E. & A. Sewall
1856	SARAH JUDSON	545	Samuel D. Bailey
1856	ALFRED LEMONT	639	Wm. M. Reed
1856	ARGO	1,078	S. D. & B. C. Bailey
1856	ANNIE KIMBALL	598	John H. Kimball
1856	CHARLES DAVENPORT	974	Charles Davenport
1857	LEANDER	897	Arthur Sewall and brother
1857	CHARLES C. DUNCAN	899	Charles Davenport
1857	TUBAL CAIN	528	Eli Cox
1857	ST. HELENA	947	Reed, Lemont and Robinson
1858	LUCINDA	838	S. D. & B. C. Bailey
1858	FRANK BOULT	1,060	Oliver Moses & Sons
1859	CITY OF BATH	736	J. B. Swanton
1859	MAID OF THE SEA	661	Henry W. Owen and others
1859	EXCHANGE	595	David P. Low
1859	LOUISE MYERS	1,049	Wm. V. & Wm. F. Moses

The following table gives the number of sizable three-masted square-riggers (full-rigged ships and barks) built and registered at Bath during each year of the twenty-year period 1850-1869 inclusive, divided into certain groups based upon registered tonnage. Of the 172 sizable ships and barks built in the 1850's, 163 were full-rigged ships and 9 barks; of the 114 sizable three-masters built and registered in the 1860's, 75 were full-rigged ships and 39 (or about one-third the total) were barks. The effect of national disunity, the business depression, and the Civil War is evident in the relatively small number of ships built during the period 1857-1863; the increased use of the bark rig for economic reasons, with a gradual increase in the size of barks, is reflected in the Bath shipbuilding records for the years 1854-1869 inclusive. Up to the clipper ship boom, a Maine-built ship of 500 tons was considered sizable, but by 1854 a full-rigged ship had to be of 800 tons and over, and barks 500 tons and over, to be deemed sizable. By 1855 a full-rigged ship had to be of 1,000 tons or over to be worthy of the designation "sizable," but barks of 500 tons or over were considered as "sizable," depending on the trade in which they operated.

	Number of Sizable 3-masted Square-riggers Built Each Year in Certain Tonnage Groups								
Year	From 500 to 650 Tons	From 651 to 800 Tons	From 801 to 1,000 Tons	From 1,001 to 1,250 Tons	From 1,251 to 1,500 Tons	From 1,501 to 1,750 Tons	From 1,751 to 2,000 Tons	Over 2,000 Tons	Total
1850	6	5	2	1	—	—	—	—	14
1851	9	3	9	1	—	—	—	—	22
1852	6	2	8	3	1	1	—	—	21
1853	1	5	8	12	3	2	1	1	33
1854	2 (both barks)	—	11	17	10	1	—	—	41
1855	1 (bark)	—	—	9	6	—	—	—	16
1856	4 (all barks)	—	—	9	1	—	—	—	14
1857	2 (both barks)	—	—	6	—	—	—	—	8
1858	—	—	—	1	—	—	—	—	1
1859	—	—	—	2	—	—	—	—	2
1860	2 (both barks)	—	—	5	—	—	—	—	7
1861	—	—	1	—	—	—	—	—	1
1862	2 (both barks)	—	—	5	—	—	—	—	7
1863	1 (bark)	1 (bark)	—	9	—	—	—	—	11
1864	7 (all barks)	—	—	10	—	—	—	—	17
1865	5 (all barks)	4 (all barks)	2 (both barks)	3	3	—	—	—	17
1866	2 (both barks)	1 (bark)	—	3	4	—	—	—	10
1867	2 (both barks)	—	1	2	4	—	—	—	9
1868	—	1 (bark)	2 (both barks)	3	10	—	—	—	16
1869	2 (both barks)	3 (all barks)	1 (bark)	2 (one a bark)	7	—	4	—	19

The following table is a record of the sizable full-rigged ships built and registered at Bath (as per customhouse records) during the period of the fifties, which is known as "the clipper ship decade." It will be noted that very few of these Bath-built ships made any attempt to qualify as "clippers," but were essentially sturdy, good-carrying, moderately sparred, money-making "Down Easters." The effect on shipbuilding of the business depression and panic of 1856-1858 and of the national political conditions that led to the Civil War in 1861 is conspicuously evident.

Year	No. of Sizable Full-rigged Ships	Tonnage Range	Tonnage		Largest Ships				
							Dimensions in Feet and Inches		
			Total	Average	Name and Tonnage		Length	Beam	Depth
1850	14	508-1,008	9,547	682	CONTINENT	1,008	169- 5	36	18
					TEMPEST	861	164- 8	33- 8	16-10
					STATE RIGHTS	825	161- 2	33- 4	22
1851	22	512-1,220	16,606	755	JAMES L. BOGART	1,220	185	37- 9½	18-10¾
					MONGOLIA	960	172	34- 9	17- 4½
					MOBILE	960	172- 8	34- 8	17- 4
					KENNEBEC	925	170- 6	34- 3	17- 1½
1852	17	608-1,524	16,115	948	WILLIAM TAPSCOTT	1,524	195	41- 3	20- 7½
					ARIEL	1,329	191- 6	38- 9	19- 4½
					BENJAMIN ADAMS	1,170	186- 8	39- 9	18- 4½
					OTSEONTHE	1,137	187	36- 2	18- 1
1853	33	603-2,031	35,828	1,086	GAUNTLET	2,031	240	42- 5	21- 2½
					PRIDE OF AMERICA	1,826	226	41- 6½	29- 9¼
					EMERALD ISLE	1,736	215	41- 8	20-10
					WILD WAVE	1,547	207- 9	40	20
					WHITE FALCON	1,372	199	38- 6	19- 3
					UNDAUNTED	1,370	198- 3	38- 8	19- 4
					MERMAID	1,221	192- 6	36-11	18- 5½
1854	39	822-1,583	44,133	1,132	ROCK LIGHT	1,583	212	40	20
					NORMANDY	1,491	212	38- 9	19- 4½
					ESCORT	1,454	208	38- 8	19- 4
					J. P. MORSE	1,451	208	38- 7	19- 3½
					WIZARD KING	1,398	199- 6	38-10	
					MARY ROBINSON	1,388	196-10	38- 9	19- 4½
					ASSYRIA	1,363	196- 6	38- 8	19- 4
					EDGAR P. STRINGER	1,353	192- 9	38-11½	19- 5¾
					NEW ERA	1,327	199- 8	37- 9	18-10½
					REVERENCE	1,316	200	37- 6½	18- 9¼
					WINDSOR FOREST	1,256	191-10	37- 8	18-10
					MESSINA	1,243	195- 4	36-11¼	18- 5½
					SAMARITAN	1,219	191- 3	37- 0½	18- 6¼
1855	15	1,073-1,397	18,030	1,202	J. S. PARSONS	1,397	198	39	19- 6
					CARAVAN	1,362	195	38-10	19- 5
					IRONSIDES	1,318	192-10	38- 4	
					INDEPENDENCE	1,277	196- 7	37- 4	18- 8
					PROTECTOR	1,267	191	37-10	18-11
					ELIZA ROUSALL	1,264	192- 8	37- 7	18- 9½
1856	10	1,017-1,467	11,462	1,146	SUNSHINE	1,467	202	39- 6	19- 9
					WILLIAM J. MORRIS	1,187	186	37- 1½	
					CALLIOPE	1,163	185	36-10	18- 5
1857	6	1,036-1,189	6,767	1,128	MARGARET TYSON	1,189	186- 7	37- 1	18- 6½
					ACHILLES	1,181	185- 6	37- 1	18- 6½
					EMILY AUGUSTA	1,173	186- 6	36-10	

(Continued on next page)

Year	No. of Sizable Full-rigged Ships	Tonnage Range	Tonnage Total	Tonnage Average	Largest Ships: Name and Tonnage		Dimensions in Feet and Inches: Length	Beam	Depth
1858	1	1,060	1,060	1,060	FRANK BOULT	1,060	180- 6	35- 7	
1859	2	1,049-1,098	2,147	1,073	THOMAS HARWARD	1,098	184	35-10	
					LIZZIE MOSES	1,049	181-10	35- 8	17-10

The two-masted square-riggers built and registered at Bath continued to be of small size until after mid-century, but in 1854 the brig *Geranium* of 433 tons was built by E. G. Pierce, of Farmingdale. Brigs and brigantines of some 200 or 230 tons were considered to be sizable, however, and no more 400-ton brigs were built in the fifties and none before the *Glendale* of 454 tons was constructed by Arthur Sewall and the *Deacon* of 499 tons was launched by Stephen Larrabee in Bath during the war year of 1863. The following table is a customhouse record of sizable brigs and brigantines (two-masted square-riggers) built and registered at Bath during the years 1851-1858 (apparently, no sizable vessels of this type were built in either 1850 or 1859).

Year	Name of 2-masted Square-rigger	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1851	BLOOMER	233	104- 9	24- 5	10- 1	Nathaniel Small	Augusta
	ABBY JONES	209	98- 4	24	9-10½	Nathaniel Small	Augusta
1852	GEORGE	206	99	25- 3	9- 3	Daniel Allen	Richmond
	GOV. BROWN	299	107- 8	27- 8	11- 3½	George Pierce	Pittston
1853	WILLIAM L. CROSBY	241	106- 1	27- 4½	9- 4½	Not given	Arrowsic
	ELLEN REED	282	105	26- 2	11- 6	Not given	Hallowell
1854	CRIMEA	287	117- 3	27- 8½	9- 9½	Augustus Arnold	Bath
	NEBRASKA	309	117- 8	28- 6½	10- 3	James Drummond	Bath
	PHILIP LARRABEE	286	112	28- 1½	10- 2	Stephen Larrabee	Bath
	JAMES WAKEFIELD	248	106	27- 6	9- 7	Everett P. Swett	Arrowsic
	CHESAPEAKE	298	114- 6	29- 3	10	Thomas Spear, Jr.	Richmond
	MORNING LIGHT	269	108- 7	27-10	10	Johnson Rideout	Bath
	LAGRANGE	320	118- 8	26-11	11- 0¼	James P. Small	Pittston
	JACOB DOCK	303	118	27-10¼	10- 2¾	Rodney C. Gould	Woolwich
	KALAFAT	274	110- 9	28-11	9- 7¾	Willard Hall	Bath
	SHEET ANCHOR	276	111	27-10	10	Johnson Rideout	Bath
	BELLFLOWER	318	115- 6	27-10¼	11	David Blinn	Pittston
	GEORGE STOCKHAM	282	117- 8	27- 9	9- 7	James Drummond	Bath
	EMILY W. SAYBURN	332	116-10	28- 3	11- 2½	David Blinn	Pittston
	MERMAID	312	115-11	27- 4	10-11	S. P. Tomlinson	Dresden
	SHIBBOLETH	265	114- 4	27	9- 6	Charles Buker	Richmond
	GERANIUM	433	127	30- 6	12- 5	E. G. Pierce	Farmingdale
	ROLLING WAVE	236	100- 3	26- 8½	10	Wm. M. Berry	Bowdoinham
	MATILDA	276	116- 6	27- 8	9- 6	Cyrus B. Cox	Bath
1855	GALVESTON	254	112- 3	27- 6½	9- 2	James Cox	Bath
	E. P. SWETT	232	100	28	9- 6	James Atkins, Jr.	Hallowell
	GANGES	374	119- 8	29- 3	11-11	Thomas Spear, Jr.	Richmond
	FLOUNBINE	256	100-11	27-10		Chas. A. Lombard	Bath
	A. C. MERRYMAN	230	106	25- 2	9- 7	A. C. Merryman	Pittston
	MELVIN	241	106	25- 3	10	S. C. Colby	Richmond
1856	MADEIRA	281	107	26- 9	11-11	Wm. O. Tapley	Richmond
1857	T. W. LUCAS	354	121- 9	30- 1	10- 9½	Stephen Larrabee	Bath
1858	STELLA	306	109- 3	26-10	11- 3	Chas. J. Lilly	Richmond

Of 172 sizable full-rigged ships built in the Bath district in the 1850's, 112 (or over 65 per cent) were built in Bath proper. Of the 33 sizable two-masted square-riggers (brigs and brigantines) built and registered in the Bath district during 1851-1858 inclusive, 11 (or 33 per cent) were built in Bath proper. The shipbuilders within the town limits of Bath were much more interested in constructing full-rigged ships than the smaller brigs and brigantines.

In 1855 the port of Bath ranked fifth in the country in tonnage registered, enrolled, and licensed and held ownership in some five hundred sailing bottoms. Eighty-five per cent of its marine tonnage was registered for foreign trade. With the Civil War came the end of the American merchant marine, and the days of the square-riggers the world over were numbered. By 1870, Britannia once more ruled the waves, and British iron ships and coal-burning steam vessels had wrested the leadership in ocean trade from the wood square-riggers flying the Stars and Stripes. Americans were disgusted with their economic experiences in the clipper ship boom and the depression that followed. Furthermore, with policies determined by political and sectional rather than farsighted national interests, the legislative acts of a nonunited country discouraged marine investments and the building of iron steam vessels to compete on ocean trade routes with highly government-subsidized foreign ships, and this at a time when the West, railroads, American industries and public utilities were calling for money for development and promising big returns to the investor. The transcontinental railway took away the need of sending ships on a hazardous 16,000-mile ocean journey to reach a point only 3,000 miles away by land. Coffin has written of this period, "The new kind of highway . . . lengthened out over the land, over the Rockies, and it sucked the life of ships away on the far Pacific at last. It cut across rivers and went down the coasts. And the ships grew scarcer and lonelier on the ocean."

In the Critical Years of the 1860's, When Other Builders Were Retiring from the Field, Bath—and Maine—Wood Shipbuilders Had "Just Begun to Fight"

Bath and New England were finding that fore-and-aft-rigged schooners were cheaper to operate (and to build and maintain) and handier in coastwise trade than brigs and brigantines, and as the incentive to build square-riggers for service on the Seven Seas grew less, the possibility of developing trade with fore-and-afters along the coast line of the rapidly growing industrial East was sensed and exploited to the full. However, in the seventies, it became increasingly evident to Bath merchants, shipowners, shipbuilders, and "old salts" that "the British were taking back the wide sea and the ocean of Bath men was shrinking to coastal gulfs and bays" more and more as the years rolled by. The opening of the Suez Canal and the shortened trade route to India and the Orient via the Mediterranean, the canal, and the Red Sea—so favorable for steam propulsion and unsuited for sail—closely following the building of American transcontinental railroads gave American wind-propelled vessels solar plexus blows from which they could never recover. It soon became evident, with the use of the compound steam engine and higher pressures and the building of coaling stations throughout the world, that not only American wood sail but also British (and all foreign) iron sail was doomed.

The small schooners of the sixties, seventies, and eighties proved particularly handy in river and harbor work, seldom requiring a tug. On sea runs between ports, they made good time and generally proved themselves superior to square-riggers in such trade; also, they could be operated by a very few deck hands, and these far less capable and experienced than deep-sea "shellbacks."

It was during the Civil War that Bath shipbuilders and owners began to develop a great coastwise trade, which in the latter decades of the nineteenth and the first years of the present (twentieth) century became the mainstay of Bath's old and prime industry and business—the building and operation of wood vessels.

After the panic and depression of 1857-1859, Bath built seven sizable deep-sea three-masted square-riggers in 1860, and when Boston, New York, and other old shipbuilding centers constructed no vessels of this type and the Civil War put a stop to most of America's foreign trade, Bath, Maine, proved itself to be a veritable "City of Ships," building seven sizable three-masted square-riggers in 1862, eleven in 1863, seventeen in each of the years 1864 and 1865, ten in 1866, nine in 1867, sixteen in 1868, and nineteen in 1869—all for the deep-sea trade. Compare this shipbuilding record with that of New York and Boston and specifically with the records of the two generally proclaimed greatest wood shipbuilders in the United States. William H. Webb, of New York, America's greatest wood shipbuilder of the period, built his last medium clipper and Cape Horner in 1856 and after that constructed only three deep-sea full-rigged ships, which were all of the sailing packet type of general trader (used in transatlantic trade), one in 1857, one in 1860, and after another lapse of nine years, his last square-rigger (also a transatlantic packet type) in 1869. Donald McKay built no clippers or Cape Horners of either the extreme or medium type between 1856 and 1868, although he turned out a general transatlantic packet type of sailing trader in 1858 and one in 1861. In 1868 he built the *Sovereign of the Seas II* and the following year the *Glory of the Seas*—his last deep-sea square-riggers. Both William H. Webb and Donald McKay retired from the field as designers and builders of full-rigged deep-sea sailing ships in 1869, affirming that the day of the square-rigged ship for both around-the-Horn and foreign trade was over. It certainly had been over for years for vessels of the clipper type but not for the more practical Down Easter, with its relatively large cargo-carrying capacity—both weight and bulk—and its good average speed and with its low operating and maintenance expense. During the many years that Webb and McKay had built no Cape Horners and no square-rigged sailing vessels for any trade or service, Bath, Maine, and environs had been busy turning out deep-sea full-rigged ships and barks for foreign trade and Cape Horn service, and Bath wood shipbuilders launched ships that, when operated by Down East skippers and both Down East and other East Coast merchants, proved to be exceedingly profitable as well as excellent, long-lived, reliable, and economic craft. When Webb and McKay retired from a field that they declared to be hopeless and impossible, Bath shipbuilders and shipowners were somewhat amused and definitely unimpressed, for they had "just begun to fight." They proved it by successfully waging war with their wood ships against British and other foreign vessels (iron and steel, sail and steam) for a quarter of a century after Webb and McKay had admitted defeat and for some twenty years after Boston, New York, the Delaware, and the Chesapeake had been compelled to admit that they could not build and operate wood square-riggers and make any money. For the coastwise trade, Bath built wood schooners until the World War of 1914-1918 and, halfheartedly, for a few years thereafter. (These included colossal six-masters, one, the *Wyoming,* being larger than McKay's leviathan and "white elephant," the *Great Republic.*)

The Civil War seriously affected Bath. Henry W. Owen, the historian, says:

> The decade of the War Between the States marks an epoch in Bath history. . . . It brought about conditions which fundamentally changed forever the course of the business and industrial life of the community, and sharply marks a boundary between the Bath that was and the Bath that was to be. As the war clouds gathered, Bath was considerably torn by conflicting loyalties. Although geographically the city lay deep in the anti-slavery territory, the community was closely bound by social and business ties to the South. Although so widely separated on the map, Bath and New Orleans were closer neighbors than Washington and Richmond. For nearly half a century, Bath ships had been carrying the cotton of Louisiana to its markets. Many Bath ship-owning houses had branches in the Crescent City. Many Bath men had found homes there, and not a few shipmasters had married into Southern families. Leading men of Bath numbered among their most valued friends citizens of New Orleans, Mobile, Charleston, and other parts of the deep South. As the war broke, Bath ships lay in many southern ports.
>
> Under such circumstances, and entirely aside from the prospective loss of one of the most lucrative items in their business, it may be understood that

the Bath shipbuilders and shipowners could not but view with sorrow the sundering of relationships which had their roots so far in the past. When, however, the storm broke, there was no question as to which side the city espoused. The shots at Fort Sumter terminated all doubt and disagreement there might have been.

It was inevitable that the Civil War should bring about a serious and deeply felt depression in the shipbuilding industry of Bath, but Bath builders and owners were both resilient and resourceful, and they went through the ordeal and emerged in the later sixties in far better shape and with infinitely more courage than the shipbuilders and shipowners of any other community in the United States. Owen continues:

> The activities of the Confederate commerce destroyers built in England and manned by Englishmen resulted in largely wiping out the vast American mercantile marine, which had for a generation been making such inroads into world commerce that British merchant tonnage had been steadily losing ground. The British revenge was nearly complete, and managed without England becoming technically involved in the war. But the only thing not English about those Confederate cruisers was the design of the bunting which they displayed.
>
> Many Bath ships were destroyed by them, and a much greater number were sold in foreign ports, and the Bath foreign trade fleet never after attained its former dimensions or prestige, though not entirely wiped out until within the present [twentieth] century. Tall ships after 1861 [and the Civil War period] ceased to constitute a majority of the output [in numbers or tonnage] of the Bath, Maine, shipyards.

Only 9 vessels were launched in Bath in 1861 as against an annual average of 23 in the preceding decade. After the first war years, shipbuilding increased. Actually, more vessels were built during the period 1861-1870 than there had been during the previous ten years (246 as against 232); the average size, however, was smaller, and the total tonnage for Bath proper dropped from 181,479 to 118,746. In the Civil War decade, only 65 ships, 39 barks, and 9 brigs were built as against 181 ships, 18 barks, and 11 brigs in the 1851-1860 decade; but this total was counterbalanced somewhat by the building of 102 schooners and 17 sloops for the coastwise trade, as against 12 schooners and 6 sloops in the preceding decade, and by the building of 14 steamers. The sixties, as far as American wood shipbuilders were concerned, was a decade of dire forebodings, distressing, pessimistic portents, and the heralding of doom. At this time, another bit of handwriting on the wall was conspicuously evident—the shrinking of the Maine forests. But Bath fetched her timber from Vermont, Canada, and the South and went on, "too courageous, stubborn, and resourceful to quit; times had changed, but Bath shifted her cloth and her scissors with the times." She built square-rigged and fore-and-aft-rigged sailing vessels, wood steamboats and steamships; also, wood warships for the United States Navy.

Many wood steamships, for both naval and merchant work, were built in Bath during the sixties. During the Civil War, Larrabee and Allen built the steam gunboat *Kalardon* of 560½ tons for the U.S. Government; she was 176½ ft. long, had engines of 300 horsepower, and carried 12 guns. Among other steam-propelled vessels built at Bath during this decade, G. F. & J. Patten constructed the steamer *Montana* of 1,003 tons in 1865 and the *Idaho* of 1,077 tons in 1866, which went around to San Francisco and operated in the Pacific.

The business founded in Bath by Goss & Sawyer in 1866 was probably the greatest of the contract shipbuilding enterprises in the history of the city. (In reality, it was the parent of the Bath Iron Works, for it was the Goss Marine Iron Works that became the nucleus of the Bath Iron Works, and Gen. T. W. Hyde, president-owner, was actively associated with The New England Company, which was the successor of Goss & Sawyer and Goss, Sawyer & Packard.) The Goss & Sawyer yard, in a period of about forty years, launched 320 vessels, which included every type of wooden craft in use during that time. The yard occupied all of the space between the Moody estate and the Sewall shipyard.

The following list gives 30 vessels (27 ships and 3 barks) built at Bath in the sixties, which Lemont thought sufficiently important or noteworthy to record in his historical notes, published in 1874.

Year Built	Name of Ship	Tonnage	Builder
1860	SAMUEL TARBOX	549	Reed, Lemont & Robinson
1860	TRANSIT	933	Geo. M. Patten
1860	CALEDONIA	999	Silas A. Houghton and brothers
1861	WHITE MOUNTAIN	937	Lemont & Robinson
1861	SEBASTOPOL	498	Bibber and Gannett
1862	GEORGE BUTLER	1,097	Geo. M. Adams and J. P. Hitchcock
1862	SABINE [or SABINO]	1,038	G. F. & J. Patten and S. T. Woodward
1863	SAGINORA	1,038	Franklin Reed
1863	ALEXANDER	1,039	Lemont & Robinson
1863	CHEROKEE	1,091	Charles Davenport
1864	ABERDEEN (bark)	886	Lemont, Robinson, and Anderson
1864	ITALY	1,019	Jas. Patten and brothers
1865	FANNIE LARRABEE	1,272	Wm. V. Moses & Sons
1865	FREEMAN CLARK	1,336	E. & A. Sewall
1865	ST. JOSEPH	1,258	J. P. Hitchcock
1866	MATTERHORN	1,327	Sewalls and T. M. Reed
1866	PONTIAC	1,198	Frank & Wm. M. Reed
1867	IDAHO	1,226	Jas. & Wm. Drummond
1867	ITASCA	1,396	Lemont & Robinson
1867	WILLIAM M. REED	1,290	Frank Reed and G. F. Manson
1868	J. A. WRIGHT	1,273	F. O. Moses
1868	CHARLES O. WHITMORE (bark)	894	Kimball and Humphrey
1868	ELLEN GOODSPEED	1,290	Frank & Edwin Reed
1868	JAPAN	1,251	G. F. & J. F. Patten
1868	PRUSSIA	1,212	L. W. Houghton & Brothers
1868	LIZZIE H. (bark)	897	Goss & Sawyer
1869	INDIA	1,294	John & Gilbert E. R. Patten
1869	TABOR	1,339	Edward, Arthur, and William D. Sewall
1869	JAMESTOWN	1,888	James M. Hagar

The following were the largest and most important three-masted full-rigged ships built and registered at Bath (as per customhouse records) during the 1860's:

Year	Name of Ship	Tonnage	Dimensions in Feet and Inches			Builder	Where Built
			Length	Beam	Depth		
1860	TIGER	1,073	178- 4	36- 1		Charles V. Minott	Phippsburg
	MAMARONECK	1,048	182- 6	35- 1½		Wm. Drummond	Bath
	OBERON	1,026	180- 3	35		W. V. Moses	Bath
	PERSIA	1,049	182- 4	35- 2		Levi W. Houghton	Bath
	OCEAN SCUD	1,008	181- 8	34- 6		Arthur Sewall	Bath
1861	WHITE MOUNTAIN	939	175- 6	33-11		Alfred Lemont	Bath
1862	GEN. BUTLER	1,095	182-11	35-11	17-11½	J. Parker Morse	Bath
	VALLEY FORGE	1,177	192	36- 3		William Bradstreet	Pittston
	THOMAS DUNHAM	1,096	186- 3	35- 6½	17- 9	James Drummond	Bath
	SABINO	1,038	185	34- 8	17- 4	George F. Patten	Bath
	T. J. SOUTHARD	1,081	187- 3	35- 2	17- 9	T. J. Southard	Richmond
1863	VICKSBURG	1,030	183- 1	36- 6	18- 3	Arthur Sewall	Bath
	W. B. DINSMORE	1,041	181- 2	35- 2	17- 7	W. J. Drummond	Bath
	ITALIA	1,019	183- 5	34- 6	17- 3	George F. Patten	Bath
	ALEXANDER	1,039	183- 4	34-10½	17- 5	Alfred Lemont	Bath
	CHEROKEE	1,091	188- 9	35- 2	17- 7	Charles Davenport	Bath
	ZOUAVE	1,135	187	36- 1½	18- 0¾	Parker M. Whitmore	Richmond
	MORAVIA	1,045	186- 9	34- 7	17- 3	John Patten	Bath
	SAGINAW	1,028	183- 4	34- 8	17- 4	Franklin Reed	Bath
	SAMUEL FREEMAN	1,049	183- 9	35	17- 6	William V. Moses	Bath

(Continued on next page)

Year	Name of Ship	Tonnage	Dimensions in Feet and Inches			Builder	Where Built
			Length	Beam	Depth		
1864	OCEAN SIGNAL	1,215	193-11	36- 9	18- 4	Edward Sewall	Bath
	INTREPID	1,078	183- 6	35- 6½	17- 9¼	Edward Sewall	Bath
	MELOILLE	1,071	184-10	35- 3	17- 7	W. F. Moses	Bath
	MARY E. RIGGS	1,124	185	36- 2	18- 1	C. V. Minott	Phippsburg
	THOMAS LORD	1,056	186	34-10	17- 5	Franklin Reed	Bath
	ANNA CAMP	1,096	181- 3	36- 1	18- 0¾	William Drummond	Bath
	NEPTUNE	1,183	188-11	36- 8½	18- 4¼	Robert Purington	Bowdoinham
	AMERICAN	1,185	188- 2	36-10	18- 5	Johnson Rideout	Bath
	JANE J. SOUTHARD	1,120	184- 6	36- 2		T. J. Southard	Richmond
	PLEIADES	1,154	186- 6	36- 6	18- 3	J. P. Morse	Bath
1865	FREEMAN CLARK	1,336	190- 1	38- 5	24- 6	Edward Sewall	Bath
	REUNION	1,142	177- 8	36- 5	23- 5	William Drummond	Bath
	FANNIE LARRABEE	1,272	185- 8	37- 2	24- 5	William V. Moses	Bath
	ST. JOSEPH	1,258	184- 3	36- 4	24- 1	George M. Adams	Bath
	ELLA S. THAYER	1,098	171	35- 7	23- 2	Albert Hathorn	Bath
	SCOTIA	1,098	182- 6	36- 8	24- 5	Levi W. Houghton	Bath
1866	KATE DAVENPORT	1,248	189- 4	37	24	Albert Hathorn	Bath
	PONTIAC	1,198	185- 7	36	23- 6	Franklin Reed	Bath
	MATTERHORN	1,327	189- 7	38- 3	24- 2	Arthur Sewall	Bath
	VERMONT	1,279	189- 3	37- 2	24- 3	Jacob P. Morse	Bath
	THOMAS FREEMAN	1,250	187- 6	37- 3	24- 2	William V. Moses	Bath
	ALICIA	1,302	191- 6	38	23- 9	Henry S. Hagar	Richmond
	CHINA	1,173	184- 8	37- 3	24- 2	Silas Houghton	Bath
1867	IDAHO	1,226	180- 9	38- 1	24- 2	James Drummond	Bath
	BOMBAY	955	169- 4	34- 8	22- 8	William Rogers	Bath
	ALICE M. MINOTT	1,093	173- 6	36- 2	23	Charles V. Minott	Phippsburg
	C. H. SOUTHARD	1,099	174	38- 2	23- 5	T. J. Southard & Son	Richmond
	ITASCA	1,396	192- 9	38- 2	24	A. Lemont	Bath
	ST. JAMES	1,286	194- 6	37- 5	24- 6	James M. Hagar	Richmond
	WILLIAM M. REED	1,290	190- 5	37	24- 4	Franklin Reed	Bath
	BELLE MORSE	1,307	191- 7	37- 4	24	Jacob P. Morse	Bath
1868	JAMES A. WRIGHT	1,273	185- 5	37- 3	24- 6	Frank O. Moses	Bath
	RIVERSIDE	1,234	183- 1	38- 1	24	William V. Moses	Bath
	ARCADIA	1,234	190- 3	37- 5	24	Henry L. Houghton	Bath
	HERMON	1,316	193- 1	38- 2½	24- 9	Edward Sewall	Bath
	HERCULES	1,279	194- 1	38- 1	24	William Rogers	Bath
	TWO BROTHERS	1,382	197	37- 8	24- 8	Peter G. Bradstreet	Farmingdale
	GEO. M. ADAMS	1,308	193- 2	37- 1	23- 7	Jacob P. Morse	Bath
	TRANQUEBAR	1,306	196- 6	37- 9	24- 2	John Harward	Richmond
	ELLEN GOODSPEED	1,290	191- 9	37- 1	24	Franklin Reed	Bath
	MOSES DAY	1,271	187- 2	38- 3	24	T. J. Southard & Son	Richmond
	ST. LUCIE	1,318	194- 4	37- 4	24	Isaac F. Chapman	Bath
	JAPAN	1,251	188- 3	38- 2	24	George F. Patten	Bath
	PRUSSIA	1,212	184- 2	36- 5½	23- 9½	Levi W. Houghton	Bath
1869	INDIA	1,294	192- 1	36- 5	23- 3½	John Patten	Bath
	TABOR	1,339	195- 5	36- 8	24- 5½	Edward Sewall	Bath
	GENEVOIS STRICKLAND	1,336	191- 2	37- 6	23- 9	William V. Moses	Bath
	J. A. THOMSON	1,344	195- 2	38- 5	23- 6	Asa P. Hodgkins	Bath
	GEN. CHAMBERLAIN	1,361	197- 5	37- 5	23- 6½	Jacob P. Morse	Bath
	NIMBUS	1,302	192- 2	37- 1	23- 9	John Patten	Bath
	ST. NICHOLAS	1,798	206- 9	42- 8	19- 8½	John McDonald	Bath
	HENRY S. SANFORD	1,159	180- 6	35- 8	23- 8	John Harward	Bowdoinham
	UNDAUNTED	1,764	207- 3	41- 1	19- 3½	Edward Sewall	Bath
	JAMESTOWN	1,888	207- 7	40- 5	20- 2	James M. Hagar	Richmond
	ST. JOHN	1,885	216- 3	42- 9	20- 4	John McDonald	Bath
	AUSTRIA	1,300	198- 9	39	23- 9	Houghton Brothers	Bath

The barks built and registered in Bath during the sixties increased in size, and whereas around mid-century a bark of 500 tons was considered a sizable vessel for that rig, barks were built in Bath during the 1860's of about 800 and 900 tons. The bark *Niphen,* built by Frank O. Moses in 1869, was of 1,094 tons (length 174 ft. 9 in., beam 36 ft. 1 in., depth 23 ft. 9 in.); this was a surprisingly large vessel to be built with a bark rig in the sixties. However, during the seventies, barks as large as sizable ships were built, and in 1880 the *William P. Crapo,* built by Goss, Sawyer & Packard and bark-rigged, was of 1,647 tons. The sizable barks of over 500 tons built and registered at Bath during the sixties can be summarized as follows:

Year	Number	Tonnage Range	Tonnage Average	Largest Barks	
1860	2	541-549	545	SAMUEL TARBOX	549
				S. W. PIKE	541
1862	2	505-639	572	THOMAS FLETCHER	639
				ALICE MINOTT	505
1863	2	600-763	682	MERCUR	763
				LEONIDE	600
1864	7	516-583	551	PENANG	583
				JANE HARWARD	577
1865	11	528-814	668	ROME	814
				B. SEWALL	813
				UKRAINE	729
				WAPELLA	728
				TOSCANA	728
				FRANK MARION	678
1866	3	628- 698	654	WETTERHORN	698
				LINCOLN	636
				ANNIE	628
1867	2	510- 633	572	OMAHA	633
				ALBERT	510
1868	3	684- 896	825	LIZZIE H.	896
				C. O. WHITMORE	894
				HARRIET F. HUSSEY	684
1869	7	512-1,094	766	NIPHEN (or NIPHON)	1,094
				VESUVIUS	812
				UNA	792
				XENIA	786
				ANNIE TORREY	781
				ALFRED	583

A barkentine of 369 tons, the *Australia,* was built by Alfred Lemont in Bath in 1864, and the same rig was used by William Rogers when he built the *C. S. Rogers* of 392 tons in 1866. Sizable brigs (or brigantines) built and registered at Bath during the sixties can be briefly summarized as follows:

Year	Number of Sizable Vessels	Tonnage Range	Tonnage Average	Largest Brigs Built in Year: Name and Tonnage		Builder	Where Built
1862	2	307-382	345	CONCORD	382	Joseph C. Given	Brunswick
				KENNEBEC	307	Albert Hathorn	Bath
1863	3	284-499	412	DEACON	499	Stephen Larrabee	Bath
				GLENDALE	454	Arthur Sewall	Bath
				YAZOO	284	Geo. H. Ferrin	Richmond
1864	5	224-409	335	VINCENT	409	Charles V. Minott	Phippsburg
				AQUIDNECK	354	William Drummond	Bath
				OCEAN BELLE	352	William Rogers	Bath
				PERPETUA	335	E. G. Simpson	Brunswick
				MATTAPONY	224	John D. Bibber	Bath
1865	2	207-235	221	MARY C. ROSEVELT	235	T. J. Southard & Son	Richmond
				VIOLET	207	Robert Purington	Bowdoinham

(Continued on next page)

Year	Number of Sizable Vessels	Tonnage		Largest Brigs Built in Year			
		Range	Average	Name and Tonnage		Builder	Where Built
1866	6	217-458	357	LIZZIE M. MERRILL	458	T. J. Southard	Richmond
				POMONA	421	T. J. Southard	Richmond
				DAVID OWEN	383	Goss & Sawyer	Bath
				JULIA F. CARNEY	339	P. G. Bradstreet	Farmingdale
				CASCATELLE	324	William Thurlow	Richmond
				F. J. MERRYMAN	217	Goss & Sawyer	Bath
1868	2	218-225	222	LONG REACH	225	Alfred Lemont	Bath
				ADELAIDE	218	J. L. Woodside	Topsham

Bath Shipbuilding Activities during the Seventies and Eighties, with a Record of the Noteworthy Output of Each Important Builder

The decade of the seventies in Bath was not one of notable events, for the city was recovering—as was the rest of the country—from the exhilaration and delirium, as well as the upsetting economic conditions, associated with war and following in its wake. Shipping and shipbuilding were stimulated during the seventies by the movement of grain in large quantities from California to East Coast U.S.A. ports and to Europe. In shipments to foreign ports from California and Puget Sound, American ships had to compete with the rapidly growing British merchant marine, outrageously favored in insurance rates by Lloyd's-dominated underwriters and the patriotic sentiments of British merchant-buyers of grain, who wanted it shipped to them in British bottoms. American protection to American ships in the Cape Horn trade applied only to runs east and west between United States ports. Surprising though it may seem, the construction of the Edes jetties at the mouth of the Mississippi River in the seventies was a severe blow to Bath shipping. The maintaining of a deep channel by the river current enabled English steamships, for the first time, to get into the country's greatest southern cotton seaport, and this trade out of New Orleans had been one of the most important to Bath ships. Notwithstanding all the influencing factors (some bad, some good), the decade established an all-time record in the number of vessels built; i.e., 353 as against 346 in the eighties, 246 in the sixties, and 232 in the fifties. According to incomplete customhouse records (the city of Bath only), the aggregate tonnage built in the seventies was 197,799 tons, a new record, comparable with 181,479 tons in the "booming fifties" and a tonnage volume to be surpassed only in the two succeeding decades of 1881-1890 and 1891-1900. Whereas the tonnage of merchant sail and the number of vessels built at Bath increased in the seventies over the shipbuilding output of preceding decades, the fore-and-aft-rigged vessels built for the coasting trade were increasing in demand and becoming a much larger percentage of the shipyard output of the district. Square-riggers for long voyages on the Seven Seas were encountering steadily increasing competition from British vessels (both sail and steam), and in the seventies British iron sail and iron screw steam became formidable factors to be reckoned with on all international deep-sea trade routes.

The number of vessels built and registered at Bath, Maine, during 1873 was reported as 59, totaling 29,004 tons, and consisted of the following types of vessels—sail and steam:

Type	Number	Tonnage	Type	Number	Tonnage
Ships	7	10,807.69	Schooners	38	13,216.02
Barks	5	4,251.54	Sloops	2	85.36
Brig	1	392.45	Steamers	6	251.03

In four years' time (1869-1872), the annual construction of ships reduced from 15,890.5 tons to 10,807.7 tons and of total square-riggers from 20,078.2 tons to 15,451.7 tons (or 23 per cent); whereas the schooner construction for the coastwise trade increased from 2,666.4 tons to 13,216.0 tons, or fivefold.

Much of the shipbuilding in Bath in the seventies was not, as generally theretofore, for local owners. The types of vessels were changing, but of great importance was the fact that Bath, the great shipbuilding and shipowning Maine port and "The City of Ships," was building ships for other seaports more than for itself. A large fleet of seagoing vessels was still owned in Bath, but the number was steadily dwindling. The square-riggers were making a great stand to survive, and the ships that were built grew larger—three of 1,892 to 1,928 tons register. Schooners, also, were growing to a size of around 1,000 tons. Following the war and the national loss of foreign business, Bath became more and more of a shipbuilding-by-contract "City of Ships" and less of a shipowning metropolis. Bath shipbuilders generally continued as managing owners, but more and more of the capital required to build the ships was being obtained from out-of-town investors domiciled in various parts of the country.

Robert P. Tristram Coffin, writing of shipbuilding on the Kennebec River in the 1870's and thence on to the end of wood sail, has said in substance:

> Shipyards in the last three decades of the nineteenth century were consolidated in centers near the open sea where deep water was available. They were larger, better organized, and financially more competent. Bath, because of its unique natural advantages (its fine, deep, wide, and non-freezing river and suitably level bank, etc.), survived when the death knell was sounded for a host of other famous wood shipbuilding centers not so favorably located. The farmer-builder had, however, long since trued by his eye his last frame, but his sons and grandsons, while they had his Yankee ingenuity and skill, were trained workmen. The contract and owner builders—game to the last in the great contest then raging between wind and steam, wood and steel—spared no expense to obtain from the outside, as needed and available, the best in material, method, or equipment. The master builders, such as John McDonald, of Bath, and others, by study and sympathetic encouragement seemed to attain perfection in their art in the stirring competitive days of the seventies and eighties. But, it was a losing game. Economic causes too complex for discussion here were hastening the end of the wood square-rigger.

That Maine, after the Civil War, was able to continue to build good and profitable wood ships better and more cheaply than any other part of the country (and of the world) was due primarily to the unequaled designers, master builders, and shipwrights of Maine; that Maine could continue to operate such wood vessels and make money in the face of fierce foreign competition was due partly to keen, farsighted, and well-planned economic management and to the Down East skippers in command. They continued to the end of sail to be superior in courage, driving power, resourcefulness, frugality, honesty, and shrewd trading ability to any other captains who ever sailed the Seven Seas. Prior to the seventies, most Bath full-rigged ships were built by managing owners in their own yards; but after the Civil War, Bath became more and more important as a shipbuilding community and less important as a port, and shipping merchants of other ports, better located geographically for both trading and management, became increasingly interested in the building of ships at Bath.

Of the shipbuilding firms of the sixties and pre-Civil War period, only the Sewalls, Houghtons, and Rogers remained very active as builder-owners engaged in foreign trade throughout the reactionary seventies. As far as number of vessels of all types built is concerned, it was reported that the firm of Goss & Sawyer, which commenced operating its yard in the early seventies, led all builders (with Packard) for the decade with 104; C. B. Harrington, a builder of small craft, constructed 34 vessels; Deering & Donnell, 23; and William Rogers and

E. & A. Sewall, 22 each. In 1872 the shipyard of G. F. & J. Patten, with an admirable record, was absorbed by the Sewalls, whose shipyard was adjoining. Mayor Reed of Bath, in an address in 1877, said that a fleet of more than 200 deep-sea foreign trade vessels was then owned in Bath.

Levi P. Lemont, in his historical notes on Bath (written in 1874), considered only square-rigged ships as noteworthy construction until 1871, when he mentions a 628-ton schooner. He recorded that, in 1873, 38 of the 59 vessels built in Bath were schooners, and 10 of the schooners, 5 of the 7 ships built that year, and 3 of the 5 barks were important and worthy of mention in his review. In the seventies, up to the date of publication of his 1400 HISTORICAL DATES OF THE TOWN AND CITY OF BATH in 1874, Lemont recorded the building of vessels at Bath as follows:

Year Built	Name of Vessel and Rig	Tonnage	Builder
1870	ST. JOHN (ship)	1,885	Chapman & Flint
1871	COLUMBIA (ship)	1,471	H. L. Houghton & Brothers
1871	NORTH STAR (ship)	1,374	Wm. V. Moses & Sons
1871	BESSE (bark)	842	Goss & Sawyer
1871	JAMES FORD (schooner)	628	Goss & Sawyer
1871	HARRY MORSE (ship)	1,365	J. P. Morse & Co.
1871	ERIC THE RED (ship)	1,580	E. & A. Sewall
1872	CARROLLTON (ship)	1,450	Wm. D. Sewall & Sons
1872	INVINCIBLE (ship)	1,400	Wm. V. Moses & Son
1872	CHARLES H. LAWRENCE (schooner)	621	Goss & Sawyer
1873	STERLING (ship)	1,731	E. & A. Sewall
1873	ALFRED BRABROOK (schooner)	562	Goss & Sawyer
1873	CHARLES F. LAMPSON (schooner)	534	Goss & Sawyer
1873	B. B. CHURCH (schooner)	513	Goss & Sawyer
1873	WM. H. JOURDAN (schooner)	497	Goss & Sawyer
1873	RALPH M. HAYWARD (schooner)	487	Goss & Sawyer
1873	GRANGER (ship)	1,526	Arthur, Edward, and Wm. D. Sewall
1873	EL CAPITAN (ship)	1,493	Arthur, Edward, and Wm. D. Sewall
1873	W. R. GRACE (ship)	1,892	Chapman & Flint
1873	JOHN H. KIMBALL (ship)	1,266	Goss & Sawyer
1873	COHISA[1] (bark)	1,189	Wm. Rogers
1873	ELLEN M. GOLDER[2] (schooner)	651	Adams & Hitchcock
1873	STEPHEN DAVOL (schooner)	743	Adams & Hitchcock
1873	J. H. DE WOLF (schooner)	488	D. O. Blaisdell
1873	H. J. LIBBEY (bark)	621	Hagan & Thurlow
1873	B. WEBSTER (bark)	584	Hagan & Thurlow
1873	GEORGE SHEPHERD[3] (schooner)	586	Deering & Donnell
1873	C. F. BAKER (schooner)	566	Alexander Robinson
1873	ANNA E. KRANZ (schooner)	682	Albert Hathorn
1874	W. S. SHEPHERD[4] (schooner)	475	Deering & Donnell
1874	D. O. WHITWELL[5] (schooner)	631	Alexander Robinson
1874	HENRY C. WINSHIP (schooner)	497	Jewell Brothers
1874	E. H. KINGSMAN[6] (bark)	1,112	Goss & Sawyer

[1]Customhouse records give bark COLUSA of 1,188 tons.
[2]Customhouse records give schooner ELLEN M. GOLDEN of this tonnage.
[3]Customhouse and other records give schooner GEORGIE SHEPARD of 585 tons.
[4]Customhouse records give schooner WILLIS S. SHEPARD of this tonnage.
[5]Customhouse and other records give schooner O. D. WITHERELL of this tonnage.
[6]Customhouse and other records give bark EDWIN H. KINGMAN of 1,111 tons.

The following number and tonnage of sizable full-rigged ships and barks in certain tonnage groups as herein set forth, with totals and averages, were built and registered at Bath during the seventies according to its customhouse records:

Year Built	Sizable Full-rigged Ships: Number of Ships: 1,201-1,400 Tons	1,401-1,600 Tons	1,601-1,800 Tons	1,801-2,000 Tons	Over 2,000 Tons	Total Number	Tonnage: Smallest	Largest	Total	Average
1871*	2	2	—	—	—	4	1,365	1,580	5,790	1,448
1872*	—	2	—	—	—	2	1,414	1,450	2,864	1,432
1873	1	4	1	1	—	7	1,266	1,892	10,804	1,544
1874	4	4	1	2	—	11	1,208	1,903	16,627	1,512
1875	3	4	3	1	—	11	1,296	1,928	16,856	1,532
1876	3	9	—	—	1	13	1,243	2,101	19,679	1,514
1877	3	8	4	1	—	16	1,299	1,973	24,691	1,543
1878	—	5	—	1	—	6	1,517	1,955	9,655	1,609
1879	—	2	1	—	—	3	1,531	1,737	4,800	1,600

*In 1871, T. J. Southard built the OLIVE S. SOUTHARD of 1,193 tons at Richmond; in 1872, Theobald & Harward built the CUBA of 1,106 tons at Richmond, and Arthur Sewall built the HUMBOLDT of 1,018 tons at Bath.

Year Built	Sizable 3-masted Barks: Number of Barks: 550-750 Tons	751-1,000 Tons	1,001-1,250 Tons	1,251-1,500 Tons	Over 1,500 Tons	Total Number	Tonnage: Smallest	Largest	Total	Average
1871	—	1	—	—	—	1	842	842	842	842
1872	—	—	—	—	—	—	—	—	—	—
1873	2	1	2	—	—	5	584	1,188	4,249	850
1874	2	1	6	—	—	9	653	1,244	9,144	1,016
1875	—	1	2	1	—	4	953	1,430	4,527	1,132
1876	1	2	3	—	—	6	749	1,168	6,099	1,017
1877	1	1	—	2	—	4	613	1,472	4,150	1,038
1878	1	—	2	1	—	4	713	1,459	4,436	1,109
1879	1	—	—	—	1	2	649	1,572	2,221	1,111

The full-rigged ships of over 1,400 tons built and registered at Bath during the seventies, as per customhouse records, were as follows:

Year	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
1871	ERIC THE RED	1,580	198- 7	41- 1	17- 1½	Arthur Sewall	Bath
	COLUMBIA	1,471	205- 9	40	24	Houghton Brothers	Bath
1872	CARROLLTON (generally credited to Sewalls)	1,450	198- 2	39- 6	24- 6	Albert Hathorn	Bath
	FLORIDA	1,414	199- 2	38- 1	25- 7	James M. Hagar	Richmond
1873	STERLING	1,731	208- 4	42- 7	17- 3	Arthur Sewall	Bath
	INVINCIBLE	1,460	202- 4	40- 3	24	William V. Moses	Bath
	EL CAPITAN	1,493	205- 9	39- 9	24- 6	Arthur Sewall	Bath
	W. R. GRACE	1,892	218- 1	42- 8	20- 8	John McDonald	Bath
	LOUISIANA	1,436	202- 4	40	24- 4	Houghton Brothers	Bath
	GRANGER	1,526	209- 9	40	24- 7	E. & A. Sewall	Bath
1874	OCCIDENTAL	1,533	210- 6	39- 8	24- 7	E. & A. Sewall	Bath
	GATHERER	1,509	208- 1	40- 2	24- 3	Albert Hathorn	Bath
	FRANCONIA	1,461	205- 8	40- 4	24- 1	Wm. V. Moses & Sons	Bath
	ST. PAUL	1,893	228- 2	42- 1	19- 1	John McDonald	Bath
	ORIENTAL	1,688	220- 1	42- 2	24- 9	E. & A. Sewall	Bath

(Continued on next page)

Year	Name of Ship	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Where Built
	GENEVA	1,535	216- 4	39- 9	24- 6	Houghton Brothers	Bath
	HAGARSTOWN	1,903	223- 7	42- 3	17- 5	James M. Hagar	Richmond
1875	MARY L. STONE	1,458	198- 9	39- 3	24- 3	Goss & Sawyer	Bath
	CONTINENTAL	1,712	220	42- 2	25- 1	Arthur Sewall	Bath
	CHARLES DENNIS	1,710	215- 7	39- 8	24- 8	T. J. Southard & Son	Richmond
	M. P. GRACE	1,928	229- 9	42- 1	19- 7	John McDonald	Bath
	CITY OF PHILADELPHIA	1,457	202- 3	40- 2	24- 3	Goss & Sawyer	Bath
	HARVESTER	1,494	210- 1	39- 7	24	Arthur Sewall	Bath
	BOHEMIA	1,633	221- 7	40- 2	25- 5	Houghton Brothers	Bath
	GEORGE F. MANSON	1,418	206- 1	39	23- 9	Albert Hathorn	Bath
1876	SANTA CLARA	1,535	209- 5	40	25- 5	John McDonald	Bath
	REAPER	1,468	211- 6	39- 2	24	Arthur Sewall	Bath
	EUREKA	2,101	230- 9	42- 1	17- 9	T. J. Southard	Richmond
	THRASHER	1,512	211- 9	39- 7	24	E. & A. Sewall	Bath
	ADAM H. SIMPSON	1,524	210- 2	40- 3	24- 1	Goss, Sawyer & Packard	Bath
	ALAMEDA	1,474	211- 3	40	24- 1	Guy C. Goss	Bath
	SAMARIA	1,509	217- 6	39- 1	24- 1½	Houghton Brothers	Bath
	ORACLE	1,549	222- 1	40	24	James P. Hitchcock	Bath
	INDIANA	1,487	208- 9	40	23- 9½	E. & A. Sewall	Bath
	QUEENSTOWN	1,548	199- 3	39- 1	26	James M. Hagar	Richmond
1877	PALESTINE	1,469	209- 6	40	24	W. L. Morse	Bath
	C. C. CHAPMAN	1,652	222- 3	39- 9½	25- 2	William Rogers	Bath
	BELLE OF BATH	1,417	203- 9	39	24- 3	Goss & Sawyer	Bath
	CHALLENGER	1,456	212- 4	39- 7	23- 9½	E. & A. Sewall	Bath
	DANIEL BARNES	1,485	210- 3	39- 9	24- 1	William Rogers	Bath
	HECLA	1,529	210- 5	40- 2	24- 3	Goss, Sawyer & Packard	Bath
	ST. MARK	1,973	232- 4	42- 3	18- 7	J. P. Hitchcock	Bath
	ARMENIA	1,698	223- 3	40- 4	26- 1	Houghton Brothers	Bath
	FLORENCE	1,684	223- 1	41	26	Goss & Sawyer	Bath
	JAMES NESMITH	1,735	228- 1	40- 3	26- 3½	Albert Hathorn	Bath
	ST. DAVID	1,595	213- 4	40- 6	17- 2	John McDonald	Bath
	THOMAS M. REED	1,516	203- 3	39- 8	24	E. & A. Sewall	Bath
	SEA KING	1,491	210- 6	39- 4	21- 4	George H. Theobald	Bowdoinham
1878	JAMES BAILEY	1,530	214- 2	40	24- 3	William Rogers	Bath
	CHESEBROUGH	1,517	212- 4	40	24- 1½	E. & A. Sewall	Bath
	ECLIPSE	1,594	221- 7	40- 3	24- 3	Goss & Sawyer	Bath
	YORKTOWN	1,955	227- 1	40- 5	20	James M. Hagar (registered Jos. M. Hagar)	Richmond
	LEVI C. WADE	1,525	214- 2	39- 8	24	William Rogers	Bath
	STANDARD	1,534	212	40- 2	24- 5	Charles V. Minott	Phippsburg
1879	SOLITAIRE	1,531	213- 7	40- 1	24- 1½	Edward Sewall	Bath
	THEODORE H. ALLEN	1,537	208- 8	39- 2	20	T. J. Southard & Son	Richmond
	MANUEL LLAGUNO (given elsewhere as LLAGUNA)	1,732	221- 3	41- 5	17- 4	John McDonald	Bath

The following twenty barks, built and registered at Bath during the seventies as per custom-house records, all being of over 1,000 tons, were unusually large vessels for that rig. Commencing with the late sixties and the building of two 900-ton barks and one 1,100-ton bark in 1868 and 1869 and continuing in the seventies, particularly from 1875 on, several large deep-sea square-riggers, for economic reasons, were rigged as barks rather than as full-rigged ships.

Year Built	Name of Bark	Tonnage	Builder
1873	WILLIAM H. BESSE	1,026	Goss & Sawyer, Bath
1873	COLUSA	1,188	William Rogers, Bath
1874	EDWIN H. KINGMAN	1,111	Goss & Sawyer, Bath
1874	CHAS. W. COCHRAN	1,105	Goss & Sawyer, Bath
1874	XENIA	1,174	Goss & Sawyer, Bath
1874	FRESNO	1,244	William Rogers, Bath
1874	EDWIN REED	1,216	Hitchcock & Adams, Bath
1874	ALMIRA ROBINSON	1,197	Lemont & Robinson, Bath
1875	CARRIE HUMPHREY	1,059	Hagan & Thurlow, Bath
1875	J. D. PETERS	1,085	Goss, Sawyer & Packard, Bath
1875	OREGON	1,430	William Rogers, Bath
1876	WESTERN BELLE	1,135	Goss & Sawyer, Bath
1876	BELLE OF OREGON	1,168	Goss & Sawyer, Bath
1876	FRED C. LITCHFIELD	1,082	Goss, Sawyer & Packard, Bath
1877	FOREST BELLE	1,296	Goss & Sawyer, Bath
1877	JONATHAN BOURNE	1,472	Goss & Sawyer, Bath
1878	GERARD C. TOBEY	1,459	Goss, Sawyer & Packard, Bath
1878	CHARLES B. KENNEY	1,128	Goss, Sawyer & Packard, Bath
1878	EMMA S. CROWELL	1,136	Goss & Sawyer, Bath
1879	GUY C. GOSS	1,572	Goss, Sawyer & Packard, Bath

Out of these twenty large barks built and registered at Bath in the seventies, fourteen (or 70 per cent) were built at the Goss & Sawyer yard at the "North End," which was one of the few yards in the city of Bath that built entirely by contract and not for the owners themselves as managing (and promoting) owners. It will be noted that of the last eleven big barks tabulated, beginning with the *J. D. Peters,* built in 1875 for Boston parties, ten were launched from the Goss & Sawyer yard.

Following the building of the barkentine *Australia* of 369 tons by Alfred Lemont in 1864 and the *C. S. Rogers* of 392 tons by William Rogers in 1866, six sizable barkentines were built and registered at Bath in the seventies, and these, together with the largest brigs constructed during the decade, are set forth herewith.

Year Built	Name of Barkentine	Tonnage	Builder
1874	KIOTO	673	Hagan & Thurlow, Bath
1874	NORENA	438	Goss & Sawyer, Bath
1874	ST. LUCIE	707	J. H. P. Merrow, Bowdoinham
1874	ELVINA	353	Goss, Sawyer & Packard, Bath
1875	FANNIE LAMBIRTH	489	Alex. Robinson, Bath
1879	ARTHUR C. WADE	522	William Rogers, Bath

Year Built	Name of Brig	Tonnage	Builder
1870	CARRIE PURINGTON	335	Joseph C. Given, Topsham
1873	CHARLES DENNIS	392	T. J. & C. H. Southard, Richmond
1874	CASTALIA	516	Wm. Thurston, Richmond
1874	REBECCA J. PAGE	274	Hodgkins & Brown, Bath
1874	HENRY B. CLEVES	349	Hagan & Thurlow, Bath
1878	CAMEO	243	Goss & Sawyer, Bath

During the years 1880-1883, four sizable brigs were built at Bath of from 373 tons up, the largest being the *H. B. Hussey* of 545 tons, built by T. J. & C. H. Southard at Richmond in 1883. Five sizable barkentines were built after the seventies, three in the eighties (1880-1886) of from 614 to 789 tons, and one in each of the years 1890 and 1892, these being the *Kremlin* of 786 tons and the *James W. Elwell* of 1,192 tons.

For long years, Levi Houghton had been building sizable full-rigged ships at intervals and operating them. His conspicuous and relatively large early ships were the *Braganza* of 445

tons, built in 1833, and the *Rochester* of 563 tons and *Hanover* of 577 tons, launched in 1837 and 1838, respectively. (Lemont records a ship *Levi Houghton* of 350 tons, built in 1832, and the *Missouri* of 398 tons, built by Levi Houghton in 1834.) Around mid-century, the Houghton shipyard had built the *Houghton* of 787 tons and the *Pelican State* of 849 tons, the *Northampton* of 982 tons in 1852, the *Potomac* of 1,198 tons (and a smaller ship) in 1854, followed the next year (1855) by the *Pocahontas* of 1,087 tons. About this time, Levi Houghton's sons entered the picture as builders and shipping merchants, and for some thirty years the Houghton Brothers operated one of the largest and most successful fleets of Bath deep-sea full-rigged ships, well and favorably known throughout the ports of the world. With the building of the *Persia* of 1,049 tons by Levi W. Houghton in 1860 and the *Scotia* of 1,098 tons by Levi W. Houghton in 1865, the nomenclature of Houghton ships underwent a change, and henceforth the Houghton vessels were given names ending in "ia" (as were the vessels of the British Cunard steamship line). The only exceptions were the 1,173-ton ship *China,* built by Silas A. Houghton in 1866, and the 1,436-ton ship *Louisiana* and 1,535-ton ship *Geneva,* built by Houghton Brothers in 1873 and 1874, respectively (the final "a" being maintained but not the "ia"). Levi W. Houghton built the 1,212-ton ship *Prussia* and Henry L. Houghton the *Arcadia* of 1,234 tons in 1868, and Houghton Brothers built the *Austria* of 1,300 tons in 1869. During the seventies, the Houghton Brothers built the following six first-class ships, which gave a good account of themselves in competitive trade, under able management, on the Seven Seas.

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1871	COLUMBIA	1,471	205- 9	40	24	1875	BOHEMIA	1,633	221- 7	40- 2	25- 5
1873	LOUISIANA	1,436	202- 4	40	24- 4	1876	SAMARIA	1,509	217- 6	39- 1	24- 1½
1874	GENEVA	1,535	216- 4	39- 9	24- 6	1877	ARMENIA	1,698	223- 3	40- 4	26- 1

The foregoing six ships were registered as built by Houghton Brothers. Later, the *Arabia* of 2,080 tons was built by John R. Houghton in 1881, and the *Servia* of 1,866 tons was built by Houghton Brothers in 1883. The Houghtons' last and largest vessel, the *Parthia* of 2,495 tons (length 260 ft. 3 in., beam 44 ft. 4 in., depth 19 ft. 6 in.), one of the largest three-masted wood ships ever built, was launched from the old Houghton yard in Bath in January 1891. The *Parthia,* built for the Cape Horn trade, made four California voyages. She was lost in October 1895, when on her fifth voyage, being destroyed by fire caused by spontaneous combustion of her coal cargo when off the Chilean coast.

It would seem that the Moses family, operating as William V. Moses & Sons, built its last sizable ship at Bath in 1874. The Bath customhouse records show the following sizable ships and barks built by the Moses' during the period 1854-1874, previous to which William V. and Oliver Moses built ships dating back to the *Georgia* of 363 tons in 1842 and the *Prussia* of 330 tons in 1844. In the early fifties and around mid-century, Oliver Moses built the *Sallie Fearn* (849 tons), *New England* (921 tons), *American Union* (999 tons), etc.

Year Built	Name of Vessel	Tonnage	Registered Builder	Year Built	Name of Vessel	Tonnage	Registered Builder
1874	FRANCONIA	1,461	William V. Moses & Sons	1865	FANNIE LARRABEE	1,272	William V. Moses
1873	INVINCIBLE	1,460	William V. Moses	1865	ROME (bark)	814	William V. Moses
1871	NORTH STAR	1,374	William V. Moses	1864	MELOILLE	1,071	William V. Moses
1869	GENEVOIS STRICKLAND	1,336	William V. Moses	1863	SAMUEL FREEMAN	1,049	William V. Moses
1869	NIPHEN (bark)	1,094	Frank O. Moses	1860	OBERON	1,026	William V. Moses
1868	RIVERSIDE	1,234	William V. Moses	1859	LIZZIE MOSES	1,049	William V. Moses
1868	JAMES A. WRIGHT	1,273	Frank O. Moses	1858	FRANK BOULT	1,060	Frank O. Moses
1866	THOMAS FREEMAN	1,250	William V. Moses	1857	N. LARRABEE	1,036	William V. Moses
1866	ANNIE (bark)	628	Frank O. Moses	1854	AQUILA	1,119	William V. Moses

Arthur and Edward Sewall separately and E. & A. Sewall as a partnership were very active Bath shipbuilders and shipping managers during the seventies, with the firm of Arthur Sewall & Company supplanting E. & A. Sewall with the building of the *Iroquois* in 1881. In the sixties, Edward and Arthur Sewall were registered builders, and the name "Sewall" as the constructor of sizable ships is recorded at the Bath customhouse as early as 1834, when James Sewall built the ship *Mount Zion* of 440 tons. The firm of Clark & Sewall was a builder of prominence for years and, in 1841, built the big ship *Rappahannock (I)* of 1,133 tons. William D. Sewall was an important builder and, in 1854, built the sizable ships *Samaritan* of 1,219 tons and *Holyhead* of 1,099 tons. In the sixties, Sewall-built ships were registered as built by either Arthur or Edward Sewall, and of the ships constructed by the Sewalls, the following were the largest and most important vessels (including a couple of barks laid down in 1865-1866) built during the period 1860-1885. In the latter year, they discontinued the laying down of Down Easters and resumed building again in 1889 for their last "Big Wood Four," which was followed in 1893 by the changing of their yard to build steel instead of wood vessels and the construction of steel mercantile sail during the years from 1894 to 1903.

Year Built	Name of Ship	Tonnage	Registered Builder
1860	OCEAN SCUD	1,008	Arthur Sewall
1863	VICKSBURG	1,030	Arthur Sewall
1864	OCEAN SIGNAL	1,215	Edward Sewall
1864	INTREPID	1,078	Edward Sewall
1865	FREEMAN CLARK	1,336	Edward Sewall
1865	FRANK MARION (bark)	678	Arthur Sewall
1866	WETTERHORN (bark)	698	Arthur Sewall
1866	MATTERHORN	1,327	Arthur Sewall
1868	HERMON	1,316	Edward Sewall
1869	UNDAUNTED	1,764	Edward Sewall
1869	TABOR	1,339	Edward Sewall
1871	ERIC THE RED	1,580	Arthur Sewall
1872	HUMBOLDT	1,018	Arthur Sewall
1873	STERLING	1,731	Arthur Sewall
1873	EL CAPITAN	1,493	Arthur Sewall
1873	GRANGER	1,526	E. & A. Sewall
1874	OCCIDENTAL	1,533	E. & A. Sewall
1874	ORIENTAL	1,688	E. & A. Sewall
1875	CONTINENTAL	1,712	Arthur Sewall
1875	HARVESTER	1,494	Arthur Sewall
1876	REAPER	1,468	Arthur Sewall
1876	THRASHER	1,512	E. & A. Sewall
1876	INDIANA	1,487	E. & A. Sewall
1877	CHALLENGER	1,456	E. & A. Sewall
1877	THOMAS M. REED	1,516	E. & A. Sewall
1878	CHESEBROUGH	1,517	E. & A. Sewall
1879	SOLITAIRE	1,531	Edward Sewall
1880	THOMAS M. REED	1,987	Arthur Sewall
1881	IROQUOIS	2,120	Arthur Sewall & Co.
1882	HENRY VILLARD	1,552	Arthur Sewall & Co.
1882	W. F. BABCOCK	2,130	Arthur Sewall & Co.
1883	RANIER	1,976	Arthur Sewall & Co.
1884	JOHN ROSENFELD	2,373	Arthur Sewall & Co.
1885	WILLIE ROSENFELD	2,455	Arthur Sewall & Co.

A Bath shipbuilder of courage and persistency, who built a fleet of good sailing vessels—ships and barks—and was one of the last sextet of builders to construct square-rigged merchant ships in Bath or on the Kennebec, was William Rogers. His output of big ships during the seventies and early eighties was outstanding and his yard as busy as that of the more publicized Sewalls. It was not until 1889 that William Rogers built his last wood square-rigger, the beautiful and able bark *Matanzas* of 1,028 tons. From the 1840's to the end of the sixties, Rogers built rather small vessels, but many of them were quite sizable or even large for their type when they were launched. The ship *Juliet,* which he built in 1848, was of only 524 tons. In the fifties, the ships that he constructed, considered "sizable" at Bath, were the *Mayflower* of 720 tons (1851), *Emily St. Pierre* of 883 tons (1854), *Montmorenci* of 1,085 tons (1856), and *Otseonthe* of 1,137 tons (1852). In the sixties, William Rogers concentrated on building barks during the Civil War years, but he constructed two sizable ships and six barks during that decade in addition to smaller floating tonnage. In the seventies, he built five sizable barks, four of which were quite large and three of them conspicuously so; but he also built six large full-rigged ships, which were Down Easters conspicuous for both size and quality. Following a decade of pronounced activity, Rogers built seven sizable square-riggers (six ships and one bark) in the three-year period 1881-1883 inclusive. The following table records the sizable ships and barks built by William Rogers in the sixties and seventies and up to—and including

—1883. During the seventeen years in which he constructed sizable square-riggers, Rogers built twenty-six such vessels (fourteen ships and twelve barks).

Year Built	Name of Vessel and Rig	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth
1860	S. W. PIKE (bark)	541	139- 9	29	
1862	THOMAS FLETCHER (bark)	639	147	30- 9	17- 2¾
1863	MERCUR (bark)	763	156- 6	32- 6½	16- 3
1865	WAPELLA (bark)	728	149- 9	31- 9	20- 6
1867	BOMBAY (ship)	955	169- 4	34- 8	22- 8
1867	OMAHA (bark)	633	139- 1	31- 3	20- 1
1868	HERCULES (ship)	1,279	194- 1	38- 1	24
1869	UNA (bark)	792	158	32- 5	20- 2
1873	COLUSA (bark)	1,188	187- 3	38- 3	22- 5
1874	FRESNO (bark)	1,244	199- 2	38- 6	23- 1
1874	HIGHLAND LIGHT (ship)	1,314	194- 9	38- 1	24- 3
1875	BONANZA (ship)	1,356	207- 8	39- 1½	24- 1
1875	OREGON (bark)	1,430	205- 6	39- 1	24- 1
1876	B. F. WATSON (bark)	992	173	35- 3	21- 6
1877	C. C. CHAPMAN (ship)	1,652	222- 3	39- 9½	25- 2
1877	DANIEL BARNES (ship)	1,485	210- 3	39- 9	24- 1
1878	JAMES BAILEY (ship)	1,530	214- 2	40	24- 3
1878	LEVI C. WADE (ship)	1,525	214- 2	39- 8	24
1879	HAVANA (bark)	649	159- 1	33- 4	15- 3
1881	DAKOTA (ship)	1,271	195- 9	38- 1	23- 5
1881	ROSE INNIS (bark)	835	163- 2	35- 9	19- 6½
1881	CHARMER (ship)	1,881	221- 7	42- 4	17- 8½
1882	RICHARD P. BUCK (ship)	1,567	220- 4	40- 3	24
1882	ABNER COBURN (ship)	1,972	225	43- 2	18- 5
1883	GOVERNOR ROBIE (ship)	1,712	224- 1	41	23- 8
1883	KENNEBEC (ship)	2,126	237- 7	43- 3	18- 4

During the period 1868-1883, William Rogers built thirteen full-rigged ships that averaged 1,590 tons (largest, 2,126 tons; smallest, 1,271 tons), and the six ships that he built in the seventies averaged 1,477 tons (largest, 1,652 tons; smallest, 1,314 tons). In the three-year period 1873-1875 inclusive, Rogers built three unusually large barks, for the times, which averaged 1,287 tons (largest, 1,430 tons; smallest, 1,188 tons). The bark *Oregon* of 1,430 tons was bigger than the ship *Bonanza* (1,356 tons), which Rogers built the same year (1875).

John McDonald was the greatest designer and builder of outstanding Down Easters in the United States. By birth, he was a Scotch Canadian, being born at Halifax, Nova Scotia, in 1825. His experience as a shipbuilder was gained entirely in New England, as he came to the United States in 1840, when fifteen years old, to learn the trade of shipwright. He served his apprenticeship in Massachusetts and worked several years for Donald McKay, following which he was employed in Maine yards and for many years was with Chapman & Flint at Thomaston, Maine, as leading shipwright. When this firm moved to Bath, Maine, in 1867, McDonald went with it as foreman and was almost immediately appointed master builder. John McDonald's first ship for which he was entirely responsible, both design and construction, was the *St. Lucie* of 1,318 tons, built at Bath in 1868, when McDonald was forty-three years old. After building nine vessels at Bath and completing the *Santa Clara* of 1,535 tons in 1876, the firm of Chapman & Flint was dissolved. Each of the two one-time partners started in business for himself as a shipbuilder and managing owner. John McDonald went with Benjamin Flint, while I. F. Chapman employed his brother-in-law, Samuel P. Hitchcock, to run his Bath shipyard; but the genius of John McDonald was evident in the ensuing years in the output of both the Flint and the Chapman shipyards. The following list gives a record of twenty outstanding and sizable three-masted square-riggers (sixteen ships and four barks) designed and built by John McDonald:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth
1868	ST. LUCIE	1,318	194- 4	37- 4	24
1869	ST. JOHN	1,885	216- 3	42- 9	20- 4
1869	ST. NICHOLAS	1,798	206- 9	42- 8	19- 8½
1873	W. R. GRACE	1,892	218- 1	42- 8	20- 8
1874	ST. PAUL	1,893	228- 2	42- 1	19- 1
1875	M. P. GRACE	1,928	229- 9	42- 1	19- 7
1876	SANTA CLARA	1,535	209- 5	40	25- 5
1877	ST. STEPHEN	1,392	208- 5	40	23- 7
1877	ST. DAVID	1,595	213- 4	40- 6	17- 2
1879	MANUEL LLAGUNO	1,732	221- 3	41- 5	17- 4
1881	A. J. FULLER	1,848	229- 3	41- 5	17- 8
1882	ST. FRANCIS	1,898	231- 4	41- 8	17- 8
1882	I. F. CHAPMAN	2,145	237- 5	42- 7	19- 2
1883	JOHN McDONALD	2,281	249- 4	43- 1	19- 9
1883	ST. JAMES (bark)	1,565	218- 5	41- 3	23- 7
1884	HENRY B. HYDE	2,583	267- 9	45	20- 5
1884	A. G. ROPES	2,460	258- 2	44- 7	20- 7
1885	W. B. FLINT (bark)	835	178- 4	35- 4	17- 7½
1890	ST. KATHERINE (bark)	1,252	202- 8	39- 3	19- 1
1891	PACTOLUS (bark)	1,668	229- 7	41- 2	24

The ship *St. John* was the largest ship built within the geographical limits of the city of Bath prior to the seventies, and succeeding record ships for size built in Bath proper were the *W. R. Grace* (1873), *St. Paul* (1874), and *M. P. Grace* (1875), all designed and built by John McDonald. In 1883 the *John McDonald* and in 1884 the *A. G. Ropes* and *Henry B. Hyde,* all built by McDonald, established records for size not only for the city of Bath but also for the entire Bath district and the Kennebec River.

John McDonald was primarily and almost solely a designer and builder of ships, and he had but little time for or interest in personal commercial undertakings. Unlike Donald McKay (who was also a Scotch-Canadian American), John McDonald concentrated on the modeling, designing, and building of economically sound merchant ships, and he had no desire to operate them or make money with them by trading. He drew the line between building and operating ships and maintained that either branch of the business was worthy of a man's entire time. By enthusiastic concentration and devotion to his calling, John McDonald grew so that he stood head and shoulders above any other contemporary designer and builder of wood deep-sea merchant sail. His last two Down Easters, the *Henry B. Hyde* and *A. G. Ropes,* were the finest wood ships ever built from the standpoint of design and construction when speed, cargo-carrying capacity, and low cost of operation and maintenance are taken into consideration. John McDonald built only one vessel for his own account, and that was the 524-ton schooner *Myra B. Weaver,* constructed in 1889, following a period when building had been dull, for between 1885 and 1890 no full-rigged ship was constructed on the Kennebec. (He built two other schooners in 1888-1889.) McDonald also designed and built a couple of large barks in 1890-1891. His active shipbuilding career occupied fifty-one years, of which twenty-three years were spent as designer and master builder. From 1891 to his death in 1897, McDonald was freely consulted in the design of all classes of wood ships, but he was not in sympathy with the type of models used by the Sewalls in the building of their last "Big Wood Four" or with the dimensions and models used by them in the construction of their fleet of steel square-riggers. It can be said that John McDonald reached his height as a designer in the building, in 1884, of his last and largest ship, the *Henry B. Hyde.* Thereafter, he was only intermittently active, the industry was depressed, and his output was of relatively unimportant craft. However, his last product as a designer and builder prior to his final retirement was worthy of his art, for the bark *Pactolus,* built in 1891, has been acclaimed as "the most beautiful wood vessel of her type and inches ever built in this or any other country." John McDonald died at Bath in January 1897, when in his seventy-second year.

The Hitchcocks built ships in Bath for many years, but no one individual of the family seems to have been outstanding, notwithstanding that on the separation of the two members of the old firm of Chapman & Flint in 1876, I. F. Chapman announced that, as John McDonald was going with Benjamin Flint as his master builder, Chapman was appointing his brother-in-law, Samuel P. Hitchcock, to run his Bath yard and act as master builder of the ships constructed by the Chapmans. Samuel P. Hitchcock was said to have been formerly of the firm of Adams & Hitchcock and to have been a partner of Zina Blair. It seems to have been James P. Hitchcock who was a member of the firm of Adams & Hitchcock and Hitchcock & Blair, and there is a great deal of confusion in the Bath records as to the actual builder of Hitchcock vessels both before and after the dissolution of the shipping firm of Chapman & Flint. A Henry Hitchcock was the registered builder of the ship *J. P. Morse* of 1,451 tons in 1854, and in that year George M. Adams built the ship *William M. Rogers* of 979 tons. In 1865 this same Adams built the ship *St. Joseph* of 1,258 tons, but unofficial Bath records mention James and Samuel P. Hitchcock as the builders. According to Bath customhouse records, Adams & Hitchcock built the large bark *Edwin Reed* of 1,216 tons in 1874. Hitchcock & Blair are said to have built the ship *Oracle* of 1,549 tons in 1876 and the ship *St. Mark* of 1,973 tons in 1877, but the Bath customhouse records state that James P. Hitchcock was the builder of each of these vessels.

This confusion of the identity of actual builders continues into the eighties. Samuel P. Hitchcock has been reported as the builder of the Down Easters *E. B. Sutton, I. F. Chapman, S. P. Hitchcock,* and *A. G. Ropes;* but this is not correct, as John McDonald was unquestionably the designer-builder in 1882 of the *I. F. Chapman* of 2,145 tons and of the *A. G. Ropes* of 2,460 tons, constructed in 1884. The Bath customhouse records give the financial interest responsible for the work on these two ships as the official builder, and the Bath registry records I. F. Chapman, the ship managing owner of New York, as the builder of the Down Easters *I. F. Chapman* and *A. G. Ropes* and J. F. Chapman, member of the New York firm of shipowners and merchants, as the builder of the *A. G. Ropes.* The Bath customhouse records give G. H. Blair (and neither Hitchcock nor Hitchcock & Blair) as the builder of the ship *E. B. Sutton* of 1,826 tons, constructed in 1881; but Samuel P. Hitchcock is recorded as the builder of the 2,292-ton ship *S. P. Hitchcock,* constructed in 1883. (The model and specifications for construction of these Down Easters were presumably furnished by John McDonald.)

The busiest shipyard in Bath during the seventies and first half of the eighties was that of Goss & Sawyer, in which yard vessels were also built by Goss, Sawyer & Packard. After 1884, the shipbuilding plant was owned by the New England Shipbuilding Company and still later by The New England Company. This yard was primarily a building-by-contract enterprise, and out-of-town business was solicited. Any and all types of wood vessel construction were undertaken. From 1871 to the end of the era of building wood square-rigged deep-sea merchant sail, the yard built forty-nine sizable ships and barks, of which only eighteen hailed from Bath and many of these only temporarily. Of the forty-nine square-riggers, 53 per cent were three-masted ships and 47 per cent barks (one a four-master), and these deep-sea sailers were originally registered as hailing from the following ports:

	Ships		Barks		Total Square-riggers	
Home Port	Number	Tonnage	Number	Tonnage	Number	Tonnage
Bath	16	25,976	2	1,606	18	27,582
Boston	2	2,666	5	5,947	7	8,613
New York	1	2,003	6	5,438	7	7,441
Philadelphia	3	4,784	—	—	3	4,784
New Bedford	3	5,066	2	3,116	5	8,182
Portland, Ore.	1	1,976	3	3,599	4	5,575
Wareham, Mass.	—	—	4	4,899	4	4,899
Bremen	—	—	1	769	1	769
Total	26	42,471	23	25,374	49	67,845

Guy C. Goss began constructing sizable square-riggers at Bath at the close of the Civil War and, during 1865-1869 inclusive, built the following four barks, all of which were large vessels for that rig in the late sixties: *Toscana* of 728 tons (1865), *C. O. Whitmore* of 894 tons (1868), *Lizzie H.* of 896 tons (1868), and *Xenia* of 786 tons (1869). The last two vessels were for out-of-town owners, the *Lizzie H.* hailing from the shipbuilding town of Newburyport, Mass. Goss & Sawyer also built the 512-ton bark *Mendota* in 1869. This partnership built small wood schooners from 1866 on, although Guy C. Goss was the registered builder of five schooners constructed in 1871 and Elijah F. Sawyer of one. All of these little coasting vessels were built for out-of-town owners. The following table gives a list of sizable square-rigged sailing vessels (ships of over 1,200 tons and barks of over 600 tons) built at the Goss & Sawyer yard at the "North End" from 1871 to the end of wood square-rigged merchant sail.

Year Built	Name of Vessel and Rig	Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Registered Builder	Hailing Port
1871	ALDEN BESSE (bark)	842	164- 5	35- 3	20- 3	Guy C. Goss	Wareham
1873	WILLIAM H. BESSE (bark)	1,026	179- 9	36- 2	20- 6	Goss & Sawyer	Wareham
	JOHN H. KIMBALL (ship)	1,266	192- 6	38- 6	23- 6½	Goss & Sawyer	Bath
1874	EDWIN H. KINGMAN (bark)	1,111	186- 6	37- 3	22- 2	Goss & Sawyer	Boston
	CHAS. W. COCHRAN (bark)	1,105	187- 2	37- 2	22- 2	Goss & Sawyer	Boston
	XENIA (bark)	1,174	182- 6	36- 6	22- 9	Goss & Sawyer	Boston
	B. P. CHENEY (ship)	1,322	195- 9	38- 6	24- 2	Goss & Sawyer	Bath
	MARTHA P. TUCKER (bark)	653	140- 6	33- 1	18- 3	Goss & Sawyer	New York
	LEADING WIND (ship)	1,208	186- 6	37- 3	22- 7	Goss & Sawyer	Boston
1875	MARY L. STONE (ship)	1,458	198- 9	39- 3	24- 3	Goss & Sawyer	Boston
	W. A. HALCOMB (bark)	953	169- 5	35- 9	22- 1	Goss, Sawyer & Packard	Bath
	CITY OF PHILADELPHIA (ship)	1,457	202- 3	40- 2	24- 3	Goss & Sawyer	Philadelphia
	ASTORIA (ship)	1,394	202	40	24	Goss & Sawyer	Bath
	J. D. PETERS (bark)	1,085	182- 2	36- 1½	21- 8	Goss, Sawyer & Packard	Boston
1876	WESTERN BELLE (bark)	1,135	183- 3	38- 1	22- 5	Goss & Sawyer	Portland, Ore.
	BELLE OF OREGON (bark)	1,168	185- 6	38- 1	22- 5	Goss & Sawyer	Portland, Ore.
	ADAM H. SIMPSON (ship)	1,524	210- 2	40- 3	24- 1	Goss, Sawyer & Packard	Philadelphia
	DAKOTA (ship)	1,370	197- 8	38- 8	24- 3	Goss & Sawyer	Bath
	ALAMEDA (ship)	1,474	211- 3	40	24- 1	Guy C. Goss	Bath
	FRED C. LITCHFIELD (bark)	1,082	177- 5	36- 1	22- 3	Goss, Sawyer & Packard	New York
	PALMYRA (ship)	1,359	197- 9	38- 8	24- 2	Goss & Sawyer	Bath
1877	KEPLER (bark)	769	160- 3	34- 1	19- 5	Guy C. Goss	Bremen
	BELLE OF BATH (ship)	1,417	203- 9	39	24- 3	Goss & Sawyer	Bath
	FOREST BELLE (bark)	1,296	193	39- 1	23- 3	Goss & Sawyer	Portland, Ore.
	HECLA (ship)	1,529	210- 5	40- 2	24- 3	Goss, Sawyer & Packard	Bath
	CRESCENT (bark)	613	137- 8	33- 1	17	Goss, Sawyer & Packard	New York
	FLORENCE (ship)	1,684	223- 1	41	26	Goss & Sawyer	Bath
	JONATHAN BOURNE (bark)	1,472	203- 3	39- 8	24	Goss & Sawyer	Boston
1878	GERARD C. TOBEY (bark)	1,459	208- 7	39- 1	23- 6	Goss, Sawyer & Packard	Wareham
	ECLIPSE (ship)	1,594	221- 7	40- 3	24- 3	Goss & Sawyer	Bath
	CHARLES B. KENNEY (bark)	1,128	179- 3	37- 2½	22- 8½	Goss, Sawyer & Packard	New York
	EMMA S. CROWELL (bark)	1,136	181- 2	37- 3½	22- 6½	Goss & Sawyer	New York
1879	GUY C. GOSS (bark)	1,572	213- 9	39- 8	24	Goss, Sawyer & Packard	Wareham
1880	WILLIAM P. CRAPO (bark)	1,647	215- 3	41- 8	24- 3	Goss, Sawyer & Packard	New Bedford

(Continued on next page)

Year Built	Name of Vessel and Rig	Tonnage	Dimensions in Feet and Inches Length	Beam	Depth	Registered Builder	Hailing Port
1881	WILLIAM J. ROTCH (ship)	1,717	218- 2	42- 1	24- 2	Goss, Sawyer & Packard	New Bedford
	TACOMA (ship)	1,738	222- 2	41	17- 7	Goss & Sawyer	Bath
	JACOB E. RIDGEWAY (ship)	1,803	219- 1	41	17- 2	Goss & Sawyer	Philadelphia
	COWLITZ (bark)	779	172- 4	40	15- 2	Goss & Sawyer	New York
1882	WILLIAM H. STARBUCK (ship)	1,339	194- 3	39	24- 3	Goss, Sawyer & Packard	New York
	HENRY FAILING (ship)	1,976	230- 6	43- 1	18- 3	Goss & Sawyer	Portland, Ore.
	CHARLES E. MOODY (ship)	2,003	239- 9	43- 4	18- 2	Goss & Sawyer	Bath
1883	WILLIAM H. SMITH (ship)	2,003	232- 4	43- 3	17- 8	Goss, Sawyer & Packard	New York
	E. F. SAWYER (ship)	1,993	230- 4	43- 4	18- 5	Goss & Sawyer	Bath
	AMY (bark)	700	159- 1	35- 5	16- 7	Goss & Sawyer	New York
	JOHN R. KELLEY (ship)	2,364	256- 9	45	19- 1	Goss & Sawyer	Bath
	BENJAMIN F. PACKARD (ship)	2,130	244- 2	43- 3	18- 2	Goss, Sawyer & Packard	Bath
1885	HOTSPUR (ship)	1,273	191- 9	38- 8	22- 8	New England Shipbuilding Co.	New Bedford
	FRANCIS (ship)	2,076	231	43	17- 7	New England Shipbuilding Co.	New Bedford
1892	OLYMPIC (4-masted bark)	1,469	224- 4	42- 1	21- 3	New England Co.	New Bedford

The relative shipbuilding activity during each of various years for the period from 1874 to the mid-eighties, when the Goss & Sawyer yard was operating as fully as procurable contracts permitted, is indicated by the following table of the number and tonnage of deep-sea square-riggers built each year:

Year	Ships Number	Ships Tonnage	Barks Number	Barks Tonnage	Total Number	Total Tonnage	Year	Ships Number	Ships Tonnage	Barks Number	Barks Tonnage	Total Number	Total Tonnage
1871	—	—	1	842	1	842	1879	—	—	1	1,572	1	1,572
1873	1	1,266	1	1,026	2	2,292	1880	—	—	1	1,647	1	1,647
1874	2	2,530	4	4,043	6	6,573	1881	3	5,258	1	779	4	6,037
1875	3	4,309	2	2,038	5	6,347	1882	3	5,318	—	—	3	5,318
1876	4	5,727	3	3,385	7	9,112	1883	4	8,480	1	700	5	9,180
1877	3	4,630	4	4,150	7	8,780	1885	2	3,349	—	—	2	3,349
1878	1	1,594	3	3,723	4	5,317	1892	—	—	1	1,469	1	1,469

Albert Hathorn built two sizable ships in 1865 and 1866, the *Ella S. Thayer* (1,098 tons) and *Kate Davenport* (1,248 tons), and three barks of from 528 to 636 tons during the years 1864-1866 inclusive, which were designated as "sizable" for that rig. He commenced building some big ships in 1872 and continued to 1881, being the registered builder of the following six sizable full-rigged ships constructed during that period of ten years:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches Length	Beam	Depth	Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches Length	Beam	Depth
1872	CARROLLTON	1,450	198- 2	39- 6	24- 6	1877	JAMES NESMITH	1,735	228- 1	40- 3	26- 3½
1874	GATHERER	1,509	208- 1	40- 2	24- 3	1880	GEORGE STETSON	1,845	232- 9	41- 3	26- 3
1875	GEORGE F. MANSON	1,418	206- 1	39	23- 9	1881	PARKER M. WHITMORE	2,205	243- 4	43- 6	19- 5

The *Carrollton,* in her early days, was owned, operated, and sold by the Sewalls. Levi Lemont, in his historical notes (published in 1874), says that the ship was built by William D.

Sewall & Sons. The *Gatherer* became notorious as the "Bloody *Gatherer,*" a so-called "Hell ship." She has been confused as one of the Sewall-built grain ships, which, built in 1873-1876, consisted of the *Granger* (1,526 tons), *Harvester* (1,494 tons), *Reaper* (1,468 tons), and *Thrasher* (1,512 tons).

Charles V. Minott, of Phippsburg, built the ship *Tiger* of 1,073 tons in 1860, the ship *Mary E. Riggs* of 1,124 tons in 1864, and the ship *Alice M. Minott* of 1,093 tons in 1867 (also the bark *Alice Minott* of 505 tons in 1862). In 1870, he built the ship *Merom* of 1,204 tons and, in 1876, the ship *Ivy* of 1,243 tons. From 1878 to the end of sail, Minott built the following sizable full-rigged ships:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1878	STANDARD	1,534	212	40- 2	24- 5	1883	ST. CHARLES	1,749	225- 2	41- 6	16- 8
1881	JAMES DRUMMOND	1,556	216	40- 1	24- 2	1890	ST. MARY	2,043	240- 6	42- 4	18- 2
1882	BERLIN	1,634	222- 5	40	24	1893	ARYAN	2,123	248- 6	42- 2	17- 4

Arthur Sewall & Company, Charles V. Minott, Houghton Brothers, John McDonald, and The New England Company were the only builders of square-riggers during the last four years of construction of wood sail. After 1891, only Sewall and Minott built wood square-rigged ships; Sewall built the mammoth *Roanoke* (a four-masted shipentine) in 1892, and Minott built America's last full-rigged wood ship, the *Aryan,* in 1893. Arthur Sewall & Company's last full-rigged wood ship was the *Rappahannock,* built in 1890, in which year Minott built the *St. Mary* and followed her two years later with the historic *Aryan.*

In and around the seventies, some large ships were built and registered in the Bath district that were launched "upriver" at Richmond. Henry S. Hagar built the *Alicia* of 1,302 tons in 1866, and James M. Hagar built the following six vessels during the years 1867-1878:

Year Built	Name of Ship	Tonnage	Year Built	Name of Ship	Tonnage	Year Built	Name of Ship	Tonnage
1867	ST. JAMES	1,286	1872	FLORIDA	1,414	1876	QUEENSTOWN	1,548
1869	JAMESTOWN	1,888	1874	HAGARSTOWN	1,903	1878	YORKTOWN*	1,955

*Registered as Jos. M. Hagar, builder.

The Southards, for three generations, were the most prominent builders of sizable ships at Richmond, although the customhouse records say that Thomas J. Southard built the ship *Forest Queen* of 885 tons for New York parties at Bath in 1849. T. J. Southard was building important vessels of size in the forties and fifties, among them being the part clipper *Gauntlet* of 2,031 tons (1853) and the *Wizard King* of 1,398 tons (1854). In the sixties, both Thomas J. and T. J. Southard & Son were the registered builders of ships, eight sizable three-masted square-riggers being so reported (four ships and four barks). The largest were the ship *Moses Day* of 1,271 tons, built by T. J. Southard & Son in 1868, the *Jane J. Southard* of 1,120 tons, built in 1864, and the *C. H. Southard* of 1,099 tons, built in 1867. During the seventies, the Southards built at Richmond the following six sizable three-masted deep-sea square-riggers, which were registered at Bath:

Year Built	Name of Vessel and Rig	Tonnage	Registered Builder	Year Built	Name of Vessel and Rig	Tonnage	Registered Builder
1871	OLIVE S. SOUTHARD (ship)	1,193	T. J. Southard	1876	EUREKA (ship)	2,101	T. J. Southard
1873	T. JEFFIE SOUTHARD (bark)	830	T. J. Southard	1877	RED CROSS (ship)	1,300	C. H. & T. J. Southard
1875	CHARLES DENNIS (ship)	1,710	T. J. Southard & Son	1879	THEODORE H. ALLEN (ship)	1,537	T. J. Southard & Son

The *Eureka* of 2,101 tons was an outstanding, big ship and, until the Sewalls constructed the *Iroquois* of 2,120 tons in 1881, was the largest vessel ever built on the Kennebec River.

The tonnage of the Southard-built clipper *Gauntlet* is in dispute. Whereas the Bath customhouse register records the official measured tonnage as 2,031 tons, the American Lloyd's Registry of American and Foreign Shipping (1860) gives the tonnage as 1,854. Cutler and Howe and Matthews, in their authoritative works on American clipper ships, state the tonnage as 1,854 and the dimensions as length 230 ft., beam 42 ft., and depth 23 ft. The American Lloyd's Registry gives the dimensions as 230 x 38 x 23 ft., but the Bath customhouse official registered dimensions are recorded as length 240 ft., beam 42 ft. 5 in., and depth 21 ft. 2½ in. When the *Gauntlet* was launched at Richmond and was towed down the Kennebec River, she was described as the largest ship built in Maine up to that time (the fall of 1853). This designation was correct in 1853 and would apply throughout the balance of the fifties and the greater part of the sixties, for it was not until 1869 that ships in excess of 1,854 tons were built on the Kennebec and registered at Bath. It is significant that after the shipbuilding boom of the early and mid-fifties (and the construction of the *Sunshine* of 1,467 tons in 1856), no very large ships were built at Bath during the depression and the Civil War years, and it was not until 1865 that a 1,300-ton ship was launched on the Kennebec.

That Richmond, notwithstanding its handicap in relation to Bath proper with respect to depth of water, width of channels, and advantageous shipbuilding sites, built some very large ships in the fifties, sixties, seventies, and eighties is evident in the following record of the largest ships built in the Bath district and registered at the Bath customhouse following the construction of the "big ship" *Rappahannock (I)* in 1841 to the end of the building of Down Easters and merchant sail, excluding Sewalls' "Big Wood Four" of from 2,744 to 3,539 tons (built 1889-1892) and Sewalls' steel four-masted shipentines of from 2,998 to 3,381 tons (built 1894-1902).

Year Built	Name of Ship	Registered Tonnage	Registered Dimensions in Feet and Inches			Registered Builder	Where Built
			Length	Beam	Depth		
1841	RAPPAHANNOCK	1,133	129- 6	37	18- 6	Clark & Sewall	Bath
1849	SARATOGA	1,200	183- 3¾	37- 8	18-10	James Drummond	Bath
1851	JAMES L. BOGART	1,220	185	37- 9½	18-10¾	Johnson Rideout	Bath
1852	ARIEL	1,329	191- 6	38- 9	19- 4½	Johnson Rideout	Bath
1852	WILLIAM TAPSCOTT	1,524	195	41- 3	20- 7½	William Drummond	Bath
1853	PRIDE OF AMERICA	1,826	226	41- 6½	29- 9¼	Patten & Sturdevant	Richmond
1853	GAUNTLET	2,031 (1,854)	240	42- 5	21- 2½	T. J. Southard	Richmond
1869	ST. JOHN	1,885	216- 3	42- 9	20- 4	John McDonald	Bath
1869	JAMESTOWN	1,888	207- 7	40- 5	20- 2	James M. Hagar	Richmond
1873	W. R. GRACE	1,892	218- 1	42- 8	20- 8	John McDonald	Bath
1874	ST. PAUL	1,893	228- 2	42- 1	19- 1	John McDonald	Bath
1874	HAGARSTOWN (or HAGERSTOWN)	1,903	223- 7	42- 3	17- 5	James M. Hagar	Richmond
1875	M. P. GRACE	1,928	229- 9	42- 1	19- 7	John McDonald	Bath
1876	EUREKA	2,101	230- 9	42- 1	17- 9	T. J. Southard	Richmond
1881	IROQUOIS	2,120	237- 1	43- 6	19- 3	Arthur Sewall & Co.	Bath
1881	PARKER M. WHITMORE	2,205	243- 4	43- 6	19- 5	Albert Hathorn	Bath
1883	JOHN McDONALD	2,281	249- 4	43- 1	19- 9	John McDonald	Bath
1883	S. P. HITCHCOCK	2,292	247- 4	44- 3	20- 1	Samuel P. Hitchcock	Bath
1883	JOHN R. KELLEY	2,364	256- 9	45	19- 1	Goss & Sawyer	Bath
1884	JOHN ROSENFELD	2,373	256- 5	44	19- 7	Arthur Sewall & Co.	Bath
1884	COMMODORE T. H. ALLEN	2,390	245- 3	41- 7	19- 8	T. J. Southard	Richmond
1884	A. G. ROPES	2,460	258- 2	44- 7	20- 7	John McDonald	Bath
1884	HENRY B. HYDE	2,583	267- 9	45	20- 5	John McDonald	Bath

The following were the four largest full-rigged ships built each year at Bath as recorded in the customhouse register for each of the years 1871-1879 inclusive:

	First		Second		Third		Fourth	
Year Built	Name and Tonnage	Builder	Name and Tonnage	Builder	Name and Tonnage	Builder	Name and Tonnage	Builder
1871	ERIC THE RED (1,580)	Sewall	COLUMBIA (1,471)	Houghton	NORTH STAR (1,374)	Moses	HARRY MORSE (1,365)	Morse
1872	CARROLL-TON (1,450)	Hathorn	FLORIDA (1,414)	Hagar	CUBA (1,106)	Theobald & Harward	HUMBOLDT (1,018)	Sewall
1873	W. R. GRACE (1,892)	McDonald	STERLING (1,731)	Sewall	GRANGER (1,526)	Sewall	EL CAPITAN (1,493)	Sewall
1874	HAGARS-TOWN (1,903)	Hagar	ST. PAUL (1,893)	McDonald	ORIENTAL (1,688)	Sewall	GENEVA (1,535)	Houghton
1875	M. P. GRACE (1,928)	McDonald	CONTI-NENTAL (1,712)	Sewall	CHARLES DENNIS (1,710)	Southard	BOHEMIA (1,633)	Houghton
1876	EUREKA (2,101)	Southard	ORACLE (1,549)	Hitchcock	QUEENS-TOWN (1,548)	Hagar	SANTA CLARA (1,535)	McDonald
1877	ST. MARK (1,973)	Hitchcock	JAMES NESMITH (1,735)	Hathorn	ARMENIA (1,698)	Houghton	FLORENCE (1,684)	Goss & Sawyer
1878	YORKTOWN (1,955)	Hagar	ECLIPSE (1,594)	Goss & Sawyer	STANDARD (1,534)	Minott	JAMES BAILEY (1,530)	Rogers
1879	MANUEL LLAGUNO (1,732)	McDonald	GUY C. GOSS (bark; 1,572)	Goss, Sawyer & Packard	THEODORE H. ALLEN (1,537)	Southard	SOLITAIRE (1,531)	Sewall

During the early decades of the nineteenth century and the period prior thereto, Maine builders of ships were generally farmers, merchants, timber and lumber operators as well as shipbuilders. They worked their lands, grew crops, cut down woodlands, and often cleared it to be used for other purposes. They built ships, often with but seemingly little regard for the economical and practical proximity of tidewater to their farm and shipbuilding land. Farmers whose property included some frontage on the Kennebec River and its associated streams and ocean inlets were fortunate in the location of their building berths and the task of putting their vessels into the water, for they merely put ways under their vessels and launched them with a minimum of time, power, and expense. Many farmers away from large rivers and tidewater, for economical reasons and to give work to their families and "help" for twelve months in the year, felt it necessary to build ships. The size of vessels in general use and in demand during the early days of the republic and the first few decades of the nineteenth century made it possible for many Maine inland farmers to build ships if they were clever and farsighted in the location of their building berth, the consideration of topography, and the planning of a relatively short and direct down-grade haul to a good stream, with high water in the spring, or tidewater. The farmer-shipbuilder also had to be ingenious enough to devise ways and means of obtaining and utilizing economically the necessary power to haul the ship's hull from the farm to water that would float her and permit her being towed to a tidewater dock for rigging and completion.

Many stories are told in Maine around the Kennebec, Penobscot, Casco Bay, the Saco, Kennebunk, etc., of the building of ships on farms amid the timber and the long haul of the vessels to water deep enough to float them when light. Some are based on fact, many have been verified and supported by records, but some are legendary lore or mere yarns, approaching at times in implausibility the Midwestern exploits of the mythical giant timberman, Paul Bunyan. Farmers tell even today of their ancestors' building "big ships" on farms "a century" or "a century and a half" or more ago and sledding them ten, twenty, or even more miles by

oxen over snow and ice to the banks, or onto the ice, of some little river to await the spring thaw and freshet that would carry them to tidewater, where they would be rigged and equipped for deep-sea trading. These "ships" were generally sloops or two-masted schooners or brigantines, and while some were sizable craft in their day, they were, of course, pitifully small as compared with the dimensions and tonnage of sailing vessels built around the middle of the nineteenth century.

In the seventies and eighties of the nineteenth century, the sons of old Down East "shipbuilding farmers" of the clipper ship era (who had felled trees, hauled timber by oxen from the woods to the shipyards, and become skilled in the use of the adz and caulking mallet) had become skilled shipwrights. Maine abounded in old-fashioned shipyards, but on the Kennebec River at Bath wood shipbuilding plants and facilities were efficient and well located, giving employment also to skilled mechanics who knew a wooden ship from stem to stern and keel to trucks. "Here the slowly dying art of the wood shipwright was treasured and preserved, the industry honored and romanticized, and the steel plate worker and riveter—the scorned 'black squad'—were kept at a distance for many years after metal had defeated wood in every other shipbuilding center of the world." Maine, with the shipbuilders of Bath in the van, "kept the flag afloat at the spanker gaff of sailing ships" on the Seven Seas after the shipyards of other states had ceased operations. After the forests of Maine and New England no longer could supply much, if any, of the materials (framing, planking, or spars) needed for wood ship construction, large gangs of lumbermen were employed until 1893 to cut timber in the deep South, and spars were obtained on the Pacific Coast for Maine-built wood square-rigged ships. Of the many shipbuilding sites in the state of Maine, Bath on the Kennebec River stands forth pre-eminently as the leader, unquestionably the greatest and the best. The Bath yards that were particularly conspicuous during the last great building era of wood square-rigged ships were those of the Sewalls; the Houghtons; Chapman & Flint (McDonald); Goss, Sawyer & Packard; Rogers; and Minott. Driven from foreign trade by steel and steam, Bath continued to build burdensome wood schooners and schooner-rigged wood tow barges until the 1920's, the great builders in this last period of big hull wood construction being Percy & Small; Kelley, Spear & Company; and Gardiner G. Deering—all of Bath, Maine.

In an 1884 government report on shipbuilding, the cost of building at Bath, Maine, in 1883 is stated as $45 per registered ton for large vessels; $53 to $60 per ton for smaller craft. It was at about this time that Bath built the finest full ship-rigged Down Easters, the *Henry B. Hyde* (2,583 tons) and *A. G. Ropes* (2,460 tons); therefore, official comment as to conditions in the industry, with prices and costs in 1883, is of interest. We read:

> The labor is divided among men skilled in their respective branches, and it is thus more quickly and efficiently performed; and the contractor makes $2 or $3 per day more than his men, and that is about all. Carpentry work was done by the day, men getting $1½ to $2, according to efficiency. One system which prevails in Bath . . . is that carpenters, calkers, and joiners supply their own tools. The outfit of a carpenter or joiner costs $50 to $75; of a calker, $15. The fastening requires a special outfit of augers, etc., which is supplied by the contractor, costing about $175. The blacksmith contractor's outfit costs about $400, rigger's $300, sail-maker's $200, and the block-maker's $1,200. This saves the builder a great deal of expense.

Prices of Ship's Timber and Lumber Delivered in Bath

Oak plank	$45 per M bd. ft.	Hardwood	$20 per M bd. ft. in round log
Oak timber	33 " " " " hewn to molds	White pine	35 " " " "
Pitch pine	28 " " " " sawed	Hackmatack	35 " " " "

Knees cost about as follows, the prices being governed by the siding thickness and freedom from defects:

5-inch knees	$ .75 to $ .90	10-inch knees	$ 7.00
6- " "	1.25 to 1.30	11- " "	8.00
7- " "	2.25 to 2.50	12- " "	9.00
8- " "	3.50	13- " "	10.00
9- " "	4.20 to 4.50		

Prices vary according to season and demand. Knees are obtained from root, and rarely more than one is obtained from a tree. A two-deck ship of 2,000 tons register requires about 650 knees; 1,600 tons, about 550; a bark of 850 tons, two decks, 425 knees; a large single-deck schooner of 450 or 500 tons, 260 knees; and a schooner of 300 tons, about 210 knees.

The report states that in 1883-1884 there were eleven great established shipyards in the city of Bath (excluding environs) and that six of them were building for themselves only. Bath is acknowledged as "the greatest shipbuilding town in America." The Houghtons, of Bath, Maine, shipbuilders and operators throughout the Seven Seas, supplied the government with the following data showing the relative cost of shipbuilding materials during the fifty-five-year period 1825-1880. (This includes the Civil War, which affected both the southern pine market and prices and transportation in general.)

	1825	1835	1845	1855	1865	1880
White oak (Maine) per M bd. ft.	$21	$25	$27	$27	$33	$35
" " (South.) " " " "	—	—	—	35	33	35
Pitch pine per M bd. ft.	—	—	26	28	50	30
White " " " " "	10	24	26	30	40	35
Hardwood " " " "	15	15	21	22	—	—
Iron bolts (per ton)	85	80 to 90	—	45	90	60
Cost, per ton, to build	45	50	45	60	70	45

Wood ships built in Maine during the last decades of the nineteenth century had less and less local, or Maine, timber used in their construction, and, as the years advanced, Maine wood shipbuilders had to go "farther and farther afield" to acquire thoroughly satisfactory timbers, planking, and sparring with which to work. When Arthur Sewall & Company built its "Big Wood Four," the *Rappahannock* (3,185 tons), *Shenandoah* (3,406 tons), *Susquehanna* (2,744 tons), and *Roanoke* (3,539 tons), in 1889-1892, all the timber for the framing and the planking (including inside ceiling) came from the South. It was said that from seven to eight hundred tons of Virginia oak were used in the framing of each vessel and that from 1,200,000 ft. to 1,500,000 ft. of Georgia pine were used for planking and ceiling. The masts and yards were made from Oregon pine, and the spike bowsprits were of steel.

The eighties commenced and ended with low-demand years for new wood ship construction. Only three sizable square-riggers were built in 1880 (two ships and one large bark) as against five in 1879 (a poor year), ten in 1878, and twenty in 1877. In 1889, at the close of the decade and after three years of inactivity (1886-1888 inclusive), a bark of 1,028 tons was built, and the building of four sizable square-riggers to be launched in 1890 had been commenced or plans were being made for their construction. The following table gives a record of sizable square-riggers built and registered in Bath during the eighties. (Ships of over 1,250 tons, barks of over 700 tons, barkentines of 600 tons, and brigs of 350 tons or more are considered "sizable.")

	Ships		Barks		Ships and Barks		Barkentines		Brigs		Total Square-riggers	
Year Built	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage
1880	2	3,832	1	1,647	3	5,479	1	614	2	813	6	6,906
1881	11	20,045	3	2,693	14	22,738	—	—	1	373	15	23,111
1882	10	18,216	—	—	10	18,216	—	—	—	—	10	18,216
1883	11	22,492	2	2,265	13	24,757	—	—	1	545	14	25,302
1884	4	9,806	—	—	4	9,806	1	699	—	—	5	10,505
1885	3	5,804	1	835	4	6,639	—	—	—	—	4	6,639
1886	—	—	—	—	—	—	1	789	—	—	1	789
No ships or barks built in 1886-1888 inclusive and no square-riggers of any type in 1887-1888 inclusive.												
1889	—	—	1	1,028	1	1,028	—	—	—	—	1	1,028
Total	41	80,195	8	8,468	49	88,663	3	2,102	4	1,731	56	92,496

Following a busy and successful career in the seventies, in which a large tonnage and a big fleet of vessels were built, Goss & Sawyer, with Goss, Sawyer & Packard and their

successors, the New England Shipbuilding Company (in 1884) and The New England Company (in 1889), built not only much more tonnage than any other yard in Bath during the eighties but also more vessels and a greater aggregate tonnage of full-rigged ships and of square-riggers. During the three years 1881-1883, this yard built (and registered at Bath) eleven full-rigged ships totaling 19,845 tons and, for the years 1880-1884, thirteen three-masted square-riggers of 22,192 tons. When operating as the New England Shipbuilding Company in 1885, the yard built two ships totaling 3,349 tons and the following year constructed a 789-ton barkentine. The tonnage of sizable three-masted square-riggers built at the yard in the eighties aggregated 26,330 tons in addition to a host of other vessels—sail and steam. The Goss & Sawyer yard turned out good square-riggers, the largest ships built and registered in the eighties being:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1883	JOHN R. KELLEY	2,364	256- 9	45	19- 1	1883	E. F. SAWYER	1,993	230- 4	43- 4	18- 5
1883	BENJAMIN F. PACKARD	2,130	244- 2	43- 3	18- 2	1882	HENRY FAILING	1,976	230- 6	43- 1	18- 3
1885	FRANCIS*	2,076	231	43	17- 7	1881	JACOB E. RIDGEWAY	1,803	219- 1	41	17- 2
1882	CHARLES E. MOODY	2,003	239- 9	43- 4	18- 2	1881	TACOMA	1,738	222- 2	41	17- 7
1883	WILLIAM H. SMITH	2,003	232- 4	43- 3	17- 8	1881	WILLIAM J. ROTCH	1,717	218- 2	42- 1	24- 2

*Built by New England Shipbuilding Co., which operated yard from 1884 to 1889-1890.

The very large bark *William P. Crapo* of 1,647 tons was built by Goss, Sawyer & Packard in 1880 for New Bedford parties. The New England Shipbuilding Company yard, which built two full-rigged ships totaling 3,349 tons in 1885, was one of the last three shipyards to build square-rigged merchant sail. In 1892 its successor, The New England Company, constructed the four-masted bark *Olympic* of 1,469 tons. This vessel had a unique rig, having yards on the fore and main and only fore-and-aft sails on the mizzen and jigger masts. Each of the members of the Goss, Sawyer & Packard firm had a relatively large square-rigger (built at the yard) named after him, but the vessel named after Captain Goss was a bark distinguished for her size. She was, when launched, the largest bark-rigged sailing vessel afloat. The *Guy C. Goss* was the one hundredth vessel constructed by the firm, and when launched on November 27, 1879, she was the thirteenth vessel that her builders had put in the water that year. That the bark was well built is proved by the fact that she had a seagoing career of forty-seven years, which was generally spent in hard service.

The following table gives the particulars, with registered dimensions, of the three square-riggers constructed at the yard of Goss & Sawyer or Goss, Sawyer & Packard by the builders:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet and Inches			Registered Builder	Hailing Port
				Length	Beam	Depth		
1879	GUY C. GOSS	Bark	1,572	213- 9	39- 8	24	Goss, Sawyer & Packard	Wareham, Mass.
1883	E. F. SAWYER	Ship	1,993	230- 4	43- 4	18- 5	Goss & Sawyer	Bath
1883	BENJAMIN F. PACKARD	Ship	2,130	244- 2	43- 3	18- 2	Goss, Sawyer & Packard	Bath

Guy C. Goss was born at Sangerville, Maine, in October 1822. After being a school teacher at Georgetown, he went to sea and was a master from 1852 to 1865. When forty-three years old, he left the sea and became associated with B. L. White as a shipbuilder, and they launched their first vessel, the schooner *John Cooper,* in February 1866. Shortly thereafter,

Captain Goss formed a partnership with Elijah F. Sawyer, a practical builder, and they constructed the brigs *David Owen* (383 tons) and *F. J. Merryman* (217 tons); also the schooners *John Crooker* (208 tons) and *Nettie Cowin* (171 tons), all in 1866. Goss & Sawyer began building in the old Johnson Rideout shipyard. Benjamin F. Packard, born at Wiscasset in 1826, moved to Bath in 1850 and became a first-class shipwright. Prior to 1871, he was boss carpenter at the Moses yard for some ten years, and after occupying a similar position with Loring White, he joined forces with Goss & Sawyer in 1873. The old Goss & Sawyer partnership continued to function, using the northern part of the old Rideout shipyard for construction; but a new partnership known as Goss, Sawyer & Packard came into being, and it used the southern half of the big yard for building its vessels.

In the seventies, G. C. Goss, E. F. Sawyer, or Goss & Sawyer built 37 sizable schooners according to Bath customhouse records, which are incomplete, with files missing for part of 1874 and 1877 and all of 1875 and 1876. The registry shows that in 1879 they built 10 sizable schooners; in 1873, 9; and in 1872, 7. Their total for the decade was probably around 55 sizable fore-and-afters. During the years 1880-1884, the Guy C. Goss, Elijah F. Sawyer, and Benjamin F. Packard partnership constructed 49 schooners, sizable for the period, according to Bath customhouse records, building 13 in 1880, 15 in 1881, and 13 in 1882. The New England Shipbuilding Company constructed 21 sizable schooners during the years 1884-1888, and The New England Company built 5 such fore-and-aft-rigged vessels in 1889, making a total of 75 sizable schooners in addition to other types of vessels built in this one yard during the eighties. This yard also launched two 373-ton brigs in 1880 and 1881, respectively, following the smaller brig *Cameo,* built in 1878, and in 1874 it launched the two barkentines *Norena* and *Elvina* of 438 and 353 tons, respectively. The firms of Goss & Sawyer and Goss, Sawyer & Packard, it is said, "built 185 vessels up to 1884," but during the early eighties, the heavy investments of these three builders in rigged vessels equipped with auxiliary steam power caused financial embarrassment and a reorganization in 1884. Taking over the assets, the New England Shipbuilding Company combined and operated the two yards.

Bath's most distinguished builder of square-rigged merchant sail, John McDonald, produced not only the finest ships but also the second largest tonnage of any Bath builder during the eighties. He launched eight square-riggers of 15,615 tons in the five-year period 1881-1885 and seven of them, totaling 14,780 tons (one of which was the large, fast bark *St. James* of 1,565 tons), during the years 1881-1884. With the building of the *A. G. Ropes* and *Henry B. Hyde* in 1884, John McDonald produced the greatest, fastest, and the largest of all Down Easters of true type and designed and constructed the best sailing ships ever built when speed, carrying capacity, seaworthiness, and both reliable and economic operation are properly taken into consideration. After the construction of McDonald's two big Down Easters, commercial conditions caused a suspension of shipbuilding operations in the United States, and McDonald's great career was practically ended when at the zenith of his powers. He emerged from what was virtually an enforced retirement (in early 1885) to build three coasting schooners in 1888-1889, and in 1890-1891 he constructed his last deep-sea square-riggers, the barks *St. Katherine* and *Pactolus.* The following ten square-rigged vessels, totaling 18,735 tons, were designed and built by John McDonald during the years 1881-1891 inclusive:

Year Built	Name of Vessel	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Vessel	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1881	A. J. FULLER	1,848	229- 3	41- 5	17- 8	1884	A. G. ROPES	2,460	258- 2	44- 7	20- 7
1882	ST. FRANCIS	1,898	231- 4	41- 8	17- 8	1884	HENRY B. HYDE	2,583	267- 9	45	20- 5
1882	I. F. CHAPMAN	2,145	237- 5	42- 7	19- 2	1885	W. B. FLINT (bark)	835	178- 4	35- 4	17- 7½
1883	JOHN McDONALD	2,281	249- 4	43- 1	19- 9	1890	ST. KATHERINE (bark)	1,252	202- 8	39- 3	19- 1
1883	ST. JAMES (bark)	1,565	218- 5	41- 3	23- 7	1891	PACTOLUS (bark)	1,668	229- 7	41- 2	24

In the eighties, Arthur Sewall & Company built seven full-rigged three-masted wood ships that totaled 14,593 tons and ranged from the *Henry Villard* of 1,552 tons, launched in 1882, to the *Willie Rosenfeld* of 2,455 tons, built in 1885. The Sewalls built no square-riggers during the four years 1886-1889 inclusive, but they constructed an 800-ton schooner in 1887 and three fore-and-afters of from 842 to 1,188 tons in 1889. They had the first of their "Big Wood Four," the three-masted ship *Rappahannock* of 3,185 tons, on the stocks and about ready to launch at the close of 1889. The six largest full-rigged ships built by the Sewalls in the eighties, with their dimensions, were:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1885	WILLIE ROSENFELD	2,455	266- 5	44- 8	19- 1	1881	IROQUOIS	2,120	237- 1	43- 6	19- 3
1884	JOHN ROSENFELD	2,373	256- 5	44	19- 7	1880	THOMAS M. REED	1,987	227- 4	42- 4	19- 2
1882	W. F. BABCOCK	2,130	240- 8	43- 8	19- 8	1883	RANIER	1,976	223	42- 2	18- 1

The *Willie Rosenfeld,* the biggest ship built by the Sewalls in the eighties and their last true "Down Easter," was virtually the same size (with the same length and beam) as John McDonald's *Henry B. Hyde,* built before her in 1884, but there was no similarity in their performance at sea. Neither the Sewalls nor any other builder of ships in Bath nor in any other part of the country ever built a ship that could even approach in speed, capacity, and excellence of design the two Down Easter masterpieces produced by McDonald in 1884. The Sewalls, in addition to seven full-rigged ships built in the eighties, constructed twelve sizable schooners, having commenced to build some fore-and-afters for the coastwise trade in 1873.

William Rogers built ten three-masted square-riggers, totaling 13,705 tons, in the eighties. Six were full-rigged ships of from 1,271 to 2,126 tons, constructed in 1881-1883; two were the bark *Rose Innis* of 835 tons, built in 1881, and the bark *Matanzas* of 1,028 tons, launched in 1889; and two were barkentines of 614 and 699 tons, built in 1880 and 1884, respectively. Rogers built seventeen sizable schooners in the eighties and continued building fore-and-afters by contract for the coastwise trade until 1902. The four largest full-rigged ships built by William Rogers in the eighties were the following:

Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches			Year Built	Name of Ship	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth				Length	Beam	Depth
1883	KENNEBEC	2,126	237- 7	43- 3	18- 4	1881	CHARMER	1,881	221- 7	42- 4	17- 8½
1882	ABNER COBURN	1,972	225	43- 2	18- 5	1883	GOVERNOR ROBIE	1,712	224- 1	41	23- 8

Rogers had built the barkentines *C. S. Rogers* of 392 tons in 1866 and *Arthur C. Wade (I)* of 522 tons in 1879, and after building two vessels of this rig in the eighties, he built his last barkentine, the *Kremlin* of 786 tons, in 1890. This was the last square-rigged vessel constructed by him, although (as before stated) he continued to build schooners until 1902.

Charles V. Minott, of Phippsburg, built three full-rigged ships, aggregating 4,939 tons, in the eighties; they were the *James Drummond* of 1,556 tons, built in 1881, the *Berlin* of 1,634 tons, launched in 1882, and the *St. Charles* of 1,749 tons, constructed in 1883. After doing no building for six years, Minott laid down the ship *St. Mary* of 2,043 tons in 1890 and built America's last full-rigged wood ship and its last three-masted ship, the *Aryan* of 2,123 tons, in 1893.

The Hitchcock-Blair association built two square-riggers, totaling 4,118 tons, in the eighties. G. H. Blair was the registered builder of the *E. B. Sutton* of 1,826 tons, constructed in 1881, and Samuel P. Hitchcock the registered builder of the *S. P. Hitchcock* of 2,292 tons,

built in 1883. Adams & Hitchcock, who built schooners during 1872-1879, constructed five sizable schooners during the years 1881-1884 inclusive. Albert Hathorn, who had built some good, large full-rigged ships in the seventies, built only two, totaling 4,050 tons, in the eighties; these were the *George Stetson* of 1,845 tons, constructed in 1880, and the *Parker M. Whitmore* of 2,205 tons, which followed the next year (1881).

John R. Houghton built the *Arabia* of 2,080 tons in 1881 and Houghton Brothers the *Servia* of 1,866 tons in 1883. These two ships, totaling 3,946 tons, represented the Houghtons' total construction in the eighties, and they built their last ship, the big *Parthia* of 2,495 tons, in 1891. The Southards, of Richmond, built their last square-riggers in the eighties, launching two vessels, which totaled 3,469 tons; they were the *C. Southard Hulbert* of 1,079 tons, built in 1881, and the *Commodore T. H. Allen* of 2,390 tons, constructed in 1884.

The decade of the eighties of the nineteenth century, we are told, marked the high point of Bath wood shipbuilding, and this twenty to forty years after other great wood shipbuilding centers had reached their peak, waned, and gradually or abruptly passed into oblivion. This decade is a great tribute to Bath industry, courage, business energy, and resourcefulness. Schooners were built for the important Kennebec ice industry, and fore-and-afters of 1,600 tons were built for the coal trade. The last wood square-riggers grew to 2,583 tons and even to around 3,000 tons register as the decade ended, but most of Bath's commerce had been lost to other ports. As far as Bath shipbuilding was concerned, the eighties were great years in the ultimate, but the decade marked the end of the Down Easter and the demand for wood square-rigged merchant sail for service on the Seven Seas. In the sixties and seventies, Bath had built on an average about 12 three-masted square-riggers a year for foreign trade (1 a month), excluding a fleet of brigs and brigantines. Although Bath produced its finest and largest Down Easters in 1884, no vessels of this type were built after 1885, and in the entire decade of the eighties, only 41 full-rigged ships, 8 barks, 3 barkentines, and 4 sizable brigs were built—or only 41 per cent as many square-riggers as in the sixties (56 vessels as compared with 136). In the eighties, the building of schooners boomed, and thoughts turned from foreign to domestic trade. Bath was not well located geographically to engage, as a port, in foreign trade, but it was marine-minded and a great shipbuilding community. It saw the future in coastwise shipping and built for it as the lure of foreign business waned. In 1881 and 1882, shipbuilding boomed, and Bath yards turned out on an average slightly more than a deep-sea square-rigger per month; but, in addition, 30 sizable schooners were built each year. The depression in the middle of the decade affected all kinds of shipbuilding. No full-rigged ships or barks were built during the years 1886-1889 inclusive, and the volume of sizable schooner construction dropped from 32 vessels in 1882 to 18 in 1884 and 6 in 1885; it averaged only 10 in 1887 and 1888, but had recovered to 22 in 1889 (and reached 33 in 1891).

The change that had taken place since the dislocations brought about by the Civil War, the growing power, competitively, of the British merchant marine, and the increased prominence of the American coastwise trade are well illustrated by the following comparative statistics covering the Bath shipping records of the decade ending with 1860 (the clipper and California Gold Rush boom period) and that of 1890:

Period of years	1851-1860	1881-1890
Number of full-rigged ships built	181	37
Total number of square-riggers	210	53
Number of schooners	12	245
Total number of fore-and-afters	18	252
Number of barges	4	2
Number of steam vessels	—	39
Total number of vessels built	232	346
Total tonnage built	181,479	233,398
Average tonnage of ships	890	1,643
Average tonnage of schooners	61	514
Average tonnage of all vessels	780	947

The 1890's Are Shipbuilding Years of Great Diversity in Bath and Mark the End of Square-rigged Wood Sail Construction

From 1885 to 1890, no full-rigged ship was built in Maine or in the United States and no square-rigger other than the 789-ton barkentine built by the New England Shipbuilding Company (at the old Goss & Sawyer yard) in 1886 and the 1,028-ton bark built by William Rogers in 1889. The winter of 1889-1890 saw the beginning of a revival to build large wood square-riggers to cope with big British iron ships, but it was a last spasm and a dying gasp. It was in January 1890 that the Sewalls, of Bath, launched the *Rappahannock* (3,185 tons), the world's largest three-masted full-rigged ship. The announcement of their intention to build three more extra large vessels was hailed as an indication that American wood shipbuilding was to be restored to its old-time prestige. In November of the same year, when the *Shenandoah* (3,406 tons), the first of their four-masted shipentines, left the ways in the presence of some 8,000 people, so impressed were the shipping authorities of the United States with the "big ship" that her picture was reproduced on all American ship registers and on their masters' certificates. The *Susquehanna* (2,744 tons) followed in 1891 and the mammoth *Roanoke* of 3,539 tons, the largest American square-rigged ship ever built and successfully sent to sea, a year later; but these square-riggers, known as the Sewall "Big Wood Four," failed to prove—as their builders hoped—the equality of wood in competition with foreign metal bottoms. The Sewalls, handicapped outrageously in operation by the discriminating British Lloyd's and insurance rates (both ship and cargo), turned from wood to steel. Complex economic causes hastened the end of the wood square-rigger and, shortly thereafter, the end of deep-sea merchant sail—both wood and metal hulls.

The particulars, with dimensions according to Bath customhouse records, of Arthur Sewall & Company's "Big Wood Four" are set forth comparatively herewith:

			Tonnage		Dimensions in Feet and Inches			
Launched	Name of Vessel	Rig	Gross	Net	Length	Beam	Depth	Remarks
Jan. 6, 1890	RAPPAHANNOCK	3-masted ship	3,185	3,053	287- 2	48- 9	19- 8	When carrying coal from Liverpool to San Francisco (1891), was destroyed by fire after making island of Juan Fernandez in Pacific.
Nov. 1890	SHENANDOAH	4-masted shipentine	3,406	3,258	299- 7	49- 1	19- 9	Was sold for conversion to a towing coal barge in 1910 and was rammed and sunk Oct. 29, 1915.
Sept. 17, 1891	SUSQUEHANNA	4-masted shipentine	2,744	2,628	283- 6	45- 1	19- 1	Broke her back and abandoned at sea, laden with chrome ore, late Aug. 1905.
Sept. 20, 1892	ROANOKE	4-masted shipentine	3,539	3,400	311- 2	49- 2	20- 2	After loading 3,000 tons of chrome ore at Nehoue, New Caledonia, Aug. 10, 1905, vessel destroyed by fire.

The *Roanoke* was reported as the "94th vessel built by the Sewalls and their last wooden ship." The *Rappahannock* was the largest full-rigged three-masted ship ever built, and the *Shenandoah* and *Roanoke,* when launched, became the world's largest wooden vessels.

The only other wood square-riggers built in the nineties were as follows, with dimensions according to Bath customhouse records:

Launched	Name of Vessel	Rig	Tonnage		Dimensions in Feet and Inches			Remarks
			Gross	Net	Length	Beam	Depth	
Mar. 1890	ST. MARY	Ship	2,043	1,941	240- 6	42- 4	18- 2	Built by C. V. Minott, Phippsburg. Lost on maiden voyage because of collision and going ashore.
1890	ST. KATHERINE	Bark	1,252	1,193	202- 8	39- 3	19- 1	Built by John McDonald. A successful fast bark. Beat the ships I. F. CHAPMAN and W. F. BABCOCK in race, Honolulu to Philadelphia.
Jan. 1891	PARTHIA	Ship	2,495	2,370	260- 3	44- 4	19- 6	Built by Houghton Bros. Destroyed by fire in coal cargo off Chilean coast, Oct. 1895.
1891	PACTOLUS	Bark	1,668	1,585	229- 7	41- 2	24	Built by John McDonald. Sold as salmon packer on Pacific and broken up late 1927.
1892	OLYMPIC	4-masted bark	1,469	1,402	224- 4	42- 1	21- 3	Built by New England Co. for Capt. W. H. Besse, of New Bedford. Sold as a salmon packer and later became a fishing barge.
July 14, 1893	ARYAN	Ship	2,123	2,017	248- 6	42- 2	17- 4	Built by C. V. Minott, Phippsburg. Lost by fire in Pacific when laden with flax and tallow late Dec. 1918.

The *Aryan* was the last full-rigged wooden ship built in the world. The *Parthia* was the Houghtons' last and biggest ship, and the bark *Pactolus* was John McDonald's last vessel. The *Olympic* was a uniquely rigged vessel, being a true four-masted bark (and apparently the only one ever built), with yards fitted on the fore and main and only fore-and-aft rig on the mizzen and jigger (or spanker) masts.

Writing of Bath, Maine, at the end of the past century, Henry W. Owen has said:

> The last decade of the 19th Century was in fact the culmination of an epoch in Bath. . . . The shipyards still lined the river front from Drummond Street [at the north end] almost to Hospital Point [at the south], and although a new note had been introduced by the clash of metal on metal in the youthful Bath Iron Works, the music of the adz and mallet still predominated the industrial symphony which penetrated to the outer limits of the city. The odor of pine chips and tarred rigging still pervaded the docks and shipyards, as did that of homely virtue and New England idealism the firesides and meeting places of the people.

The years 1891-1900 were shipbuilding years of great diversity in Bath. The aggregate measured and registered tonnage for the decade of merchant vessels built within the city of Bath was 199,868 tons, being exceeded only by the tonnage of the preceding decade. However, in addition to the merchant vessels measured for tonnage, the Bath Iron Works built 14 government vessels, not measured, that had a total displacement of 11,352 tons. Of the 196 merchant vessels reported built during the period, it was said that "11 were ships, 4 barks, 75 schooners, 5 sloops, 75 barges, and 26 steamers"; but in the record of "sizable" merchant sail taken from customhouse records, the number of vessels built during the decade 1890-1899 was stated as 11 ships, 3 barks, 2 barkentines, 105 schooners, and 53 rigged tow barges, a total of 174 vessels (excluding steamers, sloops, and small craft).

A Record of Brigs, Barks, and Barkentines Built at Bath, 1832-1892

Brigs were the popular square-riggers built in Bath in the early days, for they traded to the West Indies and Europe as well as handled the worth-while coastwise business before the schooner rig grew in favor for the rapidly increasing coastal trade. From 1791 on, Bath customhouse records do not differentiate between brigs and brigantines, and a large number of the vessels registered as brigs were undoubtedly brigantines, particularly those of small size. In 1832, only the *Macundy* of 214 tons has been classified as a sizable brig, but twenty-two vessels, totaling 3,408 tons, were registered as brigs and were apparently two-masters of either brig or brigantine rig. However, it is possible that some were topsail schooners (i.e., schooners with one or two yards on the foremast). There are no customhouse records of brigs of over 200 tons built in 1840-1844 inclusive or even in 1850. The records show only eighteen such vessels in the entire decade of the thirties, when, it is known, a large fleet of two-masted square-riggers was built. The following synopsis of certain customhouse records for selected years in the thirties and forties is significant.

	Considered as Sizable Brigs		Registered Brigs Built in Year		
Year	Number	Tonnage Range	Number	Total Tonnage	Average Tonnage
1832	1	214	22	3,408	155
1833	1	211	17	2,837	167
1834	3	212 to 246	15	2,431	162
1836	2	223 to 231	9	1,547	171
1837	1	226	12	1,997	166
1846	2	226 to 247	18	3,107	173
1847	None	None	16	2,711	169

A "sizable" brig or brigantine has been considered as one of 150 tons (or over) up to 1815, 175 tons until 1823, and 200 tons thereafter. Whereas in 1848 the Bath customhouse register records nine brigs built, with a tonnage ranging from 201 to 249 tons, only one is recorded for 1849, none in 1847 and 1850, and two in each of 1851, 1852, and 1853, with the largest registering 299 tons in 1852 and 282 tons in 1853. In the big shipbuilding boom year of 1854, eighteen sizable brigs were registered, with a range of tonnage of from 236 tons up, the largest being of 433, 332, and 312 tons, respectively. In 1855, six sizable brigs were registered of from 230 to 374 tons, only one being of over 260 tons. After 1855, the following sizable brigs were built at Bath according to available customhouse records:

	Number of Brigs						Number of Brigs				
Year	200-300 Tons	301-400 Tons	401-500 Tons	Over 500 Tons	Largest Brig	Year	200-300 Tons	301-400 Tons	401-500 Tons	Over 500 Tons	Largest Brig
1856	1	—	—	—	MADEIRA (281 tons)	1868	2	—	—	—	LONG REACH (225 tons)
1857	—	1	—	—	T. W. LUCAS (354 tons)	1870	—	1	—	—	CARRIE PURINGTON (335 tons)
1858	—	1	—	—	STELLA (306 tons)	1873	—	1	—	—	CHARLES DENNIS (392 tons)
1862	—	2	—	—	CONCORD (382 tons)	1874	1	1	—	1	CASTALIA (516 tons)
1863	1	—	2	—	DEACON (499 tons)	1878	1	—	—	—	CAMEO (243 tons)
1864	1	3	1	—	VINCENT (409 tons)	1880	—	1	1	—	JENNIE HULBERT (440 tons)
1865	2	—	—	—	MARY C. ROSEVELT (235 tons)	1881	—	1	—	—	SUNLIGHT (373 tons)
1866	1	3	2	—	LIZZIE M. MERRILL (458 tons)	1883	—	—	—	1	H. B. HUSSEY (545 tons)

Only two brigs of over 500 tons and seven of between 400 and 500 tons were built at Bath, and the two 500-tonners were launched at Richmond. The largest brig built at Bath proper was the *Deacon* of 499 tons, laid down by Stephen Larrabee in 1863, and the last brig built within the town limits was the *Sunlight* of 373 tons, launched by Goss, Sawyer & Packard in 1881.

Barks were probably built on the Kennebec at an early date, but the rig seems to have been first mentioned as different from a ship rig about 1830, and it was 1852 before the customhouse registers record barks of any size as being built. Barks were always much smaller than full-rigged ships. In 1852, Bath customhouse records show seventeen sizable ships of from 608 to 1,524 tons as having been built and four barks of from 506 to 890 tons. In 1853, thirty-three ships were built and registered of from 603 to 2,031 tons and no sizable barks; but during the years 1854-1857 inclusive, seventy sizable ships of from 822 to 1,583 tons were built and registered and nine barks of from 527 to 639 tons. The 890-ton bark *Lucknow,* built in 1852, was evidently a very large vessel for that rig in the fifties, the next largest bark built in that decade being the *Alfred Lemont* of 639 tons, built in 1856. The bark *Mercur* of 763 tons was built in 1863, but in the Civil War year of 1864, which is the first year that sizable barks were built and registered in any number, seven were constructed of from 516 to 583 tons, followed the next year (1865) by eleven vessels built of this rig, with a tonnage ranging from 528 to 814 tons. This is the only year in which the Bath customhouse records report more barks of over 500 tons as being built than ships of over 1,000 tons, as only six full-rigged ships of from 1,098 to 1,336 tons were built and registered that year. In 1868, two barks of record size (894 and 896 tons) were built at Bath, and in 1869, seven barks of from 512 to 1,094 tons were constructed. The 1,094-ton *Niphen* (or *Niphon*), built by Frank O. Moses, was the only 1,000-ton bark built at Bath prior to 1873, when William Rogers built the bark *Colusa* of 1,188 tons and followed her the next year with the bark *Fresno* of 1,244 tons and in 1875 with the "big bark *Oregon*" of 1,430 tons. The bark *Jonathan Bourne* of 1,472 tons was built by Goss & Sawyer in 1877. Goss, Sawyer & Packard built the bark *Guy C. Goss* of 1,572 tons in 1879 and the *William P. Crapo* of 1,647 tons in 1880, which vessel held the honor of being the largest bark until John McDonald built his last square-rigger, the *Pactolus,* in 1891 and rigged her as a bark.

The Bath customhouse register records, as such, the first barkentine, the *Australia* (369 tons), as being built by Alfred Lemont in 1864, and William Rogers built the barkentine *C. S. Rogers* of 392 tons in 1866. In 1874, four barkentines of from 353 to 707 tons were built and registered, the largest being the *St. Lucie,* and more barkentines were built and registered in 1875, 1879, 1880, and in 1884. In 1886 the New England Shipbuilding Company built the barkentine *Lizzie Carter* of 789 tons, and in 1890 William Rogers built the barkentine *Kremlin* of 786 tons. Bath's last and largest barkentine was the *James W. Elwell* of 1,192 tons, built by Kelley, Spear & Company in 1892.

An Analysis of the Number and Types of Sizable Sailing Vessels Built in Bath, 1850-1923

It has been said that "records show the building in the community [of Bath] of 964 square-riggers." Figures have been presented to show that following the clipper ship boom and the period when New York and Boston passed out of the picture as the leading shipbuilding centers of the United States, Bath built 113 large square-rigged wood merchant sail in the sixties, 119 in the seventies, and 53 in the eighties. According to Bath customhouse records,

the following sizable square-riggers were built and registered in Bath after the middle of the nineteenth century:

Period	Three or More Masts				Brigs	Total Square-riggers	Period	Three or More Masts				Brigs	Total Square-riggers
	Ships	Barks	Barken-tines	Total				Ships	Barks	Barken-tines	Total		
1850-1859	159	13	—	172	33	205	1880-1889	41	8	3	52	4	56
1860-1869	75	39	2	116	20	136	1890-1899	11	3	2	16	—	16
1870-1879	76	35	6	117	6	123	1900-1903	4	1	—	5	—	5

The preceding record totals 478 sizable square-rigged merchant sail, each vessel with three or more masts (12 were four-masters), and 63 sizable brigs or brigantines, each with two masts, or 541 sizable square-riggers in all, built and registered at Bath from 1850 to the end of the construction of merchant sail. All were built of wood except 8 four-masted shipentines of from 2,998 to 3,381 tons and 1 three-masted bark of 1,570 tons, which were built of steel and launched during the period 1894-1902. The largest square-rigger built of wood, the *Roanoke* of 3,539 tons (built in 1892), was a bigger vessel than the largest steel square-rigger built, the *Atlas* of 3,381 tons (built in 1902), and all the square-riggers that registered over 2,600 tons, with the exception of the full-rigged wood ship *Rappahannock* of 3,185 tons (launched in January 1890) were rigged as four-masted shipentines. A historian has said, "No other shipbuilding center in the world can equal Bath's record of building either square-riggers or merchant sail of all types." The number of square-riggers built throughout Bath's entire career as a builder of ships has been estimated "at about twelve hundred," excluding all schooners, sloops, and fore-and-aft-rigged merchant sail and further eliminating all yachts, naval and government vessels, and all steamers. The following total numbers of vessels have been reported as built at Bath, Maine, for each of six decades covering the sixty-year period 1851-1910:

Decade	Number of Vessels Built	Decade	Number of Vessels Built	Decade	Number of Vessels Built
1851-1860	232	1871-1880	353	1891-1900	196
1861-1870	246	1881-1890	346	1901-1910	143

Heavy construction preceded the mid-nineteenth century, and after 1910 the vessels built were either wood schooners for coastwise trade or naval vessels and steel steamers, including an emergency war tonnage that continued until 1921. The customhouse records show that 33,222 tons of wood sail were measured in 1854 (and the records retained) as compared with 31,287 tons in 1877, most of which was tonnage of an economic design, big carrying capacity, and an efficient, powerful sail plan built to fight in maintaining wood sail on the Seven Seas at a profit. In 1882, 37,310 tons of wood vessels were reported built in the community; in 1890, 31,206 tons; and in 1899, 39,021 tons, some of the vessels being of steel and many being fore-and-afters built for the coastwise trade. The height of construction of the wood square-rigged deep-sea "Down Easters" of a perfected type was reached during the period of 1873-1884. During these twelve years, Bath, Maine, launched and registered an annual average of 25,000 tons of wood shipping, and in no year did the tonnage fall as low as 14,000 tons.

The following table has been compiled from available Bath customhouse records to show the relative number and types of sizable merchant sail built at Bath from 1850 to the close of the emergency in building fore-and-afters brought about by the first World War. The largest square-rigger, the *Roanoke* of 3,539 tons, was built in 1892 and the largest schooner, the *Wyoming* of 3,731 tons, in 1909. The number and size of bald-headed schooner-rigged tow

barges have been included, for whereas they carried sail only as an auxiliary power, they, nevertheless, had sufficient canvas to assist their progress at sea and take care of themselves in an emergency. They had excellently designed hulls of full-shaped ship or schooner models and were sturdy seagoing craft, well built, and of strong and durable construction. These rigged tow barges were the last sizable wood vessels built at Bath, whose last schooner was the *Laura Annie Barnes* of 698 tons, built in 1921, but whose last rigged tow barges were the *Winsor* and *Hutchinson,* each of 1,034 tons, built in 1923. The largest bald-headed schooner-rigged tow barge (without bowsprit) was the *Ulak* of 2,324 tons, which was built in 1920 and had a large shaped wood hull 268 ft. 3 in. long, 46 ft. beam, and 23 ft. 6 in. deep. The *Falmouth* of 2,236½ tons, built in 1919, had the longest and beamiest hull of any rigged tow barge, being 274 ft. 2 in. long and of 46 ft. 2 in. beam. (Only a trio of wood square-riggers ever built had larger hulls—i.e., longer and beamier—than these rigged tow barges, and these ships were three of Sewalls' "Big Wood Four," built in 1900-1902 as the last wood ships of the Sewalls before they changed their yard to build steel vessels.)

	Ships		Barks		Barkentines		Brigs		Total Square-riggers		Schooners		Rigged Tow Barges		Total Schooner-rigged		Total	
Period	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons	Number	Largest Tons
1850-1859	159	2,031	13	890	—	—	33	433	205	2,031	16	300	—	—	16	300	221	2,031
1860-1869	75	1,888	39	1,094	2	392	20	499	136	1,888	22	464	—	—	22	464	158	1,888
1870-1879	76	2,101	35	1,572	6	707	6	516	123	2,101	83	898	—	—	83	898	206	2,101
1880-1889	41	2,583	8	1,647	3	789	4	545	56	2,583	178	1,658	—	—	178	1,658	234	2,583
1890-1899	11	3,539	3	1,668	2	1,192	—	—	16	3,539	105	2,441	53	1,688	158	2,441	174	3,539
1900-1909	4	3,381	1	1,570	—	—	—	—	5	3,381	104	3,731	38	1,918	142	3,731	147	3,731
1910-1919	—	—	—	—	—	—	—	—	—	—	33	2,114	22	2,236	55	2,236	55	2,236
1920-1923	—	—	—	—	—	—	—	—	—	—	4	1,470	4	2,324	8	2,324	8	2,324
1850-1923	366	3,539	99	1,668	13	1,192	63	545	541	3,539	545	3,731	117	2,324	662	3,731	1,203	3,731

This list is far from being complete, as only sizable vessels are included and the customhouse records for certain years have been lost or are unavailable. No schooner records for the year 1856, for the five consecutive years 1858-1862 inclusive, and for the two years 1875 and 1876 are included in the above table because of unavailability; neither are brig records for 1850, 1859-1861, 1867, 1869, 1871-1872, 1875-1877, 1879, 1882, and after 1883. No data of ships or three-masted square-riggers have been included for the year 1870. Because an arbitrary minimum limit on tonnage has been used in considering vessels as sizable, a host of able seagoing craft has been eliminated in these statistics. This tonnage limit has properly varied with the years; for instance, in 1852 a full-rigged ship of 600 tons was deemed "sizable" for the Kennebec, in 1854 the minimum limit was raised to 800 tons, in 1855 to 1,000 tons, and in 1868 it was set at 1,200 tons. The years showing the greatest number of sizable vessels designated as mer-

chant sail, built and registered at Bath according to available customhouse records, were as follows:

Year	Ships	Barks	Barkentines	Brigs	Schooners	Rigged Barges	Total
1854	39	2	—	18	1	—	60
1881	11	3	—	1	28	—	43
1882	10	—	—	—	32	—	42
1853	33	—	—	2	5	—	40
1874	11	9	4	3	11	—	38
1890	3	1	1	—	31	—	36
1891	2	1	—	—	33	—	36
1873	7	5	—	1	21	—	34
1883	11	2	—	1	19	—	33
1899	2	—	—	—	4	25	31

The years showing the largest number of sizable full-rigged ships were 1854 with 39, 1853 with 33, 1851 with 22, 1852 with 17, and 1877 with 16. The most three-masted square-riggers built in a year totaled 41 in 1854, 33 in 1853, 24 in 1874, 22 in 1851, 21 in 1852, and 20 in 1877.

The years that produced the greatest number of sizable square-riggers were 1854 with 59, 1853 with 35, 1874 with 27, 1851 with 24, 1852 and 1864 each with 23, and 1855 with 22. The most schooners were built in 1891 (33), 1882 (32), 1890 (31), 1881 (28), 1880 (23), 1889 (22), and 1873 (21); while the years of the greatest construction of sizable rigged towing barges were 1899 with 25, 1898 with 20, and 1900 with 13.

The Largest Square-rigged Sailing Vessels of Each Rig—Both Wood and Steel—Built at Bath, Maine

The following is a list of the largest square-rigged deep-sea sailing vessels built at Bath, Maine:

A. *Steel Square-riggers*

Year Built	Name of Vessel and Rig	Tonnage	Builder
1902	ATLAS (STAR OF LAPLAND); 4-masted shipentine	3,381	A. Sewall & Co.
1901	WILLIAM P. FRYE; 4-masted shipentine	3,374	A. Sewall & Co.
1900	ASTRAL (STAR OF ZEALAND); 4-masted shipentine	3,292	A. Sewall & Co.
1901	ACME (STAR OF POLAND); 4-masted shipentine	3,288	A. Sewall & Co.
1899	ARTHUR SEWALL; 4-masted shipentine	3,209	A. Sewall & Co.
1899	EDWARD SEWALL (STAR OF SHETLAND); 4-masted shipentine	3,206	A. Sewall & Co.
1894	DIRIGO; 4-masted shipentine	3,004	A. Sewall & Co.
1898	ERSKINE M. PHELPS; 4-masted shipentine	2,998	A. Sewall & Co.
1899	KAIULANI (STAR OF FINLAND); 3-masted bark	1,570	A. Sewall & Co.

The first mentioned six vessels were "sisters"; i.e., all built from the same plans for the hull proper below deck.

(Continued on next page)

B. *Wood Square-riggers*

Year Built	Name of Vessel and Rig	Tonnage	Builder
1892	ROANOKE; 4-masted shipentine	3,539	A. Sewall & Co.
1890	SHENANDOAH; 4-masted shipentine	3,406	A. Sewall & Co.
1890	RAPPAHANNOCK; 3-masted ship	3,185	A. Sewall & Co.
1891	SUSQUEHANNA; 4-masted shipentine	2,744	A. Sewall & Co.
1884	HENRY B. HYDE; 3-masted ship	2,583	John McDonald
1891	PARTHIA; 3-masted ship	2,495	Houghton Bros.
1884	A. G. ROPES; 3-masted ship	2,460	Ropes and Chapman
1885	WILLIE ROSENFELD; 3-masted ship	2,455	A. Sewall & Co.
1884	COMMODORE T. H. ALLEN; 3-masted ship	2,390	T. J. Southard, Richmond
1884	JOHN ROSENFELD; 3-masted ship	2,373	A. Sewall & Co.
1883	JOHN R. KELLEY; 3-masted ship	2,364	Goss & Sawyer
1883	S. P. HITCHCOCK; 3-masted ship	2,292	S. P. Hitchcock
1883	JOHN McDONALD; 3-masted ship	2,281	John McDonald
1881	PARKER M. WHITMORE; 3-masted ship	2,205	Albert Hathorn
1882	I. F. CHAPMAN; 3-masted ship	2,145	J. F. Chapman
1883	BENJAMIN F. PACKARD; 3-masted ship	2,130	Goss, Sawyer & Packard
1882	W. F. BABCOCK; 3-masted ship	2,130	A. Sewall & Co.
1883	KENNEBEC; 3-masted ship	2,126	William Rogers
1893	ARYAN; 3-masted ship	2,124	C. V. Minott, Phippsburg
1881	IROQUOIS; 3-masted ship	2,120	A. Sewall & Co.
1876	EUREKA; 3-masted ship	2,101	T. J. Southard, Richmond
1881	ARABIA; 3-masted ship	2,080	J. R. Houghton
1885	FRANCIS; 3-masted ship	2,076	New England Shipbuilding Co.
1890	ST. MARY; 3-masted ship	2,043	C. V. Minott, Phippsburg
1882	CHARLES E. MOODY; 3-masted ship	2,003	Goss & Sawyer
1883	WILLIAM H. SMITH; 3-masted ship	2,003	Goss, Sawyer & Packard

C. *Barks*

Year Built	Name of Vessel	Tonnage	Builder
1891	PACTOLUS	1,668	John McDonald
1880	WILLIAM P. CRAPO	1,647	Goss, Sawyer & Packard
1879	GUY C. GOSS	1,572	Goss, Sawyer & Packard
1899 (1900)	KAIULANI (STAR OF FINLAND)*	1,570	A. Sewall & Co.
1883	ST. JAMES	1,565	John McDonald
1877	JONATHAN BOURNE	1,472	Goss & Sawyer
1892	OLYMPIC (4-masted)**	1,469	New England Co.
1878	GERARD C. TOBEY	1,459	Goss, Sawyer & Packard
1875	OREGON	1,430	William Rogers
1877	FOREST BELLE	1,296	Goss & Sawyer
1890	ST. KATHERINE	1,252	John McDonald
1874	FRESNO	1,244	William Rogers
1874	EDWIN REED	1,216	Adams & Hitchcock
1874	ALMIRA ROBINSON	1,197	Lemont & Robinson
1873	COLUSA	1,188	William Rogers
1874	XENIA	1,174	Goss & Sawyer
1876	BELLE OF OREGON	1,168	Goss & Sawyer
1878	EMMA S. CROWELL	1,136	Goss & Sawyer
1876	WESTERN BELLE	1,135	Goss & Sawyer
1878	CHARLES E. KENNEY	1,128	Goss, Sawyer & Packard
1874	EDWIN H. KINGMAN	1,111	Goss & Sawyer
1874	CHAS. W. COCHRAN	1,105	Goss & Sawyer
1869	NIPHEN (or NIPHON)	1,094	Frank O. Moses
1875	J. D. PETERS	1,085	Goss, Sawyer & Packard
1876	FRED C. LITCHFIELD	1,082	Goss, Sawyer & Packard
1881	C. SOUTHARD HULBERT	1,079	T. J. Southard & Son, Richmond
1875	CARRIE HUMPHREY	1,059	Hagan & Thurlow
1889	MATANZAS	1,028	William Rogers
1873	WILLIAM H. BESSE	1,026	Goss & Sawyer

*All built of wood except the KAIULANI, which was the last bark built in Bath and was constructed of steel. Launched Dec. 2, 1899, the KAIULANI is also recorded in compilations as built in 1900.

**All barks listed are 3-masters except the OLYMPIC, which was 4-masted, square-rigged on the fore and main and fore-and-aft-rigged on the mizzen and spanker masts.

(Continued on next page)

D. *Barkentines and Brigs* (over 500 tons register; all of wood; no brigantine built of this size)

Year Built	Name of Vessel and Rig	Tonnage	Builder	Year Built	Name of Vessel and Rig	Tonnage	Builder
1892	JAMES W. ELWELL; barkentine	1,192	Kelley, Spear & Co.	1874	KIOTO; barkentine	673	Hagan & Thurlow
1886	LIZZIE CARTER; barkentine	789	New England Shipbuilding Co.	1880	PAYSON TUCKER; barkentine	614	William Rogers
1890	KREMLIN; barkentine	786	William Rogers	1883	H. B. HUSSEY; brig	545	T. J. & C. H. Southard, Richmond
1874	ST. LUCIE; barkentine	707	J. H. P. Merrow, Bowdoinham	1879	ARTHUR C. WADE; barkentine	522	William Rogers
1884	ARTHUR C. WADE; barkentine	699	William Rogers	1874	CASTALIA; brig	516	Wm. Thurston, Richmond

The Dominant Position of Bath, Maine, and Environs during the Transition Period from Wood to Steel

A record of the square-rigged sailing ships built at Bath, Maine, during the transition period from wood to steel in the United States is presented herewith. The thirteen-year period of 1890-1902 is considered, during which the last nineteen three- and four-masted square-rigged sailing vessels (ships, shipentines, and barks) were built. Included in the "last twenty square-riggers" built on the Kennebec, following three years (1886-1888) of absolute inactivity in the construction of square-rigged merchant sail for foreign trade, is the three-masted wood bark *Matanzas,* built by William Rogers, of Bath (his last vessel), in 1889, when the Sewalls commenced the construction of their last and biggest "Wood Four" by building the full-rigged ship *Rappahannock.* The *Matanzas* was a sizable bark, but not big, having a tonnage of 1,028 gross and 976 net tons; she was 196 ft. 3 in. long, 37 ft. 4 in. beam, and 17 ft. 5 in. deep. The particulars, with dimensions of the square-riggers launched at Bath, Maine, after January 1, 1890, can be briefly summarized as follows:

Year	Name, Construction, and Rig	Builder	Registered Tonnage		Registered Dimensions in Feet and Inches			No. of Crew (all told)
			Gross	Net	Length	Beam	Depth	
1890	RAPPAHANNOCK; wood 3-masted ship	Arthur Sewall & Co.	3,185	3,053	287- 2	48- 9	28- 8 (19- 8)	28
1890	ST. MARY; wood 3-masted ship	C. V. Minott, Phippsburg	2,043	1,941	240- 6	42- 4	18- 2	22
1890	SHENANDOAH; wood 4-masted shipentine	Arthur Sewall & Co.	3,406	3,258	299- 7	49- 1	28- 6 (19- 9)	33
1890	ST. KATHERINE; wood 3-masted bark	John McDonald (Flint & Co.)	1,252	1,193	202- 8	39- 3	19- 1	16
1890	KREMLIN; wood barkentine	William Rogers	786	747	161- 6	36- 2	17- 3	
1891	PARTHIA; wood 3-masted ship	Houghton Bros.	2,495	2,370	260- 3	44- 4	28 (19- 6)	25
1891	SUSQUEHANNA; wood 4-masted shipentine	Arthur Sewall & Co.	2,744	2,628	273- 6	45- 1	28- 1 (19- 1)	27
1891	PACTOLUS; wood 3-masted bark	John McDonald (Flint & Co.)	1,668	1,585	229- 7	41- 2	24	17

(Continued on next page)

Year	Name, Construction, and Rig	Builder	Registered Tonnage		Registered Dimensions in Feet and Inches			No. of Crew (all told)
			Gross	Net	Length	Beam	Depth	
1892	ROANOKE; wood 4-masted shipentine	Arthur Sewall & Co.	3,539	3,400	311- 2	49- 2	29- 2 (20- 2)	30
1892	OLYMPIC; wood 4-masted bark (square-rigged on two masts)	New England Co.	1,469	1,402	224- 4	42- 1	21- 3	16
1892	JAMES W. ELWELL; wood barkentine	Kelley, Spear & Co.	1,192	1,133	196- 4	39	18- 3	
1893	ARYAN; wood 3-masted ship	C. V. Minott, Phippsburg	2,124	2,017	248- 6	42- 2	17- 4	22
1894	DIRIGO; steel 4-masted shipentine	Arthur Sewall & Co.	3,004	2,855	312	45- 1	25- 6	30
1898	ERSKINE M. PHELPS; steel 4-masted shipentine	Arthur Sewall & Co.	2,998	2,715	312- 1	45- 2	25- 6	29
1899	ARTHUR SEWALL; steel 4-masted shipentine	Arthur Sewall & Co.	3,209	2,919	332	45- 2	25- 6	29
1899	EDWARD SEWALL (STAR OF SHETLAND); steel 4-masted shipentine	Arthur Sewall & Co.	3,206	2,916	332	45- 3	25- 5	26
1899 (1900)	KAIULANI (STAR OF FINLAND); steel 3-masted bark	Arthur Sewall & Co. for Williams, Dimond Co., San Francisco	1,570	1,430	225- 7	42- 3	20	17
1900	ASTRAL (STAR OF ZEALAND); steel 4-masted shipentine	Arthur Sewall & Co. for Standard Oil Co.	3,292	2,987	332- 3	45- 4	26	33
1901	WILLIAM P. FRYE; steel 4-masted shipentine	Arthur Sewall & Co.	3,374	2,998	332- 4	45- 4	26- 2	31
1901	ACME (STAR OF POLAND); steel 4-masted shipentine	Arthur Sewall & Co. for Standard Oil Co.	3,288	2,987	332- 2	45- 4	26- 1	34
1902	ATLAS (STAR OF LAPLAND); steel 4-masted shipentine	Arthur Sewall & Co. for Standard Oil Co.	3,381	3,006	332- 4	45- 4	26- 1	32

The *Rappahannock,* launched January 6, 1890, was destroyed by fire and explosions of coal gas in the Pacific, off the Chilean coast, in October 1891, when only about one and three-quarters years old. She was carrying coal from Liverpool to San Francisco and had rounded the Horn in very bad weather, taking 40 days between the two 50's. Spontaneous combustion caused cargo fires that could not be put under control, and the ship made the island of Juan Fernandez. The thirty-three persons aboard her got ashore before the burning and destruction of the big new ship were complete. The *St. Mary* left New York on her maiden voyage May 30, 1890, bound to San Francisco. During the night of August 6, she was in collision off the Horn with the ship *Magellan* of Boston, which foundered with all hands. The *St. Mary* put back to make Port Stanley for repairs; on the night of August 10, she went ashore on the Falkland Islands and was a total loss when only some four months old. The *Shenandoah* was a successful ship; when twenty years old, she was converted into a towing coal barge (1910), and on October 29, 1915, when twenty-five years old, she was rammed and sunk by the S.S. *Powhatan* near Fire Island, New York. The *Parthia,* which was the largest as well as the last ship built by the Houghtons, was launched in January 1891. On her fourth voyage, she was lost in the autumn of 1895, when a scant four and three-quarters years old, under conditions exactly similar to those that destroyed the *Rappahannock.* Each vessel was carrying coal from Britain to San Francisco, and each was lost as a result of cargo fires about the same place (400 miles west of Valparaiso and the Chilean coast). The crew of the *Parthia* had to take to the boats, one of which reached Valparaiso, and two made Juan Fernandez.

The *Susquehanna,* launched September 17, 1891, broke her back at sea because of faulty loading of a heavy chrome ore cargo and bad weather; she was abandoned at sea and foundered in late August 1905, when a scant fourteen years old. The *Roanoke,* launched September 20, 1892, was burned at anchor at Nehoue, New Caledonia, when loading chrome ore from lighters on August 10, 1905, and became a total loss when a scant thirteen years old. The bark *Pactolus* was acquired by the Pacific Coast fisheries as a "salmon packer" and was sold by them to shipbreakers in October 1927, when the bark was thirty-six years old and the association discontinued the use of wood sail. The bark *St. Katherine* also ended her sea life as a "salmon packer" and, after being laid up for years, was finally broken up. The *Olympic,* the only vessel built of her rig, was a successful sailer and performed well when she could get freights. She became a "salmon packer" in 1910, and after a varied career of some thirty-five years under canvas (and in moving pictures, etc.), she became a fishing barge in Southern California. The *Aryan,* launched July 14, 1893, was the last full-rigged wooden ship and the last full-rigged three-masted ship (wood or steel) to be built in America. On December 24, 1918, when in Lat. 45° S. on a passage from Wellington, New Zealand, to San Francisco, laden with flax and tallow, the ship was abandoned at sea with fire in her cargo and out of control; the vessel was approaching twenty-five years of age when she was destroyed by fire.

Of the nine steel square-riggers built during the years 1894-1902 inclusive, three were casualties of World War I, and two of them were lost by enemy action. The *William P. Frye,* built in 1901, was the first American merchantman to be destroyed by the Germans during the war; while carrying a cargo of grain from San Francisco to Britain, she was captured January 28, 1915, and blown up by dynamite bombs, being in her fourteenth year when sunk. The *Dirigo,* the first steel square-rigger built in America and launched into the Kennebec February 3, 1894, was destroyed by a German submarine in the English Channel, off Eddystone Light, May 31, 1917, when about thirteen years old. The *Acme,* built in 1901, was sold by the Standard Oil Company to the Alaska Packers Association, of San Francisco, which renamed her *Star of Poland;* this vessel was wrecked on Katsura Island in the Japan Sea in 1918, when about seventeen years old, while engaged in U.S. Government war work.

The *Erskine M. Phelps,* launched July 26, 1898, had a splendid career under canvas, but she was acquired in 1913 by the Union Oil Company, of San Francisco, and converted into a bulk oil-carrying barge, or tanker; she was operating on the Pacific Coast behind a tug during World War II. The *Arthur Sewall,* launched February 23, 1899, was a casualty while engaged in merchant ocean trade. While bound from Philadelphia to Seattle in 1908, she mysteriously disappeared while somewhere off the South American coast; she "went missing" with the loss of all hands when about nine years old. The *Edward Sewall, Astral,* and *Atlas* (America's last steel square-riggers), built in 1899, 1900, and 1902, respectively, were each sold to the Alaska Packers Association, of San Francisco, the first in 1922 and the other two early in the second decade of the century. These vessels, renamed *Star of Shetland, Star of Zealand,* and *Star of Lapland,* respectively, were operated as "salmon packers" until about 1930, when they were laid up, as the Alaska Packers Association turned to steam primarily because of its inability to secure either officers or men to operate square-riggers. In November 1934, these three Sewall-built four-masted steel shipentines were sold to the Japanese (when about thirty-five, thirty-four, and thirty-two years old, respectively), presumably for their metal; each crossed the Pacific to Japan, with Japanese officers and crew, under her own canvas. It was reported that instead of being immediately put into the hands of shipbreakers, they were used for some time in the Australian grain and wool trade, the *Star of Zealand Maru* being so mentioned in 1936, when the square-rigger was about thirty-six years old. The bark *Kaiulani,* launched at Bath, Maine, December 2, 1899, also went under the Alaska Packers' flag, being acquired by that association in 1922 and renamed *Star of Finland.* When the salmon fisheries turned to steam, this bark was not put up for sale. She was used for moving pictures in 1935 and became a museum ship at San Francisco, but during World War II she was put back in ocean deep-sea service as a schooner and was being operated, making long voyages in trade, when fully forty-five years old.

The dominant position of Bath, Maine, in the building of square-rigged ships in the United States for foreign trade during the last seventeen years of the era of building square-rigged merchant sail (wood or steel) for deep-sea service is clearly indicated by the following record of all square-riggers constructed in America after 1885. (No such vessels were built during the years 1886, 1887, and 1888.)

Year Built	Number of Square-riggers Built			Tonnage of Square-riggers Built			Percentage of Square-riggers Built at Bath, Maine	
	At Bath, Maine	Elsewhere	Total	At Bath, Maine	Elsewhere	Total	Number	Tonnage
1889	1	—	1	1,028	—	1,028	100	100
1890	4	1	5	9,886	1,788	11,674	80	84.7
1891	3	—	3	6,907	—	6,907	100	100
1892	2	—	2	5,008	—	5,008	100	100
1893	1	1	2	2,124	1,141	3,265	50	65.1
1894	1	—	1	3,004	—	3,004	100	100
1895-1897	No square-riggers built during these three years. All ships, shipentines, and barks built in 1893 and prior thereto were constructed of wood, and all built in 1894 and subsequent thereto were constructed of steel.							
1898	1	—	1	2,998	—	2,998	100	100
1899	3	—	3	7,985	—	7,985	100	100
1900	1	—	1	3,292	—	3,292	100	100
1901	2	—	2	6,662	—	6,662	100	100
1902	1	—	1	3,381	—	3,381	100	100

During this period of time, twenty-two square-riggers were built, of which thirteen, aggregating 24,953 tons (an average of 1,919 tons per vessel), were constructed of wood and nine, totaling 27,322 tons (an average of 3,036 tons per vessel), were built of steel. Of these twenty-two vessels, which aggregated 52,275 tons, twenty (or 91 per cent in number and 94.4 per cent in tonnage) were built at Bath, Maine. Of the nine steel square-riggers, eight were four-masted shipentines and one a three-masted bark. Of the thirteen wood square-riggers, three were four-masted shipentines, six were full-rigged three-masted ships, three were three-masted barks, and one a four-masted bark, with yards on the fore and main masts. The only two of the total of twenty-two square-riggers for the merchant marine not constructed at Bath, Maine, and built in the United States during the years 1889-1902 inclusive (the last years of construction of merchant sail) were the Down Easter *S. D. Carleton* of 1,788 tons, built by Carleton, Norwood & Company, Rockport, Maine, in 1890 (length 240 ft., beam 44 ft. 4 in., depth 25 ft. 4 in.) and the unlucky *Holliswood* of 1,141 tons, built as a three-masted ship at East Boston in 1893 by J. M. Brooks for Capt. E. M. Knight. This vessel is said to have been "always in trouble"; in 1903, after dismasting at sea, she was re-rigged as a barkentine, and after experiencing more trouble in 1904 she was made into a three-masted coasting schooner.

Wood square-riggers built at Bath in the early nineties were: four in 1890 totaling 9,886 tons; three in 1891, 6,907 tons; two in 1892, 5,008 tons; and one (at Phippsburg) in 1893, 2,124 tons.

Excluding two bark-rigged yachts built by the Bath Iron Works and three composite or sheathed square-rigged vessels for the navy (one a "canvas-back" with no auxiliary power), steel square-riggers built at Bath during the nineties and until such construction terminated in 1902 were:

Year	Number of Vessels	Total Registered Tonnage	Year	Number of Vessels	Total Registered Tonnage
1894	1	3,004	1900	2*	4,862
1895	—	—	1901	2*	6,662
1896	—	—	1902	1*	3,381
1897	—	—	Total 1894-1902	9	27,322
1898	1	2,998			
1899	2*	6,415			

* Six steel shipentines and one bark; the six shipentines (three for the Standard Oil Company and three for the builder's account—Arthur Sewall & Company) were all built from the same plans made in 1898, with very slight changes.

The Texas Steamship Company acquired in 1916 the long since abandoned or "laid-up" iron shipbuilding plant of Arthur Sewall & Company. It added the yard of The New England Company and obtained possession of the Moody property, where the Moody brothers had once built. The land of the Texas Company included the old shipyards of Arthur Sewall & Company; Goss & Sawyer; Goss, Sawyer & Packard; the New England Shipbuilding Company and The New England Company; Clark & Sewall; G. F. & J. Patten; W. V. & O. Moses; Bath (marine) Railway Company; and Johnson Rideout. Parts of this yard had been used for shipbuilding since the seventeenth century and continuously since Stephen Sewall began building vessels there in 1793. The Texas Steamship Company launched thirty-five vessels from this amalgamated yard, vessels measuring a total of 104,757 tons, as its Bath contribution to war construction in the first World War. Historians on marine matters have said, "A greater number of sailing ships have been built on this site or strip of Kennebec River shore front than on any other equal area in the world"; and again, "More ships have been built on the New England Company-Sewall-Moody-Rideout-Patten and Moses strip of Bath shore front than on any similar-sized acreage in this or any other country."

The Texas Steamship Company, interested in Bath shipyards only as a war measure, completed its last war program hulls in 1921 and wound up its affairs. What was left of the plant was destroyed by fire on July 4-5, 1936. The firm of Percy & Small launched its last vessel, the schooner *Cecelia Cohen* (1,103 tons), in 1920 and rebuilt the schooner *Snetind* (1,470 tons) at the same time. The Crosby Navigation Company built the *Phoebe Crosby* in 1920 and ceased operations. Thereafter, only one other wood sailing vessel was built in the port of Bath, and that was the small schooner *Laura Annie Barnes* of 698 tons, built in 1921 by F. S. Bowker & Son, of Phippsburg. Not a sailing vessel was constructed in Bath in 1923, but that year Kelley, Spear & Company built two "bald-headed" schooner-rigged tow barges, each of 1,034 tons register, and then closed its plant and wound up its affairs.

It has been said that, up to the end of the first World War of the twentieth century, there had been built within the legitimate geographical area that can be defined as the port and district of Bath, Maine, about forty-five hundred vessels of all classes with an aggregate registered measurement of two million tons. The Bath district consists of the lower Kennebec River Valley, with the Androscoggin, and at times has rightly included Brunswick and Bowdoinham (seven miles to the west and north), Harpswell (eleven miles southwest), Boothbay (ten miles southeast), and Wiscasset (sixteen miles northeast). All Kennebec River (or Androscoggin) shipyards are naturally directly connected with the port of Bath—the metropolis of the watershed, navigable stream, and geographical area. At one time, sizable vessels of the period were built in yards at Waterville and Winslow, about forty-five miles above Bath on the Kennebec, and shipyards on the river south of Augusta, at Hallowell (twenty-six miles), Gardiner (twenty-one miles), Pittston (twenty miles), and Richmond (twelve miles), upstream from Bath flourished well past the middle of the nineteenth century in the building of large Down Easters.

The following table is a record of the last large full-rigged wood ships built at the various "upriver" shipbuilding towns on the Kennebec:

Town Where Built	Year	Name of Ship	Registered Tonnage	Name of Builder
Hallowell, Maine	1855	ADRIANA	1,082	Rufus P. Hawkes
Pittston, Maine	1862	VALLEY FORGE	1,177	William Bradstreet
Farmingdale, Maine	1868	TWO BROTHERS	1,382	Peter G. Bradstreet
Bowdoinham, Maine	1877	SEA KING	1,491	G. H. Theobald
Richmond, Maine	1884	COMMODORE T. H. ALLEN	2,390	T. J. Southard

Whereas Portland as a port has advantages, being on the ocean, and is now the recognized prime port of Maine, it was never a great shipbuilding city and as a port was decidedly subordinate to both Bath and Waldoboro throughout the days of wood sail. For many years, Bath

and Waldoboro competed with each other as ocean ports, and Waldoboro also built good ships in quantity. Bath survived as a great shipbuilding center when both had dwindled as ports to relative national insignificance. Waldoboro, being only twenty-five miles northeast of Bath, is naturally in the greater Bath marine district, as are the intermediate shipbuilding towns of Newcastle and Damariscotta (about twenty-three miles from Bath). Casco Bay, with the territory east of Portland, is also closely associated with Bath in shipbuilding, and not only Brunswick and Harpswell yards but also those at Freeport and Yarmouth—fifteen and nineteen miles, respectively, west and slightly south of Bath—should rightly be considered with the marine district of Bath, Maine.

From 1780 to 1800, Long Reach, or what is now Bath proper, turned out only 30 per cent of the vessels built in the customs district and 34 per cent of the tonnage. In the fifties, the city of Bath produced 45 per cent of the number of vessels and 55 per cent of the tonnage built in the port of Bath district. By 1900, Bath proper was constructing 86 per cent of the vessels in number and 97 per cent of the tonnage, which proportion continued until the 1920's. After the Civil War, shipbuilding in the other towns in the port of Bath district rapidly declined and shortly became unimportant, but in the city of Bath the industry increased and reached its peak in the eighties and nineties.

The actual shipbuilding record of Bath, Maine, with that of its natural geographic suburbs (i.e., the Kennebec Valley ocean outlet), would undoubtedly give figures substantially in excess of those at hand for the port of Bath and the Bath customhouse district. Available records do not go back as far as the time that the art of shipbuilding was practiced in this region, sections of importance were ignored for years, measuring and registration were spasmodic, erratic, and at times incidental, vessels built for foreign or out-of-town owners were not measured, and losses of records occurred through fires and when changing the domicile of archives. As far as wood shipbuilding is concerned and considering leadership, number of yards, tonnage built, quality of design and construction, prestige, etc., a marine historian has said in substance: If we omit consideration of Philadelphia and the Delaware (which held a position of some prominence for a while), there have been four prime important Atlantic Coast wood shipbuilding areas—each formed around a city—that possessed outstanding natural advantages and had men of initiative, ability, and resourcefulness to take full advantage of conditions and opportunities. These four marine centers, pre-eminent in the days of wood sail (and this in a world as well as a national sense), were New York, the Chesapeake around Baltimore, Boston Harbor, and Bath, Maine. The last was not the least of the four mentioned, but the greatest, for it outlasted the others and was a large, important, and profitable wood shipbuilding center long after New York, Baltimore, Philadelphia, Boston, and all other sections of the country—and of the world—had retired from the field and launched their last wood ship built for either deep-sea service or coastal trade.

A Record of Individuals and Firms Engaged in the Building of Merchant Sail in the District of Bath, Maine, 1742-1923

The following list gives 135 different individuals, families, firms, partnerships, and corporations, of which there are records showing that they built ships in the Bath, Maine, district from 1742 to the end of sail. The total number of merchant sailing vessels of all rigs (including schooners) in this historical survey (admittedly incomplete) is 2,395, and all were built of wood except 10 vessels (8 shipentines, 1 bark, and 1 schooner), constructed by Arthur Sewall & Company during the years 1894-1903. The construction of both wood and steel sailing vessels

practically terminated about 1909. The records are very incomplete during the period of the War of 1812 and prior thereto; large numbers of sailing craft were built in colonial days, during the Revolution, and in the early decades of the republic, on which no data in regard to either the ships or their builders are now available.

Name of Builder	Years	Stated Number of Vessels Constructed (or more)
Philbrook, Jonathan	1742-1755	2
Lemont, John, J. W., Adam, and Alfred	1745-1874	18
Swanton, William	1762-1776	15
Raynes, Joshua	1772-1810	5
Turner, Simeon	1783-1798	5
Clark, John	1785-1795	6
Davis, Jonathan, & Sons	1785-1819	21
Ring & Mitchell	1785	1
Tallman, Peleg	1789-1832	18
Shaw, David, Joshua, and John	1790-1802	6
Howland, Arthur	1790	1
Sumner, Davis	1791-1795	4
Trufant, David, and sons (Gilbert and Joshua)	1791-1849	38
Crosby, George	1792-1796	2
Lincoln, Zadoc	1792-1811	6
Sewall, Stephen, Joseph, and James	1793-1835	7
Peterson, John and Levi (also Charles)	1794-1817	12
Clapp, Thomas and Charles; also Clapp & Boynton and Clapp & Magoun	1794-1854	35
Fillebrown, T.	1794	1
Dunham, A.	1794	1
Moody, John M., Joshua, and Samuel	1795-1817	13
Bryson, Peter	1795	2
Sprague, John, Peleg, and Nathaniel	1796-1835	28
Drummond, James and William; also Trufant, Drummond & Co.	1797-1867	75
King, William	1798-1815	14
Delano, Edwin and T. P.	1799 and 1835	2
Arnold, John	1799	1
Emmons, Benjamin	1800	1
Loring, Jerome C.	1801-1816	12
McFadden, J.	1801	1
Barnes, Jotham	1802-1833	3
Richardson, John, William, and George L.; also Richardson & Berry	1802-1856	18
Bosworth, Robert and John	1803-1826	22
Crooker, Jonathan, Isaiah, Charles, William D., and J. F.; also Crooker & Shepard	1803-1854	23
McLellan, James, and Dwelly Turner; also James H. McLellan	1803-1860	47
Coffin, John	1803	1
Morrison, David	1804-1810	6
Robinsons (The), consisting of George, James, Benjamin, Jacob, Samuel, T. D., J. D., C. H., and Alexander; also George Robinson & Trevett (or Trevitt), Robinson & Larrabee, and Robinson & Lemont	1804-1876	67
Kimball, Aaron	1804	1
White, Joseph (Jr.)	1804	1
Trott, Joseph P.	1805-1811	5
Duncan, Samuel; also George W.	1805-1867	8
Pettingill, S. S.	1806-1809	2
Lunt, Amos	1807-1823	2
McCobb, Parker	1809-1823	3
Stetson, Thomas P.	1809-1850	24
Nash, Asa	1810-1818	6
Hyde, Jonathan and Zina	1810-1832	2
Sylvester, William	1810	1
Gurney, David	1811-1817	2
Wood, Edward	1811-1819	2
Shepard, George	1811-1825	4
Church, James	1812-1826	4
Oliver, James	1812	1
Green, Peter	1813-1818	4
Coombs, Joshua	1813	1
Williams, Johnson and D. J.; also Williams & Gilman	1815-1864	15
Riggs, Benjamin	1815	1
Gilman, Nathaniel	1815	1
Drew, Joshua C.	1816-1825	3
Harding, Samuel, Robert, and Edward K.	1816-1866	6
Turner, F.	1817	1
Pattee, William S. and Benjamin	1818-1837	6
Hall & Snow — including James Hall, Willard Hall, Hall, Snow & Co., and Jos. Snow	1818-1858	28
Allen, Hezekiah	1818	1
Patten, George F., John, and James F.; also John Patten & Son (Gilbert) and George M. Patten	1819-1871	62
Houghton, Levi; also Houghton Bros. (Levi W., Silas A., Henry L., and John R.)	1819-1891	45
Elwell, John	1819	1
Farrin, Winthrop G. and Richard	1820-1834	17
Bailey, Bernard C. and Samuel D.	1820-1865	12
Merritt, Samuel; also Merritt & Jenks	1820-1865	8
Larrabee, John, master builder, who worked generally by contract for shipbuilders and builder-owners	1821-1868	46
Lewis, Thomas M.	1822-1828	3
Rideout, Johnson	1823-1865	72
Sewall, William D., and Freeman Clark; E. & A. Sewall; and Arthur Sewall & Co.	1823-1903	105
Agry, Thomas	1823	1
Winter, Samuel	1825	1
Gove, Hartley	1827-1834	3
Owen, Philip	1827-1834	4
Blackmer, Lewis	1827	1
Harward, Thomas and John	1828-1861	16

(Continued on next page)

Name of Builder	Years	Stated Number of Vessels Constructed (or more)
Lowell, James and John C.	1828-1856	4
Elder, Isaac	1828	1
Lines, Dennis	1830-1833	5
Gannett, M. F.	1831-1834	4
Anderson, M.	1832-1834	3
Boynton, A. W.	1832	1
Donnell, William	1832	1
Stockbridge, J.	1832	1
Webb, John	1833-1837	2
Smith, R. R.	1834-1839	2
Magoun, D. C., and Magoun & Clapp	1835-1854	3
Larrabee, Stephen (personally and with partners)	1835-1865	32
Kendall, G. W.	1836-1850	2
Hatch, Davis	1836	1
Henry, John	1839-1850	11
Davenport, Charles	1840-1866	8
Gray, J. S.	1840	1
Moses, William V. and Oliver; William V. Moses & Sons; also Larrabee & Moses (Frank O.)	1842-1889	54
Morses (The), Alden, Jacob P., Richard, Benjamin W., C. W., H. F., and John A.	1842-1913	50
Simpson, Thomas	1846-1859	4
Weeks, Benjamin O.	1846-1866	2
Rogers, William M., & Son (William)	1847-1902	98
Hildreth, H.	1848	1
Rea, William A.	1850-1858	4
Hussey, George	1851-1853	3
Arnold, Augustus; also Curtis, Cox & Arnold	1852-1856	11
Reed, William M.; also Franklin and Edwin	1853-1878	17
Paxton, Thomas	1853	1
Graffam, O. J.	1853	1
Springer, Harrison	1854-1855	3
Hitchcocks (The), consisting of Henry, Rufus, Samuel P., and James P.; also Hitchcock (probably James P.) & Blair (Zina)	1854-1884	28
Johns, W. T.	1855	1
Arthur, A. G.	1856	1
Hathorn, Albert	1860-1880	17
Harrington, Charles B.	1860-1904	73
Blaisdell, Daniel O., and Nicholas Blaisdell and sons	1861-1922	22
Rice, William	1862-1864	2
White, Benjamin Loring	1862-1874	8
Hawley, George and James W.	1864-1909	25
Soule, Elbridge (including Elbridge Soule & Co.)	1866-1883	5
Goss & Sawyer; Goss, Sawyer & Packard; Packard & Haggett; also New England Shipbuilding Co. and New England Co.	1866-1908	320
Deering, Gardiner G., and William T. Donnell (in partnership and separately)	1866-1919	109
Jewell, George B. and Israel, Jewell Bros., and Jewell & Deering	1867-1877	18
Hodgkins, Asa P.; also Hodgkins & Soule and Hodgkins & Brown	1867-1889	15
Hagan, Thomas, and Hagan & Thurlow; also Thomas M. Hagan & Co. and Thomas E. Hagan	1867-1906	49
McDonald, John	1868-1891	24
Hunt, Reuben S.	1869-1892	3
Palmer, Henry E., Augustus, and Nathaniel	1874-1898	12
Marr, John W.	1875-1877	2
Ropes & Chapman	1882-1884	2
Crosby, E. S.	1887-1896	9
Kelley & Spear; Kelley, Spear & Co.	1887-1923	198
Percy & Small	1894-1920	44
Bath Marine Construction Company	1907-1911	5

Walter Frye Turner, in his ILLUSTRATED HISTORICAL SOUVENIR OF THE CITY OF BATH, MAINE, written in 1898, says that he has records of a large number of vessels built in Bath, of which he was "unable to ascertain the names of the builders." As an indication of how numerous such vessels are, Turner distinctly specifies twenty-six such craft built in the fifties, twenty-five in the sixties, and forty-nine in the seventies known as having been constructed in the city of Bath (with the tonnage of each ship stated, varying from 47 to 2,101 tons), but with the identity of the builders unknown.

The records of ships built in Bath as prepared by historians of "The City of Ships" are based to a great degree on family records, general historical material, and contemporary writings. Of course, customhouse records, when available, constitute historical material of the highest value, but no such records were kept in the country prior to about 1790. Carl C. Cutler, in referring to this matter of customhouse records, says:

During the Revolution and prior to the adoption of the Constitution, there appears to have been little attempt to keep such records. Earlier files have largely disappeared, and it seems probable that many were removed to England. In general, existing customhouse records are fragmentary, and in some ports the quantity remaining is almost negligible. . . . Carpenter's certificates, i.e., the certificate of the builder of the ship in question, constitute most valuable documents for the student of

history and allied subjects. Most ports appear to have preserved parts only of one or two of their various files, and none have files which approximate completeness.

Cutler also refers to the gradual process of disintegration of customhouse records "by loss, mutilation, neglect, improper storage, or deliberate destruction" and, we may add, by fire and the moving of offices, archives, etc.

The most productive shipbuilders of Bath, Maine, according to other available statistics and covering the period of record from 1785 to 1935, with reference only to the number of vessels built and with no consideration being given to size, tonnage, type, or relative importance, are enumerated herewith.

Name	Number of Vessels Built	Period of Operation	Name	Number of Vessels Built	Period of Operation
Goss, Sawyer, Packard, and successor companies	320	1866-1908	McLellan	47	1803-1860
Kelley-Spear	198	1887-1923	John Larrabee (built for Patten)	46	1821-1868
Bath Iron Works	149	1890-1935	Houghtons	45	1819-1891
Deering	109	1866-1919	Percy & Small	44	1894-1920
Sewalls	105	1823-1903	Clapp	35	1794-1854
Rogers	98	1847-1902	Texas S.S. Co.	35	1917-1921
Donnell	79	1866-1901	Stephen Larrabee	32	1835-1865
Drummond	75	1797-1867	Sprague	28	1796-1835
Harrington (small craft)	73	1860-1904	Hall & Snow	28	1818-1858
Rideout	72	1823-1865	Hitchcocks	28	1854-1884
Robinson	67	1804-1876	Hawley	25	1864-1909
Trufant	66	1799-1867	Stetson	24	1809-1850
Patten	62	1819-1871	McDonald	24	1868-1891
Moses	54	1842-1889	Crooker	23	1803-1854
Morse	50	1842-1913	Bosworth	22	1803-1826
Hagan	49	1867-1906	Blaisdell	22	1861-1922
			Davis	21	1785-1819

In addition to Goss, Sawyer, Packard, and their successors, New England Shipbuilding Company and New England Company (320 vessels of all types); the Kelley-Spear firms (198 schooners and barges); the Sewalls (105 vessels); the Houghtons (45 ships); Flint and Chapman, who employed John McDonald as master builder (24 vessels); the Bath Iron Works, which built all types of naval and merchant steel tonnage but no merchant sailing vessels; and the Texas Company, which built 35 vessels at the old Sewall yard in Bath as steel emergency war-time tonnage during 1917-1921, the following Bath builders of wooden vessels were outstanding: William M. Rogers and son William built 98 vessels during 1847-1902. Gardiner G. Deering, in various partnerships and companies, built 109 vessels (mostly schooners) during 1866-1919 (William T. Donnell, a one-time partner of Deering, built 79 vessels). Charles B. Harrington built 73 vessels (all small craft) during 1860-1904. Johnson Rideout built 72 vessels during 1823-1865, and the Pattens built 62 vessels.

It has been said that in the construction of wood square-riggers, six builders of Bath and the lower Kennebec stand forth prominently during the quarter-century of post-clipper and fuller-bodied cargo carriers and Down Easters that fought for the around-the-Horn and foreign carrying trade from about 1868 to 1893. These builders or yards were:

1. The Sewalls; i.e., E. & A. Sewall and, later, Arthur Sewall & Co.
2. Goss & Sawyer; then Goss, Sawyer & Packard; also, later, New England Shipbuilding Co. and New England Co.
3. Chapman & Flint and, later, Benjamin Flint or Flint & Co. and I. F. Chapman (or I. F. Chapman & Co.), separately. John McDonald was associated with Chapman & Flint as designer and master builder.
4. The Houghtons.
5. William M. Rogers and William M. Rogers & Son.
6. The Minotts, of Phippsburg (C. V. Minott).

Charles V. Minott, of Phippsburg (Bath), built a large fleet of fine vessels and as early as 1860 launched the full-rigged ship *Tiger* of 1,073 tons (length 178 ft. 4 in., beam 36 ft. 1 in.). In 1862 he built the bark *Alice Minott* of 505 tons. From 1864 to the end of the era of wood

sail, Minott built the following sizable wood Down Easters, some of which were outstanding vessels.

Year Built	Name	Rig	Tonnage		Dimensions in Feet and Inches		
			Gross	Net	Length	Beam	Depth
1864	MARY E. RIGGS	Ship	1,124	—	185	36- 2	18- 1
1867	ALICE M. MINOTT	Ship	1,093	—	173- 6	36- 2	23
1870	MEROM	Ship	1,204	—	179- 2	37- 6	24
1876	IVY	Ship	1,243	—	184- 3	37- 2	23- 8
1878	STANDARD	Ship	1,534	—	212	40- 2	24- 5
1881	JAMES DRUMMOND	Ship	1,556	—	216	40- 1	24- 2
1882	BERLIN	Ship	1,634	1,552	222- 5	40	24
1883	ST. CHARLES	Ship	1,749	1,661	225- 2	41- 6	16- 8
1890	ST. MARY	Ship	2,043	1,941	240- 6	42- 4	18- 2
1893	ARYAN	Ship	2,124	2,017	248- 6	42- 2	17- 4

The following firms (and combinations of outstanding names in shipbuilding annals) constructed wood vessels in Bath in substantial numbers, according to official records:

Deering

Gardiner G. Deering and William T. Donnell	1866-1886	Built	70 wood vessels
Gardiner G. Deering and G. G. Deering Co.	1887-1919	Built	29 wood vessels
Jewell & Deering	1887	Built	1 wood vessel
Total	1866-1919		100 wood vessels

Donnell

Deering & Donnell (as stated above)	1866-1886	Built	70 wood vessels
William T. Donnell	1887-1901	Built	9 wood vessels
Total	1866-1901		79 wood vessels

Drummond

James Drummond, William Drummond, and Trufant, Drummond & Co.	1797-1867	Built	75 wood vessels

Robinson

George Robinson and Trevett	1804-1816	Built	9 wood vessels
James Robinson	1812-1832	Built	3 wood vessels
Benjamin Robinson	1817-1836	Built	12 wood vessels
Jacob Robinson	1820-1839	Built	9 wood vessels
Samuel Robinson	1822	Built	1 wood vessel
T. D. Robinson	1833-1849	Built	17 wood vessels
J. D. Robinson	1858-1868	Built	2 wood vessels
C. H. Robinson	1866-1869	Built	2 wood vessels
Alexander Robinson	1871-1876	Built	10 wood vessels
Robinson & Larrabee		Built	1 wood vessel
Robinson & Lemont		Built	1 wood vessel
Total stated as	1804-1876		67 wood vessels

Trufant

David Trufant & Sons (Gilbert and Joshua)	1799-1819	Built	18 wood vessels
Trufant, Drummond & Co.	1846-1867	Built	48 wood vessels
Total	1799-1867		66 wood vessels

Patten

George F. & John Patten (also James F.)	1819-1868	Built	51 wood vessels
John Patten & Son (Gilbert)	1860-1869	Built	9 wood vessels
George M. Patten	1868-1871	Built	2 wood vessels
Total	1821-1871		62 wood vessels

Moses

William V. & Oliver Moses	1844-1854	Built	18 wood vessels
Larrabee & Frank O. Moses	1855-1859	Built	5 wood vessels
William V. Moses & Sons (William F. and Albert C.)	1856-1877	Built	17 wood vessels
Oliver Moses & Sons (Frank O. and Galen C.)	1856-1889	Built	14 wood vessels
Total	1844-1889		54 wood vessels

Morse

Alden Morse and Richard Morse	1842-1853	Built	5 wood vessels
J. Parker Morse	1852-1871	Built	15 wood vessels
Benjamin W. Morse	1863-1864	Built	3 wood vessels
Benjamin W. Morse and H. F. Morse; Charles W. Morse and H. F. Morse	1879-1893	Built	23 wood vessels
John A. Morse	1890-1913	Built	4 wood vessels
Total	1842-1913		50 wood vessels

Hagan

Hagan (Thomas) & Thurlow	1867-1880	Built	20 wood vessels
Thomas M. Hagan & Co.	1881-1885	Built	20 wood vessels
Thomas E. Hagan	1882-1906	Built	9 wood vessels
Total	1867-1906		49 wood vessels

McLellan

McLellan & Turner (James McLellan and Dwelly Turner)	1803-1833	Built	32 wood vessels
James H. McLellan	1829-1860	Built	15 wood vessels
Total	1803-1860		47 wood vessels

Larrabee

Stephen Larrabee	1835-1865	Built	16 wood vessels
Stephen Larrabee & Robinson	1852-1854	Built	6 wood vessels
Stephen Larrabee & Moses	1855-1859	Built	5 wood vessels
Stephen Larrabee & Allen	1854-1862	Built	5 wood vessels
Total	1835-1865		32 wood vessels
John Larrabee, master builder for G. F. & J. Patten, who built	1821-1868		46 wood vessels

Percy (or Small)

Percy & Small	1894-1920	Built	44 wood vessels

Clapp

Thomas Clapp	1794	Built	1 wood vessel
Charles Clapp	1796-1824	Built	17 wood vessels
Clapp (Charles) & Boynton	1823-1835	Built	15 wood vessels
Clapp & Magoun	1854	Built	2 wood vessels
Total	1794-1854		35 wood vessels

Sprague

John Sprague	1796-1798	Built	2 wood vessels
Peleg Sprague	1804-1835	Built	23 wood vessels
Nathaniel Sprague	1810-1817	Built	3 wood vessels
Total	1796-1835		28 wood vessels

Hall (and Snow)

James Hall, Willard Hall, Joseph Snow, and Hall, Snow & Co.	1818-1858	Built	28 wood vessels

Hitchcock

Henry Hitchcock, Rufus Hitchcock, Sam Hitchcock, and J. P. Hitchcock; Hitchcock & Blair	1854-1884	Built	28 wood vessels

Hawley

George Hawley and James W. Hawley	1864-1909	Built	25 wood vessels

The Important Shipbuilding Record of Guy C. Goss, Elijah F. Sawyer, Benjamin F. Packard, and Their Successor Companies

Bath's most prolific wood shipbuilders were apparently, according to available statistics, The New England Company and its predecessors and associated companies, consisting of the following "owner-combinations":

1. Guy C. Goss and Elijah F. Sawyer formed the partnership of Goss & Sawyer and operated under this name from 1866 to 1884, building 125 wood vessels of all types.

2. Benjamin F. Packard joined with Guy C. Goss and Elijah F. Sawyer and operated as Goss, Sawyer & Packard (separate from the continued partnership of Goss & Sawyer) from 1874 to 1884, building 59 wood vessels.

3. Benjamin F. Packard formed a partnership with Amos L. Haggett in 1882 (separate from the firm of Goss, Sawyer & Packard); this firm operated one year as Packard & Haggett and built 3 wood vessels.

4. The New England Shipbuilding Company was organized and operated from 1884 to 1890 as a successor to the firms of Goss & Sawyer and Goss, Sawyer & Packard, building 43 wood vessels of all types.

5. The New England Company was organized and operated from 1889-1890 to 1906 as the successor to the New England Shipbuilding Company, building 88 wood vessels of all types.

6. Edward W. Hyde, the second son of Gen. Thomas W. Hyde (president of the Bath Iron Works), took over the yard of The New England Company in 1908 and completed the construction of 2 wood vessels.

7. Elijah F. Sawyer entered a partnership with John R. Kelley and D. Howard Spear, who formed a corporation known as Kelley, Spear & Company. This company acquired land adjoining that owned by the New England Shipbuilding Company and, during the years 1887-1923, built 198 wood vessels.

Recapitulation

Name of Partnership or Company	Years in Operation	Number of Vessels Built
Goss & Sawyer	1866-1884	125
Goss, Sawyer & Packard	1874-1884	59
Packard & Haggett	1882	3
New England Shipbuilding Co.	1884-1890	43
New England Co.	1890-1906	88
Edward W. Hyde	1908	2
Total, New England Co. and direct predecessors	1866-1908	320
Kelley-Spear	1887-1923	198
Total	1866-1923	518

Walter Frye Turner, in his ILLUSTRATED HISTORICAL SOUVENIR OF THE CITY OF BATH, MAINE (March 1899), gives among a list of vessels built by The New England Company during the years 1866-1896 the following important square-rigged sailing ships (three-masted barks not included):

Year Built	Name and Rig	Tonnage	Year Built	Name and Rig	Tonnage
1874	B. P. CHENEY (ship)	1,322	1881	TACOMA (ship)	1,738
1874	MARY L. STONE (ship)	1,458	1881	JACOB E. RIDGWAY (ship)	1,803
1875	CITY OF PHILADELPHIA (ship)	1,457	1882	WILLIAM H. STARBUCK (ship)	1,339
1875	ASTORIA (ship)	1,394	1882	HENRY FAILING (ship)	1,976
1876	PALMYRA (ship)	1,359	1882	CHARLES E. MOODY (ship)	2,003
1876	ADAM M. SIMPSON (ship)	1,524	1883	WILLIAM H. SMITH (ship)	2,003
1876	ALAMEDA (ship)	1,474	1883	E. F. SAWYER (ship)	1,993
1876	DAKOTA (ship)	1,370	1883	JOHN R. KELLEY (ship)	2,364
1877	BELLE OF BATH (ship)	1,417	1883	BENJAMIN F. PACKARD (ship)	2,130
1877	HECLA (ship)	1,529	1885	HOTSPUR (ship)	1,273
1878	ECLIPSE (ship)	1,594	1885	FRANCIS (ship)	2,076
1881	WILLIAM J. ROTCH (ship)	1,717	1892	OLYMPIC (4-masted bark)	1,469

The number of sizable vessels, divided into types, reported by W. F. Turner as built by The New England Company and its predecessors in the one famous "New England yard," from 1866 to the suspension of operations of The New England Company in 1906, is set forth herewith divided into certain (generally five-year) periods.

	Sail						Steam			
Years (inclusive)	Ships	Barks and Barkentines	Brigs and Brigantines	Schooners	Barges	Yachts	Steamers	Barks, Schooners, etc.	Ferry-boats, etc.	Total
1866-1869	—	3	4	4	—	—	—	—	—	11
1870-1874	4	9	—	30	3	2 sloops	—	—	—	48
1875-1879	10	18	1	11	—	—	2	1	—	43
1880-1884	10	5	2	57	—	—	2	11	—	87
1885-1889	2	3	—	23	—	1 steam	13	—	1 tug	43
1890-1894	—	2	—	14	1	—	5	—	2	24
1895-1896	—	—	—	1	6	—	5	—	—	12
Total 1866-1896	26	40	7	140	10	3	27	12	3	268

The largest wood steamers built by The New England Company (excluding rigged sailing vessels with steam as auxiliary power, such as the steam bark *George S. Homer* of 1,334 tons, built in 1882) were as follows:

Name of Steamer	Tonnage	Year Built	Name of Steamer	Tonnage	Year Built
PORTLAND	2,283	1889	FRANK JONES	1,634	1892
BAY STATE	2,211	1895	CUMBERLAND	1,605	1885
ST. CROIX	1,993	1895	STATE OF MAINE	1,448	1881
MANHATTAN	1,892	1891	WINTHROP	1,442	1887
COTTAGE CITY	1,885	1890	HAYTIEN REPUBLIC	1,089	1885
KENNEBEC	1,652	1889	LINCOLN	996	1896

The following sizable square-riggers (ships and barks; 54 vessels totaling 71,661 tons) were built by Guy C. Goss, Goss & Sawyer, Goss, Sawyer & Packard, and successor companies during the years 1865-1892 according to customhouse records:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet and Inches		
				Length	Beam	Depth
1865	TOSCANA	Bark	728	148- 8	31- 4	20- 6
1868	C. O. WHITMORE	Bark	894	164- 4	33- 3	22- 6
1868	LIZZIE H.	Bark	896	164- 1	33- 8	22- 6
1869	XENIA	Bark	786	150- 1	33- 3	22- 1
1869	MENDOTA	Bark	512	133- 4	30- 6½	16- 7½
1871	ALDEN BESSE	Bark	842	164- 5	35- 3	20- 3
1873	WILLIAM H. BESSE	Bark	1,026	179- 9	36- 2	20- 6
1873	JOHN H. KIMBALL	Ship	1,266	192- 6	38- 6	23- 6½
1874	EDWIN H. KINGMAN	Bark	1,111	186- 6	37- 3	22- 2
1874	CHARLES W. COCHRAN	Bark	1,105	187- 2	37- 2	22- 2
1874	XENIA	Bark	1,174	182- 6	36- 6	22- 9
1874	B. P. CHENEY	Bark	1,322	195- 9	38- 6	24- 2
1874	MARTHA P. TUCKER	Bark	653	140- 6	33- 1	18- 3
1874	LEADING WIND	Ship	1,208	186- 6	37- 3	22- 7
1875	MARY L. STONE	Ship	1,458	198- 9	39- 3	24- 3
1875	CITY OF PHILADELPHIA	Ship	1,457	202- 3	40- 2	24- 3
1875	ASTORIA	Ship	1,394	202	40	24
1875	W. A. HALCOMB	Bark	953	169- 5	35- 9	22- 1
1875	J. D. PETERS	Bark	1,085	182- 2	36- 1½	21- 8
1876	ALAMEDA	Ship	1,474	211- 3	40	24- 1
1876	WESTERN BELLE	Bark	1,135	183- 3	38- 1	22- 5
1876	BELLE OF OREGON	Bark	1,168	185- 6	38- 1	22- 5
1876	DAKOTA	Ship	1,370	197- 8	38- 8	24- 3
1876	PALMYRA	Ship	1,359	197- 9	38- 8	24- 2
1876	ADAM H. SIMPSON	Ship	1,524	210- 2	40- 3	24- 1
1876	FRED C. LITCHFIELD	Bark	1,082	177- 5	36- 1	22- 3
1877	KEPLER	Bark	769	160- 3	34- 1	19- 5
1877	BELLE OF BATH	Ship	1,417	203- 9	39	24- 3
1877	FOREST BELLE	Bark	1,296	193	39- 1	23- 3
1877	FLORENCE	Ship	1,684	223- 1	41	26
1877	JONATHAN BOURNE	Bark	1,472	203- 3	39- 8	24
1877	HECLA	Ship	1,529	210- 5	40- 2	24- 3
1877	CRESCENT	Bark	613	137- 8	33- 1	17
1878	ECLIPSE	Ship	1,594	221- 7	40- 3	24- 3
1878	EMMA S. CROWELL	Bark	1,136	181- 2	37- 3½	22- 6½
1878	GERARD C. TOBEY	Bark	1,459	208- 7	39- 1	23- 6
1878	CHARLES B. KENNEY	Bark	1,128	179- 3	37- 2½	22- 8½
1879	GUY C. GOSS	Bark	1,572	213- 9	39- 8	24
1880	WILLIAM P. CRAPO	Bark	1,647	215- 3	41- 8	24- 3
1881	TACOMA	Ship	1,738	222- 2	41	17- 7
1881	JACOB E. RIDGEWAY (or RIDGWAY)	Ship	1,803	219- 1	41	17- 2
1881	COWLITZ	Bark	779	172- 4	40	15- 2
1881	WILLIAM J. ROTCH	Ship	1,717	218- 2	42- 1	24- 2
1882	HENRY FAILING	Ship	1,976	230- 6	43- 1	18- 3
1882	CHARLES E. MOODY	Ship	2,003	239- 9	43- 4	18- 2
1882	WILLIAM H. STARBUCK	Ship	1,339	194- 3	39	24- 3
1883	E. F. SAWYER	Ship	1,993	230- 4	43- 4	18- 5
1883	AMY	Bark	700	159- 1	35- 5	16- 7
1883	JOHN R. KELLEY	Ship	2,364	256- 9	45	19- 1
1883	WILLIAM H. SMITH	Ship	2,003	232- 4	43- 3	17- 8
1883	BENJAMIN F. PACKARD	Ship	2,130	244- 2	43- 3	18- 2
1885	HOTSPUR	Ship	1,273	191- 9	38- 8	22- 8
1885	FRANCIS	Ship	2,076	231	43	17- 7
1892	OLYMPIC	Bark	1,469	224- 4	42- 1	21- 3

Among the smaller square-rigged sailing vessels launched from the yard can be mentioned the following brigs and barkentines built during the period 1866-1886:

Year Built	Name	Rig	Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1866	DAVID OWEN	Brig	383	113- 7	27- 6	17- 2
1866	F. J. MERRYMAN	Brig	217	107- 9	28- 2	10- 2
1874	NORENA	Barkentine	438	129- 4	33- 1	14- 6
1874	ELVINA	Barkentine	353	127- 2	30- 7	12- 4
1878	CAMEO	Brig	243	111- 5	27- 1	10- 5½
1880	ACHILLES	Brig	373	115- 1	29	15
1881	SUNLIGHT	Brig	373	125- 9	29- 1	15- 3
1886	LIZZIE CARTER	Barkentine	789	168- 9	35- 7	18

The Sewalls, of Bath, Maine, Prominent Builders of Wood and Steel Sailing Vessels, 1823-1903

Probably the best known name among the many in Bath associated with the building of square-rigged merchant sail throughout the period dating from the Civil War to the end of sail was Sewall. As early as 1793, Stephen Sewall built one ship (or more) in the Bath district, and James Sewall, during the years 1832-1835, built at least four vessels. Apparently, the famous Sewall firm of Bath shipbuilders was founded in 1823 by William D. Sewall (a grandson of Dummer Sewall of revolutionary fame), who entered into a partnership with Freeman Clark. It is recorded that this company and its direct successors built 112 sailing vessels in Bath, Maine, of which 102 were constructed of wood and 10 of steel, and they operated steadily, without suspension, during the years 1823-1903 inclusive. The partnership of William D. Sewall and Freeman Clark (known as Clark & Sewall) was succeeded in 1855 by William D. Sewall's sons, Edward and Arthur, the firm being E. & A. Sewall. Edward Sewall died in 1880, following which Edward's son, Samuel S., and Arthur's son, William D., entered the company and with Arthur Sewall constituted the firm of Arthur Sewall & Company. After Arthur Sewall's death in 1900, the company's name remained unchanged during the few succeeding years of its operations. The firm of Clark & Sewall is credited with building 30 vessels, E. & A. Sewall with 39, and Arthur Sewall & Company with 26 wood vessels in addition to a steel fleet constructed during the last ten years of operations as builders. Although the Sewalls operated their ships until post-war years, their business as shipbuilders terminated in 1903. This one branch of the Sewall family, during the eighty-one-year period of its building operations, constructed at least 105 sailing vessels, with an aggregate registered tonnage of 131,000 tons. Of this number, 74 vessels were square-riggers with yards on three masts (i.e., either full-rigged three-masted ships or four-masted shipentines), 5 were barks and 8 brigs. Following 1860, when the building of wood sail in New York, Boston, and southern yards had practically terminated and the clipper ship era had definitely passed, the Sewalls built the following vessels. Those built in 1892 and prior thereto were of wood, but all the vessels built thereafter (1894-1903 inclusive) were of steel.

Period	Ships and 4-masted Shipentines		3-masted Barks		Brigs		Schooners		Total	
	No. of Vessels	Total Tonnage	No. of Vessels	Total Tonnage	No. of Vessels	Total Tonnage	No. of Vessels	Total Tonnage	No. of Vessels	Total Tonnage
1860-1869	10	12,482	3	1,872	1	454	—	—	14	14,808
1870-1879	17	25,702	—	—	—	—	2	708	19	26,410
1880-1889	7	14,593	—	—	—	—	12	8,245	19	22,838
1890-1899	8	25,291	—	—	—	—	2	1,269	10	26,560
1900-1903	4	13,335	1	1,570	—	—	1	2,128	6	17,033
Total of 44 years	46	91,403	4	3,442	1	454	17	12,350	68	107,649

During the decade 1860-1869 inclusive, the Sewalls built full-rigged three-masted wood ships of from 1,008 tons *(Ocean Scud)* to 1,764 tons *(Undaunted)*, the average tonnage of 10 full-rigged ships being 1,248 tons. During the years 1870-1879 inclusive, 17 ships were built averaging 1,512 tons, the largest being the *Sterling* of 1,731 tons, built in 1873, and the smallest, the *Humboldt* of 1,018 tons, built in 1872. During the decade 1880-1889, full-rigged ships were built varying in size from the *Henry Villard* of 1,552 tons (in 1882) to the *Willie Rosenfeld* of 2,455 tons (in 1885), the average registered tonnage of the 7 ships built being 2,085 tons. Following 1885 and through the ensuing years of depression and pessimism, no deep-sea square-riggers were built at Bath or in any part of the United States. In 1889, however, the Sewalls outlined a program that was their supreme effort in wood square-riggers and, during 1890-1892, launched their "Big Wood Four," which consisted of the following vessels:

Year	Name	Tonnage	Rig	Year	Name	Tonnage	Rig
1890	RAPPAHANNOCK	3,185	3-masted ship	1891	SUSQUEHANNA	2,744	4-masted shipentine
1890	SHENANDOAH	3,406	4-masted shipentine	1892	ROANOKE	3,539	4-masted shipentine

With the building of the four-masted shipentine *Roanoke*, wood ship construction terminated at the Sewall yard. During the next decade, the Sewalls built 8 steel four-masted shipentines, 1 steel bark, and 1 steel schooner and then, as a firm or as a family, suspended all shipbuilding operations. During the first World War, their plant was used by an oil company (Texas S.S. Company) for building steel hulls, 35 emergency war-time craft being built during 1917-1921. After being closed and practically abandoned for many years, the buildings of the yard were destroyed by fire on July 4, 1936.

List of Sewall-built Steel Vessels

Year	Type	Name	Tonnage	Year	Type	Name	Tonnage
1894	4-masted shipentine	DIRIGO	3,004	1900	4-masted shipentine	ASTRAL	3,292
1898	4-masted shipentine	ERSKINE M. PHELPS	2,998	1901	4-masted shipentine	WILLIAM P. FRYE	3,374
1899	4-masted shipentine	ARTHUR SEWALL	3,209	1901	4-masted shipentine	ACME	3,288
1899	4-masted shipentine	EDWARD SEWALL	3,206	1902	4-masted shipentine	ATLAS	3,381
1899	3-masted bark	KAIULANI	1,570	1903	5-masted schooner	KINEO	2,128

Total during 1894-1903: 10 vessels aggregating 29,451 tons

The ASTRAL, ACME, and ATLAS were built for the Standard Oil Co.; the KAIULANI, for Williams, Dimond & Co., of San Francisco, Calif.; and the remainder for the builders' account.

According to historian W. F. Turner, Stephen Sewall built the brig *Laura* in 1793 and a privateer in 1794, and among the vessels built by Joseph Sewall was the brig *Hamilton* of

170 tons, launched in 1804. The wood sailing vessels credited by Turner to Clark & Sewall and their successor companies (E. & A. Sewall and Arthur Sewall & Company), as built during the period 1823-1892, are as follows:

Year Built	Rig	Name	Tonnage
1823	Brig	DANA	199
1824	Brig	ORBIT	199
1825	Brig	LEWIS	247
1827	Brig	DUMMER	146
1828	Brig	PLEIADES	284
1829	Schooner	EMULOUS	99
1831	Ship	EMPEROR	314
1832	Ship	GIRARD	343
1832	Ship	TROPIC	349
1833	Ship	CEYLON	421
1835	Ship	ROGER SHERMAN	490
1836	Ship	DIADEM	657
1837	Ship	VILLE DE PARIS	537
1840	Ship	PENNSYLVANIA	677
1841	Ship	GENESEE	459
1841	Ship	RAPPAHANNOCK	1,133
1843	Bark	DETROIT	292
1845	Ship	MACEDONIA	414
1846	Ship	RIO GRANDE	541
1847	Ship	SWITZERLAND	570
1847	Ship	JOHN C. CALHOUN	708
1848	Brig	MARCIA	157
1848	Ship	WILLIAM D. SEWALL	672
1850	Ship	ADRIATIC	715
1851	Ship	SARAH G. HYDE	890
1851	Ship	ERIE	458
1852	Ship	COMMERCE	1,085
1853	Ship	LADY FRANKLIN	549
1854	Ship	SAMARITAN	1,219
1855	Ship	HOLYHEAD	1,099
1855	Ship	KINEO	829
1856	Ship	HELLESPONT	767
1857	Ship	LEANDER	895
1858	Ship	VALENTIA	799
1859	Ship	VIGILANT	652
1859	Ship	VILLAFRANCA	918
1860	Ship	OCEAN SCUD	1,008
1862	Ship	VANCOUVER	969
1863	Ship	VICKSBURG	1,130
1863	Brig	GLENDALE	454
1864	Ship	INTREPID	1,078
1864	Bark	VOLANT	496
1864	Ship	OCEAN SIGNAL	1,215
1865	Ship	FREEMAN CLARK	1,336
1865	Bark	FRANK MARION	678
1866	Ship	MATTERHORN	1,327
1866	Bark	WETTERHORN	698
1868	Ship	HERMON	1,316
1869	Ship	TABOR	1,339
1869	Ship	UNDAUNTED	1,764
1871	Ship	ERIC THE RED	1,580
1872	Ship	HUMBOLDT	1,018
1872	Ship	CARROLLTON	1,450
1873	Ship	STERLING	1,731
1873	Ship	EL CAPITAN	1,493
1873	Schooner	SATILLA	312
1874	Ship	GRANGER	1,526
1874	Ship	OCCIDENTAL	1,533
1874	Ship	ORIENTAL	1,688
1875	Ship	CONTINENTAL	1,712
1875	Ship	HARVESTER	1,494
1876	Ship	REAPER	1,468
1876	Ship	THRASHER	1,512
1876	Ship	INDIANA	1,487
1877	Ship	CHALLENGER	1,456
1877	Ship	THOMAS M. REED	1,516
1878	Schooner	CARRIE S. BAILEY	396
1878	Ship	CHESEBROUGH	1,507
1879	Ship	SOLITAIRE	1,531
1880	Ship	THOMAS M. REED	1,987
1880	Schooner	BELLE HIGGINS	412
1880	Schooner	KATE MARKEE	503
1881	Schooner	S. M. THOMAS	760
1881	Ship	IROQUOIS	2,120
1881	Schooner	B. L. BURT	757
1882	Ship	HENRY VILLARD	1,552
1882	Schooner	NORA BAILEY	447
1882	Ship	W. F. BABCOCK	2,130
1882	Schooner	ALICE ARCHER	471
1883	Ship	RANIER	1,976
1883	Schooner	BLANCHE ALLEN	520
1884	Ship	JOHN ROSENFELD	2,373
1884	Schooner	ADA BAILEY	521
1885	Ship	WILLIE ROSENFELD	2,455
1887	Schooner	CARRIE A. LANE	800
1889	Schooner	DOUGLAS DEARBORN	1,024
1889	Schooner	TALOFA	1,188
1889	Schooner	AGNES E. MANSON	842
1890	Ship	RAPPAHANNOCK	3,185
1890	Schooner	ALOHA	638
1890	Ship	SHENANDOAH	3,406
1891	Schooner	TOFA	631
1891	Ship	SUSQUEHANNA	2,744
1892	Ship	ROANOKE	3,539

The following sizable square-riggers (ships, shipentines, and barks; 49 vessels totaling 94,158 tons) were built at Bath, Maine, by William D., Arthur, and Edward Sewall, E. & A. Sewall, and Arthur Sewall & Company during the years 1854-1902 according to custom-house records:

Year Built	Name	Rig	Tonnage Gross	Tonnage Net	Registered Dimensions in Feet and Inches Length	Beam	Depth
1854	SAMARITAN	Ship	1,219	—	191- 3	37- 0½	18- 6¼
1854	HOLYHEAD	Ship	1,099	—	182-10	36	18
1860	OCEAN SCUD	Ship	1,008	—	181- 8	34- 6	—
1863	VICKSBURG	Ship	1,030	—	183- 1	36- 6	18- 3
1864	OCEAN SIGNAL	Ship	1,215	—	193-11	36- 9	18- 4
1864	INTREPID	Ship	1,078	—	183- 6	35- 6½	17- 9¼
1865	FRANK MARION	Bark	678	—	143- 5	31- 4	20- 4
1865	FREEMAN CLARK	Ship	1,336	—	190- 1	38- 5	24- 6
1866	WETTERHORN	Bark	698	—	151- 8	31- 5	20- 6
1866	MATTERHORN	Ship	1,327	—	189- 7	38- 3	24- 2
1868	HERMON	Ship	1,316	—	193- 1	38- 2½	24- 9
1869	TABOR	Ship	1,339	—	195- 5	36- 8	24- 5½
1869	UNDAUNTED	Ship	1,764	—	207- 3	41- 1	19- 3½
1871	ERIC THE RED	Ship	1,580	—	198- 7	41- 1	17- 1½
1872	HUMBOLDT	Ship	1,018	—	177- 6	35- 5	22- 1
1873	STERLING	Ship	1,731	—	208- 4	42- 7	17- 3
1873	EL CAPITAN	Ship	1,493	—	205- 9	39- 9	24- 6
1873	GRANGER	Ship	1,526	—	209- 9	40	24- 7
1874	OCCIDENTAL	Ship	1,533	—	210- 6	39- 8	24- 7
1874	ORIENTAL	Ship	1,688	—	220- 1	42- 2	24- 9
1875	CONTINENTAL	Ship	1,712	—	220	42- 2	25- 1
1875	HARVESTER	Ship	1,494	—	210- 1	39- 7	24
1876	REAPER	Ship	1,468	—	211- 6	39- 2	24
1876	THRASHER	Ship	1,512	—	211- 9	39- 7	24
1876	INDIANA	Ship	1,487	—	208- 9	40	23- 9½
1877	CHALLENGER	Ship	1,456	—	212- 4	39- 7	23- 9½
1877	THOMAS M. REED	Ship	1,516	—	203- 3	39- 8	24
1878	CHESEBROUGH	Ship	1,517	—	212- 4	40	24- 1½
1879	SOLITAIRE	Ship	1,531	—	213- 7	40- 1	24- 1½
1880	THOMAS M. REED	Ship	1,987	—	227- 4	42- 4	19- 2
1881	IROQUOIS	Ship	2,120	—	237- 1	43- 6	19- 3
1882	HENRY VILLARD	Ship	1,552	1,475	219- 2	39- 8	24- 1
1882	W. F. BABCOCK	Ship	2,130	2,028	240- 8	43- 8	19- 8
1883	RANIER	Ship	1,976	1,877	223	42- 2	18- 1
1884	JOHN ROSENFELD	Ship	2,373	2,267	256- 5	44	19- 7
1885	WILLIE ROSENFELD	Ship	2,455	2,353	266- 5	44- 8	19- 1
1890	RAPPAHANNOCK	Ship	3,185	3,053	287- 2	48- 9	19- 8
1890	SHENANDOAH	Shipentine	3,406	3,258	299- 7	49- 1	19- 9
1891	SUSQUEHANNA	Shipentine	2,744	2,628	283- 6	45- 1	19- 1
			(length generally recorded as 273 ft. 6 in.)				
1892	ROANOKE	Shipentine	3,539	3,400	311- 2	49- 2	20- 2
1894	DIRIGO	Shipentine	3,004	2,855	312	45- 1½	25- 6
1898	ERSKINE M. PHELPS	Shipentine	2,998	2,715	312- 1	45- 2	25- 6
1899	ARTHUR SEWALL	Shipentine	3,209	2,919	332	45- 2	25- 6
1899	EDWARD SEWALL	Shipentine	3,206	2,916	332	45- 3	25- 5
1900 (1899)	KAIULANI	Bark	1,570	1,430	225- 7	42- 3	20
1900	ASTRAL	Shipentine	3,292	2,987	332- 3	45- 4	26
1901	ACME	Shipentine	3,288	2,987	332- 2	45- 4	26- 1
1901	WILLIAM P. FRYE	Shipentine	3,374	2,998	332- 4	45- 4	26- 2
1902	ATLAS	Shipentine	3,381	3,006	332- 4	45- 4	26- 1

"The Houghtons," Famous Bath Shipbuilders and Operators

"The Houghtons" were a famous Bath family of shipbuilders and operators favorably known throughout the world from the forties to the nineties of the nineteenth century. They built and managed deep-sea wood square-riggers of a superior quality. The founder of the yard (just south of what became the Bath Iron Works site) and of the fleet was Levi Houghton, a native of Bolton, Mass., who landed in Bath, Maine, in 1802, when nineteen years of age, from the schooner *Sophronia* of Boston. He obtained employment with Jonathan Davis, shipbuilder, merchant, and ship chandler. In 1808, Davis failed, and young Houghton, then twenty-five years old, bought the business. The first vessel in which he invested was the brig *Betsy* of 207 tons, built in Bath in 1811. In 1819, Houghton built his first vessel, the brig *Bolton* of 121 tons, which is known as the pioneer of a Houghton-built fleet of some 40,000 tons, the last of which was the big three-masted ship *Parthia* of 2,495 tons, launched in 1891. She was the third largest three-masted wood ship built, being exceeded in size only by the Sewalls' *Rappahannock* of 3,185 tons and McDonald's *Henry B. Hyde* of 2,583 tons. From the date of the building of the *Bolton* in 1819, Levi Houghton gave up his mercantile activities and devoted himself entirely to shipbuilding except for an extensive and lucrative salt business. The importation of salt, largely for local shipbuilders to place between the planking and in the timbers of their ships, continued until the early 1900's.

Levi Houghton died in 1857 after building at least twenty-five vessels. The business was carried on by his four sons, Levi W., Silas A., Henry L., and John R., with any one, two, or more being interested in the financing and building of new construction. The Houghton shipyard, located on the Kennebec River at the foot of South Street, had two ways and dock space sufficient for two ships. Besides the usual buildings, there was a large building for the storage of salt. During World War I, a part of the Houghton yard was acquired by the Bath Iron Works, which also bought the rest of the property in 1942, all of the old Houghton wood shipyard being eventually used for the building of naval vessels.

Unfortunately, the original office of the old Houghton wood shipyard was destroyed by a fire in 1898, and the accumulated data pertaining to the ships were lost. Family records and Bath customhouse statistics show that at least forty-five vessels were built by the Houghtons during the seventy-three-year period 1819-1891 inclusive. This fleet consisted of thirty-seven ships, three barks, and five brigs. All the vessels built were square-riggers, and forty of them were fitted with three masts. The ship *Milan* of 699 tons, launched in 1846, was the largest vessel built prior to the construction of the *Houghton* of 787 tons in 1849, and the first 1,000-ton vessel was the *Shamrock* of 1,125 tons, built in 1853. In 1874 the first Houghton ship of over 1,500 tons register, the *Geneva* of 1,535 tons, was built, and in 1881 the first 2,000-ton vessel, the ship *Arabia* of 2,081 tons, was launched. Although the Houghtons continued their salt business for a number of years (through the era of the big wooden schooners), they were not interested as either builders or owners in fore-and-aft-rigged vessels. Generally, the Houghtons built the ships that they owned and operated, but at least one vessel was purchased by them and became a member of the Houghton fleet; for in 1872 they bought the 1,365-ton ship *Harry Morse,* which had been built by J. Parker Morse and launched in July 1871. The *Dakota,* a ship of 1,370 tons built in 1876, which customhouse records indicate was built by Goss & Sawyer, of Bath, appears at times among the list of vessels built and owned by the Houghtons.

The following table gives a list of vessels published as built by the Houghtons, of Bath. (Customhouse and other records credit three of the vessels to other builders, and some variations occur in the figures.)

Year Built	Name of Vessel	Rig	Dimensions in Feet and Inches			Tonnage	
			Length	Beam	Depth	Old	New (gross)
1819	BOLTON	Brig	72- 4	22- 9	8- 7½	121	—
1822	WARREN	Brig	94- 9	23- 5	12- 3½	214	—
1823	SUBLIME*	Brig	93- 6	24- 6	12- 3	249	—
1824	CLARISSA ANN*	Brig	97- 3	25- 3	12- 7½	276	—
1828	CALEDONIA	Brig	102	25- 7½	12- 9⅞	299	—
1832	CORDOVA	Ship	106- 1½	26- 5½	13- 2¾	332	—
1833	BRAGANZA	Ship	111- 5½	26- 6	13- 3	353	—
1834	MISSOURI	Ship	117- 3	27- 5	13- 8½	399	—
1837	ROCHESTER	Ship	131- 2	30-10	15- 5	563	—
1838	HANOVER*	Ship	135	30- 8	15- 4	577	—
1840	CLINTON	Bark	112- 8	26- 2	13- 1	349	—
1842	PRINCETON	Bark	105	25	12- 6	296	—
1845	CHARLOTTE REED	Ship	128- 6	28- 4	14- 2	471	—
1846	MILAN	Ship	146	32- 5	16- 2½	699	—
1848	HENRY WARREN	Bark	113- 3	26	13	347	—
1849	HOUGHTON	Ship	156- 6	33- 1	16- 6½	787	—
1850	CLARA ANN	Ship	122- 8½	27- 5½	13- 8¾	421	—
1851	PELICAN STATE	Ship	153- 4	33- 7	16- 9½	849	—
1851	KATE SWANTON	Ship	135- 6	28	14	489	—
1852	NORTHAMPTON	Ship	174- 9	35- 9	23- 7	982	1,130
1853	SHAMROCK	Ship	186- 6	36	18	1,125	1,194
1854	BALTIC	Ship	154	33	16- 6	769	—
1855	POTOMAC	Ship	193- 6	36- 5	18- 2½	1,198	—
1855	POCAHONTAS	Ship	193- 7	36- 4	24- 5	1,196	—
1856	ROCHESTER	Ship	156- 8	31- 5	21- 5	644	824
1858	BOLTON	Ship	180- 6	34- 3	17	987	—
1859	CRESCENT CITY	Ship	184- 6	37- 5	24- 2	1,015	1,205
1859	EUROPA	Ship	177- 4	36- 9	24- 2	949	1,174
1860	PERSIA	Ship	183	34	23- 5	996	1,248
1860	CALEDONIA	Ship	179- 3	37- 3	24	999	1,179
1863	VIRGINIA	Ship	177	35- 5	23- 6	873	1,094
1865	SCOTIA	Ship	182- 6	36- 8	24- 5	1,098	1,171
1866	CHINA	Ship	184- 8	38- 1	24- 2	—	1,173
1868	ARCADIA	Ship	183- 1	38- 1	24	—	1,234
1868	PRUSSIA	Ship	184- 2	36- 6	23- 9	—	1,212
1870	AUSTRIA	Ship	198- 9	39	23- 9	—	1,300
1871	COLUMBIA	Ship	205- 9	40	24	—	1,471
1873	LOUISIANA	Ship	202- 4	40	24- 4	—	1,436
1874	GENEVA	Ship	216- 4	39- 9	24- 6	—	1,535
1875	BOHEMIA	Ship	221- 7	40- 2	25- 5	—	1,633
1876	SAMARIA	Ship	217- 6	39- 1	24- 1	—	1,509
1877	ARMENIA	Ship	223- 3	40- 4	26- 1	—	1,698
1881	ARABIA	Ship	238- 9	43- 2	27- 6	—	2,081
1883	SERVIA	Ship	234- 1	41- 1	26- 7	—	1,866
1891	PARTHIA	Ship	260- 3	44- 4	28	—	2,495

*Bath customhouse or other records give Jacob Robinson as the builder of the SUBLIME, W. G. Farrin as the builder of the CLARISSA ANN, and J. Drummond as the builder of the HANOVER.

Not one of the Houghton ships was a clipper, and all were built as deep-water cargo carriers. It was only in the design of the *Pocahontas* of 1,087 tons, built in 1855, that the Houghtons made any concession to the tendency of the fifties to sacrifice cargo capacity for speed, and the builders did not proceed far in the direction of either fineness of model or big sail spread. The *Pocahontas* was a well-modeled fast ship, economical in operation, and proved

to be profitable in the trade for which she was built: carrying cotton from New Orleans to England and returning with salt or manufactured goods. She was not, however, a "medium" or "moderate" clipper but a "Down Easter," in the design of which speed was given more consideration than was customary by contemporary Bath shipowners. There were but few voyages made by Houghton ships that showed outstanding speed, although in 1895 the *Bohemia,* built in 1875, covered the distance from Manila to Delaware Breakwater in 88 days, only four days longer than the record from the Philippines to an American Atlantic port made by the clipper ship *Wizard* in 1861. The *Bohemia* registered 1,633 tons gross. In 1927 this ship, staunch and seaworthy after half a century of hard service, was acquired by the moving picture industry, and in 1931, when fifty-four years old, she was intentionally destroyed by being "torpedoed" when a picture was being filmed that depicted submarine warfare. Among the occasional fast passages made by a Houghton ship was a 96-day run of the big *Parthia* from San Francisco to New York in 1893 and a 97-day passage of the *Servia* between the same ports at the same time.

A number of the Houghton ships met untimely ends. The 577-ton ship *Hanover,* after carrying a cargo of cotton to Europe, was returning to Bath with a cargo of salt and went ashore at the mouth of the Kennebec River in a severe snowstorm in November 1849. All on board were lost. The ship *Persia* was lost on Frying Pan Shoal in November 1870 while carrying cotton from New Orleans to Liverpool, and the ship *Arcadia,* while carrying coal from Leith, Scotland, to San Francisco in 1871, caught fire and was run ashore on the coast of Brazil. The *Arabia* was wrecked on Diego Ramirez Reef, southwest of Cape Horn, in May 1895, when on her twelfth westward passage from a North Atlantic port to San Francisco. The *Northampton* was lost in May 1883, on Molasses Shoal, when carrying cotton from New Orleans to Liverpool. The *Geneva* was destroyed at the Chincha Islands, Peru, by a tidal wave in May 1887, when she was completing loading a cargo of guano and had no harbor protection. The *Europa,* in March 1873, when carrying a cargo of cotton from New Orleans to Liverpool, was destroyed by fire in the Gulf of Mexico. The *Armenia* was burned at the Port Costa dock, California, in August 1889, and the big *Parthia* was burned and abandoned by her crew in the South Pacific in October 1895, when carrying coal from Liverpool to San Francisco. The *Milan,* a ship of 699 tons built in 1846, was captured by the Confederate armed towboat *Calhoun* in May 1861 off the Mississippi Bar; the *Milan* was loaded with salt and was towed as a prize to New Orleans. The Houghtons sold the following ships to Pacific Coast operators: *Prussia* (1883), *Austria* (1886), *Columbia* (1889), *Louisiana* (1895), *Bohemia* (1896), *Samaria* (1896), and *Servia* (1899). The *Harry Morse,* which they had bought in 1872 when new, they sold to Plummer, of San Francisco, in 1887.

Henry Hall, in a special government report on the shipbuilding industry of the United States (1882), referred to the Houghtons, of Bath, Maine, as being known "for making remarkably good vessels, which always sailed in the cotton trade to Liverpool, bringing back salt and manufactured goods." He also wrote:

> This firm brought the first southern pitch-pine to Bath to use for planking. The lower deck beams would not always be planked, and pine lumber was taken on in the southern ports and laid in loose, to aid in storing cargo. On returning to Bath after a round trip the masters left the dunnage lumber behind, and it was used in ceiling new vessels. Yellow pine came in such long pieces that its value was appreciated as soon as it was necessary to build large sized vessels. This firm [the Houghtons] now builds full-rigged ships only, of from 1,700 to 2,000 tons register, employing them in the California trade, and, to some extent, in the great ice business of the Kennebec to American ports.

From early days, the Houghtons were prominent in the salt business and were evident pioneers in the shipping of cargoes of foreign salt to the Kennebec for use in shipbuilding. Hall, referring to the great durability of Houghton- and other Bath-built vessels, wrote that it was "owing to care in the selection of materials and judicious salting," and he added: "The ordinary mode of salting a [Houghton- or Bath-built] ship is to fill the frame spaces from the plank-sheer to the stops, put in at light-water mark, with mingled shavings and rock-salt, and sometimes with

salt alone, from 50 to 70 tons of salt being required for a large vessel. This firm often bored auger holes in the top timbers, filling them with brine, which percolated through the heart of the timbers the whole length of the stick. Timbers thus treated were often as bright after 20 years' service as when first put in."

John McDonald, Outstanding Designer and Builder of Down Easters

John McDonald (1825-1897) was probably Bath's leading wood ship designer and builder during the "Down Easter" period of construction and was outstanding in his achievements during the years 1868-1891 inclusive. During his career, John McDonald kept conspicuously out of the "limelight" and detested all publicity. Nevertheless, he was as great a creator of medium-bodied full-rigged Down Easters "that could both carry and move fast" as Donald McKay was of extreme clippers in the early fifties. The wood ship *Henry B. Hyde* of 2,583 tons was designed and built by John McDonald in 1884. She is generally conceded to have been America's finest sailing ship built following the clipper era, which terminated prior to the Civil War. John McDonald is credited with being the actual responsible builder, in a business as well as technical sense, of the following vessels. As a designer, he was responsible for, or materially influenced, the model, sail and spar plan, and construction of many other sailing craft, both square-rigged and fore-and-aft-rigged, built in Bath from the late sixties to the early nineties of the past century.

Year Built	Type	Name	Tonnage	Year Built	Type	Name	Tonnage
1868	Ship	ST. LUCIE	1,318	1882	Ship	ST. FRANCIS	1,898
1869	Ship	ST. NICHOLAS	1,798	1882	Ship	I. F. CHAPMAN	2,145
1870	Ship	ST. JOHN	1,885	1883	Ship	JOHN McDONALD	2,281
1871	Schooner	C. R. FLINT	266	1883	Bark	ST. JAMES	1,565
1873	Ship	W. R. GRACE	1,892	1884	Ship	HENRY B. HYDE	2,583
1874	Ship	ST. PAUL	1,893	1884	Ship	A. G. ROPES	2,460
1875	Ship	M. P. GRACE	1,928	1885	Bark	W. B. FLINT	835
1876	Ship	SANTA CLARA	1,535	1888	Schooner	ALICE McDONALD	656
1877	Ship	ST. DAVID	1,595	1889	Schooner	MYRA B. WEAVER	524
1877	Ship	ST. STEPHEN	1,392	1889	Schooner	KATE S. FLINT	584
1879	Ship	MANUEL LLAGUNO	1,732	1890	Bark	ST. KATHERINE	1,252
1881	Ship	A. J. FULLER	1,848	1891	Bark	PACTOLUS	1,668

The foregoing list totals twenty-four vessels, which checks with family records stating that twenty-four vessels were built during this twenty-four-year period of 1868-1891 inclusive.

The dimensions of some of John McDonald's last built square-rigged sailing vessels, consisting of his last two full-rigged ships and four barks, were as follows according to Bath customhouse records:

Year Built	Name	Rig	Tonnage		Dimensions in Feet and Inches		
			Gross	Net	Length	Beam	Depth
1883	JOHN McDONALD	Ship	2,281	2,171	249- 4	43- 1	19- 9
1883	ST. JAMES	Bark	1,565	1,487	218- 5	41- 3	23- 7
1884	HENRY B. HYDE	Ship	2,583	2,462	267- 9	45	20- 5
1885	W. B. FLINT	Bark	835	793	178- 4	35- 4	17- 7½
1890	ST. KATHERINE	Bark	1,252	1,193	202- 8	39- 3	19- 1
1891	PACTOLUS	Bark	1,668	1,585	229- 7	41- 2	24

William Rogers Has a Long Shipbuilding Career of Fifty-five Years

William Rogers had the distinction of a longer career as an active shipbuilder than any other citizen of Bath. In partnership with his father, William M. Rogers, he was also a lumber manufacturer. William Rogers started his shipyard in 1847 in what is now the central part of the yard of the Bath Iron Works, and he launched his first ship, the *Arlington* (569 tons), that year. In 1870, Rogers purchased the Trufant, Drummond & Company yard, and when he launched his last vessel—the schooner *City of Georgetown*—there in 1902, he completed fifty-five years of active shipbuilding, during which time (as William Rogers and William M. Rogers & Son) he had built at least ninety-eight vessels aggregating 81,000 tons. This total list included the following sizable square-rigged sailing vessels (ships and barks), which number thirty-two vessels totaling 37,436 tons, built during the years 1848-1889 according to customhouse records.

Year Built	Name	Rig	Tonnage		Dimensions in Feet and Inches		
			Gross	Net	Length	Beam	Depth
1848	JULIET	Ship	524	—	135- 4	29- 1	14- 6½
1851	MAYFLOWER	Ship	720	—	152- 3	32- 1	16- 0½
1852	OTSEONTHE	Ship	1,137	—	187	36- 2	18- 1
1854	EMILY ST. PIERRE	Ship	883	—	179	32- 5¼	—
1856	MONTMORENCI	Ship	1,085	—	181- 6	35-11	—
1860	S. W. PIKE	Bark	541	—	139- 9	29	—
1862	THOMAS FLETCHER	Bark	639	—	147	30- 9	17- 2¾
1863	MERCUR	Bark	763	—	156- 6	32- 6½	16- 3
1865	WAPELLA	Bark	728	—	149- 9	31- 9	20- 6
1867	BOMBAY	Ship	955	—	169- 4	34- 8	22- 8
1867	OMAHA	Bark	633	—	139- 1	31- 3	20- 1
1868	HERCULES	Ship	1,279	—	194- 1	38- 1	24
1869	UNA	Bark	792	—	158	32- 5	20- 2
1873	COLUSA	Bark	1,188	—	187- 3	38- 3	22- 5
1874	FRESNO	Bark	1,244	—	199- 2	38- 6	23- 1
1874	HIGHLAND LIGHT	Ship	1,314	—	194- 9	38- 1	24- 3
1875	BONANZA	Ship	1,356	—	207- 8	39- 1½	24- 1
1875	OREGON	Bark	1,430	—	205- 6	39- 1	24- 1
1876	B. F. WATSON	Bark	992	—	173	35- 3	21- 6
1877	C. C. CHAPMAN	Ship	1,652	—	222- 3	39- 9½	25- 2
1877	DANIEL BARNES	Ship	1,485	—	210- 3	39- 9	24- 1
1878	JAMES BAILEY	Ship	1,530	—	214- 2	40	24- 3
1878	LEVI C. WADE	Ship	1,525	—	214- 2	39- 8	24
1879	HAVANA	Bark	649	—	159- 1	33- 4	15- 3
1881	DAKOTA	Ship	1,271	—	195- 9	38- 1	23- 5
1881	ROSE INNIS	Bark	835	—	163- 2	35- 9	19- 6½
1881	CHARMER	Ship	1,881	—	221- 7	42- 4	17- 8½
1882	RICHARD P. BUCK	Ship	1,567	1,491	220- 4	40- 3	24
1882	ABNER COBURN	Ship	1,972	1,878	225	43- 2	18- 5
1883	GOVERNOR ROBIE	Ship	1,712	1,627	224- 1	41	23- 8
1883	KENNEBEC	Ship	2,126	2,024	237- 7	43- 3	18- 4
1889	MATANZAS	Bark	1,028	976	196- 3	37- 4	17- 5

The following sizable wood brigs and barkentines were built by William Rogers at Bath, Maine, during the period 1864-1890:

Year Built	Name	Rig	Tonnage		Registered Dimensions In Feet and Inches		
			Gross	Net	Length	Beam	Depth
1864	OCEAN BELLE	Brig	352	—	119- 2	28- 1	11- 8
1866	C. S. ROGERS	Barkentine	392	—	124- 7	27- 7	15- 2
1879	ARTHUR C. WADE	Barkentine	522	—	153- 8	34- 4	12- 3
1880	PAYSON TUCKER	Barkentine	614	—	160	29	15
1884	ARTHUR C. WADE	Barkentine	699	664	160- 2	35- 1	12- 4
1890	KREMLIN	Barkentine	786	747	161- 6	36- 2	17- 3

Albert Hathorn, Bath Builder of Big and Successful Square-riggers

Although Albert Hathorn did not build, comparatively, any great number of ships during his career as a Bath shipbuilder, being generally credited with the construction of seventeen wood vessels during the period 1860-1880, he did build some important Down Easters and was in the top flight of Bath constructors of big and successful full-rigged wood square-riggers for several years before he completed the *Parker M. Whitmore* of 2,205 tons in 1881. Some of his ships, such as the famous *Gatherer* of 1,509 tons built in 1874, have been attributed to others. In the 1860's, Hathorn built, among other vessels, the ship *Ella S. Thayer* of 1,098 tons, the barks *Lincoln* (636 tons), *Ulrikken* (540 tons), and *Sagadahoc* (528 tons), and the smart and sizable coasting brig *Kennebec* (307 tons). However, during the years 1872-1881, he is credited with building the following relatively large wood square-rigged three-masted ships, which were described as "well-modeled, built and rigged vessels that showed good speed under favorable conditions of wind and weather and had the reputation of being excellent sea boats."

Year	Name of Ship	Tonnage	Year	Name of Ship	Tonnage
1881	PARKER M. WHITMORE	2,205	1875	GEORGE F. MANSON	1,418
1880	GEORGE STETSON	1,845	1874	GATHERER	1,509
1877	JAMES NESMITH	1,735	1872	CARROLLTON*	1,450

* Reported elsewhere as built by the Sewall shipyard.

Bath Originates and Develops the Fore-and-aft Rig and Builds the First, the Best, and the Last Schooner

The straight fore-and-aft-rigged schooner originated in Bath, Maine, and it there reached its highest development. As in the case of the square-rigger, Bath built the first, the best, and the last schooner. It was the thrifty, hard-working, and mentally resourceful Kennebec River shipbuilders and operators who hit upon the idea of adding a second mast to the single-masted fore-and-aft-rigged sloop and running the vessel with half the crew of a square-rigger—brig or brigantine. The economy of operation commended itself, the craft proved practical, speedy, and satisfactory for coastwise, river, and harbor work, and the schooner gradually took the place of the small square-rigger for short-voyage service. For coastwise trade on the Atlantic, the schooner, or fore-and-aft-rigged vessel, was better adapted than any square-rigged sailing craft. The prevailing winds were favorable to the schooner, and the number of the crew, both per vessel and per ton of cargo carried, gave the fore-and-after a tremendous economic advantage. In the eighties and nineties, a Bath multi-masted schooner equal in size to a big full-rigged ship was handled by a crew of fifteen to twenty men, whereas the square-rigger of the period required about forty men. Later, the big four-masted shipentines cut their full complement down to around thirty men, of whom about twenty were really hard-worked, "able" seamen (or forecastle hands); but the mammoth and extravagant specimens of schooner rig, in their last fight for survival against steam, actually operated with only eleven men.

The schooner rig is pre-eminently a coastwise rig. With a superabundance of enthusiasm and a desire to capitalize broadly and generally an idea proved good in a restricted field, Ameri-

cans have used the schooner rig in deep-sea work and in trades previously handled by square-riggers, but the results have been most disappointing. Putting square sails on the foremast has, at times, made fair sailers out of indifferent schooners for long deep-sea voyages; the *Tacora* (900 tons) is an illustration. The four-masted bark *Olympic,* built at Bath, Maine, in 1892, was a compromise vessel constructed by experienced men who wanted the sailing qualities of a square-rigger with as much of the economy of operation of a four-masted schooner as was practical. They put yards on the fore and main masts and had a fore-and-aft rig on the mizzen and jigger masts. Later, after being dismasted in a violent storm on the Pacific, the *Olympic,* for economic reasons, was rebuilt with yards on the foremast only. It was not until the last half of the 1880's that schooners of over 1,000 tons were built in numbers. Big wood schooners were first built with an eye to foreign (or deep-sea) trade, and in the eighties the owners of relatively large schooners of over 1,000 tons attempted to compete for trade between Atlantic and Pacific ports. The schooner failed miserably on the Cape Horn course and gave only a measure of satisfaction in long-distance voyages between Northern and Southern Hemisphere ports in both the Atlantic and Pacific when no attempt was made to round either Cape Horn or the Cape of Good Hope.

Toward the end of the nineteenth century, the coasting trade of the United States was carried on primarily and almost entirely by a large fleet of shapely and "fairly fast" two-, three-, and four-masted schooners. During the last decade of the century, the urge for size in sailing craft was felt and definitely shown in new construction in an attempt to compete more successfully not so much with steam direct as with steam indirect; i.e., not with steam-driven vessels so much as with carriers towed by steam tugs. As early as 1890-1891, wooden schooners of 1,500 tons (between 210 ft. and 220 ft. registered length and 42 ft. to 44 ft. beam) were built at Bath. Maine, but the popular "big" schooner for the first half of the nineties was of from 1,100 to 1,300 tons and about 200 ft. long, with a beam of about 39 ft. During the last half of the nineties, five-masted schooners up to 2,500 tons register (and even over this great size) were being built, and nicely designed four-masters were being followed up as big carriers with clumsy, huge, box-shaped five-masters and even six-masters, the very bulk and unwieldiness of which, with inadequate sail area, soon brought many of them to grief. In the first decade of the twentieth century, the mammoth five- and six-masted schooners built in New England were merely big-carrying barges, rigged as schooners, and the ultimate destination of the fleet that did not come to a disastrous end at sea was that of the square-riggers; they continued in service up and down the coast behind a powerful steam towboat, virtually helpless of themselves as far as propulsion was concerned (even though fitted with low spars and sails).

The customhouse record of wood schooner building in the Bath district of Maine commences with the *Sea Flower,* built in Kennebec in 1780. During the decade ending with 1790, at least twenty-three seagoing schooners were built, of which the *Woolwich* of 160 tons (length 70 ft., beam 21 ft. 10 in., depth 8 ft. 2 in.) was evidently the largest. Particulars of such schooners, taken from the official Bath customhouse records, are set forth herewith, but it is well known that the vessels registered were only a relatively small number of those actually built.

Year Built	Name of Schooner	Builder	Where Built	Tonnage	Registered Dimensions in Feet and Inches		
					Length	Beam	Depth
1780	SEA FLOWER	William Given	Kennebec	22	41- 1	12- 7	5- 2
1783	BETSY	Geo. Gardiner	Georgetown	25	42	12- 8	5- 6
1784	BETSY	John Snow	Harpswell	116	71	23	8- 5
	NANCY	John Peterson	Brunswick	61	62	18	6- 4
	SPEEDWELL	—	Bath	—	—	—	—
	RANGER	John Peterson	Brunswick	90	66	21- 4	7- 7
1785	POLLY	Samuel Howard	Hallowell	119	71- 4	22- 2	8
	SALLY	Kingsbury Eastman	Harpswell	99	70	23	7- 4

(Continued on next page)

Year Built	Name of Schooner	Builder	Where Built	Tonnage	Registered Dimensions in Feet and Inches		
					Length	Beam	Depth
1786	SALLY	John Peterson	Brunswick	52	57	17- 2	7
	VASSALBOROUGH	Elihu Getchell	Bowdoinham	98	68	22- 6	7- 8
1787	WOOLWICH	Ephraim Delano	Woolwich	160	70	21-10	8- 2
	DOLPHIN	James Waterhouse	Bath	31	44- 1½	13- 3½	6- 2½
1788	SPEEDWELL	Nathaniel Larrabee	Brunswick	56	58	17- 2	6- 7
	POLLY	Isaac Snow	Harpswell	69	61	19	7
	HANNAH	John Reed	Topsham	100	69	21-10	7-10
	PHENIX	Thomas Agry	Pittston	99	69	21- 6	7-10
1789	NANCY	Philip Norcross	Bath	108	70	22- 4	8- 2
	INDUSTRY	Thomas Harward	Georgetown	81	64- 4	20- 6	7- 3
	COLUMBIA	Elijah Crooker	Bath	92	65	21- 6	7-10
	HENRY	Enoch Simpson	Topsham	72	62	18	7- 5
1790	LADY WASHINGTON	John Snow	Harpswell	87	64	21	7- 8
	FLORA	Arthur Howland	Bath	69	59	17-10	6- 9
	BETSY	John Coombs	Brunswick	33	38-11	13-11	5- 9½

The schooners built (sizable for the period) in the district during selected pivotal years, according to the official Bath, Maine, customhouse records, were:

Year	Name of Schooner	Builder	Where Built	Tonnage	Dimensions in Feet and Inches		
					Length	Beam	Depth
1807	LEANDER	Michael Fisher	Georgetown	124	71- 6	22- 4	9- 1
	SMART	Charles Clapp	Bath	140	76- 1	23- 6	9- 1¾
	WILLIAM YEATON	Robert Trevett	Bath	109	66- 7½	20-11½	9- 2
	TICONEE	Seth Swift	Waterville	123	72- 7	22-10	8- 8½
	EROS	John Springer	Bowdoinham	126	78- 5	23	8- 1
	JOHN	Peleg Sprague	Bath	145	78	23- 5½	9- 2¼
	PORTRAIT	Benj. Swett	Georgetown	136	72-10	23- 4	9- 5
	MARY	John Dunlap	Brunswick	134	76-10	23- 8½	8- 7½
	EVELINA	Mark L. Hill	Georgetown	112	73- 3	22- 2	8- 0¼
	UNION	Ezekiel Hinkley	Georgetown	105	71- 6	21-10	7-10
	OLIVER	Augustus Ballard	Hallowell	113	70	21- 9	8- 6½
1816	ZEPHYR	John Bosworth	Bath	138	69- 4	22- 4	10- 6
	EXPERIMENT	Thomas P. Stetson	Bath	100	64- 1	19- 6	9- 3¾
	KENNEBEC TRADER	Nehemiah Hilton	Hallowell	102	64- 5	21- 5	8- 7½
	LYDIA	James Smith	Pittston	135	71	22- 5½	9-11
	NEPTUNE	Benj. Folensbee, Jr.	Pittston	156	74- 2	23- 1	10- 8
	EMMELINE	William Drew	Pittston	128	70- 4	22- 3	9- 7
	PARAMOUNT	John Carr	Bowdoinham	117	73- 8	22- 6	8- 2½
	HANNAH	William Drew	Gardiner	118	69- 6	21- 3½	9- 3
	HERO	James M. Rogers	Bowdoinham	116	76- 9	22- 9½	7- 8½
	MARGARET	Thomas Small	Topsham	120	78- 2	22- 8	7-10
	FAVOURITE	John M. Moody	Bath	103	65- 3	19- 8	9- 4
	TATLER	Thomas P. Stetson	Bath	100	64-10	19- 6½	9- 2
1832	CONCORD	Francis Wilds	Bath	144	81- 6½	23- 9½	8- 6⅞
	MADAWASKA	William M. Reed	Phippsburg	130	78- 9	23- 1¾	8- 3½
	BOSTON	Samuel L. Blair	Richmond	130	80	23-10½	8- 0½
	AZORA	Consider Brown	Bath	127	72- 1	22- 3	9- 2¾
	LAFAYETTE	Ebenezer Hinds	Pittston	139	84	23- 7	8- 0¼
	ADELINE	Dennis Lines	Bath	130	78- 5½	24- 3	7-11⅜
	ESTER	George N. Given	Richmond	127	77	23- 1	8- 4
	GERARD	Ebenezer Hinds	Pittston	129	83	23- 4	7- 8
	SAVANNAH	Benj. Folensbee, Jr.	Pittston	130	80	23- 5	8
	ORBIT	John Jordan	Brunswick	137	81-11	22- 9	8- 5

It has been said that "up to the 1860's, sizable schooners were generally considered as of from 125 to 225 tons measurement and all were two-masters." The records show that in the early 1850's, seven schooners of from 232 to 265 tons were built in the district of Bath, the largest being the *Ingoman,* constructed in 1853. Large vessels built with the fore-and-aft schooner rig first appear in the Bath customhouse records with the building of the *Alice M. Minott* of 1,093 tons in 1867 and of the *Merom* of 1,204 tons in 1870. However, these two vessels, constructed by Charles V. Minott, of Phippsburg, were erroneously registered as schooners, for they were full-rigged three-masted ships. Bath's first 1,000-ton schooners were the *Augustus Hunt* of 1,201 tons and *Elliot B. Church* of 1,138 tons, and both were constructed within the city limits of Bath in the year 1882. In 1864 the *Orville* of 294 tons was built by Frank O. Moses in Bath proper, but a larger schooner, the *Charles Lilly* (named after the builder), had been constructed at Richmond (in the Bath district) in 1857. From the mid-sixties to the end of the eighties, the schooners making records for size, built within the city limits of Bath, were as follows:

Year	Name of Schooner	Tonnage	Builder	Year	Name of Schooner	Tonnage	Builder
1868	ADDIE BLAISDELL	373	Daniel O. Blaisdell	1879	HATTIE S. WILLIAMS	898	Goss, Sawyer & Packard
1869	MAGGIE A. FISH	417	Daniel O. Blaisdell	1880	WILLIAM L. WHITE	996	Goss, Sawyer & Packard
1870	MATTIE A. FRANKLIN	522	Asa P. Hodgkins	1882	AUGUSTUS HUNT	1,201	B. W. & H. F. Morse
1871	JAMES FORD	628	Guy C. Goss	1886	SARAH W. LAWRENCE	1,370	New England Shipbuilding Co.
1872	BUSHROD W. HILL	637	Albert Hathorn	1887	T. A. LAMBERT	1,630	B. W. & H. F. Morse
1873	STEPHEN DAVOL	743	George M. Adams	1889	TECUMSEH	1,658	G. C. Moses & Co.

Schooners larger than those stated were built outside the city limits of Bath, but in the Bath district, during the years 1869 and 1870. In 1869 the *Fred Walton* of 464 tons was built at Bowdoinham by Robert Purington.

In the eighties, schooners rapidly became larger in size, and as the length and tonnage increased, more masts were added. Prior to 1882, large schooners had three masts, and small or medium-sized schooners had two masts. By 1886 the large schooners were of from 1,100 to 1,400 tons and generally four-masters; but whereas a few big schooners were built in the eighties and early nineties, any schooner of 700 tons or over was considered a good-sized vessel for a fore-and-after engaged in coastwise trade. Sizable schooners built in the city of Bath during the twelve-year period 1880-1891 inclusive were, in number and size, as herein set forth:

Year	Number of Sizable Schooners	Tonnage of Largest Schooner	Number of Schooners Constructed: Over 1,000 Tons	Number of Schooners Constructed: Over 750 Tons	Year	Number of Sizable Schooners	Tonnage of Largest Schooner	Number of Schooners Constructed: Over 1,000 Tons	Number of Schooners Constructed: Over 750 Tons
1880	23	996	—	2	1886	10	1,370	4	7
1881	28	763	—	4	1887	9	1,630	3	7
1882	32	1,201	2	6	1888	11	1,141	3	6
1883	19	862	—	1	1889	22	1,658	11	15
1884	18	844	—	4	1890	31	1,649	8	11
1885	6	824	—	3	1891	33	1,644	11	16

The first 1,000-ton schooner constructed in the city of Bath was the three-master *Elliot B. Church* of 1,138 tons, built by Goss & Sawyer in 1882. In the same year, B. W. & H. F. Morse built the *Augustus Hunt* of 1,201 tons and fitted her with four masts. No more 1,000-tonners were

built until 1886, when four were launched (all four-masters). As before stated, the schooner *Tecumseh* of 1,658 tons, built by Galen C. Moses & Company in 1889, established a record for size for a fore-and-after, and this vessel was not eclipsed in tonnage until 1896, when Percy & Small built the *S. P. Blackburn* of 1,757 tons and Nathaniel T. Palmer built the *William B. Palmer* of 1,806 tons. A year later, N. T. Palmer followed with the *Frank A. Palmer* of 2,015 tons, which was the first 2,000-ton schooner.

Schooners built in Bath during the nineties and until the construction of such vessels terminated in 1921 were of sizes as set forth in the following table. It includes all the war years and the shipbuilding boom of 1916-1921, which temporarily restored the building of such craft after it was generally felt that in 1914 they had passed "out of the picture" permanently.

	Number of Schooners Built during Year							Number of Schooners Built during Year					
Year	Total Sizable	Over 1,000 Tons	Over 1,500 Tons	Over 2,000 Tons	Over 2,500 Tons	Over 3,000 Tons	Year	Total Sizable	Over 1,000 Tons	Over 1,500 Tons	Over 2,000 Tons	Over 2,500 Tons	Over 3,000 Tons
1891	33	11	1	—	—	—	1906	6	3	2	1	1	1
1892	7	3	—	—	—	—	1907	4	2	2	2	1	—
1893	4	1	—	—	—	—	1908	7	4	3	3	3	3
1894	7	4	1	—	—	—	1909	5	2	1	1	1	1
1895	6	3	2	—	—	—	1910	3	1	—	—	—	—
1896	7	5	4	—	—	—	1911	3	1	—	—	—	—
1897	2	1	1	1	—	—	1912	1	—	—	—	—	—
1898	4	3	2	1	—	—	1913	2	1	1	—	—	—
1899	4	4	4	2	—	—	1914	1	—	—	—	—	—
1900	13	9	5	4	2	1	1915	2	—	—	—	—	—
1901	14	8	4	2	—	—	1916	4	1	1	—	—	—
1902	15	5	3	3	3	—	1917	5	2	1	—	—	—
1903	16*	7	3	2	1	1	1918	6	3	2	1	—	—
1904	18	9	6	3	2	2	1919	6	2	2	1	—	—
1905	6	1	1	1	1	—	1920	3	3	—	—	—	—

*Includes the KINEO of 2,128 tons—the only steel schooner (a 5-master) built at Bath; all the others were built of wood.

In 1921, Bath's last schooner was built, and she was the very moderate-sized *Laura Annie Barnes* of 698.4 gross tons, constructed by F. S. Bowker & Son at Phippsburg.

The schooners built at Bath that established a record for size, from the completion of the first 2,000-ton schooner to the end of sail, were as follows:

Year	Name of Schooner	Tonnage	Builder	Year	Name of Schooner	Tonnage	Builder
1897	FRANK A. PALMER	2,015	N. T. Palmer	1900	ELEANOR A. PERCY	3,402	Percy & Small
1898	NATHANIEL T. PALMER	2,441	N. T. Palmer	1908	EDWARD B. WINSLOW	3,425	Percy & Small
1900	WILLIAM C. CARNEGIE	2,664	Percy & Small	1909	WYOMING	3,731	Percy & Small

During the following years 1910-1921 inclusive, Bath built thirty-six schooners varying in size from a maximum of 2,114 tons for the *Carroll A. Deering*, built by G. G. Deering Company in 1919, down to the *Margaret L. Roberts* of 536 tons, built by F. S. Bowker & Son in 1917. The last schooner built by Percy & Small, famous for the construction of large schooners, was the *Cecelia Cohen* of 1,103 tons, launched in 1920.

The number of sizable wood schooners built and registered at Bath, Maine, together with total and average tonnage figures and the size of the largest schooner built, is presented herewith for each of six five-year periods (1890-1919 inclusive). Data have been added for the two years 1920 and 1921, which completes the record to the end of sailing schooner construction.

Period (inclusive)	Number of Sizable Schooners Built	Registered Tonnage				Largest Schooner Built		
		Total		Average				
		Gross	Net	Gross	Net	Year	Name	Tonnage
1890-1894	82	59,402	56,503	724	689	1890	GLENWOOD	1,649
1895-1899	23	31,669	27,974	1,377	1,216	1898	NATHANIEL T. PALMER	2,441
1900-1904	76	92,754	78,210	1,220	1,029	1900	ELEANOR A. PERCY	3,402
1905-1909	28	39,918	31,395	1,426	1,121	1909	WYOMING	3,731
1910-1914	10	8,464	7,156	846	716	1913	COURTNEY C. HOUCK	1,628
1915-1919	23	25,397	22,681	1,104	986	1919	CARROLL A. DEERING	2,114
1920-1921	3	2,849	2,612	950	871	1920	CECELIA COHEN	1,103

The largest wood schooners built each year at Bath, Maine, from 1890 to 1909 (the supreme high period for size, which also marked the real end of large schooner construction, wood or steel) are herewith recorded:

Year Built	Name	Builder	Number of Masts	Tonnage		Registered Dimensions in Feet		
				Gross	Net	Length	Beam	Depth
1890	GLENWOOD	Kelley, Spear & Co.	4	1,649	1,569	246	46	21
1891	JOHN F. RANDALL	Morse & Co.	4	1,644	1,586	229	46	22
1892	MARY E. H. G. DOW	Wm. T. Donnell	4	1,198	1,138	203	40	19
1893	DAVID P. DAVIS	G. G. Deering	4	1,231	1,170	204	39	21
1894	CHARLES P. NOTMAN	Percy & Small	4	1,518	1,442	219	43	21
1895	WILLIAM H. CLIFFORD	Percy & Small	4	1,594	1,387	222	44	20
1896	WILLIAM B. PALMER	N. T. Palmer	4	1,806	1,625	257	42	20
1897	FRANK A. PALMER	N. T. Palmer	4	2,015	1,831	275	43	21
1898	NATHANIEL T. PALMER	N. T. Palmer	5	2,441	2,245	295	44	22
1899	MARY W. BOWEN	New England Co.	5	2,153	1,907	246	47	22
1900	ELEANOR A. PERCY	Percy & Small	6	3,402	3,062	323	50	25
1901	OAKLEY C. CURTIS	Percy & Small	5	2,375	2,001	265	46	23
1902	PRESCOTT PALMER	New England Co.	5	2,811	2,307	288	46	22
1903	ELIZABETH PALMER	Percy & Small	5	3,066	2,447	300	48	28
1904	GRACE A. MARTIN	Percy & Small	5	3,129	2,625	302	48	29
1905	DAVIS PALMER	Percy & Small	5	2,966	2,287	305	48	27
1906	ALICE M. LAWRENCE	Percy & Small	6	3,132	2,231	305	48	23
1907	GOVERNOR BROOKS	Percy & Small	5	2,629	2,019	281	46	22
1908	EDWARD B. WINSLOW	Percy & Small	6	3,425	2,483	318	50	24
1909	WYOMING	Percy & Small	6	3,731	3,036	330	50	30

The *Wyoming* was a mammoth vessel, bigger in every dimension and fuller-bodied than the gigantic *Roanoke,* built by the Sewalls seventeen years earlier. The six lower masts of the *Wyoming* were 126 ft. long and her topmast poles each 56 ft. long. Her sail area was stated as "12,000 yards of canvas," all, of course, fore-and-aft. She was built primarily of yellow pine, with a six-inch planking, and was strengthened with diagonal iron cross-bracings. The *Wyoming* carried a crew of only eleven men, which was the same number of men carried on the other large six-masters and about one-third of the crew carried on correspondingly large square-riggers in the nineties and around the turn of the century.

From 1910 to the end of schooner building in 1920, the largest vessels constructed were the *Carroll A. Deering* of 2,114 tons, built in 1919; *St. John N. F.* of 2,047 tons, built in 1918; *Joseph S. Zeman* of 1,956 tons, built in 1919; *Dunham Wheeler* of 1,926 tons, built in 1917; *Jerome Jones* of 1,892 tons, built in 1916; *Courtney C. Houck* of 1,628 tons, built in 1913; and *Brina P. Pendleton* of 1,513 tons, built in 1918. After the building of the *Wyoming* in 1909, only thirteen new schooners (all wood) were built in Bath, Maine, during the final construction period of eleven years. Of these, seven were built by G. G. Deering Company, four by Percy &

Small (which also rebuilt the *Snetind* in 1920), and one each by Pendleton Bros. and the Crosby Navigation Company.

The following table gives the number and tonnage of sizable schooners, together with the name and tonnage of the largest fore-and-after, built each year during the period 1871-1921 inclusive and registered at the Bath, Maine, customhouse:

	Total Sizable Schooners		Largest Schooner	
Year	Number	Tonnage	Name	Tonnage
1871	8	2,908	JAMES FORD	628
1872	17	6,766	BUSHROD W. HILL	637
1873	21	8,981	STEPHEN DAVOL	743
1874	11	5,730	SULLIVAN SAWIN	676
1877	3	1,174	MARY J. CASTNER	433
1878	4	1,572	NORMANDY	543
1879	14	7,983	HATTIE S. WILLIAMS	898
1880	23	12,299	WILLIAM L. WHITE	996
1881	28	13,801	WILLIAM LORMAN ROBERTS	763
1882	32	18,264	AUGUSTUS HUNT	1,201
1883	19	9,230	EMMA F. ANGELL	862
1884	18	11,169	CHARLES M. CHURCH	844
1885	6	4,205	EDWARD C. ALLEN	824
1886	10	8,755	SARAH W. LAWRENCE	1,370
1887	9	8,791	T. A. LAMBERT	1,630
1888	11	8,353	GRACIE D. BUCHANAN	1,141
1889	22	20,512	TECUMSEH	1,658
1890	31	20,780	GLENWOOD	1,649
1891	33	24,834	JOHN F. RANDALL	1,644
1892	7	4,683	MARY E. H. G. DOW	1,198
1893	4	2,326	DAVID P. DAVIS	1,231
1894	7	6,779	CHARLES P. NOTMAN	1,518
1895	6	5,707	WILLIAM H. CLIFFORD	1,594
1896	7	9,335	WILLIAM B. PALMER	1,806
1897	2	2,872	FRANK A. PALMER	2,015
1898	4	5,776	NATHANIEL T. PALMER	2,441
1899	4	7,979	MARY W. BOWEN	2,153
1900	13	19,682	ELEANOR A. PERCY	3,402
1901	14	16,906	OAKLEY C. CURTIS	2,375
1902	15	16,283	PRESCOTT PALMER	2,811
1903	16	16,969	ELIZABETH PALMER	3,066
1904	18	22,914	GRACE A. MARTIN	3,129
1905	6	6,575	DAVIS PALMER	2,966
1906	6	7,962	ALICE M. LAWRENCE	3,132
1907	4	5,665	GOVERNOR BROOKS	2,629
1908	7	13,157	EDWARD B. WINSLOW	3,425
1909	5	6,558	WYOMING	3,731
1910	3	2,605	LYDIA McMILLAN BAXTER	1,352
1911	3	2,533	MONTROSE W. HOUCK	1,105
1912	1	556	EDWIN G. FARRAR	556
1913	2	2,172	COURTNEY C. HOUCK	1,628
1914	1	598	ALBERT H. WILLIS	598
1915	2	1,476	CARL F. CRESSY	898
1916	4	4,086	JEROME JONES	1,892
1917	5	5,304	DUNHAM WHEELER	1,926
1918	6	7,229	ST. JOHN N. F.	2,047
1919	6	7,302	CARROLL A. DEERING	2,114
1920	2*	2,151	CECELIA COHEN	1,103
1921	1	698	LAURA ANNIE BARNES	698

*Excludes SNETIND (1,471 tons), as she was "rebuilt."

The first four-masted schooner built in the Bath district and registered at the Bath customhouse was the *William L. White* of 995.5 tons, launched in 1880 from the Goss, Sawyer & Packard yard for Taunton, Mass., owners. In that year (1880), Bath built twenty-three sizable schooners, of which twenty-two were three-masted and only one a four-master. During the three preceding years (1877-1879 inclusive), twenty-one sizable schooners were built and registered at Bath (according to preserved records), and of these, nineteen were three-masters of from 225 to 898 tons and two were two-masters of 318 and 347 tons, respectively. The second and third four-masted schooners built and registered at Bath were constructed in 1882 by B. W. & H. F. Morse, the other thirty sizable schooners built at Bath that year being three-masters. The following table gives a record of the earliest of the four-masted schooners built and registered at Bath:

Year Built	Name of 4-masted Schooner	Builder	Gross Tonnage	Dimensions	Total Number of 3- and 4-masted Schooners Built during Year
1880	WILLIAM L. WHITE	Goss, Sawyer & Packard	995.51	189-9 x 39-9 x 17-4	22
1882	CHARLES E. BALCH	B. W. & H. F. Morse	843.73	181-6 x 36-6 x 14-3	30
1882	AUGUSTUS HUNT	B. W. & H. F. Morse	1,200.57	208 x 40-7 x 20-6	30
1884	C. B. CHURCH	B. W. & H. F. Morse	838.51	175-2 x 35-2 x 18-5½	17

	Number of Schooners Constructed		Largest 4-Master		Average Tonnage	
Year	4-Masters	3-Masters	Name	Tonnage	4-Masters	3-Masters
1886	5	5	SARAH W. LAWRENCE	1,369.76	1,123.80	627.27
1887	6	3	T. A. LAMBERT	1,630.17	1,138.80	652.58
1888	4	7	GRACIE D. BUCHANAN	1,140.93	1,045.42	595.95
1889	13	9	TECUMSEH	1,658.11	1,220.81	515.95

Five-masted schooners commenced to be built at Bath in 1898, the pioneer vessel of this rig being the *Nathaniel T. Palmer* of 2,440.63 tons. The largest four-masted schooner built in Bath that year was the *Alice E. Clark* of 1,621.84 tons, constructed by Percy & Small, although N. T. Palmer had built the only four-master that registered over 2,000 tons the previous year, this being the *Frank A. Palmer* of 2,014.96 tons (length 274 ft. 5 in., beam 43 ft., depth 21 ft.). She followed the very sizable four-masted *William B. Palmer* of 1,805.73 tons, built by N. T. Palmer in 1896. The following record gives the early five-masted schooners built and registered at Bath prior to the close of 1902:

Year Built	Name of 5-masted Schooner	Builder	Gross Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1898	NATHANIEL T. PALMER	N. T. Palmer	2,440.63	295- 1	44- 4	22- 2
1899	M. D. CRESSY	Percy & Small	2,114.63	264- 4	43- 9	21- 6
1899	HENRY O. BARRETT	G. G. Deering	1,807.13	244- 7	42- 9	24
1899	MARY W. BOWEN	New England Co.	2,153.30	246- 1	46- 5	21- 9
1900	HELEN W. MARTIN	Percy & Small	2,265.12	281- 6	44- 8	20- 9
1900	WILLIAM C. CARNEGIE	Percy & Small	2,663.99	289- 2	46- 3	22- 4
1900	LOUISE B. CRARY	New England Co.	2,231.88	267- 1	46- 2	21- 1
1901	OAKLEY C. CURTIS	Percy & Small	2,374.76	265	46- 2	22- 9
1901	MARTHA P. SMALL	Percy & Small	2,178.40	264- 6	45- 7	21- 5
1901	MARY F. BARRETT	G. G. Deering	1,833	241- 4	43- 3	24- 7
1902	PRESCOTT PALMER	New England Co.	2,811.33	288	46- 2	22- 2
1902	CORA F. CRESSY	Percy & Small	2,499.46	273	45- 4	27- 9

Seventeen other five-masted schooners were built at Bath during the period 1903-1919 inclusive, and four of them were very large vessels constructed by Percy & Small. The *Grace A. Martin* of 3,129.06 tons was built in 1904, the *Elizabeth Palmer* of 3,065.87 tons in 1903, the *Fuller Palmer* of 3,060.39 tons in 1908, and the *Davis Palmer* of 2,965.65 tons in 1905. The smallest of the Bath-built five-masted fore-and-afters was the 1,627.89-ton *Courtney C. Houck,* built by G. G. Deering Company in 1913.

The first six-masted schooner built at Bath was the *Eleanor A. Percy* of 3,401.96 tons, launched by Percy & Small in 1900. During the same year, this firm built the five-master *William C. Carnegie* of 2,663.99 tons and the *Helen W. Martin* of 2,265.12 tons. The following seven schooners, built at Bath during the period 1900-1909 inclusive, all by Percy & Small, were each fitted with six masts, and all but one registered over 3,000 tons.

Year Built	Name of 6-masted Schooner	Tonnage		Dimensions in Feet and Inches			Number of Crew
		Gross	Net	Length	Beam	Depth	
1900	ELEANOR A. PERCY	3,401.96	3,062.41	323- 5	50	24- 8	11
1902	ADDIE M. LAWRENCE	2,807.44	2,195.51	292- 4	48- 3	22- 2	11
1904	RUTH E. MERRILL	3,003.36	2,359.87	301	48- 2	23- 7	11
1906	ALICE M. LAWRENCE	3,132.04	2,230.86	305- 1	48- 2	22- 6	11
1908	EDWARD J. LAWRENCE	3,350.93	2,483.22	320- 2	50	23- 9	11
1908	EDWARD B. WINSLOW	3,424.91	2,482.81	318- 4	50	23- 7	11
1909	WYOMING	3,730.54	3,036.21	329- 5	50- 1	30- 4	11

It can be said that the era of mammoth wood schooners commenced with the building of the five-masted schooner *Nathaniel T. Palmer* of 2,440.63 tons in 1898. Only two years later (1900), the first six-master, the *Eleanor A. Percy* of 3,401.96 tons, was sent to sea; but in 1908 a slightly larger vessel, the *Edward B. Winslow* of 3,424.91 tons, was launched, and the extreme in size was reached in 1909 with the building of the *Wyoming* of 3,730.54 tons—the last of the big schooners and the largest wood sailing vessel, of any rig, ever built and put in service.

The following record gives a list of the largest wooden sailing schooners built at Bath, Maine, during the years 1890-1921 inclusive, or from 1890 to the end of sail.

Year Built	Name of Schooner	Number of Masts	Builder	Tonnage		Registered Dimensions in Feet and Inches			Number of Crew
				Gross	Net	Length	Beam	Depth	
1909	WYOMING	6	Percy & Small	3,731	3,036	329- 5	50- 1	30- 4	11
1908	EDWARD B. WINSLOW	6	Percy & Small	3,425	2,483	318- 4	50	23- 7	11
1900	ELEANOR A. PERCY	6	Percy & Small	3,402	3,062	323- 5	50	24- 8	11
1908	EDWARD J. LAWRENCE	6	Percy & Small	3,351	2,483	320- 2	50	23- 9	11
1906	ALICE M. LAWRENCE	6	Percy & Small	3,132	2,231	305- 1	48- 2	22- 6	11
1904	GRACE A. MARTIN	5	Percy & Small	3,129	2,625	302	48- 1	28- 6	11
1903	ELIZABETH PALMER	5	Percy & Small	3,066	2,447	300- 4	48- 3	28- 3	11
1908	FULLER PALMER	5	Percy & Small	3,060	2,361	309- 4	48- 9	27- 4	10
1904	RUTH E. MERRILL	6	Percy & Small	3,003	2,360	301	48- 2	23- 7	11
1905	DAVIS PALMER	5	Percy & Small	2,966	2,287	305- 4	48- 4	27- 2	10
1902	PRESCOTT PALMER	5	New England Co.	2,811	2,307	288	46- 2	22- 2	11
1902	ADDIE M. LAWRENCE	6	Percy & Small	2,807	2,196	292- 4	48- 3	22- 2	11
1900	WILLIAM C. CARNEGIE	5	Percy & Small	2,664	2,381	289- 2	46- 3	22- 4	10
1907	GOVERNOR BROOKS	5	Percy & Small	2,629	2,020	280- 7	45- 8	21- 5	10
1902	CORA F. CRESSY	5	Percy & Small	2,499	2,089	273	45- 4	27- 9	11
1898	NATHANIEL T. PALMER	5	N. T. Palmer	2,441	2,245	295- 1	44- 4	22- 2	10
1901	OAKLEY C. CURTIS	5	Percy & Small	2,375	2,001	265	46- 2	22- 9	11
1900	HELEN W. MARTIN	5	Percy & Small	2,265	2,021	281- 6	44- 8	20- 9	11
1907	FANNIE PALMER	5	Percy & Small	2,234	1,727	263- 7	45	21- 3	9
1900	LOUISE B. CRARY	5	New England Co.	2,232	1,998	267- 1	46- 2	21- 1	10
1901	MARTHA P. SMALL	5	Percy & Small	2,178	1,903	264- 6	45- 7	21- 5	11
1899	MARY W. BOWEN	5	New England Co.	2,153	1,907	246- 1	46- 5	21- 9	10
1903	KINEO*	5	A. Sewall & Co.	2,128	1,868	259- 5	45- 3	22- 9	11
1899	M. D. CRESSY	5	Percy & Small	2,115	1,884	264- 4	43- 9	21- 6	9
1919	CARROLL A. DEERING	5	G. G. Deering Co.	2,114	1,878	255- 1	44- 3	25- 3	8
1904	DOROTHY B. BARRETT	5	G. G. Deering	2,088	1,800	259- 5	45- 4	25- 1	10
1918	ST. JOHN N. F.	5	Percy & Small	2,047	1,906	254- 1	43- 3	23- 9	8
1897	FRANK A. PALMER	4	N. T. Palmer	2,015	1,832	274- 5	43	21	10
1903	GARDINER G. DEERING	5	G. G. Deering	1,982	1,714	251- 6	44- 4	25- 1	11
1919	JOSEPH S. ZEMAN	5	Percy & Small	1,956	1,812	253- 2	43- 2	23- 7	8

(Continued on next page)

Year Built	Name of Schooner	Number of Masts	Builder	Tonnage Gross	Tonnage Net	Registered Dimensions in Feet and Inches Length	Beam	Depth	Number of Crew
1917	DUNHAM WHEELER	5	Percy & Small	1,926	1,766	254- 5	44- 2	23	8
1899	MARIE PALMER	4	Wm. Rogers	1,904	1,594	253- 4	43- 3	24- 2	10
1904	MARCUS L. URANN	5	C. V. Minott, Jr.	1,900	1,577	251- 7	44- 3	24- 1	10
1916	JEROME JONES	5	G. G. Deering Co.	1,892	1,631	249- 6	43- 1	24- 9	8
1901	MARY F. BARRETT	5	G. G. Deering	1,833	1,565	241- 4	43- 3	24- 7	10
1899	HENRY O. BARRETT	5	G. G. Deering	1,807	1,565	244- 7	42- 9	24	7
1896	WILLIAM B. PALMER	4	N. T. Palmer	1,806	1,625	257- 2	42- 1	20- 1	10
1906	HELEN B. CROSBY	4	Crosby Navigation Co.	1,776	1,435	227- 3	42- 3	24- 3	8
1896	S. P. BLACKBURN	4	Percy & Small	1,757	1,537	233- 7	43- 9	20- 1	10
1904	MAGNUS MANSON	5	New England Co.	1,751	1,526	223	43- 2	22	10
1900	MAUDE PALMER	4	Wm. Rogers	1,745	1,529	231- 6	42- 6	23- 5	9
1904	FRONTENAC	4	Kelley, Spear & Co.	1,705	1,458	225- 5	43- 9	19- 8	8
1890	GLENWOOD	4	Kelley, Spear & Co.	1,649	1,569	245- 6	41- 1	20- 9	10
1891	JOHN F. RANDALL	4	Morse & Co.	1,644	1,586	228- 9	46- 4	22- 1	10
1913	COURTNEY C. HOUCK	5	G. G. Deering Co.	1,628	1,357	218- 9	42- 7	24- 6	8
1898	ALICE E. CLARK	4	Percy & Small	1,622	1,395	227- 4	43	20- 7	8
1896	EDWARD E. BRIRY	4	G. G. Deering	1,613	1,408	228- 5	42- 9	20- 3	7
1896	ALICE M. COLBURN	4	Wm. T. Donnell	1,603	1,434	225- 1	43- 3	20- 4	10
1895	WILLIAM H. CLIFFORD	4	Percy & Small	1,594	1,387	221- 6	43- 5	19- 6	10
1901	MILES M. MERRY	4	Percy & Small	1,590	1,318	215- 2	43- 2	20- 1	10
1890	CHARLES A. CAMPBELL	4	Morse & Co.	1,576	1,534	228- 3	46- 4	21- 6	8
1890	GEORGE E. WALCOTT	4	Elwell S. Crosby	1,553	1,476	212- 7	44- 1	19- 6	10
1895	MARY E. PALMER	4	N. T. Palmer	1,526	1,456	221- 6	42	19- 7	10
1894	CHARLES P. NOTMAN	4	Percy & Small	1,518	1,442	219- 3	42- 5	20- 5	9
1918	BRINA P. PENDLETON	4	Pendleton Bros.	1,513	1,404	220- 1	41- 5	21- 9	7

*In 1903, Arthur Sewall & Co. built the only steel schooner constructed in Bath, the KINEO, a 5-master of 2,128 tons gross and 1,868 tons net.

Of the above 55 largest wood schooners of over 1,500 gross tons built at Bath, Maine, Percy & Small (with a yard close to the Bath Iron Works) built 27, or one-half; G. G. Deering, 8; New England Co., 4; Nathaniel Palmer, 4; and Kelley, Spear & Co., Rogers, Morse, and Crosby, 2 each. Percy & Small built all of the 10 largest wood schooners, 14 of the 15 largest, and 17 of the biggest 19.

The following record gives the number of sizable schooners built at Bath during the period 1863-1921 inclusive, of which records are available at the Bath customhouse. The output of the most prominent builders of fore-and-afters over a long term of years is set forth, but some very important builders of schooners are not mentioned because of their limited length of activity or their relatively small output, considering the years of their operations. Deering and Donnell operated in partnership for years and later built independently of each other, but their combined output of sizable schooners is here recorded under the heading "Deering-Donnell." During the years 1894-1898, Nathaniel T. Palmer built six large schooners of from 1,225.68 to 2,440.63 tons, which aggregated 10,300.7 tons and averaged 1,716.8 tons per vessel. The Crosbys (E. S. Crosby, Crosby & Company, and C. C. Crosby) built thirteen schooners during 1887-1904, and the Crosby Navigation Company launched a schooner in each of the years 1906, 1918, and 1920. The *Phoebe Crosby* of 1,048 tons, built in 1920 by the Crosby Navigation Company, was the last schooner of over 1,000 tons constructed at Bath. This record of sizable schooners built at Bath is not complete, as some of the customs office files are missing, and no data were available for the years 1875 and 1876. The output of the Minotts and Bowkers has been combined, as they built at Phippsburg; yet they were independent, as Minott built nine schooners during the period 1868-1904. The Bowkers built thirty-five relatively small schooners during the years 1890-1921, and F. S. Bowker & Son, in 1921, built the *Laura Annie Barnes* of 698.4 tons, which was the last schooner built and registered in the Bath district.

Years	Goss, Sawyer, Packard; New England Cos.	Deering-Donnell	Kelley-Spear	Bowker-Minott	Percy & Small	William Rogers	Morses	Sewalls	Total Sizable Schooners (including those of other builders)
1863-1874	28	3	—	4	—	3	—	1	84
1877-1879	12	—	—	—	—	1	2	1	21
1880	13	1	—	—	—	2	2	2	23
1881	15	3	—	—	—	3	4	2	28
1882	16	4	—	—	—	4	3	2	32
1883	6	2	—	—	—	4	1	1	19
1884	7	2	—	1	—	1	1	1	18
1885	1	—	—	—	—	1	1	—	6
1886	7	1	—	—	—	1	1	—	10
1887	3	2	1	—	—	—	1	1	9
1888	5	2	2	—	—	—	—	—	11
1889	5	3	4	—	—	1	—	3	22
1890	7	2	7	1	—	2	3	1	31
1891	7	5	7	2	—	3	2	1	33
1892	—	2	2	1	—	—	—	—	7
1893	—	1	1	1	—	—	—	—	4
1894	—	1	1	1	1	1	—	—	7
1895	1	1	1	—	1	—	—	—	6
1896	1	2	1	1	1	—	—	—	7
1897	—	—	1	—	—	—	—	—	2
1898	1	—	1	—	1	—	—	—	4
1899	1	1	—	—	1	1	—	—	4
1900	3	—	3	2	3	1	—	—	13
1901	4	2	2	2	4	—	—	—	14
1902	5	1	2	2	3	1	—	—	15
1903	1	1	6	3	2	—	—	1	16
1904	6	1	5	3	2	—	—	—	18
1905	1	—	1	—	3	—	—	—	6
1906	1	1	—	2	1	—	—	—	6
1907	—	—	—	2	2	—	—	—	4
1908	2	1	—	1	3	—	—	—	7
1909	—	1	—	2	1	—	—	—	5
1910	—	1	1	1	—	—	—	—	3
1911-1916	—	3	—	6	4	—	—	—	13
1917-1921	—	3	—	6	7	—	—	—	20
Total	159	53	49	44	40	30	21	17	528

The greatest builders of schooners—in numbers—over a long term of years were the occupants of the Guy C. Goss and Elijah F. Sawyer, the Goss & Sawyer, and the Goss, Sawyer & Packard yard, with their successors, the New England Shipbuilding Company and still later The New England Company. The owners and operators of this yard (or yards) built at least 159 sizable sailing schooners from 1866 to 1908, of which records of registry have been preserved at the Bath customhouse. The years of large production, with the number of schooners built, were:

Year	Number	Year	Number	Year	Number	Year	Number	Year	Number
1882	16	1879	10	1884	7	1891	7	1888	5
1881	15	1873	9	1886	7	1883	6	1889	5
1880	13	1872	7	1890	7	1904	6	1902	5

The largest schooner built in 1879 was of 898 tons, in 1882 of 1,138 tons, and in 1889 of 1,553 tons. The New England Company built the schooner *Mary W. Bowen* of 2,153 tons in 1899, the *Louise B. Crary* of 2,232 tons in 1900, and its largest schooner, the *Prescott Palmer* of 2,811 tons, in 1902. Thereafter, the biggest schooners built at the yard were much smaller in size. In 1904 the *Magnus Manson* of 1,751 tons was launched, but of the other five "sizable" fore-and-afters built that year, two were of 1,154 and 1,144 tons, respectively, and the other

three ranged from 656 to 698 tons each. The last four "sizable" schooners built by The New England Company during the years 1905-1908 were of 773, 776, 717, and 715 tons register, respectively.

The firm of D. Howard Spear and John R. Kelley started building sizable sailing schooners in 1887, with the construction of the four-master *Clara Goodwin* of 945 tons. During 1889-1891, Kelley & Spear and Kelley, Spear & Company are the registered builders of eighteen schooners, but only six of them (or one-third) were of over 1,000 tons register, the largest being the *Glenwood* of 1,649 tons, built in 1890, and the *Massasoit* of 1,378 tons, built in 1889. From 1892 to the end of the century, eight schooners were built by Kelley, Spear & Company, but the largest was of 857 tons. In 1900 two schooners of 1,352 and 1,241 tons, respectively, were built, but of seventeen other schooners built by the firm during the period 1900-1905 inclusive, only one was of over 1,000 tons, and that was the *Frontenac* of 1,705 tons, built in 1904. Kelley, Spear & Company built its last schooner, the *William C. May* of 710 tons, in 1910, and whereas this partnership constructed forty-nine schooners during the period 1887-1910, only nine were of over 1,000 tons; the total tonnage was 33,780 tons and the average only 689 tons per vessel. During most of these same years, Kelley, Spear & Company was constructing schooner-rigged tow barges, in which this firm specialized, and the barges averaged a much larger registered tonnage than the schooners. During the years 1895-1910 inclusive, Kelley, Spear & Company built sixty-two modeled ocean-going rigged tow barges, of which two were of over 1,915 tons and ten of over 1,500 tons. These builders constructed twenty-five vessels of this class registering more than 1,500 tons and ranging from 1,513 to 2,236 tons during the years 1896-1919 inclusive.

A "South End" firm of famous Bath wood shipbuilders that originated contemporaneously with Goss & Sawyer (of the "North End") was composed of Gardiner G. Deering and William T. Donnell, who specialized and concentrated their energies in the building of fore-and-afters for the coastwise trade. From 1866 to 1886, Deering & Donnell built 70 schooners—mostly small ones. Separating, each of the former partners operated a shipyard on his own account. Together and separately, the two men built 109 vessels—practically all schooners—ranging up to 2,114 tons and aggregating 58,000 tons register. From 1866 to 1901, W. T. Donnell was connected with the building of 79 wood vessels and G. G. Deering, from 1866 to 1919, with an even 100. The firm of Deering & Donnell is the registered builder of the three-masted schooner *Electric Light* of 565 tons, built in 1880. In 1882 it built the *Alice Montgomery* of 732 tons and, in 1886, the *Samuel Dillaway* of 811 tons. In 1887, G. G. Deering built the three-master *John C. Haynes* of 758 tons and William T. Donnell the four-master *Katie J. Barrett* of 963 tons. Donnell built his first 1,000-ton schooner, the *George A. McFadden,* a four-master of 1,070 tons, in 1888. In 1889 each builder constructed relatively large four-masters for the period. Deering built the *Lydia M. Deering* of 1,224.75 tons as well as a smaller four-master of 964 tons; while Donnell launched the *Clara A. Donnell* of 1,177.6 tons. In 1891, William T. Donnell constructed the largest schooner built and registered at Bath that year, the *George P. Davenport* of 1,461.48 tons, and he launched five schooners of over 1,000 tons each during the years 1891-1896, his last vessel being the 1,603.5-ton schooner *Alice M. Colburn,* built in 1896. Gardiner G. Deering continued building up to 1904, in which year he constructed the 2,088.44-ton schooner *Dorothy B. Barrett.* The G. G. Deering Company operated the yard until 1919, building 10 sizable schooners, the last and largest one being the *Carroll A. Deering* of 2,114.26 tons, launched in 1919. (A 1,628-ton schooner built in 1913 was registered with G. G. Deering and not G. G. Deering Company as the builder.)

The largest schooner launched by Charles V. Minott, of Phippsburg, during the sixties and seventies was the *St. Thomas* of 742 tons, built in 1884. He is also the registered builder of the *Frances M.* of 1,228.60 tons, built in 1896, and the *Ada F. Brown* of 1,456.85 tons, built in 1901. Charles V. Minott, Jr., is the registered builder of the schooner *Marcus L. Urann* of 1,899.81 tons, built in 1904. The Bowkers, of Phippsburg, appeared as registered builders of schooners in 1890, and F. S. Bowker & Son built Bath's last schooner, the *Laura Annie Barnes* of 698.4 tons, in 1921. The Bowkers built only relatively small craft, and this during a period when the trend

was toward large schooners of 3,000 tons and over. In 1909, when Percy & Small built the mammoth *Wyoming* of 3,731 tons, F. S. Bowker & Son built a schooner of 533 tons and, for years before and after this time, launched one or more schooners a year of about this size. The largest Bowker-built vessel, constructed during World War I (in 1918), was of 741 tons.

The firm of Percy & Small was outstanding as the builder of large wood schooners during the last epoch of Bath wood shipbuilding. Capt. Samuel R. Percy and Frank A. Small formed their partnership in 1894 and specialized in the construction—and operation—of large wood schooners for the coastwise trade until the end of the schooner era. Some of the mammoth wood schooners built by Percy & Small, measuring up to 3,129 tons register, were only five-masted. This partnership, in addition to gaining a great reputation as courageous wood shipbuilders, managed a fleet measuring at one time about 25,000 tons register and capable of moving 400,000 tons of coal a year to New England coast ports. During the period 1894-1911, Percy & Small built "forty-four vessels aggregating 81,700 tons," and most of this tonnage was in large coastwise schooners ranging in size up to 3,731 tons. All of the seven six-masted schooners launched at Bath during the period 1900-1909 inclusive, the tonnage of which ranged from 2,807 to 3,731 tons, were built by Percy & Small. The *Eleanor A. Percy* and *Wyoming*, the first and last of this fleet of seven big six-masters, were constructed for the builders' account, and the five other big schooners were built for J. S. Winslow & Company, of Portland, Maine.

The largest schooners built (of 1,000 tons or over) by the firm of Percy & Small during each of its years of building operations, up to and including 1911 and prior to World War I, were as follows:

Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage
1894	CHARLES P. NOTMAN	1,518	1900	ELEANOR A. PERCY	3,402	1906	ALICE M. LAWRENCE	3,132
1895	WILLIAM H. CLIFFORD	1,594	1901	OAKLEY C. CURTIS	2,375	1907	GOVERNOR BROOKS	2,629
1896	S. P. BLACKBURN	1,757	1902	ADDIE M. LAWRENCE	2,807	1908	EDWARD B. WINSLOW	3,425
1897	None of over 1,000 tons by this firm.		1903	ELIZABETH PALMER	3,066	1909	WYOMING	3,731
1898	ALICE E. CLARK	1,622	1904	GRACE A. MARTIN	3,129	1910	None of over 1,000 tons by this firm.	
1899	M. D. CRESSY	2,115	1905	DAVIS PALMER	2,966	1911	DUSTIN G. CRESSY	862

During the ten-year period 1900-1909 inclusive, Percy & Small built twenty-four large schooners (an average of 2.4 per year), aggregating 58,411 tons. The yearly output averaged 5,841 tons and ran from 3,132 tons in 1906 to 9,836 tons in 1908. The last seven big schooners, built in 1906-1909, totaled 21,561 tons and averaged 3,080 tons per vessel.

Percy & Small resumed the building of sailing schooners when there was a great need for all kinds of deep-sea tonnage during the first World War of the twentieth century and the early post-war years. This firm built three large wood fore-and-afters of from 1,926 to 2,047 tons during the years 1917-1919. Following the building of the *Carl F. Cressy* of 898 tons as a "venture" in 1915, Percy & Small constructed the following sizable schooners during the emergency existing in 1916-1920 inclusive:

Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage
1916	CHARLES D. LOVELAND	777	1917	ANNIE C. ROSS	792	1919	JOSEPH S. ZEMAN	1,956
1916	C. C. MENGEL, JR.	845	1918	ST. JOHN N. F.	2,047	1919	MIRIAM LANDIS	905
1917	DUNHAM WHEELER	1,926	1918	LIEUT. SAM MENGEL	908	1920*	CECELIA COHEN	1,103

*In 1920 the 4-masted schooner SNETIND was reconstructed and remeasured as 1,470 gross tons.

In 1920, Percy & Small built the largest of the wood schooner-rigged towing barges, the *Ulak of* 2,324 tons, which was "bald-headed" (carrying no topsails or head gear).

During the period 1894-1920 inclusive, Percy & Small built the following number and tonnage of sizable sailing schooners each year:

Year	Number Built	Tonnage	Year	Number Built	Tonnage	Year	Number Built	Tonnage
1894	1	1,518	1902	3	6,380	1909*	1	3,731
1895	1	1,594	1903	2	4,221	1915	1	898
1896*	1	1,757	1904	2	6,132	1916	2	1,622
1898	1	1,622	1905	3	4,362	1917	2	2,718
1899	1	2,115	1906	1	3,132	1918	2	2,955
1900	3	8,331	1907	2	4,862	1919	2	2,861
1901	4	7,424	1908	3	9,836	1920**	1	1,103

*In 1897 and 1910, 1912, 1913, and 1914, no schooners built, but in 1911 the schooner DUSTIN G. CRESSY of 862 tons was constructed by Percy & Small.

**The schooner SNETIND was reconstructed in 1920 and, after being rebuilt, was registered as 1,470 tons.

Wood Schooner-rigged Towing Barges Built at Bath, Maine, 1895-1923

From 1895 to the end of sail and of the construction of wooden vessels, Bath built a fleet of wood "bald-headed" schooner-rigged towing barges (with no topsails or head gear) that were sizable vessels. In the coastwise trade, they competed with a tremendous measure of success against the sailing schooners. The following record gives the number and tonnage of vessels of this type, totaling 117 rigged barges and aggregating 131,739 tons, built during certain stated divisions of years in the period 1895-1923 inclusive.

Period (inclusive)	Number of Wood Schooner-rigged Towing Barges Built	Registered Tonnage			
		Total		Average	
		Gross	Net	Gross	Net
1895-1900	66	66,112	59,309	1,002	899
1901-1908*	25	26,018	23,191	1,041	928
1911-1917	17	25,358	22,743	1,492	1,338
1918-1923	9	14,251	13,146	1,584	1,461

*None built in 1909 and 1910; also none in 1905, 1906, 1914, and 1922.

The greatest number of rigged towing barges built in any one year was 25 in 1899, of which Kelley, Spear & Company built 17 and The New England Company 8. Of 117 wood fore-and-aft-rigged towing barges built in Bath, Maine, during the period from 1895 to 1923 inclusive, when construction stopped, Kelley, Spear & Company built 85 (or 72.7 per cent) and The New England Company 24 (or 20.5 per cent of the total). Of the balance of 8 barges (i.e., 6.8 per cent of the total), William Rogers built 5 boats, Crosby 2, and Percy & Small 1.

The year 1923 marks the end of wood shipbuilding in Bath, Maine, and in the United States. The New England Company built its last rigged towing barge, the *Hattie* of 1,287 tons, in 1903, following which Kelley, Spear & Company was the only constructor of such vessels in Bath, building 33 barges during the years 1903-1919 inclusive. In 1919, the Crosby Navigation Company built 2 barges of 1,720 and 1,328 tons, respectively. In 1920, Percy & Small built the largest

recorded vessel of this type, the *Ulak* of 2,323.62 tons, and Kelley, Spear & Company launched the 3 remaining rigged tow barges to be built at Bath, the *Barnstable* of 1,626 tons in 1921 and the *Winsor* and *Hutchinson,* each of 1,034 tons, which were constructed in 1923.

The following table gives a list of the largest wood schooner-rigged towing barges ("bald-headed," with no topsails or head gear) built at Bath, Maine. The vessels are mentioned in order based on size, and the tonnage, registered dimensions, builder, and year built are set forth.

Year Built	Name	Builder	Tonnage		Registered Dimensions		
			Gross	Net	Length	Beam	Depth
1920	ULAK	Percy & Small	2,324	2,211	268- 3	46	23- 6
1919	FALMOUTH	Kelley, Spear & Co.	2,236	2,074	274- 2	46- 2	21- 4
1917	SAMUEL W. FAUCHER	Kelley, Spear & Co.	1,973	1,798	262- 8	44- 1	21
1902	SANTIAGO	Kelley, Spear & Co.	1,918	1,752	271- 4	46- 3	19- 3
1902	CIENFUEGOS	Kelley, Spear & Co.	1,915	1,757	271- 4	46- 2	19- 3
1915	ATLANTIC	Kelley, Spear & Co.	1,901	1,680	264- 1	44- 2	20- 5
1913	PENN	Kelley, Spear & Co.	1,849	1,708	264- 8	44- 1	20- 1
1912	MOUNT HOPE	Kelley, Spear & Co.	1,802	1,584	264- 7	44- 1	19- 6
1911	FALL RIVER	Kelley, Spear & Co.	1,759	1,545	262- 4	44- 1	19- 5
1919	RICHMOND	Crosby Navigation Co.	1,720	1,634	228- 8	41- 9	21- 6
1898	NEW YORK	William Rogers	1,688	1,576	245- 4	44- 3	21
1917	NORTHERN No. 7	Kelley, Spear & Co.	1,631	1,473	245- 5	41- 2	19- 9
1899	OHIO	Kelley, Spear & Co.	1,630	1,506	237- 5	43- 4	20- 1
1900	INDIANA	New England Co.	1,627	1,507	236- 3	43- 3	20- 6
1921	BARNSTABLE	Kelley, Spear & Co.	1,626	1,485	244- 8	41- 1	20- 2
1918	OSCEOLA	Kelley, Spear & Co.	1,622	1,473	245- 9	41- 2	20- 1
1900	HAVANA	Kelley, Spear & Co.	1,618	1,465	245- 4	43- 3	19- 3
1900	GEORGIA	New England Co.	1,610	1,489	235- 5	43- 3	20- 5
1900	IOWA	New England Co.	1,607	1,473	237- 4	43- 5	19- 8
1917	MANOR	Kelley, Spear & Co.	1,603	1,474	245- 3	41- 2	19- 9
1916	NORTHERN No. 6	Kelley, Spear & Co.	1,603	1,426	244- 1	41	19- 7
1896	OCEAN BELLE	Kelley, Spear & Co.	1,594	1,496	239- 7	43- 3	19- 1
1916	WESTMORELAND	Kelley, Spear & Co.	1,593	1,418	245- 2	41- 2	19- 6
1903	LIBERTY	Kelley, Spear & Co.	1,587	1,442	246- 2	43- 3	19- 3
1901	SAGUA	Kelley, Spear & Co.	1,586	1,435	245- 9	43- 1	19
1915	LARIMER	Kelley, Spear & Co.	1,585	1,410	244- 5	41- 3	19- 8
1901	MATANZAS	Kelley, Spear & Co.	1,579	1,443	246- 9	43- 1	19- 1
1901	CARDENAS	Kelley, Spear & Co.	1,577	1,429	245- 9	43- 2	19
1898	KENTUCKY	William Rogers	1,575	1,472	245- 2	44- 3	19- 2
1898	WEST VIRGINIA	William Rogers	1,565	1,468	246- 5	44- 3	19- 2
1898	VIRGINIA	William Rogers	1,548	1,450	245- 8	44- 3	19
1899	SUNBURY	Kelley, Spear & Co.	1,544	1,419	236- 9	43- 3	19- 1
1899	DARBY	Kelley, Spear & Co.	1,513	1,394	235- 7	43- 3	19- 1

The first two vessels of this type built at Bath, the *Wayne* and *Ardmore,* were of 820 and 821 tons, respectively, and were constructed in 1895 by Kelley, Spear & Company. The following year (1896), the same builder launched the schooner-rigged barge *Dora* of 825 tons and "the big *Ocean Belle*" of 1,594 tons; while The New England Company built two barges of 857 and 858 tons, respectively, and William Rogers launched the sizable barge *Jersey Belle* of 1,335.8 tons. Only one towing barge was constructed in 1897, and that was the *Pilgrim* of 1,215.54 tons, built by Kelley, Spear & Company. In 1898 twenty of this type of vessel were constructed, and while the honors went to Kelley, Spear & Company for number and total tonnage, as this firm built eleven of these vessels, aggregating 8,874.7 tons and averaging 806.8 tons, and The New England Company launched five vessels, totaling 4,563.7 tons and averaging 912.7 tons, all these sixteen rigged tow barges were of less than 945 tons gross register. In that year, William Rogers built four large barges of from 1,548 to 1,688.5 tons, which aggregated 6,376.7 tons, averaged 1,594.2 tons, and were the last vessels of that type built by Rogers.

The *New York* of 1,688.5 tons, built by Rogers in 1898, was not exceeded in size until 1902, when Kelley, Spear & Company constructed the *Cienfuegos* of 1,915.3 tons and the *Santiago* of 1,918.4 tons. No larger towing barges were built until 1919, when the *Falmouth* of 2,236.4 tons was launched by Kelley, Spear & Company, and this was followed in 1920 by the *Ulak* of 2,323.62 tons, which was not only the largest of this class of vessel constructed but also the only rigged towing barge ever built by Percy & Small, the famous constructor of large wood schooners. When Percy & Small built the six-masted schooner *Eleanor A. Percy* of 3,402 tons in 1900, the largest of the "bald-headed" schooner-rigged tow barges building were vessels of 1,607 to 1,627 tons. In 1909, when Percy & Small built the all-time record-sized mammoth schooner *Wyoming* of 3,731 tons, no tow barges were being built at Bath, and the last ten vessels of this type (all built by Kelley, Spear & Company in the years 1904-1908) had averaged only 733.7 tons each. It was eleven years after Percy & Small had built its last big schooner and nine years after this partnership had launched its last sailing schooner (the *Dustin G. Cressy* of only 862 tons) that it constructed its record-sized and only schooner-rigged tow barge, the *Ulak* of 2,323.62 tons. Whereas sailing schooner building ceased in 1921, the last rigged tow barges were launched two years later, in 1923. No schooner-rigged towing barges of over 1,000 tons gross register were built at Bath and registered at the Bath customhouse during the six-year period 1905-1910 or during the years 1914 and 1922. The number of vessels of this type and in this size category (a total of fifty-one), constructed each year during the period 1895-1923 inclusive, is set forth herewith:

Year	Number	Year	Number	Year	Number	Year	Number	Year	Number
1896	2	1900	4	1904	1	1915	3	1919	4
1897	1	1901	3	1911	1	1916	2	1920	1
1898	4	1902	5	1912	3	1917	3	1921	1
1899	4	1903	3	1913	3	1918	1	1923	2

The years of largest tonnage construction and of the greatest number of schooner-rigged tow barges built were the three consecutive years 1898-1900, when fifty-eight of these vessels, aggregating 57,785 gross tons, were built (averaging 996.3 tons per barge). The years of greatest activity in the building of rigged tow barges at Bath, with the number and total tonnage of this class of vessel built and registered, were as follows:

Year	Number of Barges Built	Gross Tonnage		Year	Number of Barges Built	Gross Tonnage	
		Total	Average per Vessel			Total	Average per Vessel
1899	25	24,449.4	978	1896	5	5,470.4	1,094.1
1898	20	19,715	985.8	1917	3	5,207.2	1,735.7
1900	13	13,620.7	1,047.8	1915	4	4,864	1,621.3
1902	6	7,890	1,315	1904	6	4,818.1	803
1919	4	6,611.6	1,652.9	1913	3	4,359.6	1,453.2
1912	5	5,971.5	1,194.3	1903	3	3,972.8	1,324.3
1901	5	5,700.5	1,140.1	1916	2	3,196	1,598

A Summary of the Largest Sailing Vessel of Each Rig Built at Bath, with a Record of Peak and Depression Building Years and of the Number of Vessels of Each Type Constructed

The following record shows the largest sailing vessel of each type and rig registered as being built at Bath, Maine, during each decade covering the period 1801-1910:

	Ships*		Barks*		Brigs*		Barkentines*		Schooners	
Period	Name of Vessel	Tons	Name of Vessel	Tons	Name of Vessel	Tons	Name of Vessel	Tons	Name of Vessel	Tons
1801-1810	LAPWING	441	—	—	ADELINE	293	—	—	JOHN	145
1811-1820	CLEOPATRA	518	—	—	JOHN	281	—	—	NEPTUNE	156
1821-1830	ARABELLA	404	—	—	MARENGO	303	—	—	HENRY	189
1831-1840	UNITED STATES	684	—	—	McLELLAN	264	—	—	JAMES WILSON	170
1841-1850	SARATOGA	1,200	—	—	VESTA	249	—	—	JOHN MARSHALL	168
1851-1860	GAUNTLET	2,031	LUCKNOW	890	GERANIUM	433	—	—	CHARLES LILLY	300
1861-1870	JAMESTOWN	1,888	NIPHEN (or NIPHON)	1,094	DEACON	499	C. S. ROGERS	392	MATTIE A. FRANKLIN	522
1871-1880	EUREKA	2,101	WILLIAM P. CRAPO	1,647	CASTALIA	516	ST. LUCIE	707	WILLIAM L. WHITE	996
1881-1890	SHENANDOAH	3,406	ST. JAMES	1,565	H. B. HUSSEY	545	LIZZIE CARTER	789	TECUMSEH	1,658
1891-1900	ROANOKE	3,539	PACTOLUS	1,668	None	—	JAMES W. ELWELL	1,192	ELEANOR A. PERCY	3,402
1901-1910	ATLAS**	3,381	—	—	None	—	None	—	WYOMING	3,731

*Prior to 1850, registry of barks, brigs, brigantines, barkentines, and even of ships possibly not correctly designated in available official records. The tendency in the early days was to group barks with ships and brigantines with brigs.

**Built of steel. All the other vessels in the table were constructed of wood.

The number of vessels that have been built in the city of Bath up to 1935, as stated in available but decidedly incomplete official records, is 2,384, of which 2,317 are merchant vessels, with an aggregate measured and registered tonnage of 1,468,657 tons. The steel naval vessels built during the period 1891-1935 for the U.S. Navy total 67, with an aggregate displacement of 72,617 tons.

The peak decade of shipbuilding in Bath was that ending in 1890, during which period 346 vessels aggregating 233,398 registered tons were constructed, all being merchant vessels built of wood. The Bath, Maine, official tonnage record for a year was made in 1899,

and the tonnage in 1900 was nearly as large. This marked the end of Bath's legitimate big tonnage years, for the hysterical war years, with a still larger output of ships because of an artificial stimulus caused by World War I, should be considered as emergency tonnage. The peak years of measured tonnage volume were:

1919 with 43,170 tons—practically all of which was emergency war-time tonnage.

1899 with 39,021 tons—the banner year for legitimate merchant ship tonnage.

1882 with 37,310 tons—with the day of the square-rigger and deep-sea sailer passing and construction of coastwise schooners booming.

1854 with 33,222 tons—the maximum building period for around-the-Horn square-riggers.

1877 with 31,287 tons—a year of big tonnage built of economic design, with carrying power and rig to fight to maintain deep-sea trade, and booming construction of vessels built for a rapidly developing coastwise trade.

1890 with 31,206 tons—the end of big wood full-rigged ships and of "quantity production" in schooners. Henceforth only big vessels were built.

The depression years in shipbuilding in Bath were:

1922: For the first time in 140 years of record, the Bath shipyards turned out no tonnage whatever.

1910: Only one small vessel of 15 tons register was launched.

1861: Only 2,873 tons built because of depression and Civil War conditions.

1893: Only 5,390 tons built because of the failure of wood square-riggers to make money in deep-sea trade and the national business depression affecting domestic as well as foreign trade.

1887: The tonnage built of 10,265 tons reflects maritime trade conditions and credit.

1878: The tonnage built of 14,030 tons reflects national and international business conditions.

The most sustained period of prosperity in Bath shipbuilding was from 1873 to 1884, when the demand was both large and maintained for sizable square-rigged wood Down Easters of excellent quality and for wood schooners to be engaged in the coastwise trade. For twelve years, the annual average tonnage was about 25,000 tons, and in no year of this period did it fall as low as 14,000 tons. The eight years from 1909 to 1916, with an average annual output of only 5,800 tons, were the period of Bath's deepest depression as a shipbuilding city since the 1840's, which preceded the California boom. Except for the construction of a few large tow barges, merchant shipbuilding was dead. Then came the artificial war boom, when every set of ways that could build and launch a vessel of any type became occupied. This burst of activity "to build vessels to win the war" resulted in Bath's turning out 31,000 tons average per year for the five successive years 1917-1921. (This included the Texas S.S. Company's building of thirty-five steel hulls in the old Sewall shipyard during World War I's emergency demand for tonnage.) This period of false prosperity was followed by an absolute and total suspension of shipbuilding in 1922 and the longest lean period that Bath shipyards have experienced in the history of the city. During the turn into the twenties of this century, wood shipbuilding terminated at Bath for all time. Henceforth only steel vessels—and these primarily war vessels—with a smattering of yachts, small government craft, fishing trawlers, and a few merchant steamers have been built. The wood and iron (or steel) sailing vessel has gone forever. Since 1900, the management of the Bath Iron Works has not been "merchant ship-minded" or active in the design and building of steel cargo and passenger steamships for either deep-sea or coastwise trade.

The following table gives a list, as per customhouse records, of the number of vessels of each type built at the yards within the city of Bath, Maine, from the early days of the young republic up to 1935. Unfortunately, the record is far from complete. In the distant past, many vessels were not measured, and some of the official records have been lost for various reasons.

Period	Ships and Shipentines	Barks and Barkentines	Brigs and Brigantines	Schooners	Sloops	Barges	Steamers	Motor Vessels	Naval Vessels Not Measured for Tonnage: Number	Naval Vessels Not Measured for Tonnage: Total Displacement	According to Available Customhouse Records: Number of Merchant Vessels Measured	According to Available Customhouse Records: Total Registered Tonnage
Before 1780*	20	—	—	7	7	—	—	—	—	—	34	3,720
1780-1790	1	—	3	11	8	—	—	—	—	—	23	2,161
1791-1800	18	—	16	31	7	—	—	—	—	—	72	9,938
1801-1810	40	—	43	20	4	—	—	—	—	—	107	21,382
1811-1820	12	1	32	24	6	4	—	—	—	—	79	12,731
1821-1830	22	—	63	14	—	1	2	—	—	—	102	22,571
1831-1840	58	4	24	21	1	—	—	—	—	—	108	35,593
1841-1850	68	16	9	9	—	1	6	—	—	—	109	54,596
1851-1860	181	18	11	12	6	4	—	—	—	—	232	181,479
1861-1870	65	39	9	102	17	—	14	—	—	—	246	118,746
1871-1880	65	50	4	195	19	3	17	—	—	—	353	197,799
1881-1890	37	15	1	245	7	2	39	—	—	—	346	233,398
1891-1900	11	4	—	75	5	75	26	—	14	11,352	196	199,868
1901-1910	4	—	—	74	1	43	15	6	11	28,532	143	164,467
1911-1920	—	—	—	22	1	46	26	10	26	24,019	105	165,261
1921-1930	—	—	—	3	—	5	5	37	8	4,650	50	38,659
1931-1935	—	—	—	—	—	—	1	11	8	4,064	12	6,288
Total	602	147	215	865	89	184	151	64	67	72,617	2,317**	1,468,657**

*Description of vessels not accurate in early records. These reported 20 "ships" were evidently brigs or brigantines.
**Does not include naval vessels, the number and displacement of which are stated separately.

Persistent Down East Builders Fight to Maintain Wood Shipbuilding and Complete Over Three Centuries of Sailing Ship Construction at Bath, 1607-1923

John McDonald built his last vessel, the bark *Pactolus,* in 1891, and in that same year the Houghtons built their last ship, the big full-rigged *Parthia,* while the Morses launched their last schooner. Nathaniel T. Palmer built his last schooner in 1898, and whereas William T. Donnell built his last schooner registered at Bath in 1896, it has been said that he continued building until 1901. William Rogers built his last square-rigger, the bark *Matanzas,* in 1889 and his last rigged tow barge in 1898. He closed his extensive shipbuilding career after building a 600-ton schooner in 1902. The Sewalls built their last wood square-rigger, the *Roanoke,* in 1892, then converted their yard for steel construction, and built their last square-rigger in 1902 and their last vessels—a barge and the steel schooner *Kineo*—in 1903. The New England Company practically ended its career in 1906, although E. W. Hyde completed two contracts at the plant in 1908. Minott, of Phippsburg, built the last full-rigged wood ship constructed in the United States—and the world—when he launched the *Aryan* in 1893, and his son built the last Minott vessel, a schooner, in 1904. Bowker, of Phippsburg, continued to construct schooners until 1921, which was the end of the era of building sail. The Hawleys built schooners until 1909, and Kelley, Spear & Company built its last schooner in 1910, but continued constructing rigged tow barges until 1923. Deering built schooners until 1919, and the Crosbys constructed schooners until 1920 and built two rigged tow barges in 1919. Percy & Small, the last builder of big wood vessels, built both schooners and rigged tow barges until 1920.

The Bath Iron Works, established by Gen. T. W. Hyde in the city during the winter of 1889-1890 on the site of historical wood shipbuilding yards, launched its first vessel, the steel U.S. gunboat *Machias* (1,177 tons displacement), on December 8, 1891. Arthur Sewall & Company launched in 1894 the first steel sailing vessel ever built on the American continent, the four-masted shipentine *Dirigo* (named after the motto of the state of Maine, "I lead").

Bath, Maine, which is not geographically located to serve as a national seaport of consequence, fought to the last ditch to remain a wood shipbuilding community. In 1899-1900, Percy & Small built the great six-masted schooner *Eleanor A. Percy* of 3,402 tons and persisted in building big fore-and-afters. Nine years later, this same firm launched the mammoth *Wyoming* of 3,731 tons, the largest wooden sailing vessel ever built in the world and put in service. As far as the building of wooden square-riggers and deep-sea sailers is concerned, they went out in the early nineties, "in a last great blaze of glory," with the construction of the Sewall "Big Wood Four" (1889-1892), but steel square-riggers were built for a further period of ten years. It has been said that in the environs of the present city of Bath the curtain had risen on the first act of the great drama of the wood ship in America with the building, in 1607, of the *Virginia of Sagadahock.* For three centuries, Bath and the Kennebec held the center of the stage in ship construction, and this through many acts and scenes; but in 1893 the curtain fell on wood square-rigged shipbuilding in the same community when C. V. Minott launched, at Phippsburg, the *Aryan* of 2,124 tons, a full-rigged three-masted ship and the last wood square-rigged sailing vessel to be built in the world. Wood shipbuilding continued at Bath until 1923, or 316 years after the construction of America's pioneer vessel, but the last vessels built were "bald-headed" schooner-rigged towing barges. Wood schooner-rigged sailing vessels were built until 1921, steel square-riggers until 1902, and the last steel schooner and a barge were constructed in 1903. The building of wood vessels at Bath survived for twenty years after the community had constructed its last steel sailing vessel.

XXII.

THE LOWER KENNEBEC AREA—SOUTH OF BATH

A. Georgetown

THE TOWN OF Georgetown, a part of Sagadahock, was incorporated in 1716. It included within its limits the present city of Bath, West Bath (which stretches west to the New Meadows River), Winnegance, and Phippsburg on the West Bank of the Kennebec and Woolwich, Tuessic (or Towesic) Neck, West Woolwich, and the large islands of Arrowsic and Georgetown east of the river. Long Reach, once known as the Second Parish of Georgetown, seceded in 1781 and became known as the town and later as the city of Bath. Today Georgetown is a large island southeast of Bath, and its southwestern water frontage forms the East Bank of the Kennebec River at its mouth and runs about eight miles north to Hockomock Bay and the Sasanoa River, which leaves the Kennebec between Woolwich and Preble Point, opposite the center of the city of Bath. Before shipbuilding centered at the present ideally located site for the building of big vessels (known as Long Reach—now the city of Bath), ships were built in many parts of the large Township of Georgetown, and they continued for years to be built on favorably located sites until the size of ships and the demand for competent journeyman mechanics caused the bulk of the tonnage to be built in the more sizable centers of population. The following vessels, deemed to be "sizable" for the period, are registered in the Bath customhouse as having been built at Georgetown (then a part of the Greater Bath or the Bath district) following the end of the revolutionary conflict and prior to the War of 1812. (This list is known to be incomplete.)

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1783	BETSY	Schooner	25	42	12.7	5.5	George Gardiner
1788	UNION	Brigantine	100	68	22.5	7.7	Jonathan Davis
1789	INDUSTRY	Schooner	81	64.3	20.5	7.2	Thomas Harward
1796	HAZARD	Brig	169	76	22.7	11.4	Zenas Wood
1800	MERCATOR	Schooner	105	71.6	21.6	7.9	James Pearcy
1800	FRIENDSHIP	Schooner	124	74	22.1	8.8	Isaiah Crooker
1801	PRINT	Ship	215	82.7	24.6	12.2	Benjamin Emmons
1801	TWO BROTHERS	Brig	162	76.5	24.3	10.3	Abias Banges
1801	BRILLIANT	Brig	138	72.2	22	10.1	William Lee
1802	GEORGETOWN	Schooner	136	73.2	22.5	9.6	Patrick Drummond
1802	DRUMMORE	Schooner	133	79.7	23.1	8.3	John Rogers
1803	YORKSHIRE	Ship	287	96.5	26	13	William Lee
1803	ULYSSES	Brig	156	79.2	23.7	9.6	Patrick Drummond
1803	VALENTINE	Schooner	111	72.3	23.2	7.8	Samuel Woodward

(Continued on next page)

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1804	WILLIAM & MARTHA	Brig	134	74.6	23.2	9.1	Jeremiah Fisher
1804	THOMAS	Brig	187	85	24.6	10.3	William Flitner
1806	HAMILTON MOORE	Ship	345	100	28.1	14.1	
1806	REPUBLICAN	Brig	198	79.7	23.8	12.1	Michael Fisher
1806	CALISTA	Brig	128	73.6	23.3	8.7	John Parker
1806	CAROLINE	Brig	164	81.4	24.6	9.6	Samuel Woodward
1806	MARY & FRANCIS	Schooner	119	71.3	22.3	8.7	David Morrison
1807	LEANDER	Schooner	124	71.5	22.3	9.1	Michael Fisher
1807	PORTRAIT	Schooner	136	72.8	23.3	9.4	Benjamin Swett
1807	EVELINA	Schooner	112	73.2	22.2	8	Mark L. Hill
1807	UNION	Schooner	105	71.5	21.8	7.8	Ezekiel Hinkley
1810	MOUNT HOPE	Ship	384	108.5	28.2	14.1	Thomas McCobb
1810	SARAH & MARIAH	Brig	178	80.9	24.4	10.5	Michael Fisher
1810	ANT	Brig	218	88	24.9	11.4	David Rogers
1810	TRITON	Brig	123	75.2	22	8.6	Thomas McFadden
1810	RUTH & SUSANNAH	Brig	149	79.4	23.1	9.3	Joseph Mitchell
1811	WILHELMINA	Ship	309	95.5	27	13.5	Michael Fisher
1811	JANE	Brig	190	86.4	24.9	10.5	William Patten
1811	PILGRIM	Schooner	124	74.6	23	8.4	Benjamin Riggs

During the period 1816-1827, Michael Fisher built several vessels at West Georgetown and launched them into the Kennebec almost opposite the village of Phippsburg (Bath), which is located on the West Bank of the river and some six miles from its mouth. The most important of his vessels were the brig *Susannah & Mary* of 167 tons (length 80 ft., beam 24 ft., depth 10 ft.), built in 1816; the schooner *Milo* of 121 tons (length 74 ft., beam 23 ft., depth 8⅓ ft.), built in 1817; the schooner *Portrait II* of 104 tons (length 72 ft., beam 23 ft., depth 8 ft.), built in 1822; the brig *Ann Maria* of 198 tons (length 81½ ft., beam 23½ ft., depth 12 ft.), built in 1823; and the schooner *Portrait III* of 118 tons (length 76 ft., beam 23 ft., depth 8 ft.), built in 1827. George Robinson built the 161-ton brig *Enterprise* at Georgetown in 1822 (length 80 ft., beam 22½ ft., depth 10¼ ft.), and Benjamin Emmons launched the brig *Confucius* in 1826 and the schooner *Conclusion* in 1828; the brig was of 197 tons (80 ft. long, 24½ ft. beam, 11¾ ft. deep), and the schooner registered 101 tons and was 67 ft. long, 20 ft. beam, and 8¾ ft. deep. After a lapse of about twenty years, when only small craft were built, Joseph Berry constructed the following vessels at Georgetown:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1848	PHILENA	Ship	537	139	30	15
1850	EVA	Ship	630	144.2	30.9	15.4
1851	C. H. SAMPSON	Schooner	128	83.4	22	7.9
1852	LUCKNOW	Bark	890	164.3	34.2	17.1
1853	SULTAN	Ship	1,184	191.5	36.4	18.2
1854	WILLIAM & JANE	Bark	527	136.6	29	14.5

When the full-rigged ship *Sultan* was launched, she was the largest vessel built on the banks of the lower Kennebec, but a larger ship, the *Independence* of 1,277 tons, was launched from a Phippsburg yard on the West Bank of the river two years after the *Sultan* was put overboard. In 1851, Thomas Spear, Jr., of a good Bath family of shipbuilders, constructed the full-rigged ship *Wurtenberg* at Georgetown; this ship was of 839 tons register and measured 161 ft. long, 33 ft. 8 in. beam, and 16 ft. 10 in. deep.

B. Phippsburg

Phippsburg, a village that always has been part of Greater Bath, is located on the West Bank of the Kennebec River about six miles directly south of the city of Bath and approximately half way between the center of the site of "The City of Ships" and where the Kennebec empties itself into the Atlantic Ocean. Like many other locations on the banks of the Kennebec River, Phippsburg possesses natural advantages for building ships far in excess of those of other nationally much better known communities farther south and west that launched great numbers of vessels during the eighteenth and the first half of the nineteenth centuries. It is known that ships were built at Phippsburg during colonial days, but no authenticated data concerning individual vessels of good size for their type and period, with the builders of such craft, are available that definitely locate that village as a place of construction prior to 1822, when Parker McCobb laid down the brig *Rebecca* and registered her as built at Phippsburg, Bath. The small schooner *Betsey and Mary* of 27 tons is recorded as built at Phippsburg in 1817.

There are official records of the following sizable vessels built at Phippsburg during the period 1822-1832 inclusive. A more recent search of the records shows the brig *Creole* of 146 tons as built at Phippsburg in 1841; she was 84 ft. long, 23 ft. beam, and 8.5 ft. deep.

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1822	REBECCA	Brig	156	80.1	23.9	9.5	Parker McCobb
1824	NIMROD	Brig	198	81	24	11.8	William Hutchins
1825	DIDO	Brig	195	85.3	24	10.9	Benjamin Emmons
1825	CORA	Brig	220	87.5	23.9	12	Parker McCobb
1827	ALL CHANCE	Schooner	135	79.8	23	8.5	James G. Kelley
1828	LADY	Schooner	100	73.9	22.6	7	David Means
1829	CUBA	Schooner	122	76.9	23.5	7.9	Arthur Morrison
1832	MADAWASKA	Schooner	130	78.7	23.1	8.3	William M. Reed

William Hutchins also built at Phippsburg the brig RONSE of 212 tons in 1834 for Providence owners.

During the clipper ship decade, Phippsburg, like most of the shipbuilding communities in Maine, showed no interest in the construction of clipper ships, but the boom and demand for floating tonnage caused the builders in the village to construct larger vessels. In 1850, Alexander Robinson launched the 550-ton full-rigged ship *Statira Morse* (length 135 ft., beam 30 ft., depth 15 ft.), the largest vessel built at Phippsburg up to that time. Two years later, Joseph Lowell put overboard the still bigger ship *Jennie W. Paine* of 663 tons (length 146 ft., beam 31½ ft., depth 15¾ ft.), and in 1855 Alden Morse built the quite sizable three-masted ship *Independence,* which measured 1,277 tons and was 196 ft. 7 in. long, 37 ft. 4 in. beam, and 18 ft. 8 in. deep. This ship had "a good model for carrying cargo, both weight and volume, was well sparred with plenty of canvas, and had good speed; she was a profitable type of ship to own, but no clipper."

In 1860 the name Charles V. Minott appears in the Bath customhouse records as the builder at Phippsburg of the 1,073-ton full-rigged ship *Tiger.* The name of Minott dominated shipbuilding activities in the village for thirty-four years and became famous. Minott was not only a shipbuilder of note but also, like many other prominent Maine shipbuilders, was an owner, manager, and operator of ships. He has the distinction of building the last of the "Down Easters," the last square-rigged deep-sea wood ship built in the world, and the last vessel of this type to be operated in general trade on the Seven Seas under the Stars and

Stripes. The following record gives a list of vessels known to have been built by Charles V. Minott and launched from his Phippsburg (Bath) shipyard:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1860	TIGER	Ship	1,073	178.3	36.1	17.7
1862	ALICE MINOTT	Bark	505	126.8	29.7	14.8
1864	MARY E. RIGGS	Ship	1,124	185	36.2	18.1
1864	VINCENT	Brig	409	115	28.2	14.1
1867	ALICE M. MINOTT*	Ship	1,093	173.5	36.2	23
1868	HAYNE	Schooner	155	99.7	26.7	7.7
1870	MEROM*	Ship	1,204	179.2	37.5	23.8
1871	SENORA	Schooner	222	111.7	28.2	9.4
1874	CORA	Schooner	350	134.2	31.2	11.1
1874	J. D. ROBINSON	Schooner	470	135.7	30.7	15.7
1876	IVY	Ship	1,243	184.2	37.2	23.7
1878	STANDARD	Ship	1,534	212	40.2	24.4
1881	JAMES DRUMMOND	Ship	1,556	216	40.1	24.2
1882	BERLIN	Ship	1,634	222.4	40	24
1883	ST. CHARLES II	Ship	1,749	225.2	41.5	16.7
1884	ST. THOMAS	Schooner	742	164.1	35.3	17.1
1890	ST. MARY	Ship	2,043	240.5	42.3	18.2
1891	MEROM	Schooner	925	186	36.2	18.1
1893	ARYAN	Ship	2,123	248.5	42.2	17.3
1896	FRANCES M.	Schooner	1,229	204	39.2	18.3
1901	ADA F. BROWN	Schooner	1,457	221.4	41.4	18.5

*These two ships were erroneously recorded as schooners at the Bath customhouse.

The building of small vessels at Phippsburg continued through the years, and most of them were for the river, island, and coasting trade, being rigged as schooners and sloops. In the forties and fifties, evidently no sizable vessels were launched at Phippsburg, but in 1860 a full-rigged ship of 1,000 tons was built. Thereafter, even during the Civil War, many large vessels were built, and the town was prominent from that time to the end of American wood shipbuilding (1921) as a builder of wood merchant sail.

Charles V. Minott never enthusiastically entered into the business of building schooners, and no fore-and-after launched by him approached in size the square-riggers constructed at his yard during the years 1878-1893. The last vessel that he built was the schooner *Ada F. Brown* of 1,457 tons, but the Minott shipyard did not close down until after his son Charles V. Minott, Jr., had built in 1904 the five-masted schooner *Marcus L. Urann* of 1,900 tons. She was quite sizable and measured 251 ft. 7 in. long, 44 ft. 3 in. beam, and 24 ft. 1 in. deep.

The ship *Merom* was launched from the C. V. Minott yard in March 1870; she measured 1,204 tons gross and 1,158 tons net. The builders and her first master, Capt. John S. Lowell, were originally her principal owners. The *Merom* was considered "a well-built ship, a good carrier, a fair or better than average sailer, and generally a fortunate vessel and a good investment." She first entered the Atlantic cotton trade, made a few voyages to the Orient, and then went into the Cape Horn trade. In 1890 the ship was sold to the Arctic Packing Company, of San Francisco, and became a salmon packer. On October 10, 1900, the *Merom,* when thirty and a half years old, loaded with cases of salmon at anchor off Kodiak Island, Alaska, parted her moorings in a gale, collided with the *Santa Clara,* and was then blown ashore and became a total loss.

C. V. Minott launched in October 1882 the ship *Berlin,* built for his own account with "fractions" sold to friends. She was of 1,634 tons gross and 1,553 tons net register, 222 ft. 4 in. long, 40 ft. beam, and 24 ft. deep. During the first ten years of her sea life, she was operated as a Cape Horner. She was then put in the case oil trade with the Orient and, after some seven

years in this service, was sold in June 1890 for the Pacific Coast coal trade. In 1897 she was acquired by the Alaska Portland Packers Association. After engaging in the fisheries trade for fifteen years, she stranded on February 17, 1922, when trying to make port at Chignik Bay, Alaska. The *Berlin* was a good carrier and sailer. She made a passage to San Francisco from Philadelphia in 117 days and an eastbound run from San Francisco to Liverpool in 107 days. She was forty years old at the time of her loss.

The *St. Charles II,* launched at Phippsburg in October 1883, was built and principally owned by C. V. Minott. She was of 1,749 tons gross and 1,662 tons net register and was built for the California trade. The *St. Charles* made seven westbound Cape Horn passages to San Francisco, six from Philadelphia and one from Swansea, Wales, and completed six eastward runs with grain to European ports. Her best westbound passage was 120 days and the fastest eastbound 103 days. On a passage from San Francisco to Hull, England, the *St. Charles* spoke and passed at different times three British ships, *Anaurus, Thalatta,* and *Glenbreck,* which had passed through the Golden Gate ten, thirteen, and seventeen days, respectively, ahead of her. The *St. Charles* met with two serious mishaps before her final loss by a coal gas explosion in the North Pacific in May 1892, when she was less than nine years old.

The *St. Mary,* launched by Charles V. Minott in March 1890, was a big ship, being 2,043 tons gross and 1,942 tons net register, 240 ft. 6 in. long, 42 ft. 4 in. beam, and 18 ft. 2 in. deep. She was described as "a very fine vessel," owned primarily by her builders, and "built at a cost of $120,000 or about sixty dollars per ton register"; she was, however, an unfortunate vessel, doomed to a short life. On May 30, 1890, the *St. Mary,* well laden, sailed from New York for San Francisco on her maiden voyage. When well down in the South Atlantic, the ship caught up with vessels that had left port some time before her. Sailing in rather crowded waters, she collided with another ship during the night of August 6 (believed to have been the *Magellan* from Boston bound for Valparaiso), which almost immediately foundered with all hands. The *St. Mary* herself was so badly damaged that Capt. Jesse T. Carver, in command, decided to make for Port Stanley for repairs. Four days later, the ship went ashore at night on reefs connected with the Falkland Islands group and became a total loss. There was a scandal connected with the abandonment of the ship by the officers and crew without Captain Carver. Reports were conflicting, but the Port Stanley agent of Lloyd's reported that "the officers and crew simply abandoned their captain as well as the ship." Later, when men from Port Stanley boarded the *St. Mary,* they found the captain dead in his berth.

The *Aryan* was built by Minott from the same lines as the *St. Mary.* She was launched July 14, 1893, and was the last full-rigged wood ship to be built in America or in the world. She measured 2,123 tons gross and 1,939 tons net register and was 248 ft. 6 in. long, 42 ft. 4 in. beam, and 17 ft. 4 in. deep to the main deck and 26 ft. to the upper deck. Fractions in this ship were rather widely held at first. The firm of J. W. Elwell & Company, New York, was the manager, and Charles V. Minott, the builder, and Capt. Wylie R. Dickinson, the master, were the principal owners. The *Aryan* was a high-class Down Easter, with a good sailing record. She was a large carrier, loading over 3,000 tons of coal on westward passages around Cape Horn. In 1894 she made a passage of 106 days from San Francisco to New York and, in 1901, ran from Baltimore westbound around the Horn to San Francisco in 116 days. Another good run of the many made by the *Aryan* was a Pacific crossing of 17½ days from Yokohama to Honolulu. On this passage, she traversed over 3,800 miles and averaged 218 miles per day (or slightly in excess of 9 knots) for two and a half weeks on the run from port to port. The *Aryan* was for years the only wooden full-rigged American sailing ship in commission. In 1917, when acquired by L. A. Pedersen, of San Francisco, she was re-rigged as a bark by her new owner. On December 15, 1918, the *Aryan* left Wellington, New Zealand, laden with flax and tallow and bound for San Francisco. When eight days out, the cargo was found to be on fire, and on December 24 all hands were compelled to abandon the ship, which was totally destroyed.

In 1864, Samuel H. Morrison built the bark *Hattie Morrison* at Phippsburg; she registered 516 tons and measured 128 ft. long, 30 ft. beam, and 15 ft. deep. In 1885, John G. Morse launched the sizable schooner *Kate E. Morse* from a village yard; this fore-and-after was 164½ ft. long, 35¼ ft. beam, 18¼ ft. deep, and of 735 tons register.

During 1890 the name of Bowker appears in the registry of Bath as a builder of "sizable" vessels at Phippsburg, and in that year Timothy B. Bowker launched the coasting schooner *Abbie Bowker* of 192 tons (length 104 ft. 7 in., beam 29½ ft., depth 8½ ft.), a beamy, light-draft, coasting and river fore-and-after. The following year Frank S. Bowker appears in the official records as the builder of coasting schooners at Phippsburg, and he built until 1903, when his son entered the business. Operations continued under the firm name of F. S. Bowker & Son until 1921, when the Bowkers built their last vessel, the schooner *Laura Annie Barnes* of 698 tons—the last schooner to be built on the Kennebec and the last merchant sailing vessel constructed in America. Phippsburg saw launched into the waters of the Kennebec not only the first vessel to be built on the American continent (the *Virginia* in 1607) but also the last wood square-rigger (the *Aryan* in 1893) and the last merchant sailing vessel (the schooner *Laura Annie Barnes* in 1921). Frank S. Bowker and F. S. Bowker & Son built no large vessels at Phippsburg, and all were schooners intended for the coasting trade. The following list gives the vessels built by the Bowkers that were registered at the Bath customhouse:

Year Built	Name of Schooner	Tonnage	Registered Dimensions In Feet		
			Length	Beam	Depth
1890	ABBIE BOWKER	191.72	104.6	29.5	8.5
1891	HENRY H. CHAMBERLAIN	245.51	122.2	30.5	8.3
1892	WILLIAM H. DAVENPORT	256.17	123.4	30.4	8.5
1893	JAMES H. DUDLEY	367.97	131.4	33.1	10.6
1894	ABENAKI	176	101.1	28.2	8.2
1900	HENRY WEILER	400.71	138	33.5	11.3
1900	JOHN W. DANA	556.44	159.7	35.4	12.7
1901	SEQUIN	405.20	143.6	33.4	10.7
1902	KATE FEORE	382.71	142	35.1	10
1902	MADELEINE	463.06	147	34.7	12.1
1903	DORIS	382.82	142.3	35.2	10
1903	GEORGIE H. JENKINS*	471.03	149.5	34.2	11.7
1903	FRED W. AYER	387.38	142.4	35.2	10.1
1904	JULIA P. COLE	495.27	155.2	34.6	12.1
1904	PERSIS A. COLWELL	516.97	160.4	35.2	12
1906	AUBURN	633.15	171.3	36.2	13.4
1906	HERBERT MAY	384.54	140	33.3	10.3
1907	ANTOINETTE	299.64	132.4	33.2	8.7
1907	HORACE M. BICKFORD	503.52	147.6	33.4	13.6
1908	FRANK B. WITHERBEE	504.19	151.7	33.7	13.6
1909	RICHARD P. CLARK	503.34	148.7	33.7	13.7
1909	G. J. CHERRY	533.46	150.2	33.6	13.7
1910	WILLIAM E. LITCHFIELD	542.64	154.7	34.3	14.1
1911	EDWARD R. SMITH	565.50	158.2	34.4	14.1
1912	EDWIN G. FARRAR	556.41	156.2	34.5	14.2
1913	WILLIAM M. CRITCHETT	544.42	157.5	34.1	14.2
1914	ALBERT H. WILLIS	597.69	157.6	34.1	14.2
1915	GEORGE S. SMITH	577.15	162	34.7	14.1
1916	JAMES M. W. HALL	572.96	157.6	34.5	14.2
1917	MARGARET L. ROBERTS	535.59	155.5	35	12.6
1917	ALICE M. KAFKA	686.47	175.7	36.5	14.2
1918	JOHN R. FOX	741.14	179.1	36.7	15.1
1919	MARY STUART	726.91	179.3	37.1	15.2
1919	AMELIA ZEMAN	738.25	178.2	37	15.2
1921	LAURA ANNIE BARNES	698.40	181.2	36.7	15.2

*Also stated in Down East customhouse records as the 3-masted schooner GEORGIA D. JENKINS of 398 tons.

C. *Arrowsic and Woolwich*

Located between Bath and Georgetown Island, Arrowsic is an island, the west shore of which forms the East Bank of the Kennebec River from a point about opposite the center of the city of Bath to the Back River and a point a little to the south of Phippsburg. The island is about six and a half miles long (north and south) and two and a half miles wide (east and west). Vessels were built in this part of Greater Bath (the old Sagadahock and Georgetown) from early colonial days, and around the middle of the nineteenth century the following sizable craft were registered as being built in Arrowsic by Everett P. Swett and others in addition to many other vessels of small tonnage.

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1847	ARROWSIC	Schooner	125	82.2	23.1	7.5
1853	WILLIAM L. CROSBY	Brig	241	106.1	27.4	9.4
1854	JAMES WAKEFIELD	Brig	248	106	27.5	9.6

The two-masted schooner *Tamerlane* of 42 tons (55 ft. long, 16.7 ft. beam, and 7.4 ft. deep) is recorded as built at Arrowsic in 1864.

Woolwich is on the East Bank of the Kennebec River on Tuessic (or Towesic) Neck and the mainland and directly opposite Bath. What is known as West Woolwich is in reality North Woolwich and is across the river from North Bath and Telegraph Point. Ships were built on both sides of the Kennebec River from the days of the earliest settlers, but practically no records are available of the craft or of their builders. The following sizable vessels (considering type and year launched) are registered at Bath as built on the Woolwich side of the Kennebec River:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1787	WOOLWICH	Schooner	160	70	21.8	8.2	Ephraim Delano
1803	UNITED STATES	Ship	301	96	26.7	13.3	William King
1804	PALLAS	Brig	242	87.6	25	12.5	Joseph Mitchell
1817	CARPENTER	Schooner	104	71.8	22	7.6	Spencer Greenleaf
1819	HOPESTILL	Brig	171	79.7	22.9	10.7	John Stinson
1833	GANGES	Schooner	138	81.8	23.5	8.3	Gould Hathorne
1849	DENMARK	Schooner	128	81	23.7	7.7	Andrew Tarbox
1849	HOMER	Schooner	133	82.2	22.5	8.2	John Webb

Many other craft of small size were built at Woolwich during the eighteenth century and throughout the first three-quarters of the nineteenth century.

XXIII.

BRUNSWICK, MAINE, WITH THE TOPSHAM AND HARPSWELL AREAS

A Record of Sailing Ship Construction, with the Output of Important Builders, from Early Days to the 1880's

IT IS SAID that vessels were built from early colonial days on the shore of Casco Bay at Brunswick and Harpswell and on the lower Androscoggin River at Brunswick and Topsham before the river runs into the Kennebec. This territory is, in fact, part of the Greater Bath district, and its history is closely allied with and a part of that of the cradle and nursery of American wood shipbuilders. During the last half-century of wood sail, the Bath area persisted and grew to be a veritable metropolis of shipbuilding and the greatest wood shipbuilding center in the world. The real town of Brunswick fronts not on Casco Bay and the Atlantic Ocean (indeed, the ocean shore is merely Brunswick's "back door") but on the south bank of the Androscoggin River, seven miles—as the crow flies—west of Bath and opposite Topsham, which occupies the north bank of the river before it swings, turns north, and joins the Kennebec River in the historic Merrymeeting Bay some sixteen miles from that majestic river's mouth at Popham.

Before the building of the railroad, all of the freight and the greater part of the passenger traffic to and from Brunswick was by water. To get to Brunswick proper, which lies on the south bank of the Androscoggin some four miles north of tidewater (and to its companion town of Topsham on the north bank of the river opposite Brunswick), vessels trading from Portland, Boston, or other well-populated centers and active ports had either to make a landing at Brunswick's "back door" or to take the long ocean and river journey around a series of land projections into the sea (which, with their associated long and narrow islands, resemble the prongs of a fork) and then make about a twenty-seven-mile river trip up the Kennebec and Androscoggin to Brunswick's "front door" and the town proper. Maquoit was the earliest ocean landing place nearest to Brunswick, and here wharves were maintained from early days for trading with points south or west. The earliest records of vessels in use in this territory are of the sloops *Pejepscot* (named after a town on the Androscoggin about five miles upstream from Brunswick) and *Maquoit,* built and used for carrying lumber and produce between Maquoit and Boston. William H. Rowe says, "The first name that comes to us out of the past is that of Robert Dunning, who, before the Revolutionary War, built one [vessel] if not more at Middle Bay." He further states that almost the first entry in the registry of the district of Bath is that of a schooner built at Harpswell in 1781.

The ocean traffic from Brunswick to Portland, Boston, and other points in Casco Bay and Massachusetts must have been considerable, for in 1820 a larger wharf, "seven hundred and

fifty feet in length," was built at Maquoit, and seventeen years later, a group of Brunswick merchants formed the Brunswick Wharf Company and built "a substantial wharf at Simpson's Point." The first vessel to use these new facilities was the *Alice,* which, prior to sailing on May 4, 1842, was advertised as a "new and splendid schooner, with superior accommodations for passengers," built expressly for this route and for this regular sailing packet service "between Brunswick and Boston, touching at Portland." This line, it is said, was operated five years, but was discontinued in 1847 following the building of the railroad. The "new and splendid schooner" *Alice* referred to in the packet line advertisement was evidently the *Alice* that, according to the Bath customhouse record, was a brig (and not a schooner) of 226 tons (about 93 ft. long, 24½ ft. beam, and 11 ft. deep), built in 1838—the year following the incorporation of the Brunswick Wharf Company.

Other historians tell us that, during revolutionary days, sloops and schooners of from 20 to 80 tons were built at Harpswell. Official records show that, besides smaller craft, the following vessels, "sizable" for the period (i.e., for the type and rig), were launched into Harpswell waters from the year 1784 (following peace with Britain) to 1821 inclusive:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet and Inches			Builder
				Length	Beam	Depth	
1784	BETSY	Schooner	116	71	23	8- 5	John Snow
1785	SALLY	Schooner	99	70	23	7- 4	Kingsbury Eastman
1788	POLLY	Schooner	69	61	19	7	Isaac Snow
1790	LADY WASHINGTON	Schooner	87	64	21	7- 8	John Snow
1795	FANNY	Schooner	39	50- 6	14- 5	6- 3	Paul Raymond
1800	WASHINGTON	Schooner	117	75- 6	22- 2	8- 1	John Cowen
1802	THOMAS	Schooner	117	74- 5	20	8	John Skofield
1802	HARRIET	Brig	162	80-10	23- 7	9-10	Stephen Pivington
1805	MORNING STAR	Schooner	125	77- 6	23- 7	8	Thos. Skofield
1806	OCEAN	Schooner	127	73-11	23- 1	8- 8¾	Anthony Coombs, Jr.
1811	WILLIAM	Brig	132	76- 2½	23- 3	8- 8¼	Stephen Merrill
1811	TWO SISTERS	Brig	130	77- 4	23- 4	8- 9	John Wilson
1811	HARPSWELL	Brig	182	88- 7	24- 1	9- 8½	Anthony Coombs, Jr.
1816	MARY JOAN	Brig	173	86	23-11	9- 7	Stephen Merrill
1819	SUSANNA	Schooner	140	78- 7	23- 3	8-10	Thos. Skofield
1819	INDIAN QUEEN	Schooner	105	70- 6	20- 3	8- 5	Amos Pillsbury
1820	MERRILL	Schooner	105	71- 3	22- 7	7- 8	Stephen Merrill
1821	ABIGAIL	Brig	199	84- 6	24-10	11- 0½	Thos. Skofield

In late registers, the following records of twenty-two vessels built at Harpswell, Maine, during the years 1792-1890 are set forth; a couple are indexed under Cumberland, and apparently all hailed from Portland. Harpswell, which includes South, West, North, and East Harpswell as well as Harpswell Center, occupies three necks of land jutting out into the ocean at the east end of Casco Bay. As far as shipbuilding is concerned, the Harpswell region has been connected with Bath, Brunswick, Freeport, and, for registry, with Portland; but geographically, by air direct, Harpswell Center is about seven miles southeast of Freeport, eight miles south of Brunswick, eleven miles southwest of Bath, and sixteen miles northeast of Portland. The vessels set forth in the following table represent only a small percentage of the total floating tonnage built from early days to the end of the construction of vessels in the Harpswell territory and on the various necks of land running south into the ocean between Casco Bay and the strip of mainland that forms the West Bank of the Kennebec River. (Some variations are evident in names and figures as compared with other records.)

Year Built	Name	Rig	Number of Masts	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1792	NANCY	Schooner	2	106-12/95	71.4	21.9	7.9
1795	SALLY	Schooner	2	21-89/95	40	11.7	5.4
1816	REUBEN	Schooner	2	33	46.5	15.3	5.5
1834	LARK	Schooner	2	20-61/95	35.5	11.9	5.8
1846	ELLEN MERRIMAN	Schooner	2	94.76	80	23	7.4
1852	LOOKOUT	Schooner	2	74.12 G. 70.41 N.	73	21	8
1856	L. F. CHASE	Schooner	2	34.52 G. 32.79 N.	61	18	6
1856	STORM KING	Schooner	2	36.46 G. 34.64 N.	58	18	6
1863	ADA CARTER	Bark	3	435.26 G. 413.50 N.	124.5	28.2	17.6
1864	GEORGE W. CHASE	Brig	2	285.73	105.8	26.4	10.3
1866	A. B. LITTLEJOHN	Schooner	2	23.97 G. 22.74 N.	51.4	16.8	5.6
1866	WILLIE SMITH	Schooner	2	32 G. 30.40 N.	55	17	6
1867	WILLIAM H. WARREN	Schooner	2	31.14 G. 29.58 N.	56	18	6
1867	RISING BILLOW	Schooner	2	20.45 G. 19.43 N.	47.4	15.1	6
1869	CLARA EATON	Bark	3	555.02 G. 527.27 N.	134.5	30	17.6
1869	ANITA OWEN	Brig	2	489.58 G. 465.10 N.	121.3	30	16.9
1871	CARRIE S. ALLEN	Schooner	2	24 G. 22.80 N.	47.9	16.4	5.8
1874	ARIADNE	Schooner	2	398.23 G. 378.32 N.	126.1	30.5	11.5
1874	MINNIE C. TAYLOR	Schooner	3	192.10 G. 182.50 N.	104.3	27.2	8.2
1879	G. M. STANWOOD	Bark	3	549.79 G. 522.31 N.	135.8	31.4	16.8
1881	DIDA E. CLARK	Barkentine	3	502.52 G. 477.39 N.	131.5	30.4	17
1890	LILLIE ALICE	Schooner	2	29	51.5	17.2	4.2

The foregoing incomplete list shows that some sizable vessels were built at Harpswell during the years 1863-1881 inclusive. Of the vessels set forth, two brigs of 286 and 490 tons, built in 1864 and 1869, respectively; a schooner of 398 tons, built in 1874; three barks of 435, 555, and 550 tons, built in 1863, 1869, and 1879, respectively; and a barkentine of 503 tons, built in 1881, averaged 460 tons register for the seven vessels. The five largest of these stated vessels (all square-riggers), consisting of three barks, one barkentine, and one brig, averaged 507 tons.

Historian William H. Rowe says that "before 1800 Brunswick built 44 vessels and Harpswell 8, mostly schooners and brigs ranging in size from 20 to 200 tons, with a few ships such as the *Nancy* of 286 tons, built in Brunswick in 1792, and the *Telemachus* of 217 tons, built in the same place four years later." It was John Peterson, we are told, who built the "big ship" *Nancy,* and this builder is credited with launching six vessels in the years 1791-1796. William Stanwood and John Dunlap, of Brunswick, are said to have been important early builders or owners of vessels constructed in shipyards located near their sawmills, which were located at the falls of the Androscoggin. Among the products of these river yards are mentioned the following craft:

Year Built	Name	Rig	Tonnage	Year Built	Name	Rig	Tonnage
1793	POLLY	Schooner	121	1806	NEPTUNE	Brig	147
1796	HANNIBAL	Brig	124	1807	MARY	Schooner	134
1798	HOPE	Brig	148	1809	AGNES	Schooner	125
1801	FORTUNE	Schooner	114	1810	AMERICA	Brig	184
1802	SOPHRON	Schooner	115	1811	CHARLES	Brig	151
1803	BRUNSWICK	Ship	199				

Most of these vessels, it is said, were used in carrying Maine lumber to the West Indies. This market offered a rich reward to such craft as escaped the French privateers and got their cargo safely to port. The Yankee owners must have been successful in their trading, for John Dunlap grew to be "the richest man in the District of Maine." However, in 1800, two of the Brunswick vessels—the *Hope* and the *Hannibal*—were taken by the French. The latter was soon restored to her original owners, being rather promptly recaptured by the U.S. man-of-war *John Adams.*

During the first half of the nineteenth century, Brunswick was a sawmill town. In 1820, we are told, there were "twenty-five saws on both sides of the river at the falls," and during the period 1835-1845, "there were thirty saws operating in Brunswick alone." In 1848, J. C. Humphreys & Company built two steam sawmills two miles down the river from Brunswick Village, and he established a shipyard close by "to build vessels to transport the cut lumber to markets." We are told that Gen. J. C., John H., and Charles C. Humphreys built during the years 1848-1856 the following ships: *Ophir* of 438 tons; *J. C. Humphreys* of 522 tons; *Singapore* of 622 tons; *Marengo* of 567 tons; and the bark *Annie Kimball* of 598 tons. This Humphreys yard was used as late as 1864, for during that year the brig *Perpetua* of 360 tons (also reported as 335 tons) was built there by Elbridge G. Simpson.

In regard to the identity of vessels and of their builders, the writings of historians do not seem to check entirely with the admittedly incomplete records of the Bath, Maine, customhouse, which give the following sizable vessels built at Brunswick and Topsham and registered in the Bath district. (Most of the vessels built at Brunswick and Topsham were for the account of local owners and builders, several were for Bath owners, and a few of those launched from Topsham yards were built for Boston merchants.)

Vessels Built at Brunswick

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet and Inches: Length	Beam	Depth	Builder
1784	NANCY	Schooner	61	62	18	6- 4	John Peterson
1784	RANGER	Schooner	90	66	21- 4	7- 7	John Peterson
1786	SALLY	Schooner	52	57	17- 2	7	John Peterson
1788	SPEEDWELL	Schooner	56	58	17- 2	6- 7	Nathaniel Larrabee
1790	BETSY	Schooner	33	38-11	13-11	5- 9½	John Coombs
1795	ORANGE	Schooner	129	76	23	8- 7	Joshua Shaw
1796	HANNIBAL	Brig	124	74	23- 2	8- 6	John Dunlap
1797	UNION	Schooner	83	68- 4	20- 1	7	Nathaniel Melcher
1800	BETSY	Schooner	92	69-10	21- 4	7- 2½	James W. Lemont
1801	JOHN & JAMES	Ship	240	88	25- 0½	12- 6	John Winthrop
1801	MARY	Brig	124	73	22- 3¼	8-10¾	Samuel Dunlap
(A brig MARY of identical dimensions is recorded as built in 1801 by John Mathews.)							
1801	FORTUNE	Schooner	114	73	22- 3	8- 2	David Dunlap
1801	SIREN	Schooner	118	75- 2½	22- 5¼	8- 1¼	John Perry
1802	IRIS	Schooner	120	75- 7½	22- 4	8- 3	John Speir

(Continued on next page)

Vessels Built at Brunswick—*Continued*

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet and Inches			Builder
				Length	Beam	Depth	
1802	SOPHRON	Schooner	115	73-10	22-10	8	William Stanwood
1804	LEOPARD	Brig	155	82- 5	23- 7	9- 2½	John Swett
1804	HAMLET	Brig	204	82	24	12	John Dunlap
1804	WINDWELL	Schooner	117	75- 2	22- 2	8- 2	Isaac Coombs
1805	RETRIEVE	Brig	221	83	23-11½	12-11½	Aaron Kimball
1805	JAMES	Schooner	123	77	23- 3	8- 4½	John Skofield
1806	ALMIRA	Brig	189	88- 6	24- 9½	9-10	Josiah Melcher
1806	NEPTUNE	Brig	147	80- 6	24	8-10	Henry Merritt
1806	WILLIAM KING	Brig	203	80- 6	24- 2½	12- 1¼	
1806	UNION	Schooner	137	80- 7	23- 3½	8- 5	David Given
1807	GOVERNOR STRONG	Brig	179	86- 9	24- 7	9- 8	Nehemiah Hooper
1807	FRANKLIN	Brig	197	87- 6	25- 6½	10- 2	John Swett
1807	MARY	Schooner	134	76-10	23- 8½	8- 7½	John Dunlap
1809	ISAAC	Brig	187	88	24- 5	9-11	Josiah Melcher
1809	RHODA	Schooner	102	71	21- 5	7-10	Thomas Skofield
1809	AGNES	Schooner	125	74- 8	22- 9	8- 7	David Given
1810	MARY ANN	Brig	134	77- 1	23- 4	8- 8	George Skofield
1810	AMERICA	Brig	184	87- 9	24- 5	9-10	John Swett
1810	HOPE	Schooner	121	76- 2	22- 8	8- 2	William Pennell
1811	NORTH STAR	Brig	177	84- 4	24- 4	9-11	John Henry
1811	ARGO	Brig	159	82- 6	24- 9½	9	William Pennell
1811	CHARLES	Brig	150	80	23-11	9- 1½	Jedediah Moulton
1811	MARCIA	Brig	162	83- 8	23-10	9- 4	Thomas Denning
1811	CRITERION	Brig	138	76	23- 7	9	Wm. P. Stover
1815	ADAMS	Brig	153	75- 4	22- 3	10- 6	Francis Adams
1815	CALISTA	Schooner	112	76	20- 7	8- 2	William P. Storey
1815	SIREN	Schooner	114	67	21- 8	9- 3	Campbell Alexander
1817	ACTEON	Brig	205	90- 4	25- 7	10- 1¾	William Pennell
1820	MEXICO	Brig	150	77- 5	22-10	9- 9½	James Skofield
1822	FLORIDA	Schooner	117	71- 7	21-10	8- 9	Jacob Pennell
1823	TURNER	Brig	154	83	23- 7	9- 0½	David Given
1824	JOHN	Brig	188	85- 4	24- 4	10- 4½	William Curtis
1825	ALBERT	Brig	195	88- 7	25- 2	10- 0½	John Given
1825	ADAMS	Brig	189	86- 6	24- 4½	10- 3	Josiah Melcher
1826	DUNLAP	Brig	197	88-11	25- 4½	10- 4	Josiah Melcher
1827	SUSAN	Schooner	129	78- 6	23- 4	8- 2	Washington Woodward
1832	ORBIT	Schooner	137	81-11	22- 9	8- 5	John Jordan
1838	ALICE	Brig	226	93- 5	24- 5	11- 2	
1846	SAMUEL R. JACKSON	Schooner	149	85- 4	25	8- 1	James Pennell
1849	J. C. HUMPHREYS	Ship	532	137- 9	29	14- 6	Ephraim Hunt
1851	SINGAPORE	Ship	622	141- 1	31- 1	15- 6½	Ephraim Hunt
1853	AFRICA	Ship	949	174	34- 3½	17- 1¾	
1854	GREENLAND	Bark	549	137- 9	29- 6	14- 9	Joseph C. Given
1855	MARCIA GREENLEAF	Ship	1,177	199- 9	36- 2	18- 1	Joseph C. Given
1856	ANNIE KIMBALL	Bark	598	143	30- 2	15- 1	J. C. Humphreys
1862	CONCORD	Brig	382	111- 6	27- 8	13-10	Joseph C. Given
1864	PERPETUA	Brig	335	122- 9	29-11	10- 2	E. G. Simpson

Among the many other vessels recorded in ship registers as built at Brunswick, Maine, were the schooner *Lucy* of 97-10/95 tons, constructed in 1802; the brig *Ellen* of 135 tons, built in 1819 (length 81.2 ft., beam 22.4 ft., depth 8.4 ft.); and the schooner *Forester* of 95-45/95 tons, built in 1834.

Vessels Built at Topsham

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet and Inches: Length	Beam	Depth	Builder
1788	HANNAH	Schooner	100	69	21-10	7-10	John Reed
1789	HENRY	Schooner	72	62	18	7- 5	Enoch Simpson
1799	ANDROSCOGGIN	Brig	133	75-10	22- 7	9	Isaac Perkins
1800	MINERVA	Brig	137	75-10	22-10	9- 2½	John Richardson
1802	ANN	Ship	232	86-10	24- 9	12- 4½	Charles Bradford
1802	MERCURY	Schooner	105	72	22- 1½	7- 8½	Robert Patten
1803	ENDEAVOUR	Schooner	113	72- 2	22- 5	8- 2	John Morse
1803	VULCAN	Schooner	119	72-10½	23	8- 4½	Thomas Reed
1804	DIAN	Brig	158	79- 2	23- 9	9-10½	Joseph Foster
1804	HERO	Schooner	123	76- 3	23	8- 2	John Miller
1804	VENUS	Schooner	106	71-10	21- 8½	7-11	Robert Patten
1804	DELIA	Schooner	113	72- 1	21-10	8- 4	Samuel Foy
1806	LEOPARD*	Brig	181	85- 9½	24- 3¾	9-11½	Stephen Harris
1806	MARY	Brig	167	85- 4½	23- 4½	9- 6½	Samuel Silvester
1806	MERCATOR	Brig	162	80- 2	23- 4½	10	Edmond Montfort
1806	MARS	Brig	153	79- 2	23- 7½	9- 6	Joseph Foster
1807	HENRY	Brig	180	84- 2	24- 8½	10	Ezra Smith
1807	HIRAM	Brig	149	80	23- 8½	9- 1	Abraham Howland
1809	HARMONY	Brig	194	88- 7	25	10- 0½	George Skofield
1810	MENTOR	Brig	183	83- 9	24	10- 6	Edmond Montfort
1811	HOME	Ship	424	114-10	28- 9	14- 4½	Stephen Harris
1811	WILLIAM HENRY	Brig	264	90	26	13	Peter H. Green
1811	COMET	Brig	187	87- 1	24- 8	10	Moses Merrill
1813	HAULPA	Brig	171	81- 6	23- 6	10- 3	Peter H. Green
1815	SARAH	Brig	128	76- 2	22-11	8- 6	Francis Small
1815	SAMPSON	Brig	165	80	23-10	10	James Sampson
1816	ANN MARIA	Brig	153	78	22- 4	10- 1	George F. Patten
1816	MARGARET	Schooner	120	78- 2	22- 8	7-10	Thomas Small
1819	STATIRA	Brig	183	80- 2	23- 4	11- 3½	George F. Patten
1823	FRANCIS AUGUSTA	Brig	227	86- 6	24- 6	12- 3	Samuel Veazy
1824	ALPHA	Schooner	124	76- 3	22- 2	8- 5½	J. Moulton
1825	JONES	Brig	190	86-10	25- 2	10	Samuel Veazy
1826	JAVA	Ship	331	105- 6	26- 6	13- 3	John Henry
1826	JOHN	Brig	260	96- 2	26- 1	11- 9¼	Samuel Veazy
1827	EMERY	Brig	285	99- 5	25- 4½	12- 8¼	Humphrey Purington
1827	ANN ELIZA	Brig	184	83- 5	22- 7½	11- 1	Joseph O. Reed
1829	WILLIAM	Schooner	120	76- 6	22- 9	8	J. Moulton
1831	CURTIS	Brig	249	95- 9	24- 2	12- 1	J. Moulton
1831	PROVIDENCE	Schooner	126	78- 8	22- 7½	8- 2	William Frost
1836	MARCIA JANE	Brig	223	91	24- 1½	11- 6	John Godfrey
1836	SAGADAHOC	Schooner	129	79-10	22- 7½	8- 2½	
1847	HUMPHREY PURINGTON	Ship	636	139- 8	31- 8	15-10	
1852	UNDINE	Bark	532	139- 7	28- 9	14- 4½	Charles Thompson
1852	GERTRUDE	Bark	506	135- 8	28- 6	14- 3	Jeremiah Hunt
1853	AMOS LAWRENCE	Schooner	197	96- 5	27- 7	8- 7	
1868	ADELAIDE	Brig	218	106- 2	26- 8	9- 7	J. L. Woodside
1870	CARRIE PURINGTON	Brig	335	117- 3	28- 8	13- 3	Joseph C. Given

*In addition to the brig LEOPARD of 181 tons built at Topsham in 1806, the registers show a schooner of the same name built at Topsham in 1808; this vessel is recorded as of 75-49/95 tons (length 65 ft. 1 in., beam 19 ft. 4 in., depth 6 ft. 11½ in.).

The building of the railroad "up from Yarmouth Junction to Brunswick" and the erection of the bridge across the Androscoggin River materially affected shipbuilding activities on the river at Brunswick and Topsham. It is said that the bridge construction work was completed before the bark *Undine* of 532 tons, which was being built by Charles Thompson on the Topsham side of the river above the bridge, was launched in 1852. This was a sizable vessel (about 140 ft. long, 29 ft. beam, and 14½ ft. deep), and the owners and builders, we are told, "found it necessary to cut a channel under the bridge on the Brunswick side to get her down the river to the sea."

Ships had been built at Mere Point since the days of the War of 1812, for the privateer *Seaflower* was launched from there. We are told: "Here on the western shore . . . William Stanwood built at least six ships, the *Brunswick,* 300 tons, in 1826; *Scotland,* 500 tons, in 1846; *Brunswick* [*II*], 700 tons, in 1840; *Harry Harbeck,* 500 tons, in 1845; *Potomac,* 200 tons, in 1846; and the *Sierra Nevada,* 500 tons, in 1851. . . . The brigs *Uncas, Sarah Ann* and *Eagle* were also built on the Point by Thomas Skolfield and his son Jacob."

Although the building of the railroad into Brunswick put out of business the sailing packet line between Brunswick's Casco Bay wharf and Boston, the New Wharf "furnished several convenient building berths, which for thirty years or more were kept busy by various builders." It was here that in 1849 Capt. Robert McMannus constructed the ship *Esmeralda* of 907 tons, and Israel G. Simpson (from whom Simpson's Point took its name) built the schooners *Eagle* and *Sylvia* and followed in 1854 with the barkentine *J. D. Lincoln* of 250 tons. Here, also, was located the yard of Samuel Dunning, who built the following vessels:

Year Built	Name	Rig	Tonnage	Year Built	Name	Rig	Tonnage
1846	ELLEN MERRIMAN	Schooner	129	1852	SCREAMER	Ship	1,197
1847	JUANITA	Schooner	136	1852	MAYFLOWER	Bark	286
1848	PENNSYLVANIA	Brig	153	1853	A. B. THOMPSON	Ship	980
1850	CONQUER	Ship	1,085	1854	SAM DUNNING	Ship	1,582
1851	JOHN CURTIS	Bark	467	1855	DANIEL ELLIOT	Ship	591
1851	WILLIAM A. DREW	Bark	164	1856	CONSIGNMENT	Ship	1,131

When the *Sam Dunning* (1,582 tons) was launched in 1854, she was the largest vessel built in the Casco Bay region up to that time. The ship was wrecked in 1864, when ten years old, during a voyage from Rangoon to England, and twenty-five members of her crew of thirty-one were lost with the ship. Elbridge G. Simpson, who in 1864 built the last sizable vessel at Brunswick on the Androscoggin (the brig *Perpetua* of 335 tons), built here at New Wharf the brig *Orient.* Of the smaller builders in this section and their product can be mentioned the following:

Year Built	Name	Rig	Tonnage	Builder
1864	ELLEN DYER	Bark	397	Robert Pennell
1864	NETTIE MERRIMAN	Bark	600	Robert Pennell
1866	SARAH THOMPSON	Brig	250	Chas. L. Thompson
1866	SARAH	Brig	199	Chas. L. Thompson
1867	ISAAC LINCOLN	Bark	600	Chas. L. Thompson
1867	GALVESTON	Bark	472	Robert Pennell
1873	DAVID TORREY	Schooner	166	Daniel Brewer
1873	NELLIE F. SAWYER	Schooner	284	Daniel Brewer

Four miles from Brunswick Village, at Pennellville, ships were built by members of the Pennell family from the 1780's to 1874, and it is said that "over eighty ships have slid down the ways at Pennellville into the embrace of Middle Bay." Capt. William Pennell bought a large farm at this site in 1780, built a home, and established a shipyard. He sold the shipyard

to his brother Jacob, who passed it on to his son Jacob, Jr. The five sons of Jacob Pennell, Jr. (Charles S., Jacob, James, Robert, and John), as Pennell Brothers, operated the shipyard at Pennellville during the years 1834-1874, the period of its greatest activity. It is said that during the War of 1812, Jacob Pennell built and launched a 200-ton ship. Fearing privateers, he would not let her, upon completion, proceed to sea, but kept her "tied up and hidden away" in a cove until the war was over. There are no records available of the early vessels built by Jacob Pennell and Jacob, Jr., but family lists show that the Pennell Brothers of the next generation built sixty-eight vessels—seventeen ships, thirteen barks, twenty-two brigs, fourteen schooners, and two sloops. Records in the Bath customhouse of vessels built at Brunswick show that William Pennell was the registered builder of the schooner *Hope* in 1810 and the brigs *Argo* and *Acteon* in 1811 and 1817. Jacob Pennell is the registered builder of the schooner *Florida* in 1822 and James Pennell of the schooner *Samuel R. Jackson* in 1846, each launched at Brunswick. The most important vessels in the Pennell-built fleet were probably the following:

Year Built	Name	Rig	Tonnage	Year Built	Name	Rig	Tonnage
1834	CHARLES	Brig	160	1855	WILLIAM WOODSIDE	Bark	462
1836	HARRIETT	Schooner	128	1855	C. S. PENNELL	Ship	968
1838	JACOB PENNELL	Ship	233	1855	UNITED STATES	Ship	1,082
1840	MARY PENNELL	Brig	233	1859	JOHN O. BAKER	Ship	797
1844	GUADALOUPE	Bark	188	1862	DEBORAH PENNELL	Bark	599
1845	OREGON	Bark	347	1864	ANGLO SAXON	Bark	543
1848	JAMES PENNELL	Ship	570	1865	MARY EMMA	Ship	1,067
1849	TEMPEST	Ship	861	1866	ISTRIA	Bark	811
1854	REDWOOD	Ship	1,165	1866	OAKLAND	Ship	1,237
1855	ELLEN HOOD	Ship	1,046	1874	BENJAMIN SEWALL	Ship	1,433

The last and largest of the vessels built by the Pennells was the *Benjamin Sewall,* built by C. S. Pennell & Company and launched October 21, 1874. This ship was a full-bodied Down Easter of 1,433 tons gross and 1,362 tons net register, measuring 202 ft. long, 38 ft. 9 in. beam, and 24 ft. deep. The *"Sewall"* was an unfortunate ship, made many long passages (of so long duration that very heavy premiums were paid for reinsurance), and suffered many mishaps. Most of her sea life was spent in trade with the Far East, but she made several passages from North Atlantic to North Pacific ports and operated at times in the export lumber trade out of Puget Sound. The *Benjamin Sewall* was one of a fleet of ships damaged by the tidal wave that swept the Peruvian coast in May 1877; she was repaired on the dry dock at Callao. In 1889 she was in collision with the British ship *Sutlej,* suffered injuries, and then went ashore. In 1892 she reached Valparaiso from Puget Sound badly leaking, so that she had to be dry-docked for repairs and could not get a cargo out. It was necessary for her to return in ballast to Vancouver, where she was loaded with lumber for Britain. In 1894 she had a bad time off Cape Horn, was badly battered, lost most of her fresh water, and was forced to put into Tome. Three years later, on a voyage from Shanghai to New York, she had to make for Singapore with a sprung rudderhead. In 1898 the *Benjamin Sewall* cleared Baltimore for San Francisco; dismasted, she put into Montevideo for repairs. The cargo was discharged and the voyage abandoned. She then went to Hong Kong and was driven ashore in a typhoon. On the passage from Shanghai to Puget Sound, the ship encountered a second typhoon and put into Hakodate badly battered. Captain Sewall left the ship "in disgust with his bad luck" and crossed the Pacific by steamer, leaving the ship under a new command "to follow leisurely"—which she did. The *Benjamin Sewall* sailed from Puget Sound in November 1901 for Fremantle, Australia, but had to put into Honolulu in a leaky condition and with damage to rigging and loss of many sails; she later completed the voyage, but it was her last. The ship was wrecked on Pescadores Reef on October 6, 1903 (when twenty-nine years old), while bound to Shanghai from Singapore.

Probably the most important of the Brunswick yards in the fifties, sixties, and seventies of the nineteenth century was that of the Skolfields. The name was well known among shipbuilders in the Brunswick area and is given in early customhouse records as "Skofield." A John Skofield is registered at the Bath customhouse as the builder at Brunswick, on the Androscoggin, of the schooner *James* in 1805. Thomas Skofield is the officially accredited builder of the schooner *Rhoda* in 1809, James Skofield of the brig *Mexico* in 1820, and George Skofield of the brig *Mary Ann* on the Brunswick side of the river in 1810 and of the brig *Harmony* (194 tons) on the Topsham side in 1809. It was George, born in Harpswell in 1776, who became prominent as a Brunswick shipbuilder on "the Casco Bay side of the Township." Leaving his earlier yards on the Androscoggin, George moved to his native town of Harpswell. However, feeling that he was being unfairly treated by the assessors when he was taxed for a vessel on the stocks undergoing construction, he moved "just across the line" from Harpswell to Brunswick, where he built ships until his death in 1866 (when ninety years of age). His sons, operating as Skolfield Brothers, carried on the business until 1885. It is said that George Skolfield built, all told, sixty vessels and through most of his life "averaged one ship a year." The story goes that he started with nothing and had to borrow a dollar to buy an ax to fell the timber for the frame of his first vessel. In his prime, he was one of the wealthiest men in the community. The Skolfield shipyard was located where Harpswell Neck narrows down to "a mere bridge of land," which connects it with Brunswick. Among the vessels built at the Skolfield yard can be mentioned the following:

Year Built	Name	Rig	Tonnage	Year Built	Name	Rig	Tonnage
1848	JAMES BADGER	Ship	890	1870	GEORGE SKOLFIELD	Ship	1,276
1850	GOVERNOR DUNLAP	Ship	946	1873	FANNIE SKOLFIELD	Bark	1,062
1851	JOHN CURTIS	Bark	467	1875	SAM SKOLFIELD	Ship	1,589
1854	JOHN L. DIMMICK	Ship	1,086	1880	I. L. SKOLFIELD	Bark	1,431
1856	RISING SUN	Ship	1,310	1883	SAM SKOLFIELD 2ND	Ship	1,514
1860	LYDIA SKOLFIELD	Ship	1,201	1885	GEORGE R. SKOLFIELD	Ship	1,645

Other vessels launched from the Skolfield yard were the ships *Washington, John Dunlap, Dublin, Roger Stewart, Brandywine, Scioto* and *Roamer;* the bark *Virginia Dare;* and the brigs *Mentor, George, Alcenas, Thomas P. Cope,* etc.

The *Rising Sun* of 1,310 tons, built by George Skolfield in 1855-1856, was the only so-called "clipper" ship to be built in Brunswick. She measured 207 ft. long, 39 ft. beam, and 27 ft. deep and was owned by her builder and his business associates.

The *Lydia Skolfield* had the reputation of being "an unusually well-built wooden ship." In 1873, when thirteen years old, she was classed A-1 with a star for another three years, this rating being the same as she had received after launching in 1860; in 1884, when twenty-four years old, she was rated 1½ and "fit for the carriage of all kinds of cargo on all voyages." It is said that, when the ship was retrunneled, "some 1,800 trunnels were driven into her and not a particle of rot was discovered in any of the borings."

The ship *George Skolfield* was launched in September 1870. She registered 1,276 tons and was 187 ft. long, 38 ft. beam, and 23 ft. 9 in. deep. She was owned and operated by her builders. For many years, the *"Skolfield"* was engaged in the transatlantic cotton trade; she then ran between North Atlantic ports and the Far East, generally making Calcutta. In September 1893, when twenty-three years old, the ship was sold to the Alaska Packers Association, of San Francisco, and inaugurated that company's fleet of internationally known old square-riggers. For seven years, the *"Skolfield"* made seasonal voyages to Alaska as a "salmon packer." In the fall of 1900, she was sold to the American Trading Company, of San Francisco, and was dispatched to Port Arthur with stores for the Russian Government. In late October, the *George Skolfield* went ashore on the Japanese coast. She was floated and taken

to Nagasaki, where, after repairs, when over thirty years old, she was converted into a coal barge.

The *Sam Skolfield 2nd,* built and owned by Skolfield Brothers, of Brunswick, Maine, was launched in December 1883. She was to have been named *Skolfield Brothers,* but the ship *Sam Skolfield* was lost in a Gulf of Mexico hurricane while the new ship was on the stocks, so it was decided to christen her *Sam Skolfield 2nd* and perpetuate the name of the "first *Sam,*" which was of 1,589 tons and had been built in 1875. The "second *Sam*" measured 218½ ft. long, 39¾ ft. beam, 24 ft. deep, and 1,514 tons register. She was a good carrier and a slow sailer. Particularly in her later years, she was often in trouble. In 1894 she was dismasted in the North Atlantic and made St. Thomas under jury rig, following which she was towed to New York and re-masted. After lying idle for seven months in Manila following the discharge of a cargo of coal from Newcastle, N.S.W., the *Sam Skolfield 2nd* sailed on December 1, 1901, for Puget Sound. When 114 days out (it was thought that she had been lost at sea), the ship put into Yokohama short of stores, provisions and water; she finally reached Port Townsend in May 1902, some 170 days out from Manila. She was then sold by the Skolfields to N. W. Rice, of Boston, who re-rigged her as a bark and renamed her *Harvard.* For five years, she was operated in the Atlantic and was then converted into a tow barge. During the first World War, because of the emergency need of ocean-going bottoms, she was reconditioned and refitted as a bark and sent to sea. In 1919, while bound to Honolulu, she suffered in heavy weather, and a fire in her cargo added to the damage. After reaching port, she was condemned and sold at auction. The new owners, Charles Nelson Company, of San Francisco, thoroughly overhauled and repaired her. In October 1920, when bound from Sydney to Valparaiso, she put into Papeete damaged by a gale and leaking, and she remained in port until November 1921. On December 13, 1921, she was abandoned by her officers and crew in a sinking condition off Panama. The *Sam Skolfield 2nd* was thirty-eight years old when she foundered, but she had not been in first-class physical condition for fifteen years.

The *George R. Skolfield* was the largest and the last vessel built by Skolfield Brothers, of Brunswick, Maine, who at one time owned a large fleet of merchant sailers. She was launched in June 1885 and measured 232 ft. long, 39 ft. 9 in. beam, 24 ft. 6 in. deep, and 1,645 tons register. A good carrier and a rather slow sailer, the ship had an uneventful career. When fifteen years old, she was sold to the Seaboard Transportation Company, of New York, and converted into a barge, in which prosaic capacity she saw service for almost twenty years. She ended her days when she stranded on February 5, 1920, at Sea Isle, New Jersey.

Brunswick, "the mill town on the Androscoggin" (a tributary of the Kennebec River), was jealous, in the old days, of Bath, "the shipbuilding town on the Kennebec." Ships built on the Androscoggin at Brunswick, Topsham, and in the upper bay at Bowdoinham and the reaches of the rivers, could get to the ocean only by passing Bath, which is ideally located at about the middle of the Long Reach of the Kennebec River, with deep water all the way to the ocean. Brunswick wanted to get away from the domination of Bath in marine matters as well as to cut off mileage and enjoy a shorter and more direct trade route to markets, such as Portland and Boston; hence its development of a Casco Bay landing and shipping point many miles from the town, which was primarily a river sawmill town and not located with any thought of ever growing south to Casco Bay or of becoming a shipbuilding town or ocean port. Brunswick was proud of its ships and wanted Brunswick—not Bath—painted on their sterns as the hailing port. When Congress passed a law requiring that all vessels owned in a customs district should, after 1870, hail from the port of entry, it meant that, with Portland and Bath the two ports of entry in the vicinity of Brunswick, all vessels built in that township would have to hail from either Portland or Bath. As Brunswick, in 1870, was launching its vessels into Casco Bay tidewaters, these vessels, even if owned in Brunswick and operated by Brunswick merchants, had to hail from Portland, where the customs office for all Casco Bay towns was located. Skolfield Brothers objected, as did other shipbuilders and owners in Casco Bay at Brunswick, Freeport, and Yarmouth, but the Skolfields went further. They painted "Portland"

in three-inch letters on the stern of their ships as required by law, but added conspicuously beneath the hailing port the words, "Built at Brunswick."

In SHIPBUILDING DAYS IN CASCO BAY, William H. Rowe says:

> Although his vessels were few in number, yet Robert Giving and his yard at Middle Bay had an enviable reputation for quality and carefulness of construction. Captain Giving, who was somewhat of an eccentric, always living alone and cooking his own food, built vessels averaging about three hundred tons in size often by his own unaided efforts and at the best with only three or four hands to help in the heaviest work. In this way it took him almost three years to produce an ordinary craft, and did his funds run low, much longer, for he would leave his own enterprises high and dry until he had enough money of his own to complete them. During all his business life he was never in debt a dollar. His craft met a ready sale for the purchaser knew that the timber had been selected by Mr. Giving in the forests, stick by stick, and that the whole work of building had been done with meticulous care.

No man, of course, by "his own unaided efforts" could handle the timbers and planking of even a small, not to mention a sizable 300-ton, vessel; but, ignoring the impractical statements of a writer who obviously was not a shipbuilder, we find much in Rowe's description of Giving and his method of work that, in a measure, applied to many builders of wood vessels in Maine in the seventeenth, eighteenth, and early nineteenth centuries. Shipbuilding was often an economic family affair worked in with farming and the clearing and development of land for crops and livestock. Cutting timber in the woods and the construction work were seasonal and planned to give employment to the male members of the usually large old-time family, and this without interfering with the operation of a farm, the growing of crops and livestock, and the cutting, preparation, and shipping of forest products for outside markets.

Rowe and other historians give the name of this interesting family of early shipbuilders in the Brunswick-Topsham-Harpswell-Bath region as "Giving," but the government customhouse records at Bath give it as "Given." Rowe, in addition to the activities of Robert Giving, refers to Joseph C. Giving, who during the forties, fifties, and sixties of the last century had a yard on the New Meadows River, where "he built the ship *Ann E. Thompson,* 787 tons, in 1848; bark *Greenland,* 562 tons, in 1854; ship *Marcia Greenleaf,* 1,177 tons, in 1855; brig *Concord,* 382 tons, in 1862; bark *Annie H. Palmer,* 500 tons, in 1864; schooner *A. P. Jordan,* 286 tons, in 1866; and brig *Josephine,* 250 tons, in 1867." The Bath customhouse records show the bark *Greenland* of 549 tons, the ship *Marcia Greenleaf* of 1,177 tons, and the brig *Concord* of 382 tons as built in 1854, 1855, and 1862, respectively, by Joseph C. Given at Brunswick, Maine. Among the other registered builders of sizable craft in the Bath district, we note that William Given built the schooner *Sea Flower* of 22 tons at Kennebec in 1780; that David Given constructed the schooner *Union* of 137 tons in 1806 and the brig *Turner* of 154 tons in 1823; and that John Given built the brig *Albert* of 195 tons in 1825—all three vessels being laid down at Brunswick. George N. Given launched the schooner *Ester* of 127 tons at Richmond in 1832; St. Vincent Given built at Bowdoinham the full-rigged ships *Marrilla* of 539 tons in 1848, *S. V. Given* of 593 tons in 1851, and the relatively large *Juan Fernandez* of 1,079 tons in 1854; and as late as 1870 Joseph C. Given launched the brig *Carrie Purington* of 335 tons from a yard at Topsham.

On the Harpswell peninsula—which runs south, projecting into the ocean, some nine or ten miles, with South Harpswell at the tip about thirteen miles south of Brunswick—many vessels were built in several yards. During the decade that followed the great shipbuilding boom in America (which ran from 1850-1854), the brothers Harmon, Stover, and David Pennell built several small deep-sea square-riggers on the east shore at North Harpswell. Among these were the bark *Chevalier* (478 tons), built in 1854; the bark *Harmon* (308 tons), launched in 1857; the bark *Acacia* (316 tons), built in 1858; and the brig *George W. Chase* (286 tons), built in 1864. On the westerly side of the peninsula at Jordan Shore, where Paul Randall had a yard, were built the brigs *General Marion* and *General Washington.* Among the vessels built (generally in the third quarter of the nineteenth century) on the

Harpswell peninsula can be mentioned the following, which are representative of the output of the shipyards in this locality:

Year Built	Name	Rig	Registered Tonnage	Builder
1847	COMMODORE STEWART	Brig	135	Wilson
1848	LEONTINE	Brig	176	Curtis & Estes
1848	ALESIA	Brig	167	Theodore Stover
1849	JOSEPH ALBION	Brig	221	Curtis & Estes
1850	PANOMIA	Bark	413	Intervale
1850	P. R. CURTIS	Brig	229	Curtis & Estes
1850	MATANZAS	Brig	144	Intervale
1851	MANZANILLA	Brig	185	Jacob Bailey
1851	WILLIAM A. PARKS	Brig	195	Alcott S. Merriman
1852	CASTILLIAN	Brig	220	Norton Stover
1852	THOMAS COOPER	Brig	216	Alcott S. Merriman
1852	MECHANIC	Brig	219	Wilson
1852	CORINTHIAN	Bark	252	Curtis & Estes
1852	LOOKOUT	Schooner	111	Curtis & Estes
1853	EXCURSION	Sloop	51	Norton Stover
1853	MARY HAMILTON	Brig	292	Curtis & Estes
1853	NORTHERN LIGHT	Sloop	80	Alcott S. Merriman
1854	CHAMPION	Ship	563	Curtis & Estes
1854	IONIC	Bark	298	Curtis & Estes
1854	LIZZIE T. NICHOLS	Bark	298	Curtis & Estes
1854	CELESTIAL BREEZE	Ship	491	Alcott S. Merriman
1855	GRANDILLA	Schooner	228	Theodore Stover
1855	ANDES	Bark	274	Curtis & Estes
1855	HARPSWELL	Ship	628	Norton Stover
1855	ALFARETTA	Brig	303	Norton Stover
1856	GEORGE DEERING	Ship	249	Norton Stover
1856	P. C. ALEXANDER	Ship	282	Curtis & Estes
1856	STORM KING	Schooner	68	Curtis & Estes
1858	S. W. HOLBROOK	Bark	348	Curtis & Estes
1859	MORNING STAR	Ship	239	Norton Stover
1859	EVENING STAR	Ship	257	Norton Stover
1861	HATTIE WHEELER	Brig	397	Alcott S. Merriman
1862	HATTIE S. EMERY	Brig	205	Alcott S. Merriman
1864	ANGIER H. CURTIS	Brig	388	Curtis & Estes
1864	NORTON STOVER	Bark	463	Norton Stover
1864	PRAIRIE ROSE	Brig	407	Norton Stover
1864	JOHN F. PEARSON	Bark	520	Alcott S. Merriman
1864	HATTIE E. BISHOP	Brig	368	George and Emore Allen
1874	ARIADNE	Schooner	377	Paul Merriman
1882	DIDA CLARK	Barkentine	502	Paul Merriman

Paul R. Curtis and Albion Estes formed the partnership of Curtis & Estes and, it is said, "for nearly a score of years turned out an average of a vessel a year"—almost all square-riggers. The small ship *P. C. Alexander,* built by this firm, was sunk in the North Atlantic (when homeward bound, laden, from Cuba) by the Confederate raider *Alabama* during the Civil War.

Indicative of the youthful skippers on Maine ships in the eighteenth and first half of the nineteenth century, it is of interest to note that the ship *Andes,* built by Curtis & Estes, was commanded by Capt. William Merriman on a voyage to the West Indies before he was twenty-one years of age.

XXIV.

BOWDOINHAM AND MERRYMEETING BAY, MAINE

Active in Shipbuilding from the 1600's to the Down Easter Period

BOWDOINHAM, about seven miles from the city of Bath and located on the northwestern corner of "The Bay" where the Androscoggin River empties into the Kennebec, has built ships from the days of the early settlers in the seventeenth century. Large numbers of sloops and schooners, of from 15 to 75 tons for the sloops and from 60 to 135 tons for the schooners, were built there in the eighteenth century, during revolutionary days, and in the early years of the new republic, but practically no authenticated records are available in regard to these craft and their builders. Among the many sizable vessels known to have been built at Bowdoinham during the early days of the republic and prior to the War of 1812 are the following craft, which were deemed large or moderate in size considering the type and the period:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1786	VASSALBOROUGH	Schooner	98	68	22.5	7.7	Elihu Getchell
1801	JEFFERSON	Schooner	114	74.2	22.7	7.9	Thomas Fillebrown
1804	OLYMPUS	Brig	170	81.5	23.5	10.2	John Springer
1804	BETSY	Schooner	104	68.2	21.1	8.2	William Denham
1805	WELCOME RETURN	Brig	174	84.2	24.5	9.7	Daniel Brewer
1806	DENHAM	Schooner	127	77.8	22.9	8.2	William Denham
1806	MESSINA	Schooner	124	76.3	23	8.2	John Speir
1807	EROS	Schooner	126	78.4	23	8.1	John Springer
1810	SUCCESS	Schooner	136	79.9	23.6	8.3	Ami Ross
1810	LIBERTY	Brig	121	77	22.3	8.1	John Henry
1811	SEGUIN	Ship	336	101	27.5	13.7	William Denham
1811	ROTUND	Brig	146	78.6	22.5	9.5	John Springer
1811	HENRY	Brig	190	87.2	24.8	10.1	John Henry
1811	CLARISSA ANN	Brig	197	80.8	23.8	11.9	Abraham Howland
1811	FAME	Brig	188	86.5	24.7	10.1	Joseph Carr
1811	SUPERIOR	Schooner	131	79.3	22.4	8.5	James Rogers, Jr.
1812	WILLIAM & DORCAS	Schooner	108	72.4	21.8	7.9	William Denham
1812	TANTAMOUNT	Schooner	107	71.7	22.8	7.7	John Henry

The ship *Seguin* of 336 tons, built by William Denham in 1811 (named after the island rock, three miles oceanward from the mouth of the Kennebec), was a big vessel in her day.

Because of the war with England, no sizable vessels were built at Bowdoinham during the years 1813 and 1814; but construction was resumed in 1815, when four brigs of from 126 to 176 tons were built, followed by two brigs of 168 and 188 tons and some sizable schooners in 1816. Each year up to and including 1828 saw some medium and large brigs and schooners

launched from Bowdoinham (or Bowdoin) yards, but building of sizable craft was intermittent during the eighteen-year period 1829-1846 inclusive, for in only six of these years were sizable vessels built (i.e., over 200 registered tons). In 1831, however, the full-rigged ship *Augusta* of 431 tons (length 121.6 ft., beam 28 ft., depth 19 ft.) was built by Thomas M. Lewis. In 1847, Bowdoinham commenced to build three-masted ships in quantity and during the boom years 1851-1855 launched ten full-rigged ships of from 593 to 1,267 tons register and a brig (*Rolling Wave*) of 236 tons. There was no construction of sizable vessels at Bowdoinham yards during the years 1856-1863, but Robert Purington built the ship *Neptune* of 1,183 tons and John Harward launched the bark *Jane Harward* of 577 tons in 1864. Thereafter, for twenty years, many small craft were built, but only ten sizable vessels; they consisted of two ships of 1,491 and 1,159 tons, a bark of 510 tons, a barkentine of 707 tons, a brig of 207 tons, and six schooners, the largest of which was the *Warren Adams* of 667 tons—the last sizable vessel built at Bowdoinham—constructed by J. Rideout & Company in 1884.

The following list gives the sizable vessels built at Bowdoinham during the period 1847-1884 inclusive:

Year Built	Name	Rig	Tonnage	Registered Dimensions In Feet			Builder
				Length	Beam	Depth	
1847	GENOA	Ship	549	134	30	15	
1848	MARRILLA	Ship	539	134.2	29.7	14.8	St. Vincent Given
1848	SOLOMON EATON	Brig	233	98.3	24.3	10.9	E. C. Coombs
1849	RHINE	Ship	534	132.3	29.8	14.9	John Harward
1851	SEA NYMPH	Ship	732	150	32.7	16.3	Robert Patten
1851	S. V. GIVEN	Ship	593	142	30.2	15.1	St. Vincent Given
1852	SHANGHAI	Ship	649	143	31.5	15.8	Horace A. Gray
1853	TRANQUEBAR	Ship	868	167.7	33.4	16.7	
1853	JOHN FYFE	Ship	839	165	33.2	16.6	
1854	AGAMEMNON	Ship	893	169	33.8	15.9	John Harward
1854	GEORGE L. SAMSON	Ship	1,005	181.2	34.5	17.2	Joseph Berry
1854	JUAN FERNANDEZ	Ship	1,079	178.2	35	17.5	St. Vincent Given
1854	LARINA ADAMS	Ship	882	165.5	34	17	Samuel H. Fuller
1854	ROLLING WAVE	Brig	236	100.2	26.7	10	William M. Berry
1855	PROTECTOR	Ship	1,267	191	37.8	18.9	Joseph Berry
1864	JANE HARWARD	Bark	577	140	30	15	John Harward
1864	NEPTUNE	Ship	1,183	188.9	36.7	18.3	Robert Purington
1865	VIOLET	Brig	207	108.1	28.7	8.6	Robert Purington
1867	ALBERT	Bark	510	127	29.5	18.1	John Harward
1869	HENRY S. SANFORD	Ship	1,159	180.5	35.7	23.7	John Harward
1869	MAY MORN	Schooner	184	103.3	27.3	8.7	Nathaniel H. Macomber
1869	FRED WALTON	Schooner	464	135.7	31.2	14.6	Robert Purington
1870	MATTIE W. ATWOOD	Schooner	492	135.6	31.4	14.7	Robert Purington
1874	ST. LUCIE	Barkentine	707	150.7	33.3	19.2	J. H. P. Merrow
1877	SEA KING	Ship	1,491	210.5	39.3	21.3	George H. Theobald
1883	R. D. SPEAR	Schooner	352	133.3	32.7	10.2	Rideout & Company
1884	WARREN ADAMS	Schooner	667	163.3	35.1	13.1	J. Rideout & Company

The building of sizable vessels at Bowdoinham, of which reliable records are available, can be divided into three periods covering practically a century of time:

Period	Number of Years		Number of Sizable Vessels Built of Each Rig						
	In Period	In Which Sizable Vessels Built	Full-rigged Ships	Barks	Barkentines	Brigs	Total Square-riggers	Schooners	Total All Rigs
1786-1812	27	9	1	—	—	7	8	10	18
1813-1846	34	19	1	—	—	20	21	14	35
1847-1884	38	17	16	2	1	3	22	5	27
1786-1884	99	45	18	2	1	30	51	29	80

According to available records, the most important builders of sizable vessels at Bowdoinham (i.e., sizable for the type and the period) and their years of activity in constructing such craft were as follows:

Name	Period	Sizable Vessels Built during This Period		Number of Each Rig				Tonnage of Largest Vessel
		Number	Tonnage	Ships	Barks	Brigs	Schooners	
John Henry	1810-1825	13	2,118	—	—	9	4	273
George Henry	1824	1	130	—	—	—	1	113
William Denham	1804-1819	5	802	1	—	—	4	336
John Springer	1804-1815	4	568	—	—	3	1	170
Carr — Joseph, John, James, and William..	1811-1822	5	629	—	—	1	4	188
Thomas Harward	1817-1825	3	536	—	—	2	1	224
John Harward	1849-1869	5	3,673	3	2	—	—	1,159
Robert Purington	1864-1870	4	2,346	1	—	1	2	1,183

Some other builders important in shipbuilding history in the Bath territory constructed some vessels at Bowdoinham; among them are Given, Fillebrown, Rogers, Patten, Theobald, Berry, and Rideout.

The largest vessels—all full-rigged ships—built at Bowdoinham were (1) the *Sea King* of 1,491 tons, built by George H. Theobald in 1877, which was a large ship of Down Easter type; (2) the *Protector* of 1,267 tons, built by Joseph Berry in 1855, which was heavily sparred and sharper than a typical Down Easter, but was not as fine-lined as a "half" clipper; (3) the *Henry S. Sanford* of 1,159 tons, built by John Harward in 1869; (4) the *Neptune* of 1,183 tons, built by Robert Purington in 1864 (both of these ships built in the sixties were Down Easters); (5) the *Juan Fernandez* of 1,079 tons, built by St. Vincent Given; and (6) the *George L. Samson* of 1,005 tons, built by Joseph Berry. The last two vessels were built in 1854 and were of somewhat sharper model and carried more canvas than the standard Bath-built ship.

The ship *Henry S. Sanford*—which can be considered representative of her class of second-rate Down Easter—was built by John Harward and launched from his Bowdoinham yard in October 1869. She was 180 ft. 6 in. long, 35 ft. 8 in. beam, 23 ft. 8 in. deep and registered 1,159 tons. She was named after a former United States minister to Belgium, who owned an interest in her. The *"Sanford"* was of the kettle-bottom, tumble-home type—a good carrier, but a dull sailer. Most of her sea life was spent carrying coal, case oil, and guano, but she also took two cargoes of wheat from the northern Pacific Coast to Europe. She was managed by her builders for some time and was then sold to Nesmith & Sons, New York. In the early seventies, while at anchor at Callao, Peru, she was run down by the big British-owned, American-built clipper *Donald McKay* and suffered much damage. After extensive repairs were made at Bath, the ship was purchased by Capt. Nathan P. Carver, who put her under the management of Pendleton, Carver & Nichols. On a voyage from Manila to New York in 1887, Captain Pendleton and four of the crew died of beriberi. A few years later, while the *Henry S. Sanford* was loading at Cebu, she was again damaged when at anchor, this time by a Norwegian vessel that dragged her anchor during a typhoon. The *"Sanford's"* hull was badly injured by the collision and her masts carried away. Later, the wrecked vessel was towed to Manila, where she was condemned and sold and the hull used for coal storage.

XXV.

THE UPPER KENNEBEC AREA

(north of Bowdoinham, the Androscoggin, and Merrymeeting Bay)

A. Dresden

ABOUT NINE MILES up the Kennebec River, above Bath, is Swan Island, which approaches four miles in length and a mile in width. On the bank of the east branch of the river passing Swan Island is Dresden, where ships were built in the eighteenth and the first half of the nineteenth centuries. Among the sizable vessels registered in Bath are the following recorded as built in the Dresden area:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1809	WELCOME RETURN	Schooner	115	71.6	21.7	8.6	John Kidder
1811	DRESDEN	Brig	181	82.5	24.4	10.4	James Carney
1811	EDWARD	Schooner	137	77.2	23.1	8.9	George Houdlette
1817	MARY & NANCY	Schooner	108	74.2	22.5	7.5	John Swett
1819	BETSY	Schooner	116	77	23.2	7.5	John Swett
1825	JOHN	Schooner	127	79	23	8.1	John Chism
1825	HELEN	Schooner	127	78.7	23.9	9.8	George Houdlette
1826	LAURA	Schooner	120	78	23.2	7.7	Nathaniel Blanchard
1829	JACKSON	Schooner	121	77.7	23	7.7	William Hiscock
1854	MERMAID	Brig	312	115.9	27.3	10.9	S. P. Tomlinson

B. Richmond

On the West Bank of the Kennebec River, twelve miles as the crow flies north of the center of the city of Bath and opposite Dresden and the northern extremity of Swan Island, is located the town of Richmond, which boasts a fine shipbuilding record and, next to the city of Bath, was the most important shipbuilding community in the Greater Bath area during the period 1824-1885. The Swett family of shipbuilders had built for years at Georgetown and parts of Greater Bath. John Swett, who had built schooners in Dresden in 1817-1819, launched two sister brigs at Richmond in 1824 named *Lady* and *Lady Richmond;* these vessels were each of 207 tons register, 82 ft. long, 24½ ft. beam, and 12 ft. deep. Other sizable vessels (for the period) registered in Bath as built in the Richmond area during the years 1825-1837 are as follows:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1825	FACTOR	Schooner	115	76	23.4	7.5	Joseph Dennison
1826	MECHANIC	Schooner	114	77.2	23.2	7.4	Joseph Alexander
1827	NAVARIN	Schooner	116	72.7	22	8.5	James Dennison
1832	BOSTON	Schooner	130	80	23.9	8	Samuel L. Blair
1832	ESTER	Schooner	127	77	23.1	8.3	George N. Given
1837	REPORTER	Schooner	133	84.1	23.1	7.8	Elias Colby

Records show that the two-masted schooner *Delaware* of 114 tons (length 81.2 ft., beam 23.6 ft., depth 6.9 ft.) was built in Richmond in 1844.

With the launching of the schooner *Croton* in 1846, T. J. Southard commenced a long and highly important career of forty years as a shipbuilder at Richmond. T. J. Southard built alone up to 1865, in which year he himself built the bark *B. Sewall* and with his son constructed the brig *Mary C. Rosevelt.* Thereafter, ships were built in the Southard yard by T. J. Southard and T. J. Southard & Son, but in 1873 the brig *Charles Dennis* and, in 1877, the ship *Red Cross* were constructed by T. J. & C. H. Southard. All the vessels built in the Southard yard in and after 1879 have the firm T. J. Southard & Son as the registered builders. The following list gives the "sizable" vessels of various types built by T. J. Southard from records available in Bath. It is not complete, as it does not include many vessels known to have been built at the Southard yard in Richmond. There is also some doubt as to whether the ships *Phaeton* and *Linda* (one or both), built at Richmond, were constructed by T. J. Southard as reported, for the record is not quite clear.

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1846	CROTON	Schooner	148	87.7	23.4	8.2
1847	MEDALLION	Ship	547	136.2	29.7	14.8
1848	BUENA VISTA	Ship	661	142.4	31.9	16
1849	FOREST QUEEN	Ship	885	158.4	35	17.5
1850	DELIA MARIA	Ship	583	138.3	30.4	15.2
1850	BENNINGTON	Ship	513	132.2	29.2	14.6
1851	SEWALL	Ship	597	142.2	30.2	15.1
1852	R. K. PAGE	Ship	995	167.5	36	18
1853	GAUNTLET*	Ship	2,031	240	42.4	21.2
1853	PHAETON	Ship	1,113	187	35.7	17.9
1853	LINDA	Ship	1,077	182.3	35.7	17.8
1854	VULCAN	Schooner	158	84.4	25.8	9
1854	WIZARD KING	Ship	1,398	199.5	38.8	23.5
1857	LIZZIE SOUTHARD	Ship	1,041	185.3	34.7	17.5
1857	H. E. SPEARING	Schooner	224	110.1	25	8.7
1862	T. J. SOUTHARD	Ship	1,081	187.2	35.2	17.7
1864	TOMMIE HUSSEY	Bark	564	136.4	30.1	15
1864	JANE J. SOUTHARD	Ship	1,120	184.5	36.2	18
1865	B. SEWALL	Bark	813	147.4	34.5	13.7
1865	MARY C. ROSEVELT	Brig	235	117.2	29.4	9.6
1866	POMONA	Brig	421	125.5	31	15.4
1866	LIZZIE M. MERRILL	Brig	458	131.4	31	15.7
1867	C. H. SOUTHARD	Ship	1,099	174	38.2	23.4
1868	HARRIET F. HUSSEY	Bark	684	141.2	31.6	20.7
1868	MOSES DAY	Ship	1,271	187.2	38.2	24

(Continued on next page)

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1869	VESUVIUS	Bark	812	160.7	32.5	21.1
1871	OLIVE S. SOUTHARD	Ship	1,193	186.2	37.1	24.2
1873	T. JEFFIE SOUTHARD	Bark	830	161.7	36.4	18.6
1873	CHARLES DENNIS	Brig	392	138.4	31	11.7
1875	CHARLES DENNIS II	Ship	1,710	215.6	39.7	24.7
1876	EUREKA	Ship	2,101	230.7	42.1	17.7
1877	RED CROSS	Ship	1,300	185.2	38.1	23.1
1879	THEODORE H. ALLEN	Ship	1,537	208.7	39.2	20
1880	JENNIE HULBERT	Brig	440	143.6	32.5	12.2
1881	C. SOUTHARD HULBERT	Bark	1,079	178.5	35.6	21.2
1883	H. B. HUSSEY	Brig	545	160.4	36.2	12.2
1884	COMMODORE T. H. ALLEN	Ship	2,390	245.2	41.6	19.7
1885	CONECUH	Schooner	822	175	36.5	17.7

*Also recorded as 1,854 tons register and length as 230 ft., beam 40.5 ft., and depth 23 ft.

Other ships built by the Southards, of Richmond, that are listed in American Lloyd's Registry (in either 1860 or 1865) and that, evidently, are not in the Bath, Maine, customhouse records are:

Year Built	Name	Rig	Tonnage	Dimensions in Feet			
				Length	Beam	Depth	Draft
1851	HARRIET AND FRANCIS	Bark	454	—	—	—	16
1853	LORENZO	Ship	1,093	—	—	—	20
1853	WILLIAM LIBBEY	Ship	999	171	35	24	20
1855	FLORA SOUTHARD	Ship	524	134	28	22	17
1859	SOUTHERN RIGHTS	Ship	830	170	32	23	20
1860	C. H. SMITH	Ship	800	—	—	—	19
1860	C. H. SOUTHARD	Bark	625	146	30	22	18
1865	ELLEN SOUTHARD	Ship	828	159	33	23	20

The Southard family is authority for the statement that the last vessel built by the Southards was the four-masted schooner *Edith L. Allen,* which was launched in 1890.

The Bath list of Southard vessels built at Richmond in 1854 shows one ship of 1,398 tons (the *Wizard King*) and one schooner of 158 tons (the *Vulcan*), but other official figures give the output of the yard in 1854 as three ships aggregating 3,194 tons and the schooner *Vulcan* of 168 tons, or a total of four vessels aggregating 3,362 tons as against the incomplete Bath list of two vessels totaling 1,556 tons.

The *Buena Vista,* built by the Southards in 1848 for Mott & McCready, New York, was not a clipper, but she had the reputation of being a fast sailer. During the clipper ship decade, she made only one westbound passage around the Horn to California, clearing New York July 25, 1852, and arriving at San Francisco December 24 after a run of 152 days. This was rather slow; however, several real clippers—sharp-lined and built for speed—sailing at the same time did little, if any, better, as the following length of passages shows: *Albatross,* 160 days; *Black Squall,* 156 days; *Golden Age,* 149 days; *Jennette,* 148 days; *Polynesia,* 141 days; *Warner,* 140 days. In 1851, with Capt. Eben Linnell in command, the *Buena Vista* made a splendid passage of 60 days from San Francisco to Calcutta.

The *Gauntlet,* built in 1853 (tonnage given as both 2,031 and 1,854 tons), and the *Wizard King* of 1,398 tons, built in 1854, were both classified as clippers, but they had neither

the models nor the spar plans of even medium clippers. As far as sharpness of hull and spread of canvas were concerned, they are better described as "half clippers"—and that on the full and "Down Easter" side. The *Gauntlet,* originally built for Stephenson & Thurston, was sold to the British in 1860, renamed *Sunda,* and was lost by fire in 1878, when twenty-two years old. The *Wizard King* was both built and owned by Thomas J. Southard, of Richmond. The only westbound passage around the Horn during the clipper ship decade (1850-1859 inclusive) of a Southard-built clipper was made by the *Gauntlet* in 1858, and she made a very slow run of 161 days—much slower than the runs of the great majority of other ships sailing about the same time. It was not the slowest, however, for the *Raduga,* sailing three days earlier, reached San Francisco via Rio a week after the *Gauntlet.*

The *Charles Dennis,* which was a good-looking and loftily sparred ship, was launched from the Southard yard on May 17, 1875. She was classed as a Down Easter and named after the vice president of the Atlantic Mutual Insurance Company, of New York; she was modeled to be "a good carrier and make fair average passages." It would seem that the ship could not have realized the expectations of her builders. Deep laden, she carried from Lobos de Tierra to Antwerp 2,311 tons of guano, which was 1.4 times her net registered tonnage and was fair, but not particularly good. (On her runs to the West Coast, she carried 2,250 tons of coal, which was 1.36 times her net registered tonnage.) She proved to be a slow and rather sluggish sailer notwithstanding that she was "a three skysail-yard ship." Her first passage from Baltimore to the Golden Gate occupied 160 days, her fastest run around the Horn westbound took 140 days, and the average of all passages from North Atlantic ports to San Francisco was 149 days. Eastbound, the performance was no better, for in this direction—favored by wind and sea—her average time of passage was 139 days, while her fastest run occupied 122 days. Generally, the *"Dennis"* was a lucky ship as regards accidents at sea, although on one occasion she was forced to put into Fayal to repair damages caused by the elements. On June 6, 1891, the *Charles Dennis* sailed from New York for San Francisco. In a heavy gale, on August 10, she lost some spars and sails and sprang a bad leak, which steadily increased notwithstanding continual pumping. The ship was abandoned and foundered in the South Atlantic when only sixteen years old, the crew of nineteen men being taken off and later landed at Rio de Janeiro by the *Belle of Bath.*

The Southard-built Down Easter *Eureka* was a well-known ship. She is said to have cost $110,000, or about $55 per net registered ton. Her builders owned three-quarters of her, the remaining interest being held by J. W. Elwell & Company, of New York, and Capt. James O. Woodworth, of Richmond, Maine, her master. She was launched in June 1876 and was considered "a first-class ship fitted with all the latest improvements." The *Eureka* was faster than the *"Dennis,"* but from 1888 on she had bad luck at sea, which resulted in Captain Woodworth's committing suicide in 1894. The *Eureka* was sold in March 1899, when twenty-three years old, converted into a coal barge, and lost three years later. The first voyage of the *Eureka* was disastrous, for she struck a hurricane and was almost entirely dismasted and suffered hull damage on November 8, 1876; she made Tybee under jury rig and was towed from there to New York for repairs. Thereafter, for some eleven years, the ship had good luck at sea. She made a westbound Cape Horn run from New York to San Francisco in 124 days and one eastbound, wheat laden, from San Francisco to Havre in 119 days, following which she made a westbound transatlantic passage in 20 days—a smart run. The *Eureka,* loaded with wheat, also made a run from the Golden Gate to Rio de Janeiro in 69 days. In 1888, when in the South Atlantic, the vessel encountered heavy gales and strained herself badly; she leaked to such an extent that she put about for Rio de Janeiro, where a part of the cargo had to be discharged, and the *Eureka* was in port three months undergoing repairs. The ship's troubles at sea really commenced piling up with discouraging persistence in 1893, when, with nitrate aboard and bound for New York, she sprang a leak off Cape Horn during a succession of heavy gales and had to put back to Valparaiso for repairs. On her next voyage (New York to Melbourne), the ship lost some spars and a number of sails, the cargo shifted, and the ship "went over on

her beam ends"; it was after the *Eureka* made Melbourne, completing this eventful passage, that Captain Woodworth shot himself.

The *Red Cross,* which was owned as well as built by T. J. Southard & Son, was launched in September 1877. She was built as a Cape Horner and proved to be a fair carrier for a Down Easter and a rather slow sailer. Her career was generally uneventful, but her end was sudden. Sailing from San Francisco December 12, 1888, she was dismasted in a gale during the end of January 1889 and put into Rarotonga in distress. There the crew refused to serve any longer on the vessel, maintaining that she could not be made seaworthy. A survey evidently backed up the men in their stand, and the ship was condemned and sold for $2,500. On March 16, 1889, when only eleven and a half years old, the *Red Cross* was driven ashore during a hurricane and became a total wreck.

The *Commodore T. H. Allen* was launched from the yard of T. J. Southard & Son on May 20, 1884, and was the largest vessel built at Richmond or at any point on the Kennebec north of Bath. She crossed three skysails and had an unusually short bowsprit and jib boom. She was named after Theodore H. Allen of the stevedoring firm of Allen & Young, San Francisco, who was popularly known as "The Commodore." The *"Commodore Allen"* was owned by her builders, with T. H. Allen and the ship's master owning a "fraction." She was modeled for a cargo carrier and was an average sailer, with some good runs to her credit, but she also made several slow passages. The best time made on a westbound around-the-Horn voyage to San Francisco was 128 days, but running east she made two fast passages in 108 days. In 1887 she "raced" across the Atlantic from Liverpool to New York with the full-bodied, big-carrying, Bath-built Down Easter *John R. Kelley.* The ships left Liverpool on the same tide and arrived in New York within twenty minutes of each other after a crossing of something over 24 days; notwithstanding rival claims, the marine fraternity considered the race as a draw. In July 1901, the *"Commodore Allen,"* loaded with case oil, cleared New York for Yokohama. She grounded off Sandy Hook and caught fire. Pumped full of water by fire boats, the hull submerged, with upper work destroyed. Later, the vessel was floated, sold by auction, and converted into a coal barge. While in tow deep laden in January 1912, when approaching twenty-eight years old, she sprang a leak and foundered.

William Patten, the master builder, launched several important full-rigged ships from his Richmond yard during the shipbuilding boom of mid-century. In the construction of many of these vessels, he was financed by Sturdevant (recorded also as Sturtevant), and the partnership known as Patten & Sturdevant both built and managed the ships. The records give the following data of these Patten vessels:

Year Built	Name	Tonnage	Registered Dimensions in Feet		
			Length	Beam	Depth
1848	WILLIAM PATTEN	608	140.7	30.7	15.4
1852	PEERLESS	633	145	30.8	15.4
1853	PRIDE OF AMERICA	1,826	226	41.5	29.8
1853	STRELNA	714	155.9	31.5	15.7
1854	THERESE	899	163.2	34.7	—

The *Peerless, Pride of America,* and *Strelna* were rated as medium or "half" clippers and had sharp lines and a lofty rig compared with the standard type of Maine-built general trader or Down Easter. The *Peerless* was built for E. E. Davidson, of Boston, and Edward Babson, of Gloucester, Mass., and was put under the command of Capt. Caleb G. Babson. The *Pride of America* was constructed for the builders' account and was sold to the British in March 1854; she had a sea life of thirty years and foundered in 1883. The *Strelna* was owned by William Ropes, of Boston, and was commanded by Capt. Thomas Leach.

The only other builder of a clipper ship at Richmond besides Thomas J. Southard and Patten & Sturdevant was George H. Ferrin, who built for Benjamin Bangs, of Boston, Mass., the medium clipper *Wild Wave* of 1,547 tons (length 207 ft. 9 in., beam 40 ft., depth 20 ft.) in 1853. In 1856 the *Wild Wave,* under the command of Capt. Josiah N. Knowles, made a run of 70 days from Callao, Peru, to Plymouth, England—a record over this course that stands unequaled by all sailing vessels. In the California Cape Horn run, the Richmond-built clipper ships were neither active nor successful; only two westbound passages were made around the Horn by Richmond-built clippers in the clipper ship decade when "speed was king," and each was in slow time. The really fast *Wild Wave,* built by Ferrin, was unfortunate in weather on her one run in 1857-1858 from New York to San Francisco and took 140 days for the trip. The *Golden Rule* and *Thatcher Magoun,* sailing a little earlier, were lucky in weather or on the course sailed, for they made passages of 114 and 125 days, respectively. The fast clipper *Neptune's Car* experienced some of the bad weather that the *Wild Wave* encountered, had to make for Rio de Janeiro, and arrived at San Francisco 180 days out. The *Kit Carson,* leaving New York after the *Wild Wave,* met heavy gales and made a run of 147 days (seven days longer than that of the Richmond-built clipper), and the *Sparkling Sea* arrived in San Francisco one day ahead of the *Wild Wave,* but had been ten days longer on the passage. The *Wild Wave* was wrecked on a coral island in the South Pacific, some eighty miles from Pitcairn Island, on March 5, 1858.

Among other vessels built by George H. Ferrin at Richmond were the ship *Charter Oak* of 867 tons (length 169 ft., beam 33¼ ft.), launched in 1854, and the brig *Yazoo* of 284 tons (length 113½ ft., beam 30 ft.), laid down in 1863.

The names of Harward and Theobald, well known in the maritime history of the Kennebec basin, are encountered as one studies the shipbuilding history of Richmond. Thomas Harward was the registered builder of the schooner *Industry* at Georgetown in 1789, and both Thomas and John Harward built at Bath during the period 1828-1861. John Harward had a yard at Bowdoinham, where he built several sizable vessels after the late forties, including the ships *Agamemnon* (893 tons) and *Rhine* (534 tons) and the barks *Jane Harward* (577 tons) and *Albert* (510 tons); in 1869 he launched from there the big ship *Henry S. Sanford* of 1,159 tons. John Harward built at Richmond in 1868 the large full-rigged Down Easter *Tranquebar* of 1,306 tons (length 197 ft., beam 37¾ ft., depth 24¼ ft.) and, in partnership with George H. Theobald, constructed the ship *Cuba* of 1,106 tons (length 186 ft., beam 35 ft., depth 22½ ft.) in 1872 and the *Storm King* of 1,261 tons gross and 1,206 tons net (length 189½ ft., beam 37 ft., depth 24 ft.), launched in July 1874. The *Storm King* was an outstanding Down Easter, and she made good speed while carrying 1,900 tons of paying deadweight, or 1.58 times her registered tonnage. A record of all the distant ocean voyages made by the *Storm King* during the first ten years of her sea life can be briefly summarized as follows:

		Days
1874–1875	Liverpool to Rangoon	110
	Rangoon to Queenstown	108
1875–1876	Liverpool to Wilmington, Calif.	134
1877–1878	Astoria to Liverpool	123
	Liverpool to Bombay	110
	Bombay to Astoria	77
1879–1880	Victoria, B.C., to Callao	60
	Callao to Victoria, B.C.	53
	San Francisco to Queenstown	143
	Cardiff to Rio de Janeiro	44
	Rio de Janeiro to San Francisco	65
1881–1882	San Francisco to Queenstown	120
	Newport, Wales, to Guaymas	140
	Astoria to Queenstown	134

(Continued on next page)

		Days
1883	New York to San Francisco	139
	San Francisco to Queenstown	133

The run of the *Storm King* from Rio de Janeiro to San Francisco in 65 days has been beaten only once, and that in 1851 by the extreme clipper *Witchcraft,* and equaled only once, and that in 1854 by another clipper, the *Spitfire*—a Maine-built ship. On this fast passage of the *Storm King,* she covered the sixteen miles through the Straits of Le Maire in sixty-five minutes. The *Storm King* was owned by her builders, Theobald & Harward, and their friends, and in her later years she was not kept up well. In August 1892, the ship was sold to Boston parties and converted into a barge; while in tow, she foundered in a severe winter gale when twenty-eight years old.

George H. Theobald, the partner of John Harward at Richmond, built the ship *Sea King* of 1,491 tons at Bowdoinham in 1877, and among other vessels constructed by him was the 560-ton schooner *William H. Stuart* (length 158 ft., beam 35 ft. 8 in., depth 13 ft.), launched at Richmond in 1884.

The Springers were a shipbuilding family. John Springer had a yard in Bowdoinham that produced sizable brigs and schooners about the time of the War of 1812 and prior thereto. Harrison Springer built two full-rigged ships at Richmond and several smaller craft, of which the following were the most sizable and important. He was also the registered builder of three vessels at Bath during the years 1854-1855.

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1849	ELLEN MARIA	Ship	768	150.7	33.4	16.8
1850	VIRGINIA	Schooner	132	85	22.7	7.7
1852	SOUTH AMERICA	Ship	837	164.2	33.2	16.6
1852	CENTRAL AMERICA	Schooner	246	110	24.2	10.1
1864	R. E. PECKER	Schooner	222	104.3	26.1	9.1

Thomas Spear, Jr., launched three ships and two brigs from his Richmond yard in the three years 1853-1855, assuming that he built the ship *Lalla Rookh.* She was constructed in Richmond, but the identity of the builder is somewhat uncertain. The data regarding the Spear-built vessels are as follows:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
1853	LALLA ROOKH	Ship	603	146.7	29.8	14.9
1854	CLARA	Ship	822	167	32.5	16.5
1854	CHESAPEAKE	Brig	298	114.5	29.2	10
1855	CHATTAHOOCHEE	Ship	1,115	186.5	35.8	17.9
1855	GANGES	Brig	374	119.7	29.2	11.9

Charles Lilly, of Richmond, built the schooner *Charles Lilly,* named after himself, in 1857; she was of 300 tons and measured 109 ft. long, 27 ft. beam, and 11½ ft. deep. The following year he constructed the brig *Stella* of 306 tons from the same model. In 1863, Abial Lilly built the schooner *Chiloe* of 249 tons (length 110 ft. 4 in., beam 27 ft., depth 9 ft. 4 in.).

Henry S. Hagar built the ship *Alicia* at Richmond in 1866. She was of 1,302 tons register and measured 191 ft. 6 in. long, 38 ft. beam, and 23 ft. 9 in. deep. During the period 1867-1878, James M. Hagar launched the following six large full-rigged ships from the Hagar shipyard at Richmond:

Year Built	Name	Tonnage	Registered Dimensions in Feet		
			Length	Beam	Depth
1867	ST. JAMES	1,286	194.5	37.4	24.5
1869	JAMESTOWN	1,888	207.6	40.4	20.2
1872	FLORIDA	1,414	199.2	38.1	25.6
1874	HAGERSTOWN (or HAGARSTOWN)	1,903	223.6	42.2	17.4
1876	QUEENSTOWN	1,548	199.2	39.1	26
1878	YORKTOWN	1,955	227.1	40.4	20

Daniel Allen built the brig *George* of 206 tons (length 99 ft., beam 25¼ ft., depth 9¼ ft.) at Richmond in 1852, and three years later he launched the 238-ton schooner *Zuluka* (length 100 ft., beam 27 ft., depth 10 ft.). He also built the very sizable full-rigged 1,079-ton ship *Walter Lord* in 1854, which had a length of 182 ft. and a beam of 35 ft. William Thurlow built in 1866 the brig *Cascatelle* of 324 tons (length 124 ft., beam 30⅓ ft., depth 11⅓ ft.) and probably also, in 1874, the 516-ton brig *Castalia,* which measured 130 ft. 7 in. long, 30 ft. 8 in. beam, and 17 ft. deep. In a list of builders who launched vessels from Richmond yards in 1854, published in a New York marine journal early in 1855, appear the names of Foster & McFarlane with three ships of 960, 767, and 670 tons, respectively; Jack & Woodward with two ships of 825 and 650 tons; H. P. Toothaker with two ships of 820 and 769 tons; and Barker & Parks with a brig of 250 tons.

Other sizable vessels—considering the type or rig and the year built—known to have been launched from Richmond shipyards during the period 1848-1869 include the following seven vessels, the product of seven different builders:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1848	CARDIFF	Brig	201	95.9	24.7	9.6	John W. Avery
1854	CIVILIAN	Ship	848	165.7	33.2	16.4	Dexter Jack
1854	SHIBBOLETH	Brig	265	114.3	27	9.5	Charles Buker
1855	MELVIN	Brig	241	106	25.2	10	S. C. Colby
1856	MADEIRA	Brig	281	107	26.7	11.9	William O. Tapley
1863	ZOUAVE	Ship	1,135	187	36.1	18	Parker M. Whitmore
1869	ANNIE TORREY	Bark	781	155.6	32.1	21.1	Jacob Elwell

C. Pittston

Pittston, Maine, is on the East Bank of the Kennebec River a couple of miles as the crow flies from Gardiner (which is to the northwest and on the West Bank) and is about thirty-three miles in a direct air line north of Popham and the mouth of the Kennebec. Pittston has a long shipbuilding history, merging into tradition in the eighteenth century, and as far back as there is any record or knowledge of marine—ocean or river—activities, Pittston was an important builder not only of river craft but also of sizable ships, brigs, brigantines, and schooners that saw service in deep-sea trade. Since the days that some official and authenticated records became available about the first of the nineteenth century, Pittston is known to have been a most unusual, steady producer of marine tonnage in good times and bad, through depressions and booms, up to the inevitable national panic of reaction following the overbuilding of ships and the unwarranted optimism and gambling in almost all business that followed the discovery of gold in California. From 1801 to 1855 inclusive, the Bath customhouse records show that

sizable vessels—considering the type or rig and the times—were built at Pittston in almost every year. Building was suspended in 1813 and 1814 because of the war with Britain, but was resumed with vigor in 1815. There was a pronounced recession in building activities in the last half of the thirties and the first half of the forties, but the years from 1845 to 1855 inclusive were Pittston's most active period; after that, building was only occasional until it terminated with the launching of the schooner *Grace Cushing* by Augustus E. Pinkham in 1870.

The following table gives a list, from official records, of sizable vessels built at Pittston prior to the War of 1812:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1784	DOLPHIN	Brigantine	115	71	21.7	8.8	Thomas Agry
1788	PHENIX	Schooner	99	69	21.5	7.8	Thomas Agry
1791	HANNAH	Brig	178	78	23	11.5	William Springer
1797	RUTH	Schooner	101	70.3	21.2	7.9	Simon Bradstreet
1801	ARGO	Brig	158	78.1	24	9.8	Cowen Lilly
1802	FRANKLIN	Brig	139	78	22.7	9.1	Stephen Jewett
1804	EMMELINE	Brig	202	80.7	24.1	12	Benjamin Folensbee
1804	RACHAEL	Schooner	116	74	22.5	8.3	Caleb Stevens
1805	HANNAH MATILDA	Schooner	115	73	22.5	8.2	Samuel Oakman
1807	CRITERION	Ship	360	103.7	28.1	14	David Colburn
1808	ROSE IN BLOOM	Schooner	120	74.2	22.2	8.5	James Smith
1809	CAROLINE	Ship	325	99	27.3	13.7	David Colburn
1809	ELIZA	Brig	120	74.2	22.7	8.7	Samuel Oakman
1810	EMELINE	Brig	212	84.3	24	12	David Colburn
1810	ARGONAUT	Schooner	116	65.7	20.8	10	James Smith
1811	CHARLES FRUCETT	Brig	237	87.8	24.9	12.4	Benjamin Folensbee
1811	DISPATCH	Brig	223	83.2	24.9	12.5	James Smith
1811	ENTERPRISE	Schooner	118	71.7	22	8.7	Gideon Staples
1812	WASHINGTON	Schooner	149	75.5	23.9	9.7	James Smith
1812	GEORGE BECKWORTH	Schooner	137	71.7	23.2	9.7	Benjamin Folensbee, Jr.

Some of these names are the family names of shipbuilders who built downriver earlier, at the same time, or at a later date. James Smith, who built the schooner *Rose in Bloom* in 1808 and a brig and three other schooners during the years 1810-1812, launched vessels at Pittston up to 1829. We know that he built at least nine sizable craft, and in 1854 James P. Smith built the ship *Tigress* of 912 tons and the brig *Lagrange* of 320 tons. Benjamin Folensbee built two sizable brigs in 1804 and 1811, and his son Benjamin Folensbee, Jr., who built a schooner in 1812, continued to build until 1848, in which year he launched the brig *Rachael Stevens* of 213 tons. There are official records showing that Benjamin Folensbee, Jr., built at least fourteen sizable vessels at Pittston. During the period 1836-1847 inclusive, only forty per cent of the official records of registry show the name of the builder, so a statement of the lifework of builders—even of important sizable vessels—is impossible. Such omissions permeate all the Bath customhouse records for certain years. Of the identified builders, Ebenezer Hinds built at least eleven sizable vessels during the period 1831-1857, and Charles C. Hinds launched the *Marion Draper,* a schooner of 183 tons, in 1867. The Coopers (William, Alexander, and James N.) are registered as builders of four vessels during the period 1825-1844. E. G. Pierce built in 1826 and again in 1848, and George Pierce was a registered builder in 1852. Francis Flitner built in 1815-1818, Jonathan Young in 1824-1825, and Joseph King in 1848-1851; David Blinn built two sizable brigs in 1854, and William Bradstreet built the Down Easters *Washington* (1,197 tons) and *Valley Forge* (1,177 tons) in 1855 and 1862, respectively.

The number and type of vessels—considered as sizable for the rig and the period—built at Pittston during the years 1815 to 1846 inclusive were as follows according to the Bath customhouse records:

Period Inclusive	Number of Sizable Vessels				Tonnage of Sizable Vessels			
	Ships	Brigs	Schooners	Total	Ships	Brigs	Schooners	Total
1815-1819	—	3	7	10	—	535	934	1,469
1820-1824	—	5	3	8	—	979	342	1,321
1825-1829	—	7	4	11	—	1,683	450	2,133
1830-1835	2	—	6	8	873	—	810	1,683
1836-1840	—	1	2	3	—	232	267	499
1841-1846	1	2	5	8	549	427	722	1,698
Total 1815-1846 (32-year period)	3	18	27	48	1,422	3,856	3,525	8,803

Average tonnage per vessel during this period: ships, 474 tons; brigs, 214 tons; schooners, 131 tons; all types, 183 tons.

The following table gives a list of the full-rigged ships over 523 tons register, the brigs over 213 tons, and the schooners over 133 tons built at Pittston during the years 1847-1870 inclusive as per the Bath, Maine, customhouse records:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1847	WILLIAM A. COOPER	Ship	645	147	30.9	15.5	No record
1847	CYBELE	Ship	798	157.3	33.2	22.7	No record
1847	E. HINDS	Schooner	145	86	23.7	8.1	No record
1847	ALVARADO	Schooner	133	87.3	24.4	7.1	No record
1848	WILLIAM V. KENT	Ship	676	150.6	31.2	—	Joseph King
1848	RACHAEL STEVENS	Brig	213	94.7	24.2	10.4	Benjamin Folensbee, Jr.
1848	MARY WILDER	Brig	213	94	24.4	10.5	E. G. Pierce
1848	MARY MELVILLE	Brig	235	100.3	24.7	10.6	Ebenezer Hinds
1849	CHARLES COOPER	Ship	677	151.2	31.2	15.6	Joseph King
1850	STATE RIGHTS	Ship	825	161.2	33.3	22	Ebenezer Hinds
1851	JANE D. COOPER	Ship	523	135.7	29	14.5	Joseph King
1852	GOVERNOR BROWN	Brig	299	107.7	27.7	11.3	George Pierce
1853	WHITE FALCON	Ship	1,372	199	38.5	19.2	No record
1854	TIGRESS	Ship	912	171	33.9	17	James P. Smith
1854	LAGRANGE	Brig	320	118.7	26.9	11	James P. Smith
1854	BELLFLOWER	Brig	318	115.5	27.9	11	David Blinn
1854	EMILY W. SAYBURN	Brig	332	116.8	28.2	11.2	David Blinn
1855	W. S. LINDSAY	Ship	1,164	185.2	36.8	18.4	Ebenezer Hinds
1855	WASHINGTON	Ship	1,197	192	36.6	18.3	William Bradstreet
1855	A. C. MERRYMAN	Brig	230	106	25.2	9.6	A. C. Merryman
1857	JULIA MAINE	Schooner	196	91.2	26.2	9.4	Ebenezer Hinds
1862	VALLEY FORGE	Ship	1,177	192	36.2	18.3	William Bradstreet
1867	MARION DRAPER	Schooner	183	106	27.4	9.1	Charles C. Hinds
1869	HENRY ADELBERT	Schooner	196	111.6	27.5	8.7	Charles H. Dunton
1870	GRACE CUSHING	Schooner	158	101.2	27.7	7.7	Augustus E. Pinkham

The following recapitulation shows the number, rig, and tonnage of these twenty-five sizable Pittston-built vessels, launched and registered during the years 1847-1870 inclusive:

Rig	Number of Vessels	Total Registered Tonnage	Average Registered Tonnage per Vessel
Full-rigged ships	11	9,966	906
Brigs	8	2,160	270
Schooners	6	1,011	169
Total	25	13,137	525½

The largest ships ever built at Pittston are herein set forth:

Year Built	Name	Registered Tonnage	Year Built	Name	Registered Tonnage
1853	WHITE FALCON	1,372	1854	TIGRESS	912
1855	WASHINGTON	1,197	1850	STATE RIGHTS	825
1862	VALLEY FORGE	1,177	1847	CYBELE	798
1855	W. S. LINDSAY	1,164	1849	CHARLES COOPER	677

The largest brigs built at Pittston were as follows:

Year Built	Name	Registered Tonnage	Year Built	Name	Registered Tonnage
1854	EMILY W. SAYBURN	332	1852	GOVERNOR BROWN	299
1854	LAGRANGE	320	1828	GRAND TURK	297
1854	BELLFLOWER	318	1826	WALTHAM	284

The *White Falcon* of 1,372 tons, built in 1853, was the only clipper ship launched from a Pittston yard, and her builder is unidentified. The sharp-lined vessel was built for M. O. Roberts, New York, and was put in command of Captain Ryan. There is no record of any passage made by the *White Falcon* in the Cape Horn service. She was sold to the Peruvians in 1864, during the Civil War, and was destroyed by fire in 1866.

The *Valley Forge* was built by William Bradstreet at Pittston in 1862 for his own account, and Gardiner, Maine, was her hailing port. She is selected as representative of the best Pittston-built merchant sailers of the Down Easter type. She had a rather full model and, it is said, carried 1,900 tons deadweight, or 1.55 tons per ton register, in deep-sea trade. She was given a good length of masts and spars and plenty of canvas, including studding sails up to the fore and main topgallants. The ship was commanded by masters who held a fractional share in her, and she was well kept up and handled effectively, for she made her voyages in fair average time. For about nineteen years, the *Valley Forge* was engaged as a general carrier, but was principally in the coal and guano trade. In 1881 she was sold to C. L. Dingley & Company, San Francisco, and put in the Pacific coastwise lumber and coal trade. After being operated for ten years, she was then laid up. In 1894 she was sold to shipbreakers for the small sum of $250. The *Valley Forge* had a successful and uneventful sea life of twenty-nine years, and she was destroyed when thirty-two years old.

D. Gardiner

Gardiner, situated about twenty-one miles north of Bath in a direct air line, is located on the West Bank of the Kennebec River and is the most important of a group of towns contiguous to each other—Gardiner and Farmingdale on the West Bank and Randolph (with Pittston) on the East Bank. Gardiner built deep-sea brigs and schooners as well as river craft in the eighteenth century. The following vessels (considered sizable for rig and when built) are recorded at the Bath customhouse as being constructed at Gardiner during the period 1807-1850 inclusive:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1807	WILLIAM	Brig	168	80.3	23.6	10.2	John Sprague
1811	OLIVE BRANCH	Schooner	140	75.3	23	9.9	Joseph Glidden
1811	HARRIET	Brig	218	83.5	24.6	12.2	John Sprague
1815	COBBOSSEECONTEE*	Brig	147	74.5	23.5	9.8	John Sprague
1817	ANCHORAGE	Schooner	117	69.2	21.9	9	John Marston
1822	PORTER	Schooner	113	70.2	22	8.6	Solomon Perry
1823	LAUREL	Brig	167	76	23.1	11.1	Richard Clay
1827	SHAMROCK	Brig	227	93	22.3	12.2	James Smith
1834	MARGARET	Brig	246	95.7	24	12	Benjamin Folensbee, Jr.
1834	CHOCTAW	Brig	245	94.8	22.8	12.6	E. G. Pierce
1835	WARSAW	Schooner	128	75.2	21.5	9.1	Thomas N. Atkins
1835	HENRY A. BREED	Schooner	130	83.2	23.1	7.7	James Lowell, Jr.
1845	OPHER	Schooner	134	80.8	22.5	8.4	
1846	ATHOS	Schooner	138	83	23.5	8.1	Thomas N. Atkins
1846	GLENROY	Schooner	143	86.4	23.1	8.1	James Lowell, Jr.
1847	MARION	Ship	549	137	29.6	14.8	
1847	SEA BELLE	Schooner	125	90.5	21.8	7.9	
1848	VESTA	Brig	249	102.2	25	10.9	E. G. Pierce
1848	CROCUS	Brig	221	104.3	23.3	10	William Bradstreet
1848	GLENCOE	Brig	222	97.3	24.2	10.5	Thomas N. Atkins
1849	JOHN MERRICK	Ship	691	146	32.2	16.1	John Still
1850	KALOOLAH	Schooner	159	89.5	23.2	8.6	James Lowell, Jr.

*Historian Levi P. Lemont records that the brig COBBSECONTE of Bath (Captain Jackson) was robbed in 1821 by pirates near Morro Castle, Cuba.

The Spragues are a well-known old Kennebec River family of shipbuilders. James Smith, Benjamin Folensbee, Jr., E. G. Pierce, the Lowells, and William Bradstreet were important builders operating yards across the river at Pittston. Of the foregoing list of vessels, two were ships of 691 tons and 549 tons, respectively; ten were brigs ranging from 147 to 249 tons and averaging 211 tons; and ten were schooners of from 113 to 159 tons register. The average tonnage of the twenty-two stated vessels was 212½ tons. Of the seventeen vessels the builders of which are identified, James Lowell, Jr., Thomas N. Atkins, and John Sprague each built three, and E. G. Pierce built two.

E. Farmingdale

Farmingdale borders on Gardiner to the north and is on the West Bank of the Kennebec River about thirty-five miles (as the crow flies) from where it empties into the Atlantic Ocean. During the years 1852-1868, Farmingdale built vessels that were conspicuous for their large average size compared with other craft built in the Pittston-Randolph-Gardiner-Farmingdale area. They were all laid down by members of the Bradstreet and Pierce families, who also built in Pittston and Gardiner. The sizable vessels registered in Bath as built in Farmingdale are as follows:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1852	ISLAND CITY	Bark	549	134	30	15	E. G. Pierce
1853	MISS MAG	Ship	727	153.5	32.1	16	George Pierce
1853	NARRAGANSETT	Schooner	248	103	29	9.5	
1854	VISION	Ship	1,092	179.2	36.3	18.2	George Pierce
1854	GERANIUM	Brig	433	127	30.5	12.4	E. G. Pierce
1856	SAMUEL C. GRANT	Ship	1,153	185	36.7	18.3	George Pierce
1865	MIDAS	Bark	550	136.3	29.2	18.3	P. G. Bradstreet
1866	JULIA F. CARNEY	Brig	339	116.1	28	14.7	P. G. Bradstreet
1868	TWO BROTHERS	Ship	1,382	197	37.7	24.7	P. G. Bradstreet

This list includes three full-rigged ships of over 1,000 tons register, the largest being of 1,382 tons, and the average of the four ships built was 1,088½ tons. Two barks were launched averaging 549½ tons and two brigs averaging 386 tons, the total tonnage for the nine stated vessels (consisting of eight square-riggers and one fore-and-after) being 6,473 tons register and the average per vessel 719 tons. The *Miss Mag* was the only so-called "clipper" ship built in the Farmingdale-Gardiner area (although a larger "clipper," the *White Falcon,* was built at Pittston on the opposite side of the river and a little to the south). The *Miss Mag* was constructed by George Pierce to the order of Samuel C. Grant, of Farmingdale, and Pierce & Bacon, of Boston, and was placed under the command of Capt. Josiah S. Arey. The name of the ship was later changed to *Beaver.*

F. Hallowell

Hallowell is another community on the Kennebec and "well upriver" that has a long recorded history and is rich in tradition in the realm of shipbuilding. Located about thirty-eight miles almost directly north of Popham (as the crow flies), it built vessels in the eighteenth century not only for river and ocean inlet trade but also for deep-sea service. Brigs are known to have been built at Hallowell prior to the Revolution, and Bath customhouse records that date back to the turn of the century show that William Springer launched the *Polly,* a brig of 112 tons, at Hallowell in 1800. Mention is made of a 119-ton schooner of the same name as having been built there by Samuel Howard in 1785. Prior to the commencement of hostilities with England in 1812 (including the period of the embargo so destructive to American ship operation and, therefore, to shipbuilding), the following sizable vessels are officially recorded as having been built in Hallowell:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1785	POLLY	Schooner	119	71.3	22.2	8	Samuel Howard
1799	SUMNER	Schooner	82	63.2	19.2	7.8	Thomas Fillebrown
1800	POLLY	Brig	112	68.9	21.7	8.8	William Springer
1801	WASHINGTON	Brig	169	82.6	23.3	10	Peter Grant
1801	DESPATCH	Schooner	126	73.2	22	9.1	James Lowell
1802	WILLIAM	Ship	257	88	26	13	Thomas Nye, Jr.
1803	MARY JANE	Brig	156	78.7	23.5	9.8	Thomas McCobb
1803	INDUSTRY	Schooner	104	68.4	21.7	8.2	John Agry
1803	WILLIAM	Schooner	101	69.7	20.6	8.1	Peter Grant
1803	WILLIAM	Schooner	112	73.5	22.1	8	William Morse
1803	NEPTUNE	Schooner	101	68	21.5	8.1	James Springer
1804	ENTERPRISE	Brig	128	71.6	23.1	9.1	James Thatcher
1805	NANCY	Brig	160	77.8	23.5	10.1	Augustus Ballard
1805	CHARLOTTE	Brig	138	70.4	21.7	10.5	Nehemiah Hilton
1805	CYGNET	Brig	170	74.9	23	11.5	Ebenezer Mayo
1806	DEARBORN	Brig	129	73.8	22.7	9	Benjamin Prescott
1807	COMMERCE	Brig	153	78.7	23.2	9.7	Nehemiah Hilton
1807	NANCY & MARY	Brig	226	82.5	25.2	12.6	Ebenezer Mayo
1807	OLIVER	Schooner	113	70	21.7	8.5	Augustus Ballard
1810	WASHINGTON	Brig	136	70.4	22.6	10.1	Augustus Ballard
1811	HALLOWELL	Ship	397	107.4	28.9	14.5	Ebenezer Mayo
1811	ENTERPRISE	Schooner	148	71.8	22.9	10.6	Nehemiah Hilton
1811	NATIVE	Schooner	137	67.8	22.7	10.6	Augustus Ballard
1811	CHARLES HENRY	Schooner	118	69	21.1	9.4	George Skofield
1812	EDWARD & HIRAM	Schooner	108	67.2	21.7	8.7	James Lowell
1812	AMERICAN HERO	Schooner	128	73	23	8.6	Joseph Glidden

It is interesting to note that prior to the War of 1812, Hallowell built two three-masted full-rigged ships, the *William* of 257 tons in 1802 and the relatively large *Hallowell* of 397 tons in 1811. As at other points on the Kennebec, there was no shipbuilding in Hallowell during 1813 and 1814; but the industry was resumed in 1815, when the full-rigged ship *Diana,* two brigs (the *General Ripley* and *Belle Savage*), and three schooners were built. According to official—retained and available—records, the following sizable vessels were laid down at Hallowell during the twenty-four-year period 1815-1838 inclusive. The number and tonnage of the craft are set forth separately according to rig for each of the stated periods.

Period Inclusive	Number of Sizable Vessels				Tonnage of Sizable Vessels			
	Ships	Brigs	Schooners	Total	Ships	Brigs	Schooners	Total
1815-1819	1	2	11	14	382	274	1,210	1,866
1820-1824	—	5	—	5	—	926	—	926
1825-1829	—	6	2	8	—	1,315	306	1,621
1830-1834	1	1	—	2	449	211	—	660
1835-1838	1	2	—	3	520	429	—	949
Total 1815-1838 (24-year period)	3	16	13	32	1,351	3,155	1,516	6,022

Average tonnage per vessel during this period: ships, 450 tons; brigs, 197 tons; schooners, 117 tons; all types, 188 tons.

According to official records, there was a lull in shipbuilding at Hallowell during 1839-1847 inclusive, but the following sizable vessels are recorded at Bath as having been built at Hallowell during the period 1848-1855 inclusive:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1848	URANUS	Brig	218	95.5	24	10.7	Ebenezer Cannon
1853	ELLEN REED	Brig	282	105	26.2	11.5	
1853	ALEONA	Schooner	158	89	24.7	8.2	
1854	DASHAWAY	Ship	1,012	178	35	18	Rideout and Reed
1854	LORENZO	Ship	1,090	184.3	35.7	17.8	Rufus P. Hawkes
1854	ABBY LANGDON	Ship	1,035	177.4	35.5	17.7	J. P. Rideout
1855	ADRIANA	Ship	1,082	183	35.7	17.8	Rufus P. Hawkes
1855	E. P. SWETT	Brig	232	100	28	9.5	James Atkins, Jr.
1855	EAGLET	Schooner	232	100	28	9.5	James Atkins, Jr.

The *Dashaway* was said to be a "medium," or "half," clipper ship built by J. P. Rideout in 1854 to the order of Reed, Page & Company, Hallowell. She was sold in 1863 (during the Civil War) to the British and renamed *Mauritius Merchant.* Well-known Kennebec River shipbuilding family names appear in the identified and recorded list of shipbuilders who laid down vessels at Hallowell. From early days of official records, there are such names as Fillebrown, Springer, Lowell, Smith, Hinds, Pierce, Atkins, Rideout, and others. George Skofield, of Brunswick fame, built the schooner *Charles Henry* of 118 tons at Hallowell in 1811. From the list of sizable vessels constructed and registered with builders identified, it appears that Augustus Ballard built eleven during 1805-1827; Nehemiah Hilton, seven during 1805-1818; James Lowell, seven during 1801-1829; Ebenezer Mayo, three during 1805-1811; and Obed Mayo, two in the years 1817 and 1824. E. G. Pierce built three during 1828-1831; Owen Hinds, three during 1821-1824; and Ebenezer Hinds, one in 1837. Thomas N. Atkins built two in the years 1828 and 1833 and James Atkins, Jr., two in 1855; James P. Rideout, three in the years 1835 and 1854 and Rufus P. Hawkes, two during 1854-1855.

The largest ships ever built at Hallowell were:

Year Built	Name	Registered Tonnage	Year Built	Name	Registered Tonnage
1854	LORENZO	1,090	1854	DASHAWAY	1,012
1855	ADRIANA	1,082	1831	FLORENCE	449
1854	ABBY LANGDON	1,035	1811	HALLOWELL	397

The largest brigs built at Hallowell were:

Year Built	Name	Registered Tonnage	Year Built	Name	Registered Tonnage
1827	MERIDIAN	292	1828	CAROLINE	252
1853	ELLEN REED	282	1855	E. P. SWETT	232

G. *Augusta*

Augusta, the capital of the state of Maine, about forty miles (on a straight air line) north from the mouth of the Kennebec River, was the site of an old Indian village—Koussinoc—where the Plymouth Colony established a trading post in 1628 and from which radiated historic trails. Vessels were being built at Augusta at the time that a fort was erected there in 1754, but records of early construction are not obtainable. The following vessels (deemed sizable for the period) are registered at Bath as having been built at Augusta during the period 1803-1855:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1803	HARRIOT	Brig	126	74.1	22.2	8.9	Samuel Elwell
1805	EDWARD PREBLE	Schooner	123	76.5	23.2	8.1	T. Hamlin
1806	MONTEZUMA	Brig	160	82.2	24.1	9.3	James North
1816	HAVRE PACKET	Brig	157	74	23.3	10.7	Richard Sweetser, Jr.
1827	BRUTUS	Brig	198	81.5	23.2	12	Obed Mayo
1843	TICONIC	Schooner	139	84.2	23.7	8	William Jones
1847	HENRY FREELING	Schooner	141	86	23.3	8	
1849	COMMONWEALTH	Ship	642	143.1	31.3	—	William Jones
1851	BLOOMER	Brig	233	104.7	24.4	10.1	Nathaniel Small
1851	ABBY JONES	Brig	209	98.3	24	9.9	Nathaniel Small
1853	REPUBLIC	Schooner	249	109	24.4	10.3	
1855	GEORGE DARBY	Schooner	238	104.1	26.9	9.6	James Hayden

The largest vessel built at Augusta was the full-rigged ship *Commonwealth* of 642 tons, launched by William Jones in 1849. The largest Augusta-built brig of which we have an authenticated record was the *Bloomer* of 233 tons, built by Nathaniel Small in 1851. Obed Mayo, who had a yard at Hallowell during the years 1817-1824, built the brig *Brutus* of 198 tons at Augusta in 1827.

H. Vassalboro

Journeying up the Kennebec River from Augusta, we pass the village of Kennebec, some five miles farther upstream, where many vessels were built in "the old days" and where in 1780 the schooner *Sea Flower* was launched by William Given. Continuing north and passing Riverside, we come to Vassalboro on the East Bank about eleven miles northeast of the state capital. Vassalboro, from early colonial days, built not only river craft but also sizable brigs and schooners, which had to sail some fifty-three miles downstream to get to the ocean. The sizable vessels built at Vassalboro, of which there are readily accessible official records, were as follows:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1801	ANTELOPE	Schooner	108	71.2	22.1	8	John O. Page
1809	VALIANT	Schooner	105	72.2	21.9	7.7	James Thatcher
1810	UNION	Brig	181	81.2	24.4	10.6	James Thatcher
1811	JOHN & HANNAH	Brig	180	77.7	24.1	11.3	James Thatcher
1811	RUFUS KING	Brig	226	82.7	25.1	12.6	Bernard Hoyt
1812	ROMP	Brig	161	74.8	23	10.9	James Thatcher
1815	SUPERIOR	Ship	366	101	28.8	14.4	Nehemiah Hilton
1815	FAYETTE	Schooner	119	71	21.5	9.1	James Thatcher
1829	ALACRITY	Schooner	109	71.3	21.2	8.4	Ebenezer Hinds
1831	DANIEL WEBSTER	Schooner	106	71.6	21.5	8	Obed Mayo

The largest vessel built at Vassalboro was evidently the full-rigged ship *Superior* of 366 tons, built by Nehemiah Hilton in 1815—the same builder who operated a shipyard actively at Hallowell during the years 1805-1818 inclusive. The largest Vassalboro-built brig was the *Rufus King* of 226 tons, launched in 1811 by Bernard Hoyt. James Thatcher, during the years 1809-1815, built half of the vessels tabulated in the foregoing list. They consisted of three brigs and two schooners and aggregated 746 registered tons, the largest being the two brigs *Union* (181 tons) and *John & Hannah* (180 tons). Ebenezer Hinds and Obed Mayo, with yards at Hallowell, also built at Vassalboro.

I. Waterville

Vessels that were quite sizable in their day were built on the banks of the Kennebec River as far north as Waterville, which is located on the West Bank some seventeen and a half miles north of Augusta (and slightly to the east) and about fifty-six miles in a direct air line, or about sixty miles by water, from the mouth of the Kennebec—America's greatest and most historic shipbuilding river. In the days when the Kennebec River, as a water highway, was practically the only avenue for transportation and trade from settlements on or near the coast back into the country (which was rich in timber, furs, and other marketable commodities), Waterville as well as most other towns and villages on the river built vessels for the river trade. Waterville, however, constructed deep-sea craft in colonial days, during the War of Independence, and in the first quarter of the nineteenth century. There is but little authentic data available concerning Waterville-built craft for either ocean or river work, but the Bath customhouse records show that the following vessels (sizable for the period) were registered there as being built at Waterville for ocean trade during the twenty-year period 1805-1824 inclusive:

Year Built	Name	Rig	Tonnage	Registered Dimensions in Feet			Builder
				Length	Beam	Depth	
1805	WILLIAM GRAY	Brig	155	80.1	24	9.4	James Thatcher
1807	TICONEE	Schooner	123	72.6	22.8	8.7	Seth Swift
1809	AMERICA	Brig	135	74	23.5	9.2	Thomas P. Stetson
1809	MADISON	Brig	160	78	23.9	10	Nathaniel Gilman
1809	JAMES	Schooner	117	71.3	23	8.4	Charles Dingley
1811	HIRAM	Brig	141	74	22.9	9.7	James W. Lemont
1824	NORTH STAR	Schooner	107	69	22.5	8.2	Johnson Williams

These four brigs average 148 registered tons and the three schooners 116 tons. The brig *William Gray* of 155 tons, built in 1805, was named after William Gray, the great merchant of Salem and Boston, Mass. He is reported to have been the greatest American shipowner of his day and to have operated his entire fleet of square-riggers in foreign trade. Evidently, William Gray, who built his ships not in yards of his own but where he could get the best ships at the lowest cost, was well acquainted with the better known Maine shipyards on or near the coast and did business with the shipbuilders located at points well inland and somewhat remote, such as Waterville.

XXVI.

WISCASSET, MAINE

Wiscasset Is Laid Out in 1735 and Incorporated in 1760

WISCASSET, Maine, is an old shipbuilding town and port that was important during colonial days, the War of the Revolution, the early years of the republic, the War of 1812, and the first part of the nineteenth century. It is located on the west bank of the first important ocean inlet east of the Kennebec and is ten miles northeast of the city of Bath and about seven miles (as the crow flies) east of the Kennebec River. The relation of Wiscasset to Bath is geographically quite intimate, as the ocean inlet on which Wiscasset is located makes contact with the Kennebec River at Bath by a communicating and navigable body of water known as Back River. One can travel between Bath and Wiscasset direct by land (or railroad) or by water without the necessity of journeying on the Kennebec between Bath and its mouth and covering the distance at sea between Popham (with Arrowsic and Georgetown to the west) and Wiscasset, now at the head of navigation of its distinctive ocean inlet. The shipbuilding towns of Newcastle and Damariscotta are on the second important ocean inlet east of the Kennebec, Waldoboro on the third, and Thomaston on the fourth. While these towns are directly connected by railroad with Bath and are now at the head of navigable ocean inlets, to reach them from Bath by water requires a journey part of the way on the open ocean. Farther to the east is the Penobscot section of Maine, with a large number of shipbuilding towns on its western shore and river bank. Rockland is a natural center for records of ships built in the Penobscot region, but why the National Archives Office, located at that town, should hold records of Wiscasset ships, when the old shipbuilding town and port of Wiscasset is more closely connected with Bath and the Kennebec, is difficult to explain.

Wiscasset was first laid out in 1735 by Major Samuel Denny, an English emigrant and an early resident of Georgetown. Together with Dresden (which ran to the East Bank of the Kennebec), Swan Island (in the Kennebec, just south of Richmond), and Alna (at head waters of the creek north of Wiscasset), Wiscasset formed the old town of Pownalborough, from which Dresden (with Swan Island) and Alna separated in 1794. In 1802 the name of Pownalborough was changed to Wiscasset. Pownalborough, named after Thomas Pownall (1722-1805), the English governor of the province, had been incorporated February 13, 1760, as the sixteenth town in Maine. Pownall returned to England rather than accept a transfer from Maine to South Carolina by the British Government. He resided in Bath and suggested the name of that English city to the citizens of "Long Reach" on the Kennebec River, which suggestion was acted upon favorably, as the well-located Kennebec village "was growing to be a place of considerable importance."

Colonial Wiscasset Becomes a Shipbuilding and Timber Products Community

Fishing was the earliest industry in most parts of New England. Soon after the discovery of the North American continent (believed to be the northeastern coast of Asia) by the Cabots in 1497 for King Henry VII of England, a fishing fleet came to the Newfoundland Banks and the eastern Canadian and Maine coasts to gather an annual harvest from the sea. The coast fisheries, with shore facilities for curing and preservation, provided "the first articles of export" and became the foundation of navigation and commerce. From the mouth of the Kennebec to the Penobscot and centering around Monhegan Island and Pemaquid Point, there exists a fishing ground that was famous in the sixteenth, seventeenth, and eighteenth centuries. To these waters, fishing craft of England, Spain, France, and Holland voyaged in 1560 in the quest for cod. Capt. John Smith wrote in 1614 that a hundred fish from these waters "were in marketable worth equal to two hundred of the eastern catch"; also, "We took and cured forty thousand fish, corned or in pickle." As early as 1623, individuals associated with the fisheries are reported to have made permanent residence, with curing facilities, on Arrowsic Island, Pemaquid, and elsewhere, and Williamson says that eighty-four families, besides fishermen, were residing along the coast in this fishing region in 1630. As settling the territory developed, timber was shipped to European markets and salt brought back to preserve the fish shipped to Spain and the West Indies. Shipbuilding, first for the fisheries and coasting transport and then to produce tonnage to carry fish and forest products to Europe and the West Indies, developed with the timber industry and the need of bottoms for export. The trade in beaver and otter skins (and furs in general), in which the Indians engaged with fishermen and explorers who came to the Maine and Canadian shores, followed the fishing industry on the coast and developed rapidly to big proportions when vessels went up the rivers and established trading posts. For many long years, the French concentrated on the fur trade, but the Anglo-Saxons in Maine, while profiting by and developing the fur trade, did not ignore the possibilities of the fisheries and the timber industry; moreover, they did not have the St. Lawrence, which the French used to tap a tremendous fur-producing country inland.

Wiscasset's prime industries, from the early days of settlement, were based on forest products and shipbuilding. Prior to the Revolution, the region was looked upon by the British Government as an important source of supply of "tall virgin white pines for masts and spars for the Royal Navy." Falmouth, Maine, had superseded Portsmouth, N.H., as the prime British mast shipping port, and the Kennebec, Wiscasset, and the Penobscot areas were yearly becoming more active in cutting and shipping large pines for the British Navy. All trees of 24 inches diameter and up growing on "His Majesty's plantations" were being branded with a broad arrow and the letter "R" and claimed as the property of the British king. The British naval operations off the Maine coast during the War of the Revolution were aimed primarily at obtaining masts and spars for the Royal Navy and preventing the colonies in revolt from shipping such mastings or shipbuilding timbers to France. The bombardment of Falmouth occurred as a result of a masting episode, and the British masting regulations and the great need of large white pine trees caused the pursuit of the ship *Gruel* and the *Marquis de la Fayette* up the Sheepscot River by British naval vessels during the Revolutionary War. Wiscasset obtained most of its food supplies from the land and the ocean, but was dependent on Britain, the mother country, for manufactured goods. These could be paid for only by Wiscasset's exports, which were limited to forest products. Wiscasset produced mastings and manufactured lumber, but Britain sought to control this trade by decreeing that no timber or lumber should be carried to England by American vessels except in sloops. To prevent the colonies from becoming independent and industrial-minded, the British Government passed

an act prohibiting "any slitting mill, or forge, or iron works in America," and no man who was a mechanic or manufacturer was allowed to leave Great Britain. New England towns were driven to West Indian markets in order to live and survive in the face of arbitrary and selfish British trading restrictions. Practically all that Wiscasset could produce for export was lumber, as it was neither an agricultural community nor an important fishing center. The sterile soil and short crop season sent a large percentage of its men and boys to sea; therefore, Wiscasset naturally became a shipbuilding, shipping, and timber products community.

In the latter part of the eighteenth century, many Wiscasset vessels carried hay to southern ports. At Charleston, Savannah, or New Orleans, after the hay was unloaded, a cargo of cotton or naval stores was placed aboard for Liverpool. A new vessel in this triangular trade was coppered at the English port, as the material was cheaper and the work could be done better and at less cost than at an American port. Returning to Wiscasset or a home port on the last lap of the voyage, the vessel carried clothing, agricultural implements, manufactured articles, salt, and those things for which a Maine timber and shipbuilding port was dependent on industrial Britain for comfort and a well-rounded existence. The general exports of Wiscasset valued for commercial purposes were masts, spars, and ship timbers; lumber for construction purposes; wood for fuel; fish, furs or skins; and tar, turpentine, and potash, which come under the category of "forest products." Later, as Sheepscot vessels traded primarily with the West Indies, the vessels took out, in addition to dried fish, such articles as pork, beef, potatoes, an occasional shipment of horses, headings and hoop poles for cooperage, barrel staves, box shooks, etc., and brought back tropical fruits, coffee, sugar, molasses and rum, cottons, salt, etc. These were distributed all over the adjoining country for cash or in exchange for salable country produce or else re-shipped by coasters to larger New England markets.

The original masts for the U.S. frigate *Constitution* were made of white pine trees, in one piece, cut back inland in 1796 and hauled over a swamped road to the Sheepscot River, where they were launched and taken to Wiscasset. From there, they were towed to Boston, where America's most famous wood frigate (launched October 21, 1797) was building.

The early settlers in New England were required to build boats for transport if they desired to move around, visit their neighbors, or trade with other settlements or with the Indians; for the rivers and streams, inlets, creeks, and ocean formed the only highway. The deep-sea fisheries and ocean transport required larger and more able sailing vessels, and as trade extended, the cargoes to be carried economically determined the size of the craft needed. That Wiscasset built some vessels in the first half of the eighteenth century is proved by the deposition of Michael Sevey, who stated that he "came to Wiscasset in 1737 to help build a ship."

Until after the adoption of the Constitution by the young republic, there are practically no reliable records of early Wiscasset ship construction. Prior to the War of the Revolution, Britishers built ships in America for their own account. We read in the CUMBERLAND PACQUET of Whitehaven, England, that Daniel Brocklebank, having built five ships in America, sailed in the last one (the *Castor*) from Sheepscot for Whitehaven on May 8, 1775, and made a 32-day crossing. Captain Brocklebank, after the war, established a shipyard at Whitehaven and built twenty-five vessels there. He is said to have founded the Anchor-Brocklebank Line, of Liverpool, in 1770.

The Difficulty of Obtaining Official Records of the Building of Ships in Maine Towns

Official records of the building of ships in Maine towns are extremely difficult to obtain. In these days, to find a complete record, even for the nineteenth century, is impossible. The needed data, even if once obtained and recorded correctly, have been indifferently filed, sloppily stored, and moved around; many records have been lost by fire and in the process of unintelligent attempts at so-called "preservation," with the localism, politics, and lack of a real feeling of values associated therewith. The changes of customhouses, limits and names of townships confuse the situation. The believed lack of importance of builders and even of the place of building in relation to owners and hailing ports makes it impossible to prepare any fairly complete and authentic statement covering the construction of ships, particularly in the state of Maine, even from the time of the establishment of customhouses in the early days of the republic. Maine as a shipbuilding state constructed vessels for out-of-town and out-of-state, or "foreign," owners, but the customhouses generally registered only the ships locally owned and hailing from the local port. Practically all the ports in the United States owned Maine-built ships. To obtain a list of vessels constructed in Maine, the registers of all customhouses in the country would have to be examined, and such a search, if made thoroughly, would give only a partial list, as the records are incomplete because of losses from fire, transfers, and indifferent preservation in inadequate and insecure storage. Some shipping centers in Maine (as in other states) that were more active as trading ports than as shipbuilding communities registered ships that were built elsewhere and merely hailed from the port of registry; therefore, there are some ports credited with numbers of vessels and tonnage far in excess of what have been constructed at that particular shipping center. As a general proposition, shipbuilding ports grossly understated their actual local construction tonnage in their registers of shipping; whereas shipping and trading ports showed on their registers a large percentage of vessels built elsewhere. The records of the builders of ships in Maine are very poor, and in most cases Master Carpenter's Certificates are the only source of information on the names of builders. These generally have not been filed, but evidently have been treated with a measure of indifference.

Prior to the participation of the United States in World War II, an investigator of Maine customhouse ship registers reported on this subject of obtaining data of the building of old Maine wood ships, in part, as follows:

> While most of the other information of interest on ships built at any given port has been filed where it is available in the District Customhouse and, more recently, been concentrated in the National Archives, the builders' names have not been so filed and will, in most cases, not be obtainable without considerable loss of time and much repetitious and often fruitless investigation. In the few cases where these certificates have been filed in orderly fashion, the tying of ships to builders becomes only a matter of going through the certificates for the year that ship was built, and the port, which is not always the same as the one at the top of the certificate. While the National Archives in Washington were interested at first in the names of the builders, they have now given up including this in their assembled material except in the rare instances where it appears along with the other information on file under the ship's name. Why the builders' names for ships built at Bath have been so much more readily available than for ships at the other ports, or most of the other ports, I cannot say, but such seems to be the case.

Wiscasset was the seat of a customhouse from 1791 until June 30, 1913, when it was discontinued and "Bath took over," absorbing the Wiscasset area. However, to obtain records of Wiscasset-built ships, it was authoritatively said that "the Wiscasset file at the Rockland Office of the National Archives would have to be examined." This file was supposed to be "complete so far as possible for the district of Wiscasset." An examination of the records of ships reported built in the Wiscasset area as per statistics available in various Maine customs offices gave the following results:

Source	Number Reported Built at				Total
	Wiscasset	Pownal-borough	Alna	Dresden	
Wiscasset file; Rockland Office of National Archives.....	161	30	96	5	292
Bath district	7	4	5	18	34
Waldoboro district	—	—	3	—	3
Penobscot-Castine district	—	2	—	1	3
Total	168	36	104	24	332

New vessels registered not at the place of building but at some distant U.S.A. port were allowed to travel under what was called a master-builder's certificate to the port where they intended to do business, be permanently located, and be registered. Thus vessels built in one customhouse district were sailed past the customhouse of the district in which they were constructed, launched, rigged and fitted for sea and were registered at some other customhouse, which might be comparatively near by, some distance away, or far remote. Under these conditions, customhouse records were more valuable for obtaining comparisons of marine tonnage engaged in commerce from various hailing ports than for obtaining a record of the actual building of ships in the district.

The Days of Wiscasset's Prosperity as a Shipbuilding Center and Foreign Trade Port

The years immediately following the Revolution were, "until the withering blight of the embargo," the years of Wiscasset's prosperity. It was Maine's greatest business center east of Portland, and all neighboring towns were then in an incipient stage of development. Bath was a small community that built good ships, but had not found itself. Augusta, up the Kennebec, which was to become the capital of the state of Maine, was a little village known by its Indian name of Cushnoc. Richmond was merely a plantation of little importance, and Gardiner was known as Cobbosseecontee Mills. Wiscasset had become a foreign trade port of eminence, and the Napoleonic Wars had brought wealth to Wiscasset shipowners and merchants. It was freely said, "Wiscasset milked the British cow." It was claimed in 1791 that the town of Wiscasset was "the largest United States shipping port east of Boston." When Jefferson's embargo was put into effect at the end of 1807, the tonnage of square-rigged deep-sea vessels owned at the port of Wiscasset totaled 8,405 tons, and this fleet included thirty-two full-rigged ships.

The following table gives a list of the vessels built at Wiscasset and Pownalborough prior to and including 1806 as per the records of the National Archives at Rockland, Maine, and of the Bath, Maine, customhouse. Dresden and Alna separated from the old town of Pownalborough in 1794, and Pownalborough became known as Wiscasset in 1802. Until 1794, vessels built at Wiscasset might be registered as built at either Pownalborough or Wiscasset, but following that date vessels recorded as constructed at Pownalborough were built at Wiscasset. Occasionally, the old town name crept into the records, for the schooner *Fox* of 30-17/95 tons was registered as being built at Pownalborough in 1816.

Year Built	Built at	Name of Vessel	Rig	Tonnage
1782	Wiscasset	DIAMOND	Schooner	20-39/95
1784	Wiscasset	BETSEY	Ship	219- 2/95
1786	Pownalborough	ALFRED	Brigantine	185-48/95
1787	Wiscasset	ADVENTURE	Brigantine	187
1788	Wiscasset	RANGER	Schooner	36- 9/95
1788	Pownalborough	NEPTUNE	Brigantine	119
1789	Wiscasset	FRIENDSHIP	Brigantine	106
1789	Pownalborough	RANGER (of Northport)	Sloop	93-75/95
1790	Pownalborough	POLLY (of Kennebec)	Brigantine	167-39/95
1790	Pownalborough	HENRY	Brigantine	173
1790	Wiscasset	FAME	Brigantine	210-90/95
1790	Wiscasset	LYDIA	Ship (?)	71
1790	Wiscasset	FLORA	Schooner	35-14/95
1790	Wiscasset	TRYAL	Schooner	73
1791	Pownalborough	COLUMBUS	Schooner	59-34/95
1791	Wiscasset	INDUSTRY	Schooner	149- 7/95
1792	Wiscasset	NABBY	Ship	297-11/95
1792	Pownalborough	EXPERIMENT (of Kennebec)	Ship (?)	51-12/95
1792	Pownalborough	HIBERNIA (of Kennebec)	Schooner	33-32/95
1793	Pownalborough	NANCY	Ship	235- 7/95
1793	Pownalborough	ASTREA	Ship	458-60/95
1793	Pownalborough	BETSEY	Schooner	46-82/95
1794	Pownalborough	JUNO	Ship	177- 3/95
1794	Pownalborough	HANNAH	Schooner	136-39/95
1795	Pownalborough	SALLY	Ship	348-42/95
1795	Pownalborough	MAGNET	Ship	299-26/95
1795	Pownalborough	ALNOMAC	Ship	195-68/95
1796	Pownalborough	PRESIDENT	Ship	369-12/95
1796	Pownalborough	MINERVA	Ship	209-52/95
1796	Pownalborough	ELIZABETH	Ship	345-71/95
1796	Pownalborough	INDUSTRY	Sloop	80- 7/95
1797	Pownalborough	SIX SISTERS	Ship	215-17/95
1797	Pownalborough	AMERICA	Brigantine	142
1798	Pownalborough	BENEVOLENCE	Schooner	117-67/95
1798	Pownalborough	DOLPHIN	Schooner	23
1799	Wiscasset	ONSLOW	Ship	257
1799	Pownalborough	CLEOPATRA	Ship	246-67/95
1799	Pownalborough	NEPTUNE	Brigantine	123-32/95
1799	Pownalborough	BELISARIUS	Brigantine	168-33/95
1799	Pownalborough	PACKET	Sloop	79-11/95
1800	Pownalborough	HOPE	Brig	157-93/95
1800	Pownalborough	MARGARET	Ship	206-18/95
1801	Pownalborough	MERCURY	Ship	221
1801	Pownalborough	GOVERNOR STRONG	Schooner (?)	367-55/95
1802	Pownalborough	MYARS	Ship	281-49/95
1804	Wiscasset	ALBERT	Sloop	66-22/95
1804	Wiscasset	UNITED STATES	Ship	377
1805	Wiscasset (at Dresden)	INDIAN CHIEF (of New York)	Ship	256-28/95
1805	Wiscasset	DRYADE	Ship	327-90/95
1805	Wiscasset	ULYSSES	Ship	297-51/95
1805	Wiscasset	CLIO	Ship	263-82/95
1805	Wiscasset	FORTITUDE	Brig	132-74/95

(Continued on next page)

Year Built	Built at	Name of Vessel	Rig	Tonnage
1806	Wiscasset	SALLY	Ship	194-91/95
1806	Wiscasset	ISABELLA	Ship	291-14/95
1806	Wiscasset	MARY	Ship	308-21/95
1806	Wiscasset	OCTAVIA	Ship	250-71/95
1806	Wiscasset	SUSAN	Ship	230- 2/95

The foregoing list of Wiscasset- or Pownalborough-built vessels is known to be incomplete for the period covered. During the years 1787-1806, the one yard of Abiel Wood at Wiscasset is known to have built at least twenty-four vessels, but only twelve of them are recorded here.

Sizable ships (for the period) were built at Wiscasset from early days, and a full-rigged ship was constructed as early as 1784. In 1792 a ship of practically 300 tons was built and, in 1793, a very large ship of over 450 tons. It would seem that in the first decade of the nineteenth century, Wiscasset built practically nothing but sizable ships or else a record of the smaller craft has not been preserved. The available customhouse records show that during the ten years 1800-1809 inclusive, Wiscasset built twenty-two vessels, of which only one was under 100 tons, the other twenty-one ranging in tonnage from the brigs *Hero* of 141.3 tons and *Hope* of 158 tons to the ships *Columbus* of 381.5 tons and *United States* of 377 tons. Whereas seventeen of the twenty-one sizable vessels were recorded as ships and two as schooners, it is probable that the schooners were in reality ship-rigged, as these so-called "schooners" were very large vessels for the period, being the *Governor Strong* of 367.5 tons, built in 1801, and the *Cleopatra* of 378.4 tons, built in 1807.

We read in WISCASSET IN POWNALBOROUGH by historian Fannie S. Chase that in 1791 the principal shipowner in Wiscasset was Moses Carlton, "considered one of the richest men of his day." Moses Carlton was a spectacular figure, and both he and his son (Moses, Jr.) were in the public eye. It is doubtful as to whether Moses Carlton and his son were ever in the same class as General Abiel Wood and his sons (Abiel, Jr., and Major Joseph T.) as shipowners; yet in a pamphlet circulated "To the Electors of Lincoln District" during the Jefferson Embargo Act political controversy of 1808 we read: "Messrs. Gray, Wood, King and Carlton are men of the largest concern in commerce." The men referred to were William Gray, of Salem (later of Boston—America's greatest shipowner and merchant), Abiel Wood, Jr., of Wiscasset, William King, of Bath, and Moses Carlton, Jr., of Wiscasset. Moses Carlton, Sr., came from the Head Tide section of Alna, and until the embargo and the events that followed, he was one of the prominent shipowners of Wiscasset. One historian says that during the embargo, Moses Carlton "saw thirty of his vessels rotting at the wharves." It is difficult to trace any such large number of vessels to Carlton ownership, although he is credited with owning the ship *Liverpool Packet,* the ships *Mary* and *William Carlton,* the brigs *Eliza, Swift, Hiram,* and *Pattern,* the schooner *Walter,* and half of the schooner *Edward Preble.* Carlton built and owned one of the six long wharves at Wiscasset, which extended out to the channel of the river, the others being owned by Abiel Wood, Joseph T. Wood, the Cooks, Dole, and a private company (Union Wharf), respectively.

Moses Carlton was a selectman of the town of Wiscasset in 1776 and at the turn of the century had accumulated much wealth. Historian Fannie S. Chase writes:

> When his ships came in bringing home the fruit of their voyages, the cargo money, in nail kegs, was pushed uphill from Carlton's wharf in wheelbarrows to his mansion on High Street by Robert Dow and emptied into chests in the cellar.
>
> Tradition relates of the affluent Moses Carlton, that standing one day on his wharf, he threw a gold ring into the Sheepscot River, saying as he did so, "There is as much chance of my dying a poor man as there is of my ever again seeing that ring." A few days later when fish was served on the bountiful Carlton table, there, to the consternation of the family, was the identical gold ring inside of the fish.

Because of the trouble with the British and the French at sea and the paralyzing effect, suspension of trading, and complete economic collapse brought about by the embargoes, Moses Carlton suffered losses. During a period of anxiety following the *Chesapeake-Leopard* incident, Carlton, "fearing an attack on Wiscasset by the British, built for a hideout, a large house at Head Tide, equipped with a secret closet, secret stairs and a jug vault in the cellar. . . . This house is still standing [in 1941]." Moses Carlton, we are told, "sent his treasures up to his cache at Head Tide, where his 'metal money' was hidden in a jug vault in the cellar, which when flooded with water gave the appearance of a perfectly innocent cistern." Notwithstanding all his precautions, his husbanding of hard cash, and his refusal to take adventuresome chances in trade, it appears that events impoverished Moses Carlton. It is said that he died "a poor man," which is surprising; for his son, Major Moses Carlton, Jr., was a prominent man of means during the early nineteenth century and the War of 1812. Tradition says that in February 1815, when a post-rider brought word of the cessation of hostilities to Wiscasset at night, Major Carlton's house was the scene of a large social gathering. Being brilliantly lighted, it was the only building illuminated in the village. The post-rider, who was traveling fast in his excitement as the bearer of tremendous news, "spurred his horse straight into the hall of the home of Major Moses Carlton to make the announcement. . . . This sudden appearance of a man on horseback entering the house so startled the slave, Pendy, that she dropped with a direful crash on the floor, a tray filled with flip glasses which she was carrying to the guests."

In later years, a member of the Dow family stated that "when his father worked for Major Carlton, he had the responsibility of taking kegs of specie in a wheelbarrow from Carlton's Wharf to the Carlton house on High Street." Evidently, it is difficult to differentiate between the wealth and doings of Moses Carlton and of Moses Carlton, Jr. The house known as the Carlton house in Wiscasset was built by Joseph T. Wood in 1805 and promptly traded by him to Major Moses Carlton, Jr., for a hundred puncheons of rum, which cargo, just landed on the Carlton Wharf in Wiscasset, was sold for $12,000. Major Carlton and his family lived in this house for fifty years. He had eight children, and he lived to the ripe old age of ninety. He was described as "a gentleman of the old school."

Abiel Wood, Wiscasset's most important early shipbuilder and shipowner, arrived at that village from Middleboro, Mass., in 1766. John Currier, in a statement made in 1801, said that he "worked in the ship-yard of Abiel Wood in 1767 and for several years thereafter" and that Wood had a vessel building in said yard in 1798. This yard was operating at Wiscasset until building was suspended during the War of the Revolution. (Apparently, this John Currier was the father of the famous shipbuilder of Newburyport, Mass., John Currier, Jr., who built a hundred fine vessels in the half century following 1830.) An incomplete list of the vessels built during the period 1787-1810 and owned by Abiel Wood and Abiel Wood, Jr., is set forth herewith:

Year Built	Name	Rig and Tonnage	Year Built	Name	Rig and Tonnage	Year Built	Name	Rig and Tonnage
1787	DOLPHIN	Sloop	1793	APOLLO	Schooner	1798	BENEVO-LENCE	Schooner; 118
1788	NEPTUNE	Brigantine; 119	1793	ASTREA	Ship; 459	1799	MILFORD	Schooner
1790	TWO FRIENDS	Sloop	1794	MINERVA	Brig (209?)	1799	BELISARIUS	Brigantine; 168
1790	LYDIA	Ship; 71	1795	ALNOMAC	Ship; 196	1801	MOUNT VERNON	Ship
1790	BETSEY	Ship (219?)	1795	HARMONY	Ship	1803	BETSEY	Brig
1791	CLEOPATRA	Schooner	1796	HANNAH	Schooner; 136	1805	ISABELLA	Ship; 291
1791	COLUMBUS	Schooner; 59	1796	PRESIDENT	Ship; 369	1805-1806	MILFORD	Ship
1792	ALEXANDER	Brig; 131	1797	AMERICA	Brigantine; 142	1806	SALLY	Ship; 195

Abiel Wood is also credited with building the ship *Rapid* of 291 tons at Wiscasset in 1810—after the embargo.

General Abiel Wood contributed largely to the enterprise and activity of Wiscasset and was generally considered "the town's most prominent citizen." He had several sons, two of whom, Abiel Wood, Jr., and Major Joseph Tinkham Wood, were prominent shipowners. Abiel Wood was extensively engaged in the timber trade with Liverpool before the War of 1812. We are told that he owned the greatest amount of tonnage of any Wiscasset shipowner, "among his ships being the *Columbus, Dryad, Perseverance, President, Sally, Diana, Shamrock,* and *Independence.*" He also owned a couple of brigs, one of which was the *Belisarius.* Historians tell us that "rafts were made up on the Kennebec, with the pine floating the hardwood; they were floated down upon the ebb tide to Wiscasset, where both American and British vessels were ready to receive them aboard and carry them to their destination." Major Joseph Tinkham Wood, at one time, owned the four ships *Europe, Asia, America,* and *Africa.* He also had the brigs *Sophronia, Caesar,* and *Perseverance* and the schooner *Trial.*

During the War of 1812, Wiscasset Turns to Privateering

The people of Wiscasset, in common generally with New Englanders, while patriotic and supporting the United States as a whole, were positively not in favor of the ill-advised and badly timed War of 1812, the declaration of which was signed on June 18, 1812. At a town meeting held at Wiscasset August 1, 1812, the people voted:

> That with deep regret and utter astonishment we find ourselves engaged in an offensive war with a nation, which almost single-handed is now struggling for her existence with the most despotic tyrant that ever waged war upon the liberties of mankind—that the differences in our opinion subsisting between us and the power against whom we have so fatally commenced hostilities are susceptible of an honourable adjustment by treaty, and that the declaration of war was premature, impolitic and altogether unnecessary.
>
> That we view with the deepest horror an alliance with the present government of France—a gigantic despotism fatally bent upon the destruction of every vestige of freedom. . . .

The people of Wiscasset were concerned with the political domination of the country by a party that was not interested in maritime commerce, that was opposed to a navy and was inclined to be pro-French, and that had declared war without any preparation for it and without any means of defense. Wiscasset was in an exposed position and for two and a half years was threatened by British invasion. The people had no love for Britain, but hated the upstart despot Napoleon. They were indignant that the government, which had had cause for waging war against both France and Britain for many long years, had not prepared to defend itself before it declared war and that when it did abandon its position of neutrality, it took sides with the greatest despot the world had known against peoples who were fighting Napoleon in the interest of democracy and individual liberty. Wiscasset not only sought to defend itself against attack during the War of 1812 but also turned to privateering. Five privateers, the *Grand Turk, Hercules, Intention, Paul Jones,* and *Fox,* were built, owned, or enrolled at Wiscasset. The most famous of these was the brig *Grand Turk* of 309 tons (length 102 ft., beam 28 ft., depth 12⅓ ft.), built by Stephen C. Dutton, of Wiscasset, in 1812. She was pierced for 18 guns and designed to carry 120 men. She was sold to a Salem, Mass., syndicate. She made a great reputation for herself as a fast and deadly hornet of the sea, making cruises against enemy shipping as long as the war lasted and taking as prizes no fewer than thirty enemy vessels and much treasure. After the war, the *Grand Turk* was acquired for a fast merchantman by William Gray, of Boston, America's leading shipowner.

The *Hercules* has been described as both a privateer and a "letter of marque." She carried 18 guns, which would seem to brand her as a privateer, but she is confused with a Wiscasset armed merchant vessel of similar name that foundered in the mid-Atlantic in early 1799. The *Intention* was a Wiscasset-owned and manned privateer schooner, which was captured in the autumn of 1812. The *Paul Jones* was a successful privateer schooner, well armed and carrying a crew of 85 men. Among her several prizes were the British brig *Danzic* of 170 tons, brought into port in January 1815, and the American brig *Arrow*. She had been captured by a British armed vessel and was retaken by the *Paul Jones* and sailed into Wiscasset, where she was sold "and yielded the men $74 a share." But little is known of the privateer *Fox* of Wiscasset, although her name appears in old records. Maclay writes of the *Fox*, Captain Jack, which "after taking eight British vessels was chased one hundred miles by an English squadron and captured." Evidently, this refers to the Baltimore privateer *Fox* (a schooner of 162 tons), which fought and took the British post office packet *Lapwing*, but was captured by the British in January 1817. There was also an "American privateer schooner *Fox*, commanded by Capt. John Winkley of Portsmouth, N.H.," but this vessel was an armed schooner of 208 tons, built at Portland, Maine, in 1812. She operated successfully throughout the war, sent many valuable prizes into New England ports, and became known as "a million dollar privateer." The privateer *Fox* mentioned in the HISTORY OF BRISTOL AND BREMEN as belonging to Wiscasset could hardly have been, as suggested by historians, a sloop of that name built at Edgecomb in 1787, for such a craft, being of only 95 tons, would have been too small as well as too old to make a successful privateer during the War of 1812.

A Record of Vessels Built in Wiscasset, 1810-1859, Including One of Medium Clipper Type—the GOLDEN HORN

During the second decade of the nineteenth century (1810-1819 inclusive), Wiscasset is credited, according to available customhouse records, with building twenty vessels, of which three were registered as ships, six as brigs, ten as schooners, and one as a sloop. It would seem that the *Ganges* of 329.4 tons, built in 1810 and recorded as a schooner, was in fact a ship, and there is some doubt as to whether the brig *Calcutta* of 257 tons, built in 1818, was a true brig or had three masts and was a bark or a ship. The other five brigs built at Wiscasset during the decade ranged in tonnage from 159.7 to 211.2 tons, the other nine schooners from 32.7 to 115.4 tons, and the sloop was a vessel of 104 tons, built in 1810 and named *Defiance*. The three vessels recorded as ships, built during this period, were the *Caledonia* of 477.5 tons, built in 1815; the *Commerce* of 443.3 tons, built in 1811; and the much smaller *Rapid* of 203.4 tons, built in 1810.

In the 1820's, the customhouse records credit Wiscasset with building fifteen vessels, consisting of three ships, one bark, four brigs, and seven schooners. The ships were the *Othello* of 370.4 tons, built in 1827, and the *Tamerlane* of 357.4 tons and *Henry Kneeland* of 303.8 tons, each built in 1824. The bark was the *Loyd* (probably meant for *Lloyd*) of 196.8 tons, built in 1823, and three of the four brigs were sizable two-masted square-riggers, being the *De Witt Clinton* of 292.9 tons, built in 1823, the *Ceres* of 248.4 tons, built in 1826, and the *Ajax* of 227.5 tons, built in 1825. The seven schooners ranged in size from 28.5 to 125.3 tons. Another vessel built during this period and registered as a Wiscasset brig in the Penobscot-Castine district was the *Franklin* (of Castine), with a tonnage of 196-34/95, built in 1827. There was also the *Hope*, of Gardiner, a schooner of 71-12/95 tons, built in 1829.

The following table is a record of other Wiscasset-built vessels according to the available customhouse files presumably covering the district:

Period	Ships: Number	Ships: Largest and Smallest Tonnage	Barks: Number	Barks: Largest and Smallest Tonnage	Brigs: Number	Brigs: Largest and Smallest Tonnage	Schooners: Number	Schooners: Largest and Smallest Tonnage	Total Vessels
1830-1839	2	ONTARIO; 572.8	3	PERU; 271.3	5	RALPH (of Gardiner); 235.7	10	EMPORIUM; 309.3*	20
		STERLING; 504		LEVANT (of Gardiner); 146.7		GRANITE; 150.8		OSPREY; 31.8	
1840-1849	2	TELASSAR; 473	2	SMYRNA; 272	7	ARCADIAN; 199.6	17	MERCHANT; 164	28
		CANTON; 415.3		EXPRESS; 261		CRUSOE; 130.2		EXCHANGE; 32.2	
1850-1859	4	MACKINAW; 1,094.2	4	JAMES BRIANT; 518.2	5	JULIA; 263.4	9	GOLDEN RULE; 1,193.8†	22
		ISABELLA; 92.2**		CHEROKEE; 344.9		MARIA T. WILDER; 147.2		SPRAY; 26.8	

*Probably ship- or bark-rigged with 3 masts; next largest schooners were PLANET (of Bath) of 99.2 tons and POCASSET of 76 tons.

**Undoubtedly incorrectly registered as ship-rigged; was probably a schooner. The other two ships recorded were the TAMERLANE of 924 tons, built (as was the MACKINAW) in 1854, and the ST. BERNARD of 880.8 tons, built in 1853.

†Undoubtedly a full-rigged ship incorrectly registered as a schooner; was built in 1854. A ship of this name, referred to as a "medium clipper" of 1,185 tons, was built by William Hitchcock that year at Damariscotta or Newcastle, some seven miles from Wiscasset. However, according to available records, another so-called "medium clipper ship" named the GOLDEN HORN of 1,193 tons was built in 1854 by Clark & Wood, Wiscasset, for local owners. The next largest vessel reported as of fore-and-aft rig and built at Wiscasset during the fifties was the schooner FREDERICK REED of 138.6 tons.

Records show that Wiscasset experienced a gala day in 1854, as it "launched three vessels on the same day." The ships put overboard are said to have been the *Golden Horn* of 1,193 tons, built by Clark & Wood in Harriman & Clark's yard in Bradbury Cove; the *Mackinaw* of 1,094 tons, constructed in Isaac H. Coffin's yard; and the *Tamerlane* of 924 tons, built by Carleton & Norwood in John Johnston & Sons's yard at the extreme southeastern corner of the Point near the old ferry-ways.

No real clipper ships were built or owned at Wiscasset, but the following three so-called medium clippers were identified with Wiscasset through ownership, and one of the trio was built in that town in 1854.

Year Built	Name of Ship	Registered Tonnage	Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Owner
1852	CELESTIAL EMPIRE	1,395	193	39-7	29	Jotham Stetson, South Boston	C. H. Parsons & Co., New York
1854	GOLDEN HORN	1,193	186	37-2	23	Clark & Wood, Wiscasset	Henry Clark et al., Wiscasset
1854	GOLDEN RULE	1,185	186	36-6	23-6	Hitchcock & Co., Damariscotta	F. Nickerson & Co., Boston

The American Lloyd's Register describes the *Golden Rule* as of "sharp model" and the other two ships as of "medium" fullness. All were built of oak, with copper and iron fastening.

The *Celestial Empire* was owned in shares by the Parsons family. Charles H. Parsons & Company, of New York, was the agent, and Jotham Parsons, of Wiscasset, was the "company" of the New York firm. This ship made a voyage in the California Cape Horn trade in the clipper ship boom period, and her sailing performance proved that she was no clipper (as has been claimed) but a rather full-bodied and moderately rigged Down East type of sailing ship that carried "a relatively large cargo and a small crew." Under Captain Pierce, the *Celestial Empire* left New York April 28, 1853, the same day that the extreme clippers *Flying Cloud* (1,782 tons) and *Hornet* (1,426 tons) sailed, and she reached San Francisco September 21 after a passage of 146 days; whereas each of the two clippers reported runs of 108 days. On this passage, the *Hornet* beat the "greyhound" *Flying Cloud* by the greater part of a day over the ocean course from off Sandy Hook to a point off the Golden Gate, where the *Hornet* was detained and anchored over night because of fog. The *Celestial Empire* was said to have been built for trading with India and the Orient, but most of her career was spent in the transatlantic trade. She is credited with making four westbound around-the-Horn passages to California. Although the shortest run was reported as 144 days, the average is said to have been 164 days, which is very slow time for either a real Down Easter or a medium clipper. The ship was owned by the Parsons family for about twenty years, but was sold to Snow & Burgess, of New York, in 1872. When in her twenty-sixth year, the *Celestial Empire* was abandoned at sea in the North Atlantic on February 20, 1878, while on a westbound transatlantic crossing from Bremen to New York. Capt. Jotham Sewall Parsons, of Wiscasset, was said to have commanded the *Celestial Empire* around the mid-fifties. He was murdered by Moros at Manila on May 6, 1858.

The *Golden Horn* ceased her connection with Wiscasset when she was sold in 1863 to go under the British flag "in order to evade the risk of capture by Confederate commerce raiders, as insurance against such was almost prohibitive." In 1886, when thirty-two years old, the vessel, rigged as a bark, was engaged in North Atlantic trade under the Norwegian flag as the *Golden Horn* of Christiania.

The *Golden Rule,* with a larger but somewhat similar type of ship, the *Criterion,* was built by William Hitchcock & Company on either the Damariscotta or Newcastle side of the Maine salt water inlet that separates the two towns (about seven miles to the east of Wiscasset). These vessels were reported as owned and managed by Frederick Nickerson & Company, of Boston, as was also the clipper ship *Flying Eagle* of 1,004 tons, built by Hitchcock in 1852. Although some Wiscasset interest may have owned a fraction of the *Golden Rule* or of other Nickerson vessels, it would seem that such an interest was not sufficiently large to affect management or identify any of these Hitchcock-built and Nickerson-owned ships with the town or port of Wiscasset.

Evidently, according to available and incomplete customhouse registers, no more full-rigged ships were launched at Wiscasset after the first half of the 1850's, during which the following full-bodied square-rigged three-masters were built: *Mackinaw* of 1,094.2 tons, *Tamerlane* of 924 tons, and *St. Bernard* of 880.8 tons; also possibly the *Golden Rule* or *Golden Horn* of 1,185 to 1,193 tons.

A Record of Vessels Built at Wiscasset, 1860-1899

The vessels recorded by the customhouse as having been built at Wiscasset from 1860 to the end of sail were as follows:

	Barks		Brigs		Schooners		Steamers		
Period	Number	Name and Tonnage	Number	Name and Tonnage	Number	Largest and Smallest Tonnage	Number	Name and Tonnage	Total Vessels
1860-1869	1	JAMES McCARTY; 549.7	2	HIRAM ABIFF; 292.5 HYPERION; 243.2	10	GLENGARRY; 218.8 SUNNY SIDE; 27.5	2	WAWENOCK (of Bath); 103.1 CLARION; 77.6	15
1870-1879	1	BIERSTADT; 585.6	—	—	—	—	1	HENRY D. HOBSON; 49.6	2
1880-1889	—	—	—	—	10	ANDREW ADAMS; 812 ANNAWAN; 123.5	—	—	10
1890-1899	—	—	—	—	3	R. T. RUNDLETT; 272 SHEEPSCOT; 120.3	1 sloop	FANNIE F.; 38.9	4

These customhouse records are incomplete, for no mention is made here of the Down Easter *Fannie Tucker,* a three-masted ship of 1,527 tons register that was launched at Birch Point, Wiscasset, in November 1875.

The Johnston Family of Shipowners and Shipbuilders Survives the Ruin of the Embargoes and the War of 1812

The John Johnstons, father and son (Senior and Junior) and later John Johnston & Sons, we read in WISCASSET IN POWNALBOROUGH, were "the only ones to survive the ruin which wrecked the ship-owners of this village" brought about by the shipping embargoes and the war (1807-1815). "If Wiscasset staggered under the first embargo, the second had an even more paralyzing effect; then followed the War of 1812 which proved the death blow to its halcyon days of roaring trade." The experience of Wiscasset, Maine, was very similar to that of Salem, Mass. The Kennebec River, with Bath, held natural advantages over Wiscasset as a shipbuilding and shipowning port, and it rose to pre-eminence in the construction and operation of ships as Wiscasset declined. Wiscasset's historian, Fannie S. Chase, says:

> Business and population began to flow in and thrive upon the Kennebec. The trade from the interior to Wiscasset was stopped, and the town through no fault of its own, was reduced to meager resources, while other towns, springing up on every side, seized the enterprise that once centered upon the banks of the Sheepscot. The losses sustained by Wiscasset merchants and ship-owners reached large proportions and there were few in business life who did not suffer thereby.

John Johnston, Sr., had two sons who, with their father, were active in the building or operation of Wiscasset ships. Capt. John ("Jack") Johnston (born in 1778) died in 1854 at the age of seventy-six, and his younger brother, Capt. Alexander Johnston (born in 1780), died in 1857 at the age of seventy-seven years. Capt. "Jack" Johnston became the real seafaring man of the family, and Alexander worked ashore. The ship *Cleopatra* of 378 tons, built at Wiscasset in 1807, was reported as built and owned by John Johnston, Sr., and his son Alexander; the little *Dove,* built in 1824, was owned by "John and Alexander Johnston." This Alexander, the son of John Johnston, Sr., became known as "Senior" himself, for the second of his six children (born at Wiscasset December 20, 1815) "became a shipbuilder with his father" in 1835 after his graduation from college. Alexander Johnston, Jr., who died October 4, 1890, when in his seventy-fifth year, was not a very active shipbuilder, but is better known as an architect, civil engineer, and writer. His father, Alexander Johnston, Sr., followed his father, "Old John," as a builder and repairer of ships, but much of his business activity was in the realm of general commerce and trading. Alexander Johnston, Sr., was the first man to import English blot iron after the War of 1812 and, during the years 1823-1830, was the only importer of iron in Maine. He did a good volume of business throughout the state.

The Johnstons (the father, John, and his two sons, John and Alexander, who survived the ruin wrought at Wiscasset by the embargoes and the War of 1812) are known to have built or acquired at least ten ships during the period 1805-1856 inclusive—prior to the death of Alexander, Sr. However, the third generation of Johnstons was interested in the construction, ownership, and operation of vessels from the thirties on. These ships, which were all built on the Sheepscot and most of them by John Johnston & Sons at Wiscasset, can be briefly described as follows:

Year Built	Name of Ship	Tonnage	Remarks
1805	STIRLING (I)	275	Length 99 ft., beam 25 ft., depth 12.4 ft.
1807	CLEOPATRA	378.4	Length 110 ft., beam 27.8 ft., depth 13.9 ft.
1810	AFRICA	320.2	Evidently built by John Averill on the Sheepscot. Bought by the Johnstons in 1820.
1811	CALEDONIA	477	Building during War of 1812. Finished in 1815.
1824	TAMERLANE (I)	357	Used entirely in transatlantic trade.
1824	DOVE	36.5	Evidently far too small for the reported ship rig.
1833	STIRLING (II)	504	All 16 men aboard stricken by smallpox a few days out from Liverpool, 1836.
1847	GONDAR	645	Destroyed by fire at Charleston, S.C., June 1853.
1854-1855	TAMERLANE (II)	924	Length 175 ft., beam 34.5 ft., depth 22 ft.
1856	WALLACE	977	Length 168 ft., beam 34.5 ft., depth 23.8 ft.

The *Stirling (I),* built in 1805 at Sheepscot Farms on the Sheepscot River, three miles above Wiscasset, was the first of the Johnston ships. On her second voyage, a youth destined to become a famous American writer, James Fenimore Cooper, shipped aboard the vessel as a greenhorn foremast hand. When she sailed, she had a motley crew aboard consisting of four Americans, one Canadian, one Englishman, one Scot, one Swede, one Dane, one Prussian, one Spaniard, and one Portuguese. These were the days of the British search and detention of American ships and the impressment of members of the crew. The master and part owner of the *Stirling,* Capt. John Johnston (born at Haverhill, Mass., in 1778), was himself seized by British officers in London for service in the British Navy, as they claimed that a man speaking with such a broad Scotch accent must be British born and, therefore, according to their view-

point, a British citizen without regard to naturalization. This officious act of the British embarrassed and greatly annoyed Captain "Jack" before he was liberated because of overwhelming proof that he was an American. A few months later, the notorious *Chesapeake* incident occurred. The British actually fired upon the new American frigate and caused casualties when the American man-of-war (which was manned, but had no armament that could be used at the time) refused the British frigate *Leopard* permission to board and "the right to search" an American ship for British deserters and British subjects. Jefferson's embargo followed this humiliating experience and, shortly thereafter, the declaration of the War of 1812.

Capt. "Jack" Johnston commanded the *Stirling (II),* built in 1833, on her maiden voyage and until 1835, when he quit the sea forever and turned over the command to Capt. Richard Hawley Tucker. The two ships *Stirling* were named after the birthplace of John Johnston, Sr., in Scotland. Johnston emigrated to Boston in 1770, married and settled at Salem in 1772, and later moved to Haverhill. A shipbuilder, he moved, with his family, to Wiscasset in 1803. Of the firm of John Johnston & Sons, John, Sr., built the ships, John, Jr., commanded them and directed the foreign business, and another son, Alexander, had charge of all the home business, books, and accounts pertaining to their affairs. Captain "Jack" was in command of a vessel when barely twenty years old, and his sea life extended from 1798 to 1835, a period of thirty-seven years. He was fifty-seven years old when he discontinued going to sea and gave up his command of the *Stirling (II).*

The *Caledonia,* when laid down in 1811, was the largest vessel built on the river. When war broke out, the *Caledonia* could not be armed and sent to sea. As the British were expected to come up the river to attack Wiscasset, the ship "was hidden in a cove, partially submerged, and her masts concealed by fir trees lashed to each of them" to prevent enemy detection and destruction. The *Caledonia* is reported to have been completed May 16, 1815, but it is said that "she was refitted and sold in Boston in 1816."

The *Cleopatra* was captured by the Danes in 1810 by a Napoleonic decree when she was bound from London to St. Petersburg with English goods. She was taken to Copenhagen and there sold as a prize. Upon the loss of the *Stirling* in 1819, the Johnstons evidently bought the ship *Africa* from Joseph Tinkham Wood, of Wiscasset, who at one time owned four ships named *Europe, Asia, America,* and *Africa.* The last of these vessels, built on the Sheepscot River in 1810, survived the War of 1812 and was bought by the Johnstons in 1820. The *Africa* was sunk by collision with a Bath-built brig, off Cape Cod, in December 1825, and all aboard were lost.

The first of the two *Tamerlanes* built by John Johnston & Sons was peculiarly named after "the terrible Timur, a descendant of the Tartar conqueror of China." The ship seemingly was not built for the China trade and never made a passage to the Orient. When the *Tamerlane* was built in 1824, the Johnstons were considered most bold in defying tradition and quite foolish in deliberately tempting fate; for she was launched on a Friday and sailed on a Friday, and then "the gods stepped in," as the ship completed her first sea passage on a Friday and was not foredoomed to bad luck. She was driven ashore near Portland Light in June 1834 (when ten years old) during a terrific tempest, but was gotten off without any serious damage. She was operated wholly in the north transatlantic trade and was considered such a lucky and profitable vessel that when she was replaced in 1854 by a much larger and more suitably sized ship for the trade, the new vessel of 924 tons was given the same name as the old *Tamerlane,* launched thirty years earlier.

The ship *Gondar,* built in 1847, was destroyed by fire at Charleston, S.C., in mid-June of 1853, when loaded with cotton and naval stores and about to sail for Liverpool. This vessel, named after the capital city of Abyssinia, had an image of the Queen of Sheba for her figurehead, and this wood carving, famed for its beauty, was the only part of the *Gondar* that was saved from the Charleston fire. The impressive figurehead stood in Alexander Johnston's garden at Wiscasset for thirty years, following which it was owned by Dr. A. J. Stedman, of Georgetown, Maine, for some twenty years. It was then sold and sent around Cape

Horn in a Bath ship to Honolulu after it had outlived the ship *Gondar* by over half a century. (Its present location or its end is not known.)

The ship *Wallace,* the last of the Johnston ships, was a sizable vessel of 977 tons built in 1856. She was named after William Wallace and had a wooden image of the ancient Scottish chieftain and patriot for a figurehead. This carving, which was also impressive, was acquired in 1883 by Dr. Stedman, of Georgetown, from Alexander Johnston. The *Wallace,* built with a white oak frame that was cut in Virginia and planked with southern hard pine, was the last full-rigged wood ship built at Wiscasset village.

The Tuckers, of Wiscasset, Seafarers and Shipping Merchants

Wiscasset was the hailing port and town of ownership of the Tucker ships, but the Tuckers were seafarers and shipping merchants and not shipbuilders. Most of their vessels, which were built in the 1840's and 1850's, were constructed at Portsmouth, N.H. The first Tucker of note in Wiscasset was Capt. Richard Tucker, who commanded at least a couple of the Abiel Wood square-riggers built in the 1790's. The records show that Richard Tucker bought a house in 1795 and promptly moved it to its present location in Wiscasset. A historian has given a list of Tucker ships that were built during a period dating from the mid-nineties of the eighteenth century to the late seventies of the nineteenth century; but it is generally stated that the first ship owned by Capt. Richard Hawley Tucker was the *Othello,* a vessel of 360 tons built in 1827. Tucker boasted that this ship "earned a large amount of money for her owners and never cost the insurance company one dollar." Capt. R. H. Tucker did not build this vessel, but he was her managing owner in 1828 and, it is said, was her first commander. In 1839, Capt. Richard Holbrook Tucker, his son, was the master of the *Othello,* and in 1845 Capt. Joseph Tucker, another son, was in command of the ship. In 1849, during the Gold Rush, the *Othello,* then twenty-two years old, sailed from Wiscasset to San Francisco. Upon her arrival, she was sold to a company, which cut a large doorway into her side, used the ship as a warehouse, and gradually incorporated the vessel into part of a wharf. A second *Othello,* a ship of 887 tons, owned by R. H. Tucker & Sons, of Wiscasset, was built at Portsmouth, N.H., in 1855; this vessel was 179 ft. long, 36 ft. beam, and 23 ft. deep. The following square-riggers built during the years 1827-1875 have been recorded as owned by the Tuckers, of Wiscasset:

Name	Rig	Built	Tonnage	Name	Rig	Built	Tonnage
OTHELLO	Ship	1827 Portsmouth, N.H.	360	MOULTRIE	Ship	1854	
ALLIANCE (2)	Ship	1836 Kittery, Maine	525	ELLEN AUSTIN	Ship	1854 Damariscotta, Maine	1,812
ONTARIO	Ship	1839 Wiscasset, Maine	573	OTHELLO (2)	Ship	1855 Portsmouth, N.H.	887
ZAIDA	Bark	1840		R. H. TUCKER (2)	Ship	1857 Portsmouth, N.H.	898
CANTON	Ship	1841 Wiscasset, Maine	412	MARY WASHINGTON	Ship	1857 Portsmouth, N.H.	933
SAMOSET	Ship	1847 Portsmouth, N.H.	563	RICHARD III	Ship	1859 Portsmouth, N.H.	1,050
FRANCHISE	Ship	1848		HIRAM ABIFF	Brig	1863 Wiscasset, Maine	327
BROTHER JONATHAN	Ship	1853		GLACIER	Bark	1864	
R. H. TUCKER	Ship	1853 Portsmouth, N.H.		FANNIE TUCKER	Ship	1875 Wiscasset, Maine	1,527

The *Ellen Austin* is classed by Wiscasset as a Wiscasset vessel, but she was built by Austin & Hall, of Damariscotta, "on spec." Her early owners are stated as Grinnell, Minturn & Company, of New York. The American Lloyd's Registry of 1860 gives her owners as Spofford & Tileston, New York, and records her tonnage as 1,626 tons and her dimensions as length 209 ft. 10 in., beam 40 ft. 8 in., depth 29 ft. The Tucker connection with this vessel, which became a transatlantic packet (and was of good size and well proportioned as an emigrant carrier), seems to be limited to the fact that on her maiden voyage from Damariscotta to Charleston, S.C., thence to Liverpool, Capt. Joseph Tucker, of Wiscasset, was in command and that at a later date he again took charge of the vessel. Some Wiscasset records say, however, that at least for a time Capt. Joseph Tucker was "part owner" of the *Ellen Austin.* She was named after a member of one of her builder's family. The ship ran in the New York-Liverpool Dramatic (Patriotic) Line (1856-1866) and then in the London Red Swallowtail Line until 1881, when the transatlantic sailing packet service was discontinued. The *Ellen Austin* was a packet ship for twenty-five years and operated in the trade as long as the line was in existence.

The ship *Alliance (II)*, although built at Kittery in 1836 for Portsmouth owners, was sold to New York parties after a transatlantic voyage and acquired from them by Capt. Richard H. Tucker in 1841. Under his command, this ship made many North Atlantic voyages. An earlier ship named *Alliance,* built in 1795, is generally placed in Wiscasset records as a Tucker-owned ship, as is also the ship *Jane,* built in 1812. The *Jane* should not be confused with an earlier Wiscasset-owned brig of this name, which, on a voyage from Norfolk, Va., to Liverpool in October 1798, was taken by a French privateer to Santander, where she was condemned and sold. The Tuckers are also said to have owned the schooners *Charter Oak* (built 1847), *Idlewild* (built 1865), *Jenny Armstrong* (built 1867), *Atlanta* (built 1868), and *Air Propeller* (built 1878); also the *Matilda* and *The Southerner,* with rig and year built unstated.

Another member of the so-called Tucker fleet of twenty-nine vessels was the bark *Mary T. Rundlett* of 286 tons. This vessel was built at Sheepscot by Jotham Donnell and was owned not by the Tuckers but by Oakes Rundlett, who named the bark after his daughter-in-law, Mary Tucker Rundlett. The ship *R. H. Tucker (II)* of 898 tons (length 166 ft., beam 34 ft., depth 23½ ft.), built in 1857, was commanded in 1868 by Capt. Richard Tucker Rundlett, a nephew of Captain Tucker. On her return passage from Liverpool, through a mistake in not recognizing lights, the *R. H. Tucker* was put ashore and wrecked off the Irish coast. Captain Rundlett's wife and baby daughter were with him on the ship, and although the ship was a total loss, all on board were saved by taking to the ship's boats. The *R. H. Tucker (II)* was the first and last command of Capt. Richard Tucker Rundlett, who subsequently held many town offices in Wiscasset, but never again went to sea. The first *R. H. Tucker* was shorter-lived than the second Tucker ship to bear that name. Each was built by Tobey & Littlefield at Portsmouth, N.H., and the *R. H. Tucker (I)* was commanded by Capt. Joseph Tucker, who took her to England a few months after her completion. On her return passage, she was lost off Portaferry, Ireland, October 27, 1854, after a collision with the British ship *William Penn.*

The *Samoset* (563 tons; length 136 ft., beam 30 ft.) was not the first Portsmouth-built ship owned by the Tuckers, but was the first ship to be built on order for the Tuckers at Portsmouth, N.H. She was constructed by the firm of Fernald & Pettigrew, which commenced her construction in November 1846, and the ship was launched July 12, 1847. Wiscasset records give the owners of the vessel as Richard Holbrook Tucker and Daniel Stone. On her first passage to Charleston in September 1847, her master was Capt. Joseph Tucker. The American Lloyd's Register of 1860 states that the ship *Samoset* was owned by R. H. Tucker & Co., of Wiscasset, and was built by Badger, of Portsmouth, N.H., in 1847.

The ship *Richard III* was built by Tobey & Littlefield, Portsmouth, N.H., for Capt. Richard Holbrook Tucker et al., of Wiscasset. On the morning of the day of the launching,

October 29, 1859, the principal owner's wife gave birth to a son. He was named Richard Hawley Tucker after his grandfather, who was still living, thus making the new arrival the third Richard in direct line in the Tucker family. When the new Tucker ship was launched on young Richard's natal day, she was christened *Richard III.* This ship was a good carrier (length 174 ft., beam 34 ft., and depth of hold 23½ ft.). She loaded 1,300 tons of coal on passages around Cape Horn and was said to carry 1,700 tons as a coal drogher on the Pacific Coast. In 1860 her tonnage is recorded by American Lloyd's Register as 1,050 tons, but in 1865 it is stated as 898 tons (probably based on new 1865 measurement formula). Other records give the tonnage as 985 tons. When she arrived at San Francisco August 27, 1861, from Greenock, Scotland, it was reported that she had 1,445 tons of coal aboard. Until 1882 the *Richard III* traded generally as a transient in the Atlantic trade, although she made voyages to California, Bombay, Rio de Janeiro, etc. During 1871-1880, Capt. Joseph Tucker Hubbard was in command. Upon arrival at San Francisco in November 1882 from Liverpool, the *Richard III* was sold to Middlemas & Boole and for fifteen years was engaged in Pacific coastwise and offshore trading under several owners. In 1897, when thirty-eight years old, she was converted into a barge, operating in British Columbia and Alaska waters. In January 1907, the vessel went ashore in the Clarence Straits, off the coast of Alaska, and became a total loss when in her forty-eighth year.

The full-rigged ship *Fannie Tucker* of the Down Easter type was launched from the yard of Brown & Hodgkins at Birch Point, Wiscasset, on November 3, 1875. This yard had built the bark *Bierstadt* for Captain Harrison, of Somerville, Mass., in 1873. The *Fannie Tucker* was of 1,527 tons register and measured 211 ft. long, 40 ft. beam, and 24 ft. deep. For several years, the ship was managed by William P. Lennox. She was named after the eldest daughter of Capt. Joseph Tucker, one of her principal owners. The *Fannie Tucker* had an interesting career, but she was generally an unlucky vessel. On her first voyage, she carried ice to India, and being unable to obtain a return cargo, she laid up for a year and "dried up to such an extent that she had to be overhauled and refitted at considerable expense." After two voyages to India and a lay-up for a year at Calcutta due to low freight rates (during which period she "dried up badly"), the *Fannie Tucker* was operated in the California grain trade, making three round voyages. On the first run eastbound in this service in 1880, with grain to Britain, she was found to be leaking badly when in the South Pacific. Captain Roberts decided to make for Callao, which could not be entered, as it was blockaded by the Chilean Navy. The ship proceeded farther south to Coquimbo, where a portion of the cargo was discharged and extensive and expensive repairs made. When the *"Tucker"* arrived at San Francisco from Cardiff in October 1884 after a slow passage of some five months, freights were not available, and the ship was again laid up—this time for about thirteen months. In November 1885, she sailed from San Francisco for British Columbia to load coal.

In April 1889, the *Fannie Tucker* was sold for $35,000 to A. F. Stafford, New York, American representative of Troop & Son, shipowners, of St. John, New Brunswick. She then made a voyage to the Orient with case oil and, upon her return to New York, loaded for Tacoma. Sailing on July 5, 1891, she put into Bahia in August, with bad leaks. A portion of her cargo had been discharged to facilitate a proper examination and repairs to the hull, and the ship was found to be on fire. She became a total loss when sixteen years old. Members of the crew were evidently to blame for the fire, which definitely seemed to be of incendiary origin, and charges of foul play were made, but could not be substantiated. The crew, it seems, had had enough of the vessel; steady work at the pumps was too hard, and the men were determined not to proceed to sea again in the ship.

The Old Maritime Family of McNear, with a Record of Ships Owned by Baker McNear

In histories of Wiscasset, the ships of Baker McNear are often identified with that port, but these vessels were all built at Belfast, Maine, and not at Wiscasset. Whereas fractions of several, if not all, of the McNear ships may have been owned in Wiscasset, Baker McNear was an old-time master mariner of Boston and was intimately connected with that city. The ships of which he was the managing owner hailed and were operated from Boston. Baker McNear died at this city in 1887 at the age of eighty, and although at that time he had retired from active business, he was still a director of the Boston Marine Insurance Company. The ship *McNear* of 1,308 tons, built in 1872 at Belfast, Maine, had only one McNear among the list of registered owners, the other recorded principal owners besides the managing owner, Baker McNear, being Benjamin Sewall and James Gammons, Jr., of Boston, and William P. Lennox and Jonathan Edwards Scott, of Wiscasset. The McNears were an old maritime family of Wiscasset, dating back to the early eighteenth century. John McNear fought against the Indians and the French and was a prisoner in Canada in the 1740's, arriving at Boston on a French ship under a flag of truce and returning from there to Wiscasset in August 1747. Four of Capt. John McNear's sons born at Wiscasset, John, James, Joseph, and Thomas, were lost at sea, and a Capt. John McNear was a well-known skipper of coasters trading between Wiscasset and Boston. A William McNear was part owner of record in 1848 of the Wiscasset-built bark *Mary T. Rundlett.* However, the septet of McNear ships was identified with Belfast, Maine, and the Carters, who built four of them, and the McGilverys, who built the other three for Baker McNear et al., with Boston, Mass., as the hailing port. These McNear ships can be briefly summarized as follows:

MARY McNEAR	of	993 tons,	built	in	1854	at Belfast,	Maine,	by C. P. Carter
INSPECTOR	of	1,122 tons,	"	"	1860	"	"	by C. P. Carter & Co.
SARDIS	of	1,249 tons,	"	"	1864	"	"	by C. P. Carter & Co.
EMILY McNEAR	of	1,217 tons,	"	"	1868	"	"	by White & McGilvery
McNEAR	of	1,308 tons,	"	"	1872	"	"	by Henry McGilvery
ANTELOPE	of	1,306 tons,	"	"	1873	"	"	by Henry McGilvery
R. B. FULLER	of	1,360 tons,	"	"	1874	"	"	by C. P. Carter & Co.

During the Civil War, Capt. Baker McNear put his ships under the German flag, with Hamburg as the hailing port and place of registry, so that they would not be captured by commerce raiders or cruisers operating under the Confederate flag.

The Whaleship WISCASSET

The ship *Wiscasset* of Wiscasset, "a staunch vessel of 380-18/95 tons," has been given a measure of publicity as (1) the only whaleship hailing from Wiscasset, (2) a profitable vessel in the Pacific whale fishery, and (3) the vessel that brought Andrew Carnegie as an emigrant boy (in his thirteenth year) to the United States from Glasgow, Scotland. Evidently, this ship (later rigged as a bark) was not built at Wiscasset, but was constructed by William and John Hiscock at their Nobleboro shipyard on the east bank of the Damariscotta River. After her launching in October 1833, the hull was purchased by Messrs. Wood, Lennox, and Stacy, of Wiscasset, agents for the Wiscasset Whale Fishing Company. She was taken "under

jury masts and borrowed sails" in late November to her new hailing port to be rigged, equipped, outfitted, and manned as a deep-sea whaler, the whaleboats and oil casks being obtained from New Bedford. With Capt. Richard Macy, formerly of Nantucket, in command, the *Wiscasset* sailed on her first cruise in May 1834 and returned in September 1837 after an absence of 40 months. One report gives her take as "2,800 barrels of Sperm Oil and 80 barrels of White Whale Oil," but the owners announced that the returns of the voyage were "sufficient to clear the ship of its entire cost and all of its bills." The *Wiscasset* sailed on her second voyage in January 1838 with Capt. Seth R. Horton in command, but no information pertaining to the "take" on this cruise is available. It was probably disappointing to the Wiscasset owners, as the ship was sold to a Sag Harbor whaling firm in 1841, for which she made two successful and profitable cruises that can be briefly summarized as follows:

Voyage No.	Captain	Sag Harbor Departure	Sag Harbor Return	Length of Whaling Cruise	Take: Sperm Oil	Take: Whale Oil	Take: Whale Bone	Take: Market Value
				Months	*Barrels*	*Barrels*	*Pounds*	
3	Sylvester P. Smith	Dec. 1841	June 1844	30	250	2,600	2,700	$48,000
4	Payne	Sept. 1844	Feb. 1847	29	—	3,700	34,000	$51,000

The revenue from the "take" obtained on two cruises totaling 59 months at sea and occupying 62 months (5 years 2 months) was $99,000 (equivalent to about $19,200 per year). The halcyon days of the whale fishing business, which had lasted about a dozen years (1835-1846), were about over, so the bark *Wiscasset* was withdrawn from the fishery and sold for service in the merchant marine.

On May 19, 1848, the one-time whaleship *Wiscasset,* then eighteen years old, sailed from Broomielaw in Glasgow, Scotland, for New York and dropped anchor off Castle Garden after a westward transatlantic crossing of 50 days. The little ship was being economically operated and was undermanned, so able-bodied "steerage" passengers were frequently called upon to help work the ship. Among these emigrant passengers were a Mr. and Mrs. Carnegie and their two sons, one of whom, Andrew (1835-1919), born in Fifeshire, Scotland, was destined to rise from a humble bobbin-boy in a Pennsylvania cotton factory to be an outstanding industrialist, America's greatest producer of steel, and one of the richest and most philanthropic men in the world. In 1902 a Maine newspaper sent to Mr. Carnegie a picture of the old *Wiscasset,* and in acknowledging the receipt of it his secretary, writing on June 3 from Skibo Castle, Ardgay, New Brunswick, said that the vessel illustrated "is no doubt the bark [*Wiscasset*] in which Mr. Carnegie's parents sailed with himself and his brother in 1848. . . . He became a little sailor and was sorry to leave the ship after seven weeks upon it."

The Screw Steamer ALPHA, *Built on the Sheepscot in 1816*

It has been claimed that "the first screw steamer ever built was constructed at Wiscasset in 1816." This vessel, the *Alpha,* a boat of "about fifteen tons," was built by Jonathan Morgan on the Sheepscot River at or near Wiscasset. The principle of the screw for marine propulsion had been demonstrated by John Gordon some ten years earlier, but Gordon (like early American submarine inventors) had turned the screw propeller by hand. Jonathan Morgan interested an "ingenious Alna blacksmith and a Wiscasset tin plate worker named

Dudley Ladd" in the production of the machinery to drive his screw-propeller boat by steam. The boiler, we are told, "was constructed of plank and hooped with iron; it had wooden heads and into one of these an iron, watertight fire-box was set, in which the fire, needed to generate the steam, was made." The screw propeller in Morgan's *Alpha,* it is said, "was affixed to the rudder instead of being attached to the stern" and forward of the rudder. A description of the driving mechanism says: "An endless chain ran around its axis and around the wheel projecting over the stern of the vessel, and this in turn was connected by another endless chain with the main drum or wheel turned by the engine." The steamboat was operated successfully in 1816. Under the command of her owner-builder, Jonathan Morgan, the *Alpha* made her maiden run, entirely under steam, from Wiscasset to Brunswick. She was the first steam-driven vessel to navigate the Kennebec River and adjacent waters, making a run upriver to Augusta and averaging a speed of from four to five miles an hour on her initial voyage. The annoying noise made by the system of chains and pulleys used to drive the vessel gained for the *Alpha* the nickname of "Morgan's Rattler." The steamboat was neither profitable nor popular. Her machinery was removed in early 1818, and the boat was converted into a sailing vessel for the fisheries. On June 2, 1818, the craft was attached by Dudley Ladd and was sold at public auction by Constable Felker, of Wiscasset, for the sum of $87.

The Last Days of Shipbuilding in Wiscasset

Wiscasset was never a prominent builder of sizable steamboats. It constructed three small stern-wheel steamboats during the Civil War and the steamer *Henry B. Hobson* of a scant 50 tons in the seventies, but they were all relatively unimportant vessels.

In the historical work, WISCASSET IN POWNALBOROUGH by Fannie S. Chase (1941), we read:

> The last vessels built at Wiscasset village were: the ship *Wallace* in 1856, owned by the Johnstons; the brig *Aladdin* in 1857, James Shortwell, master; four yachts: the *Sunnyside* in 1858, the *Idlewild II, Sunnyside* and *Twilight* in 1865; three steamboats, stern-wheelers: the *Wawenock,* the *Falcon* and the *Clarion,* all built during the Civil War for war purposes, and all of them used on the North Carolina sounds and in the Potomac until peace came. These were the last vessels built at the Point although schooners were built at Hobson's Island and ships were launched from Birch Point at a much later date.

The *Wallace* was a ship of 977 tons (length 168 ft., beam 34 ft. 6 in., depth 23 ft. 9 in.). The brig *Aladdin* was of 211 tons and was owned by her master, Capt. James Shortwell.

That Wiscasset, an important American port prior to the embargoes and the War of 1812, gradually sank into oblivion as a shipbuilding and shipowning community as the century advanced and that its eclipse was complete in the late eighties is proved by the fact that whereas other Maine ports owned over a hundred full-rigged sailing ships in mid-1889, Wiscasset did not own a single one. During the years 1897-1916 inclusive, there were no customhouse recordings of vessels built at Wiscasset, but during the years 1917-1924 three "gas screw" small wood vessels of yacht type were registered, with tonnage ranging from 36.5 to 47.1 tons each.

The Maine Shipbuilding and Navigation Company, of Wiscasset, organized in February 1890, located its shipyard on Hobson's (formerly Holbrook's) Island. It built only three small vessels, all schooners of from 120 to 272 tons, and liquidated the company in May 1902. The Standard Shipbuilding Company, of Wiscasset, had a yard at Birch Point during the first World War.

Shipbuilding at Edgecomb, Boothbay, Westport, and Southport

From early days, there has been some vessel construction at Edgecomb, which is associated with the Wiscasset area. Shipping registers record that the schooner *Defiance* of 40-92/95 tons (length 47 ft. 3 in., beam 14 ft., depth 7 ft. 1½ in.) was built at Edgecomb in 1815; also the schooner *Concord* of 27 tons in 1822 and the schooner *Banner* of 33 tons in 1840. Small craft have also been built from colonial days to the end of World War I at Boothbay. The following extracts from shipping registers are typical of this type of construction:

Year Built	Name	Rig	Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1815	ALERT	Schooner	112-40/95	73- 7	22- 0½	7-11½
1819	RESOLUTION	Schooner	35-18/95	45-11	14- 5	6- 2½
1829	ADVENTURER	Schooner	69-89/95	60- 9	18- 2	7- 5
1843	LEONIDAS	Schooner	133-46/95	81- 4	23-11	7-11
1852	NORTHERN LIGHT	Schooner	51-11/95	62- 7	18- 2	7
1860	M. J. SEWALL	Schooner	40-51/95	58- 8	18- 5	6
1863	TANNISCOTT	Schooner	27-17/95	50- 1	16- 8	6- 3
1865	LIZZIE WALWORTH	Schooner	8.63	34	11- 8	4- 8
1919	MARGUERITE M. WEMYSS	Schooner (4 masts)	582.08	168-10	34- 6	13- 7

A later search of the records gives the following schooners built at Boothbay: *Eliza* of 117 tons and *Julia and Martha* of 144 tons, built in 1833; *Frederick Reed* of 99 tons, built in 1838; *Irene* of 43 tons, built in 1859; *E. K. Dresser* of 60 tons, built in 1866; and *Eva A. Race* of 12 tons, built in 1879. Recorded as built at East Boothbay are the two-masted schooners *Katie L. Palmer* of 30 tons, built in 1895, and the *Fannie Belle* of 35 tons, built in 1903. The 22-ton "gas screw" *Annie Louise* was built at East Boothbay in 1912. The three-masted schooner *Frederick J. Lovatt* of 510 tons is recorded as built at Boothbay Harbor in 1918. Two "gas screw" craft, the *Annie F. Kimball* of 41 tons and the *Alice A.* of 9 tons, built in 1886 and 1892, respectively, are recorded as built at Boothbay.

Vessels were also built at Westport, about eight miles south of Wiscasset and some five miles east of Woolwich and the Kennebec River. Typical Westport construction taken from ship registers are the schooner *Louisa* of 38-77/95 tons, built in 1834, the schooner *C. and R. Tarbox* of 31 tons, built in 1855, the schooners *Saragossa* of 29.41 tons and *Ocean Romp* of 42.07 tons, built in 1856 and 1858, respectively, and the schooner *C. E. Morris* of 14 tons, built in 1862. Farther oceanward, at Southport, some vessels have been built, such as the schooner *Nautilus* of 37.48 tons (length 57 ft., beam 16 ft., depth 7 ft.), registered as constructed at that island port in 1839.

XXVII.

ALNA, MAINE

Available Customhouse Records Give 103 Vessels Built at Alna, 1811-1896

ALNA IS NORTH OF Wiscasset and Sheepscot, near Head Tide, and about twenty-three miles north of Newagen (as the crow flies) and the open ocean. Vessels have been built in this locality from early colonial days, and the ocean inlet and rivers around Sheepscot, North Newcastle, Alna, etc.—like many other parts of the Maine coast—have had launched into their waters innumerable craft of which we have no record today. Alna was part of the ancient town of Pownalborough, but separated, with Dresden, in 1794, and what was left of Pownalborough changed its name to Wiscasset in 1802. Some of the early vessels listed in old records as built at Pownalborough, may have been constructed at Alna; but available customhouse records commenced in 1811, at which time it is felt that Alna, like Dresden, was a well-established shipbuilding town.

Because of Alna's geographical location well inland on a shallow ocean creek and about the head of tide waters, the town could have been expected to build only small craft, but as early as 1811 it launched the 330-ton full-rigged ship *Mandarin.* This vessel was apparently of unusually large size for the building locality, for no larger ship was built there during the next thirty-five years and no craft of over 200 tons during the period 1826-1844. From 1845 to the Civil War, Alna was an active shipbuilding town and, in 1847, built six sizable vessels. The two largest were the square-rigged ships *Iconium* of 549.5 tons and *Ascutna* of 428.8 tons, which vessels beat by a considerable margin for size the record-holding *Mandarin* of 330.5 tons, launched in 1811 before the war with Britain. In 1849, Alna built the 318.6-ton bark *Eureka* and, during the years 1850-1852, launched three barks of from 425.3 to 453.8 tons. Following this, the town embarked on some really sizable construction, building the ship *Jonas Wern* of 747.4 tons in 1853 and the ship *Keystone* of 853.2 tons in 1854. In 1856, Alna launched the amazingly large (for the locality) ship *King Philip* of 1,194.4 tons, which was not only by far the largest but also the last full-rigged ship built at Alna. Square-riggers, bark- and brig-rigged, followed the *King Philip,* but the only sizable square-rigger built at Alna after the *King Philip* was the bark *Annie* of 695.5 tons, built by Lemuel Carleton in 1863. This was the last square-rigger launched in the town, which built thereafter only a few schooners, sloops, and a small steamer. The largest of these later vessels was the schooner *Annie P. Chase* of 257 tons, built in 1873. The last vessel built in the district was evidently the sloop *Yankee Star* (of Bath), which was launched in 1896 and registered 29.5 tons. The following table is a synopsis of the vessels constructed at Alna during the years 1811-1896 inclusive according to available customhouse records covering the Penobscot-Kennebec region, most of which are in the National Archives at Rockland, Maine:

	Ships		Barks		Brigs		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1811-1814	1	MANDARIN; 330.5	—	—	1	BETSEY DOLE; 196.2	1	MERINO; 78.6	—	—	3
1815-1819	—	—	—	—	1	SOPHRONIA; 203.2	10	SOPHRONIA DOLE; 124.3 ALPHA (rebuilt); 24.7	—	—	11
1820-1824	—	—	—	—	3	ANSON; 272.8 FLORA; 184.5	7	WILLIAM (of Bath); 130.6 ENTERPRISE; 33.5	—	—	10
1825-1829	—	—	—	—	5	MARY; 214.3 COLUMBUS; 130.2	9	ENTERPRISE; 118.7 ALDEN; 45.8	—	—	14
1830-1834	—	—	—	—	1	EMELINE; 142.8	13	CASPIAN; 138.2 IVANHOE (of Thomaston); 44.5	1	EDWARD; 35.4	15
1835-1839	—	—	—	—	1	DIRIGO; 170.2	6	ORION; 136.5 HARRIET; 65.4	—	—	7
1840-1844	—	—	—	—	—	—	1	GENERAL SCOTT; 51.1	—	—	1
1845-1849	2	ICONIUM; 549.5 ASCUTNA; 428.8	3	EUREKA; 318.6 EMMA; 198.6	3	KATE BOYD; 199.6 HALCYON; 171.6	10	LEWIS; 194.6 M. LAMARTINE (of Georgetown); 60.4	—	—	18
1850-1854	2	KEYSTONE; 853.2 JONAS WERN; 747.4	3	RODMOND; 453.8 ARION; 425.3	—	—	—	—	—	—	5
1855-1859	2	KING PHILIP; 1,194.4 ISIS; 537.3	3	MOUNTAIN EAGLE; 376.9 EMMA; 292.4	2	DIRIGO; 299.5 CYCLONE; 261.6	2	UNION; 120.8 UNION (of Friendship); 105	—	—	9

(Continued on next page)

	Ships		Barks		Brigs		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1860-1869	—	—	2	ANNIE; 695.6 PLEIADES; 521	—	—	2	CHARTER OAK (of Newcastle); 111.2 JAMES S. AYER; 68.7	1	MABEL WINN; 35.2	5
1870-1896	—	Steamer (1) MEDORA; 68	—	—	—	—	1	ANNIE P. CHASE; 257	3	YANKEE STAR (of Bath); 29.4 HELENA; 27.3	5

This list of vessels, taken from customhouse records known to be incomplete, totals 103 craft and consists of 7 ships, 11 barks, 17 brigs, 62 schooners, 5 sloops, and 1 steamer. Whereas 8 of the 103 vessels known to have been built at Alna were registered at other Maine ports, many more vessels owned out of town were undoubtedly built at Alna, and other craft were probably built in the town prior to 1811.

The largest vessel built at Alna, the *King Philip* of 1,194.4 tons, was launched from the yard of D. Weymouth in November 1856. Her tonnage is also stated in later records as 1,189 tons net register. She measured 182 ft. long, 36 ft. 3 in. beam, and 24 ft. deep. The ship was built for and managed by Glidden & Williams, Boston, Mass. Although constructed in the clipper ship decade, the *King Philip* was a copy of the Bath type of early Down Easter, with good cargo-carrying capacity, both weight and bulk, and fair speed. (She should not be confused with the clipper ship of the same name, built at Quincy, Mass., in 1854, which was sold to London and went under the British flag in 1857.) The *"Philip"* had the reputation of being a good sailer and for making good passages. She was undoubtedly hard driven. Trouble with her crew reached boiling point in 1869, when, while in the port of Honolulu, she was set afire by forecastle hands and so badly damaged that she was condemned and sold. This firing of a ship when in port by disgruntled and vindictive sailors was nothing new, for many American ships were seriously damaged or destroyed by such revengeful acts on the part of members of the crew. Although the culprits were often arrested and charged with the crime, they were always acquitted by the courts because of the inability of the owners and officers to present unquestionable evidence and eyewitnesses who could testify that they actually saw the incendiarists start the fire.

The *King Philip* was purchased by Pope & Talbot, repaired, and sent to sea. Her first voyage under new ownership was a long passage of five months to Liverpool with wheat. The ship experienced heavy weather and jettisoned 250 tons of her cargo. She returned from England to the Pacific Coast, where she operated a couple of years before taking a cargo of guano from Howland's Island to Hamburg. She then crossed the Atlantic in ballast to Baltimore, where she loaded coal and—strange to say—"barrels of pitch and bales of oakum" for San Francisco. Once again trouble developed among the crew. As on a former occasion, the ship was deliberately set afire on May 18, 1874, while at anchor off Earpe's Island in the Chesapeake, but the fire was extinguished after a couple of hours' work. The crew mutinied, and marines of the U.S. Navy took charge. With order and discipline restored, the *King Philip* actually sailed and passed Fortress Monroe on May 27, eleven days after she had left Baltimore with a riotous and belligerent crew. This was the commencement of a disastrous and long drawn-out passage westbound around the Horn. In August, while attempting to round Cape Stiff, the ship encountered heavy head gales. Severely battered, she suffered damage and lost many spars and sails, and the pumps could not keep the water in the vessel's

hold under control. She put about and made for Rio de Janeiro for repairs, which were so extensive that the ship was detained in port four months. On resuming her voyage, the "*Philip*" sailed to the Golden Gate in 107 days from Rio and finally made San Francisco, 351 days out from Baltimore. This was the last long-distance voyage of the *King Philip*. She was lost January 25, 1878, when twenty-one years old, by going ashore two miles south of the Golden Gate.

XXVIII.

NEWCASTLE, MAINE

A Search of Available Records Shows 211 Vessels Built at Newcastle, 1785-1920

NEWCASTLE IS LOCATED on the west bank of an ocean inlet, opposite Damariscotta and about fifteen miles due north from the open ocean. It is some sixteen miles northeast of the city of Bath and twelve miles east of the Kennebec River, in a direct air line, and about twenty-two miles west of Rockland on the Penobscot. Vessels were built at Newcastle, Damariscotta, and environs from early days, and that part of the country, like all the ocean inlets and streams between Casco Bay and Penobscot Bay, is rich in marine tradition. A survey made in 1941 of customhouse records at the National Archives, Rockland, Maine, of vessels built at Newcastle, supplemented by data gleaned from Waldoboro, Belfast, Bath, and Penobscot-Castine customhouse records, gave a list of 211 Newcastle-built vessels constructed during the period 1785-1920. This is admittedly incomplete, but, nevertheless, of interest when viewed comparatively in relation to generally similar available statistics of shipbuilding in other Maine towns. The following table gives a synopsis of the vessels built at Newcastle during various periods as per the available incomplete customhouse records before mentioned:

	Ships		Brigs		Brigantines, etc.		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1785-1794	1	ATLANTIC; 211	1	JANE (of Topsham); 136.6	3	PATTERN; 179 JAY; 117.6	6	DOLPHIN; 123.4 MERCY (of Bath); 41.7	7	JENNY; 110.4 CATO; 34.4	18
1795-1799	1	VENUS; 194.8	—	—	4	FRIENDSHIP; 179.5 MOSES GILL; 136.3	9	THREE BROTHERS; 138.4 POLLY; 97.8	4	BETSEY; 139.9 SUSANNAH; 89.3	18
1800-1804	1	HUNTRESS; 269.6	2	FOX; 198.6 HOPE; 142.4	—	—	11	SEA FLOWER; 172.2 AMERICA; 104.6	4	CLARISA; 114.9 POLLY; 36.6	18
1805-1809	1	STERLING; 274.6	4	SHEPHERDESS; 193.9 UNION (of Dresden); 139.6	—	—	5	COMPORT; 145.3 TRAVELLER; 35.2	5	NEW PACKET; 99.5 INDUSTRY; 95.6	15

(Continued on next page)

	Ships		Brigs		Brigantines, etc.		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1810-1814	3	LIVERPOOL PACKET; 409.6 SHAMROCK; 260.7	4	THOMAS NELSON; 254.6 THREE SISTERS; 167.5	—	—	—	—	1	PACKET; 104.6	8
1815-1819	—	—	3	FAME; 262 BELISARIUS; 163	—	—	12	FAVORITE; 325.4 SHYLOCK; 25	1	SALLY; 98	16
1820-1824	—	—	3	ROBERT PATTERN; 220.5 HECTOR; 166.9	1	SUPERIOR; 129 (herm. brig)	5	LARK; 128 DOVE (of Thomaston); 24.7	1	INDEPENDENCE; 36	10
1825-1829	—	—	4	SABATTUS; 273.3 FORTUNE; 182.5	—	—	15	FITZ; 142.4 HAWK; 22	—	—	19
1830-1834	—	—	4	STERLING (of Searsport); 155.2 EDWARD (of Belfast); 126.4	—	—	14	EDWARD (of Prospect); 143.7 ANN; 32.8	—	—	18
1835-1839	—	—	7	DAMASCUS; 249.2 HARTLEY; 133.7	—	—	6	AZULA; 121.4 SEA MEW; 32.6	—	—	13
1840-1844	1	AVALANCHE; 396	2	CACILDA (of Boston); 170.6 AVA; 149	—	—	2	MARY; 128.5 TIPPECANOE; 27.7	—	—	5
1845-1849	—	—	5	MARY ELLEN (of St. George); 224.1 JAMES W. ELWELL; 143.2	—	Barks (2) SPLENDID; 270 MARIEL; 224.5	14	NORMAN; 163.7 MARY F.; 40.4	—	—	21
1850-1864	—	—	2	B. INGINAC; 360.4 ISABEL BEARMANN; 197.6	—	Barks (3) ELLWOOD COOPER; 658.1 R. MURRAY, JR.; 365.9	2	ELLA (of Thomaston); 152.4 MARIA ELLIOT (of Bath); 74.7	—	—	7

(Continued on next page)

	Ships		Brigs		Brigantines, etc.		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1865-1879	5	VALIANT (of Boston); 1,572.8 CARONDELET (of Damariscotta); 1,438	2	LIZZIE WYMAN; 287.7 C. C. BEARCE (of Damariscotta); 262.6	—	Bark (1) NELLIE MAY; 699.1	2	ISAAC ORBETON; 310 GENERAL GRANT; 50.3	—	—	10
1880-1889	1	ELIZABETH (of Searsport); 1,866	—	—	—	Barkentine (1) ISAAC DODGE (of Damariscotta); 442	6	HELEN A. CHASE; 559.2 PHINEAS H. GAY (of Damariscotta); 109.6	—	Steamer (1) FOXHALL (of Searsport); 843	9
1890-1920	—	—	—	—	—	—	6	VIRGINIA DARE (of New York); 1,569.3 MARY E. LYNCH; 185.8	—	—	6

The 211 vessels appearing in the available but incomplete customhouse records examined consist of 14 full-rigged ships, 6 barks and 1 barkentine (or 21 square-rigged vessels with three masts), 43 brigs and 8 brigantines (or 51 square-rigged vessels with two masts), 115 schooners, 23 sloops, and 1 steamer.

Prior to 1872, no vessel of over 1,000 tons appears in Maine (Kennebec and Penobscot) customhouse records as having been built in Newcastle, and yet it is known that three clipper ships and at least two New York transatlantic packets of from 1,004 to 1,398 tons were built at Newcastle during the years 1852-1862 (four of them during 1852-1854). In the before-mentioned customhouse records, the largest ship mentioned as built at Newcastle prior to 1872 was the *Avalanche* of 396 tons, constructed in 1840. In 1862 the bark *Commerce* of 462.8 tons was built; in 1864 the bark *Ellwood Cooper* of 658 tons; and in 1867 the bark *Nellie May* of 699 tons. The Waldoboro customhouse records contain particulars of the following six sizable full-rigged ships built at Newcastle during the years 1872-1882 inclusive:

Year	Name	Tonnage	Year	Name	Tonnage	Year	Name	Tonnage
1872	CARONDELET	1,438	1874	VALIANT	1,573	1878	STATE OF MAINE	1,536
1873	ROBERT DIXON	1,368	1876	JOSEPHUS	1,470	1882	ELIZABETH	1,866

It is probable that the *Favorite* of 325.4 tons, built in 1815, which appears on the records as a schooner, was in fact a square-rigger. In 1881, Newcastle built the schooner *Helen A. Chase* of 559 tons, in 1890 the *James M. Seaman* of 648.5 tons, in 1902 the *Stanley H. Miner* of 697 tons, and during the last days of sail the three big fore-and-afters *Virginia Dare* of 1,569 tons in 1912 and *Mary H. Diebold* of 1,516 tons and *Dolly Madison* of 1,541 tons in 1920.

Newcastle Is Credited with Building Three Transatlantic Packet Ships and Three Clipper Ships

Of eleven transatlantic sailing packets built in Maine that were operating out of the port of New York in established lines sailing on regular published schedule, Newcastle built the most (i.e., three), and Newcastle and its companion town, Damariscotta, turned out five. The three New York transatlantic sailing packets built at Newcastle were as follows:

Name of Ship	Year Built	Line	Tonnage	Registered Dimensions in Feet		
				Length	Beam	Depth
AMERICAN CONGRESS	1849	Red Swallowtail, London	863	162.3	34	17
CAROLUS MAGNUS	1852	Whitlock, Havre	1,349	196.7	39.9	19.9
E. W. STETSON	1862	Red Swallowtail, London	1,164 (new meas.)	173.2	38.2	23.5

Although some records credit the *Ontario (II)* of 1,501 tons to New York, the American Lloyd's Registry (1860) gives this ship as built in Newcastle, Maine, in 1854, with measurements of 202 ft. length, 40 ft. 3 in. beam, and 20 ft. depth. She was operated in the Liverpool Blue Swallowtail Line (1854-1858), the London Swallowtail service (1858-1863), and later in transient trade.

The *American Congress* was a successful and popular packet ship that operated in the hardest service in the world, the North Atlantic "ferry," for thirty years (1850-1879 inclusive). During this entire period, the *"Congress"* averaged 36 days on her westbound "uphill" passages. Her fastest crossing westward was "a very smart run of 21 days," and her longest was an unpleasant passage of 77 days bucking western gales. The *Carolus Magnus* operated in the New York-Havre Whitlock Line and later in the Union Line between the same ports for ten and a half years (1853-1863 inclusive). She averaged 34 days for all her westbound passages, her fastest crossing being a run of 22 days and the slowest a passage of 53 days. The *E. W. Stetson* ran in the New York-London Red Swallowtail Line from the time that she was built until the discontinuance of the service. She sailed steadily for seventeen and a half years (1863-1880) in this severe and exacting trade and performed most creditably.

During the clipper shipbuilding decade, Newcastle launched the following three ships that were classed as clippers:

Year Built	Name of Ship	Registered Tonnage	Builder	Registered Dimensions in Feet and Inches			Owner
				Length	Beam	Depth	
1852	FLYING EAGLE	1,093	William Hitchcock	183- 9	36- 1	23	Frederick Nickerson & Co., Boston
1852	WESTERN EMPIRE*	1,398	Abner Stetson	192	39- 9	24	Wm. Sprague et al., Boston
1854	GOLDEN RULE* (also recorded as of 1,194 tons)	1,185	William Hitchcock	186	36- 6	23- 6	Frederick Nickerson & Co., Boston

*The American Lloyd's Registry of Shipping states that both the WESTERN EMPIRE and GOLDEN RULE were built at Damariscotta, which is on the opposite side of the creek from Newcastle.

The FLYING EAGLE was classified as a clipper in model fullness, and her tonnage "new measurement" is given as 1,004 tons; the WESTERN EMPIRE is recorded as a ship of "full model" and the GOLDEN RULE as of "sharp model."

The *Western Empire* did not engage in the Cape Horn trade, but the Hitchcock ships, whereas they show a high average length of passage for all their runs, made some good runs and at times showed "a nice turn of speed." The average of eight reported westbound Cape Horn passages during the clipper ship years 1850-1860 inclusive was 137 days, and the average in sailing days was 131. The fastest passage recorded is 114 days, which is apparently incorrect (118 days seems to have been the fastest authenticated run), and the longest 167 days, of which 142 were sailing days and 25 were days spent in port en route undergoing repairs.

The *Flying Eagle* had a hull length over-all of 195 ft., with deck 183 ft. 9 in., and her tonnage, old measurement, was 1,093 tons. She is said to have carried 1,370 tons deadweight and had 15 in. deadrise. On her maiden voyage to San Francisco, the *"Eagle"* lost her maintopmast, with all gear attached, and all three topgallant masts when only 5 days out from Boston. Although severely handicapped, she continued and put into Rio de Janeiro 47 days out, where she was refitted, and sailed 25 days later, arriving at San Francisco 167 days out from Boston and after 142 days at sea. This was an unsatisfactory sailing performance, but the ship was unfortunate as to weather and seas, and clippers sailing about the same time did no faster sailing. The *Corinne* was dismasted and returned to New York, and four other ships completed the passage in 144, 145, 146, and 180 days, respectively. The *Flying Eagle* also suffered such damage to spars and hull on her seventh westbound around-the-Horn passage in 1860-1861 that she was required to put into Montevideo for repairs and the fitting of a new bowsprit. This occupied 23 days, and the ship reached San Francisco 160 days out and 137 sailing days from New York. In 1854, 1857, and 1859, the vessel lost important spars, but was able to make adequate repairs at sea. The net sailing time of the *Flying Eagle's* seven westbound passages commenced prior to the end of 1860 was 134 days, the length of the runs being 142, 132, 120, 118, 132, 153, and 137 days, respectively. In the following decade, the ship, with sail spread further reduced, made five more westbound passages to California, the length of runs being 159, 135, 132, 141, and 112 days, respectively. The last passage, leaving New York November 10, 1869, was her best sailing performance in twelve voyages, the average length of all the westbound passages being 134¾ sailing days (best, 112 days; slowest, 159 days). In 1858 the *"Eagle"* made an amazingly fast passage from San Francisco to Honolulu. Sailing from the Golden Gate on July 9, she arrived at Honolulu July 19 after a run of only 9 days and 22 hours. The ship carried mail that had left New York June 21 by steamer via Panama, and this mail was delivered in record time.

The eastbound passages of the *Flying Eagle* from San Francisco were as follows:

1853	To Callao	44	days,	thence	to	New York	85 days
1855	" Callao	55	"	"	"	Hampton Roads	71 "
1856	" Calcutta	70	"	"	"	Boston	110 "
1857	" Callao	48	"	"	"	Hampton Roads	84 "

1858	From Honolulu	to	New York	96 days
1861	" San Francisco	to	Liverpool	130 "
1862	" " "	"	Boston	111 "
1864	" " "	"	Boston	97 "
1865	" " "	"	Boston	113 "
1867	" " "	"	New York	106 "
1868	" " "	"	Queenstown	102 "
1870	" " "	"	Liverpool	116 "

Average of seven direct passages, San Francisco to North Atlantic ports, 110.7 days.

The *Flying Eagle* arrived at Mauritius July 22, 1879, in distress. She was twenty-seven years old at the time and was condemned and sold.

The clipper ship *Golden Rule*, also built by William Hitchcock, is credited with a westbound around-the-Horn passage of 114 days in 1857. The claim is not substantiated by an examination of the records of clearance, sailings, and arrivals, and the claim of 114 days evidently refers to sailing days at sea; yet there is no record that the ship put into any port

en route. However, the sailing performance of the ship on the voyage in question, even if her passage was one of 132 days and not of 114 days as claimed, is so good in relation to that of all the other clippers leaving North Atlantic ports within some two weeks before and two weeks after her that the comparison leads to the conclusion that the only westbound passage of the *Golden Rule* around Cape Horn was a creditable sailing performance. The following sailings were the only ones recorded between August 7 and September 27, 1857, of clipper ships that completed their voyages.

Name of Clipper	Port of Departure	Date of Departure	Date of Arrival San Francisco	Length of Passage in Days—Port to Port
SPARKLING SEA	Boston	Aug. 19, 1857	Jan. 22, 1858	156
THATCHER MAGOUN	New York	Aug. 20, 1857	Dec. 25, 1857	127
NEPTUNE'S CAR	New York	Cleared Aug. 29, 1857	Mar. 4, 1858	187 via Rio de Janeiro
GOLDEN RULE	Boston	Cleared Aug. 29, 1857	Jan. 8, 1858	132 (claimed 114 days)
WILD WAVE	New York	Cleared Aug. 31, 1857	Jan. 23, 1858	145 (claimed 140 days)
KIT CARSON	New York	Cleared Sept. 11, 1857	Feb. 11, 1858	153 (claimed 147 days)

The average of the recorded seven passages is 149 days, and the only ship beating the 132-day recorded run of the *Golden Rule* was the *Thatcher Magoun* of Medford, Mass., which is credited with a passage of 127 days and claimed a run of 125 days. There is uncertainty in regard to the actual date of sailing or "departure at sea" of some of these vessels and of the length of the actual passage at sea. The *Neptune's Car,* which cleared New York August 29, was reported as sailing September 1 and as arriving at San Francisco "180 days from New York." With a badly sprung foremast, this vessel put into Rio de Janeiro November 8, 1857, for repairs and was evidently in port 34 days. Captain Bearse stated on arrival that his ship had made a run of 125 sailing days from New York and 82 days from Rio, which does not check with the dates of clearance and reported departure and arrival at Rio. They suggest a passage from departure to arrival of 184 days and 150 days at sea, so the 125 days reported by Captain Bearse was obviously his estimate of "sailing days on the course" and not either "time between ports" or "days spent at sea."

But little is known of the *Golden Rule,* but Howe and Matthews, in AMERICAN CLIPPER SHIPS, say that she was built by Hitchcock & Company at Damariscotta in 1854 (185 x 37 x 23; 1,185 tons) for F. Nickerson & Company, Boston, and was "reported in 1900 register," which would mean that she was in service when forty-six years old.

Newcastle Launches the CARONDELET, JOSEPHUS, *and* ELIZABETH *of Down Easter Type*

The ship *Carondelet* of Down Easter type—model and spars—was launched from the yard of Edwin Flye & Company at Newcastle in December 1872 and was built to the order of Abner Stetson, a retired shipbuilder of Damariscotta. The vessel was of 1,376 tons register, 202 ft. 5 in. long, 40 ft. 3 in. beam, and 24 ft. deep. Abner Stetson's sons, who were sea captains (Jos. A. and Wilder Francis Stetson), were presented with an interest in the ship, and each of them subsequently commanded her. In 1881 the *Carondelet* crossed the Pacific

from Yokohama to San Francisco in 22 days, which, it is said, "is the record fast passage over that course." She sailed from Yokohama in ballast at midnight of October 8 (Capt. W. F. Stetson), "thirty inches down by the head and arrived at San Francisco in the early morning of October 30, sailing into the harbor to her anchorage without tugboat or pilot." The ship *Frank Pendleton,* leaving Yokohama thirteen days ahead of the *Carondelet,* was 35 days making the run to the Golden Gate, and the ships reached San Francisco the same day. In 1887 the *Carondelet* was sold to Pope & Talbot, lumber merchants of San Francisco, with sawmills on Puget Sound, who put her in the transpacific lumber trade. In 1890 she made a record fast passage of 43 days from Sydney to Puget Sound port, and in 1902 she ran from San Francisco to Prince William Sound, Alaska, in only 20 days, lowering the record between the points by four days. In 1909, when thirty-seven years old, the *Carondelet* was acquired by Seattle interests, which cut her down to a barge and employed her in carrying cement in tow; while in this service, she foundered off Prince Rupert, B.C., on December 1, 1911.

The Down Easter *Josephus* was built by E. Haggett at Newcastle, Maine, and was launched in October 1876. She was of 1,470 tons register and measured 213 ft. long, 39 ft. 2 in. beam, and 24 ft. 4 in. deep. Her managing owner was A. Austin, and she hailed from Damariscotta. It is said that the *Josephus* was "a good carrier, made passages in better than usual time, and was, in general, a fortunate ship." Among her sailing performances was a passage in ballast from Acapulco, Mexico (November 30, 1885), to Newcastle, N.S.W. (January 7, 1886), in 38 days. The distance covered was 7,800 miles; average per day, 205 miles; best day's run, 305 miles; average speed for the voyage, 8½ knots per hour; highest average speed for twenty-four hours, 12.7 knots per hour. The *Josephus* was sold in 1893 to Pendleton, Carver & Nichols, of New York, and in 1900 she was purchased for conversion into a coal barge. In April 1924, when forty-eight years old, she was destroyed by fire at Scotland, Va.

Another rather full-modeled but good-sailing full-rigged deep-sea ship built by Haggett & Company at Newcastle, Maine (launched October 1882), was the *Elizabeth,* which hailed from Searsport. She had three Searsport skippers for her masters and was owned by Searsport sea captains, active and retired. The *Elizabeth* was of 1,773 tons register, 231 ft. long, 41 ft. 9 in. beam, and 27 ft. 5 in. deep. She was named after the wife of Capt. Phineas Pendleton, 3rd, of Searsport. (He was the commander of the *Henry B. Hyde,* built at Bath in 1884, the finest Down Easter ever launched.) The *Elizabeth* operated generally in the Cape Horn trade, carrying wheat eastbound to England. The average of her six westbound passages was 133 days, the fastest being in 123 days and the slowest 138 days. The average of her return eastbound passages was 115 days, the fastest being "a very smart run of 97 days" and the slowest 123 days. On February 22, 1891, the *Elizabeth,* when in tow and entering San Francisco Bay, went ashore in a gale of hurricane force on Rocky Point. She had just completed a 119-day passage from New York.

XXIX.

DAMARISCOTTA AND NOBLEBORO, MAINE

(including Bristol and Bremen)

A Record of Vessels Built in the Area, 1789-1890

DAMARISCOTTA, across the inlet from Newcastle and on the eastern bank, was an important port of entry as well as a shipbuilding town of prominence around the middle of the nineteenth century. Damariscotta was part of the town of Nobleborough (now Nobleboro) until 1847, and it is impossible at this time to get any fairly complete and accurate record of the ship construction that has taken place within the limits of the present town of Damariscotta. The records of Damariscotta on the east bank and Newcastle on the west bank of the creek (or river) are somewhat confused, and it is impossible to differentiate between Nobleboro and Damariscotta; moreover, this part of Maine did a great deal of construction for out-of-town and out-of-state owners, of which there is no record in Maine customhouses. The following table gives a list of vessels built at Damariscotta or Nobleboro during the period 1789-1810 inclusive as per available customhouse records. It is, however, far from complete.

Year Built	Reported Place of Building	Name	Rig	Tonnage
1789	Damariscotta	ABIGAIL (of Charlestown, Mass.)	Schooner	81
1792	Damariscotta	TWO SISTERS	Brig	172-30/95
1794	Nobleborough	HAZARD	Schooner	102-45/95
1794	Nobleborough	ATLANTIC	Brigantine	155-64/95
1797	Nobleborough	JANE	Brigantine	187-63/95
1800	Nobleborough	PLATO	Brig	142-30/95
1801	Nobleborough	MINERVA*	Ship	104-21/95
1801	Nobleborough	THREE SISTERS	Schooner	146-35/95
1801	Nobleborough	PATTY	Schooner	140- 3/95
1803	Nobleborough	SARAH AND ELIZA	Ship	250-88/95
1803	Nobleborough	PARTY	Sloop	95- 3/95
1804	Nobleborough	SALLY	Brig	148-75/95
1804	Nobleborough	NANCY	Brig	146-16/95
1805	Nobleborough	GOLDEN RULE**	Schooner	353-32/95
1806	Nobleborough	FRIENDSHIP	Schooner	100-78/95
1808	Nobleborough	ACTEON	Ship	336-56/95
1808	Nobleborough	FAIR PLAY (of Bath)	Schooner	47-77/95
1809	Nobleborough	CAESAR	Brig	177-55/95
1810	Nobleborough	ASIA	Ship	251-89/95
1810	Nobleborough	JUNIUS	Brig	130-68/95

*The MINERVA was probably a brig or brigantine.
**The GOLDEN RULE was probably ship-rigged.

A later search of the records gives the following vessels built at Nobleboro:

Year Built	Name	Rig	Tonnage	Dimensions in Feet: Length	Beam	Depth	Number of Masts
1820	BETSEY	Schooner	121	80	22.7	8.1	2
1820	CATHERINE	Schooner	59	56.5	16.8	7.2	2
1820	JULIA	Schooner	115	76	22.8	7.7	2
1830	EVERETT	Schooner	67	61.1	17.3	7.3	2
1832	EMELINE	Brig	133	82.6	23.4	8.1	2
1838	EDWARD ADAMS	Schooner	114	81.2	22.8	7.1	2
1839	HAMPTON	Schooner	89	76.8	23.6	7.5	2

The Nobleboro records available at various Penobscot-Kennebec (Maine) customhouses give the following vessels registered as built in that township during the period 1811-1848 inclusive:

	Ships		Brigs		Schooners		Sloops		
Period	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	No.	Largest and Smallest Tonnage	Total Number of Vessels
1811-1819	1	PERSEVERANCE; 278	1	MARINER; 194.2	5	MECHANIC; 110.6 LYDIA ADAMS; 96.6	1	JUNIOR PACKET; 89.1	8
1820-1829	—	—	4	ROOK (of Castine); 197 BETSEY (of Belfast); 129.2	9	JOHN RUGGLES (of Islesboro); 124.7 WATCHMAN (of Thomaston); 72.8	1	BETSEY AND SALLY; 21.7	14
1830-1839	1	FERAX (of Thomaston); 372.6	12	LUCY ANN (of Thomaston); 240.5 RANSOME (of Deer Isle); 116.3	25	MARY AND SUSAN (of Belfast); 133.2 CAROLINE; 34.5	—	—	38
1840-1848	—	—	9	OTTAWA; 249.1 ADELAIDE G. WASHBURN (of Gardiner); 125.6	11	SARAH SEAVEY (of St. George); 131.8 EVELINE; 20	—	—	20

Of these eighty vessels, only two were full-rigged ships, twenty-six were brigs, fifty were schooners, and two were sloops. There were no barks, barkentines, or brigantines.

During the years 1849-1890, the following vessels appear on the records of the National Archives of Rockland and are gleaned from the Waldoboro, Belfast, and Bath customhouse districts as having been built at Damariscotta and Nobleboro, all but two of the vessels being credited to Damariscotta. In this list of forty-nine vessels are twenty-one schooners, nine ships, seven brigs, four barkentines, three barks, three steamers, and two sloops.

Period	Ships No.	Ships Largest and Smallest Tonnage	Brigs No.	Brigs Largest and Smallest Tonnage	Barks and Barkentines No.	Barks and Barkentines Largest and Smallest Tonnage	Schooners No.	Schooners Largest and Smallest Tonnage	Sloops (or Steamers) No.	Sloops (or Steamers) Name, Type, and Tonnage	Total Number of Vessels
1849-1869	2	D. W. CHAPMAN; 1,015.5 UNION; 977	3	FRANK CLARK; 297 GEORGE S. BERRY; 255.8	1	Bark DON JUSTO (of Baltimore); 693.9	12	L. W. WHEELER; 322.4 GREY EAGLE; 28.9	1	Sloop NONE LIKE (of Bath); 30.5	19
1870-1874	3	VOYAGER (of New York); 1,356.4 NORRIS; 1,155	4	J. F. MERRY; 471.5 NETTIE CHASE; 244	2 1	Barkentines GRANADA; 395.5 LIZZIE MERRY (of Portland); 338.3 Bark BRISTOL; 592	7	DELIA O. YATES; 442 SILVER SPRAY (of Rockport); 124	1	Sloop ROUGH AND READY; 26.8	18
1875-1890	4	ELWELL; 1,461.4 B. F. METCALF (of New York); 1,049.7	—	—	2 1	Barkentines HATTIE G. DIXON; 528.5 JOSE E. MORE (of New York); 443.3 Bark JOSE D. BUENO (of New York); 419	2	EBEN R. HAGGETT; 841.4 TWO BROTHERS (of Bristol); 120.5	3	Steamers J. W. FRENCH and J. C. TUTHILL; each of 84.8 LIZZIE WYMAN; 77	12

The sizable square-rigged ships built at Damariscotta as per local customhouse records and constructed during the years 1865-1879 inclusive were as follows:

Year	Name	Tonnage	Year	Name	Tonnage	Year	Name	Tonnage
1865	UNION	977	1874	NORRIS	1,155	1875	ELWELL	1,461.4
1868	D. W. CHAPMAN	1,015.5	1874	VOYAGER	1,356.4	1877	NORMANDY	1,208.9
1873	SUMNER R. MEAD	1,116.7	1875	B. F. METCALF	1,049.7	1879	PATRICIAN	1,254.3

During the 1850's, Damariscotta Builds Two Transatlantic Packets and Nine Ships of the Clipper Type

Damariscotta built two sailing packets for the transatlantic lines operating on regular schedule out of the port of New York. The *American Union* was built in 1851 and ran under the Blue Swallowtail Line flag in the New York-Liverpool service for sixteen years (1852-

1867), after which she operated another nine years in the London Swallowtail service. This ship had a good sailing record as a consistent performer in the Atlantic "ferry." Whereas the average length of all her westbound passages was 37 days, the longest crossing was in 49 days (as against 77 days for the *American Congress,* built across the stream at Newcastle), and the *American Union* is credited with making one westbound passage in only 21 days. Registering 1,146 tons, she measured 181 ft. long, 37 ft. 1 in. beam, and 18 ft. 6 in. deep. The second and last New York transatlantic sailing packet built at Damariscotta (and the largest ship for such service constructed in Maine) was the *Ellen Austin* of 1,626 tons register, built in 1854. This full-rigged packet ship measured 209 ft. 10 in. long, had a beam of 40 ft. 8 in., and was 29 ft. deep. She operated regularly for eleven years (1856-1866 inclusive) in the Dramatic Line running between New York and Liverpool, following which she ran in the London Swallowtail Line until the service of wood sailing packet ships was abandoned to iron and steam in 1881. Each of the Damariscotta-built New York sailing packets operated in the transatlantic service—the hardest trade route in the world—for a period of twenty-five years.

Of the twenty-nine towns that built clipper ships in the state of Maine during the clipper shipbuilding decade of 1850-1859 inclusive, Damariscotta ranked second in both the number and tonnage of ships launched, turning out nine clippers of 11,831 aggregate registered tons and being beaten only by Rockland, which produced ten clipper ships totaling 13,179 tons. (The city of Bath—eliminating Richmond, Pittston, Hallowell, Farmingdale, etc., of the Bath customhouse district—launched nine clippers of 10,051 aggregate registered tons.) If the clipper ships built at Newcastle, across-stream from Damariscotta, are added to the output of Damariscotta, then that quite concentrated community launched in the fifties twelve clipper ships totaling 15,427 registered tons and led all shipbuilding centers in the state. Moreover, the Damariscotta-Newcastle clippers were big ships averaging 1,286 tons, as against an average for the entire fleet of eighty-four clippers built in the state of Maine of 1,073 tons.

The following table gives a list of the clipper ships built at Damariscotta during the clipper shipbuilding decade. Of a total of nine vessels constructed of this type, eight were launched during the four-year period 1852-1855 inclusive. One was built in 1850, two in 1852, four in 1853, and one each in the years 1854 and 1855. The smallest clipper ship was the first one built—the *Alert* of 764 tons, launched in 1850; the largest, the *Black Warrior* of 1,828 tons, was built in 1853. The average tonnage of the vessels built in the various years was: 1850, 764 tons; 1852, 1,071 tons; 1853, 1,575 tons; 1854, 1,238 tons; and 1855, 1,387 tons.

Name of Clipper, Year Built, and Registered Tonnage	Builder	Registered Dimensions in Feet and Inches			Owner	Westbound Passages around the Horn to California, 1850-1860				
								Time in Days		
		Length	Beam	Depth		Years	Number of Passages	Average	Fastest	Slowest
ALERT; 1850; 764 tons	Metcalf & Norris	152- 6	33- 1	21- 6	Crocker & Warren, New York	1850-1853	2	149	148	150
LEVANTER; 1852; 868 tons	Metcalf & Norris	182	33	22	Smith & Boynton and Naylor & Co., New York	—	—	—	—	—
QUEEN OF THE EAST; 1852; 1,275 tons	Metcalf & Norris	184	38	23	Crocker & Warren, New York	1852	1	154 (including stop and delay at Callao)	154	154
FLYING SCUD; 1853; 1,713 tons	Metcalf & Norris	200- 6	40- 9	23- 9	R. W. Cameron, New York	—	—	—	—	—
TALISMAN; 1854; 1,238 tons	Metcalf & Norris	194- 8	36-11	23- 6	Crocker & Warren, New York	1852-1860	4	132	112	142

(Continued on next page)

Name of Clipper, Year Built, and Registered Tonnage	Builder	Registered Dimensions in Feet and Inches			Owner	Westbound Passages around the Horn to California, 1850-1860				
						Years	Number of Passages	Time in Days		
		Length	Beam	Depth				Average	Fastest	Slowest
WILD ROVER; 1853; 1,100 tons	Austin & Hall	187	36	22	Alpheus Hardy & Co., Boston	1856-1859	3	145	126	173
BLACK WARRIOR; 1853; 1,828 tons	Austin & Co.	234	42	23- 8	William Wilson & Son, Baltimore	1855-1858	2	119	114	124
OCEAN HERALD; 1853; 1,658 tons	Cyrus Cotter				Everett & Brown, New York	—	—	—	—	—
CRITERION; 1855; 1,387 tons	Wm. Hitchcock & Co.	198- 3	38- 9	28	F. Nickerson & Co., Boston	—	—	—	—	—
Nine ships totaling 11,831 tons; average, 1,315 tons per ship.						1852-1860	12	137¾	112	173

The *Alert* was too small for Cape Horn service. She made two westbound passages during 1850-1853 in 148 and 150 days, respectively, which was slow time; but even at that she beat the *Joshua Bates* and *Game Cock* on her first passage and the *Wings of the Morning* on her second. The ship was sold at Calcutta in 1857, and she was lost near Formosa in the China Sea—with two mates and half her crew—in October 1858.

The *Levanter* was also a small ship, and evidently she was never put in the Cape Horn trade. Before Smith & Boynton and Naylor & Company acquired her, she had been owned by B. F. Metcalf and R. W. Trundy. She was a vessel of many owners, being purchased in 1863 by E. Wheelwright of Boston, who sold her to T. Cotter, of Cowes, England, in 1865. She went under the British flag, having had three groups of American owners during the years 1852-1863.

The *Queen of the East,* which was Metcalf & Norris' first large clipper, made only one westbound passage around Cape Horn and that via Callao, Peru. The elapsed time from clearance at New York (April 7, 1852) to arrival at San Francisco (September 8, 1852) was 154 days. How long she stayed at Callao is not stated, although the records say that she ran from Callao to San Francisco in 41 days. Sailing four days before the *"Queen,"* the ship *North America* arrived at San Francisco after a passage of 151 days, being at Rio a part of a day and at Valparaiso five days en route. In 1854 the *"Queen"* made a very slow run in the China-Britain tea trade, clearing Shanghai July 11 and not arriving at Deal until December 28 (elapsed time, 170 days). In 1857 she was put in the Australian service and in April 1872, when twenty years old, was lost on a reef in the South Pacific while on a voyage from San Francisco to Newcastle, N.S.W.

The firm of Metcalf & Norris, of Damariscotta, was one of the most productive and best known builders of clipper ships in Maine. It launched five ships of this type aggregating 5,858 tons during the years 1850-1854. Its last two ships, the *Flying Scud,* built in 1853, and the *Talisman,* put in the water a year later, were undoubtedly fast vessels and, it is said, were built from a model or plans of Samuel Harte Pook. The *Flying Scud* was the largest clipper turned out by Metcalf & Norris, although she was not the largest built in Damariscotta; for the *Black Warrior,* which followed the lines of the *"Scud,"* was of 1,828 tons as against 1,713 tons for the *Flying Scud.*

The *Flying Scud* was launched November 2, 1853, and the story is told that, when she sailed from Damariscotta on her maiden voyage, "her officers decided that the chronometers were out of order as no ship, they felt, could have run down the river and gotten to sea in the time they indicated." The ship started her career under a great handicap. The manag-

ing owner, R. W. Cameron, of New York, was absurdly boastful of the ship's sailing ability, and he made ridiculous promises to passengers and shippers before her first long voyage commenced. Then he permitted the ship to be heavily overloaded and dispatched her for Melbourne "with her scuppers almost awash, a heavy deck load, cargo badly stowed, and the ship trimmed two feet by the head." Capt. Warren H. Bearse, of Hyannis, Cape Cod, was in command, and he was required to take out an extremely crank as well as an overladen ship. The *Flying Scud* cleared New York September 28, 1854, and two days later was struck twice by lightning, which deranged the compass and caused the ship several days' delay. She crossed the equator October 26 and on November 5 was in 27° 41′ S., 29° 30′ W.; the following day, according to Captain Bearse's log, the ship ran 449 nautical miles (an average of 18.7 knots per hour), an all-time day's run record for a ship under canvas. Then, for a week, the ship had variable weather, calms, and strong gales; at times she logged 15 and 16 knots, at other times 3 or 4 knots and less. Lieutenant Maury figured that between November 24 and December 10, the *"Scud"* covered 4,620 nautical miles in sixteen consecutive days, an average of 289 miles per day and over 12 knots per hour. The ship arrived at Port Phillip Heads December 14 after a passage of 76 days—a remarkable run considering the overloading, stowage, and trim of the ship and the condition of her compasses and the delay associated therewith. One competent marine historian has written: "In view of all the circumstances, it is remarkable that she made the passage at all."

Among other fast passages, the *Flying Scud* made a record transatlantic crossing from New York to Marseilles, France, of 19 days 20 hours, clearing New York December 20, 1855, and arriving at Marseilles January 9, 1856. On April 14, 1856, the *"Scud"* sailed from New York for Bombay, where she arrived July 4 after a very fast passage of 81 days. Following the clipper ship decade, with spars cut down and canvas reduced, the *"Scud"* made a westbound around-the-Horn passage, reaching San Francisco June 27, 1862, 118 days out from New York. Early in the voyage, with heavy winds in the North Atlantic, the ship ran 1,053 nautical miles in 66 hours—an average of 16 knots per hour for 2¾ days, which is record fast sailing; but thereafter she had light winds almost all the way. Because of conditions brought about by the Civil War, the *Flying Scud* was sold in England to J. Thompson in April 1863, and she was renamed *Cestrian* (hailing port, Liverpool) when she went under the British flag.

The last of the five clipper ships built by Metcalf & Norris at Damariscotta was the *Talisman* of 1,238 tons, launched in 1854. During the clipper ship decade, the *Talisman* made four westbound around-the-Horn passages to San Francisco in 140, 135, 142, and 112 days, respectively—an average of 132 days, which is not fast for a clipper. It would seem, however, that the vessel was a speedy craft but generally unfortunate as to weather on her westbound runs. On the 1858 passages of nine noted clippers making the run during the period in which the *Talisman* sailed, only two beat the Damariscotta ship's time of 135 days (the big *Great Republic* with a run of 120 days and the *Adelaide* with 133 days), and one other (the Maine-built *Euterpe*) sailed even with the *Talisman.* The other clipper ships whose time was beaten were the *Superior,* 140 days; the *Stephen R. Mallory,* 146 days; the *Memnon (II),* 150 days; the *Wandering Jew,* 163 days; and the *Polynesia,* 198 days. The average time for all nine ships —including the *Great Republic, Adelaide, Talisman,* and *Euterpe*—was 148 days, or thirteen days more than the 135-day passage of the *Talisman.* Returning east, the *Talisman* evened up matters with the *Great Republic,* for the little Damariscotta-built clipper defeated the giant Donald McKay extreme clipper by four days on the run from San Francisco to New York. The two ships sailed through the Golden Gate together on February 10, the *Talisman* arrived at New York May 18 after "a smart passage of 96 days," and the *Great Republic* (2¾ times the size of the *Talisman*) reached New York May 22—four days later—after a "fast run of 100 days." In 1859, when the *Talisman's* run to San Francisco took 142 days, five other clippers sailed about the same time. One of them, the *Queen of the Pacific,* was lost, but the length of passage of the other four ships was *Don Quixote,* 141 days; *Mary Robinson,* 144 days; *Malay,* 145 days; and *West Wind,* 170 days.

The *Talisman's* fourth run to California just "got under the wire" as an 1860 sailing, for she sailed from New York just before Christmas of 1860 and reached San Francisco after a passage of 112 days. If she had not been becalmed ten days in Lat. 24° N. Pacific, she would have made the run in 103 days. Returning east, the *Talisman* carried 1,580 (short) tons of wheat and reached Queenstown 108 days out from San Francisco. The *Talisman* made her fifth and last westbound around-the-Horn passage to California, reaching San Francisco on April 15, 1862, in 115 days from New York and making her all-time average for five westbound runs 128½ days. On her last voyage, the *Talisman* sailed from New York May 2, 1863, bound for Shanghai. On June 5, in Lat. 14° 35′ S., Long. 36° 26′ W., she was intercepted and destroyed by fire by the steam Confederate commerce raider *Alabama.* The claim filed later with the *Alabama's* Prize Commission was for $247,765 (vessel, cargo, freight, wages, and personal effects). In addition, the claim for war risk insurance premiums previously paid amounted to $115,500.

The clipper ship *Wild Rover* (1,100 tons old and 1,036 tons new measurement) was built by Austin & Hall, Damariscotta, in 1853. She first engaged in transatlantic trade. On January 26, 1855, westbound to Liverpool, both the foremast and mainmast were struck by lightning. A fire was started in her cotton cargo, but was gotten under control after thirty-five bales were jettisoned. The *"Rover"* made three westbound around-the-Horn passages in the clipper ship decade in 136, 126, and 173 days, respectively, and two more runs in the sixties, with cut-down spars and sail spread, were negotiated in 121 and 132 days, respectively. This record gives an all-time average for five passages of 137½ days, during none of which was the ship favored with consistently good sailing weather. On her longest passage of 173 days, two months of the voyage were spent endeavoring to round Cape Horn. On four occasions, the *"Rover"* was up with and had passed the Cape (August 11, 13, 17, and September 4), but each time she was driven back. At this same time, the clipper *Golden Eagle* made a passage of 217 days and spent 90 days in battling to round the Horn, and the *Cherubim* had a protracted passage of 193 days and had to stop at Valparaiso for repairs. When the *Wild Rover* made her run of 121 days from Boston to San Francisco, she was within 200 miles of the Golden Gate in 111 days, and it took her ten days to cover the short remaining distance. Her last passage, New York to San Francisco, was made in "one continual series of light winds." In 1871 the *"Rover,"* when eighteen years old, went ashore at Jones Inlet, Long Island, and became a total loss.

The *Black Warrior,* launched from the yard of Austin & Company, Damariscotta, in late 1853, was officially described as "a medium and not an extreme three-decked clipper ship." She was built "on spec," but was promptly sold for $90,000 (about $50 per ton) to William Wilson & Son, Baltimore. On her long-distance maiden voyage, the *"Warrior"* made the passage from London to Melbourne in 76 days, carrying 2,600 tons of general cargo; her best day's run was 365 miles—a speed of over 15.2 knots per hour. From Australia the ship sailed to the West Coast of South America and loaded at Callao for Hampton Roads and New York. She arrived on June 23, 1855, after a passage of 86 days from Callao.

The first westbound passage of the *Black Warrior* around Cape Horn to California originated in New York September 6, 1855, and the run was made in 124 days, of which 35 days were spent rounding the Cape in heavy gales. The ship was within 280 miles of the Golden Gate for over ten days, and throughout the voyage, other than around the Horn, she experienced light winds and calms. The *Defender* and *John Stuart,* sailing just before the *"Warrior,"* made runs of 136 and 135 days, respectively; the *Flora Temple,* leaving New York two days after the *"Warrior,"* did not reach San Francisco until February 19, 1856, after a passage of 164 days. On her second westbound run to California, the *"Warrior"* went from New York to San Francisco in 114 days and was becalmed 27 days en route. The *Defender* and *Witchcraft,* each sailing three days after the *"Warrior,"* made runs of 150 and 170 days, respectively. In 1862, because of conditions brought about by the Civil War, the *Black Warrior* was sold to James Baines & Company, of Liverpool, which put her under the British flag and

renamed her *City of Melbourne.* While at Williamstown Pier, Port Phillip, Australia, the ship caught fire on February 1, 1868, and was scuttled. She was promptly raised and repaired; in 1870 she was registered as being owned by W. T. Heron, of Liverpool, and in 1877—when twenty-four years old—she had been cut down and was in use as a hulk at Melbourne.

Carl C. Cutler, in GREYHOUNDS OF THE SEA, writing of clipper ships in 1853, says, "Maine now entered the lists in a substantial way, contributing no less than twenty-eight beautiful clippers during the year, many of which later ranked high among the most famous ships in history, and one of which, the *Ocean Herald* of Damariscotta, registered originally nearly 2,400 tons." For such a supposedly large and important clipper ship as the *Ocean Herald,* very little that is authentic is known about this vessel. Records seem to agree that she was built by Col. Cyrus Cotter, of Damariscotta, was launched in 1853, and was either ordered or soon purchased by Everett & Brown, New York; but Cutler, in his "Appendix" giving measurements of clippers, states the tonnage of the *Ocean Herald* as 1,658 tons, which agrees with tonnage given by Howe and Matthews in AMERICAN CLIPPER SHIPS. No measurements of the vessel are given. There is no record that the *Ocean Herald* engaged in Cape Horn service. During the Crimean War, she was chartered by the French Government for use as a transport, and soon after the Peace of Paris was signed, March 30, 1856, the ship was sold to French owners and renamed *Malabar.*

William Hitchcock, who had built the *Flying Eagle* of 1,004 tons and the *Golden Rule* of 1,194 tons at Newcastle in 1852 and 1854, laid down the bigger *Criterion* in 1855 on the Damariscotta side of the inlet (or stream). Very little has been recorded about this ship. One authority says that she was of 1,546 tons, 200 ft. long, 38 ft. beam, and 28 ft. deep; another says that she was of 1,386.92 tons, 198 ft. 3 in. long, 38 ft. 9 in. beam, and 28 ft. deep. Lloyd's American Registry lists the ship as of 1,385 tons (old measurement). She was built for F. Nickerson & Company, of Boston (owners of the *Flying Eagle* and *Golden Rule*), and she was sold to Moravia in 1882.

Merchant Ships of the Down Easter Type Launched at Damariscotta

Several first-class merchant ships of the Down Easter type were built at Damariscotta. The *Voyager* of 1,356 tons register was launched in October 1874. She was 195 ft. long, 39 ft. beam, and 24 ft. 2 in. deep. This full-bodied square-rigger was well modeled and sparred, and she carried good cargoes while showing fair speed. Her managing owners were Carver & Barnes, of New York (successors to Walsh, Carver & Barnes), and Capt. Charles A. Chase, of Newburyport, was her commander. On her maiden voyage, the *Voyager* made a westbound around-the-Horn passage, New York to San Francisco, in 139 days and, returning east, ran to Liverpool, wheat laden, in 125 days. The ship then loaded coal and went out to San Francisco in 144 days, making a return run to Britain with wheat in 131 days. On February 7, 1878, the *Voyager,* when three and a half years old, sailed from New York for Bristol, and nothing has since been heard of the ship or of any member of the crew.

The Down Easter *Elwell,* built at Damariscotta and owned by D. W. Chapman, was launched in 1875. She was 212 ft. 3 in. long, 39 ft. 1 in. beam, 24 ft. 7 in. deep, measuring 1,461 registered tons. In 1896, when twenty-one years old, the *Elwell,* with Capt. J. E. Barston in command, distinguished herself by breaking the record for the round voyage between San Francisco and Nanaimo, British Columbia. The dates of arrival and departure were:

Left	San Francisco	April 22;	arrived	Nanaimo	April	29
"	Nanaimo	May 2;	"	San Francisco	May	7

The outward run was in 7 days and the homeward run in 5 days. The complete elapsed time for the round voyage, including 4 days of detention at Nanaimo, was 16 days, of which 12 days were under canvas.

The *Normandy*, another Damariscotta-built full-rigged ship that "carried and sailed well," was launched in 1877. She was owned by J. M. Turkey and measured 1,208 tons register, 188 ft. long, 38 ft. beam, and 24 ft. 2 in. deep. The *Patrician* was built at Damariscotta in 1879 (W. A. Street, owner). She was 192 ft. 2 in. long, 36 ft. 4 in. beam, 24 ft. deep, and of 1,254 tons register.

A Record of Vessels Built at Bristol and Bremen

South of the Nobleboro-Damariscotta area, the town of Bristol has a shipbuilding record dating back to early days. Bristol is credited with building in 1854 the clipper ship *Sparkling Sea* of 893 tons (167 ft. 3 in. length, 34 ft. beam, 17 ft. depth) for Alfred Blanchard and associates, of Boston. The following extracts from ship registers recording the particulars of vessels built at Bristol are typical of the construction in that region:

Year Built	Name	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1786	INDUSTRY	Schooner	86	64.9	21.2	7.4
1802	FANNY	Schooner	109	72.5	22.3	7.8
1805	JANE	Schooner	98	60.5	21.8	7.8
1811	HENRY	Schooner	40	52.5	14.4	6
1816	FREETOWN	Schooner	116	72.9	22.7	8.2
1819	AMITY	Schooner	50	54	15	7
1821	BOSTON	Schooner	107	73.3	22.3	7.4
1821	MERCATOR	Schooner	99-14/95	68.7	21.8	11.7
1825	JANE	Schooner	32	55.5	15.5	7.2
1827	SUPERIOR	Schooner	123-54/95	78.9	23.3	7.7
1838	CAROLINE	Schooner	74-57/95	63.2	17.8	7.6
1841	ORRALLOO	Schooner	128-17/95	81.7	23	7.8
1845	OLIVIA	Brig	175-75/95	90.2	24.6	9
1847	WILLIAM	Bark	231-76/95	97.7	25.3	10.6
1851	CORA	Schooner	54	68.9	22.4	6.1
1852	FLYING CLOUD	Schooner	109	82.2	22.4	5.8
1857	FRANK BARKER	Schooner	50	64.4	18.4	7.2
1864	ADELAIDE	Schooner	55	65.7	21.7	5.8
1870	MINNIE DAVIS	Schooner	14	46.6	14.6	5.2
1871	JENNIE H. GILBERT	Schooner	26.74	51.1	16.7	5.8
1873	ROSIE AND ADRA	Schooner	111.70	87.8	27.2	7
1876	MINNIE DAVIS	Schooner	26	53	16.6	6
1877	KINGFISHER	Schooner	10	35.4	12	5.4
1878	CHARLES A. SPROUL	Schooner	64	72.5	22.5	6.7
1884	NELLIE G. DAVIS	Schooner	36	59	17.7	6.8
1888	VIOLA M. BREWER	Schooner	21.24	48.2	15.6	6.4
1894	C. A. DOLLIVAR (gas screw)		20	48	15.3	6.8
1894	CHARLOTTE A. BEAL	Schooner	24	50.5	16.4	6.7
1895	E. McNICHOL	Schooner	27	53	16.7	6.8
1897	KATIE C. LAMSON	Schooner	23	50	16	6.7
1901	MABEL E. BRYSON	Schooner	39	62.8	18.2	8.3

The following two-masted schooners are recorded as built at Bremen, Maine:

Year Built	Name	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1833	GEORGE WASHINGTON	121	79.2	23.1	7.6
1838	BRILLIANT	20	44.3	13.4	6
1847	EDWARD KING	84	81	24	6.5
1858	IDA L. HOWARD	116	84.8	24.6	7.8

"Oil Screw" Power Vessels Built at Damariscotta, 1926-1931

The customhouse records of the Waldoboro area show that after the building of marine sail for both deep-sea and coastal work was suspended, Damariscotta built a fleet of "oil screw" power vessels of small size, presumably for fishing purposes. These craft, eighteen in number, registered as being built during the years 1926-1931 inclusive by J. D. Morse, averaged about 60 tons each and ranged in size from 42.3 tons to 118.7 tons, only one boat being over 75 tons. These boats, the pioneers of which were the *Sunbeam* of Ellsworth (69.4 tons) and the *Helen M.* of Bath (74.8 tons), were constructed for out-of-town owners. Seven were owned at Gloucester, four in Boston, and two in New Bedford. The largest of the fleet was the *Venture* of 118.7 tons, owned in Boston, and the last vessel of this type built was the *Santa Maria* (of Gloucester) of 70¼ tons, registered in 1931. She was one of four sisters constructed in 1930-1931, three for Gloucester and one for New Bedford, Mass., owners.

XXX.

WALDOBORO, MAINE

A Community with a Shipbuilding Record from the 1800's through the Packet, Clipper, and Down Easter Eras to the End of Its Schooner Construction in 1904

No records of ships are available in the Waldoboro customhouse previous to 1871, but small vessels are known to have been built in Waldoboro early in the nineteenth century. Shipping registers record the schooner *Resolution* of 102-52/95 tons (length 70 ft., beam 21 ft. 10 in., depth 7 ft. 10 in.), built at Waldoboro in 1801, and the schooner *Rambler* of 103-69/95 tons (length 70 ft. 4 in., beam 22 ft. 4 in., depth 7 ft. 9 in.), constructed there in 1806. It is known that a shipwright named Merritt built a vessel at Schenck's Point in 1810. Identified vessels were constructed in Waldoboro as early as 1829, for the schooner *Hampton* of 93 tons was launched that year, followed by two schooners (the *Billow* and *Albert*) in 1830 and two in 1831, one of these being the *Vesta* of 135 tons. Registers show that the schooner *Othello* of 107-10/95 tons, with a length of 77 ft. 3 in., a beam of 24 ft. 7 in., and a depth of 7 ft. 4 in., was built at Waldoboro in 1833. When the brig *Morosco* of 196 tons was launched by Charles Miller in 1836, she was described as "the twenty-fourth vessel built by Charles Miller in Waldoboro." The schooner *St. Lawrence* of 153-25/95 tons (length 86 ft., beam 23 ft. 4 in., depth 8 ft. 8 in.) was registered as being built at Waldoboro in 1838. As in other parts of New England, small vessels were built in relatively inaccessible places, from which they could not be launched but had to be hauled, rolled, and skidded to water. A Waldoboro historian writes: "In 1843 a schooner of 33 tons was built in Jackson Russell's door-yard. William Russell and Ellis Wade furnished money and material. When completed she was hauled by forty yoke of oxen to Samson's landing. In the spring of 1844 she was rigged and launched." The *Mary Ann,* built by Joseph Clark in 1835, was the first full-rigged ship launched from a Waldoboro yard. Joseph Clark built the 480-ton ship *Avon* in 1837, and William and Alfred Storer laid down the 543-ton ship *St. Andrew* in 1839.

An amusing story is told of how Waldoboro shipbuilders and owners watched their pennies. A painter named Wildes was engaged to place the name *Emily* on a bark being built by Joseph Miller. After the first two letters had been painted on the stern, the owner-builder appeared and asked what the charge would be. On being told that the price for painting any name was so much a letter, Miller replied, "Well, at that rate two letters are enough, so you can stop right now and not paint any more." The bark, throughout her life, sailed with the letters *EM* on her stern, and under this name she was registered and known.

In 1841, Joseph Clark built the ship *Desdemona* of 625 tons, which remained Waldoboro's largest vessel until the same builder launched the *Caroline & Mary Clark* of 800 tons in 1849, which, in turn, held tonnage honors until the ship *E. Wilder Farley* of 1,300 tons was launched in 1854. Among the schooners registered as being built at Waldoboro during the clipper ship decade was the little *Mariel* of 82 tons (length 78 ft., beam 22 ft., depth

6 ft.), built in 1850, and the more sizable *Damon* of 166 tons (length 96 ft., beam 27 ft., depth 8 ft.), constructed in 1856.

The first three-masted schooner was the *American Eagle,* built by Joseph Clark in 1865, and it is said that the *Governor Ames* of 1,689 tons, built by Leavitt Storer in 1888, was the first five-masted schooner ever built. After seven years of inactivity (1893-1899 inclusive), in which Waldoboro shipyards built only 56 tons of small craft (four sloops and two little schooners), six very large five-masted schooners were launched for the Palmer fleet from the yard of George L. Welt during the years 1900-1904 inclusive. These big schooners ranged in size from the *Paul Palmer* of 1,763 tons, built in 1902, to the *Harwood Palmer* of 2,400 tons, launched in 1904, which was the largest as well as the last vessel to be constructed at Waldoboro. Prior to the building of the six large Palmer schooners (with a total registered tonnage of 13,150 tons and an average of 2,192 tons per vessel), the largest vessel to be launched from a Waldoboro yard was the ship *George Curtis,* built by A. R. Reed in 1884.

The following tables give a list of the known vessels of each of the four types built (all sailing craft) launched each year at Waldoboro from 1829 up to and including 1864—a period of thirty-six years; also a list of the vessels—both number and tonnage of each type—built during each five-year period from 1865 to and including 1904, when construction ceased. The combined lists show that 365 known sailing vessels were built at Waldoboro during a period of seventy-six years, of which number 50 were full-rigged ships and 174 were square-riggers (ships, barks, barkentines, and brigs) and 191 were schooners.

Period	Ships		Barks and Barkentines		Brigs		Total Square-riggers		Schooners		Total All Sail	
	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage
1865-1869	3	3,876	7	3,308	5	1,719	15	8,903	26	5,517	41	14,420
1870-1874	2	2,761	5	3,206	2	760	9	6,727	19	5,105	28	11,832
1875-1879	3	4,660	5	3,177	1	373	9	8,210	3	1,296	12	9,506
1880-1884	2	3,309	3	2,005	—	—	5	5,314	14	6,851	19	12,165
1885-1889	—	—	—	—	—	—	—	—	5	5,104	5	5,104
1890-1894	—	—	—	—	—	—	—	—	4	3,811	4	3,811
1895-1899	—	—	—	—	—	—	—	—	2	26	2	26
1900-1904	—	—	—	—	—	—	—	—	7	13,164	7	13,164
Total	10	14,606	20	11,696	8	2,852	38	29,154	80	40,874	118	70,028

Note: During the years 1883-1901, eleven sloops were built, with a total tonnage of 86 registered tons.

Period	Average Tonnage per Vessel					
	Ships	Barks and Barkentines	Brigs	Total Square-riggers	Schooners	Total All Sail
1865-1869	1,292	473	344	594	212	352
1870-1874	1,380	641	380	747	269	423
1875-1879	1,553	635	373	912	432	792
1880-1884	1,654	668	—	1,063	489	640
1885-1889	—	—	—	—	1,021	1,021
1890-1894	—	—	—	—	953	953
1895-1899	—	—	—	—	13	13
1900-1904	—	—	—	—	1,881	1,881
Total	1,461	585	356	767	511	593

Period	Ships	Barks	Brigs	Total Square-riggers	Schooners	Total All Sail
1829	—	—	—	—	1	1
1830	—	—	—	—	2	2
1831	—	—	—	—	2	2
1832	—	—	—	—	—	—
1833	—	—	1	1	3	4
1834	—	—	1	1	3	4

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Period	Ships	Barks	Brigs	Total Square-riggers	Schooners	Total All Sail
1835	1	1	3	5	1	6
1836	1	—	3	4	7	11
1837	1	1	1	3	5	8
1838	—	—	2	2	6	8
1839	4	2	—	6	3	9
1840	1	2	1	4	3	7
1841	1	3	3	7	3	10
1842	—	—	—	—	—	—
1843	1	1	1	3	2	5
1844	1	—	2	3	2	5
1845	—	—	1	1	4	5
1846	—	—	7	7	7	14
1847	—	2	1	3	7	10
1848	2	2	2	6	8	14
1849	1	2	3	6	11	17
1850	4	3	2	9	5	14
1851	3	1	7	11	2	13
1852	3	1	2	6	3	9
1853	2	2	2	6	3	9
1854	5	1	7	13	—	13
1855	1	3	7	11	—	11
1856	2	—	—	2	3	5
1857	—	—	3	3	—	3
1858	—	—	—	—	—	—
1859	2	—	1	3	1	4
1860	1	—	—	1	3	4
1861	—	—	—	—	3	3
1862	1	—	1	2	2	4
1863	1	—	1	2	3	5
1864	1	1	3	5	3	8
Total	40	28	68	136	111	247

The following table gives a list of the twenty-two largest full-rigged ships, the eight largest barks, the two largest barkentines, the four largest brigs, and the twelve largest schooners built at Waldoboro. The registered tonnage, year built, and name of the builder are set forth. All the full-rigged ships of over 625 tons register, ranging up to 1,745 tons, are mentioned; the barks from 566 to 873 tons, barkentines from 639 to 655 tons, brigs from 396 to 492 tons, and schooners from 756 to 2,357 tons. The most important names appearing among the builders are Joseph Clark and the Reeds, Welts, Storers, and Kennedy.

Full-rigged Ships

Name	Year Built	Tonnage	Builder	Name	Year Built	Tonnage	Builder
GEORGE CURTIS	1884	1,745	A. R. Reed	E. WILDER FARLEY	1854	1,300	B. B. Haskell & Co.
WILLIAM F. STORER	1856	1,700	Storer & Comery	GOLD HUNTER	1867	1,258	Joseph Clark
MABEL CLARK	1877	1,661	Edwin O. Clark	OTIS NORCROSS	1862	1,240	Joseph Clark
EMILY REED	1880	1,564	A. R. Reed & Co.	ALFRED STORER	1854	1,200	Storer & Hovey
ISAAC REED	1875	1,550	A. R. Reed & Co.	WESTON MERRITT	1860	1,171	Reed, Welt & Co.
ANNIE FISH	1868	1,496	Reed, Welt & Co.	ALEX McNEIL	1869	1,122	Reed, Caldwell & Co.
ROSIE WELT	1874	1,453	Reed, Welt & Co.	CAROLINE & MARY CLARK	1849	800	Joseph Clark
WILLIE REED	1877	1,449	A. R. Reed & Co.	WOODCOCK	1852	744	Edwin Achorn
CARRIE CLARK	1874	1,326	Joseph Clark & Son	B. L. HARRIMAN	1851	700	B. L. Harriman
JOSEPH CLARK	1856	1,308	Joseph Clark	MUSCONGUS	1850	699	Reed, Welt & Co.
J. WEBSTER CLARK	1859	1,308	Joseph Clark	DESDEMONA	1841	625	Joseph Clark

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Barks

Name	Year Built	Tonnage	Builder	Name	Year Built	Tonnage	Builder
ALICE REED	1873	873	A. R. Reed & Co.	MATANZAS	1880	711	H. Kennedy & Co.
NINA SHELDON	1872	782	Joseph Clark & Son	ROSETTA McNEIL	1867	611	A. R. Reed & Co.
FANNIE L. KENNEDY	1878	758	H. Kennedy & Co.	CHIMBORAZO*	1865	575	Wilbur Newhall
ANNIE REED	1876	747	Reed, Welt & Co.	MARY G. REED	1867	566	Reed, Welt & Co.

*A bark of 576 registered tons was built by B. L. Harriman in 1852.

Barkentines

E. O. CLARK	1883	655	Edwin O. Clark	RACHEL EMERY	1883	639	H. Kennedy & Co.

Brigs

ANNIE R. STORER	1869	492	Storer & Benner	EMILY T. SHELDON	1873	424	Joseph Clark & Son
JOHN HASTINGS	1864	472	Schwartz & Castner	JOHN H. KENNEDY	1862	396	Storer & Caldwell

Schooners

HARWOOD PALMER	1904	2,400	Geo. L. Welt	GOVERNOR AMES	1888	1,689	Leavitt Storer
SINGLETON PALMER	1904	2,357	Geo. L. Welt	HATTIE P. SIMPSON	1891	1,220	A. R. Reed & Co.
DOROTHY PALMER	1903	2,315	Geo. L. Welt	AUGUSTUS WELT	1889	1,162	Geo. L. Welt & Co.
BAKER PALMER	1901	2,240	Geo. L. Welt	JAMES W. FITCH	1890	1,064	Leavitt Storer
FANNIE PALMER	1900	2,075	Geo. L. Welt	JOSIAH HART	1886	852	Geo. L. Welt & Co.
PAUL PALMER	1902	1,763	Geo. L. Welt	J. MANCHESTER HAYNES	1885	756	A. Storer & Son

The ship *William F. Storer* was one of the later large sailing packets to be used in transatlantic service in the New York lines operating on schedule. For fourteen years (1861-1875), the *"Storer,"* named after one of her Waldoboro, Maine, builders, ran between New York and Liverpool in the Black Ball (Liverpool) Line. Robert G. Albion, in his authoritative work SQUARE-RIGGERS ON SCHEDULE, gives the registered tonnage of the *William F. Storer* as 1,628 tons and her dimensions as length 200 ft., beam 40.2 ft., and depth 28 ft. He also lists the sailing packet *Hamilton Fish,* which ran in the same New York-Liverpool Black Ball Line up to the end of its existence in 1878, as of 1,628 tons (new measurement) and built in Waldoboro, Maine, in 1856. This would suggest that the *Hamilton Fish* was a sister ship of the *William F. Storer,* built the same year and most probably in the same yard; but Samuel L. Miller, the Waldoboro historian, makes no mention of this ship, and she does not appear in his list of vessels built at Waldoboro (1829-1904), which cannot be considered complete, as he says that there are no records in the Waldoboro customhouse prior to 1871.

Another Waldoboro-built sailing packet that operated on schedule out of the port of New York was the *Toulon* of 744 tons (length 154.7 ft., beam 32.3 ft., depth 16.2 ft.), built by Henry Kennedy. She ran in the New Orleans service, and during the five years (1853-1858) that she was in the "Louisiana Line," she averaged 17½ days on the run between New York and New Orleans; her best passage was made in 14 days, and her longest passage occupied only 22 days.

Three clipper ships were built at Waldoboro during the clipper ship era, but much confusion exists as to their size, time and place of building. Carl C. Cutler, in GREYHOUNDS OF THE SEA, gives the following data of the three Waldoboro-built clipper ships, which do not, however, agree with the records of the local historian, Samuel L. Miller, from whose

findings the list of vessels built in Waldoboro set forth in the preceding tables has been compiled:

Name of Vessel	Year Built	Builder	Tonnage	Registered Dimensions Length	Registered Dimensions Beam	Owner
WINGS OF THE MORNING	1852	Edwin Achorn	915.64	166-10	34- 6	Talbot & Olyphant, New York
WOODCOCK	1853	Achorn & Gleason	1,091.17	187- 1	35- 4	Dunham & Dimon, New York
SPARK OF THE OCEAN	1853	Unidentified	895.42	171	33- 7	Alfred Blanchard, Wm. Greely, et al., Boston

These three ships totaled 2,902 registered tons, an average of 967 tons per vessel. The *Wings of the Morning* (Capt. H. A. Lovell) was sold to the French in 1856. The records show that previous to that time, she made two westbound passages around the Horn to San Francisco. The first—on which she sailed from New York—was an unfortunate, long voyage in 1853 of 183 days, port to port, with 165 days net at sea, as the ship, partly dismasted, put into Rio de Janeiro for repairs. The second, in 1855, was a run from Philadelphia to San Francisco in 145 days. The *Wings of the Morning* was an unfortunate ship as to weather encountered. In 1854 she made a passage of 102 days from New York to Melbourne, but she did some fast sailing when conditions of wind and sea were favorable. She ran from anchorage in San Francisco Bay to the equator in 15 days flat and, sailing with the clipper *Red Rover* from Callao, Peru, to Havre, beat that ship by nineteen days on the run. There is no record of any westbound passage to California made by the *Woodcock* (said to have been commanded by Capt. Frederick M. Ranlett) or the *Spark of the Ocean* (Capt. Willard J. Treat).

Samuel L. Miller, the historian of Waldoboro, says that there are no Waldoboro customhouse records of ships built in that town prior to the 1870's. He mentions the *Wings of the Morning* and says that the ship was built by Edwin Achorn & Company in 1853; the *Woodcock* he describes as a ship of 744 tons built by Edwin Achorn in 1852. He says nothing of the *Spark of the Ocean,* although he records the building of a couple of ships (both name and tonnage unknown) that he affirms were launched at Waldoboro about this time, and he mentions the building during the years 1852-1854 of seven vessels with unidentified names and of twenty-one vessels with stated names but no given tonnage.

In addition to the foregoing lists of vessels built in Waldoboro, a recent search of the records shows the following two-masted schooners and one brig registered as built there:

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Dimensions in Feet Beam	Dimensions in Feet Depth
1801	DOVE	Schooner	20	34.3	11.2	6.2
1803	INDEPENDENCE	Schooner	110	72.7	21.2	8.3
1816	HANNAH AND JANE	Schooner	93	74.2	22.8	6.3
1819	FRANCIS MILLER	Brig	174	83	23.9	10.5
1819	GEORGE WASHINGTON	Schooner	102	75.1	23.2	7
1820	FAIR PLAY	Schooner	116	77	22.7	7.6
1829	BANNER	Schooner	117	79.3	22.8	7.3
1830	AMARANTH	Schooner	116	79.2	22.9	7.3
1833	EXAMPLE	Schooner	143	80.5	23.3	8.3
1844	CAROLINE CLARK	Schooner	163	85	23.1	10
1848	JENNY LIND	Schooner	161	87.3	24	8.8

Waldoboro, like most other shipbuilding communities in Maine, was neither impressed by nor greatly interested in the speed craze that produced sharp-lined and oversparred ships in the early fifties and "medium" clippers from 1853 or 1854 to the end of the building period

of that decade. Good, rather full-modeled, well-sparred, and amply canvased ships were built around mid-century. Waldoboro constructed vessels of this type throughout the brief clipper ship period and continued building such ships until the closing years of the era of wood sail. The following table gives a list of the rather full-modeled, full-rigged, three-masted ships, generally of Down Easter type, built at Waldoboro, Maine, during the years 1854-1884 inclusive:

Year Built	Name	Registered Tonnage	Builder	Year Built	Name	Registered Tonnage	Builder
1884	GEORGE CURTIS	1,745	A. R. Reed	1864	SARAH C. WELT	1,200	Reed, Welt & Co.
1880	EMILY REED	1,564	A. R. Reed & Co.	1863	EDWIN CLARK	1,300	Joseph Clark
1877	MABEL CLARK	1,661	Edwin O. Clark	1862	OTIS NORCROSS	1,240	Joseph Clark
1877	WILLIE REED	1,449	A. R. Reed & Co.	1860	WESTON MERRITT	1,171	Reed, Welt & Co.
1875	ISAAC REED	1,550	A. R. Reed & Co.	1859	J. WEBSTER CLARK	1,308	Joseph Clark
1874	CARRIE CLARK	1,326	Joseph Clark & Son	1856	WILLIAM F. STORER	1,700	Storer & Comery
1874	ROSIE WELT	1,435	Reed, Welt & Co.	1856	JOSEPH CLARK	1,308	Joseph Clark
1869	ALEX McNEIL	1,122	Reed, Caldwell & Co.	1854	E. WILDER FARLEY	1,300	B. B. Haskell & Co.
1868	ANNIE FISH	1,496	Reed, Welt & Co.	1854	ALFRED STORER	1,200	Storer & Hovey
1867	GOLD HUNTER	1,258	Joseph Clark				

The *Gold Hunter* of 1,258 tons measured 180 ft. long, 38½ ft. beam, and 24 ft. deep. She was built by Joseph Clark to the order of J. Henry Sears & Company, Boston. She proved to be a profitable ship during her sea life of thirteen years, which was terminated when, laden with coal and bound from Cardiff, Wales, to Hong Kong, she struck a coral reef in the China Sea. The *Gold Hunter* made fair passages in all the trades in which she was engaged: (1) Cape Horn, (2) transatlantic, and (3) carrying coal or case oil to China. She was in collision with the ship *Anahuac* in San Francisco Bay. She had her rudderhead twisted off when rounding Cape Horn, but continued her voyage to San Francisco by using tackles. She was in the news in November 1878, when her crew mutinied at Shanghai.

The *Alex McNeil* measured 1,122 tons gross and 1,088 tons net; 178 ft. long, 36 ft. beam, and 23½ ft. deep. She was built by Reed, Caldwell & Company for New Orleans owners and was named after "Sandy" McNeil, a prominent merchant of that city. In 1888 she was purchased by J. D. Spreckels, of San Francisco, for the Honolulu sugar trade and her rig changed to that of a bark. Later, she was in the export lumber trade. After taking a cargo to the Philippines, she was returning to Puget Sound when she went ashore on Pratas Reef on December 26, 1902, and became a total loss when thirty-five years old.

The *Carrie Clark,* built by Joseph Clark & Son in 1874, was of 1,326 tons register, 185 ft. long, 38 ft. beam, and 24 ft. deep. She was owned jointly by her builder and Boston parties for nine years, after which (in 1883) she was sold to the Germans and renamed *Anna.* After operating about twenty years in transatlantic trade under the German flag, the ship was purchased by Lewis Luckenbach, of New York, converted into a barge, and her old name restored. The *Carrie Clark* carried coal along the Atlantic Coast until November 28, 1921, when she, with the old ship *Gov. Robie* in the same tow, foundered off Highland Light, New Jersey. The *Carrie Clark's* career came to an end after forty-seven years of sea life, of which twenty-nine years had been under canvas. She was generally considered "a good and reliable vessel" and was a good carrier but a rather slow ship. She proved to be well modeled for the severe north transatlantic trade and never experienced any major mishaps.

The *Isaac Reed* of 1,550 tons gross and 1,489 tons net (length 212 ft., beam 40 ft., depth 24 ft.) was built by A. R. Reed & Company "on spec" and named after a state senator. The fractions of this ship were well spread. She was commanded by Capt. William S. Colley, part owner, and managed by Yates & Porterfield, of New York. The *Isaac Reed* was an average

sailer and a good carrier. She was sold in 1900 to J. Jensen, of San Francisco, and resold in 1914 to Hind, Rolph & Company of the same city. Later, after being converted into a barge, she foundered off the California coast in July 1924, when forty-nine years old.

The *Willie Reed* was launched June 11, 1877, by A. R. Reed & Company and was generally considered "one of the best vessels ever built at Waldoboro." She was owned mainly by her builders and Yates & Porterfield, New York, her managing owners. The ship was of 1,449 tons register, 210 ft. long, 39½ ft. beam, and 24 ft. deep. Under command of Capt. Oscar S. Yates, a part owner, the *Willie Reed* gave a good account of herself and, considering her fullness, was a good sailer. She is credited with a passage of 114 days from San Francisco to Dublin. Frederick C. Matthews writes: "On July 1, 1882, the *Jabez Howes, Seminole, Eliza McNeil,* and *Willie Reed* sailed from San Francisco and were close together four days later. Capt. John B. Emerson of the *McNeil* wrote that his ship outsailed all except the *Willie Reed* and on another occasion when both these ships were near Cape Horn, bound to the westward, the *Reed* was given credit for sailing somewhat faster than the *McNeil.*" The last completed voyage of the *Willie Reed* was a westbound Cape Horn passage of 153 days from New York to Astoria and an eastbound run of 124 days from Astoria to Queenstown. On February 24, 1894, when seventeen years old, she was wrecked on Point San Quentin near Royan, France, and became a total loss.

The *Emily Reed,* built by A. R. Reed & Company and launched in November 1880, was of 1,564 tons register, 215 ft. long, 40½ ft. beam, and 24 ft. deep. Her managing owners were Yates & Porterfield, New York. She was later sold to Hind, Rolph & Company, of San Francisco, and when twenty-eight years old she was wrecked (February 14, 1908) on the rocky coast of Oregon near the Nehalem River. Her command, Captain Kessel, asserted, "The ship was lost through an error in the chronometers, they showing her position to be sixty miles offshore when she struck. The weather was very foggy at the time." Whereas the *Emily Reed* was called "a good ship" and credited with making "fair passages" and with being "a good carrier," she had many mishaps during her sea life. In 1885 she experienced severe weather off the Horn, during which her cargo shifted and, it was reported, "a number of spars were sprung and most of the fresh water lost." She had to put back to Montevideo for repairs, reconditioning, and restowage of part of the cargo. In 1888 the *Emily Reed* had to put into Valparaiso for repairs and to overcome leaks that were beyond the capacity of the ship's pumps. Leaving San Francisco in July 1890 with a cargo of wheat for Rio de Janeiro, the "*Reed*" had another disastrous experience off Cape Horn when "heavy gales and tremendous seas kept the ship practically submerged for four successive days." The forecastle was stove in, and eight of the crew were swept overboard in two days. On the return trip from New York to San Francisco, when well down in the South Atlantic, the rudderhead was sprung in a gale, and the *Emily Reed* had to be put about for Rio de Janeiro for repairs and the fitting of a new rudder. After a run from Rio to San Francisco of 95 days, Capt. O. D. Sheldon, in disgust with the bad luck that seemed to be pursuing him and his ship, relinquished command. It is interesting to note that prior to taking command of the *Emily Reed,* Captain Sheldon (a Bowdoinham, Maine, man) had brought out in the winter of 1877-1878 "the new ship *Mabel Clark* of 1,661 tons, at that time the largest ship ever built at Waldoboro." The career of the *Mabel Clark* was very brief. After crossing the Atlantic, she sailed from Liverpool in March 1878 and, in May, went ashore on the island of Tristan da Cunha and was a total loss.

XXXI.

THOMASTON, MAINE

The Pine Tree State's Second Greatest Wood Shipbuilding Center

THOMASTON, the greatest of the wood shipbuilding centers of Maine outside of Bath and the Kennebec River, is situated at the northern end of the eastern ocean inlet opening into Muscongus Bay (Waldoboro is at the head of the western inlet) about thirteen miles, in a direct air line, from the open ocean, four miles southwest of Rockland and thirty-three miles west-northwest of Bath. Only a narrow neck of land separates the ocean inlet leading to Thomaston from the Penobscot, and South Thomaston fronts on the Atlantic on the west shore about where the bay begins.

Thomaston built vessels from the early days of the republic, and originally the town covered a large area. In addition to the present town at the north end of a sizable bay, there was what is now South Thomaston, some three and a half miles to the southeast. The well-known town of Rockland, originally a part of Thomaston, is now a sort of capital of the lower Penobscot region and some four miles to the northeast of Thomaston (directly on the ocean, but protected by Owl's Head on the west bank of Penobscot Bay). The early shipbuilding history of Thomaston and Rockland is much confused, for Rockland, settled in 1769, began to grow with the establishment of the lime industry in 1795. It was set off from Thomaston and incorporated as the town of East Thomaston in 1848, but two years later its present name of Rockland was adopted. It became a deep-sea fishing port of note.

Among the early vessels appearing in shipping registers and recorded as being built at Thomaston (but not later indexed under Rockland) are the following:

Year Built	Name	Rig	Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1801	SHARK	Schooner	23-35/95	40- 3	12	5- 7
1809	RISING STATES	Schooner	133-78/95	73- 4	22-10	9- 4
1816	LAVINIA	Schooner	88-79/95	71-10	21- 1½	6- 9
1817	MILO	Schooner	79-17/95	67- 3½	20- 4½	6- 8½
1823	LEO	Schooner	89-71/95	63- 5	19-11	8- 3
1830	ROMP	Schooner	76-56/95	63- 3	20- 4½	7

Also the brig MATINIC of 192-2/95 tons (length 90 ft. 10 in., beam 24 ft. 1 in., depth 9 ft. 11 in.), built at Thomaston in 1847.

Among the many early vessels recorded as being built at Thomaston but indexed in shipping registers as being laid down in the part of the town that, since the middle of the nineteenth century, has been known as Rockland are the following:

Year Built	Name	Rig	Tonnage	Dimensions in Feet and Inches		
				Length	Beam	Depth
1815	MARY SPEAR	Schooner	97-84/95	71	21-9	7-4½
1829	MARY SNOW	Schooner	55-40/95	54-7	19	6-5
1845	MARY LANGDON	Schooner	116	78-6	22-1	8-5

In an official list of Rockland-built vessels appears the schooner *Thomas Hix* of 99 gross and 95 net tons register, built in 1842. In the record, this vessel is shown as 84 ft. long, 23 ft. 3 in. beam, and 8 ft. 4 in. deep; but a vessel of the same name is shown in shipping registers as built at Thomaston in 1847, and this vessel, while of about the same tonnage (and stated to have been built five years after the Rockland schooner), is reported as 77 ft. 4 in. long, 27 ft. 5 in. beam, and 8 ft. 3 in. deep. The name "Hix" was not uncommon in shipping circles (the schooner *Carrie L. Hix* was built at Rockland in 1871), and it is possible that there were two schooners named *Thomas Hix* built in the general Thomaston territory, one in 1842 and another in 1847.

The following two-masted schooners are recorded as built in Thomaston:

Year Built	Name	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1817	ELIZA ANN	89	70	21.8	6.8
1823	FRANCIS	83	67.1	20.9	6.9
1827	GENERAL JACKSON	108	72.8	20.3	8
1827	JOHN	102	71.5	22.7	7.3
1835	EFFORT	78	66.4	20	6.4
1836	D. B. KEELER	129	73.8	22.5	9
1838	GEORGE AND JAMES	54	56.3	18.6	6
1843	JOHN FREDERICK	102	77.2	22.2	6.7

At St. George, on the east bank of the bay about four miles south of Thomaston, vessels were built from early days to well into the 1870's. Among such craft were the schooner *Sally* of 45-76/95 tons, built in 1818, and the schooner *Sadie Willcutt* of 346.76 tons (length 129 ft., beam 32 ft., depth 10 ft.), built in 1874. Samuel Watts and his brother, Capt. Alfred Watts, who became famous at Thomaston as builders of outstanding, large square-riggers, were born at St. George in 1812 and 1816, respectively.

Vessels were also built at Cushing, across the ocean inlet and west of St. George, from the early days of the republic. Ship registers show the schooner *Priscilla* of 111-20/95 tons (length 74 ft. 9 in., beam 22 ft., depth 7 ft. 9 in.), built at Cushing in 1807.

Warren, a town some four miles northeast of Thomaston (with South Warren only about a couple of miles west of Thomaston), has built vessels since the early days. Among the vessels registered as being built at Warren prior to the War of 1812 were the schooner *Minerva* of 110-39/95 tons (length 71 ft. 5 in., beam 22 ft. 1½ in., depth 8 ft. 1½ in.), built in 1797, and the schooner *Mary* of 123-13/95 tons (length 75 ft. 9 in., beam 22 ft. 2½ in., depth 8 ft. 5¼ in.), built in 1804. Typical of the marine construction at Warren during the years 1816-1852 were the following schooners:

Year Built	Name	Tonnage	Dimensions in Feet and Inches		
			Length	Beam	Depth
1816	PRESIDENT	115-13/95	77- 8	23- 7½	7- 3½
1825	MARY ANN	75	75	20- 8½	6- 6½
1832	ANN	146-18/95	83	23- 7½	8- 6½
1833	WILLIAM AND JOHN	123-79/95	78- 1½	23- 5	7-10
1833	WILLIAM PENN	126-57/95	77- 7	23- 2½	8- 1½
1834	SPLENDID	130- 4/95	79- 8	23- 3	8- 1
1836	AMANDA	114-19/95	78- 2	23- 1	7- 4
1840	MADISON	149-69/95	83- 7	24	8- 7
1852	MARY AUGUSTA	143- 5/95	84-10	23- 9	8- 1

The schooners *William and John* and *William Penn* were built by Edward O'Brien, a native of Warren, when he was forty years old. In 1848, before O'Brien moved to Thomaston (where he and the product of his yard became famous), he built at Warren a full-rigged ship of 797 tons named after himself. Warren is credited with building one ship of the clipper type, the *Stephen Crowell* of 936 tons (174 ft. length, 35½ ft. beam, 24 ft. depth), built by Burgess & Clark in 1855. She was owned by Snow & Burgess, of New York.

Other ship registers record the following two-masted schooners built in Warren: *Betsey* of 90 tons (69.7 ft. length, 21.8 ft. beam, 7.1 ft. depth), built in 1801; *Fair Trader* of 96 tons (72.8 ft. length, 22.1 ft. beam, 7.2 ft. depth), built in 1810; *Galen* of 118 tons (74 ft. length, 22.4 ft. beam, 8.3 ft. depth), built in 1811; *Fair America* of 103 tons (72.5 ft. length, 21.8 ft. beam, 7.5 ft. depth), built in 1816; *Eliza Ann* of 117 tons (76.8 ft. length, 22.6 ft. beam, 7.8 ft. depth), built in 1819; *Champion* of 131 tons (81.2 ft. length, 23.1 ft. beam, 8 ft. depth), built in 1827; and *Henry Clay* of 101 tons (76.7 ft. length, 22 ft. beam, 6.8 ft. depth), built in 1831.

Vessels were built inland at Union, some seven miles north of Warren, about eleven miles from Thomaston, and about twenty-one miles from the open ocean (as the crow flies). Typical of such craft was the schooner *Union* of 22-17/95 tons, recorded in ship registers as 39 ft. 9 in. long, 11 ft. 10 in. beam, and 6 ft. 5½ in. deep and built at Union in 1820.

Out at sea, on the island of Monhegan (which lies about twelve miles to the south of Port Clyde on the mainland), vessels were also occasionally constructed from early days. The schooner *Leader* of 24-57/95 tons, according to official records, was built on this island in 1837; she was registered as 51 ft. long, 12 ft. 3 in. beam, and 5 ft. 8 in. deep. The following two-masted schooners are recorded as built at Monhegan: *Joseph* of 38 tons (46.2 ft. length, 14.8 ft. beam, 6.5 ft. depth), built in 1811; *Fame* of 46 tons (50.7 ft. length, 15.1 ft. beam, 6.9 ft. depth) and *Enpenmont* of 44 tons (52.8 ft. length, 14.7 ft. beam, 6.5 ft. depth), each built in 1822.

The Five Clipper Ships Built at Thomaston, with Their Record in the Cape Horn Service

Five clipper ships were built at Thomaston, Maine, during the clipper shipbuilding decade of 1850-1859 inclusive. The following table gives the dimensions of these five sharp-lined, loftily sparred, and heavily canvased Thomaston-built ships launched during the brief era—brought about by the California Gold Rush—"when speed was king" and deadweight carrying

capacity was sacrificed in order to produce a faster ship. The record of each vessel in the California service is also given, showing the sailing performance on all westbound around-the-Horn passages negotiated during the period of clipper ship voyages, 1850-1860 inclusive. (After 1860, all clipper ships had their spars cut down and sail spread reduced in an effort to reduce operating expenses, repairs, and maintenance charges.)

Year Built	Name and Tonnage	Registered Dimensions			Builder, Thomaston, Maine	Around-the-Horn Westbound Passages to California 1850-1860				
								Time in Days		
		Length	Beam	Depth		Years	Number	Average	Best	Slowest
1851	EMPIRE; 1,272 tons	189	38	23.6	Capt. Eben A. Thorndike for Foster & Nickerson, New York	1852	1	128 (arrived under jury rig)	128	128
1852	GOLDEN RACER; 837 tons	196	34	19	J. C. C. Morton	1853-1855	3	127	117	135
1853	ORACLE; 1,196 tons	185	37	23	Chapman & Flint	1858	1	109	109	109
1854	OCEAN CHIEF; 1,228 tons	195	38	23.6	J. & C. Morton	—	—	—	—	—
1854	CREST OF THE WAVE; 942 tons	175	34	21	Joshua Patterson	1858	1	163 (36 days off Cape Horn)	163	163
	Total tonnage of five clippers.....5,475 tons Average tonnage per clipper.....1,095 tons					1852-1858	6	130	109	163

The *Golden Racer,* built in 1852, was a medium and not an extreme clipper. She was laid down by her builder "on spec" and was designed and constructed as a "medium clipper packet ship suitable for either the transatlantic or Cape Horn trade." When launched, she was christened *Hyperion.* The vessel was acquired by Boston parties, who promptly changed the name to *Golden Racer* and put her in the California trade. After making two westbound runs to San Francisco, the *Golden Racer* was sold, in October 1855, by auction at New York to Roberts & Williams for $45,000. She made a third passage to California under her new owners before being lost. An analysis of the three westbound Cape Horn passages of the *Golden Racer* is given herewith:

	Voyage No. 1	Voyage No. 2	Voyage No. 3
Sailing port	Boston	Baltimore	New York
Date of departure	Jan. 29, 1853	Mar. 27, 1854	Nov. 16, 1855
Date of arrival at San Francisco	June 8, 1853	Aug. 9, 1854	Mar. 12, 1856
From port to equator—Atlantic	35 days	26 days	27 days
From equator to 50° S. Atlantic	21 days	22 days	22 days
From 50° S. Atlantic to 50° S. Pacific (rounding Cape Horn)	19 days	18 days	17 days
From 50° S. to equator—Pacific	22 days	32 days	29 days
From equator Pacific to port	33 days	37 days	22 days
Total length of passage	130 days	135 days	117 days

Capt. Benjamin M. Melcher reported "a run of 128 days, port to port," for the *Golden Racer* on her first voyage, but she did not actually reach anchorage until 130 days out from Boston. The *"Racer"* was 100 miles from the Golden Gate on June 4, when she was practically becalmed, averaging only about one knot per hour for the remainder of the journey. Off the Horn, her main-topmast was sprung, other spars were damaged, and much canvas was lost. Returning east via Callao (loading guano at the Chincha Islands), she was 53 days to Callao and thence 80 days to Hampton Roads.

On her second voyage, the *Golden Racer,* with Captain Nagle in command, again had bad weather rounding the Horn, where she lost her main yard. Then followed light winds all the way up the Pacific. She was becalmed for sixteen days in 19° S. and had light airs from the equator to the Golden Gate. Returning, the ship crossed the Pacific to Calcutta, where she loaded for Boston. She arrived April 11, 1855, after a good passage of 90 days from Sand Heads around the Cape of Good Hope, having circumnavigated the globe on this her second voyage.

On her third and last voyage, the *"Racer"* sailed from New York under Capt. George H. Wilson (her third master on three voyages). She passed Cape Horn 57 days out, experienced a heavy gale in the South Pacific, during which her bulwarks were stove, and lost much canvas. She was close to the California coast on March 7, when 112 days out, and her arrival was delayed several days by light airs. The ship then sailed for Shanghai, where she arrived May 16, 1856, after a run of 43 days from San Francisco. Soon afterwards, she stranded (with no cargo aboard) in the River Min and became a total loss.

The *Oracle,* built by Chapman & Flint in 1853, made a fast run to California of 109 days in 1858, this being by far the best passage to San Francisco made by any clipper sailing from a North Atlantic port during the period from January 17 to April 5 of that year. A comparison of the sailing performance of the *Oracle,* on this her only California run, with that of all the other clipper ships that sailed from Boston or New York between February 24 and April 2, 1858, is set forth herewith:

Name of Clipper	Date of Sailing	Passage in Days	Name of Clipper	Date of Sailing	Passage in Days
RADUGA	Feb. 24	174	WITCHCRAFT	Mar. 13	170
GAUNTLET	Feb. 27	161	ORACLE	Mar. 14	109
CHARGER	Mar. 2	117	DAVID CROCKETT	Mar. 24	116
RATTLER	Mar. 9	115	WEST WIND	Mar. 25	137
BLACK WARRIOR	Mar. 10	114	FLYING DRAGON	Mar. 25	126
DEFENDER	Mar. 13	150	MORNING STAR	Mar. 31	125

In 1855 the *Oracle* was engaged in the China-Britain tea trade and made a passage of 122 days from anchorage at Shanghai (January 7) to dock at London (May 9). Because of conditions brought about by the Civil War, the ship was sold to the British in November 1862, and her new owners renamed her *Young England.*

The clipper ship *Ocean Chief* was built by J. & C. Morton, of Thomaston, in 1854 for the firm's own account. The shipbuilding boom was beginning to wane, but soon after the ship was launched, she was purchased by James Baines & Company, Liverpool, England, which operated the British "Black Ball Line" of sailing packets to Australia. The Baines company was having several clipper ships built at the time by Donald McKay at East Boston. James Baines became interested in the *Ocean Chief* when he learned that the Thomaston ship offered for sale was being built from the designs of Samuel Harte Pook, the young naval architect of Boston who had modeled and made the plans for the *Red Jacket,* built at Rockland, Maine, the "surprising *Surprise,*" built at East Boston, and many more of America's finest and fastest ships. The *Ocean Chief* is said to have been "a very fast and in every way a beautiful and successful ship." Unfortunately, her life was short, for she was deliberately fired by some member of her crew while in port at Bluff Harbor, New Zealand, and totally destroyed by fire. On the maiden voyage of the *Ocean Chief* from Liverpool to Hobart Town, Australia, she lowered the record to 72 days; she returned to Liverpool from Sydney in 84 days, and she made her next two outbound voyages from Liverpool to Melbourne in 80 and 75 days, respectively. James Baines was pleased with the *Ocean Chief* and said of her, "She is a splendid ship, pleasing to the eye, and a most reliable, comfortable, and consistent fast sailer."

The *Crest of the Wave,* built at Thomaston, Maine, in 1854, was a medium clipper and an unfortunate ship. The vessel's only passage westbound around Cape Horn to San Francisco was made under bad weather and adverse sailing conditions, and she was 163 days out from New York when she passed through the Golden Gate on April 8, 1859. The ship had been "held up" at Cape Horn, her commander (Captain Colley) said, for 36 days. Several other ships sailing the same waters at the time made long passages. The *Ocean Belle* arrived at San Francisco March 27 after a passage of 157 days; the *Seaman's Bride* arrived April 4 after a run of 185 days; and the *Manitou* passed through the Golden Gate on April 10 (two days after the *Crest of the Wave*) after a passage from New York of 168 days. The *"Crest"* made several voyages between North Atlantic ports and the West Coast of South America, and in 1861 and 1862 she made runs between Tome and New York in 80 and 81 days, respectively.

For some years prior to 1861, the *"Crest"* was owned by M. R. Ludwig, of Baltimore, and in that year she was seized by the United States Government as rebel property. In 1863 she was purchased by Jones & Company, of Baltimore. The ship sailed from New York July 26, 1862, for Valparaiso and reached there December 21 after an unfortunate passage of 148 days, having had to put into the Falklands en route for repairs. The *"Crest"* arrived at Acapulco November 6, 1864, and reported sixteen deaths from yellow fever. On April 12, 1870, when 35 days out from Liverpool bound for Baltimore, the *Crest of the Wave,* during a severe gale, struck Wreck Island, fifteen miles north of Cape Charles, and was a total loss, with none of the twenty men aboard her surviving to tell the tale. Captain Jones, who was in command, had three years previously been the master of, and the only survivor on, the bark *Isabella* when she was wrecked near St. Thomas and totally destroyed.

Thomaston Launches the Historic NE PLUS ULTRA — *the Last Sailing Vessel in the Transatlantic Packet Service*

Between the clipper ship era and the period of pronounced activity in the building of Down Easters at Thomaston, which came with the sixties and carried into the eighties, Thomaston built many medium-sized deep-sea square-riggers, most of which lacked distinction. In 1863, however, there was launched from a Thomaston yard a historic vessel, the *Ne Plus Ultra,* a New York-England transatlantic sailing packet that is famous not only for her good record in the Atlantic "ferry" but also as the last sailing vessel in the transatlantic packet service. This square-rigged three-masted ship made the last passage of any sailing packet in the Atlantic trade when she arrived at New York from London on May 18, 1881, after a passage of 37 days. The *Ne Plus Ultra* was operated by the Red Swallowtail Line and ran between New York and London in regular service as per an advertised sailing schedule that was rigidly maintained. She was 186 ft. long, 40½ ft. beam, 28 ft. deep, and her registered tonnage was 1,396 tons old and 1,534 tons new measurement. The *Ne Plus Ultra* was well named, for after her — and her last 1881 spring crossing — there was "nothing further" in the transatlantic sailing packet service. On June 1, 1881, the eighteen-year-old ship was sold to the Germans for $30,000.

The Ships of Down Easter Type Built at Thomaston—the Building Record of Edward O'Brien and Samuel Watts, Great Builder-Owners

The story of the Down Easters built at Thomaston, Maine, is the story of the ships conceived, created, and operated by two great builder-owners of American wood merchant ships in the sixties, seventies, and eighties of the nineteenth century—Edward O'Brien and Samuel Watts. Edward O'Brien, of Scotch-Irish descent, was born in July 1793 at Warren, Maine (some five miles northwest of Thomaston and "upriver"). He went to sea as a boy on coasting vessels, but soon worked at the shipbuilding trade and in 1823, when thirty years old, started building on his own account. In 1848 he built at his Warren yard the *Edward O'Brien,* which was the first of three ships to bear his name. This ship of 797 tons was sold to the British at the onset of the Civil War and was renamed *Arthur.* Later, O'Brien moved his yard to Thomaston. For several years, he was associated in business with Samuel Watts (born at St. George, Maine, October 3, 1812, and nineteen years younger than O'Brien) in the conduct of a general store and the operation of the shipbuilding firm of O'Brien & Watts. Each man was a forceful, ambitious, natural leader. Subsequently, the partnership was dissolved, with each operating his own yard and building a fleet of important ships for his own account. Edward O'Brien is said to have constructed over a hundred vessels. Building, owning, and managing his ships, he was active until he died on May 6, 1882, at the age of eighty-nine years. It is said that "he retained almost to the last his full faculties, conducting his own correspondence and directing the movements of his large fleet of ships, in itself an undertaking of great magnitude."

From 1858 onward, O'Brien had made it a practice to own entirely the vessels that he built, and at his death he personally owned upwards of 20,000 tons of shipping and had a 2,200-ton ship in frame in his yard. He did not sell fractions to others as was the established custom in New England, but the fleet that he constructed and operated was his own. No other person had any authoritative voice in the management of the O'Brien ships. He was what is termed today a "rugged individualist." O'Brien was a man of character, high principles, business courage, great enterprise, and integrity. What he had, he had earned by hard work coupled with early self-sacrifice. He was greatly esteemed, as well as acknowledged, for some half a century as "one of the most famous American shipbuilders and owners." O'Brien not only owned his own ships but also frequently owned the cargoes carried. For years, he was his own insurer. He was the first shipbuilder to obtain from the South white oak timber cut from his own tracts. He was vitally interested in every phase of shipbuilding and the operation of vessels in world-wide trade. He also built steam sawmills in Thomaston, established lime kilns and a bank, and for years acted as a member of the State Legislature.

Samuel Watts did not have a career as interestingly novel and spectacular as that of Edward O'Brien, but he was a sound businessman and a highly successful builder and managing owner of deep-sea wood square-riggers of the Down Easter type and, later, of coastwise schooners. Associated with Samuel Watts in the business of shipbuilding and operation was his brother, Capt. Alfred Watts (born in St. George, Maine, in 1816), who had been in command of the ships *Barnabas Webb* and *General McClellan* and who retired from the sea to be the manager of the Samuel Watts shipyard. Alfred Watts proved to be a good builder and businessman. Highly respected, he represented his home town at Augusta, the state capital, as both representative and state senator. Alfred Watts died in May 1882, within a few days of the passing of Edward O'Brien, and the death of these two men, coupled with the highly competitive conditions existing in deep-sea trade, put a stop to the building of square-riggers at Thomaston. The big ship on the stocks at the O'Brien yard at the time of Edward O'Brien's death was completed by his son, Edward E. O'Brien, and after certain delays was launched in November 1882. This was the last ship built in the O'Brien shipyard.

At the Watts yard, Samuel, after launching the *Cyrus Wakefield* in 1882, built one more square-rigger, the *R. D. Rice,* which he put overboard on October 18, 1883, and this was the last Down Easter and the last square-rigged vessel built in Thomaston. Samuel Watts greatly missed his younger brother, who had died when sixty-six years old. Samuel survived his brother for many years, but his fire had left him, and he passed away on March 7, 1900, at the age of eighty-seven and one-half years.

If Edward O'Brien had been a younger man and had lived another ten years, he would probably have continued to challenge Bath shipbuilders, but with his passing went a great and resourceful fighting personality. For a decade after his death, Bath was supreme in the realm of wood shipbuilding and operated unchallenged. The only square-riggers built in the country outside of Bath during the years 1886 to the end of wood sail were the *S. D. Carleton,* built at Rockport, Maine, in 1890, and the little and most unsatisfactory *Holliswood,* built in Boston in 1893. After the construction of the big wood four-masted shipentine *Roanoke* in 1892 and the full-rigged three-masted ship *Aryan* (the last wooden ship built in the world), Bath built a fleet of steel square-riggers during the years 1894-1902 inclusive, but with the building of the steel four-masted shipentine *Atlas* at the Sewall yard at Bath, the curtain descended for all time on American merchant sail.

The following table gives a list of vessels considered as outstanding Down Easters built by Edward O'Brien at his Thomaston yard:

Year Built	Name and Tonnage	Registered Dimensions		
		Length	Beam	Depth
1863	EDWARD O'BRIEN (II); 1,803 tons	200	40.5	28
1866	ANDREW JOHNSON; 2,005 tons	215	41	30
1867	WILLIAM A. CAMPBELL; 1,494 tons (1,538 gross)	206	41.6	24
1869	JOHN BRYCE; 1,968 tons	220	42.2	30
1870	ALEX McCALLUM; 1,951 tons	220	42	29
1875	BELLE O'BRIEN; 1,903 tons	237.5	42	26.2
1877	BARING BROTHERS; 2,090 tons	243.7	42.2	29.5
1877	ALEX GIBSON; 2,121 tons	247.3	42.6	29.6
1878	FRANK F. CURLING; 2,200 tons	245	42.4	30
1879	J. B. WALKER; 2,106 tons	247	42.2	29.8
1881	GENERAL KNOX; 2,141 tons	252	42.4	29.4
1882	EDWARD O'BRIEN (III); 2,157 tons	259	42	28.6

The *Edward O'Brien II,* built and owned by Edward O'Brien and launched from the Thomaston yard in November 1863, was the second ship bearing this name laid down by the builder, the first, built by him at Warren in 1848, having been sold and given British registry in 1862. After 1882, the *"Edward II"* was known as the *"Little Edward"* to distinguish her from the larger *Edward O'Brien III.* The *"Little Edward"* was a good carrier but a rather slow sailer. In 1867 she had a rather bad time of it rounding Cape Horn. The rudder was twisted off, and the ship was unmanageable for fourteen hours, during which time she made bad weather of it, with water getting below and much damage to the cargo. In December 1872, the ship arrived at Falmouth in such a battered and leaking condition that Captain Oliver refused to proceed to Hamburg as per orders, but went into graving dock at Liverpool and was not made ready for sea again until six months had expired. In 1891 the *"Edward II"* was practically rebuilt in San Francisco at an expense of about $30,000. In 1893 the ship took lumber and spars from Vancouver to London and was seven months making the passage. In early 1895, she was converted into a coal barge after a sea life of thirty-one and a half years under canvas. In October 1883, the *"Edward II"* was at San Francisco when the new *Edward O'Brien III* arrived there from the East, and three and a half years later, the same tug that towed the *"Little Edward"* (of 1,803 net registered tons) to sea from Puget Sound picked up the *"Big Edward"* (of 2,157 net registered tons) and towed her through the Straits of Juan de Fuca into the Sound. Both the *"Little Edward"* and the *"Big Edward"* continued to sail

the seas for a period of over twelve and a half years, and the larger and later of the two *"Edwards"* (and the third of the name) continued in service until the end of February 1899, when, at anchor deep laden with coal off Honolulu, her cables parted. She was driven on the reef and became a total loss when seventeen years old.

As before stated, the *Edward O'Brien III,* under construction when the great shipbuilder and prominent businessman died, was completed by his son, Edward E. O'Brien, who, at the launching of the ship in November 1882, named her in honor of his respected father. The ship was a full-modeled Down Easter, but her sailing record is good. The average of nine of her ten westbound Cape Horn passages is 132 days, the shortest being a good run from Liverpool to San Francisco in 113 days. Eastbound, she averaged 126 days for her passages, the fastest being a run of 110 days. In 1885 the *"Big Edward"* had a tiresome passage from Liverpool to San Francisco, occupying 182 days on the run and experiencing no bad heavy weather—only light and contrary winds and long periods of calm. On this passage, it took the ship 103 days to Cape Horn. In 1883 she did some fast sailing, running north from 50° S. Pacific to the equator in 17 days and 18 hours, and in 1884 she rounded Cape Horn from 50° S. Atlantic to 50° S. Pacific in only 9 days.

The *Andrew Johnson,* built by O'Brien in 1866, carried well, but she was slow under canvas. She was lost on October 20, 1884, when eighteen years old, by being rammed by the British iron ship *Thirlmere* in the South Atlantic through sheer incompetence and carelessness on the part of the British command. She sank in two minutes, taking seventeen of her crew with her.

The *William A. Campbell,* launched October 29, 1867, was named after the son-in-law of Edward O'Brien, the builder. For fifteen years, she operated in the transatlantic trade and then made two westbound passages around the Horn (one a long passage occupying almost six months), after which she operated in the Puget Sound-Australia service, carrying lumber out and returning with coal. In July 1892, the *"Campbell"* loaded one and a quarter million board feet of timber at New Whatcom, Wash., and sailed for Queenstown. The ship's bow ports were enlarged to facilitate the loading of timber of unusual dimensions, one being "a stick 100 ft. long and squared to 2 ft. sides." Leaky lumber ports evidently were her undoing. In August, some three weeks after sailing, she encountered "terrific gales and heavy seas, sprang a leak, was thrown on her beam ends, and finally broke in two." The ship was abandoned, the officers and crew taking to the boats. After twenty-three days, the mate's boat was picked up off Honolulu, over two thousand miles from where the *"Campbell"* foundered, but nothing was ever heard of the captain's boat.

The *John Bryce,* launched from the O'Brien yard in October 1869, was named after the Bryce of the Callao firm of Bryce, Grace & Company. This ship was a good carrier but a sluggish sailer, and several of her passages were so drawn out that she had practically been given up as lost when she ambled into port. In December 1872, while at Penarth loading for Callao, the *"Bryce"* was carried from her moorings in a heavy gale. She damaged herself as well as seven other vessels. She was also severely damaged by a tidal wave at Pabellon de Pica in May 1877. In October 1888, the *John Bryce* cleared Puget Sound bound for Hobson's Bay, Australia, loaded with a scant one and a half million board feet of lumber, and she foundered in a hurricane when about 800 miles west of the Samoan Islands. She was nineteen years old when she was abandoned by her crew.

In May 1870, Edward O'Brien launched the Down Easter *Alex McCallum* from his Thomaston yard. This vessel was named after a shipbuilder of Warren, Maine, who had moved to Thomaston. The *"McCallum"* was a very full ship and a good carrier but probably the slowest of the O'Brien fleet, none of which was either modeled or sparred for fast sailing. The average of the ship's eight westbound around-the-Horn passages to San Francisco was 162 days, and the average of the eastbound return passages was 137 days. On August 12, 1892, the *"McCallum"* cleared San Francisco bound for London. Late in the month, she encountered severe gales and was badly battered and damaged. With eight feet of water in

the hold and a bad list, she limped back to San Francisco for repairs. In May 1893, when crossing the Atlantic from London to New York, she was run down and sunk by the Cunard S.S. *Servia.*

The ship *Belle O'Brien,* named after the owner-builder's niece, had the reputation of being an unusually good carrier of heavy bulk cargoes. On her first westbound passage around the Horn (in 1884), she sailed from Baltimore and required 175 days to reach San Francisco. After arrival, she was laid up for two years. She then made an eastbound passage, taking grain to Havre, and while entering that port, she suffered damage by collision with the British ship *Royal George.* The *"Belle"* cleared San Francisco for Queenstown, wheat laden, June 19, 1895, on her last voyage. On November 18, when 152 days out and sixty miles from her destination, the ship encountered heavy weather, and Captain Colley stood to the westward for sea room. Disabled and severely damaged by heavy seas, the *"Belle"* gradually foundered.

The *Alex Gibson,* launched from the O'Brien yard on October 24, 1877, was named after a timber merchant of St. John, New Brunswick. She had the full model of the O'Brien ships, but she was more heavily sparred and carried more sail than most of the vessels of the fleet. Her sailing record was quite fair while carrying large cargoes. The average of the westbound Cape Horn passages was 138 days, the best run being made in 123 days (Liverpool to San Francisco). Eastbound, the average length of passage was 122 days, with a 108-day run from the Golden Gate to Liverpool the shortest. On one voyage, the *Alex Gibson* sailed from Liverpool bound for San Francisco via Callao in company with the admittedly "slow poke" *Alex McCallum.* The two ships, to the surprise of all, entered and cleared Callao and passed through the Golden Gate on the same days. Returning to Liverpool, however, was "another story." On the eastbound passage, the ships sailed from San Francisco Harbor the same day, and the *"Gibson"* beat the *"McCallum"* by thirty days. The *"Gibson,"* like most O'Brien ships, made some slow passages, but her worst sailing performance was 134 days from Puget Sound to Cape Town in 1901. She had been given up for lost nearly a month before she reached port. In 1900 the ship was sold to John Rosenfeld's Sons, San Francisco, and resold to the California Shipping Company, which operated her in the Pacific export lumber trade. After being laid up at San Francisco for two years, she loaded lumber at Tacoma for New York, where she arrived in January 1911 after a stormy and eventful passage via Valparaiso, which port she was compelled to make for repairs and conditioning. She was then sold to the Luckenbachs, who converted her into a coal barge. She was lost on December 28, 1915, when thirty-eight years old, by stranding on the McCreigh Shoal off the New Jersey coast.

The Down Easter *Baring Brothers* was launched from the O'Brien yard at Thomaston on June 14, 1877. She was named in honor of a London firm with which Edward O'Brien had done business for many years. The ship was a good carrier, but she was too full-modeled for speed. She is credited, however, with one very fast transatlantic crossing, having, when new, made a passage from Norfolk to Liverpool loaded with cotton in 15 days. The average length of her ten westbound passages around the Horn was 141 days (best, 121; slowest, 184 days). The average of eight eastbound passages was 127 days (best, 117; slowest, 138 days). In September 1892, the *Baring Brothers* sailed from Philadelphia for San Francisco, but she encountered bad luck from the start. The ship went aground near Wilmington, Del., but was refloated and left the breakwater October 1. Three weeks later, she put into Barbados leaking. A part of her cargo was discharged, temporary repairs made, and the vessel was ordered to New York for overhauling. When this work was completed, she again set sail for the Golden Gate, which she reached on September 23, 1893, 141 days from New York but 358 days from Philadelphia. On the return eastward run loaded with redwood lumber, the ship had another long drawn-out passage of 185 days. In December 1897, the *Baring Brothers* sailed from New York for Yokohama with case oil. The passage was slow (about six months) and the crew mutinous. On August 12, 1898, when loading silk and other commodities at Kobe, the ship—then twenty-one years old—was deliberately set on fire by seamen who had been under arrest. They had been carried aboard by the authorities and had declared

that they would destroy the ship rather than make the return passage to New York in her. The vessel was scuttled and later refloated, but she was so badly damaged that she was condemned and sold.

Edward O'Brien launched the ship *Frank F. Curling* of 2,200 tons on October 28, 1878. She was named after her commander and was proclaimed to be "the largest vessel ever built at Thomaston." On her first long ocean voyage, she sailed from Liverpool on April 5, 1879, coal laden for San Francisco and got into trouble off the Falkland Islands. On June 23, the cargo shifted, and the vessel, in her plight, was evidently badly handled. On June 28, when the ship was helpless, badly battered, on her beam ends and foundering, the officers and crew were rescued by the ship *John de Costa,* bound from Rio de Janeiro to San Francisco. When only eight months old, this apparently well-built ship went down in the South Atlantic because of a combination of bad luck and the ill-health and incompetency of the officers.

The ship *J. B. Walker* was launched from the O'Brien yard in September 1879, and she was named after Dr. J. B. Walker, of Thomaston, a great personal friend of the builder and owner. She is said to have been the fastest of Edward O'Brien's ships, and although she made many good passages, she also made many slow ones. On her first westbound around-the-Horn run, she went from St. George's Channel (out of Liverpool) to Valparaiso in 68 days and thence to San Francisco in 38 days—which is fine sailing. Her days at sea from Liverpool to San Francisco were reported as 113. Returning, she ran direct from San Francisco to Liverpool in 119 days and, commencing the next voyage, ran outward and westbound again in only 109 days. The last round voyage occupied only 8 months and 13 days. In 1889, under bad sailing conditions, she made a westbound passage in 167 days, and in 1894 she had a very stormy time of it and required 170 days to make the run from Baltimore to San Francisco. The average of nine westbound passages was 135 days and of seven of them, only 125 days. This is good time for a ship modeled for carrying big cargo. The average of eight eastbound Cape Horn passages was 127 days; the best was a run of 115 days and the longest, 150 days. In January 1900, she was sold to James C. Mulligan for $30,000 and re-rigged as a bark, and in 1903 she was acquired by Lewis Luckenbach and converted into a barge. She foundered on October 27, 1917, when thirty-eight years old.

The *General Knox* was a three-decked Down Easter that was launched by Edward O'Brien in December 1881. She was named after the Revolutionary War hero who later was Secretary of War for eleven years and, although born in Boston, lived and died in Thomaston, Maine. The "*Knox*" was a large carrier. For a ship of her fullness, she showed fair speed, the average time of her eight round voyages between North Atlantic ports and San Francisco being 133 days for the westbound and 130 days for the eastward passages. On August 18, 1894, the *General Knox,* in her thirteenth year, was burned when loading at a New York wharf. The ship was scuttled and, when refloated later, was found to be so badly damaged that she was sold for $7,750 to be converted into a barge. In October 1917, she was purchased by the U.S. Government, but she saw but little service and was laid up on the beach during most of the twenties and early thirties.

Although a trained shipwright and a master builder, Edward O'Brien became in his prime, and continued to be in his later years, more of a businessman than a ship designer and builder. He was not a naval architect, but neither was Samuel Watts nor any of the other Thomaston builders of vessels. O'Brien, however, concentrated on building big, burdensome carriers, which were once described as "wood tramp steamer hulls propelled by wind instead of machinery." He built well and took great pride in his product. O'Brien ships were staunch, well-found and well-kept-up vessels, and they were distinctive in many ways. One feature was a band several plank deep around them, and this was kept brightly varnished and was never painted while Edward O'Brien lived.

None of the Thomaston builders could be compared with the master shipwrights of Bath, Maine, and Thomaston had no competent technical designer. One of the great differences between shipbuilding on the Kennebec and the Penobscot was that on the Kennebec real live-

wire, well-trained and thoroughly experienced, competent men—who were shipbuilders and nothing but shipbuilders—constructed ships, and they got the finest masters to sail them; on the Penobscot, ship captains and not trained master builders turned out the vessels. The Kennebec was a territory of great wood shipbuilders; the Penobscot a region of sea captains who frequently turned from the sea to be shipbuilders, shipowners, ship managers, agents, and businessmen in general.

Thomaston, Maine, possibly jealous of the fame of the little town of Searsport (because of its sea captains, who commanded so many American merchant sailing ships of importance), gave itself the proud title of "The Town of a Hundred Captains." Lubbock says, "Among these hundred captains were numbered no less than twenty-five members of the Watts family" —Alfred, Charles, John, Edward, James, William, Samuel, Seymour, Edwin, Edward Brown, Edward A., C. A., etc.

Samuel Watts built Down Easters at Thomaston, Maine, during about the same period of time that Edward O'Brien was active as a builder of sizable deep-sea square-riggers. Each built this type of vessel steadily following the Civil War to the early eighties. The following table gives a list of outstanding square-riggers built by Samuel Watts at his Thomaston yard:

Year Built	Name and Tonnage	Registered Dimensions		
		Length	Beam	Depth
1862	GENERAL McCLELLAN; 1,518 tons	191	39.3	28.6
1866	JOSEPH FISH (IV); 1,262 tons	188	39	24
1866	L. B. GILLCHREST; 1,158 tons	182.7	38	23.4
1867	KENDRICK FISH; 1,326 tons	185.3	38.7	23.9
1869	LORETTO FISH; 1,945 tons	213	42	29.9
1870	SAMUEL WATTS (II); 2,035 tons	220	42	30
1871	ELIZA McNEIL; 1,582 tons	209	40	26.6
1874	ABNER I. BENYON (ALFRED WATTS); 1,955 tons	227	42	28
1875	H. S. GREGORY; 2,020 tons	228.9	41.9	29.1
1876	JOHN T. BERRY; 1,420 tons	202.7	41.2	24.2
1877	ALFRED D. SNOW; 1,987 tons	232	42	29
1877	LEVI G. BURGESS; 1,536 tons	217.5	41.2	24.3
1878	SNOW & BURGESS; 1,655 tons (gross)	228.5	41.5	24.7
1881	JOSEPH B. THOMAS; 1,851 tons	234	42	27
1882	CYRUS WAKEFIELD; 2,013 tons	247	43.7	28.6
1883	R. D. RICE; 2,134 tons (2,247 gross)	252	43.7	28.7

The ship *General McClellan* was launched in July 1862 from the yard of Samuel Watts at Thomaston, Maine, and was designed as a transatlantic freighter to carry big cargoes. She was a full vessel, with short entrance and run and an elliptical stern. For a vessel of her model lines, the *"McClellan"* showed moderate speed in both transatlantic and Cape Horn service, over which route she traveled during the years 1867-1884. She was a uniform sailer, and her length of passages, while naturally slow, never varied much from the average, which, for fourteen voyages in the Cape Horn trade, was 145 days westbound to San Francisco and 128 days eastbound—generally to Liverpool. Early in her career, the *General McClellan* was acquired by Lawrence Giles & Company, New York, which operated her until 1881, when (being nineteen years old) she was sold for $35,000 to San Francisco owners, who in turn sold her in New York to Troop & Son, of St. John, New Brunswick, in 1884.

After trading in Atlantic service during the years 1884-1887 inclusive, the *"McClellan,"* in the spring of 1888, loaded coal at Baltimore for San Francisco. She grounded twice in the Chesapeake and, when approaching Cape Horn in bad weather, sprang a bad leak. Part of the cargo had to be jettisoned, but the ship reached San Francisco on October 17, 1888, after a long passage of 174 days. For some unaccountable reason, the owner, then J. W. Elwell & Company, instead of overhauling and repairing the ship, sent her to Puget Sound, where she loaded lumber and sailed on February 25, 1889, for Buenos Aires; a week later she returned to

port in tow, "half full of water and on her beam ends." Some three hundred thousand board feet of lumber was then taken out of the vessel, and repairs "of a sort" were made. The vessel then proceeded to sea, made Buenos Aires, and had a tedious passage to New York, during which she had to put into Barbados. Soon afterwards, she was purchased by Philadelphia parties and, when thirty years old, was operating as a barge. The first master of the *General McClellan* was Capt. Alfred Watts (brother of Samuel Watts, the builder), who later became the superintendent, or manager, of the Watts shipyard at Thomaston.

The Watts-built Down Easter *L. B. Gillchrest,* launched in November 1866, was named after Capt. Levi B. Gillchrest, of Thomaston, Maine, who engaged in business in Liverpool, England, as a ship agent and broker. The ship was a good carrier and an average sailer, considering her fullness. In April 1876, laden with 3,750 bales of cotton, she ran from New Orleans to Havre in 32 days. It is said, "The best day's run made by the ship during a period of some five years, while in the transatlantic trade, was 250 miles." (This is 10.4 knots per hour and seems to have been about the speed limit of "her full, short-ended and bluff-bowed model.") In 1885, the *"Gillchrest,"* then nineteen years old, was sold for $9,500 to J. W. Parker & Company, of New York, which resold her in 1888 to the Boston Towboat Company for conversion into a coal barge, in which service she operated about three years.

Samuel Watts launched from his Thomaston yard in December 1866 a ship of Down Easter type named the *Joseph Fish,* which was a rather familiar name; for another ship, as well as a bark and a schooner, had been similarly christened. The first full-rigged ship named *Joseph Fish* had been built in Thomaston in 1858, and in 1861 she was badly damaged in a collision with the British ship *Juanita,* resulting in the sinking of the British vessel and the loss of thirteen lives. Joseph Fish, of Waldoboro, Maine, was a one-time school teacher who later built ships, operated a store at Port Clyde, and became a part owner of several vessels. In addition to getting four vessels named after himself, Joseph Fish had either enough financial interest in other ships or business influence to have full-rigged ships named after his wife (Jane Fish), his son (Kendrick Fish), and his daughter (Loretto Fish). The ship *Joseph Fish* had an uneventful career during the eleven years that she operated under the Stars and Stripes. In the late fall of 1877, she was sold by Samuel Watts to C. Jalder, ship broker of Bremerhaven, for $42,000. On her first voyage under German ownership, she sprang a leak soon after sailing from New York for Europe and had to put back, discharge her cargo, and undergo thorough repairs. Upon her arrival later at Bremen, the ship was put under German registry, renamed *Atlantic,* and was operated for years in the transatlantic oil trade.

The ship *Kendrick Fish* was launched from the Watts yard on October 13, 1867. She was operated generally in transatlantic trade, although she made a few South American guano voyages and one voyage from Liverpool to Singapore with coal, returning from India with rice. It is said that the ship made "fair average passages" and was "a good carrier." On one occasion, she crossed the Atlantic from New Orleans to Liverpool as one of a cotton fleet, and her commander, Capt. John B. Henry, won the bonus, or premium, for being the first arrival. In August 1880, when the *Kendrick Fish* was thirteen years old, Capt. John B. Emerson bought into the vessel, acquiring a 3/16ths for $4,687, which puts a value on the ship of $25,000. Captain Emerson promptly sailed the vessel to Bremen and sold her to J. D. Bischoff for $31,600. Miller & Company, the New York agent of the ship, when informed of this transaction, wrote: "So the *Kendrick Fish* has passed over to the land of Sauer Kraut and Zwei Lager. We are pleased to learn that you got a good price. Well, it does seem as though the entire American merchant marine was passing into the hands of foreigners. We hope to see some steps taken to revive it once more." The first master of the *Kendrick Fish* was Capt. Edward Brown Watts, the son of Capt. Alfred Watts and nephew of Samuel Watts.

The *Loretto Fish* was launched by Samuel Watts in October 1869. She was a good carrier but a slow, sluggish sailer. The ship operated generally in the coal and guano trades with South American ports, but she made two westbound around-the-Horn passages to San Francisco, one of which (1878) required 183 days. On this long, unfortunate and distressing passage,

a seaman was killed by a fall, off the Horn, when the ship was "iced up," two others died from scurvy, and "the whole crew was affected by the disease due to lack of provisions." It has been said of this passage: "Altogether the voyage was one of the hardest ever recorded in the annals of San Francisco shipping, and Captain Hodgman and his officers were tried for cruelty and neglect but through influence they escaped punishment." The *Loretto Fish,* in addition to making slow passages, had many mishaps at sea. In 1881, when bound from Antwerp to Manzanillo, she had to put into Rio de Janeiro; she had sprung a leak, and much cargo had to be discharged before repairs could be made. Returning east with California wheat, she arrived at Queenstown badly battered and damaged, with two thousand sacks of her cargo ruined; proceeding to Havre for discharge, she suffered further damage by collision with a French steamship. On the next eastbound passage, she reached port with foremast sprung, damage to both hull and rigging, and leaking badly. Soon afterwards, the *Loretto Fish* was sold to the Germans for $24,000, and she became known as the *Theodor Fisher,* hailing from Bremen.

The full-rigged ship *Samuel Watts (II)* was owned by and named after her builder and was launched from his Thomaston yard in October 1870. The first *Samuel Watts* was also a three-masted ship and was built at Thomaston in 1855; she was operated generally in the transatlantic trade and foundered in February 1863 while bound to Liverpool from New York. The second *Samuel Watts,* a deep and rather full ship, carried well and showed good speed for a vessel of her type. The average length of her six westbound passages around the Horn was 132 days; the shortest was 113 days, the longest 162 days, and five of the six runs were 136 days or better. Eastbound, the ship did well as a grain carrier, her best passage being a run of 115 days from San Francisco to Liverpool. At the end of 1882, when twelve years old, the *Samuel Watts* was sold when at Antwerp for $51,000 and was renamed *S. J. Weissenhorn.* She went under the German flag, hailing from Bremen. After several successful years in the transatlantic barrel oil trade, she went under the Norwegian flag and finally became a coal hulk in Rio de Janeiro. In the transatlantic service, she made some good runs, one of which—unsubstantiated by supporting data—was a claimed record from New York to Bremerhaven.

On June 3, 1871, Samuel Watts launched from his Thomaston yard the ship *Eliza McNeil,* named after the wife of John Watts, the son of William Watts, the original Scotch settler and founder of the Watts family in New England. This vessel was employed generally in Cape Horn service. Considering her model fullness, she was as good a sailer as she was a cargo carrier. Her passages averaged well. In 1872 she ran from New York to San Francisco in 119 days. In 1877 she made a passage from San Francisco to Queenstown in only 100 days, and in 1882 she ran from the Golden Gate to Antwerp in 112 days. After this last fast voyage and when the ship was eleven years old, the *Eliza McNeil* was sold to Seidenberg, Wendt & Company, of Bremen, for $43,750; she was renamed *August,* and the remainder of her sea life was spent in the transatlantic barrel oil trade.

The Down Easter *Abner I. Benyon,* built by Samuel Watts and launched from his Thomaston yard in September 1874, was named after the president of a Boston, Mass., bank with whom many Maine shipowners had dealings. It is said, "Mr. Benyon betrayed his trust, causing the bank's depositors serious loss, and, as a result, Mr. Watts had the name of the *Benyon* changed to *Alfred Watts,* in honor of a brother who had been associated with him in business." Lubbock, the British marine historian, writes:

> After the ship had been afloat for about ten years [with the name of a well-known New England banker, Abner I. Benyon, on her stern], the financier got into difficulties and left many of the Thomaston shipping fraternity with pockets lightened as he decamped across the Canadian border. After this scandal [Samuel] Watts could no longer keep that man's name [Abner I. Benyon] on an honest ship's stern, and he renamed her the *Alfred Watts,* a proceeding which is considered to be most unlucky by old salts, and so it proved on this occasion.

The first master of the *Abner I. Benyon* was Capt. Edward B. Watts, son of Capt. Alfred Watts. The ship was a good carrier but a slow sailer. The fastest of five westbound around-

the-Horn passages was 137 days. On one of them, she had to put into the Falklands, where she was detained three months for repairs. Eastbound, she sailed better. The average time of four passages was 127 days, and the shortest, a good run to Antwerp, was 110 days. On the fifth passage east, the ship, leaking badly, had to put into St. Thomas for repairs.

The *"Benyon"* was sold to Snow & Burgess, of New York, in February 1884 (when nine and a half years old) and, after being renamed *Alfred Watts,* operated without mishap until the fall of 1887. On October 8, 1887, the *Alfred Watts* cleared Philadelphia loaded with kerosene, in cases, for Japan. Drawing 26 ft., she grounded in the Delaware, but was pulled off the bar and proceeded on her voyage. A week after clearing the Cape, she encountered a hurricane, was knocked on her beam ends, and capsized, with the loss of twenty-five lives.

The ship *H. S. Gregory* was launched in October 1875 from Samuel Watts's yard at Thomaston; she was owned by her builder and was named after a prominent stevedore of St. John, New Brunswick. The *"Gregory"* operated in the Cape Horn trade. The average time of her five westbound passages to San Francisco was 130 days and of the return eastward passages, 128 days. Her best sailing performance was on her maiden voyage, when she went out in 119 days and returned in 118 days, making 237 days at sea for the round voyage—which was good sailing for a ship of her type. On the return leg of the sixth voyage, wheat laden and bound for Queenstown, the *"Gregory"* foundered on February 10, 1883, when only seven and a half years old, about 650 miles west of Fastnet Light.

The ship *John T. Berry* was built at the yard of J. A. Creighton, Thomaston, Maine, by Joseph Hilt, master builder, for Samuel Watts and was launched August 21, 1876. She was a sharper-modeled ship than those previously built by and for Samuel Watts, but she was, nevertheless, a good carrier and a well-modeled Down Easter. She was named after a prominent businessman of Rockland, Maine, who was a brother of Major-General Hiram G. Berry, for whom the ship *General Berry* was named. The *John T. Berry* ran for some years in the transatlantic trade and generally made good passages. On one run from New Orleans to Europe, she overtook and passed the *J. A. Thompson,* which had left the Mississippi some hours before her, and later passed the *Bombay,* which had a five-day head start. The *"Berry,"* in the Florida Straits, logged 276 miles in one day (11½ knots per hour) and in forty-eight hours covered 520 miles at an average speed of over 10.8 knots. She made a fine westbound run of 39 days from Havre to New Orleans (said to be a record passage for the period), but she made one historic long transatlantic crossing of 108 days from Liverpool to Baltimore. Sailing from Liverpool, January 2, 1877, the ship encountered adverse sailing conditions and, as far as direction was concerned, was at the mercy of a series of gales. She was blown to the North Sea, to the eastward of England, and on February 18 anchored in the Downs, having been at sea 46 days and being farther away from her destination than when she sailed. With the voyage resumed on February 22, the ship met more bad weather, and trouble developed between officers and crew. She reached Tybee Roads April 5 and finally arrived at Baltimore April 20. That this was a most surprising and unusual experience for the *"Berry,"* or for any Samuel Watts ship, is evident from the letter written to Watts at Thomaston by R. L. Gillchrest & Company, of Liverpool, under date of July 17, 1879:

> To our surprise, on Monday morning, we received a telegram advising us of the arrival of the *John T. Berry* at Antwerp, on the 12th, 22 days from New York. She had taken her pilot off Lands End when 18 days out. Thus she has completed the work of the *Abner I. Benyon* (112 days from San Francisco to Antwerp) and the *Kendrick Fish* (23 days from New York to Bremen). There can hereafter be no doubt that Samuel Watts' ships are entitled to rank as "clippers," although we presume that it will be difficult to convince the bulk of the jealous minded captains that hail from Thomaston and vicinity, of the fact.

The latter part of the letter suggests a feud between the O'Brien and the Watts fleets of Thomaston-built ships, and it would seem that Watts built with more thought of speed than did O'Brien.

From 1880 to 1886, the *"Berry"* was in the Cape Horn trade and in that service has to her credit a westbound passage of 116 days and two eastward passages of 114 and 118 days,

respectively. On January 9, 1888, on a voyage to Japan loaded with kerosene in cases, she caught fire and was destroyed when a little over eleven years old.

The Down Easter *Alfred D. Snow,* built by Samuel Watts for his own account, was launched from his Thomaston yard May 17, 1877. It is said that she cost $115,000, or a scant $58 per net registered ton. The ship was named after the son of Ambrose Snow of the New York shipping firm of Snow & Burgess. Alfred D. Snow was connected with W. R. Grace & Company. Throughout her sea life, the *Alfred D. Snow* was operated in the triangular New York-San Francisco-Liverpool-New York service. The average of her eight westbound Cape Horn passages is 128 days, with the fastest run made in 106 days. The average of her seven completed passages eastbound was 121 days, the fastest being 101 days and the slowest 139 days.

It is interesting to compare the sailing time between points on the best westbound passage of the Down Easter *Alfred D. Snow* in 1885-1886 and that of another of Samuel Watts's ships, the *Cyrus Wakefield,* in 1887-1888 with the time over the same sections of the course made by certain clipper ships during the years 1846-1872 and particularly with seven distinctive fast runs of clipper ships during the clipper ship decade (1850-1860), including the all-time record passage of the *Andrew Jackson,* made in 1859-1860.

Name and type of ship.....	ALFRED D. SNOW Down Easter	CYRUS WAKEFIELD Down Easter	SEA WITCH Clipper	TYPHOON Clipper	RAVEN Clipper	GREAT REPUBLIC Clipper
Year of passage.....	1885	1887	1846	1851	1851	1860
	Days	*Days*	*Days*	*Days*	*Days*	*Days*
From port to equator (Atlantic)	20	24	29	27	25	24
Equator to 50° S. Atlantic...	26	22	22	23	21	26
50° S. Atlantic to 50° S. Pacific (rounding the Horn)	16	18	14	13	14	11
50° S. Pacific to equator.....	20	22	22	25	24	24
Equator (Pacific) to San Francisco	24	15	23	20	22	20
Total for passage.....	106	101	110	108	106	105

Name and type of ship.....	DAVID CROCKETT Clipper	FLYING FISH Clipper	YOUNG AMERICA Clipper	SWEEP-STAKES Clipper	JOHN GILPIN Clipper	ANDREW JACKSON Clipper (all-time record)
Year of passage.....	1871	1851	1872	1856	1852	1859
	Days	*Days*	*Days*	*Days*	*Days*	*Days*
From port to equator (Atlantic)	21	19	15	18	24	20
Equator to 50° S. Atlantic....	30	26	24	23	23	23
50° S. Atlantic to 50° S. Pacific (rounding the Horn)	12	7	12	15	11	10
50° S. Pacific to equator.....	20	23	28	17	20	20
Equator (Pacific) to San Francisco	21	25	17	21	15	16
Total for passage.....	104	100	96	94	93	89

The *"Snow,"* on her eighth passage eastbound (carrying 2,850 long tons of California wheat to Liverpool), went ashore in a violent gale off Dunmore Head, Waterford, Ireland, on December 31, 1887, when 122 days out from San Francisco. She was a total loss, and all aboard were drowned because of the officially branded cowardice of the coxswain of the Dunmore lifeboat. At the time of this catastrophe, the *Alfred D. Snow* was only ten and a half years old.

Samuel Watts built two Down Easters at Thomaston in 1877 for his own account, and the second one, launched October 6, 1877, was christened the *Levi G. Burgess* in honor of the son of Capt. Joseph S. Burgess of the firm of Snow & Burgess, New York, which was part owner and agent for many Maine ships. The *"Burgess"* was a good carrier and a fast sailer. She was in the transatlantic cotton trade for three years before she became a Cape Horner. Her first westbound passage to California originated at Plymouth, England, and she ran out to San Francisco in 115 days. Returning, she had a passage of 117 days to Queenstown. The next voyage was a run from New York to San Francisco; thence a return to Cardiff in 120 days. Her third Atlantic-Pacific voyage was globe-encircling; she went out to Yokohama around the Cape of Good Hope in 130 days, crossed the Pacific to San Francisco in 27 days, and sailed from there to Havre in 105 days. The *"Burgess"* then made a slow passage of 149 days from Baltimore to San Francisco, encountering light and contrary winds after crossing the Atlantic equator. Upon her arrival at San Francisco on July 30, 1887, the ship was sold (when about ten years old) for $30,000. In 1897 she was re-rigged as a bark. From 1887 until 1910, she did splendid service in the Pacific coastwise and offshore trades and became known as a fast ship. The *"Burgess"* made an outstandingly fast run of only 33½ days from Callao to Puget Sound and a round voyage between San Francisco and Tacoma in 16 days. The ship was acquired in 1910 by the Alaska Portland Packers Association and was operated as a salmon packer until 1922, when she was laid up. At the age of forty-five years, she had ended her sailing days. Six years later, she was sold to shipbreakers, and in November 1928 she was burned for her metal.

The Down Easter *Snow & Burgess,* built by Samuel Watts at Thomaston, Maine, was named after a prominent shipping firm of New York. After many years of good service on the Seven Seas, the ship became a timber drogher on the Pacific and around 1910 was re-rigged as a five-masted schooner. On March 14, 1921, she arrived at Puget Sound after a long passage from Manila, having suffered considerable damage by heavy weather. In the fall, when forty-three years old, she was laid up and sold to shipbreakers by C. Henry Smith, her owner.

The ship *Joseph B. Thomas* was launched from the yard of her owner-builder at Thomaston, Maine, on October 25, 1881; she was named after a Boston sugar merchant. Prior to 1894, the *"Thomas"* was employed primarily in the Cape Horn run. The average length of ten passages westbound was 133 days (fastest, 116 and 117 days; slowest, 156 days from Baltimore in 1884). The average length of the eastward passages from San Francisco was 121 days (fastest, 110 days to New York in 1890; slowest, 132 days to Havre in 1891). In 1883 the *Joseph B. Thomas* made a fast round voyage in transatlantic trade, running to Liverpool in 18 days and returning to New York in 24 days; the entire round voyage occupied 73 days, of which only 44 days were spent at sea. From 1894 to 1899, the *"Thomas"* was engaged principally in the case oil trade with the Far East. In 1899 she was purchased by the California Shipping Company, of San Francisco, and for ten years was employed in the Pacific coal and lumber trade. In 1909 she took a load of timber to New York and, upon arrival there, was sold and converted into a coal barge after twenty-nine years' service under canvas. She foundered off Cape Cod when in tow on October 15, 1913.

Samuel Watts launched from his Thomaston yard on September 30, 1882, a big and fine-looking Down Easter named the *Cyrus Wakefield,* built, as were all his ships, for his own account, and, like the others, this one was named after a friend and business associate—a merchant who had established the town of Wakefield, Mass. This ship had double-topgallant and skysail yards and was loftily sparred, the main truck being 173 ft. above the deck. The *"Wakefield,"* built as a Cape Horner, operated generally in that trade. She made fourteen westbound around-the-Horn passages to San Francisco, and all were direct except the last one, when she was forced to put into Port Stanley. The average time of the thirteen direct westward runs was 131 days; the shortest was an unusually fine passage of 101 days from Liverpool in 1887-1888, and the longest was a run of 150 days from Baltimore in 1886, made under adverse sailing conditions. The *"Wakefield"* made twelve eastward runs direct from the

Golden Gate to North Atlantic ports (seven to Britain, two to Havre, and three to New York), and she made one return passage by way of the Philippines. The average time of the twelve eastward Cape Horn runs was 113 days, the shortest being a splendid run of 91 days to New York and the longest a 127-day passage to Hull (the English East Coast port on the North Sea); other good eastward runs were 100 days to New York and 109-day passages to Liverpool and to Dublin. The *"Wakefield"* made a very fast round voyage in 1887-1888 from San Francisco to Liverpool and return. She sailed east in 116 days and, after discharging cargo, was "dry-docked, caulked, and metaled." She made the westbound run to San Francisco, coal laden, in the splendid time of 101 days. The ship arrived at San Francisco January 30, 1888, after an absence of 247 days, of which 217 days had been spent at sea. The time made in the Pacific by the *"Wakefield"* on the westbound passage compares favorably with that of the crack extreme clippers of the fifties, which were built for speed alone and, therefore, carried small cargoes. The Down Easter *Cyrus Wakefield* ran from 50° S. Pacific to San Francisco in 37 days; the *Andrew Jackson,* on her all-time record Cape Horn passage, did it in 36 days. The best run over this course made by the *Sweepstakes* was in 38 days, and both the *Hurricane* and *Great Republic* covered it in 42 days. The *"Wakefield"* left New York April 4, 1899, on her last westbound around-the-Horn passage, ran into bad weather off Cape Horn, and suffered considerable damage to hull, sails and rigging. A course was set for the Falklands to make repairs. While bound for Port Stanley, Captain Henry met a violent death caused by a blow on the head "under circumstances that were never satisfactorily explained." In 1900 the ship was sold to the Quartermaster's Department, U.S. Army, at a reported price of $75,000, which, if correct, was absurdly high for an eighteen-year-old wood ship, particularly when it is known that, after sailing her to Manila with a cargo of coal, the government promptly converted her into a barge or port coal hulk.

The last Down Easter built by Samuel Watts—and the last square-rigged vessel launched from a Thomaston, Maine, yard—was the *R. D. Rice,* which was laid down in May and put overboard on October 18, 1883. The *"Rice"* was a good carrier. Her passages averaged well for time, and occasionally, when conditions were just right for her, she made a fast run. The average of seven passages westbound around the Horn was 133 days, 127 days being the shortest and 147 days the longest. These times can be compared with the average and best of sixteen westbound runs of 124 days and 105 days, respectively, of the Bath-built Down Easter *Henry B. Hyde.* Thomaston people most erroneously felt that, in speed, the *R. D. Rice* equaled the *Henry B. Hyde.* The average of the *"Rice's"* seven eastward runs was 117 days, the shortest being a fine passage of 98 days to Queenstown and the longest a 127-day run to the same port. The *Henry B. Hyde* made eastbound runs of 88, 94, and 96 days, and her slowest passage to Britain was 114 days. The best run of the *"Rice"* from San Francisco to New York was 109 days; that of the *"Hyde,"* 88 days. In 1889, Capt. Newell Jordon reported that the *"Rice"* had covered 291 miles in twenty-four hours (an average speed of 12⅛ knots per hour for a day) during her fastest eastward passage, which was a 98-day run from San Francisco to Queenstown. He also wrote: "Spoke the *Willie Rosenfeld* [when 31 days out] which had left San Francisco four days ahead of us"; and, "Saw the British ship *Celtic Chief* [when 62 days out] which had left twelve days ahead of us, also bound for Queenstown." In his report to the owners of the vessel, he characteristically wrote with pride, "What's the matter with 291 miles in 24 hours in a Down East wood boat with her belly full of wheat? What's the matter with 98 days [San Francisco to Cork]?"

In July 1894, the *R. D. Rice* was sold by her builder-owner-managers to Flint & Company, of New York, which disposed of her in 1899 with the remainder of its fleet of sailing vessels to the California Shipping Company, of San Francisco. On April 11, 1901, when seventeen and a half years old, the *"Rice"* caught fire at Hiogo, was scuttled, and became a total loss. It is believed that the ship was deliberately set on fire by disgruntled members of the crew. One of the believed leaders in the despicable outrage had been one of the crew of the ship *Baring Brothers,* which three years previously had been destroyed by fire of undoubted incendiary origin in the same port.

It is evident that Samuel Watts was more speed-minded than Edward O'Brien, his rival in the building, ownership, and management of Thomaston Down Easters. O'Brien modeled his ships to carry big bulk cargoes, and he knowingly sacrificed speed in order to carry more paying freights. Watts built to carry a large cargo in every bottom that he launched, but with the years, as he changed the dimensions of his ships in harmony with the demand of the times, he also made the ends a little finer and gave his ships longer spars and more canvas. In the late seventies and eighties, Samuel Watts and his skippers were very articulate and boastful of the sailing performance of ships of the Watts fleet. O'Brien, during the last years of his life, was scornful of the wild claims for speed that emanated from "the Watts camp" and on one occasion remarked, "The Watts crowd do a lot of talking about their speedy ships. We build and operate ships to carry cargoes and make money. Talk means nothing, and we have no time for talk." An O'Brien shipmaster admitted: "Some Watts ships are faster than ours, but most of them are cranky, unfitted to carry bulk cargoes like case oil, and are recklessly handled."

Other important Down Easters built at Thomaston, Maine, included the following:

Year Built	Name	Tonnage	Registered Dimensions			Builder
			Length	Beam	Depth	
1865	PACTOLUS (I)	1,205	191	38.6	23.3	Chapman & Flint
1866	ST. CHARLES (I)	1,166	188	38	23	Chapman & Flint
1868	VENTUS	1,242	183	38	24	Stetson, Gerry & Co.
1874	JOSEPH S. SPINNEY	1,895	230.9	42.6	27.5	Harvey Mills and associates
1876	HARVEY MILLS	2,077	231	43	29.7	Mills & Creighton

The *Pactolus,* launched at Thomaston in February 1865, was a full-rigged ship built by Chapman & Flint with much finer lines than the usual Down Easter. She proved in service to be "a fair carrier and a fair sailer" but not as fast a ship as her builders had expected. The average time of her twelve westbound around-the-Horn passages was 130 days (fastest, 114 days; slowest, 146 days). Her best eastward passage was a run of 100 days from San Francisco to Queenstown. In 1877-1878, she made her fastest Cape Horn round voyage: New York to San Francisco, thence to Astoria, where she loaded grain for Liverpool, and return to Philadelphia, where she arrived April 5, 1878, after 10 months 26 days. The westbound Cape Horn passage occupied 114 days and the eastbound, 112 days. The *Pactolus* holds the record for all post-clipper ships in rounding Cape Horn; for on her best run to San Francisco (1877) of 114 days, she encountered ideal sailing conditions and sailed from 50° S. Atlantic (64° W.) to 50° S. Pacific (89° W.) in only 6 days, a performance equaled only once in the annals of sail and that by the clipper ship *Young America.* Other fast sailing performances westbound around the Horn credited to Down Easters are: *C. F. Sargent* (built at Yarmouth, Maine) in 6 days 8 hours and *John McDonald* (built at Bath, Maine) in 6½ days. The clipper ship *Thatcher Magoun* is credited with a run of 6½ days. Among the clipper ships credited with runs of 7 days are the *Herald of the Morning, Flying Cloud, Flying Fish, Robin Hood,* and again the *Young America.* The best time made by the clippers *Great Republic* and *Sweepstakes* was 9 and 10 days, respectively. These were all famous clipper ships—built in the 1850's, when "speed was king." As previously stated, a run over 6 days and under 7 days was generally considered as 6 days, so the 6-day rounding by the *Pactolus* may or may not have been as short as the 6-day run of the *Young America* and may have been fully as long as the roundings of 6½ days of the *Thatcher Magoun* and *John McDonald.*

During later years of sailing over varied trade routes on the Seven Seas, the *Pactolus* had her yards removed from the mizzenmast, but she still carried her original lower, top and topgallant mizzenmasts. On a passage from the River Plate to Charlotte Town, Fla., to load phosphate rock for Baltimore, she was severely battered during a hurricane and put into Key

West with her deck beams broken and ten feet of water in the hold. She was condemned and sold to Brown Bros., of Baltimore, which repaired the ship and made a barge out of her. The *Pactolus,* when forty-two years old, foundered when in tow off Hog Island, Virginia, on June 2, 1907.

The ship *St. Charles,* launched by Chapman & Flint in September 1866, was built from the same model as the *Pactolus.* The *St. Charles* made ten westbound around-the-Horn passages to San Francisco (eight from New York and two from Liverpool), which averaged 128 days. Eastbound, she made eight passages direct to North Atlantic ports (six to Britain and two to New York), which averaged 118 days. The fastest runs westbound to San Francisco were 116 and 119 days from New York and 118 days from Liverpool; eastbound, the best passage was a 101-day run to New York in 1873. The ship also made a fast passage of 52 days from Newcastle, N.S.W., to San Francisco, and her gross time of a round voyage between these ports was 4 months 11 days. In 1872, when on a passage from New York, the ship's rudderhead was twisted off, and she was forced to put into Rio de Janeiro for repairs. In March 1880, while at Hiogo, Japan, unloading a cargo of case oil, the *St. Charles* was burned (when thirteen and a half years old), and, as in the case of many other American wood sailing ships that were destroyed in like manner, "it was evident that the fire had been started by some disaffected member of the crew." One of the seamen killed the ship's second mate, who accused him of the crime, but the only punishment any of the sailors received for destroying a ship and killing an officer was ten years in San Quentin prison for the man who committed murder. The *St. Charles I* was, in reality, the second of that name, for a ship of 800 tons register named *St. Charles* was built at New York in 1847 and sailed through the Golden Gate in 1864; shortly afterwards, while bound to Johnston's Island to load guano, she went ashore on a reef and became a total loss.

The Down Easter *Ventus,* built at Thomaston by Stetson, Gerry & Company, was launched in September 1868 and constructed for the builder's account. She was later acquired and managed by Snow & Burgess, New York. The *Ventus,* taking railroad iron from New York to Tacoma in 1877, is said to have been the first vessel to arrive in Puget Sound with a full cargo from an American eastern port. On October 15, 1881, the *Ventus,* then thirteen years old, stranded on the Button, Straits of Sunda, near Anjer, and became a total loss.

The ship *Joseph S. Spinney,* built by Harvey Mills and associates at Thomaston, was launched in October 1874. The *"Spinney"* was a good carrier and a fast sailer for a ship of her model fullness. Her passages showed up well, the average time of her westbound Cape Horn runs being 128 days, with one from New York in 117 days the shortest. Her three best eastward passages from San Francisco were 99 days to Queenstown, 106 days to Liverpool, and 113 days to New York. For about eight years, the *"Spinney"* was a fortunate and profitable ship, but beginning in 1882 she was unlucky until she met her end under most peculiar circumstances off the California coast, in October 1892, after a sea life of eighteen years.

The ill-fortune of the *"Spinney"* commenced in 1882, when she could not pick up a cargo in Europe for the Pacific and had to make the run from Havre to San Francisco in ballast. She made the passage in 124 days, lost both bower anchors entering the harbor, and came near to sinking soon after arrival, as her crew attempted to scuttle her by boring many auger holes through the planking between the light and normal load draft lines. The vessel had taken considerable water aboard before the cause was discovered and the ship lightened and the holes plugged. On the next passage eastbound to Liverpool, she made water badly off Cape Horn and, after a long passage of 148 days, had to have extensive repairs made. The westbound passage from Liverpool to Seattle in 1887 was long, disastrous, and very expensive. Captain Curling had to put into Callao when 120 days out, as the leaks were out of control. The cargo was discharged, and the ship was in port undergoing repairs for nearly four months. It was said that this detention due to uncontrollable leaks cost the owners of the ship $60,000. In December 1888, the *"Spinney,"* on a passage from Tacoma to Queenstown, was badly

battered by gales, had the rudderhead twisted off, and had to put into San Francisco for repairs. In 1891, on the run from New York to San Francisco, the ship suffered damages when, after arrival and alongside the wharf, she was run into by the steamer *State of California* and her bow damaged, with the head gear carried away. The end of the *Joseph S. Spinney* is well covered by historian Frederick C. Matthews, as follows:

> On June 9, 1892, the *Spinney* left New York for San Francisco, and all went well until October 25th when she was abandoned off the California coast some sixty miles north of the Golden Gate. The crew reached San Francisco in the ship's boats. Captain Curling's act of abandonment was very severely criticized as the ship drifted about a full day or so until finally bringing up on the rocky coast where she became a total loss. It developed that assistance could readily have been obtained before the ship was left to her fate had such been necessary. Captain Curling's interest in the vessel was the only portion that was covered by insurance and he had a very unpleasant time trying to explain matters to the agents of the ship and the underwriters of her cargo who accused him of being either a knave or a fool. The wreck was sold for $420 but all the purchasers were able to recover were some sails and gear.

When the Down Easter *Harvey Mills* was launched on September 4, 1876, from the yard of Mills & Creighton, Thomaston, Maine (Capt. Harvey Mills and Capt. James A. Creighton, builders), it was said that she "ranked fourth in size among American ships." The cost was stated as $125,000, or $60 per net registered ton, and she was built to be commanded by Capt. Warren F. Mills, son of Capt. Harvey Mills, after whom the ship was named. The *"Mills"* sailed to Port Royal, S.C., to load cotton for Liverpool. On December 27, 1876, with the ship partly loaded, fire was discovered in the hold, which was extinguished only by the scuttling of the vessel. The ship and cargo, insured for half a million dollars, were abandoned to the underwriters, who had the ship raised and towed to New York, salvaged the cargo, and repaired the badly damaged vessel.

The *Harvey Mills* was a very unfortunate ship. From the time that she moved under her own canvas and sailed south in ballast to load cotton for her maiden voyage, she had bad luck and ran into a hurricane, being under bare poles and helpless for sixteen hours. In February-March 1878, she crossed the Atlantic—Liverpool to New York—in 36 days. She was in a hurricane that damaged the ship's hull and cargo and that swept away all topgallant masts, the main yard and lower main-topsail yard, and much canvas. On May 19, 1882, the *"Mills"* cleared Liverpool for New York and on the 21st ran into and sank the British bark *Eta,* which was bound for Liverpool with a cargo of copper. The *"Mills"* lost her jib boom and head gear and severely damaged her bow. She saved the crew of the *Eta,* but, making water badly, she managed to stay afloat only long enough to reach Queenstown in tow and go into dry dock. The value of the *Eta* and cargo was placed at $155,500, for which the *"Mills"* was declared responsible by the court, which held that the collision was due to the American ship's "not keeping a proper lookout and then twice altering her course." The *"Mills"* was sold at auction and bought in by her owners for $41,300. She did not sail for New York from Queenstown until December 5, 1883, and then had to put back on December 17, partly dismasted. She was sent to Liverpool for refitting, and the ship did not reach New York until almost a year after she first started on the voyage from Liverpool.

The *"Mills"* could sail well, but she had few chances to show speed on a long voyage. Her average for six westbound around-the-Horn passages to San Francisco (four from New York and two from Liverpool) was 140 days, the best being 124 days from Liverpool and 127 days from New York; the slowest, 163 days and 148 days—each from New York. On her third voyage, she ran from Liverpool to Valparaiso in 81 days and from Valparaiso to San Francisco (fully loaded) in 43 days, a total of 124 sailing days from Liverpool to San Francisco via Valparaiso, which equals her best performance between the ports on a direct passage. Eastbound, the ship's average of six passages was 120½ days, and if we omit the last, a slow run of 144 days to Antwerp, the average of the other five made to Liverpool was 116 days. The best was a run of 103 days, and the slowest was 124 days.

The *Harvey Mills* sailed from Seattle on December 13, 1886, bound for San Francisco, and encountered a severe gale. She was thrown on her beam ends and foundered on December 16, with a great loss of life. The ship was only a little more than ten years old when the end came. Captain Crawford was lost with the ship, and all who had anything to do with the unfortunate *"Mills"* were unlucky from the day that she first spread canvas to her disappearance in the North Pacific.

Thomaston's Noteworthy Record in Building Schooners, 1822-1920

Samuel Watts, after discontinuing the building of square-rigged Down Easters for service around the Horn and on the waters of the Seven Seas, built several schooners. A four-masted schooner was built for Capt. William J. Lermond—of the square-riggers *Joseph B. Thomas* and *Samuel Watts*—to command. Captain Lermond had a financial interest in the schooner, and "the old square-rig skipper," it is said, "made such a killing with this fore-and-after, taking deals from St. John, N.B., to Bristol, and then coal up the Mediterranean" that it was decided to build him a really big "five-master of great carrying capacity." The result was the schooner *Washington B. Thomas,* one of the few American fore-and-afters built for foreign trade. Captain Lermond took the ship from the ways of the Watts shipyard and superintended her rigging and fitting out. When the new craft was completed, he decided to give her a "working-down" trip in coastal service, so he took the schooner (into which, it is said, he bought heavily) down to Virginia to load 4,000 tons of coal for Portland, Maine. Winter had set in when the *Washington B. Thomas* cleared Newport News, and heavy weather was experienced. When off the Maine coast, the wind and sea were so bad that Captain Lermond decided to take shelter under Stratton's Island, four miles off Old Orchard. With an easterly gale at its height, the unwieldy and unmanageable fore-and-after dragged onto the rocks and promptly began to break up. The crew took to the rigging, but the captain's young wife refused to budge from the deckhouse. While Captain Lermond was pleading with her, the deckhouse was smashed in by a sea and the captain and his wife washed ashore; they were picked up on the beach, but the woman was dead. The crew in the rigging was later saved by the coast guard equipped with lifesaving apparatus. Captain Lermond had invested all his money in the new schooner, and he was uninsured.

As long as four-masted schooners of moderate size, well proportioned, and carrying a good and adequate sail spread were used for coastwise trade, such craft were operated successfully; but when large and clumsy, excessively full, big five- and six-masted schooners were built, with a lack of sufficient and properly usable canvas, such fore-and-afters met disastrous ends in the coastwise trade and were positively unsuitable for deep-sea service. Of the William F. Palmer fleet of four- and five-masted schooners of from 1,745 to 3,138 tons, built during the years 1900-1908, fourteen vessels were destroyed, wrecked, or lost by foundering, and a vast majority of the big unwieldy schooners built in the United States for coastwise service after the building of deep-sea square-riggers was discontinued met with a tragic end.

The following list of schooners built at Thomaston, Maine, was compiled by Capt. Arthur J. Elliot, of Thomaston, a member of the firm of Dunn, Elliot & Company and a man the major part of whose life has been devoted to merchant sail either at sea or in management ashore. It would seem that the names of the builders stated were, in fact, the owners, who financed the construction of the vessels at local yards, and that the names of the master builders are not set forth.

Year Built	Name	Tonnage	Builder	Captain
1822	FRANKLIN	73	Not given	Not given
1826	DELAWARE	65	" "	" "
1838	REINZI	44	" "	" "
1838	CORVO	98	H. G. Bird	John Tyler
1840	ALNONCAK	145	Captain and others	Stevens
1845	GRANVILLE	44	J. Mourton	Clark
1845	MARY LANGDON	116	Cobb	Holland
1847	THOMAS HIX	104	N. Farwell	H. Hall
1847	PALUSKA	39	Not given	Not given
1851	E. ARCULAUS	101	" "	Montgomery
1851	J. K. BAKER	54	" "	Not given
1851	R. BAKER, JR.	77	" "	" "
1852	JAMES FREEMAN	57	" "	" "
1853	OLIVER JOHNSON	204	" "	Campbell
1854	MARY B. SMITH	175	" "	Not given
1855	WASH. FREEMAN	96	" "	" "
1856	TANTAMOUNT	190	" "	Pendleton
1859	NAUTILUS	128	" "	Not given
1860	HELEN	110	McLoon	Thompson
1861	SAMUEL FISH	214	Not given	Not given
1863	WILLIAM FLINT	250	Flint	Pendleton
1864	ELLA	94	Not given	Not given
1864	SEVENTY SIX	196	Walsh & Simmons	Joe Teel
1864	CATTAWANCH	148	Not given	Not given
1866	VETO	91	Creighton	Marshall
1866	JAMES YOUNG	261	Dunn & Elliot	Young
1866	WILLIAM SLATER	221	Stetson & Gerry	J. Killnan
1867	D. B. EVERETT	199	J. R. Farnsworth	Hicks
1867	ABBIE DUNN	279	Walker, Dunn & Co.	I. Fountain
1867	NETTIE CUSHING	91	Farwell & Creighton	Irvin
1867	ADDIE FULLER	217	Payson & Mehan	A. Henderson
1867	CARRIE WALKER	173	Walker, Dunn & Co.	Chadwick
1867	CORA AND ETTA	230	Dean and owners	Pendleton
1868	LIZZIE CARR	286	Walker, Dunn & Co.	Joe Teel
1869	LOUISA BLISS	429	Walker, Dunn & Co.	John Strong
1869	GEORGIA B. McFARLANDS	267	Walker, Dunn & Co.	Robt. McFarland
1869	ABBIE L. BUTLER	269	Captain and owners	W. R. Eaton
1869	ALDONA ROKES	294	Emerson Rokes	G. W. Rhoades
1869	WILLIAM McLOON	65	Not given	Thorndike
1870	IDA F. WHITNEY	312	Burgess O'Brien	Masters
1870	ALBERT D. HENDERSON	300	Captain and owners	Avery
1870	CHARLES F. HEYER	323	Amos Walker	G. Poland
1870	JENNIE F. WILLEY	364	Dunn & Elliot	T. Chadwick
1871	ANNIE BLISS	334	Watts & Co.	Simmons
1871	EFFIE J. SIMMONS	214	Walker, Dunn & Co.	T. Chadwick
1871	JAMES A. POTTER	348	Captain and owners	L. Ogier
1872	ELLA PRESSEY	165	Waterman and owners	W. A. Pressey
1872	AMOS WALKER	364	Walker, Dunn & Co.	G. Poland
1872	HATTIE TURNER	295	S. Watts	Hupper
1872	LIZZIE WILSON	319	Walker, Dunn & Co.	Jessie Wilson
1872	MARY A. POWERS	497	S. Watts	W. G. Willey
1872	SILVER SPRAY	124	Not given	Russell
1873	LIZZIE HEYER	360	Walker, Dunn & Co.	N. Polland
1873	GRACE BRADLEY	530	S. Watts	S. G. Hupper
1873	CATHIE C. BERRY	319	S. Watts	A. L. Seavey
1873	ETTA M. WATTS	365	Stetson & Gerry	A. Watts

(Continued on next page)

Year Built	Name	Tonnage	Builder	Captain
1873	ETTA M. BARTER	272	Walker, Dunn & Co.	J. Barter
1873	M. E. DOWNER	379	Walker, Dunn & Co.	W. Thompson
1873	F. L. RICHARDSON	401	S. Watts	Delano
1873	LIZZIE BELL	65	J. A. Creighton	E. H. Maloney
1873	MAY McFARLAND	456	Dunn & Elliot	J. McFarland
1874	THOMAS R. PILLSBURY	414	S. Watts	Hewett
1874	MAGGIE M. RIVERS	281	Walker, Dunn & Co.	C. H. Rivers
1874	MELISSA A. WILLEY	425	Dunn & Elliot	M. K. Willey
1874	GRACE ANDREWS	568	Stetson & Gerry	D. R. Andrews
1874	JOSEPH SOUTHER	381	S. Watts	Samuel Watts
1874	THOMAS R. PILLSBURY	527	S. Watts	H. A. Pitcher
1874	ALMEDA WILLEY	547	Dunn & Elliot	J. Willey
1874	CASSIE JAMESON	399	Hill & Waterman	E. D. Jameson
1874	ETTA M. STIMPSON	314	Stetson & Gerry	A. Hart
1875	C. W. LEWIS	322	S. Watts	S. G. Hupper
1876	J. A. LEVENSALER	21	Not given	G. T. Burns
1880	MARY SPRAGUE	650	S. Gerry	Poland
1881	LIZZIE B. WILLEY	574	Dunn & Elliot	W. B. Willey
1881	NELSON BARTLETT	670	S. Watts	Samuel Watts
1882	JENNIE LOCKWOOD	443	S. Gerry	G. W. Poland
1882	ELIZA LEVENSALER	160	J. O. Cushing	Phil Kalloch
1882	CARRIE STRONG	450	Dunn & Elliot	J. L. Strong
1882	MARY A. KILLERAN	413	S. Gerry	J. Killeran
1882	ELLA ELLIOT	419	Dunn & Elliot	F. W. Russell
1882	HELEN L. MARTIN	403	S. Gerry	I. A. Fountain
1883	LIZZIE CHADWICK	449	Dunn & Elliot	C. W. Chadwick
1883	NELLIE A. DRURY	460	Dunn & Elliot	J. Wilson
1883	HORACE O. BRIGHT	647	S. Watts	A. L. Seavey
1883	ELBRIDGE SOUTHER	658	S. Watts	J. T. Fales
1883	EMILY J. WATTS	439	S. Gerry	E. A. Watts
1884	HATTIE DUNN	414	Dunn & Elliot	S. Poland
1884	HENRY SOUTHER	680	S. Watts	J. H. Hupper
1884	T. W. DUNN	672	Dunn & Elliot	R. McFarland
1884	JOHN K. SOUTHER	737	S. Watts	James Bellows
1884	JAMES B. JORDAN	686	S. Gerry	D. S. Martin
1885	W. J. LERMOND	843	S. Watts	S. G. Hupper
1887	MATTIE E. EATON	590	Washburn Brothers	Sawyer
1887	PHINEAS W. SPRAGUE	788	Dunn & Elliot	A. J. Elliot
1888	JOHN K. SOUTHER	944	Washburn Brothers	Webb Thompson
1888	CORA DUNN	527	Dunn & Elliot	W. R. Harrington
1888	WILLIE H. CHILDS	585	Dunn & Elliot	D. W. Giles
1889	ROBERT McFARLAND	641	Dunn & Elliot	E. L. Montgomery
1889	MABEL JORDAN	899	Washburn Brothers	J. W. Belano
1890	CHARLES L. DAVENPORT	980	Washburn Brothers	Samuel Watts
1890	D. H. RIVERS	1,019	Dunn & Elliot	Fred Watts
1890	HENRY J. SMITH	1,053	Washburn Brothers	John Adams
1890	SADIE C. SUMMER	672	Dunn & Elliot	D. H. Summer
1890	CARRIE T. BELANO	474	Washburn Brothers	Not given
1890	SUSIE M. PLUMMER	808	J. A. Creighton	James E. Creighton
1890	BENJAMIN C. FRITH	888	Dunn & Elliot	J. T. Fales
1891	MARTHA T. THOMAS	750	Washburn Brothers	William Smith
1891	BESSIE E. CREIGHTON	612	J. A. Creighton	Frank Matthews
1891	ELLA M. WILLEY	841	Dunn & Elliot	Walter B. Willey
1892	HARRY T. HAYWOOD	1,203	Washburn Brothers	Ed. Hitchborn
1893	CORA HANSON	900	Washburn Brothers	John Stahl
1894	C. S. GLIDDEN, 1ST	1,057	Dunn & Elliot	J. T. Fales

(Continued on next page)

Year Built	Name	Tonnage	Builder	Captain
1895	HENRY LIPPETT	790	Washburn Brothers	Benjamin T. Howes
1896	R. W. HOPKINS	935	Washburn Brothers	Will Hitchborn
1898	C. S. GLIDDEN, 2ND	1,098	Dunn & Elliot	J. T. Fales
1898	JOHN C. HAYNES	1,198	Washburn Brothers	Wm. Hamilton
1899	MARY T. QUIMBY	1,047	Washburn Brothers	E. W. Arey
1899	LIZZIE J. PARKER	1,250	Dunn & Elliot	T. Watson Dunn
1900	THOMAS S. DENNISON	1,329	Dunn & Elliot	Willard Wade
1900	REPUBLIC	801	Dunn & Elliot	M. D. Saunders
1900	MARY E. LERMOND	314	Washburn Brothers	Sprowl
1900	JOSEPH B. THOMAS	1,564	Washburn Brothers	W. J. Lermond
1901	JAMES PIERCE	1,664	Washburn Brothers	Not given
1901	JOSEPH G. RAY	1,253	Washburn Brothers	J. B. Crocker
1901	WILLIAM H. YERKES	1,498	Dunn & Elliot	Willard Wade
1902	HARRY T. HAYWOOD	1,203	Washburn Brothers	Ed. Hitchborn
1903	WASHINGTON B. THOMAS	2,639	Washburn Brothers	W. J. Lermond
1903	E. MARIE BROWN	456	Dunn & Elliot	John Brown
1904	MARGARET THOMAS	410	Washburn Brothers	George Lain
1904	MARY BRADFORD PIERCE	1,427	Washburn Brothers	J. W. Belano
1904	E. STARR JONES	916	Dunn & Elliot	A. J. Elliot
1904	HELEN E. TAFT	1,197	Dunn & Elliot	J. T. Fales
1904	HELEN THOMAS	1,470	Washburn Brothers	W. J. Lermond
1905	STILMAN F. KELLEY	685	Washburn Brothers	John Allen
1917	NANCY HANKS	1,162	George Gilchrest	Not given
1917	JESSIE G. NOYES	1,376	Atlantic Coast	W. E. Rutledge
1917	IDA S. DOW	1,411	Atlantic Coast	R. C. Roding
1918	AUGUSTUS HILTON	1,562	Atlantic Coast	O. C. Sawyer
1918	MARGARET THROOP	1,264	Dunn & Elliot	H. L. Heyliger
1918	STEAMER UTOKA	2,599	George Gilchrest	Not given
1919	WILLIAM G. HARRIMAN	1,450	Atlantic Coast	J. T. Rutledge
1919	M. VIVIAN PIERCE	1,511	Atlantic Coast	Alden Cheney
1920	ATLANTIC COAST	1,643	Atlantic Coast	W. B. Willey
1920	EDNA HOYT	1,512	Dunn & Elliot	Elmer Beal

The following table gives a recapitulation of Captain Elliot's statistics divided into fifteen periods, which collectively cover ninety-nine years (1822-1920 inclusive) and consist of 144 vessels aggregating 85,231 tons.

Years Inclusive	Number	Tonnage	Average Tonnage per Vessel	Years Inclusive	Number	Tonnage	Average Tonnage per Vessel
1822-1839	4	280	70.0	1880-1884	19	10,024	527.6
1840-1849	5	448	89.6	1885-1889	8	5,817	727.1
1850-1854	6	668	111.3	1890-1894	13	11,257	865.9
1855-1859	3	414	138.0	1895-1899	6	6,318	1,053.0
1860-1864	6	1,012	168.7	1900-1905	16	18,826	1,176.6
1865-1869	15	3,372	224.8	1906-1916	—	—	—
1870-1874	31	10,962	353.6	1917-1920	10	15,490	1,549.0
1875-1879	2	343	171.5	Total 1822-1920	144	85,231	591.9

The following copy of a "Master Carpenter's Certificate" is reproduced to illustrate the type of the record. Such certificates may or may not have been preserved in the Maine custom-houses, but it would seem that they gave the only authentic record of the actual builder's name of Maine-built vessels. This certificate happens to be of a schooner built in relatively late years (1904), and it will be noted that the schooner, the *E. Starr Jones* of 916 tons, had Capt. A. J.

Elliot as recorded master. Whereas Luther M. Simmons was the responsible master builder, or shipwright, the firm of Dunn & Elliot is set forth as the builder inasmuch as this firm of operators financed the construction of the vessel.

Master Carpenter's Certificate

District of Waldoboro

Port of Thomaston

I, Luther M. Simmons, Carpenter

of Thomaston, Maine, do certify that

the Schooner, named the E. STARR JONES was built by

me _____ at Thomaston, Me., during

the year 1904 for Dunn & Elliot Co.; that said

Schooner is built of wood has two decks, and four

masts, is 185.8 feet in length, 38.1 feet in breadth,

19.2 feet in depth, of 916 and $\frac{54}{100}$ tons burden

As witness my hand this day and year aforesaid

Luther M. Simmons

XXXII.

ROCKLAND, MAINE

Rockland Comes to the Fore in Shipbuilding during the 1850's and Leads All Maine Communities in Producing Ten Clipper Ships

ROCKLAND, now a city of importance, is located on the west bank of Penobscot Bay and is the first point on the bay touched by the railroad running east before it swings to the northward and runs to Bucksport, at the head of the bay, and up to Bangor and other points on the Penobscot River. Rockland is a sort of marine capital of the Penobscot, with a branch of the National Archives, housing the records of many old Maine shipbuilding communities. Rockland lies sixty-eight miles east-northeast of Portland, Maine, and is popularly well known as a port and a trading center, with a shipbuilding tradition. It was first settled in 1769. For a time, it was known as the "Shore Village," but in 1824 an application was granted for a post office to be named the East Thomaston Post Office. On July 28, 1848, the district was incorporated as the "Town of East Thomaston." Its present name was adopted in 1850, and it was chartered as the city of Rockland in 1852.

It is extremely difficult to identify definitely vessels constructed at Rockland prior to about the middle of the nineteenth century. It appears that whereas the port of New York listed thirty-one shipbuilding establishments of all kinds, large and small, in 1855 and the port of Boston that year had nineteen yards working on full-rigged ships (besides many others occupied in building other types of vessels), there were engaged in building such square-rigged deep-sea vessels, between the years 1848 and 1857, six yards at Rockland, seven at South Thomaston, fourteen at Thomaston, and seventeen at Waldoboro. At this time, because of the greater size of vessels and the growing importance of ocean-borne timber supplies required for shipbuilding, the industry was abandoning its upstream yards throughout the entire coast line, which were handicapped by shallow water, and concentrating on locating and developing wood shipbuilding establishments on deep tidewater on or near the coast. Rockland did not come to the fore during this period and grow to be a prime wood shipbuilding center such as its geographical location would suggest, and in actual ship construction and in shipping activities it lagged behind other Penobscot towns as well as Bath on the Kennebec River and various inlet ports between the Kennebec and the Penobscot. However, in the clipper shipbuilding era, which consisted practically of the first half of the 1850's, Rockland launched ten clippers of 13,179 aggregate tons, leading all other Maine shipbuilding communities in the production of sharp-modeled and heavily canvased vessels of this type as to both number and tonnage of ships built.

"Deacon" George Thomas, Rockland's greatest builder, moved to Boston, Mass., in 1854 after constructing four clippers totaling 5,487 tons at his Rockland yard during 1851-1853 inclusive, and during the depression that closely followed Thomas' desertion of the community, Rockland faded from the picture as a leading shipbuilding center. During the post-clipper

and Down Easter periods, Rockland was eclipsed as nearby Thomaston grew to fame and such Penobscot building centers as Belfast, Searsport, Camden-Rockport, etc., became more prominent and active. During the clipper ship decade of the 1850's, George Thomas by no means monopolized shipbuilding at Rockland. Although he led in a decided fashion in building clippers and was fortunate in building from the designs of Samuel Harte Pook (the talented young naval architect of Boston) as early as 1852, yet when he left Rockland to locate his yard at Quincy, Mass., in 1854, Horace Merriam had built the excellent and fast clipper *Live Yankee* of 1,637 tons at Rockland in 1853 and F. W. Rhodes (or Rhoades) had launched two reputed clippers in that same year. When Thomas reached Quincy, Mass., he built two medium clippers in 1854 and 1856 (the *King Philip* of 1,486 tons and the *Logan* of 1,541 tons), but they were not outstanding. In the meantime, Merriam and Rhodes continued active, and Rockland launched two medium clippers in 1854 and a sizable reputed clipper in 1855 before discontinuing the construction of this type of ship, designed to make fast passages in the decade when "speed was king."

In the entire Penobscot area, twenty-five clippers aggregating 28,588 tons were built during the clipper ship decade of the 1850's, and of this fleet of vessels, ten totaling 13,179 tons, or 40 per cent in number and 46 per cent in tonnage, were built at Rockland. The balance was built principally in Frankfort and Thomaston, each of which constructed five clippers (or half the number and less than half the tonnage built at Rockland), while Belfast launched two clippers and Warren, Orland, and Brewer one each. Rockland built 12 per cent of the number and 14.6 per cent of the tonnage of clippers and reputed clippers built in the state of Maine, and the entire Rockland-Penobscot area was responsible for 30 per cent and 31.8 per cent, respectively. The following table gives a list of the clippers, medium clippers, and reputed clippers built at Rockland, Maine, this construction of ten vessels being limited to the five-year period 1851-1855 inclusive.

Year Built	Name of Vessel	Builder	Tonnage	Dimensions in Feet			Ownership and Remarks
				Length	Beam	Depth	
1851	SPRINGBOK (bark)	George Thomas	370	120	27	13.2	Seccomb & Taylor, Boston (Capt. S. L. Hurd).
1852	DEFIANCE	George Thomas	1,691	204	42.4	29	Built for William T. Dugan, New York. Sold 1854 to McCreedy, Mott & Co. Designed by Samuel H. Pook and was the first fast clipper built with a flat floor.
1852	RATTLER	George Thomas	1,121	192	35.1	21	William Whitlock, Jr., New York. Said to be "a small edition of the celebrated RED JACKET."
1853	RED JACKET	George Thomas	2,305	251.2	44	31	Built for Seccomb & Taylor, Boston, from designs by Samuel H. Pook. Sold to British for the Australian packet trade.
1853	LIVE YANKEE	Horace Merriam	1,637	212	40	23.5	George W. Brown et al., New York, but soon sold to Foster & Nickerson, New York, and later to Lawrence Giles & Co., New York.
1853	ANGLO-SAXON	F. W. Rhodes (or Rhoades)	868	160	34.4		Henry A. Kelley, Robert B. Coleman, et al., New York. Later, E. M. Robertson, New York.
1853	PROGRESSIVE	F. W. Rhodes (or Rhoades)	1,119	180	36.4	22	
1854	EUTERPE	Horace Merriam	1,985	224	43.7	24.5	Foster & Nickerson, New York. A fast ship and a good carrier.

(Continued on next page)

Year Built	Name of Vessel	Builder	Tonnage	Dimensions in Feet Length	Beam	Depth	Ownership and Remarks
1854	YANKEE RANGER	Robert Trowbridge	708	162.5	30.5		Gustavus Moler, William Heye, et al., New York. Abbott, Kimball & Co., New York, also reported owner. Later sold to Germans.
1855	YOUNG MECHANIC	T. W. (or F. W.) Rhoades (or Rhodes)	1,375	199.5	38.5	22.5	William McLoon, Rockland.

Whereas "Deacon" George Thomas, of Rockland, Maine, built in 1851 the small clipper bark *Springbok* (370 tons) as his first clipper-modeled and rigged vessel, it was the *Defiance,* launched March 8, 1852, and his first sizable full-rigged clipper ship, that brought him, his product, and Rockland, Maine, conspicuously to the notice of the marine fraternity. Designed by Samuel H. Pook, of Boston, this ship was of revolutionary design for an extreme clipper and Cape Horner. Up to this time, naval architects had been "unyielding advocates of the sharp wedge-shaped bottom" for high speed; but the *Defiance* had a flat floor, with only ten inches of deadrise, and she traveled under canvas the first time that she moved under sail (on her delivery run from Rockland to New York) at a rate of speed that no other sailing vessel had been able to attain. Naval Architect Pook is to be honored for adopting the flat floor in the design of fast clippers and for repudiating the last important characteristic of the old frigate theory in the building of fast merchant ships. However, in this respect, Pook was not an originator, as Capt. Nathaniel B. Palmer had efficiently used flat floors in the construction of the Dramatic Line fleet of transatlantic packets built for Edward K. Collins by Brown & Bell, New York, in 1835-1838. The *Defiance,* under the command of Capt. Robert McCerren on her initial run, in ballast, traveled at the speed of 18 knots per hour when sailing from Rockland to Fire Island, but on the run from Fire Island to New York she made "the unprecedented speed of 20 knots." This performance made such a deep impression on the ship designers, owners, and builders of the period that but few American ships were laid down thereafter that did not follow the Pook model idea as exemplified in the *Defiance* and eliminate the sharp bottom for merchant vessels.

The *Defiance* was built at Rockland by George Thomas under the direction of Capt. Isaac Taylor, of Boston, from the plans prepared in detail by Samuel H. Pook. Her original owner was William T. Dugan, of New York, who sold her when she was two years old to McCreedy, Mott & Company, of New York, for a reported price of $85,000. The *Defiance* proved to be a fast but a rather unlucky ship. She made only one westward Cape Horn passage to California, leaving New York June 25, 1852, and arriving at San Francisco December 2, which is 160 days later. The passage was reported as 136 days at sea between the ports, as she had spent 23½ days at Rio de Janeiro, and the time spent on the course had been about 112 days. The run from Rio to San Francisco was made in 83 days, and the ship, on this maiden passage, reported "calms and storms with head winds practically the whole run." The *Defiance* encountered very heavy gales and seas off the Horn and light airs and calms in the North Pacific, she being held up off San Francisco for many days by lack of wind. The ship returned to New York via Callao, where she was evidently laid up about seven months by her owners in the hope of obtaining better paying freights than were being offered. In 1854, however, freight rates were moving down for good, and the *Defiance* was sold. McCreedy, Mott & Company sent the ship out around the Horn again, and her destination was not California but West Coast South American ports. On the return passage of Voyage No. 2, the *Defiance,* laden with guano, made a splendid run of 52 days from the Chincha Islands to Hampton Roads. With Capt. John Kendrick in command, the ship left the Chinchas February 27, 1855, and reached Hampton Roads on April 20. The vessel was then put in the British-Indian trade. On November 2, 1856, when bound from Liverpool to Bombay, she encountered a terrific gale in the North Atlantic and, it is said, "was thrown on her beam ends, bursting her water tank and

shifting the cargo," which had been loosely stowed. The first and second mates suffered severe injuries caused by the shifting cargo, and the badly battered ship put into the Canaries in distress. The *Defiance* was turned over to the underwriters, who sold her to go under the Spanish flag, and the ship continued her career as the *Teide* of Cadiz (J. Matia, owner).

When the *Defiance* was at the Chincha Islands in August 1853 loaded with guano and ready to sail on the return part of her maiden voyage, the ship came conspicuously in the news. Howe and Matthews, in AMERICAN CLIPPER SHIPS (Marine Research Society, Salem, Mass., 1926), describe the episode as follows:

> One of the crew, on shore leave, was arrested and placed in jail on the charge of having shot a pelican. Captain McCerren went to the authorities and asked for the release of the man, as he was about to sail, at the same time offering to pay the fixed penalty for the offence, which was only one dollar. The authorities, however, refused to release the man or receive the fine. Captain McCerren then sent for the Commandante of the port and again requested the release of the man and was again refused. This uncalled for and unjust treatment excited great indignation among the American captains in port and on the day she was to sail, some thirty captains and officers of American vessels, then lying at the Chinchas, came on board the *Defiance* to see her off. One of the ship's guns was fired as the usual signal for sailing and immediately three boats put off from the Peruvian War Steamer *Rimac,* and came alongside the *Defiance.* The officer in command of the boats boarded the ship and demanded of Captain McCerren a fine of 25 dollars as penalty for firing a gun in port. This the captain paid, at the same time remarking that if the officer staid in the vicinity of the ship fifteen minutes longer, there would be another fine to collect. The Peruvian officer then called his men aboard and a fight ensued during which several of the Americans were badly wounded and Captain McCerren, with his scalp cut to the bone from a blow of a carbine, was finally ironed and carried off to jail. The *Defiance* was abandoned to the Peruvian Government and her mate went to Callao and put the case in the hands of Mr. Clay, our Minister at the time, at Callao. The Peruvian Government afterwards disavowed the act of the Commandante; promised redress and the removal of the offending official.

The extreme clipper *Rattler* of 1,121 tons was built by George Thomas, of Rockland, "on spec" following the completion of the *Defiance.* She was launched on October 15, 1852, or 8 months 7 days after the *Defiance* had been put overboard and about 11½ months before Thomas launched the famous *Red Jacket,* each of which clippers was designed and built under the direction of Samuel H. Pook, naval architect. Either Pook designed the *Rattler* or Thomas copied the model and sail plan prepared by Pook and merely reduced the dimensions to make a smaller and more readily salable vessel. After her launch, the *Rattler* was sold by Thomas to William Whitlock, Jr., of New York, who had been greatly impressed with the speed performance of the *Defiance.* Whitlock, who paid about $66,000 (about $60 per ton), was interested in packet ships and, as an independent owner, ran his own New York-Havre line. A courageous operator, he often bought cargoes outright to move in his ships. When he acquired the clipper ship *Rattler,* he planned to use her in the California trade and on the Seven Seas wherever freights were good, but at intervals she ran as a transatlantic packet. From March 1854 to March 1858, a period of four years, the *Rattler* was either in service as a New York-Havre Whitlock line packet or under charter to the French Government, and in the winter of 1855-1856 she carried troops from Marseilles to the Crimea. In the mid-summer of 1860, the *Rattler* made a New York-Liverpool voyage, following which she ran as a Havre packet once more until March 1862, when she entered around-the-world trade via Cape Horn and the Orient.

During the fifteen-year period 1853-1868, the *Rattler* is credited with making eight westward Cape Horn passages to San Francisco and averaging 128¾ days on these runs. Her fastest passages were made in 114 days (1866), 115 days (1858), 119 days (1864), and 121 days (1853); her longest runs were 160 days (1859), 138 days (1862), and 133 days (1868). In the mid-sixties, under Capt. B. F. Marsh, the *Rattler* went from New York to within 500 miles of San Francisco in 113 days, but due to calms and light airs the ship was 17 days in reaching her destination, and the passage was lengthened to 130 days. On her first two Cape Horn westward runs, the *Rattler* experienced light winds, but on her third California voyage (in 1859), with Captain Almy in command, the ship had adverse winds throughout the run. She

was 30 days to the Atlantic equator and did not clear Cape Horn until the 96th day. In 1862 the *Rattler's* passage was materially lengthened by very bad weather, but in 1858 she was 59 days to Cape Horn and was fortunate in finding good sailing conditions off the Cape, which Captain Almy capitalized to the full. The ship sailed from Lat. 50° in the South Atlantic around the Horn to the same parallel in the Pacific in only 7 days, which is only one day longer than the all-time record run between these points made by the clipper *Young America* in June 1876.

In 1867 the *Rattler* took a cargo and $800,000 in treasure from San Francisco to Hong Kong, where she was caught in a severe typhoon and was deliberately run ashore (because of the treasure aboard) to prevent being blown to sea and probably wrecked on one of many dangerous and relatively difficult points for salvage. Later, she got off, having sustained so little apparent damage that she sailed for New York, where she received necessary repairs. The next passage of the *Rattler* was, for her, a slow run of 133 days around Cape Horn loaded with railroad iron. She arrived at San Francisco January 11, 1869, in company with the fast Pook-designed clipper ship *Fearless* of 1,184 tons, which, also laden with railroad iron, had taken 163 days (or 30 days longer than the *Rattler*) to make the run. Captain Ballard of the *Fearless* reported that his ship had required 43 days to reach the Atlantic equator in very adverse weather and had been 35 days off Cape Horn in strong westerly gales. Following the *Rattler's* arrival at San Francisco in early 1869, the ship went to Manila and traded for some time between oriental ports and Australia. In 1870 she took a cargo of coal from Newcastle, N.S.W., to Hong Kong in 61 days, and on January 27, 1872, under Captain Marsh, she arrived at Melbourne after a fine passage of 83 days from New York, this being the fastest run reported between the ports for several years. In 1873 the *Rattler* was sold and became the *Terecina Ferreira* of Nicaragua and later the Costa Rican ship *Martha.* In 1878, when twenty-six years old, this ship made the all-time record run of 28 days from Callao to San Francisco Heads, when deep laden with sugar, a sailing performance never approached by a ship with cargo in the history of sail and, it is said, "better by two full days than the best passage ever made by a ship in ballast." Toward the end of her sea career, the old *Rattler* was the British bark *Martha* of Shanghai. In November 1889, when thirty-seven years old, the vessel put into San Francisco in distress and was sold; she was broken up in 1890.

George Thomas built his third full-rigged clipper ship and his fourth clipper, the *Red Jacket,* in 1853 before he left Rockland, Maine, to establish a yard on the outskirts of Boston and continue his building operations at Quincy, Mass. He probably felt that, alongside a big port and nearer the market for his finished product, his yard would be located at a better site, although he had moved from a shipbuilding area that was nearer the timber supply at least as far as New England and specifically Maine and Canada were concerned. The *Red Jacket,* a three-decked extreme clipper of 2,305 tons, designed by Samuel H. Pook for Seccomb & Taylor, of Boston, was the last vessel built by "Deacon" Thomas at Rockland before he moved his yard to Quincy, Mass. She was launched on November 2, 1853, and about a week later the big hull was towed to New York, where arrangements had been made to build and install her spars and rigging. The vessel's owner, the firm of Seccomb & Taylor, was more of a speculator in marine tonnage than an operator, and feeling that the *Red Jacket* would be a splendid vessel of the best possible size and speed for the British-Australian packet trade, Seccomb & Taylor decided to send her to Liverpool for sale. Capt. Asa Eldridge, a former master in Collins' Dramatic Line of New York-Liverpool packets, was placed in command of the big new clipper, which was hailed by leading authorities in New York as "unexcelled in grace, power, beauty, with the promise of high speed." The ship was not docked and copper-sheathed in New York. With a poor crew ranging from "mediocre" and "indifferent" to "incompetent," she left New York January 11, 1854, after being 70 days in the water. She experienced snow, hail or rain nearly every day of the eastward mid-winter north transatlantic passage, and she reached the Bell Buoy on the 23rd, when only 12 days out. She arrived at Liverpool on January 23 after an elapsed time on the run of only 13 days 1 hour 25 minutes, dock to dock,

making a new record that was to stand throughout the era of sail. For six consecutive days, the *Red Jacket* averaged a little over 343 miles per day, the poorest of these days showing 300 miles and the best day's runs being 413, 374, and 371 miles, respectively. It was reported that on January 19 "the main brace was spliced on the strength of four hundred and thirteen miles, being the greatest distance ever run in twenty-four hours by anything afloat."

Some of the English papers were at first inclined to doubt the correctness of the length of passage and the speed claims made for the new Yankee-built clipper, so Captain Eldridge offered his logbook for inspection and wrote to the editor of the London TIMES. Meanwhile, the Liverpool papers, knowing the international reputation of Captain Eldridge as a navigator and seaman and having access to his log, commented in generous terms on the *Red Jacket,* her magnificent appearance, and her remarkable exploit. The Liverpool JOURNAL (January 28, 1853) says that the ship "in general appearance of hull, spars, rigging and deck arrangements is very much after the style of the celebrated *Sovereign of the Seas,*" Donald McKay's much-vaunted big 2,421-ton clipper, which had reached Liverpool July 1, 1853 (6 months 22 days earlier), after a reported transatlantic passage of 13 days 22 hours 50 minutes (best day's run, 340 miles). However, the Liverpool JOURNAL also says that the *Red Jacket* "appears to have rather more 'spring' forward and she certainly has more outside ornament in the shape of a full length figurehead, and an elaborate design in gilt work on her stern extending also down each side of the rudder." It has been authoritatively said that the *Red Jacket* "was justly celebrated for the delicate beauty of her graceful lines throughout," and in this respect she was a contrast to McKay's clippers, which were powerful looking but lacked "delicate beauty" and grace. We are also told that the *Red Jacket's* arched stem was "so pleasing to the eye as was her powerful but exquisitely modeled stern," while her spars and rigging were said to be "perfectly proportioned." Howe and Matthews, the clipper ship historians, have written: "To the end of her days as a sailing ship she was everywhere considered as the handsomest of the large clipper ships put afloat by American builders." The *Red Jacket* was never seen in a United States port, but was well known in Britain, Australia, and India, and she was consistently praised not by Americans but by the British.

Soon after her arrival in Liverpool in late January 1854, the *Red Jacket* was chartered by Pilkington & Wilson to make a round voyage in its White Star Line, operating between Liverpool and Melbourne in the British colonial express sailing packet service. On this run, the ship gave an amazing performance of fast sailing, completing the round voyage and circumnavigating the globe (Liverpool-Melbourne-Liverpool) in the record time of only 5 months 10 days 22½ hours, including all detentions. She went out, leaving Liverpool May 4, 1854, in 67 days 13 hours under sail, and her time from Rock Light to Port Phillip Heads was 69 days 11 hours 15 minutes, the reported date of arrival at Melbourne being July 12. The distance covered was stated at 13,880 miles. The log shows rather poor sailing conditions for the first part of the passage, with light winds and poor trades. She took 25 days to the equator and was not at the meridian of the Cape (Lat. 45° S.) until the 51st day out. In completing the outward passage, the *Red Jacket* made an all-time sailing record. Searching for strong winds in running her easting down, she went to 52° S. and experienced much cold weather, with snow, sleet, and rain. At times, she was covered with ice. The log tells of strong gales, severe squalls, high seas, and troublesome cross seas, but the clipper ran to Melbourne from the meridian of the Cape of Good Hope in only 19 days. After a port detention of 22 days, the *Red Jacket* left Melbourne on August 3, 1854, for Liverpool, with passengers and about a million dollars worth of gold dust aboard. Continuing eastward, she rounded Cape Horn when only 20 days out and made the passage between the two capes in only 39 sailing days. Off Cape Horn, the clipper was completely surrounded by field ice, and she was required to dodge many icebergs, one being estimated as "two miles in circumference" and others "fully 200 feet high." Notwithstanding the inevitable delays caused by ice, the *Red Jacket* crossed the Atlantic equator when only 42 days out, having traveled 10,423 miles according to log. Thereafter, as far as sailing conditions were concerned, bad luck was encountered, and light winds and calms re-

sulted in the vessel's taking 31 days to run from the equator to Liverpool. She made the entire passage in the good time of 73 days instead of the phenomenal time of 60 days, which was hoped for when the ship was at the line, having completed over 70 per cent of the journey of 14,863 miles—and covered the hardest part of it—in 42 days.

This splendid maiden voyage of the *Red Jacket* in the Australian trade caused a sensation in British maritime circles. The vessel, proclaimed to be "the fastest and handsomest ship in the world," was promptly bought by the charterers for the reportedly high price of £30,000 sterling. In the fall of 1855, the *Red Jacket* made the fastest passage of any clipper out to Melbourne, beating the McKay-built Black Ball liners *James Baines* and *Lightning* and the fast and capable *Invincible,* built by Webb, of New York, and chartered by the British White Star Line, owner of the *Red Jacket.*

After the Australian boom was over and the passenger traffic declined, the *Red Jacket* and all the big American-built clippers proved far too large for that trade, as the ships could get neither enough freight nor passengers to pay operating expenses. The *Red Jacket* figured in the Indian as well as the Australian service. In the seventies, she was sold and engaged in the Canadian-British timber trade. It would seem that in the eighties, when about thirty years old, the *Red Jacket* was again sold and eventually went to Cape Verde, where she was used as a coal storage barge to fuel steamers.

The extreme clipper *Live Yankee* of 1,637 tons was also launched in 1853 at Rockland, Maine, the builder being Horace Merriam. This his first clipper, built "on spec" following the Pook model and general design adopted by George Thomas, was bought by George W. Brown et al., New York, who soon sold the ship to Foster & Nickerson, New York. When wrecked on the coast of Galicia in 1861, when eight years old and bound from Liverpool to India, the *Live Yankee* was owned by Lawrence Giles & Company, also of New York. It has been said that there was much jealousy between the builders, backers, and owners of the *Live Yankee* and the builders and members of the shipping fraternity who favored the *Red Jacket.* The product of a builder who openly copied the Pook design was boosted by some Rockland partisans as being fully equal or superior to the *Red Jacket,* Pook's masterpiece, but assuredly the *Live Yankee* was not. The natives did not like the fact that "Deacon" Thomas, the builder of the Pook clippers, was abandoning Rockland, so they went out of their way to praise the product of a local builder. The *Live Yankee,* embodying much of a Pook design, was naturally a very good-looking ship and a fast sailer, logging 18 knots on her first voyage to California.

The *Live Yankee,* built by Merriam at about the same time as Thomas built his last Rockland ship, the *Red Jacket,* was rigged and completed at Rockland. In ballast, she went under her own canvas to New York in 4 days, following which she made a round voyage to Liverpool and return and then sailed June 29, 1854, from New York on a passage to San Francisco that she completed in 113 days, arriving at her destination October 20. On this the only westward Cape Horn run made by the *Live Yankee,* she had bad luck in the Northern Hemisphere as far as sailing conditions were concerned, being 34 days to the Atlantic equator and 24 days from the line in the Pacific to port. In rounding the Horn, she encountered some bad weather and was 19 days "between the 50's"; but the ship did some brilliant sailing in the Southern Hemisphere, running south in the Atlantic from Cape St. Roque to 50° S. in only 17 days and north from 50° S. in the Pacific to the line in only 16 days. It was said that the *Live Yankee* went from Lat. 50° to 10° S. in the Pacific in two days faster time than the *Flying Cloud* when that fast clipper made her 89-day 21½-hour passage from New York to San Francisco. Continuing the voyage and sailing west, the *Live Yankee* went to Hong Kong, Singapore, Calcutta, and London and then engaged in the British-Indian and British-Australian trades. She then made two passages carrying Chinese coolies to Havana. Her last completed voyage was from New York to Hong Kong, thence with 728 coolies to Havana, and thence to New Orleans for cotton, which she took to Liverpool. She was lost on her next outward passage bound for Kur-

rachee, India, which originated at Liverpool June 26, 1861. When she was wrecked, her chief officer and six of the crew were drowned.

The *Anglo-Saxon* of 868 tons was a small clipper and was the first of three sharp-lined vessels built by F. W. Rhodes (or Rhoades) at Rockland. She was launched in early 1853 and was the first of four reputed clippers built at Rockland during that shipbuilding boom year. The *Anglo-Saxon,* built "on spec," was sold to E. M. Robertson, of New York, for a reported price of $50,000 (or $57½ per ton). It is said that Rhodes first sold her to a New York syndicate, of which Henry A. Kelley and Robert B. Coleman were the principal members. The *Anglo-Saxon* was too small to make a good Cape Horner, but she was, nevertheless, kept in that trade until she was captured and burned by the Confederate raider *Florida* on August 21, 1863, when a little over ten years old.

In addition to a round voyage to the West Coast of South America, the *Anglo-Saxon* made six westward Cape Horn passages from New York to San Francisco, of which the following table gives a brief digest:

Voyage No.	Clearance from New York	Arrival at San Francisco	Length of Passage in Days: Elapsed Time	Length of Passage in Days: As Reported	Remarks
1	May 14, 1853	Oct. 12, 1853	151	150	Had bad weather and lost deck load off the Plate. Gales and high seas for 26 days off Cape Horn; lost jib boom. Was 98 days to Pacific and then had light winds to destination. Captain Leeds in command.
3	Nov. 16, 1855	Mar. 16, 1856	121	120 (also 118)	Made good time in Atlantic. Was 15 days rounding the Horn, but was 52 days running up the Pacific in light winds. Captain Mayo in command.
4	Apr. 10, 1858	Sept. 21, 1858	164	164	Had generally light winds in the Atlantic and Pacific, but was 41 days rounding the Horn in very heavy weather. Capt. Henry Manter in command.
5	June 24, 1859	Nov. 12, 1859	141	139	Was 70 days to the Straits of Le Maire, experiencing adverse sailing conditions in the Atlantic. Was 26 days rounding the Horn in bad weather. Capt. Henry Manter in command.
6	Nov. 5, 1860	Mar. 15, 1861	130	127	Was 59 days running south in Atlantic, 50 days running north in Pacific, and 18 days rounding Cape Horn. Capt. John M. Cavarly in command.
7	Mar. 11, 1862	Aug. 30, 1862	172	171	Bad sailing conditions throughout. Was 70 days in Atlantic, 39 days rounding Horn in strong S. and S.W. gales, then 29 days to Pacific equator. Was within 700 miles of port for 18 days in light airs and calms. Captain Cavarly in command.

Recapitulation: Average length of six passages was 146½ days, clearance to entry, and 145 days as reported. Average time of rounding the Horn was 27½ days; best, 15 days; slowest, 41 days.

The *Anglo-Saxon,* on the return passage of her maiden voyage, went from San Francisco to Callao and thence 102 days with guano to Baltimore. On her second voyage, which was from New York to West Coast South American ports, she returned in 84 days from Callao to Hampton Roads. On Voyage No. 3, the ship circumnavigated the globe, crossed the Pacific from San Francisco, and on the last lap was 109 days from Calcutta to New York, where she arrived December 12, 1856. The return passage of her fourth voyage was a run from the Sandwich Islands (Hawaii) to New Bedford with whale oil. Leaving San Francisco on her fifth and sixth voyages, the *Anglo-Saxon* went to Mazatlan and carried dyewoods thence to Europe. On her last voyage (No. 7), the ship was unlucky throughout. After a long and

eventful Cape Horn run to San Francisco in wretched weather, the *Anglo-Saxon* went to Howland's Island to load guano for Europe; she got on a reef and had to go to Honolulu for repairs, which, it was reported, cost $15,000. At Honolulu, attempts were made, presumably by members of the crew, to set fire to the ship, but the fire was discovered and extinguished. After delivering a cargo of guano at Liverpool, the *Anglo-Saxon* sailed August 17, 1863, laden with coal for New York, on the last lap of her voyage. When four days out and off Kinsale Head, the ship was captured and burned by the Confederate raider *Florida,* and the officers and crew were landed at Brest.

The *Euterpe* (1,985 tons), the second, largest, and last clipper built by Horace Merriam at Rockland, was launched December 7, 1854. She was described as a medium clipper, a fast vessel, and a good carrier, and it was said that she carried 3,400 tons of general merchandise to California on her maiden passage. This amount of cargo was not deadweight, but was determined more by measurement than by weight. As the ship's tonnage by the new formula (put into effect in 1865), which considered the shape and not merely the prime dimensions of the vessel, was only 1,509 tons, it is evident that the *Euterpe* was a sharp-modeled ship and that she should be classed as a real clipper and not as a medium clipper. On her maiden voyage, the *Euterpe* did some fast sailing. She left New York January 31, 1855, for India and arrived at Calcutta May 1 after a passage of 90 days, being 24 days to the line and 66 days thence to destination. Leaving Saugor Roads (Calcutta) August 12, 1855, the *Euterpe* was off the Cape of Good Hope in 39 days, which time has never been beaten. She ran from the Cape to London in 46 days, making the passage from Calcutta to London in the record time of 85 days. After crossing to New York, the *Euterpe* was put in the Cape Horn California trade. She made four westbound passages from New York to San Francisco, which can be summarized as follows:

Voyage No.	Clearance from New York	Arrival at San Francisco	Length of Passage in Days: Elapsed Time	Length of Passage in Days: As Reported	Remarks
2	May 30, 1856	Sept. 22, 1856	115	112	Also reported as "sailed June 2." Made a slow run of 34 days to the Atlantic equator. Passed Cape Horn when 62 days out and crossed line in Pacific when 83 days from New York. From line to port, 32 days in calms and light airs. Was 66 days in Northern Hemisphere. Capt. John Arey in command.
3	Sept. 1, 1858	Jan. 15, 1859	135	135	Was 39 days to line; fell to leeward of Cape St. Roque and lost 3 days. Was 19 days off Horn in bad weather, 23 days in South Pacific, and 24 days from line to port, being within 300 miles of Golden Gate for 10 days. Had head gales most of the passage. Capt. John Arey in command.
4	Feb. 25, 1860	June 25, 1860	121	118	A good passage, but entered San Francisco Harbor with pilot aboard and grounded in fog. Got off after lightering 140 tons of cargo, with 4 ft. of water in hold. Was repaired at San Francisco, and total expense of accident reported as $24,000. Captain Arey in command.
5	June 23, 1861	Nov. 2, 1861	132	132	The last passage made to San Francisco. Returned from there to New York in 94 days. Captain Arey, in command, reported 43 days to the Horn, 69 days to Atlantic equator, and 11 days of northerly gales after passing the Bermudas.

Recapitulation: Average of four passages, 125.7 days elapsed time and 124¼ days as reported.

On the first westward Cape Horn passage, the *Euterpe* arrived at San Francisco the same day (September 22, 1856) as the clippers *John Gilpin, Nor'wester, Robin Hood,* and *Thatcher Magoun.* During September 21-23, eight first-class clippers passed through the Golden Gate from New York and Boston, and the *Euterpe* beat them all by from nine to twenty-nine days. Of her second passage west in 1858-1859, Carl C. Cutler, in GREYHOUNDS OF THE SEA, writes: "A drawn battle was staged by the *Euterpe,* commanded by hard driving John Arey from 'down Frankfort way,' and the Damariscotta clipper *Talisman* under Captain Thomas." Cutler refers to the ships' sailing two days apart at "the worst season of the year for fast passages" and arriving out in the same order "exactly 135 days later." The *Talisman* (1,237 tons) was a fast ship, for on her return from San Francisco to New York she made the passage in 96 days and beat Donald McKay's much-vaunted *Great Republic,* which passed through the Golden Gate in company with her, by four days on the run home. The *Euterpe,* when she made her 135-day passage in the same time as that of the *Talisman,* was handicapped by ill-luck throughout the run, and she reached her destination with more than half of her crew ill. After thirty-nine days of head winds followed by light airs in the North Atlantic, the *Euterpe* fell to leeward of Cape St. Roque and, at the end of a turbulent passage, was held within a good single day's sailing distance of the Golden Gate for ten days by calms and light contrary winds.

Returning to New York from San Francisco in 1856-1857, the *Euterpe* went to Callao in 47 days and reached New York on June 30, 1857, in 80 days with guano from Callao via Hampton Roads. In 1859 the ship went from San Francisco to Valparaiso and thence home. In 1860-1861, the *Euterpe* ran from San Francisco to Callao in 40 days and from Callao, guano laden, to Hampton Roads in 78 days. She completed a very fast round voyage, being only 236 days at sea. On her fourth and last eastward rounding of Cape Horn (in 1862), the *Euterpe's* fast passage of 94 days from San Francisco to New York direct would have been a run of some 87 days or so if the ship, after crossing the Atlantic equator when only 69 days out, had not run into eleven days of strong northerly gales after she had passed the Bermudas.

During the Civil War, the *Euterpe* was chartered by the United States Government, following which she was engaged in general trade in the North Atlantic. In late 1867, she was reported sold. On April 28, 1871, she sailed from Callao (with guano) bound to Falmouth, England, "for orders." On June 4, the ship was abandoned in the South Atlantic, as she was leaking beyond the capacity of the pumps. Captain Leach and two-thirds of the crew landed on the coast of Brazil after ten days in a ship's boat; but the mate and the balance of the crew were lost, nine out of the twenty-seven men aboard being drowned.

The *Young Mechanic,* launched by F. W. Rhodes at Rockland on February 2, 1855, was Rhodes' third and last reputed clipper and the last of ten clippers and reputed clippers constructed at Rockland. It is said that a young son of the builder whittled the model of the ship, which the father built and named after his son as the "*Young Mechanic.*" The vessel (1,375 tons) was sold to William McLoon et al., of Rockland. On her maiden voyage, the ship is credited with a transatlantic crossing of 17 days from Savannah to Liverpool, and during this passage she reported covering 1,730 miles in six consecutive days—an average of over 288 miles per day and a speed of about 12 knots per hour. On her only westward Cape Horn passage, the *Young Mechanic* reached San Francisco on June 3, 1862, in 127 days from New York; she was 22 days to the line, 25 days to Lat. 50° S., 25 days rounding the Horn in heavy gales (losing the main yard), 28 days in the South Pacific, and 27 days from the line to destination (including five days of dead calms). On November 2, 1864, the *Young Mechanic* left New York, coal laden, bound on a second passage around the Horn with San Francisco as destination, but she developed bad leaks during heavy gales and put into St. Thomas for repairs. The cargo was discharged and sold and the ship patched up, so that she could return to New York for permanent reconditioning. On February 17, 1865, however, she put into Newport in distress, partially dismasted, and with the hull strained during severe gales.

After being overhauled and repaired in Boston, the *Young Mechanic* left that port on May 4, 1865, under charter of Tudor & Company to carry ice to Madras and Calcutta, India. Captain McLoon, who had been in her for some time, was in command. At Calcutta, he, the second officer, and three of the crew died, and many others on board were stricken during an epidemic of cholera. Returning to the United States, the *Young Mechanic* left Sand Heads November 1, 1865, and arrived at Boston January 29, 1866, after an excellent passage of 88 days. The ship had sailed well, but the conditions were favorable for speed. The *Antelope* of New York made the run to New York at the same time, also in 88 days, and the ships were in company in the South Indian Ocean; whereas the ship *Longwood* (American built and British owned), which did not rate as a clipper, left Calcutta six days after the *Young Mechanic* and *Antelope* and made an 86-day passage from Sand Heads to New York. This was two days better time than that made by the two clippers. Tudor & Company, pleased with the performance of the *Young Mechanic,* chartered the ship for a second voyage and sent her out under Captain Grant with ice, pitch, kerosene, etc., for Hong Kong. The ship sailed from Boston on March 5, 1866, but in the South Atlantic (Lat. 11° S., Long. 33° W.) fire was discovered in the pitch, which was stowed forward, and the vessel was destroyed in about a couple of hours. All aboard took to the boats and were picked up by the French bark *Eugene,* which landed them at Pernambuco the next day. The *Young Mechanic* was eleven years old when she was lost.

A List of 275 Vessels, Taken from Customhouse Records, Registered as Built at Rockland, Maine, 1837-1920

The following list of vessels, recorded as having been built at Rockland, Maine, is taken from customhouse records. It is to be regretted that the desired data covering construction and registration at most Maine ports have not been preserved, recorded, and made available for inspection locally; that the records still in existence—and that have not been destroyed or lost—are scattered; that tabulations of the data on hand attempted during recent years by the P.W.A. are incomplete; and that such records as have been made available are for vessels catalogued alphabetically instead of chronologically.

Rockland, known as Shore Village and East Thomaston, built many vessels that are not here recorded. From 1848 to the end of the fifties, Rockland constructed many important and sizable vessels, including eighteen full-rigged ships of from 1,064 to 2,305 tons, launched during 1852-1859 inclusive. With the depression and the Civil War, interest in shipbuilding waned, but a 1,297-ton square-rigged ship (*Martha Cobb*) was built in 1862. Small vessels were constructed intermittently, but in 1890 another 1,000-ton vessel was launched—the schooner *Lena F. Dixon* of 1,030 tons. No further vessels of over 1,000 tons were built at Rockland in the nineties, but in the first decade of the twentieth century eight schooners of from 1,042 to 2,824 tons were built, the largest being the important six-master *Mertie B. Crowley,* constructed in 1907, which was 296.5 ft. long and 48.4 ft. beam. During the years 1911-1920 inclusive, which was World War I decade, Rockland built ten vessels, and five of them were schooners of from 1,070 to 1,607 tons, the last and the largest built during the period being the *Josephine A. McQuestin.*

Year Built	Name	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1837	CHIEF	Schooner	110	80.4	25.6	8.2
1842	THOMAS HIX	Schooner	99	84	23.2	8.3
1847	TELEGRAPH	Schooner	114	77	22	12
1848	A. H. KIMBALL	Bark	283	103.7	25.3	12
1848	GEORGE S. ABBOTT	Schooner	208	91.4	23.8	10.8
1848	GEORGE THOMAS	Bark	283	100	25.2	12.6
1848	LANSON DEAN	Schooner	103	71.3	21.2	7.9
1848	MARY WISE	Schooner	125	77.6	22.5	8.3
1848	NORUMBEGA	Bark	324	107.8	26	12.8
1848	OPHIR	Schooner	118	78	22.2	7.8
1848	SARAH HAMILTON	Schooner	123	76.8	22.7	8.2
1848	TELEGRAPH	Bark	224	99.5	24.1	10.3
1849	EDGAR	Brig	144	82.2	23.5	8.5
1849	EQUATOR	Ship	876	162.5	24.3	17.1
1849	GERTRUDE HORTON	Schooner	123	76.3	22.7	8.3
1849	GOLDEN AGE	Bark	311	109.1	26.2	12.1
1849	JOHN BIRD	Bark	278	105.6	25.4	11.5
1849	JOHN SPEAR	Ship	629	145.4	30.7	15.3
1849	MARMORA	Bark	388	117.4	27	13.5
1849	OLIVER H. PERRY	Schooner	129	80.4	23.1	8
1850	CELESTIAL	Schooner	116	76.5	22.5	7.8
1850	CRESCENT	Ship	753	151.3	33	16.5
1850	MARY CROCKER	Ship	549	130.6	29.6	13.8
1850	R. B. PITTS	Schooner	82	60.3	20.4	7.6
1850	ROCKLAND	Ship	922	169.3	34.3	17.2
1850	SILAS WRIGHT	Schooner	142	82.8	21.9	8.6
1851	ANN	Schooner	157	86.3	24.3	8.6
1851	CHARLES HOLMES	Ship	792	158	33	16.5
1851	GEORGE W. HORTON	Bark	299	108	26	11.8
1851	HARRIET SPAULDING	Bark	300	105.9	25.6	12.3
1851	IDDO KIMBALL	Bark	475	126.4	28.4	14.3
1851	ONATIVIA	Schooner	137	82.7	22.7	8.3
1851	SPRINGBOK	Bark	367	121	27	13.3
1851	SUPERIOR	Schooner	98	74.3	21.6	7.8
1851	WILLIAM GREGORY	Schooner	149	89	24	7.9
1852-1853	ANGLO-SAXON	Ship	869	160	34.5	—
1852	CHARLES ROBERTS	Schooner	149	85.5	23.3	8.5
1852	DEFIANCE	Ship	1,691	204	42.5	29
1852	ISAAC COHEN HERTZ	Schooner	149	85	24	8.3
1852	JANE INGRAHAM	Schooner	148	85.1	23.4	8.4
1852	JENNY PITTS	Bark	540	139.4	29	14.5
1852	JOSIAH ACHORN	Schooner	124	80	22.1	8
1852	LUCY AMES	Schooner	150	88	23.9	8.1
1852	PARAGON	Ship	900	168	34.5	17.3
1852	RATTLER	Ship	1,121	192	35.1	21
1852	REBECCA	Schooner	115	71.7	21	8.8
1852	WILLIAM S. BROWN	Schooner	146	84.8	23.3	8.4
1853	ANGELIA BREWER	Bark	422	125.3	29	12.8
1853	C. A. ALLEN	Schooner	155	91.2	24	8
1853	CHARLES BUCK	Ship	1,424	202	38.9	19.4
1853	DAVID KIMBALL	Bark	449	129	29.2	13.1
1853	EMMA FURBISH	Schooner	185	93.8	25.2	8.8
1853	EMPIRE	Schooner	218	103.8	26.2	9
1853	F. L. JONES	Schooner	167	91.7	23.9	8.5
1853	GAZETTEER	Ship	1,119	182.5	36.3	18.2

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth
1853	HARDSCRABBLE	Schooner	126	81.7	22	7.9
1853	H. S. BRADLEY	Bark	400	126	28.1	12.3
1853	JOHN BELL	Schooner	148	85.4	23.4	8.4
1853	KATE HOLBROOK	Schooner	169	90.7	24.3	8.7
1853	LEWIS McLAIN	Schooner	176	89.5	24.7	9.1
1853	LIVE YANKEE	Ship	1,637	214	40	23.6
1853	MARY FARNSWORTH	Schooner	150	88.4	24.3	7.9
1853	MARY J. KIMBALL	Bark	398	117.1	29.3	13
1853	MARY T. STARRETT	Ship	624	142.8	30.8	15.4
1853	MOUNTAIN EAGLE	Schooner	196	99	25.3	8.8
1853	PROGRESSIVE	Ship	1,119	180	36.5	22
1853	RED JACKET	Ship	2,305	251.2	44	31
1853	SARAH L. HILLS	Schooner	171	89	24.8	8.8
1853	WILLIAM T. SAYWARD	Bark	462	141.5	30.2	11.8
1854	ALBERT JAMESON	Schooner	89	67.3	18.8	8.1
1854	ANN M. WEEKS	Brig	198	94.8	25.1	9.4
1854	C. A. LIBBY	Schooner	238	109.8	26.4	9.1
1854	CAVALIER	Ship	1,286	194.5	37.7	18.8
1854	CHARLES A. FARWELL	Ship	1,298	195	37.8	18.9
1854	CLARISSA BIRD	Ship	1,064	176.3	36.2	18.1
1854	ELLA	Schooner	213	101.3	25.3	9.3
1854	ENTERPRIZE	Brig	250	108.2	27	9.5
1854	EUTERPE	Ship	1,985	224	43.8	24.6
1854	JOHN COTTLE	Ship	1,745	214.5	41.8	20.9
1854	LOUISA HATCH	Ship	854	162	33.8	16.9
1854	LUCY W. ALEXANDER	Schooner	145	85	24.1	8.1
1854	MARY COBB	Brig	285	115.5	27.3	10
1854	OLIVER JORDAN	Ship	1,219	187.3	37.5	18.8
1854	RAMBLER	Bark	367	122.4	27.3	12
1854	SAMPSON	Bark	456	135.5	27.5	13.3
1854	SARAH E. DIX	Brig	262	113.4	26.3	9.7
1854	TYRANT	Brig	211	99.3	24.6	9.7
1854	YANKEE RANGER	Ship	708	162.6	30.6	15.3
1855	BALTIC	Schooner	148	82.5	22.7	9
1855	ELLA FRANCES	Schooner	23	38	12.1	5.8
1855	ELLA MAY	Schooner	61	58.3	17.1	7.1
1855	EXCELSIOR	Schooner	174	91.2	24.1	8.9
1855	HANSON GREGORY	Bark	349	116	28.3	11.8
1855	HIAWATHA	Schooner	131	78.5	23.3	8.3
1855	L. D. CARVER	Bark	414	126	29.7	12.3
1855	N. C. FLETCHER	Schooner	96	75.6	20.9	8.3
1855	SQUANDO	Ship	1,089	177.5	36.4	18.3
1855	YOUNG MECHANIC	Ship	1,376	199.6	38.6	22.6
1856	FOREST EAGLE	Ship	1,156	184	36.8	18.4
1856	HARRIET S. FISK	Bark	564	137	30	15
1856	JULIA LAWRENCE	Ship	874	165.3	33.8	16.9
1856	OCEAN EAGLE	Brig	290	107	26.8	11.3
1856	PILOT'S BRIDE	Schooner	225	100	26.3	9.6
1856	UNCLE SAM	Schooner	57	50.7	18.5	7.4
1857	B. S. KIMBALL	Ship	1,192	183.5	37.5	18.8
1857	CEPHAS STARRETT	Schooner	401	127	28.5	13
1858	ORAVILLE	Bark	599	140	30.6	15.3
1858	B. B. BEAN	Schooner	217	101.1	26.3	9.2
1858	EMELINE McLAIN	Schooner	200	96.3	25.8	9.1

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1858	FOREST QUEEN	Ship	594	137.8	30.8	15.3
1859	CAROLINE	Bark	449	124	28.3	14.1
1859	JENNIE BEALS	Ship	1,094	174	37	18.5
1859	MINNIE COBB	Schooner	85	74.3	21.2	6.2
1859	RALPH HEWETT	Schooner	122	73.5	19.5	9.6
1860	ADA AMES	Schooner	200	100	26.5	8.5
1860	CONVOY	Schooner	161	88.7	25.3	8.3
1860	FANNY KEATING	Schooner	237	104.5	28	9.2
1860	JAMES R.	Schooner	52	54.3	20.1	5.8
1860	LEONESIA	Schooner	214	102	25	8.7
1861	A. J. BIRD	Schooner	179	92.7	25.3	8.7
1861	PRINCE OF WALES	Schooner	124	78.5	31	8.5
1862	ANTIETAM	Bark	222	98.6	24.3	10.3
1862	BRADFORD	Bark	284	103.1	25.4	12.1
1862	LIZZIE GUPTILL	Schooner	56	62	18	7.4
1862	MARTHA COBB	Ship	1,297	184.7	37.4	25.5
1863	ADRIAN	Schooner	109	76	21.1	7.8
1863	NED SUMTER	Schooner	104	73.3	20.7	7.8
1863	VICKSBURG	Schooner	101	70.1	20.8	7.5
1864	CATAWAMTEAK	Schooner	148	81	23	9
1864	CONCORD	Schooner	62	57.3	19.7	6.6
1864	FORTUNA THOMPSON	Schooner	243	102	27.7	9.8
1864	GEORGE W. KIMBALL, JR.	Schooner	94	67.7	21.3	7.7
1864	OTAGO	Bark	895	169.7	33.3	22
1865	A. F. AMES	Schooner	281	117.6	30.6	10.6
1865	ALBERT JAMESON	Schooner	78	67.3	18.7	8.8
1865	ALFRED KEEN	Schooner	242	116	28	10.8
1865	BEDADEDEC	Schooner	95	82.3	22.9	7.5
1865	LOUISA CROCKETT	Schooner	211	107.6	27.8	10.2
1865	NAVARINO	Brig	386	120.6	30.5	11.8
1865	WALTER H. THORNDIKE	Schooner	121	89.5	23.8	9.1
1866	ADDIE M. BIRD	Schooner	323	114	30	14.9
1866	ALICE STARRETT	Brig	300	119	28.7	11.6
1866	CLARA SMITH	Schooner	259	110.5	28.5	11.1
1866	EMMA C. LITCHFIELD	Bark	483	128.5	30.5	15.3
1866	JENNIE COBB	Bark	473	128.4	30.5	15.2
1866	M. C. HASKELL	Brig	351	115	28	16.8
1866	MARY MUNROE	Schooner	204	109.2	26.5	9.1
1866	R. C. THOMAS	Schooner	236	111.4	28.6	10.4
1867	EMMA L. GREGORY	Schooner	84	70.8	20.8	7.5
1867	FRANK JAMESON	Schooner	181	100.7	26.6	8.9
1867	FRANK AND NELLIE	Schooner	259	113.7	42.5	21.7
1867	HENRY A. LITCHFIELD	Bark	638	147	31	19
1867	H. G. BIRD	Schooner	141	91.2	25.1	8.2
1867	ISRAEL SNOW	Schooner	158	92.7	25.7	9.6
1867	MARY M. BIRD	Bark	616	141.7	31.4	19
1868	EDITH HALL	Brig	286	102	26.6	8.7
1868	EMMA C. VERRILL	Schooner	93	72	20.2	8
1868	FANNIE BARNEY	Schooner	59	67.6	20.3	6.8
1868	LIZZIE WILLIAMS	Bark	827	158.1	33.4	30.2
1868	MAGGIE D. MARSTON	Schooner	254	110	28.3	11.1
1868	OLIVER JAMESON	Schooner	204	101.5	26.5	9.9
1869	ADELLE McLOON	Brig	361	119.6	28.8	15.3
1869	CAROLINE GRAY	Brig	327	111	27	12.6
1869	DAVID AMES	Schooner	336	112.3	29.2	9.8
1869	IDA HUDSON	Schooner	76	75.8	19.7	6.8

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth
1869	JOHN W. HUNT	Brig	436	121.7	28.7	16.9
1869	LUCY W. SNOW	Brig	315	112.8	26.9	14
1869	ONALASKA	Brig	476	124.4	29.1	17.4
1869	WILLIAM WILSON	Schooner	267	114.3	29.9	11.6
1870	HELEN L. SNOW	Schooner	90	78.1	21	7.3
1870	JOHN S. INGRAHAM	Schooner	293	119.2	29.2	11.7
1870	R. W. MESSER	Brig	497	126.8	29.9	16.1
1871	CARRIE L. HIX	Schooner	147	93.3	26.3	8.9
1871	LOTTIE AMES	Schooner	201	100.3	28.1	9.4
1871	SAILOR'S DELIGHT	Schooner	16	55	13.4	6.5
1871	SILAS McLOON	Schooner	122	86.8	24.2	7.5
1872	BELLE BROWN	Schooner	147	92	26.1	8.6
1872	CHARLOTTE JAMESON	Schooner	354	125	29.3	11.8
1872	K. C. RANKIN	Schooner	204	106.1	28.4	9.5
1872	WILLIE	Schooner	14	40.8	12.8	5.4
1873	EMERSON ROKES	Schooner	441	134.5	31.8	14.4
1873	JOHNNIE MESERVE	Schooner	88	75	21.8	8
1873	JOSEPH FARWELL	Schooner	144	98.6	27	7.4
1873	RESTLESS	Schooner	8	28	12	4
1873	SARAH F. BIRD	Schooner	382	137	31.5	11.5
1874	ADDIE E. SLEEPER	Bark	592	150.4	35	15.3
1874	ADELIA S. HILLS	Schooner	466	137.6	31.5	14.4
1874	HANNAH McLOON	Barkentine	545	137	31.5	14.5
1874	L. T. WHITMORE	Schooner	295	120.9	30.1	10.6
1874	WALKER ARMINGTON, JR.	Bark	521	183	30	8
1874	WILLIAM S. FARWELL	Schooner	146	100.3	26.8	7.3
1875	BRUNETTE	Schooner	11	38.2	13.7	5
1875	LUELLA A. SNOW	Schooner	187	106.7	27	8.4
1876	ADDIE E. SNOW	Schooner	163	95.8	24.4	9
1876	MAJOR	Schooner	7	27	9	4
1877	JOHN R. STANHOPE	Bark	407	123.1	28.5	15.9
1877	WILL W. CASE	Bark	576	143.1	31.7	17.6
1878	C. HANRAHAN	Schooner	462	130	31	17
1878	FRANK PEARSONS	Schooner	83	66.5	21.1	7.2
1879	JULIA FAIRBANKS	Schooner	17	45	14.8	5.6
1879	M. A. ACHORN	Schooner	308	127	31	11
1880	CHARLIE HANLEY	Schooner	100	67.2	24.9	8.2
1880	KITTIE LAWRY	Schooner	33	54	19	5
1881	HELEN MONTAGUE	Schooner	407	134	32	12
1881	JENNY GREENBANK	Schooner	90	73.3	21.3	6.8
1881	MILFORD	Schooner	227	117	28.5	9.3
1882	BERTHA E. GLOVER	Schooner	119	77.9	24.3	7.6
1882	FANNIE WHITMORE	Schooner	582	154	34.7	13.2
1882	IRA E. WIGHT	Schooner	75	69.5	19.4	7.9
1882	JENNIE G. PILLSBURY	Schooner	154	93.9	25.8	7.2
1882	MAYNARD SUMNER	Schooner	307	143.3	28.5	10
1882	M. LUELLA WOOD	Schooner	557	153.5	34.4	13.5
1882	NAHUM CHAPIN	Schooner	597	145	35	15.6
1883	GEORGE BIRD	Schooner	224	106.8	28	9.3
1883	J. B. HOLDEN	Schooner	411	148	34.3	10.9
1883	MABEL HOOPER	Schooner	574	155	34.4	12.9
1883	NINA TILLSON	Schooner	647	159.3	35	12.5
1883	WOODBURY M. SNOW	Schooner	107	74	21.4	7.5
1884	ALFARETTA CAMPBELL	Schooner	671	165	35	16
1884	JOHN H. PEARSON	Schooner	230	104	26.5	9.3

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1884	W. L. WHITE	Schooner	659	162.4	34.9	15.5
1885	JOSE OLAVERRI	Schooner	662	164	35	14.8
1886	ROBERT A. SNOW	Schooner	174	97.8	26.4	7.8
1888	JOHN I. SNOW	Schooner	196	107.8	25.6	7.3
1889	IRA B. ELLEMS	Schooner	306	123	28.6	8.6
1890	CARRIE E. LOOK	Schooner	530	154.6	35.2	12
1890	LAURA L. SPRAGUE	Schooner	594	154.4	32.6	11.2
1890	LAURA M. LUNT	Schooner	568	149.2	34.8	12.4
1890	LENA F. DIXON	Schooner	1,030	184.4	39	18.6
1890	LULU EVERETT	Schooner	202	97.2	28.7	8.2
1890	MORRIS AND CLIFF	Schooner	132	84.2	23.5	7.2
1890	NATHAN F. COBB	Schooner	656	167.2	35.1	12.7
1891	CARRIE A. COOKSON	Schooner	964	182.1	38.9	17.6
1891	LENA WHITE	Schooner	127	90	24.2	8.8
1891	MARGARET A. GREGORY	Schooner	207	110.3	26.6	9.5
1891	OLIVE T. WHITTIER	Schooner	563	152	35.5	12.4
1893	LAVINIA M. SNOW	Schooner	354	133	31.7	10.9
1893	THELMA	Schooner	525	157.3	35.6	13.2
1896	METHEBESEC	Schooner	377	136.4	31	11.8
1897	JOHN J. PERRY	Schooner	152	93.2	26.5	10.2
1900	GENEVA	Schooner	874	169.6	32.2	17.5
1900	WELLFLEET	Schooner	600	161	35	14.5
1901	JACOB M. HASKELL	Schooner	1,778	226.8	43.2	20.5
1901	METINIC	Schooner	261	112.1	31.4	9.8
1901	REBECCA PALMER	Schooner	2,556	260.4	46.1	23.1
1902	MARION N. COBB	Schooner	459	150.7	34.9	11.8
1902	MINERVA II	Schooner	597	162.5	35.2	13.8
1902	WILLIAM BISBEE	Schooner	309	133.1	31.2	9.3
1903	ROBERT H. McCURDY	Schooner	735	178	37.2	13
1904	EDWARD H. COLE	Schooner	1,791	228	43.2	20.7
1904	ELLEN LITTLE	Schooner	999	188.2	39.2	11.7
1905	GOVERNOR POWERS	Schooner	1,962	237.2	44.3	20.8
1905	HELVETIA	Schooner	499	157.4	36.2	12.8
1905	RUTH B. COBB	Schooner	620	182.6	37.2	13.6
1906	JOHN D. COLWELL	Schooner	1,042	191.6	39.2	12.1
1906	NORTHLAND	Schooner	2,047	242.2	44.1	22
1907	DEAN E. BROWN	Schooner	719	182.7	38	13.7
1907	MERTIE B. CROWLEY	Schooner	2,824	296.5	48.4	23.8
1907	WAWENOCK	Schooner	325	135.9	34.3	9.8
1908	FRANK BRAINERD	Schooner	254	123.4	30.9	8.7
1908	JESSIE A. BISHOP	Schooner	754	188.9	38	14.9
1908	LEWISTON	Schooner	814	190.5	39.5	14.9
1908	STANLEY M. SEAMAN	Schooner	1,060	189	39.4	20
1909	WILLIAM E. BURNHAM	Schooner	772	190.9	38.4	15
1910	HUGH-DE-PAYENS	Schooner	416	144	35.9	10.1
1913	TARRATINE	Schooner	289	130.5	34.1	9.1
1917	FRANK A. MOREY	Schooner	574	163	35.4	14.7
1917	THEOLINE	Schooner	594	172	34.8	13
1918	ELLA PIERCE THURLOW	Schooner	1,505	221.2	42	22.3
1918	PAUL E. THURLOW	Schooner	1,590	230	41.8	23.3
1919	DOROTHEA L. BRINKMANN	Schooner	698	184.4	38.2	15
1919	FREEMAN	Schooner	1,070	192.4	39	19.4
1919	LUCIA P. DOW	Schooner	998	189	37.8	20
1919	WHITE HEAD	Schooner barge	1,254	230	37.9	18.8
1920	JOSEPHINE A. McQUESTIN	Schooner	1,607	230	41.9	22.8

The following recapitulation shows the 275 vessels known to have been built at Rockland, as herein recorded, set forth as to rig for various periods. Of the total number of vessels built, 31.3 per cent were square-riggers, while 25.1 per cent were three-masted square-riggers. Of the vessels built prior to the Civil War, 54.4 per cent were ships, barks, or brigs, but all the vessels built after 1877 were fore-and-afters.

Years	Ships	Barks	Brigs	Total Square-riggers	Schooners	Total
Prior to 1850	2	7	1	10	10	20
1850-1854	22	12	5	39	29	68
1855-1859	7	5	1	13	13	26
1860-1864	1	3	—	4	15	19
1865-1869	—	5	9	14	22	36
1870-1874	—	3*	1	4	18	22
1875-1879	—	2	—	2	8	10
1880-1884	—	—	—	—	20	20
1885-1889	—	—	—	—	4	4
1890-1894	—	—	—	—	13	13
1895-1899	—	—	—	—	2	2
1900-1904	—	—	—	—	11	11
1905-1909	—	—	—	—	13	13
1910-1920	—	—	—	—	11**	11
Total	32	37	17	86	189	275

*Includes one barkentine of 545 tons.
**Includes a schooner barge of 1,254 tons.

The total tonnage of the 275 vessels reported built at Rockland is 126,994 tons, an average of 462 tons per vessel. The highest average tonnage per vessel is recorded in the 35 vessels built in the twentieth century, which, with an aggregate tonnage of 35,246 tons, average 1,007 tons per vessel. The average tonnage built per annum during this twenty-one-year period (1900-1920 inclusive) of constructing relatively large vessels was only 1,678 tons per year; but during the five-year period 1850-1854 inclusive, 68 vessels of 36,533 tons were built, an average of 537 tons per vessel. The following tables show a record of the number and tonnage of the various types of vessels, with the total number and tonnage, built during various stated periods as set forth. Rockland did not build much tonnage between the deep-sea clipper ship era of the 1850's and the large coasting schooner building era, which did not stimulate Rockland to construction activities until the twentieth century and terminated at the end of the era in 1920.

	Prior to 1850		1850-1854		1855-1859		1860-1864		1865-1869		1870-1874		1875-1879	
	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage
Ships	2	1,505	22	25,984	7	7,375	1	1,297	—	—	—	—	—	—
Average per vessel		752		1,181		1,053		1,297						
Barks	7	2,091	12	4,935	5	2,375	3	1,401	5	3,037	3*	1,658	2	983
Average per vessel		299		411		475		467		607		553		491
Brigs	1	144	5	1,206	1	290	—	—	9	3,238	1	497	—	—
Average per vessel		144		241		290				360		497		
Total square-riggers	10	3,740	39	32,125	13	10,040	4	2,698	14	6,275	4	2,155	2	983
Average per vessel		374		824		772		674		448		539		491
Schooners	10	1,252	29	4,408	13	1,940	15	2,084	22	4,162	18	3,558	8	1,238
Average per vessel		125		152		149		139		189		198		155
Total all vessels built		20		68		26		19		36		22		10
Total tonnage all vessels		4,992		36,533		11,980		4,782		10,437		5,713		2,221
Average tonnage all vessels		250		537		461		252		290		260		222

*Includes one barkentine of 545 tons.

	1880-1884		1885-1889		1890-1894		1895-1899		1900-1904		1905-1909		1910-1920	
	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage
Schooners*	20	6,771	4	1,338	13	6,452	2	529	11	10,959	13	13,692	11**	10,595
Average per vessel		339		334		496		264		996		1,053		963
Total all vessels built		20		4		13		2		11		13		11
Total tonnage all vessels		6,771		1,338		6,452		529		10,959		13,692		10,595
Average tonnage all vessels		339		334		496		264		996		1,053		963

*The available records show only schooners built after 1878.
**Includes one schooner barge of 1,254 tons.

XXXIII.

ISLANDS IN THE LOWER PENOBSCOT, MAINE

THE ISLANDS near the mouth of the Penobscot have an old shipbuilding history. Records of the building of ships on Vinalhaven and North Haven, on Deer Isle, Thurlow's Island, and Isle au Haut date back to the early 1790's. At that time, schooners and sloops were being built on nearby Swan's Island, which is on the east side of Penobscot Bay, with the waters of Jericho Bay and Bluehill Bay to the north and the open ocean to the south and east.

A. Vinalhaven and North Haven

The following summary shows the number and tonnage of vessels known to have been built at Vinalhaven and North Haven; it is probably quite incomplete, and it is claimed that some sizable craft were built on the island during the 1780's.

Period Inclusive	Number of Vessels					Tonnage of Vessels				
	Ships	Brigs	Schooners	Sloops	Total	Ships	Brigs	Schooners	Sloops	Total
1793-1799	—	—	4	1	5	—	—	370	84	454
1800-1809	1	—	2	—	3	200	—	189	—	389
1810-1819	—	—	13	—	13	—	—	707	—	707
1820-1829	—	1	9	1	11	—	141	479	41	661
1830-1839	—	—	5	—	5	—	—	291	—	291
1840-1849	—	—	5	—	5	—	—	211	—	211
1850-1859	—	—	3	—	3	—	—	279	—	279
1860-1869	—	—	3	—	3	—	—	316	—	316
1870-1899	—	—	—	—	—	—	—	—	—	—
1900-1904	—	—	1	—	1	—	—	366	—	366
Total 1793-1904	1	1	45	2	49	200	141	3,208	125	3,674

There are records of the following vessels being built at Vinalhaven and North Haven prior to 1810:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1793	POLLY	Schooner	110	—	—	—	James Babbage and Samuel Lewis, mariners, of Vinalhaven
1794	DOLPHIN	Schooner	88	—	—	—	Stephen Carver, farmer; Matthew Beverage, mariner, of Vinalhaven
1794	FOX (1ST)	Schooner	35	37	12	5	Anthony Coombs, of Vinalhaven; Rich Coombs, mariner
1795	LUCY	Schooner	137	74	24	9	Eleazer Crabtree, gentleman; William Crabtree, mariner, each of Vinalhaven

(Continued on next page)

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Owner, Builder, or Mariner
1796	FOX	Sloop	84	65	21	7	William Vinal, Joseph Waterman, Pinelop Winslow, of Vinalhaven; Jonas Mills, mariner
1801	PLUTUS	Schooner	95	63	20	9	Nathan Martin, of Vinalhaven, owner and mariner
1803	LUCY & NANCY	Ship	—	—	—	—	Built North Haven by Capt. Eleazer Crabtree
1804	BARBARA	Schooner	94	70	22	7	Thomas Cooper, Charles Stewart, of Vinalhaven; Joshua Woodman, of Castine; John Small, of Butter Island; Henry Alexander, mariner

No records have been preserved of ship construction in the district during the ten-year period 1805-1814 inclusive. The following table gives a list, with the dimensions and particulars, of the largest and seemingly the most important vessels of each rig or type built in the various periods as stated, during the years 1815-1904, which latter year marked the end of shipbuilding in the district.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet Length	Beam	Depth
1815-1819	THOMAS	Schooner	1818	106	66	19	10
	DIME	Schooner	1818	95	70	22	7
	MARY	Schooner	1816	85	60	21	7
	HARRIOT	Schooner	1819	63	56	18	7
	HAZARD	Schooner	1817	57	54	16	8
1820-1824	AGENORIA	Schooner	1820	55	54	17	7
	PEGGY & POLLY	Schooner	1824	37	46	15	6
	FIVE SISTERS	Schooner	1820	35	44	15	7
	MANILLA	Schooner	1823	32	43	15	6
1825-1829	VISTA	Brig	1827	141	83	24	8
	PLYMOUTH ROCK	Schooner	1826	146	82	24	9
	CLEMENT	Schooner	1827	62	59	18	7
	CALYPSO	Schooner	1828	45	54	16	6
1830-1839	ARMADA	Schooner	1832	99	70	20	8
	ELIZA JANE	Schooner	1834	66	56	17	8
	ELIZA ANN	Schooner	1831	64	57	17	8
1840-1849	OREGON	Schooner	1844	58	58	17	7
	PIONEER	Schooner	1848	40	49	14	7
	HORNET (pink)	Schooner	1846	23	39	12	6
1850-1859	GOLDEN CLOUD	Schooner	1853	125	—	—	—
	U. D.	Schooner	1855	104	75	21	8
	GREY HOUND	Schooner	1855	50	52	17	5
1860-1904	SOPHIA R. JAMESON	Schooner	1861	111	72	25	7
	VOLANT	Schooner	1861	51	54	18	5
	ISLAND HOME	Schooner	1866	154	92	29	9
	MARGARET M. FORD	Schooner	1904	366	132	35	12

The only other vessels, not mentioned in the preceding table, reported built at Vinalhaven and North Haven in the 1840's or thereafter were the schooner (pink) *Walkulla* of 20 tons, built in 1845; and the schooner *Cherokee* (tonnage unknown), which was reported built for William Witherle, Benjamin D. Gay, et al., of Castine, in 1847 and lost in 1851, when four years old. The vessels built since 1850 are set forth in chronological order. The *U. D.* was built at Eagle Island, lying a few miles northeast of North Haven. The *Grey Hound* ran for many years as a packet between Vinalhaven and Rockland, and she lived to a ripe old age, as

she was engaged in coastal trading in 1898, when forty-three years old. William Witherle and associates, of Castine, built or were part owners of a few schooners constructed at Vinalhaven during the period 1829-1847. Witherle's records show that the 64-ton schooner *Eliza Ann,* built for himself and John H. Jarvis, of Castine, in 1831 and of which Roger Merithew was master, cost $2,503, or about $40 per ton. The schooner *Clement* (62 tons), built in 1827, had an unusually long life, for she was in service in 1908, when eighty-one years old.

The schooner *Island Home* is said to have been the "last vessel built by Reuben Carver," but her career was short, as she was reported as lost at sea in 1867, when only a year old. The first vessel built by Reuben Carver was the schooner *Plymouth Rock,* constructed in 1826 for William Humphrey, of Boston, when the builder (born in 1797) was twenty-nine years old. Carver is generally credited with building twelve schooners and a brig—all small craft.

Evidently, there was no ship construction in the district during the nine-year period 1835-1843 inclusive, and after five small schooners (two of them "pinks") had been built during the five years 1844-1848 inclusive, three small schooners were launched in 1853-1855 and only three small craft in the period 1861-1866 inclusive. Following this, there was no activity for thirty-eight years, but in 1904 the last and by far the largest vessel built in the district was constructed. She was the small three-masted schooner *Margaret M. Ford* of 366 tons, built for James O. Webster, of New York, at a time when Maine shipyards were constructing mammoth six-masted schooners of 3,000 tons or more. Of the forty-nine vessels reported built in the district (1793-1904 inclusive), all were fore-and-afters (forty-five schooners and two sloops) except the small ship *Lucy & Nancy* (estimated as 200 tons), built in 1803, and the brig *Vista* of 141 tons, built in 1827. The *Lucy & Nancy* was built at the head of Southern Harbor, North Haven, by Capt. Eleazer Crabtree, who, eight years earlier (in 1795), was recorded as "Eleazer Crabtree, gentleman," owner of the schooner *Lucy,* built that year. Evidently, the "gentleman" took to the sea, for he commanded as well as built the island's only square-rigged ship, and he was unfortunate, for he lost his vessel on the coast of Ireland in 1804, when she was less than a year old. We are told, "Captain Crabtree and the crew were taken off the wreck by a passing vessel and carried to Liverpool."

Not included in the before-mentioned list of vessels built at Vinalhaven is the three-masted schooner *Mollie Rhodes,* which appears in ship registers as being built at that island port in 1885 by William L. Tupper. The official dimensions are stated as length 115.3 ft., beam 30.7 ft., depth 9.5 ft., with the tonnage as 226.32 tons.

B. Deer Isle, Thurlow's Island, and Isle au Haut

Records show that the following vessels were built at Deer Isle, Thurlow's Island, and Isle au Haut during the period 1792-1870 inclusive:

Period Inclusive	Number of Vessels						Tonnage of Vessels					
	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schooners	Sloops	Total
1792-1799	—	—	—	4	1	5	—	—	—	319	51	370
1800-1809	1	—	—	9	—	10	400	—	—	789	—	1,189
1810-1819	—	—	1	18	1	20	—	—	165	1,298	50	1,513
1820-1829	—	1	1	6	—	8	—	160	148	333	—	641
1830-1839	—	—	2	11	1	14	—	—	308	923	45	1,276
1840-1849	—	—	1	7	—	8	—	—	159	632	—	791
1850-1859	—	—	—	4	—	4	—	—	—	287	—	287
1860-1870	—	—	1	3	—	4	—	—	345	250	—	595
Total 1792-1870	1	1	6	62	3	73	400	160	1,125	4,831	146	6,662

The following fifteen vessels are known to have been built in the before-stated islands prior to 1810 and specifically during the years 1792-1807 inclusive:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1792	RANGER	Schooner	99	—	—	—	Ephraim Marshall and Jonathan Haskell, of Deer Isle, mariners
1793	INDUSTRY	Schooner	24	—	—	—	William Torrey, of Deer Isle, mariner
1794	PARROT	Sloop	51	—	—	—	Tristram Haskell, of Deer Isle, mariner
1795	GIDEON	Schooner	100	—	—	—	Ignatius Haskell, gentleman; Jonathan Haskell, mariner, of Deer Isle
1797	BETSY & LUCY	Schooner	96	—	—	—	Johnson Raynes and William Hooper, of Deer Isle, mariners
1800	POLLY & PHEBE	Schooner	87	70	22	7	Peter Hardy and Jonathan Haskell (mariner), of Deer Isle; Thomas Whitteredge and Timothy Wyer, of Beverly
1801	GEORGE WASHINGTON	Schooner	99	71	22	7	Reuben Rhode Island, Ezekiel Morey, Jonathan and Tristram Haskell (mariner), of Deer Isle
1805	MERCY	Schooner	98	67	22	8	David Thurlow and William Raynes (mariner), of Deer Isle; built on Thurlow's Island
1805	PEGGY	Schooner	71	61	20	7	James Cooper, of Deer Isle; Joseph Young and James Means (mariner), of Surry
1805	FOX	Schooner	41	45	17	7	Joshua Staples and Josiah Closson (mariner), of Deer Isle
1806	AMERICA	Schooner	111	72	23	6	David Sawyer, Richard & Ephraim Crockett, Joseph Crockett (mariner), of Deer Isle
1806	BOLINA	Schooner	106	72	23	8	Ignatius Haskell, of Deer Isle; Solomon Haskell, of Newbury; Ebenezer Small (mariner)
1807	"The big Haskell ship"	Ship	400 (about)	—	—	—	Mark Haskell & Sons (Solomon and Ignatius), Deer Isle
1807	PRESIDENT	Schooner	141	81	24	9	Reuben Rhode Island, Hezekiah Bowen, Jonathan Haskell (mariner), of Deer Isle
1807	BETSY & MARY	Schooner	35	39	15	6	Benjamin York, of Deer Isle, owner and mariner

In 1792 one of the builder-owners of the schooner *Ranger* was Jonathan Haskell, mariner; in 1794 Tristram Haskell, mariner, was the reported builder and owner of the sloop *Parrot;* and in 1795, records show, the schooner *Gideon* of 100 tons was built for "Ignatius Haskell, gentleman," with "Jonathan Haskell, mariner." In 1800, Jonathan Haskell was the reported mariner of the schooner *Polly & Phebe,* and the following year Jonathan and Tristram Haskell were part owners of the schooner *George Washington* (99 tons), with Tristram Haskell as mariner. In 1806, Ignatius and Solomon Haskell were the owners of record of the schooner *Bolina* of 106 tons, built that year; but we read that "the big Haskell ship," built in 1807 before the embargo, was constructed by Mark, Solomon, and Ignatius Haskell, of Deer Isle, and that "between 1800 and 1810 Mark Haskell and his two sons, Ignatius and Solomon, under the firm name of Mark Haskell & Sons, built several brigs and schooners and one ship of about 400 tons." In this list, the Haskell family is not credited with building any brigs prior to 1815 (*Laurel;* 165 tons), but the Haskells were interested in shipbuilding in the district from 1792, when the pioneer schooner *Ranger* (99 tons) was built, to the construction of the brig *Julia E. Haskell* (345 tons) and the schooner *Carrie E. Spofford* (89 tons) in 1868—a period of seventy-six years.

An interesting situation in ship ownership is evident from the recorded part ownership of the schooner *George Washington* (99 tons), built in 1801, and of the schooner *President* (141 tons), built in 1807. The principal owner of these sizable schooners of the period, as

registered, was Reuben Rhode Island, of Deer Isle, a Negro and the son of an escaped slave known as Newport Rhode Island. Reuben was described by contemporaries as the son of Negro parents and "an enterprising man who acquired considerable property" and "died unmarried in 1827."

According to Hosmer's HISTORY OF DEER ISLE, David Thurlow, of Newbury, settled on Thurlow's Island about 1800. He is locally credited with building a sawmill and seventeen vessels, one a brig of 150 tons, on the island before 1840, and in all early records the family name is spelled "Thurlo." According to available official records, the schooner *Mercy* (98 tons) was the first vessel built on Thurlow's Island; the builder was David Thurlow and the stated date 1805. There is a record of the building of the schooner *St. Paul* of 81 tons by David Thurlow, of Deer Isle, on Thurlow's Island in 1837, and apparently the largest vessel built by Thurlow on his island was the brig *Sarah & Phoebe* of 148 tons, launched in 1828. The Thurlows mentioned in the records are David, Jesse, Jeremiah, David, Jr. (mariner), and Paul.

The following list gives the largest and most important vessels of each type and rig, with dimensions and particulars, built at Deer Isle, Thurlow's Island, and Isle au Haut during the various periods as stated from 1812 to 1870 inclusive. There was no ship construction in the district during the four years 1808-1811 inclusive, and building in the nineteenth century terminated with the completion of the small schooner *J. B. Stinson* of 51 tons, launched at Deer Isle in 1870 for the Stinsons.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1810-1814	HAZARD	Schooner	1812	153	81	24	9
	BOAZ (pink)	Schooner	1812	62	58	17	7
	BETSEY	Sloop	1813	50	49	17	7
1815-1819	LAUREL	Brig	1815	165	81	24	10
	LUCRETIA	Schooner	1815	138	78	23	9
	ELIZABETH	Schooner	1817	121	75	23	8
	LYDIA (pink)	Schooner	1819	76	63	17	8
	ROEBUCK	Schooner	1817	74	66	20	7
	ANN (pink)	Schooner	1818	69	62	17	7
1820-1824	—	Bark	1820	—	—	—	—
	HOPE	Schooner	1823	66	57	18	6
	CYNTHIA (pink)	Schooner	1821	30	37	11	6
1825-1829	SARAH & PHOEBE	Brig	1828	148	83	24	9
	HENRY & LUCY	Schooner	1826	78	63	18	8
	ELIZA ANN	Schooner	1828	54	53	16	8
1830-1834	LA GRANGE	Brig	1833	192	81	22	12
	THURLO	Schooner	1832	107	72	21	8
	ORIOLE	Schooner	1832	106	75	21	8
	EMPEROR	Schooner	1833	88	67	18	8
1835-1839	FREDERICK PEARL	Brig	1835	116	73	23	8
	J. W. DRISKO	Schooner	1836	168	—	—	—
	SUSAN & JANE	Schooner	1837	98	69	23	8
	ST. PAUL	Schooner	1837	81	62	18	9
1840-1844	NORWEST	Schooner	1844	106	71	23	8
	REVEREND SALVATION JOHN MURRAY (pink)	Schooner	1840	35	39	12	6
1845-1849	SUSAN & ABIGAIL	Brig	1846	159	85	26	9
	SAMUEL WHITMORE	Schooner	1849	126	82	23	8
	ARCTURUS	Schooner	1847	122	78	24	8

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	PERSEVERANCE	Schooner	1848	109	76	24	8
	SUSAN & MARY	Schooner	1848	74	66	20	7
1850-1859	FRANKLIN	Schooner	1850	124	78	22	8
	SUNBEAM	Schooner	1851	68	62	17	7
	A. FIFIELD	Schooner	1851	54	53	16	7
	MY FANCY	Schooner	1858	41	38	13	6
1860-1870	JULIA E. HASKELL	Brig	1868	345	119	28	15
	ALPINE	Schooner	1869	110	—	—	—
	CARRIE H. SPOFFORD	Schooner	1868	89	—	—	—
	J. B. STINSON	Schooner	1870	51	64	21	6

In 1816 the schooner *Shakespeare* (tonnage unknown) was built by Pearl & Frederick Spofford, of Deer Isle. Frederick, a younger brother of Pearl, was on board the vessel, together with a cargo of merchandise owned by the firm, when the schooner was lost with all hands in 1818. The same Spofford interests built the schooner *Elizabeth* of 121 tons in 1817. In 1835 the brig *Frederick Pearl* of 116 tons was built by Pearl Spofford, and the Spoffords were described as "among the leading merchants and shipowners of Deer Isle since 1800." In 1868 the schooner *Carrie H. Spofford* of 89 tons was built by J. G. Haskell, of Deer Isle, and this vessel, when eighteen years old and laden with granite, was lost on Plum Island in a snowstorm in 1886.

The schooner *Clio* (64 tons), built in 1817, was in service for fifty-six years, but was lost in 1873. The little schooner *Mary* of 30 tons, built in 1819 by Mark Haskell and Hezekiah Rowell, Deer Isle, was lost in 1820, when only one year old. Capt. Jacob Carlton is reported to have "built a bark and two large schooners at the Thoroughfare, Isle au Haut, some time before 1839, when he removed to Winterport." This is the bark reported built at Isle au Haut in 1820 and, apparently, was the only vessel of this rig built in the Deer Isle, Thurlow's Island, and Isle au Haut district. Only one vessel was built in this region between 1839 and 1844, and that was the schooner-rigged "pink" *Reverend Salvation John Murray* of 35 tons, built by Jacob & Daniel Carlton, Deer Isle (Theophilus Eaton, master), which was named after Rev. John Murray, of Gloucester, said to have been "the founder of Universalism."

In Hosmer's History of Deer Isle, it is said that "in 1860 there were owned by the inhabitants of Deer Isle about ten thousand tons of vessels, a large part of which were employed in the fisheries." Outside of the brig *Julia E. Haskell* of 345 tons, built in 1868, no vessel built in the district between the embargo of 1808 and the end of construction in 1870 exceeded 200 tons, and only two of sixty-five fore-and-afters, reported built in the area during the entire period 1792-1870 inclusive, registered more than 150 tons, these being the schooner *Hazard* of 153 tons, built in 1812, and the schooner *J. W. Drisko* of 168 tons, built in 1836.

The following two-masted schooners are recorded as built at Deer Isle in the twentieth century: *Enterprise* of 58 tons (length 70.5 ft., beam 21.8 ft., depth 6.8 ft.), built in 1909; *Mercantile* of 41 tons (length 71.1 ft., beam 21.4 ft., length 5.3 ft.), built in 1916; and *Billings Bros.* of 52 tons (length 58.9 ft., beam 21.5 ft., depth 5.5 ft.), built in 1922.

C. Swan's Island

The following vessels are reported as having been built on Swan's Island during the period 1793-1867 inclusive. Building of small craft on the island, according to tradition, was rather steady around the end of the eighteenth century but quite intermittent thereafter.

Period Inclusive	Number of Vessels			Tonnage of Vessels		
	Schooners	Sloops	Total	Schooners	Sloops	Total
1793-1799	2	1	3	117	38	155
1800-1819	1	—	1	102	—	102
1820-1839	3	—	3	259	—	259
1840-1849	5	—	5	467	—	467
1850-1859	1	—	1	95	—	95
1860-1867	1	—	1	105	—	105
Total 1793-1867	13	1	14	1,145	38	1,183

Only fore-and-afters were built at Swan's Island, and the dimensions and known particulars of the fourteen vessels mentioned are set forth herewith:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1793	POLLY	Schooner	21	—	—	—	John Prince
1794	HAWK	Sloop	38	—	—	—	Edward Howard, farmer; Jacob Booden, of Penobscot, mariner
1797	SWAN	Schooner	96	64	22	8	Joseph Prince; Daniel Adams, mariner
1803	EXPERIMENT (rebuilt at Belfast in 1815)	Schooner	102	68	23	8	William Norwood, of Vinalhaven; Stephen Babbage, of Deer Isle; Thomas Verrell, mariner
1820	ANN	Schooner	51	52	16	7	Richard Hawes, Isaac Coffin, of Castine; George W. Staples, mariner
1827	ARCADIE	Schooner	126	79	23	8	Israel Lunt, owner and master; built by Ebenezer Joyce and Alexander Staples
1829	NANCY	Schooner	82	60	18	9	Thomas Cushing, of Thomaston, owner and master
1842	CATHERINE	Schooner	—	—	—	—	Silas Hardy, master builder
1843	PEARL	Schooner	74	62	19	7	Silas Hardy, of Swan's Island; Samuel Adams, of Castine; Nelson Herrick, mariner
1844	YOUNG JAMES	Schooner	—	—	—	—	Silas Hardy, owner and master builder
1845	HENRY M. JOHNSON	Schooner	120	77	22	8	Silas Hardy (mariner), of Marshall's Island; Albion Lunt, of Long Island; John Dresser, of Castine
1849	CHALLENGE	Schooner	88	69	21	7	John Stockbridge; Roderick Joyce, mariner
1856	MARIA WHITNEY	Schooner	95	66	20	8	Benjamin Stinson; Joseph Gott, mariner
1867	REBECCA M. ATWOOD	Schooner	105	—	—	—	Foundered off Carolina coast in 1877 when bound from Philadelphia to Nevis, B.W.I.; crew saved by ship TONAWANDA

It is evident that vessels were built on the islands of the Penobscot and in various locations on the east and west banks of the bay, where suitable timber was growing for use in ship construction. Very few of the Penobscot Bay shipyards could be considered as permanent locations as far as the industry was concerned. Builders changed their sphere of operations freely as timber in or near certain localities was cut out, and owners resident in one town frequently built on an island or in some other location on the bay when they considered it economic to do so. There are names of Penobscot owners, builders, and mariners that are identified with some particular geographic setting, others with a general location of larger area, but some families seem to have been associated throughout a century of building with operations in a good part of the Penobscot Bay territory.

XXXIV.

CAMDEN AND ROCKPORT, MAINE

With a Shipbuilding Record Dating from 1792 to 1919, the District Comes into Prominence in the Launching of Sizable Down Easters and the Building of Schooners

CAMDEN, the first sizable town north of Rockland on the west bank of Penobscot Bay, has an important shipbuilding tradition dating back to colonial days. In the early days of the republic, the McGlathery yard had a reputation for building good schooners and sloops, and Noah Brooks's yard was evidently well known for building and repairs during the time of the War of 1812 with Britain and subsequent thereto. Rockport lies about two miles south of Camden and about five or six miles north of Rockland, on the west shore of Penobscot Bay. It did not come into prominence as a shipbuilding locality until the demand for larger vessels during the seventies and eighties compelled Penobscot Bay shipbuilders to take advantage of those building sites where sizable ships could be laid down and from which Down Easters of from 1,500 to 2,500 tons could be launched economically and safely.

The following table gives a record of the vessels of which statistics are available, with their tonnage, known to have been built in the Camden-Rockport district during the period 1792-1919 inclusive. The list is obviously incomplete, particularly in the early years.

	Number of Vessels							Tonnage of Vessels						
Period Inclusive	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total
1792-1799	—	—	—	—	2	2	4	—	—	—	—	174	57	231
1800-1809	—	—	—	—	3	—	3	—	—	—	—	293	—	293
1810-1819	—	—	—	1	10	—	11	—	—	—	150	616	—	766
1820-1829	—	—	—	3	11	—	14	—	—	—	490	976	—	1,466
1830-1839	—	2	—	4	20	1	27	—	544	—	964	1,993	52	3,553
1840-1849	4	6	—	12	31	—	53	2,175	1,580	—	2,248	2,812	—	8,815
1850-1859	7	5	—	13	32	—	57	6,156	2,539	—	3,480	3,165	—	15,340
1860-1869	1	9	—	6	29	—	45	1,200	4,731	—	2,347	5,361	—	13,639
1870-1879	3	10	1	—	13	—	27	4,749	8,600	505	—	3,234	—	17,088
1880-1889	3	1	2	—	27	—	33	6,971	1,448	1,275	—	15,518	—	25,212
1890-1899	1	—	1	—	22	—	24	1,788	—	777	—	20,568	—	23,133
1900-1909	—	—	—	—	15	—	15	—	—	—	—	25,534	—	25,534
1910-1919	—	—	—	—	1	—	1	—	—	—	—	1,143	—	1,143
Total 1792-1919	19	33	4	39	216	3	314	23,039	19,442	2,557	9,679	81,387	109	136,213

Many more vessels were built at Camden in the late eighteenth century and the first decades of the nineteenth century than can be traced by available records today. For instance, the "Journal" of the Rev. Paul Coffin, D.D., dated August 15, 1796, says: "One ship and a schooner have this year been launched here [Camden] and six or seven heavy vessels are on the stocks." Yet no record of a single vessel built at Camden during the years 1795, 1796, and

1797 has been preserved. Whereas it is well known that William McGlathery, merchant and captain, operated a shipyard at Camden from 1791 to 1799 (when he moved to Frankfort and engaged in shipbuilding there), definite records have been found of only three of the many vessels built at the McGlathery yard, and they were constructed during the years 1792-1794 inclusive. It has been stated in early documents that William McGlathery, sometimes referred to as Capt. William McGlathery, "built the first vessels in Camden." Noah Brooks moved from Scituate, Mass., to Camden in 1806 and established a shipyard there. Generally referred to as Captain Brooks, he built vessels at Camden steadily until 1819, when he moved to South Boston and became a prominent shipbuilder there; yet records are available of only three vessels built at Camden by Noah Brooks and these during the years 1806, 1816, and 1817. The absence of data of ships constructed by Brooks during the entire nine-year period 1807-1815 inclusive is significant. The following record is an admittedly very incomplete list of the vessels built at Camden prior to 1820; but evidently it comprises all the craft for which statistics in regard to name, size and type, date of building, etc., have been preserved.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1792	INDUSTRY (1ST)	Sloop	26	—	—	—	William McGlathery, merchant; Asa Hosmer, mariner
1793	PEGGY	Schooner	100	—	—	—	William McGlathery, merchant; Benjamin Condon, mariner
1794	INDUSTRY (2ND)	Sloop	31	44	15	6	Built in the McGlathery yard; Robert Thorndike, of Rockport, owner and mariner
1798	EAGLE	Schooner	74	65	21	7	Thomas Adams, Nathaniel Martin, of Camden; John & Joseph Perkins and Doty Little, of Castine. Barnabas Philbrook, mariner
1801	MARY	Schooner	95	74	23	7	Nathaniel Hosmer et al., of Camden
1801	NANCY	Schooner	92	66	22	8	Rebuilt in Castine in 1819 and then owned by Pelathiah Leach, of Penobscot. Andrew Phillips, mariner
1806	CAMDEN (1ST)	Schooner	106	73	21	8	Built by Noah Brooks
1812	CLIO	Schooner	111	74	22	8	In 1837 owner was William Haskell, of Deer Isle
1814	HERALD	Schooner	24	40	13	6	Coburn Tyler, of Camden, and Wilder Perry, of Vinalhaven. William Larry, mariner
1816	MOXA	Schooner	104	75	22	8	Noah Brooks, Benjamin Cushing, Joseph Stetson (master carpenter); James Curtis, mariner
1817	ADVEHO	Schooner	103	73	22	8	Noah Brooks, Joseph Huse, of Camden; Charles Stevens, of Hope; Ebenezer Hudson, of Scituate; and John Anderson, of Boston. William Pendleton, mariner
1817	FAME	Schooner	46	55	17	6	Hosea Bates, of Camden, owner and mariner
1818	ADVENTURE	Schooner	72	61	18	8	Ignatius Sherman, John Dillingham (mariner), of Camden, and John Decrow, of Lincolnville
1819	HARRIOT & LUCY	Brig	150	79	22	10	William Norwood, Benjamin Cushing, James Curtis, Joseph Stetson (m.b.), and Joseph Huse (mariner), of Camden; William Farnsworth, of Waldoboro
1819	SHARK	Schooner	46	52	16	7	William Parkman, William Russ, Samuel & Frederic Jacobs, Ephraim Wood, Benjamin Cushing. Simon Hunt, mariner
1819	ARGO	Schooner	45	52	15	7	Ebenezer Thorndike, Alden Bass, William Carleton. Levi Stoddart, mariner
1819	CLEMENTINE	Schooner	43	51	15	7	Benjamin Cushing, Ephraim Wood; Simon Hunt, mariner
1819	SALLY & DORCAS	Schooner	22	37	13	5	Ira Brewster, of Camden; Joseph Brewster, mariner

In addition to the foregoing vessels, certain registers record a two-masted schooner *Ranger* of 98½ tons, which is credited as having been built at Camden in 1795. The dimensions stated are length 70 ft., beam 22 ft., depth 7 ft. 5½ in. The two-masted schooner *Albion* of 100-75/95 tons (length 72 ft., beam 20 ft. 9 in., depth 7 ft. 9 in.) is recorded as built at Camden in 1805.

The first vessel recorded as built at Camden by Noah Brooks, a very competent shipbuilder, was the schooner *Camden (1st),* constructed in 1806. The second vessel recorded as built by him was the schooner *Moxa,* built in 1816 after the close of the War of 1812, and it is said that Joseph Stetson was the master carpenter during the building of this vessel. Joseph Stetson is of importance in the history of Camden shipbuilding. He was born at Scituate, Mass., trained as a shipwright at the Charlestown Navy Yard, and in 1814 went to Lake Champlain and helped to build there an emergency American war fleet out of green timbers. In 1815, he went to Camden to work for Noah Brooks and apparently was foreman during the construction of the 104-ton schooner *Moxa.* In 1819, Noah Brooks left Camden for Boston, and Joseph Stetson, master builder, took over the Brooks shipyard and built his first vessel there, the 150-ton brig *Harriot & Lucy,* that year. It is said that "Deacon [Joseph] Stetson, from 1819 to 1853, built over seventy vessels in Camden."

The schooner *Herald* was rebuilt at Camden in 1841, when the vessel was twenty-seven years old, and her tonnage was increased one-third, becoming 32 instead of 24 tons.

The schooner *Adveho* (103 tons), built in 1817, was lost in 1825, when eight years old; the schooner *Adventure* (72 tons), built in 1818, was lost in 1823, when five years old; and the schooner *Clementine* (43 tons), built in 1819, was lost in 1826, when seven years old.

The following table gives a list of the largest and most important vessels known to have been built in the Camden-Rockport district during the various periods set forth from 1820 to 1919, which year marked the end of shipbuilding in the area.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1820-1829	ELBA	Brig	1824	187	83	23	11
	SALLY & ESTHER	Brig	1821	157	82	23	10
	HENRY BENNETT	Brig	1828	146	84	23	9
	MILO	Schooner	1826	120	75	22	8
	PEIRCE	Schooner	1826	112	76	23	7
	LAUREL	Schooner	1825	103	74	23	7
1830-1839	CHANTICLEER	Bark	1838	282	105	24	12
	TARQUIN	Bark	1839	262	99	24	12
	DANUBE	Brig	1839	278	97	20	13
	ALBANO	Brig	1838	276	98	24	13
	BORODINO	Brig	1837	264	97	24	13
	GAZELLE	Brig	1837	146	83	23	9
	WANDERER	Schooner	1832	142	76	23	10
	JUSTICE	Schooner	1835	129	78	23	8
	NORMAN	Schooner	1836	120	75	21	9
	ALERT	Sloop	1835	52	52	18	7
1840-1844	JOSEPH JONES	Ship	1840	785	—	—	—
	MEGUNTICOOK	Ship	1841	536	131	28	14
	TENNESSEE	Ship	1840	457	125	28	14
	MONTPELIER	Bark	1841	264	102	24	12
	GENERAL GREENE	Bark	1843	243	97	24	12
	CAPTAIN JOHN	Brig	1843	223	96	24	11
	THOMAS P. HART	Brig	1841	188	90	24	10
	CAROLINA	Brig	1841	166	87	24	9
	N. G. BOURNE	Brig	1841	130	81	23	8
	JOHN	Schooner	1841	143	81	22	9
	NORTH STAR	Schooner	1840	99	74	19	8

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Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1845-1849	ALICE GRAY	Ship	1847	397	120	27	14
	O. J. CHAFEE	Bark	1849	365	118	26	13
	HAMILTON	Bark	1846	275	—	—	—
	HOWLAND	Bark	1845	260	—	—	—
	SUWANEE	Brig	1848	244	95	25	9
	OCILLA	Brig	1847	214	98	25	10
	ZENOBIA	Brig	1847	200	—	—	—
	GEORGE E. PRESCOTT	Schooner	1848	149	90	24	8
	BROTHERS	Schooner	1848	140	—	—	—
	JOHN TUNIS	Schooner	1847	130	—	—	—
1850-1854	WANDERING JEW (1ST)	Ship	1853	1,140	180	38	—
	PRESIDENT FILLMORE	Ship	1852	850	—	—	—
	BORODINO	Ship	1854	791	—	—	—
	BENJAMIN HOWARD	Ship	1851	650	—	—	—
	GLANCE	Ship	1851	525	—	—	—
	BERTHA	Bark	1850	517	138	29	14
	WELKIN	Bark	1853	496	131	30	20
	SAMUEL G. ADAMS	Brig	1854	288	—	—	—
	SURF	Brig	1852	269	101	27	11
	BALTIC	Brig	1854	265	108	27	10
	TOCCOA	Brig	1854	230	—	—	—
	TALLULAH	Brig	1853	200	—	—	—
	MAINE LAW	Schooner	1853	186	92	24	9
	N. BERRY	Schooner	1852	149	85	24	8
	TENNESSEE	Schooner	1850	122	—	—	—
1855-1859	ZULEIKA	Ship	1859	1,200	190	38	24
	THIRTY-ONE STATES	Ship	1856	1,000	168	34	17
	R. A. ALLEN	Bark	1856	566	135	30	12
	AURELIA	Bark	1855	561	—	—	—
	ADELINE C. ADAMS	Bark	1856	399	124	30	12
	KATAHDIN	Brig	1856	349	120	27	12
	JESSE RHYNAS	Brig	1855	309	115	27	11
	LIZABEL	Brig	1856	298	112	28	11
	J. McINTYRE	Brig	1856	289	116	28	11
	LUCY A. ORCUTT	Schooner	1856	198	96	26	9
	C. F. YOUNG	Schooner	1859	195	96	26	9
	SNOW SQUALL	Schooner	1856	187	94	25	9
	ANNA SHEPHERD	Schooner	1858	187	—	—	—
1860-1864	AUGUSTA NORWOOD	Ship	1860	1,200	—	—	—
	SARAH D. CARLETON	Bark	1863	616	143	31	19
	EVA H. FISK	Bark	1864	496	145	30	19
	SANDY HOOK	Bark	1863	425	127	29	12
	R. B. GOVE	Brig	1864	463	123	30	12
	BREWSTER	Brig	1862	349	116	28	12
	ABBIE BURSLEY	Schooner	1864	309	119	29	9
	D. TALBOT	Schooner	1864	285	107	28	10
	EDNA HARWOOD	Schooner	1863	283	108	27	10
	EMMA BACON	Schooner	1864	279	121	30	10
	SYBIL	Schooner	1862	210	—	—	—
1865-1869	SAMUEL D. CARLETON	Bark	1868	883	159	34	21
	ADELIA CARLETON	Bark	1865	594	140	30	19
	JOSIE MILDRED	Bark	1867	500	125	30	16
	J. G. NORWOOD	Bark	1869	473	—	—	—
	ROSINA	Bark	1865	406	126	28	12
	MARIA W. NORWOOD	Brig	1866	477	132	30	18
	FRED BLISS	Brig	1866	438	129	29	15
	C. S. PACKARD	Brig	1869	321	115	28	15
	RALPH CARLETON	Schooner	1866	338	113	28	10
	EMMA F. HART	Schooner	1866	328	129	26	11
	DEXTER WASHBURN	Schooner	1867	296	102	26	15
	NELLIE BOWERS	Schooner	1868	296	109	26	15

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Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1870-1874	JOHN PASCAL	Ship	1874	1,470	206	40	24
	P. J. CARLETON	Bark	1870	986	170	35	22
	HARRIET N. CARLETON	Bark	1873	873	170	36	21
	HENRY KNIGHT	Bark	1870	488	128	30	16
	LORINDA BORSTEL	Barkentine	1874	505	131	30	16
	JOHN BIRD	Schooner	1870	355	121	29	15
	ARMIDA HALL	Schooner	1871	298	127	29	12
	ANEROID	Schooner	1873	260	129	30	10
1875-1879	WANDERING JEW (2ND)	Ship	1877	1,737	219	40	29
	RAPHAEL	Ship	1875	1,542	222	40	24
	JENNIE HARKNESS	Bark	1879	1,373	206	38	23
	MONHEGAN	Bark	1876	1,173	189	36	20
	RICHARD PARSONS	Bark	1878	1,159	189	37	23
	J. H. BOWERS	Bark	1875	734	164	33	19
	JOHN M. CLARK	Bark	1876	719	148	33	19
	MIRIAM	Bark	1877	598	—	—	—
	EDWARD CUSHING	Bark	1875	497	138	31	16
	R. BOWERS	Schooner	1879	436	150	33	12
	FOSTINA	Schooner	1879	383	137	31	12
	FLORA ROGERS	Schooner	1877	376	138	33	12
1880-1884	ROBERT L. BELKNAP	Ship	1884	2,251	264	43	28
	WILLIAM H. MACY	Ship	1883	2,092	255	43	28
	ADOLPH OBRIG	Bark	1881	1,448	208	38	23
	FRED E. RICHARDS	Barkentine	1882	644	167	35	18
	ADDIE MORRILL	Barkentine	1882	631	165	35	18
	JONATHAN BOURNE	Schooner	1883	673	169	36	17
	JOHN F. MERROW	Schooner	1882	668	145	35	19
	SARAH E. WARD	Schooner	1884	577	176	35	15
	MAY O'NEIL	Schooner	1883	574	150	34	16
	RACHEL & MAUD	Schooner	1884	475	152	35	12
1885-1889	FREDERICK BILLINGS	Ship	1885	2,628	282	45	29
	MILLIE G. BOWNE	Schooner	1889	1,680	235	47	22
	CORNELIUS HARGRAVE	Schooner	1889	1,402	211	45	22
	POCAHONTAS	Schooner	1887	1,382	234	47	20
	KING PHILIP	Schooner	1886	1,224	211	42	20
	MOUNT HOPE	Schooner	1887	1,105	204	42	20
	JAMIE CARLETON	Schooner	1888	472	157	35	13
1890-1894	S. D. CARLETON	Ship	1890	1,788	240	44	25
	MANNIE SWAN	Barkentine	1891	777	166	36	19
	J. HOLMES BIRDSALL	Schooner	1894	1,520	218	43	22
	MARJORIE	Schooner	1890	1,460	216	45	20
	MARY MANNING	Schooner	1894	1,234	210	41	19
	KATHERINE D. PERRY	Schooner	1891	1,125	193	40	22
	R. & T. HARGRAVE	Schooner	1891	783	173	39	18
	WILLIAM JOHNSON	Schooner	1890	777	174	38	18
	ALICE HOLBROOK	Schooner	1890	723	170	36	18
	FANNIE ARTHUR	Schooner	1891	614	171	38	13
1895-1899	JOHN B. PRESCOTT	Schooner	1899	2,454	300	44	23
	JENNIE FRENCH POTTER	Schooner	1899	1,993	258	44	21
	HENRY W. CRAMP	Schooner	1896	1,630	232	44	19
	ANNA MURRAY	Schooner	1899	1,534	225	43	22
	ALMA E. A. HOLMES	Schooner	1896	1,209	202	41	18
	ANNIE L. HENDERSON	Schooner	1896	428	140	33	13

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Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1900-1904	GEORGE W. WELLS	Schooner	1900	2,970	319	49	23
	SAMUEL J. GOUCHER	Schooner	1904	2,547	282	48	23
	T. CHARLTON HENRY	Schooner	1902	2,422	274	49	23
	ARTHUR SEITZ	Schooner	1901	2,207	272	46	23
	VAN ALLENS BOUGHTON	Schooner	1900	2,129	264	47	23
	MARGARET HASKELL	Schooner	1904	2,114	252	48	21
	MALCOLM BAXTER, JR.	Schooner	1900	1,732	226	45	21
	ADDISON E. BULLARD	Schooner	1904	1,485	219	43	20
	WINFIELD S. SHUSTER	Schooner	1904	1,481	218	43	20
	EDGAR W. MURDOCK	Schooner	1902	1,451	217	43	20
	J. C. STRAWBRIDGE	Schooner	1901	861	183	37	17
	ANNIE	Schooner	1901	613	172	37	13
1905-1909	HELEN J. SEITZ	Schooner	1905	2,547	282	48	23
	FRANK M. LOW	Schooner	1909	542	156	34	14
	FRANK E. SWAIN	Schooner	1909	433	139	32	13
1919	CHARLES A. DEAN	Schooner	1919	1,143	195	40	20

In the foregoing list, all the twenty-four schooners built during the period 1893-1919 (the end of ship construction in the Camden-Rockport district) have been set forth as well as all the nineteen full-rigged ships and all the sizable square-riggers built during the years 1820-1919 inclusive.

The schooner *Camden (2nd)* of 91 tons, built in 1820, was captured by pirates off the Isle of Pines in 1821. The crew was landed on Bahia Honda after a fight with the pirates, and the schooner's men remained on the island for eight days without food and water before they were picked up. The schooner *Peirce* of 112 tons, built in 1826, was sunk off Thatcher's Island in 1887 during a severe easterly gale; she was sixty-one years old when lost, and her crew was saved by the schooner *J. P. Merriam.* The schooner *Forest* of 60 tons, sometimes credited as being built at Camden, was built many miles inland, but launched in the bay; this vessel is listed as built at Lincolnville, and the hauling of the craft by oxen to tidewater is described elsewhere. The schooner *Helen Mar* (67 tons), built in 1832 for Ephraim Hosmer, Camden, et al., was in service for forty-six years, but in 1878 she was run into and sunk in Long Island Sound. The schooner *Hannah* (70 tons), built in 1834, was lost on Mosquito Island in 1874, when forty years old. The schooner *Lucy Blake* (104 tons), built in 1835, was later rebuilt and renamed *Adrian,* and the schooner *Ceylon* (99 tons), built the same year, was lost on Cape Henry in 1853, when eighteen years old. The brig *Borodino* (264 tons), built in 1837, was lost when two years old, and the bark *Chanticleer* (282 tons), built in 1838, was lost when three years old. The brig *Danube* (278 tons), built in 1839, was lost in 1843, when four years old.

In 1840 the first full-rigged ships were built in both Camden and Rockport. The square-rigger *Joseph Jones* of 785 tons was launched at Camden and the ship *Tennessee* of 457 tons at Rockport. (The *Joseph Jones* was lost in 1860, when the ship was twenty years old.) The schooner *Mary Clark* of 74 tons, also built in 1840, traded for thirty-six years, but burned at sea off the New Jersey coast in 1876. The ship *Megunticook* of 536 tons, built in 1841, was sold to the British in 1861 at the start of the Civil War and was renamed *Garibaldi.* The schooner *Iowa* of 83 tons, built in 1842, lived to a ripe old age, as she was in service in 1893, when fifty-one years old. The bark *General Greene* (243 tons), built in 1843, was sold to the Germans and renamed *Venus.*

In 1825, William Carleton, of Rockport, built the schooner *Lion* of 54 tons and, in 1832, the schooner *Granville* of 63 tons; but the first vessel built by the firm of Carleton & Norwood, which was destined to become famous, was the schooner *Del Norte* of 94 tons, launched in 1844. Carleton & Norwood and Carleton, Norwood & Company are credited with building a

fleet of sixty-three vessels during the years 1844-1892 inclusive, a period of forty-nine years, and it is said that "with but one exception all these vessels were built in the yard of John Pascal at Rockport." The following list gives the vessels built by Carleton & Norwood (and Carleton, Norwood & Company). In the last two years that the firm was in business (1891 and 1892), it constructed five vessels (all schooners), launching three of them in 1892—the last year that the firm operated. These schooners were all of the vessels built at Rockport and Camden in that year.

Year	Name of Vessel	Rig	Tonnage
1844	DEL NORTE	Schooner	94
1845	HOWLAND	Bark	260
1846	HAMILTON	Bark	275
1846	PALO ALTO	Brig	153
1847	ALICE GRAY	Ship	397
1847	ZENOBIA	Brig	200
1847	THOMAS F. KNOX	Brig	164
1847	JOHN TUNIS	Schooner	130
1848	BROTHERS	Schooner	140
1849	O. J. CHAFEE	Bark	365
1850	BERTHA	Bark	517
1851	BENJAMIN HOWARD	Ship	650
1852	PRESIDENT FILLMORE	Ship	850
1852	SURF	Brig	269
1853	WANDERING JEW (1ST)	Ship	1,140
1853	TALLULAH	Brig	200
1854	BORODINO	Ship	791
1854	TOCCOA	Brig	230
1856	THIRTY-ONE STATES	Ship	1,000
1856	R. A. ALLEN	Bark	566
1856	KATAHDIN	Brig	349
1856	J. McINTYRE	Brig	289
1859	ZULEIKA	Ship	1,200
1859	A. HORTA	Brig	250
1860	AUGUSTA NORWOOD	Ship	1,200
1862	KATE CARLETON	Schooner	206
1863	SARAH D. CARLETON	Bark	616
1864	R. B. GOVE	Brig	463
1865	ADELIA CARLETON	Bark	594
1866	MARIA W. NORWOOD	Brig	477
1866	RALPH CARLETON	Schooner	338
1867	DEXTER WASHBURN	Schooner	296
1868	SAMUEL D. CARLETON	Bark	883
1868	NELLIE BOWERS	Schooner	296
1868	MARIA W. NORWOOD	Schooner	130
1869	J. G. NORWOOD	Bark	473
1870	P. J. CARLETON	Bark	986
1871	WILLIE LUCE	Schooner	133
1872	STEPHEN BENNETT	Schooner	244
1872	JOE CARLETON	Schooner	95
1873	HARRIET N. CARLETON	Bark	873
1873	ANEROID	Schooner	260
1874	JOHN PASCAL	Ship	1,470
1875	RAPHAEL	Ship	1,542
1875	J. H. BOWERS	Bark	734
1876	MONHEGAN	Bark	1,173
1877	WANDERING JEW (2ND)	Ship	1,737
1878	RICHARD PARSONS	Bark	1,159
1879	JENNIE HARKNESS	Bark	1,373
1881	ADOLPH OBRIG	Bark	1,448
1882	FRED E. RICHARDS	Barkentine	644
1882	ADDIE MORRILL	Barkentine	631
1883	WILLIAM H. MACY	Ship	2,092
1884	ROBERT L. BELKNAP	Ship	2,251
1885	FREDERICK BILLINGS	Ship	2,628
1888	JAMIE CARLETON	Schooner	472
1889	EDWARD S. STEARNS	Schooner	338
1890	S. D. CARLETON	Ship	1,788
1891	GEORGE TWOHY	Schooner	570
1891	EMMA KNOWLTON	Schooner	372
1892	HATTIE C. LUCE	Schooner	336
1892	IRENE THAYER	Schooner	263
1892	ADELIA T. CARLETON	Schooner	247

The schooner *Delaware* (84 tons), built in 1844, was in service for fifty-eight years, but was lost on Mark Island in 1902. The bark *Howland* (260 tons), built by Carleton & Norwood et al., of Rockport, in 1845, was sold for a whaler; the bark *Hamilton* (275 tons), built by the same firm in 1846, was sold at Cape Town, South Africa, and renamed *Springbok*. The schooner *Thomas C. Bartlett* (100 tons), also built in 1846, for Josiah Hopkins et al., Camden, was rebuilt in 1869, when twenty-three years old, and renamed *Forest Belle*. The brig *Zenobia* of 200 tons, built by Carleton & Norwood et al. in 1847, was a rather famous early clipper brig and was known as a fast and classy as well as "fancy vessel." It is said that she "had two sets of topgallant masts and carried two skysails in fair weather." The schooner *George E. Prescott* (149 tons), built in 1848 for Samuel G. Adams, of Camden, et al., was still trading in 1908, when sixty years old. Of the other vessels built in the district in the same year, the schooner *Francis A. Baker* (68 tons) foundered off Cape Cod in 1878, when thirty years old; the schooner *Amazon* (61 tons) was lost on Race Point, Cape Cod, in 1883, when thirty-five years old; and the schooner *Lamartine* (103 tons) was sunk off Cape Cod in 1893, when forty-five years old.

The schooners *Lucy Baker* (63 tons) and *Ocean Wave* (61 tons), built in 1849, were lost on Peak's Island in 1866 and on Beach Point, Truro, in 1876, ending their careers when seventeen and twenty-seven years old, respectively. The schooner *Belle Creole* (88 tons), built the same year, was wrecked off Port Clyde in 1867, when eighteen years old, and the bark *O. J. Chafee,* also launched in 1849, was lost on South Shoal; while another Carleton, Norwood & Company bark built the following year (1850), the *Bertha* of 517 tons, was lost in the China Seas. Three schooners built in 1850 came to tragic ends. The *Tennessee* (122 tons) was run into and sunk in Vineyard Sound in 1877, when twenty-seven years old; the *W. H. Lovett* (60 tons) was wrecked on Lowell's Rock, Penobscot Bay, in 1880, when thirty years old; and the *Edward Stanley* (49 tons) was lost on Cape Cod in 1886, when thirty-six years old. Another 1850-built schooner, the *Abeona (2nd)* of 105 tons, is known to have been trading in 1885, when thirty-five years old, and the schooners *Antelope* (65 tons) and *Herald* (85 tons), each built in 1851, were wrecked on Norman's Woe in 1881 and in Muscle Ridge Channel in 1900, when thirty and forty-nine years old, respectively. Carleton, Norwood & Company's ship *Benjamin Howard,* also built in 1851, was sold to Denmark and is credited with making many fast passages under the Danish flag. The brig *Surf* of 269 tons, built by Carleton, Norwood & Company, Rockport, et al. in 1852, was said to be "a handy, snappy sailer" and a "clipper brig"; she was lost at Key West in 1870, when eighteen years old, and was too full-modeled to be rated as a clipper. The schooners *David Brown, Jr.,* of 63 tons and *Julia Newall* of 78 tons were lost on the Fox Islands in 1877 and on Cape Ann in 1878, being twenty-five and twenty-six years old, respectively, when their ends came.

The 1,140-ton ship built by Carleton, Norwood & Company in 1853 was named *National Eagle* when launched, but she was renamed *Wandering Jew* before she put to sea. The ship was sold to Australia in 1863, during the Civil War, and was renamed *Lottie Maria.* In 1870 she was condemned and sold at St. Thomas. (A second *Wandering Jew* was a Down Easter built at Rockport in 1877.) Carleton, Norwood & Company also built the brig *Tallulah* of 200 tons in 1853 for the Savannah trade. Because of her fast sailing, big sail spread, and sporty appearance, she was popularly referred to as "a Rockport clipper brig." Three of the four schooners built in the Camden-Rockport district in 1853 met tragic ends. The *Geo. R. Lanfair* (66 tons) was lost on Cape Ann in 1873, when twenty years old; the *Sunbeam* (45 tons) was lost in Boston Harbor in 1881, when twenty-eight years old; and the *East Wind* (92 tons) was lost in 1893, when forty years old. Another schooner, the *Boston Light* of 57 tons, built in 1854, was lost on Kittery Point in 1884, when thirty years old. The ship *Borodino* of 791 tons, built by Carleton, Norwood & Company in 1854, was sold in England, and the brig *Samuel G. Adams* of 288 tons, built at the same time, was sold at Matanzas, Cuba. The brig *Toccoa* of 230 tons, also built in 1854, was another of Carleton, Norwood & Company's little fast sailers. Constructed for the Savannah trade and popularly known as a "clipper brig," she apparently degenerated into a slaver. We are told that she was caught in that illegal trade and "sawed in two." Three schooners were built in the Camden-Rockport district in 1855, and all were long-lived. The *Diadem* (65 tons) was lost on Ash Island, Muscle Ridge Channel, in 1906, when fifty-one years old; while the *Olive Arey* (58 tons) and *Jonathan Cone* (112 tons) are known to have been afloat and in service when forty-eight and fifty-three years old, respectively.

The sizable ship *Thirty-One States* (1,000 tons), built by Carleton, Norwood & Company in 1856, was lost on the coast of Spain with most of her crew; but another vessel constructed in the same yard, the same year, the bark *R. A. Allen* (566 tons), was trading in 1885, when twenty-nine years old, as was also the bark *Adeline C. Adams,* built in Camden in 1856. The brig *Katahdin* (349 tons), also launched by Carleton, Norwood & Company, Rockport, in 1856, was later renamed *Colleen Bawn.* The end of two of the five schooners built in the district in 1856 is known. The *Ellen H. Gott* (95 tons) was sunk by ice in the Potomac River in 1877, when she was twenty-one years old, and the *Cherokee* (85 tons) was condemned and broken up in 1879, when the vessel was twenty-three years old. The schooner *James Garcelon* of 64 tons, built in 1858, met disaster when eighteen years old, as she was lost on Cape Small

Point, with all hands, in 1876. The schooner *Anna Shepherd* of 187 tons, built the same year, was lost on Devil's Back Ledge, Boston Harbor, in 1899, but she was forty-one years old when her end came.

The ship *Augusta Norwood* of 1,200 tons, built by Carleton, Norwood & Company in 1860, was sold in Calcutta because of the Civil War and went under the British flag. The schooner *E. G. Knight* (149 tons), built for Elbridge G. Knight et al., Camden, at the same time, was burned and foundered off Cross Rip Lightship in 1884, when twenty-four years old; but another schooner, *Red Jacket* (136 tons), also launched in 1860 for Jabez A. Amesbury et al., Rockport, was afloat and in service in 1908, when forty-eight years old. Of the seven vessels (two barks, one brig, and four schooners) built in the Camden-Rockport area in the Civil War years of 1862-1863, the bark *Sarah D. Carleton* (616 tons) was sold in the Argentine on her maiden voyage and renamed *Enrique;* the bark *Sandy Hook* (425 tons) was sold to Italy and significantly renamed *Alabama;* the brig *Brewster* (349 tons) was sold in San Francisco; the schooner *Sybil* (210 tons) was sold in Nassau; and the *Kate Carleton,* a schooner of 206 tons, was put under the British flag at Nassau by Carleton, Norwood & Company and was sold for use as a grain elevator in Boston Harbor in 1885, when she was twenty-three years old. The brig *R. B. Gove* (463 tons), built in 1864, was lost on the Florida Reefs in 1882, when eighteen years old; the schooner *Justus M. Lewis* (159 tons) capsized and was abandoned off Barnegat in 1867, when only three years old; the schooner *D. Talbot* (285 tons) foundered in a gale off Florida in 1875, when eleven years old; and the schooner *Ella May* (91 tons), also built in 1864, came to her end on York Beach in 1911, when forty-seven years old.

The bark *Adelia Carleton* of 594 tons, built in 1865 by Carleton, Norwood & Company, of Rockport, saw thirty years of steady service as a square-rigger, but was sold in 1895 to be cut down for use as a towing coal barge. Of the four schooners built in 1866, the *Clara Belle* (156 tons) was lost at sea in 1872, when six years old; the *Ralph Carleton* (338 tons) was abandoned and foundered off Cape May in 1879, when thirteen years old; and the *Laura T. Chester* (69 tons) was lost on Kittery Point in 1882, when sixteen years old. The schooner *Dexter Washburn* (296 tons), built in 1867, was wrecked on the Florida coast when only three years old; the schooner *Mary E. Van Cleaf* (256 tons), also built in 1867, struck a sunken wreck and foundered off Beaufort, S.C., in 1884, when seventeen years old; while the schooner *Allie Oakes* (120 tons), built at the same time, was burned at Hyannis in 1890, when twenty-three years old. The bark *Samuel D. Carleton* of 883 tons, built by Carleton, Norwood & Company in 1868, was sold to the city of New York in 1886, when eighteen years old, for use as a quarantine ship. The brig *Theresa Butler* (299 tons), built the same year, was sold to Italy and renamed *Aurora.* Of the four schooners built in 1868, three were wrecked by running ashore. The *Nellie Bowers* (296 tons) was lost on Richmond's Island in 1890, when twenty-two years old; the *Abbie H. Hodgman* (145 tons) on Monomoy Bar in 1891, when twenty-three years old; and the *Annie L. Wilder* (112 tons) on Negro Island, Camden, in 1905, when thirty-seven years old. The bark *J. G. Norwood* of 473 tons, built in 1869 by Carleton, Norwood & Company, Rockport, came to a tragic end; for on a passage from Galveston to Europe, laden with cotton, she was lost with all hands. The brig *C. S. Packard* of 321 tons, built the same year, came to her end on Key Verde, Cuba, in 1885, when sixteen years old. The bark *Henry Knight* (488 tons), built at Camden in 1870, was burned at sea off Double Shot Key, West Indies, in 1885, when fifteen years old, but her crew was saved, being picked up in the bark's boats. The bark *P. J. Carleton* (986 tons), built at Rockport the same year, after twenty successful years of trading as a square-rigger, was sold in 1890 for conversion to a coal towing barge.

Only six schooners and no square-riggers were built in the district in 1871-1872, and five of them came to a premature and tragic end. The *Stephen Bennett* (244 tons) was sunk off Portland, the *Bertha J. Fellows* (146 tons) was wrecked on Common Flat Bar in 1885, when thirteen years old, and the *Willie Luce* (133 tons) was destroyed by fire at Charleston,

S.C., the same year, when fourteen years old. The *Joe Carleton* (95 tons) was run into and sunk off Monhegan in 1902, when thirty years old, and the *Laura Woods* (95 tons) was lost on Cape Elizabeth in 1905, when thirty-four years old. The two vessels built in 1873 met disaster. The bark *Harriet N. Carleton* of 873 tons was lost in the Sandwich Islands in 1878, when five years old, and the schooner *Aneroid* of 260 tons, under the command of Capt. Nathaniel Talbot, sailed from Philadelphia and "went missing." The ship *John Pascal* of 1,470 tons, the first vessel of over 1,200 tons built in the Camden-Rockport area, was constructed in 1874 by Carleton, Norwood & Company at Rockport and named after the firm's master builder. But little is known of this ship for the reason that she was most unfortunate, being burned at sea in 1875 on the return passage of her maiden voyage between New York and Calcutta. Capt. Henry Talpy was in command. On the homeward run, the cargo of linseed and jute caught fire by spontaneous combustion. With the ship in flames, she was abandoned. The mate's boat reached St. Helena, and the ship *Victory,* commanded by a Searsport captain, picked up the captain's boat.

The ship *Raphael* was built by Carleton, Norwood & Company at Rockport, Maine, and was launched October 28, 1875. Of 1,542 tons register, she measured 222 ft. long, 40 ft. beam, and 24 ft. deep. This Down Easter was employed principally in trade to Australia and the Far East, where she gained the reputation of being "a good carrier and a smart sailer." She made only two westbound and four eastbound Cape Horn passages. Her average time was not good for a supposedly fast sailer. She went out in 138 and 154 days, respectively (an average of 146 days), and eastbound she averaged 128 days, the best being a passage of 103 days from San Francisco to Queenstown, grain laden. The *Raphael* was sold in November 1893 to Capt. A. Y. Trask, San Francisco, and put in the Pacific coastwise coal trade. On July 7, 1895, while at Tanglefoot Bay, near Karluk, and under charter to salmon cannery interests for a voyage, she dragged the mooring buoys in a bad storm, went ashore, and became a total loss when twenty years old.

The bark *J. H. Bowers* of 734 tons, also built by Carleton, Norwood & Company at Rockport in 1875, was sold in Boston for the Buenos Aires trade; she was condemned in 1900, when twenty-five years old. The sizable bark *Monhegan* of 1,173 tons, built by the same company in 1876, was burned at Newcastle, N.S.W., Australia, and was condemned and sold in 1882, when six years old.

The Down Easter *Wandering Jew* of 1,737 tons gross and 1,650 tons net register (length 219 ft., beam 40 ft., depth 29 ft.) was built for Carleton, Norwood & Company, of Rockport, by John Pascal, master builder, and launched in September 1877. This vessel was "a fine looking ship in all respects and famous in her day." She is said to have been "one of the two flush-decked full-rigged ships ever built in the United States." She gained the reputation of being a fast sailer, and on her first voyage from Philadelphia to Europe, thence to Hong Kong and across the Pacific to San Francisco, she covered 25,460 nautical miles in 190 days—an average of 134 miles per day and 5.6 knots. Her passage of 33 days from Hong Kong to San Francisco was a record fast run. Her first eastward Cape Horn passage was a run from the Golden Gate to Liverpool in 115 days. In 1895 the *Wandering Jew* raced from Hong Kong to New York with the *Tam O'Shanter,* built by E. C. Soule at Freeport, Maine, in 1875. The ships left port in company, met on several occasions throughout the passage, and arrived at New York together, 95 days out. Returning to Hong Kong, the *Wandering Jew* was found to be on fire on October 30, 1895; she was scuttled, later raised, and made over into a freight landing barge on the river above Shanghai. The ship was eighteen years old when her days ended as a sailer. It was believed that she had been deliberately fired by members of the crew.

The bark *Miriam* of 598 tons, built in the district in 1877 for G. S. Follansby, of Belfast, et al., had a short life and a tragic end, as she was lost with all hands on the Florida coast in 1880, when only three years old. Capt. A. H. Parker's wife and daughter were aboard, and Roland Parker was mate.

The bark *Richard Parsons* of 1,159 tons, built in 1878 by Carleton, Norwood & Company, Rockport, et al., was driven ashore in a severe typhoon and lost in the Philippines in 1894, when the vessel was sixteen years old. The bark *Jennie Harkness* of 1,373 tons, built in the same yard the following year, was sold to Germany and later lost in the English Channel. Four schooners and no square-riggers were built in the district in 1880, and two of them were lost in 1887, when seven years old; these were the *Robbie L. Foster* of 431 tons and the *J. H. Eells* of 144 tons, the latter being wrecked on Nauset Bar. The *Adolph Obrig* was built at Carleton, Norwood & Company's yard at Rockport in 1881; she was rigged as a bark and measured 208 ft. 2 in. long, 38 ft. 6 in. beam, 23 ft. deep, and 1,445 tons register (also recorded as 1,448 tons). This bark, which was a flush-decked vessel, was sold in New York. She was lost with all hands off Cape Horn in 1900, when nineteen years old.

The barkentine *Fred E. Richards* of 644 tons, built in 1882 by Carleton, Norwood & Company, of Rockport, was sold to Boston owners for the River Plate trade, and she was lost on the Brazilian coast. Another barkentine, the *Addie Morrill* of 631 tons, built in the same yard during the same year, was sunk during a heavy gale off Portland, and the schooner *Fannie Leland* of 327 tons, also built in 1882, "went missing" on a passage from Bangor to New York. The ship *William H. Macy* of 2,202 tons gross and 2,092 tons net register (254 ft. 9 in. long, 43 ft. 2 in. beam, and 28 ft. 3 in. deep), built in 1883, was sold by Carleton, Norwood & Company, her builders and managing owners, to California parties in 1895, when the ship was twelve years old. Later, she returned to the Atlantic Coast, where she was sold for conversion to a coal barge. The schooner *Sarah D. J. Rawson* of 387 tons, built also in 1883, for Thomaston owners, was lost on Cape Lookout, but the crew was saved by a breeches buoy after the men had been in the rigging for twenty hours. The schooner *Lizzie M. Eells* of 109 tons, built at the same time, was abandoned off Cape Cod, and the vessel foundered in 1885, when only two years old.

The Down Easter *Robert L. Belknap* was a three-masted ship built by Carleton, Norwood & Company at Rockport, Maine, and launched in June 1884. She was fitted with three sets of double topgallant and three skysail yards. The *"Belknap"* was of 2,251 tons register, 264 ft. 8 in. long, 43 ft. 8 in. beam, and 29 ft. 3 in. deep. She was a good carrier and a better-than-average sailer. Her average time on five westbound around-the-Horn passages to San Francisco was 132 days. The average of six eastbound runs from the Golden Gate to North Atlantic ports was 122 days, the shortest (to Liverpool) being 110 days. The ship did some good sailing in 1890-1891, when she made San Francisco in 120 days from New York, thence to Liverpool in 113 days, and back again to San Francisco in 121 days. The three passages occupied 428 days (or only 1.17 years), of which 354 days, or 83 per cent of the time, were spent in the open sea. The distance covered was approximately 48,000 miles, and the average speed was around 5½ knots.

In 1892, Capt. Horace Staples, of Stockton, did a strange thing with the *"Belknap."* On a voyage from New York to Yokohama, he took the vessel past the Cape of Good Hope and then, instead of working northeast across the Indian Ocean to Anjer, made his course around Australia. The long passage of 163 days caused great anxiety and reinsuring at high figures. On the return voyage, Captain Staples was ordered to follow the usual China Sea run home via the Straits of Sunda. The *"Belknap,"* while on this course in late January 1893, went ashore on an uncharted reef near Natuna Islands and, with her cargo, became a total loss. The officers and crew reached Singapore in the ship's boats. The reef that wrecked the *Robert L. Belknap* is now charted as Belknap Reef.

As before stated, John Pascal was the master builder for Carleton, Norwood & Company and was in charge of the yard. Pascal's son was trained under him. When the big four-masted shipentine *Frederick Billings* was built, Pascal & Son, the registered builder, launched the vessel from the Rockport yard in August 1885. The *"Billings"* was the third four-masted shipentine built in the United States. The first was Donald McKay's extreme clipper *Great Republic* (4,555 tons; cut down to 3,356 tons), built in 1853; the second was the *Ocean King* of 2,516 tons,

built by Capt. N. L. Thompson at Kennebunk, Maine, in 1874. Later, this rig was adopted by Arthur Sewall & Company, of Bath, in the building of three of its last "Big Wood Four" (the *Shenandoah* of 3,406 tons, *Susquehanna* of 2,744 tons, and *Roanoke* of 3,539 tons, built 1890-1892) and in the construction of eight steel square-riggers of from 2,998 to 3,381 tons, built during the years 1894-1902 inclusive. The *Frederick Billings* was the largest square-rigged vessel ever built in Penobscot waters. She was 278 ft. long, 44 ft. 9 in. beam, and 29 ft. deep. She measured 2,628 tons gross and 2,497 net registered tons, and her deadweight capacity was said to be about 4,000 tons. Like the *Robert L. Belknap,* she was fitted with double topgallant yards and skysail yards on the fore, main, and mizzen; her royal masts were fidded, the main truck was 180 ft. above the deck, and the lower main yard was 90 ft. long.

The *"Billings"* sailed and carried well. Although built for the California trade, she made her maiden voyage loaded with case oil to Japan, following the delivery of which she crossed the northern Pacific from Kobe to San Francisco in ballast in 29 days. She arrived at San Francisco in June 1886 and then carried a wheat cargo to Havre, France, in the reported time of 112 days. The average of five eastward Cape Horn passages to North Atlantic ports was 120 days. Three from San Francisco to Havre averaged 115 days (112, 117, and 115 days, respectively), and she made two from the same port to Liverpool in 123 and 132 days, respectively, an average of 127½ days. The vessel made five westbound passages to San Francisco around the Horn, averaging 132½ days. Two from British ports (Cardiff and Liverpool) in 126 and 122 days, respectively, averaged 124 days, and three from New York averaged 138 days and were made in 145, 135, and 135 days, respectively. The *"Billings"* made a run to Seattle from San Francisco, returning with coal, and the round voyage occupied 38 days. Following her last arrival at San Francisco, which was in April 1893 from New York, she was chartered for the carrying of Chilean nitrate to Hampton Roads, Va., "for orders." After the ship took 3,800 tons of nitrate aboard in eight working days at Pisagua and was ready for sailing on July 29, 1893, fire was discovered. A series of terrific explosions completely destroyed the vessel in some twenty minutes of time. It was claimed that a disgruntled crew, rebellious because of claimed harsh treatment, was responsible for the fires that caused the explosions. None of the members of the crew lost their lives.

Only schooners (nine in number) were built in the Camden-Rockport district during the years 1886-1889 inclusive, but five of them were large vessels, as follows: *Millie G. Bowne* of 1,680 tons and *Cornelius Hargrave* of 1,402 tons, built in 1889; the *Pocahontas* of 1,382 tons, built in 1887; the *King Philip* of 1,224 tons, built in 1886; and the *Mount Hope* of 1,105 tons, built in 1887. Of the remaining four vessels, two were quite small (of 82 and 72 tons, respectively), and the other two were moderate-sized three-masters built by Carleton, Norwood & Company. The *Jamie Carleton* of 472 tons was run into and sunk by the British S.S. *Ardangorm* off Cape Henry in 1890, when the schooner was only two years old, and the *Edward S. Stearns* of 338 tons was lost on the Carolina coast in 1895, when six years old.

The *S. D. Carleton* was built by Carleton, Norwood & Company at Rockport in 1890. She was a Down Easter of 1,788 tons register, 240 ft. long, 44 ft. 4 in. beam, and 25 ft. 4 in. deep. Her maiden voyage (Capt. E. T. Amesbury) was a slow passage of 151 days made in wretched weather. She lost her topgallant masts off Cape Horn and was a whole month "battling to make westing." Returning east, she sailed from San Francisco in company with the Bath four-masted wood shipentine *Shenandoah,* the *M. P. Grace* (built in Bath, 1875), and two British ships, *Strathearn* and *Balkamah;* all the ships were bound for Havre except the *M. P. Grace,* whose port was New York. Both the *"Carleton"* and *Shenandoah* made good passages of 112 and 109 days, respectively, and the British ships were so badly beaten that the two Yankee vessels had discharged and cleared Havre before the first of the Britishers reached port. On the next westbound passage to California, the *"Carleton"* sailed the course with the *Shenandoah* and the *Tam O'Shanter.* The last two vessels reached the Golden Gate together 110 days out, but the *"Carleton,"* after leading her rivals to Lat. 44° S. in the

Atlantic, had a streak of bad luck; she ran into four days of heavy weather and was driven five hundred miles to leeward—a handicap that the ship could not overcome. She reached San Francisco a bad third, with a passage of 142 days from Philadelphia. On May 3, 1894, the *S. D. Carleton* arrived at Sydney after "a splendid run of 73 days from Prawle Point." In June 1895, the vessel was badly pooped when bound out to Melbourne round the Cape. In 1896 she went ashore on the Panjang Reef, Java, when bound to Shanghai from New York, but was refloated. Leaking badly, she made Singapore. On September 21, 1896, the *"Carleton"* sailed from Sydney with 1,470 bales of wool for London, where she arrived January 2, 1897, after a passage of 103 days. After the turn of the century, the *S. D. Carleton* became one of the California Shipping Company's fleet and for several years did a great deal of "timber droghuing" across the Pacific between Puget Sound and Australasia. Her name disappeared from the register in 1913.

The schooner *Marjorie* of 1,460 tons was built in 1890 for William B. Brown, of West Dennis, Mass., et al., who also had launched for him the same year the *Alice Holbrook* of 723 tons. Two other schooners built in the district in 1890 were the *William Johnson* of 777 tons for Peter B. Reed, of Lynnwood, N.J., et al. and the *William Smith* of 468 tons for local owners. The schooner *Katherine D. Perry* of 1,125 tons was built in 1891 and, during that same year, the barkentine *Mannie Swan* of 777 tons. Other 1891-built vessels consisted of six schooners of from 783 to 256 tons register. The *George Twohy* (570 tons) was burned at Para, Brazil, in 1893, when two years old; the *Emma Knowlton* (372 tons) was lost on the coast of Florida in 1906, when fifteen years old; and in this same year the *Ella G. Eells* (256 tons) came to her end, being lost on Libby Island, Machias, with the captain rescued but four men drowned. The three vessels built in 1892—all small schooners—came to a tragic end. The *Hattie C. Luce* of 336 tons was dismasted, sprang a leak, was abandoned, and foundered off Bermuda in 1898, when six years old. The *Irene Thayer* of 263 tons was lost on Hatteras, and the *Adelia T. Carleton* of 247 tons, after being sold in the Azores through Portuguese in Provincetown, was lost in the River Plate.

With the exception of the period of the seventies and to a lesser degree that of the forties, fifties, and sixties, when many brigs and barks were built, ship construction in the Camden-Rockport district always ran strongly to fore-and-afters. In the eighties, twenty-seven of the thirty-three vessels built were schooners; in the nineties, twenty-two out of twenty-four. After the building of the barkentine *Mannie Swan* of 777 tons in 1891, all the thirty-four vessels built in the district had fore-and-aft rig and were of from 256 to 2,970 tons register. The following table gives a list of the largest schooners built in the Camden-Rockport district during the years 1890-1919 inclusive:

Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage	Year Built	Name of Schooner	Tonnage
1900	GEORGE W. WELLS	2,970	1899	ANNA MURRAY	1,534	1891	R. & T. HARGRAVE	783
1904	SAMUEL J. GOUCHER	2,547	1894	J. HOLMES BIRDSALL	1,520	1890	WILLIAM JOHNSON	777
1905	HELEN J. SEITZ	2,547	1904	ADDISON E. BULLARD	1,485	1890	ALICE HOLBROOK	723
1899	JOHN B. PRESCOTT	2,454	1904	WINFIELD S. SHUSTER	1,481	1891	FANNIE ARTHUR	614
1902	T. CHARLTON HENRY	2,422	1890	MARJORIE	1,460	1901	ANNIE	613
1901	ARTHUR SEITZ	2,207	1902	EDGAR W. MURDOCK	1,451	1891	WILLIAM H. SUMNER	572
1900	VAN ALLENS BOUGHTON	2,129	1894	MARY MANNING	1,234	1891	GEORGE TWOHY	570
1904	MARGARET HASKELL	2,114	1896	ALMA E. A. HOLMES	1,209	1909	FRANK M. LOW	542
1899	JENNIE FRENCH POTTER	1,993	1919	CHARLES A. DEAN	1,143	1890	WILLIAM SMITH	468
1900	MALCOLM BAXTER, JR.	1,732	1891	KATHERINE D. PERRY	1,125	1909	FRANK E. SWAIN	433
1896	HENRY W. CRAMP	1,630	1901	J. C. STRAWBRIDGE	861	1896	ANNIE L. HENDERSON	428

The schooner *George W. Wells* of 2,970 tons, built in 1900 for George W. Wells, of Southbridge, Mass., et al., was the first six-masted schooner ever built. She was 319 ft. long.

The *Arthur Seitz,* a five-master of 2,207 tons and 272 ft. long, built in 1901 by Arthur Seitz, of Hoboken, N.J., was lost in Vineyard Sound in 1902, when only a year old. The moderate-sized schooners *Addison E. Bullard* (1,485 tons) and *Winfield S. Shuster* (1,481 tons), each built in 1904, and the *Annie* of 613 tons, launched in 1901, were owned by Frank Carleton, of Rockport, et al. The big schooners built in the Camden-Rockport district after the construction of the *Katherine D. Perry* of 1,125 tons in 1891, were generally for Massachusetts, New York, New Jersey, and Pennsylvania owners. The last vessel built in the area, the schooner *Charles A. Dean* of 1,143 tons, was constructed for the Boston Maritime Corporation in the post-war year of 1919 after shipbuilding had been terminated in the area for a period of ten years.

XXXV.

SHIPBUILDING ON PENOBSCOT BAY — MID-SECTION INCLUDING EAST AND WEST BANKS

A. Sedgwick and Brooklin

THE FOLLOWING number and tonnage of vessels are recorded as having been built at Sedgwick and Brooklin on the east part of the middle of Penobscot Bay during the period 1793-1882 inclusive:

Period Inclusive	Number of Vessels					Tonnage of Vessels				
	Barks	Brigs	Schooners	Sloops	Total	Barks	Brigs	Schooners	Sloops	Total
1793-1799	—	—	3	1	4	—	—	184	20	204
1800-1809	—	—	5	—	5	—	—	533	—	533
1810-1819	—	—	8	1	9	—	—	601	30	631
1820-1829	—	2	22	—	24	—	373	1,928	—	2,301
1830-1839	—	7	16	—	23	—	1,177	1,451	—	2,628
1840-1849	1	3	17	—	21	241	530	1,677	—	2,448
1850-1859	1	5	12	—	18	375	1,015	1,222	—	2,612
1860-1869	—	—	5	—	5	—	—	602	—	602
1870-1879	—	—	2	—	2	—	—	157	—	157
1880-1882	—	—	2	—	2	—	—	675	—	675
Total 1793-1882	2	17	92	2	113	616	3,095	9,030	50	12,791

The following record gives known particulars of the vessels built in the area during the years 1793-1819 inclusive. The *Trial (1st)* was built at Herrick Bay, the *Happy Couple* at Dority's Point, the *William & John* and the sizable schooner *Prince & Groves* at Allen's Cove, the *Lingan* at Well's Cove, the *Hannah* at Flye Point, the *Rowland & John* at Benjamin's River, and the schooners *Nancy* and *Leo* at Naskeag Point.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1793	TRIAL (1ST)	Schooner	67	—	—	—	John Dority and John Allen, of Brooklin
1793	ANNA	Schooner	23	—	—	—	Samuel Black, of Sedgwick; Elijah Winslow, of Salem
1794	LUCY	Sloop	20	—	—	—	Samuel Herrick, yeoman; Thomas Cousins, mariner; each of Brooklin
1798	TRIAL (2ND)	Schooner	94	70	21	7	Lemuel Smith, of Sedgwick; Daniel Osgood, of Blue Hill; Solomon York, mariner
1800	ULYSSES	Schooner	—	—	—	—	John Babson et al., Brooklin
1801	AMAZON	Schooner	103	70	23	8	David Carlton, of Sedgwick; James Brown, mariner

(Continued on next page)

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Owner, Builder, or Mariner
1801	COLUMBIA	Schooner	89	66	22	7	John Byard, Bartholomew Flowers, Daniel Morgan, John Hooper, of Brooklin
1804	LIBERTY	Schooner	100	74	22	7	Holden, Billings, Carver, Jordon, of Sedgwick; Bartholomew Flowers
1806	HAPPY COUPLE	Schooner	142	83	24	8	John Flye, John Dority, John Herrick; John Allen (mariner), of Brooklin
1811	WILLIAM & JOHN	Schooner	108	75	23	7	John Allen, of Brooklin, owner and mariner
1811	ELIZABETH	Sloop	30	45	14	6	John Allen, of Brooklin
1812	LINGAN	Schooner	130	79	23	8	William Wells, Brooklin; Doty Little, Castine
1812	PACKET	Schooner	37	50	14	6	James Babson, Brooklin; Joseph Babson (mariner), Newburyport
1816	PRINCE & GROVES	Schooner	163	88	24	9	John Allen, Brooklin; John Glover, mariner
1817	HANNAH	Schooner	39	51	16	6	John Flye; Jeremiah Hooper and Daniel Wentworth, of Brooklin
1818	ROWLAND & JOHN	Schooner	79	64	20	7	Rowland Carlton and John Means, of Brooklin; Daniel McKenzie, mariner
1818	NANCY	Schooner	22	38	12	6	Joseph Freethy, of Brooklin
1819	LEO	Schooner	23	43	12	5	Abraham Reed, of Brooklin; Joseph Reed, mariner

The *Liberty,* in late registers, is recorded as a two-masted schooner of 103-3/95 tons built in 1804 (70 ft. 4 in. long, 22 ft. 4 in. beam, and 7 ft. 9 in. deep). In the winter of 1819-1820, the schooner *Three Brothers* was reported as built at Sedgwick. Her registered tonnage was stated as 73-50/95 and her dimensions as length 42 ft., beam 11 ft. 6 in., and depth 5 ft. 6½ in. The sloop *Elizabeth,* built in 1811 by John Allen, of Brooklin, was constructed of materials salvaged from a wrecked vessel. She was re-rigged as a schooner in 1812 and must have been a sturdy, well-built vessel; for she was in service until 1874, being broken up when sixty-three years of age.

The following table gives a list, with particulars, of the largest and most important vessels of each type or rig built in the area during each of the periods stated:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet Length	Beam	Depth
1820-1824	AMAZON	Brig	1822	148	84	24	9
	SCIO	Schooner	1824	134	80	24	8
	OSPRAY	Schooner	1824	125	78	24	8
	JULIA ANN	Schooner	1823	98	72	23	7
	FAIR PLAY	Schooner	1820	56	58	18	7
1825-1829	VETERAN	Brig	1825	225	89	26	12
	ROZELLA	Schooner	1826	166	85	24	9
	CYPRUS	Schooner	1826	146	82	24	9
	EXAMPLER	Schooner	1826	134	82	24	8
	CADIZ	Schooner	1827	131	79	24	8
1830-1834	SPLENDID	Brig	1833	226	89	25	11
	PARVO	Brig	1832	206	87	25	11
	VESPER	Brig	1834	149	83	23	9
	AMBASSADOR	Schooner	1832	144	—	—	—
	SAVOY	Schooner	1834	94	80	22	7
	SAMARITAN	Schooner	1834	89	68	22	7
1835-1839	DIPLOMA	Brig	1839	168	83	23	10
	PACTOLUS	Brig	1835	155	84	23	9
	SCIENCE	Brig	1837	147	83	22	9

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	OROZEMBO	Schooner	1837	130	78	22	9
	SIAM	Schooner	1837	108	73	21	8
	PRESIDENT	Schooner	1835	100	73	21	8
1840-1844	WISCONSIN	Brig	1840	193	89	23	11
	PERUVIAN	Brig	1840	190	90	24	10
	SEA LION	Schooner	1844	117	—	—	—
	ROSCOE	Schooner	1842	108	74	23	7
	GRECIAN	Schooner	1844	105	78	22	7
1845-1849	F. A. EVERETT	Bark	1848	241	103	25	10
	WATSON	Brig	1846	147	87	23	9
	RIO	Schooner	1846	135	82	22	9
	MARY ANN	Schooner	1845	108	76	22	8
	ZULETTE	Schooner	1847	108	78	22	7
	ALMIRA	Schooner	1848	108	76	22	7
1850-1854	ABBY WATSON	Brig	1854	249	110	27	9
	PRINCETON	Brig	1853	194	95	25	9
	J. MEANS	Brig	1852	174	88	25	8
	MAGELLAN CLOUD	Schooner	1851	145	83	24	8
	H. W. WELLINGTON	Schooner	1850	127	81	24	8
	ADA FRANCES	Schooner	1853	106	78	23	7
1855-1859	FANNIE	Bark	1857	375	128	27	11
	OCEAN TRAVELLER	Brig	1855	227	110	27	10
	MARY MEANS	Brig	1855	171	93	24	8
	WM. H. SARGENT	Schooner	1858	172	98	27	8
	ROBERT DORITY	Schooner	1858	130	86	27	8
	FLORENCE	Schooner	1859	54	62	19	5
1860-1864	E. CLOSSON	Schooner	1860	195	96	26	9
	AVAIL	Schooner	1863	121	—	—	—
	INDIAN QUEEN	Schooner	1860	119	78	21	8
1865-1882	HOPE GOWER	Schooner	1882	350	141	32	11
	WYER G. SARGENT	Schooner	1881	325	131	32	11
	LAURA S. WATSON	Schooner	1865	115	89	24	8
	L. B. SARGENT	Schooner	1870	99	83	24	7
	M. E. TORREY	Schooner	1870	58	72	21	7

Of the vessels built in the Sedgwick-Brooklin area in 1818-1820 inclusive, all were schooners and of small tonnage, ranging from 22 to 79 tons. Five of the seven vessels were built at Naskeag Point, the largest being the *Fair Play* of 56 tons; the next in size was the *Four Brothers* (a schooner "pink") of 35 tons; and the other three were quite small craft of 24, 23, and 22 tons, respectively. The district at no time built large or even moderate-sized vessels, considering the period; only three craft of over 300 tons and nine of over 200 tons were constructed. The largest vessels built were the bark *Fannie* of 375 tons in 1857, the schooner *Hope Gower* of 350 tons in 1882, and the schooner *Wyer G. Sargent* of 325 tons in 1881. The next largest vessels launched in the area were:

Year Built	Rig	Name	Tonnage	Year Built	Rig	Name	Tonnage	Year Built	Rig	Name	Tonnage
1854	Brig	ABBY WATSON	249	1855	Brig	OCEAN TRAVELLER	227	1825	Brig	VETERAN	225
1848	Bark	F. A. EVERETT	241	1833	Brig	SPLENDID	226	1832	Brig	PARVO	206

Only six vessels of over 100 ft. in length were built, only seven of 27 ft. beam or over, and only seven with a depth of 11 ft. or more. After 1820 the specific locations recorded for building were Naskeag Point, Benjamin's River, Allen's Cove, Center Harbor, and Flye Point as well as the general designation of Sedgwick or Brooklin. Some of these vessels lived to a good age, indicating that they were well built and that good materials were used. The *Savoy,* built in 1834, was in service in 1898, when sixty-four years old; the *Elizabeth,* as already reported (built in 1811), was sixty-three years old when her usefulness terminated. The *Samaritan,* built in 1834, was trading in 1885, when fifty-one years old. The *Concert,* built in 1832, was wrecked in 1874 and came to her end, through no fault of her own, when forty-two years old. The *Grecian,* built in 1844 and renamed *Harry,* was in service in 1885, when forty-one years old. The *Martha Sargent,* built in 1853, was in active service in 1893, when forty years old, and the *Robert Dority,* built in 1858, was wrecked on Halibut Point, Cape Ann, in 1897, when thirty-nine years old and in good physical condition.

The schooner *George Henry* of 73 tons, built in 1836, was lost in 1869, when thirty-three years old; the schooner *H. W. Wellington,* built in 1850, was wrecked in 1872, when twenty-two years old; the brig *J. Means,* built in 1852, was wrecked at Carrituck Inlet, N.C., in 1874, also when twenty-two years old; and the brig *Abby Watson* of 249 tons, built in 1854, was lost with all hands on Cape Hatteras in 1877, when twenty-three years old. The brig *Ocean Traveller* was renamed *Covadonga.* The schooner *Laura S. Watson,* built in 1865, stranded on Chatham Bar, was run into by the schooner *Florida* in 1875, and became a total loss when ten years old. The schooner *M. E. Torrey,* built in 1870, leaked badly and became water-logged. She was abandoned off Scotia Island, Cape Breton, in 1887, when seventeen years old. Of the two relatively big schooners built in 1881-1882, the *Wyer G. Sargent* (325 tons) foundered off Hatteras in 1891, when ten years old (her crew was saved), and the *Hope Gower* (350 tons), the last vessel built in the Sedgwick-Brooklin area, was lost at the mouth of the Magdalena River in 1884, when only two years old.

B. Brooksville

Brooksville, to the north of Sedgwick on the east bank of Penobscot Bay, is credited with building the following vessels during the period 1793-1902 inclusive, but the list is probably far from complete.

Period Inclusive	Number of Vessels						Tonnage of Vessels					
	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schooners	Sloops	Total
1793-1799	1	—	—	2	3	6	100	—	—	226	201	527
1800-1809	—	—	—	1	1	2	—	—	—	114	86	200
1810-1819	—	—	—	3	—	3	—	—	—	173	—	173
1820-1829	—	—	—	3	—	3	—	—	—	254	—	254
1830-1839	—	—	—	5	—	5	—	—	—	359	—	359
1840-1849	—	—	3	4	—	7	—	—	470	461	—	931
1850-1859	—	2	2	17	1	22	—	615	500	1,834	52	3,001
1860-1869	—	—	—	7	—	7	—	—	—	1,027	—	1,027
1870-1879	—	—	—	2	—	2	—	—	—	298	—	298
1880-1889	—	—	—	2	—	2	—	—	—	135	—	135
1890-1899	—	—	—	2	—	2	—	—	—	185	—	185
1900-1902	—	—	—	1	—	1	—	—	—	74	—	74
Total 1793-1902	1	2	5	49	5	62	100	615	970	5,140	339	7,164

The following fourteen vessels, of which records have been preserved, are known to have been built in the Brooksville district during the years 1793-1821 inclusive:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1793	ENDEAVOR	Sloop	55	—	—	—	John Bakeman, farmer; Francis Bakeman, mariner
1794	LIBERTY	Schooner	116	—	—	—	John Bakeman, farmer; Thatcher Avery, mariner
1795	HARMONY	Sloop	56	—	—	—	Malachi Orcutt, of Brooksville, mariner
1796	HOPE (1ST)	Schooner	110	74	28	8	John Bakeman, of Brooksville; William Tyler and Richard Caswell, of Boston; John Bakeman, Jr., mariner
1797	SALLY	Sloop	90	68	21	7	John Allen; Richard Allen, mariner
1798	Name unknown	Ship	100	—	—	—	Built by John Bakeman at Goose Falls
1800	POLLY & HANNAH	Sloop	86	67	21	7	Samuel and John Wasson, of Brooksville; Joshua Hopkins, of Orland; Isaac Turner, mariner
1805	TRUE AMERICAN	Schooner	114	73	22	8	Francis Bakeman; Elisha Blake, mariner
1815	HERO	Schooner (pink)	35	46	15	6	John Foster; Paoli Hewes, mariner
1818	MARY ELIZABETH	Schooner	36	44	13	7	John Foster; Luther Bakeman, mariner
1819	HOPE (2ND)	Schooner	102	66	20	9	Francis Bakeman
1820	BETHIAH	Schooner	115	74	22	8	Jeremiah Jones; Samuel Wardwell, mariner
1820	BROOKSVILLE (1ST)	Schooner	107	73	22	8	Samuel Wasson, of Brooksville; Barker Brooks and Noah Mead, of Castine; Phineas Norton, mariner
1821	BEE	Schooner	32	42	13	7	Built at Brooksville for local owners

The following table gives particulars of the largest and most important vessels of each rig built at Brooksville during each of the stated periods:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1822-1839	POLAND	Schooner	1832	127	79	22	8
	PRESIDENT	Schooner	1830	72	72	22	7
	VICTORY	Schooner	1836	72	66	19	7
	LILLY	Schooner	1837	47	47	15	6
1840-1849	WASSON	Brig	1841	166	87	24	9
	MONACO	Brig	1840	155	84	21	10
	ROBERT RAMSAY	Brig	1848	149	86	24	8
	BROOKSVILLE (2ND)	Schooner	1848	149	85	24	8
	ST. LEON	Schooner	1849	146	88	24	8
	PHEBE ANN	Schooner	1849	93	75	22	7
1850-1859	LUCY FRANCES	Bark	1856	314	114	27	11
	ROBERT B. WALKER	Bark	1853	301	110	26	15
	GILMORE MEREDITH	Brig	1858	350	119	27	12
	EMMA W. RICHARDSON	Brig	1853	150	89	24	8
	HATTIE ANNAH	Schooner	1852	140	83	24	8
	R. H. MOULTON	Schooner	1850	136	86	23	7
	H. D. GRINDLE	Schooner	1852	136	86	24	8
	IMPROVEMENT	Sloop	1854	52	55	16	4
1860-1879	DAVID WASSON	Schooner	1867	230	113	28	10
	JOHN LYMBURNER	Schooner	1867	174	105	29	9
	LAURA H. JONES	Schooner	1870	157	96	26	7
	AUGUSTA M. GOTT	Schooner	1868	152	91	27	8

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	HENRY WHITNEY	Schooner	1869	147	96	26	9
	LOUISA SMITH	Schooner	1868	144	93	25	9
	ABBY WASSON	Schooner	1870	141	93	26	8
1880-1902	LYDIA M. WEBSTER	Schooner	1882	60	58	21	6
	ANNIE L. GREEN	Schooner	1886	75	68	22	7
	JAMES A. WEBSTER	Schooner	1890	110	86	27	7
	MILDRED MAY (2ND)	Schooner	1896	75	69	22	6
	JOANNA DURGAIN	Schooner	1902	74	68	22	7
	KATIE D. SEAVEY	Schooner	1902	55	65	22	7

In the foregoing list, all the vessels recorded as built in Brooksville after 1866 to the end of shipbuilding in that district are set forth, and the last six vessels built, following two schooners constructed in 1870, are recorded chronologically and not according to tonnage. Of the vessels built in the Brooksville district, the *True American, Hope (2nd),* and a little 100-ton ship were reported as constructed at Goose Falls, the *Gilmore Meredith* and *Robert B. Walker* at Buck's Harbor, the schooners *Phebe Ann, John Lymburner,* and *Augusta M. Gott* at North Brooksville; while the bark *Lucy Frances* and the schooners *Laura H. Jones* and *Abby Wasson* were launched at West Brooksville.

In 1844 the schooner *Essex* of 73 tons, built at Brooksville for Solomon Gray, of Sedgwick, and Benjamin Gray, of Penobscot, was commanded by Capt. Robert Lymburner, then eighteen years of age, this being the first vessel of which he was master. Captain Lymburner later changed the spelling of his name to Limeburner. In 1848, John and Robert Lymburner were part owners of the schooner *Brooksville (2nd)* of 149 tons, built at Brooksville at a total cost of $4,300 (or $29 per ton). When five years old, this schooner was abandoned in the North Atlantic, and "her crew was taken off the wreck by the brig *Gov. Brock.*"

The schooner *R. H. Moulton* of 136 tons, built at Brooksville in 1850 for the Wassons and the Grindles, was commanded by Capt. Thomas Tapley, then twenty-one years old, and was his first command. Young Tapley went to sea as a cabin boy when nine years old and spent sixty-two years of his life following the sea. He was a master for forty-two years. During the Civil War, Captain Tapley, in command of the clipper brig *Clara P. Gibbs* of 288 tons (a converted slaver), is said to have outsailed and escaped from the Confederate raider *Alabama.* The Tapleys were a seafaring family. The schooner *David Wasson* of 230 tons, constructed in 1867, was one of the earliest three-masted schooners built, and Capt. Jerome Tapley was her master. This vessel was "caught in a hurricane, struck by a tidal wave, and capsized [with a loss of three lives] on a passage to the West Indies in 1873." The survivors, including Captain Tapley, were picked up and carried to Rio de Janeiro, where they arrived shortly after the bark *Hattie Tapley,* commanded by Capt. Robert Tapley, had put into Rio in distress. We are told, "The Tapley brothers brought the vessels and the crews home."

The schooner *Augusta M. Gott* (152 tons), built in 1868 at North Brooksville, had a short and tragic career. We are told that the schooner, with a crew of six Brooksville men, was "caught in hurricane in Gulf Stream and capsized on maiden trip; crew on wreck 12 days without food or water; decision was taken to kill one of the number for food, and the lot fell on Erastus Cousins. His companions were on the point of executing him when a vessel was sighted. Cousins never got over the experience, became a confirmed stammerer, and never went to sea again."

The schooner *John Lymburner* (174 tons), built by John and Joseph Lymburner, of Brooksville, was lost at sea in 1870, when only three years old. The *Henry Whitney* (147 tons), built in 1869, was lost on Eastern Point, Gloucester, in 1901, when thirty-two years old. The two schooners *Laura H. Jones* and *Abby Wasson,* built in 1870, were lost in 1887, when

seventeen years old; the *"Jones"* was burned at Elizabethport, N.J., and the *"Wasson"* was lost on Pollock Rip, Nantucket Shoals. The schooner *James A. Webster* (110 tons), built in 1890, lived a long and useful life, being engaged in trade in 1931, when forty-one years old.

C. Penobscot

The township of Penobscot, with South Penobscot and North Penobscot on the east bank of Penobscot Bay, runs from Brooksville on the south to Orland at the head of an ocean inlet on the north. This part of the mid-Penobscot section never developed as a great shipbuilding center, but since the early days of the republic, some vessels were built there. Records show that at least thirty-eight brigs, schooners, and sloops were launched in this area during the years 1794-1872. These vessels and the known time of their construction can be briefly summarized as follows:

Period Inclusive	Number of Vessels				Tonnage of Vessels			
	Brigs	Schooners	Sloops	Total	Brigs	Schooners	Sloops	Total
1794-1799	—	1	2	3	—	109	159	268
1800-1809	—	5	1	6	—	454	33	487
1810-1819	—	5	—	5	—	412	—	412
1820-1829	—	4	—	4	—	449	—	449
1830-1839	1	4	—	5	189	365	—	554
1840-1849	—	5	—	5	—	344	—	344
1850-1859	1	4	—	5	170	400	—	570
1860-1869	—	2	—	2	—	161	—	161
1870-1872	—	3	—	3	—	226	—	226
Total 1794-1872	2	33	3	38	359	2,920	192	3,471

The following fourteen vessels are known to have been built in the Penobscot district or township prior to 1820:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1794	ENTERPRISE	Schooner	109	71	22	8	Jeremiah Wardwell, "gentleman"; Josiah Wardwell, mariner
1794	PATTY	Sloop	88	—	—	—	Thomas Binney, yeoman; Jacob Booden, mariner
1795	SEA FLOWER	Sloop	71	—	—	—	Pelatiah Leach, farmer; Simeon Bray, mariner
1800	MARY ANN	Schooner	120	75	23	8	James Ginn et al.
1801	ROYALL	Schooner	90	67	21	8	Reuben Grindle, of Penobscot; Daniel Johnson and Otis Little, of Castine; Stephen Grindle, mariner
1803	POLLY	Schooner	100	72	22	7	Samuel and Jeremiah Wardwell, William Stover, and William Hutchings
1807	RESOLUTION	Schooner	98	70	23	7	Samuel Herrick, of Penobscot; Doty Little, of Castine; Ebenezer Grant, mariner
1807	PACKET	Sloop	33	46	16	5	Pelatiah Leach; John Alley, mariner
1808	MORENDA	Schooner	46	54	16	6	William Hutchings, owner and mariner
1810	SEVEN SISTERS	Schooner	112	73	22	8	Jotham and Luxford Stover; George Perkins, mariner
1816	CASTINE PACKET	Schooner	110	70	23	8	Thatcher Avery; John Blodgett, mariner

(Continued on next page)

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Owner, Builder, or Mariner
1817	JET	Schooner	96	72	23	7	Thos. E. Hale, Mark and Jonathan Hatch, Jeremiah Perkins; Mark Hatch, Jr., mariner
1817	EIGHT BROTHERS	Schooner	69	60	18	7	Charles Snowman, Eliakim Hutchings; William Hutchings, mariner
1818	HARRIET	Schooner	25	—	—	—	Edward, John, Moses, Elias, and William Littlefield

The little schooner *Harriet,* built in 1818, was in active service for seventy-two years, but she capsized and sank off Rockport, Maine, in 1890.

The following record gives the size and particulars of the largest and most important of each type of the vessels built at Penobscot during each of the periods stated and regarding which statistics are available:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet Length	Beam	Depth
1820-1829	VERMONT	Schooner	1826	128	79	23	8
	SAPHRONIA	Schooner	1825	122	77	23	8
	MAINE	Schooner	1824	111	75	23	8
	MARGARET ANN	Schooner	1829	88	70	20	7
1830-1839	SAPPHO	Brig	1838	189	87	23	11
	JAMES	Schooner	1836	99	72	21	8
	LUCY & NANCY	Schooner	1834	98	72	21	8
	CORAL	Schooner	1835	91	69	18	8
1840-1849	MEDORA	Schooner	1848	100	73	20	8
	VIOLA	Schooner	1848	81	70	21	7
	OPHIR	Schooner	1849	59	64	20	6
	LAMARTINE	Schooner	1848	54	63	18	6
1850-1859	EMELINE	Brig	1851	170	89	25	9
	R. H. PERKINS	Schooner	1856	150	89	24	8
	R. LEACH	Schooner	1857	127	82	24	7
	MILLARD F. VARNUM	Schooner	1858	73	69	21	6
1860-1872	C. L. HERRICK	Schooner	1863	113	81	23	7
	ADDIE L. PERKINS	Schooner	1870	84	78	22	7
	ST. LEON	Schooner	1871	83	75	23	7
	IDA BLANCHE	Schooner	1872	59	74	22	6

All the vessels recorded as built at Penobscot during the years from 1841 to the end of shipbuilding in the district are enumerated with the exception of the 50-ton schooner *Jessie Benton,* which was built in 1856 for Penobscot and New Haven, Conn., owners.

The schooner *Lucy & Nancy* (98 tons), built in 1834, was thirty-nine years old when she was lost in 1873, and the schooner *James* (99 tons), built in 1836, was forty-three years old when broken up in 1879. At no time was Penobscot a very active shipbuilding town or community, and during the first six decades of the nineteenth century, only from four to six vessels were constructed in each of these ten-year periods. Moreover, the vessels built were quite small, and 95 per cent of them were schooners and sloops. The two largest vessels built, which were the only square-riggers, were the brigs *Sappho* of 189 tons and the *Emeline* of 170 tons. The largest schooners were the *R. H. Perkins* of 150 tons, the *Vermont* of 128 tons, and the *R. Leach* of 127 tons. Of the vessels built at intervals after 1857, the largest was the schooner *C. L. Herrick* of only 113 tons; the last vessel built in the district was the schooner *Ida Blanche,* launched in 1872, and she registered only 59 tons.

The pioneer shipbuilding family of Wardwell was interested in building at Penobscot from 1794 to 1835, the Leaches from 1795 to 1858, the Grindles from 1801 to 1856, the Hutchings' from 1803 to 1848, the Herricks from 1807 to 1863, and the Perkins' from 1810 to 1871. At times, however, during shipbuilding days, six, seven, or eight years would elapse with no construction. In only five years were two vessels built per year, and in 1848, when the record of three vessels constructed in one calendar year was made, the combined tonnage of the three schooners built for different owners totaled only 235 tons. It is evident that whereas Penobscot Bay was an important shipbuilding center, the town of Penobscot was not a building community and was not considered satisfactory for the construction of even very moderate-sized vessels at any time in the nineteenth century.

D. Castine

Castine was an early port of importance in the Penobscot and, as a fortified center, has a history dating back to the War of the Revolution. Sizable full-rigged ships were built at Castine in the latter part of the eighteenth century. In 1835 the 500-ton ship *St. Leon* was launched, in 1840 the 600-ton "full-rigger" *Adams,* and in 1848 the ship *William Jarvis* of 668 tons, built with a beam of 32 ft. In the clipper ship decade of the 1850's, Castine built nine square-rigged ships for deep-sea trade, six of which, launched in 1853-1857, were of over 1,000 tons register. None was a sharp-modeled clipper, all being built "to carry well at a fair rate of speed." In the sixties and seventies, Castine built no more full-rigged ships and launched its last vessel, the barkentine *J. W. Dresser* of 634 tons, in 1877. The following record, admittedly incomplete, is a synopsis of the vessels known to have been built at Castine during the period 1789-1877 inclusive:

	Number of Vessels						Tonnage of Vessels					
Period Inclusive	Ships	Barks, etc.	Brigs	Schoon-ers	Sloops	Total	Ships	Barks, etc.	Brigs	Schoon-ers	Sloops	Total
1789	—	—	—	1	—	1	—	—	—	115	—	115
1790-1799	2	—	—	8	3	13	624	—	—	949	240	1,813
1800-1809	2	—	3	6	2	13	449	—	457	578	147	1,631
1810-1819	1	—	5	5	—	11	291	—	835	414	—	1,540
1820-1829	2	1 steamer	6	7	1	17	675	99 (steamer)	999	771	58	2,602
1830-1839	1	—	—	5	—	6	505	—	—	500	—	1,005
1840-1849	2	4	2	8	—	16	1,260	1,524	344	1,037	—	4,165
1850-1859	9	1	5	9	—	24	9,244	646	1,384	938	—	12,212
1860-1869	—	—	1	12	—	13	—	—	214	1,502	—	1,716
1870-1877	—	1 barkentine	1	4	—	6	—	643 (barkentine)	264	820	—	1,718
Total 1789-1877	19	7	23	65	6	120	13,048	2,903	4,497	7,624	445	28,517

In the early days of the republic, Castine was actively interested in ships, and the account book of Col. Gabriel Johonet in 1786 carries the names of the following Castine citizens or residents who were identified with the building or operation of vessels: (a) shipwrights—Richard Hunnewell, Turner & Lawrence, William Turner, and Nathaniel Palmer (referred to as master carpenter); (b) sailmakers—Benjamin Lincoln and Benjamin Lunt; (c) mariners (or shipmasters)—Joseph Perkins, Hutson Bishop, John Bray, Thatcher Avery, Francis Booden, Nathaniel Perkins, Seth Blodgett, Thomas Fields, and Jesse Holbrook. (It is evident that some of these men were connected with shipbuilding in other towns in the Penobscot Bay area other than Castine.)

The following table gives a list of twenty-seven vessels built at Castine prior to 1810, for which records of name, size, and builder or owner are available:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1789	RANGER	Schooner	115	74	23	8	Joseph and John Perkins, farmers; Elisha Dyer, mariner
1790	VICTORY	Schooner	105	—	—	—	Thatcher Avery, owner and mariner
1791	NANCY	Schooner	115	—	—	—	Oliver Mann, physician; William Boyd, m. b.; Hutson Bishop, mariner
1792	FRIENDSHIP	Sloop	72	—	—	—	John Perkins, farmer; Joseph Wardwell, mariner
1792	RUSSELL	Sloop	64	—	—	—	Richard Hunnewell, merchant; Jonathan Holbrook, mariner
1793	ACTIVE	Schooner	135	76	23	9	James Crawford, merchant; Nathaniel Atkins, mariner
1793	FREEDOM	Schooner	120	73	23	9	Stover Perkins, farmer; David Dunbar, mariner
1794	DELIGHT	Schooner	108	74	22	8	Mark Hatch, merchant; Mark Hatch, Jr., mariner
1794	ENDEAVOR	Sloop	104	—	—	—	Mark Hatch, merchant; Mark Hatch, Jr., mariner
1795	MINERVA	Schooner	107	71	22	8	Joseph Perkins, farmer; Joseph Perkins, Jr., mariner
1796	ORONO	Ship	332	97	28	17	Robert Treat et al., of Bangor; Samuel Jameson, mariner
1796	JOHN & PHEBE	Ship	292	95	26	16	John Perkins; Elisha Dyer, mariner
1796	ABIGAIL	Schooner	116	75	23	8	Thatcher Avery, of Castine; Tyler and Caswell, of Boston; Simeon Bray, mariner
1798	RECOVERY	Schooner	143	76	23	10	Mark Hatch and Mark Hatch, Jr.
1800	ANSON	Schooner	106	71	20	8	Samuel and Abel Rogers; Jesse Holbrook, mariner
1801	LIBRA	Brig	168	81	24	10	Stover Perkins; John Perkins, Jr., mariner
1801	UNITY	Brig	139	75	23	10	Mark and Jonathan Hatch; Mark Hatch, Jr., mariner
1801	EIGHT SISTERS	Schooner	110	72	22	8	John Perkins; David Dunbar, mariner
1803	RUTHY	Ship	199	94	25	7	Samuel A. Whitney; Joseph Wescott, mariner
1804	PERSEVERANCE	Schooner	97	71	21	8	James Crawford; Isaac Nickerson, mariner
1805	DEFIANCE	Schooner	113	73	23	8	Jonathan and Mark Hatch; Stephen Perkins, mariner
1805	UNITED STATES	Schooner	112	74	22	8	Stover and John Perkins; Robert Parker, of Bangor; John Burgess, mariner
1806	VIGILANT	Brig	—	—	—	—	James Crawford et al.
1806	PACKET	Sloop	95	70	22	7	Daniel Johnson and Otis Little; Samuel Wardwell, mariner
1808	THUCYDIDES	Ship	250	(estimated)			James Crawford et al.
1808	SEVEN SISTERS	Schooner	40	39	12	5	Benjamin Howard; Edward Howard, mariner
1808	JANE	Sloop	52	53	17	6	Robert and John Perkins; John Bray, mariner

The builder of the schooner *Nancy* (115 tons) at Castine in 1791 was "Deacon" William Boyd, the master builder who constructed the first vessels launched at Bangor. Documents show that Boyd was hired by the owners to construct this vessel at Castine, and "The Deacon" made a legal protest in regard to non-delivery of materials as per contract. The schooner *Abigail* (116 tons), built in 1796, was captured by the French in the West Indies in 1810. The schooner *Recovery* (143 tons), built in 1798, was re-rigged as a brig in 1801. In Wheeler's HISTORY OF CASTINE, we read: "Sailing from Castine and owned there in 1799 were the following vessels: three ships, one brig, ten schooners, and two sloops, all engaged in

the foreign trade, besides smaller coasters." In the autobiography of Lemuel Norton, the brig *Vigilant,* built in 1806 for James Crawford et al., Castine, is referred to, and the statement is made that she "was one-sided, with one bow much fuller than the other, and would not lay to at all on one tack." The sloop *Packet* (95 tons), built the same year, was re-rigged as a schooner in 1812. The ship *Thucydides,* built for James Crawford et al., Castine, during the Jefferson embargo, was lost on the coast of Ireland in 1811, when less than three years old.

The following table gives the dimensions and particulars of the largest and most important vessels of each type built at Castine during each of the periods set forth. It is surprising that sizable construction terminated abruptly in 1857 and was never again resumed, although a halfhearted attempt was made to build a moderate-sized ocean-going barkentine some twenty years later and in 1864, during the Civil War, Castine built the largest two-masted schooner on record in the Penobscot region.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1810-1819	ATTICUS	Ship	1819	291	98	26	13
	PHOEBE	Brig	1815	194	90	26	10
	RETRIEVE	Brig	1811	186	90	25	10
	MARY JANE	Brig	1810	155	—	—	—
	HARVEST	Schooner	1819	116	74	23	8
	BEE	Schooner	1815	98	71	22	7
	SOUTHERN TRADER	Schooner	1817	89	67	20	7
1820-1829	ANTIOCH	Ship	1826	395	115	28	14
	LUCAS	Ship	1828	280	102	25	12
	RUPEE	Brig	1828	209	91	23	11
	FORTUNE	Brig	1826	183	89	24	10
	ADAMS	Brig	1821	182	82	23	11
	GEORGE	Brig	1827	153	84	23	9
	MARY JANE	Schooner	1824	134	82	22	8
	LUCY & MARGARET	Schooner	1825	132	83	22	8
	SAXON	Schooner	1825	125	81	22	8
	CHARLES	Sloop	1822	58	58	18	7
	HANCOCK	Steamboat	1827	99	89	18	7
1830-1839	ST. LEON	Ship	1835	505	134	29	14
	JOHN MURRAY	Schooner	1838	121	77	21	9
	CHOCTAW	Schooner	1838	120	80	20	8
	CURLEW	Schooner	1836	99	69	19	9
1840-1849	WILLIAM JARVIS	Ship	1848	668	142	32	16
	ADAMS	Ship	1840	592	143	30	15
	ELLEN NOYES	Bark	1849	417	122	27	14
	SARAH L. BRYANT	Bark	1847	357	110	27	13
	LUCIA FIELD	Bark	1845	350	111	26	13
	SUSAN CURRIER	Brig	1847	185	92	24	9
	BURMAH	Brig	1843	159	89	24	9
	SYLVANUS RICH	Schooner	1846	164	87	24	9
	LUCULLUS	Schooner	1846	145	86	23	8
	EGLANTINE	Schooner	1847	133	83	22	8
1850-1859	SAMUEL ADAMS	Ship	1854	1,178	184	37	19
	EDWARD HYMAN	Ship	1856	1,128	180	36	18
	PICAYUNE	Ship	1857	1,081	172	35	18
	CASTINE	Ship	1857	1,032	170	35	18
	HEZ. WILLIAMS	Ship	1856	1,030	163	34	17
	J. P. WHITNEY	Ship	1853	1,020	161	34	17
	OSTERVALD	Ship	1853	950	165	35	17

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	BENJAMIN THAXTER	Ship	1854	949	172	35	17
	WILLIAM WITHERLE	Ship	1851	876	162	34	17
	ANTIOCH	Bark	1859	646	142	31	20
	H. B. EMERY	Brig	1856	357	118	27	12
	WILLIAM MASON	Brig	1857	299	112	27	10
	ANNA PRENTISS	Brig	1854	289	108	27	11
	BARON DE CASTINE	Brig	1852	267	105	26	11
	FRANCES HATCH	Schooner	1854	125	82	21	8
	MARTHA BURGESS	Schooner	1853	118	76	21	8
	MARY BREWER	Schooner	1852	115	77	21	8
1860-1869	ANNIE GARDNER	Brig	1867	214	110	29	19
	KATE WENTWORTH	Schooner	1864	282	116	30	9
	ANNIE WHITING	Schooner	1866	181	101	27	10
	ANN CARLET	Schooner	1861	149	87	23	8
	JAMES BROPHY	Schooner	1860	138	84	23	8
1870-1877	J. W. DRESSER	Barkentine	1877	634	138	32	18
	SILAS N. MARTIN	Brig	1870	264	109	27	9
	OLIVE CROSBY	Schooner	1874	296	117	28	10
	ANNA W. BARKER	Schooner	1873	246	105	27	8
	CLARA FLETCHER	Schooner	1874	226	115	28	9
	RAIL ROAD	Schooner	1872	52	54	20	6

The brig *Abeona,* built in 1811 for Witherle, Jarvis, Hale, and Blodgett, of Castine, was reported to have cost $8,528 when completed, but the tonnage is unknown. If the vessel cost about $40 per ton, an estimated tonnage of 213 tons would make her the largest brig constructed at Castine not only in the second decade of the century but also prior to the building of the *Baron de Castine* in 1852. The reported cost of several vessels of various types and sizes built at Castine during the years 1824-1859 inclusive is as follows:

Year Built	Name of Vessel	Rig	Tonnage	Stated Cost			
				Hull and Spars		Completed Vessel	
				Total	Per Ton	Total	Per Ton
1824	ECHO	Schooner	117	$2,600	$22	$ 3,500 (estimated)	$30
1825	WILLIAM & JOHN	Schooner	84	1,700	20	2,807	33
1826	ANTIOCH	Ship	395	(built by day's work)		27,721	70
1835	ST. LEON	Ship	505	(built by day's work)		33,462	66
1836	CURLEW	Schooner	99	(copper-fastened and copper-sheathed)		5,750	58
1840	LOCHIEL	Schooner	128	(built by contract)		6,000	47
1844	PEMBROKE	Schooner	111			4,308	39
1847	SARAH L. BRYANT	Bark	357			21,343	60
1847	SUSAN CURRIER	Brig	185			8,903	48
1851	WILLIAM WITHERLE	Ship	876			46,787	53½
1854	SAMUEL ADAMS	Ship	1,178			73,000	62
1859	ANTIOCH	Bark	646			26,522	41

Samuel Noyes was the master builder in the construction of the schooners *Echo* and *William & John* and the ships *Antioch* and *St. Leon* (also probably of the schooner *Curlew* and other vessels). William Witherle, of Castine, was the principal owner of all the vessels whose cost figures are stated.

A ship named *Canova* of 344 tons (length 111 ft., beam 26 ft., depth 13 ft.) was bought by Witherle & Jarvis, of Castine, when building at the yard of Treat & Parker at Winterport.

When launched, she was towed to Castine for rigging and completion and is, therefore, often referred to as a Castine-built ship. (One of her guns is mounted in front of the Castine Town Hall.) The ship *Antioch* was lost at Port Jolie, Nova Scotia, in 1841, when fifteen years old; this was eighteen years before her owner, William Witherle, gave the same name to the 646-ton bark *Antioch,* which he built in 1859.

The steamboat *Hancock* (99 tons), built in 1827 by Samuel Noyes (master builder) for the Penobscot Steam Boat Navigation Company, of which Otis Little was president, was evidently a peculiar experimental craft that did not come up to expectations. We read of her: "She had one deck and one mast. Her engine had no boiler, the steam apparatus being constructed on the 'Babcock' principle. Her machinery was installed in Boston; it broke down before she got out of the harbor, and she was towed back. What became of her is not known."

The ship *Adams* of 592 tons, built in 1840, was put under the British flag during the Civil War and renamed *Saguenay.* The schooner *Pembroke,* built in 1844, capsized in the Gulf of Mexico when two years old. The crew was on the wreck nine days without food and water, and all died with the exception of Capt. James Hatch, who was taken off by a British vessel and carried to Glasgow, where he died soon after being put ashore. The schooner *Samuel Noyes* (103 tons), built in 1845 and named after Castine's foremost master builder, was lost with all hands during a passage to Cuba in 1848. The bark *Sarah L. Bryant* of 357 tons, built in 1847 for William Witherle et al., of Castine, was sold to Chile and renamed *Tarando.* The brig *Susan Currier,* built the same year (also for Witherle), was lost near Turks Island in 1849, when only two years old. A Castine-built bark, the *Byron* (tonnage unknown), launched in 1849, was abandoned at sea in 1854, when on a passage from Charleston, S.C., to Nantes. William Witherle was one of her owners. The full-rigged ship *William Witherle* of 876 tons, built at Castine in 1851, was sold to the Germans at Hamburg and renamed *Selma.* The schooner *Sarah D. Sparks,* built in 1852, was sold to go under the British flag during the Civil War and renamed *Anna.* Another Castine schooner, the *Mary Brewer,* also built in 1852, was engaged in active trading in 1908, when fifty-six years of age. The schooner *Martha Burgess,* built in 1853, had a short life, as she was lost at sea in 1856, when three years old.

The ship *Hez. Williams* of 1,030 tons, built in 1856, was wrecked in 1857 at Port Jolie, Nova Scotia, when on the return passage of her maiden voyage and bound from Liverpool to Philadelphia. The brig *William Mason* (299 tons), built in 1857, re-rigged as a schooner, was in active service in 1893, when thirty-six years old. The schooner *Kate Wentworth* of 282 tons, built in 1864 and described as "the largest two-masted schooner on record in the Penobscot region," was dragged ashore in a gale on Bogin Beach, N.C., in 1886 (when twenty-two years old) and became a total loss. Her captain was drowned. The schooner *Bagaduce* (134 tons), built in 1865, went ashore and was lost on Block Island in 1877, and the schooner *Annie Whiting* (181 tons), built in 1866, stranded in a fog on Block Island in 1883. Her crew was saved by a breeches buoy. The schooner *D. T. Patchin* of 90 tons, built also in 1866, was dragged ashore on Ten Pound Island, Gloucester, in "the blizzard of 1898" and was lost when thirty-two years old.

Three of the four vessels built at Castine in 1867 had tragic ends. The schooner *Julia N. Tilden* (68 tons) was lost on Magdalen Island, Gulf of St. Lawrence, when only a few months old; she was on a fishing trip, and Capt. Benjamin Sylvester and seventeen men from Castine and Deer Isle were drowned. The schooner *Fred Dunbar* (78 tons) was wrecked on Caicos Reef, West Indies, in 1876, and the brig *Annie Gardner* (214 tons) came to her end at the entrance to St. John, N.B., in 1880. The brig *Silas N. Martin* (264 tons), built in 1870, dragged ashore at Cuttyhunk in 1880. The schooner *Anna W. Barker* (246 tons), built in 1873, was driven ashore at Tenants Harbor, Maine, in "the blizzard of 1898"; the schooner *Olive Crosby* (296 tons), built in 1874, was lost at Mayaguez, Puerto Rico, in 1883; and the last vessel built at Castine, the barkentine *J. W. Dresser* of 634 tons, launched in 1877, struck on Outer Diamond Shoal in 1895, when eighteen years old, and became a total loss.

E. Islesboro

Islesboro, on Long Island, is in the middle of Penobscot Bay. It runs north and south from a point between Castine on the east and Belfast on the west to a point on the south about midway between Camden and Lincolnville on the west bank of the Penobscot. Some vessels were built at Islesboro in colonial days, and for a time in the 1790's, it is said, "shipbuilding flourished" there. The only vessels of which records are seemingly available today, known to have been built at Islesboro, are the following twenty-nine craft. Ten were schooners built in the 1800's, and eighteen were schooners and sloops known to have been built prior to 1809.

Period Inclusive	Number of Vessels				Tonnage of Vessels			
	Brigs	Schooners	Sloops	Total	Brigs	Schooners	Sloops	Total
1792-1799	—	5	3	8	—	503	260	763
1800-1809	—	10	—	10	—	1,100	—	1,100
1810-1819	—	2	—	2	—	232	—	232
1820-1829	—	3	—	3	—	66	—	66
1830-1839	1	2	—	3	175	227	—	402
1840-1849	—	1	—	1	—	89	—	89
1850-1856	1	1	—	2	194	67	—	261
Total 1792-1856	2	24	3	29	369	2,284	260	2,913

The following fourteen vessels are known to have been built at Islesboro during the years 1792-1805 inclusive:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1792	WILLIAM	Schooner	98	70	21	8	William, Joseph, and John Pendleton; Samuel Bullock, mariner
1793	PRISCILLA	Sloop	94	—	—	—	John Pendleton, merchant; Oliver Pendleton, mariner
1794	ABIGAIL	Sloop	94	66	22	8	Amos, Joseph, Samuel, and Benjamin Williams; Job Philbrook, mariner
1794	BEAVER	Sloop	72	62	20	6	John Gilkey, shipwright; Josiah Farrow, mariner
1795	THOMAS	Schooner	105	72	22	8	John Gilkey, shipwright; Thomas Pendleton, mariner
1796	PRESIDENT	Schooner	105	71	21	8	Richard Hunnewell; Isaac Parker; Jonathan Holbrook, mariner
1796	ROSANNA (1ST)	Schooner	97	72	22	7	Simeon, Israel, and Mark Dodge; Joshua Pendleton; Stephen Pendleton, mariner
1797	EXPERIMENT	Schooner	98	72	22	7	Samuel Rogers, of Castine; Jonathan Holbrook, mariner
1801	GODFREY & MARY	Schooner	132	82	23	8	Godfrey, Robert, and James Trim; Israel Dodge; Thomas Marshall; David Dunbar, mariner
1801	GOOD INTENT	Schooner	80	65	21	7	Ebenezer Whitney, John Farrow, Hosea Coombs, Thomas Eames, and Elisha Nash; Sumner Holbrook, mariner
1803	HARMONY	Schooner	105	73	22	8	Paoli Hewes, John Warren, Ellison Lassell, and Joshua Cottrell; William Boardman, mariner
1803	RANGER	Schooner	85	69	21	7	John Farrow, Thomas Gilkey, Thomas Eames, Nathaniel Palmer, et al.; Josiah Farrow, mariner
1805	FIVE BROTHERS	Schooner	123	78	23	8	Jonathan, Anthony, Benjamin, Ephraim, and Jesse Coombs; Samuel Warren et al.; Joseph Clewey, mariner
1805	RETALIATION	Schooner	110	72	22	8	Fields, Hosea, and Simeon Coombs; Samuel Veazie; Jesse Holbrook, mariner

The schooner *Thomas* (105 tons), built in 1795, saw active service for forty-eight years, for she was wrecked on Lynn Beach in 1843 and all hands lost. The schooner *Experiment* (98 tons), built in 1797, was wrecked on Monhegan in 1826, when twenty-nine years old. The owners of the sloop *Abigail* (94 tons), built in 1794, consisted of four male members of the Williams family. In 1805 the schooner *Five Brothers* (123 tons) was built, with five members of the Coombs family as recorded owners together with other Islesboro people. During the same year, the schooner *Retaliation* was built, of which the prime owners were three additional members of the Coombs family, and possibly the name has some family significance. The first vessel built at Islesboro (in 1792) had three members of the Pendleton family as owners. The schooner *Rosanna (1st)* of 97 tons, built in 1796, had as principal owners three members of the Dodge family. The schooner *Godfrey & Mary* (132 tons), built in 1801, was largely owned by Godfrey, Robert, and James Trim. In later years, the schooner *Mary & Jane* of 101 tons, built in 1831, had Ambrose, John, and James Farrow as the dominant owners, with John Farrow, Jr., as master.

The following table gives the size and particulars of all the vessels of each rig or type (two brigs and thirteen schooners) built at Islesboro during the various periods specified and covering the years 1806-1856 inclusive. Shipbuilding was terminated in the district following the construction of the schooner *Shanghai* of 67 tons in 1856. The list includes only two square-riggers, and they were brigs of relatively small size: the *Daniel Webster* of 194 tons, built in 1854, and the *Melissa* of 175 tons, launched in 1837.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1806-1809	REBECKAH	Schooner	1806	117	77	23	8
	ROSANNA (2ND)	Schooner	1806	107	75	22	7
	RISING SUN	Schooner	1807	115	74	23	8
	PATTY & HITTY	Schooner	1809	126	79	23	8
1810-1819	SPECIE	Schooner	1811	94	71	21	7
	GOLD HUNTER	Schooner	1816	138	78	23	9
1820-1829	EDNA	Schooner	1821	22	40	12	6
	PAMELIA	Schooner	1829	22	39	13	6
	ORION	Schooner	1829	22	38	14	5
1830-1839	MARY & JANE	Schooner	1831	101	74	23	7
	RIALTO	Schooner	1833	126	81	23	8
	MELISSA	Brig	1837	175	—	—	—
1840-1856	CONVERT	Schooner	1842	89	76	22	8
	DANIEL WEBSTER	Brig	1854	194	98	26	9
	SHANGHAI	Schooner	1856	67	65	21	6

It will be noted that all the vessels built at Islesboro were small craft, the largest constructed during the entire building period of sixty-four years (1792-1856 inclusive) being the brigs *Daniel Webster* (194 tons) and *Melissa* (175 tons) and the schooners *Gold Hunter* (138 tons), *Patty & Hitty* (126 tons), *Rialto* (126 tons), and *Rebeckah* (117 tons). During the fourteen-year period 1817-1830 inclusive, only three vessels were built; but the aggregate tonnage constructed during these years was only 66 tons, or only 4.7 tons per year, as all three vessels were small schooners, each measuring only 22 tons. During the eleven-year period 1843-1853, no vessels were constructed at Islesboro and only 261 tons from 1843 to the end of building.

F. Lincolnville

Lincolnville, on the west bank of Penobscot Bay, located about midway between Camden-Rockport to the south and Belfast to the north, built a sizable ship of 250 tons in 1801 and

another of about 400 tons in 1826. Thereafter, Lincolnville launched no more full-rigged ships until the boom of the clipper ship era, when the good-carrying *Simoda* of moderate speed and registering 650 tons was built in 1854. This proved to be the last ship built in the region, although sizable barks were launched in 1855 and 1864 and a brig of 279 tons was built, as Lincolnville's last vessel, in 1867. Northport, contiguous to Lincolnville and to the north of it, was from early days bracketed with Belfast in the production of ships. Both Northport and Lincolnville interests were closely allied with those of Islesboro and Long Island in the middle of the Penobscot, but an attempt has been made to differentiate between the Belfast-Northport district and its marine activities and those of Lincolnville.

The following record gives the number and tonnage of vessels definitely known or believed to have been built in the Lincolnville region, according to available customhouse records, during the years 1793-1867. It is probable that many small craft were built at Lincolnville during the decade preceding 1793 (and for some years thereafter) of which there is no record. Government statistics for this area, as for all other Maine shipbuilding districts, are known to be very incomplete for the entire period of time supposedly covered.

	Number of Vessels					Tonnage of Vessels				
Period Inclusive	Ships	Barks	Brigs	Schoon-ers	Total	Ships	Barks	Brigs	Schoon-ers	Total
1793-1799	—	—	—	3	3	—	—	—	161	161
1800-1809	1	—	—	—	1	250	—	—	—	250
1810-1819	—	—	1	7	8	—	—	184	634	818
1820-1829	1	—	1	2	4	397	—	207	147	751
1830-1839	—	—	2	6	8	—	—	293	569	862
1840-1849	—	1	4	10	15	—	250	644	1,070	1,964
1850-1859	1	2	3	2	8	650	615	712	142	2,119
1860-1867	—	1	1	5	7	—	575	279	790	1,644
Total 1793-1867	3	4	12	35	54	1,297	1,440	2,319	3,513	8,569

The early craft reported as being built in Lincolnville can be set forth as follows:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet: Length	Beam	Depth	Stated Owner
1793	CATHERINE	Schooner	85	68	21	7	John Horton, Jr., Boston
1794	INDUSTRY	Schooner	47	—	—	—	Leonard Dunn, Lincolnville
1794	LIVELY	Schooner	29	—	—	—	Nathaniel Pendleton (mariner), Lincolnville
1801	JOSEPH & PHEBE	Ship	250	89	25	13	Joseph and Ebenezer Perkins, Castine
1812	VENUS	Brig	184	87	24	10	Charles K. Tilden, Castine
1814	COMMODORE PERRY	Schooner	121	78	23	8	Michael and John Howard; Jonathan Pressey, Deer Isle
1815	MARY JANE	Schooner	86	65	22	7	Samuel A. Whitney, Lincolnville
1816	OLIVE	Schooner	112	75	21	8	Adam Rogers, Lincolnville, and Boston parties
1817	GOVERNOR BROOKS	Schooner	94	73	22	7	Amos Sproul and Lemuel Kempton, Frankfort
1818	LENITY	Schooner	95	72	22	7	Ralph Wade and Adam Rogers, Lincolnville
1818	DOLPHIN	Schooner	26	41	12	6	Benjamin Lane and James Ginn, Vinalhaven
1819	JANE (I)	Schooner	100	74	22	7	Adam Rogers, Lincolnville; Philip Gilkey, Islesboro
1821	WILLIAM	Schooner	48	54	15	7	Peleg Decrow, Lincolnville, et al.
1822	SAMUEL & JOHN	Brig	207	86	23	12	Samuel A. Whitney et al., Lincolnville
1826	CASHMERE	Ship	397	115	28	—	Samuel A. Whitney et al., Lincolnville
1827	RACHEL & LYDIA	Schooner	99	70	21	8	Allen Whitman, Boston

Early records give the owners for whom the vessel was built but not the shipwright or master builder, for the owners financed the construction and usually hired mechanics to do the required work. With the names of the owners generally appears the name of a "mariner," who usually had some financial interest in her, was evidently the captain of the vessel, and often had much to say in regard to the design and building of the hull and took charge of the rigging and equipment of the craft. Lemuel Drinkwater was the mariner of the schooner *Catherine,* which was Lincolnville's first vessel of record, and Micajah Drinkwater was mariner of the schooner *Olive,* built in 1816 for Lincolnville and Boston owners. In 1834, George Drinkwater appears as owner in the building of the schooner *William Wallace,* and in 1844 Elbridge Drinkwater built the schooner *Mount Vernon.* Other early Lincolnville mariners of record were David Dunbar (1801), James Holmes (1812), Atherton W. Rogers (1815), Timothy L. Couillard (1817), and John Decrow (1818). It will be noted that in 1801 and 1812, Lincolnville built for Castine owners, in 1814 for Deer Isle parties, from as early as 1816 for Boston capitalists, and during 1817-1819 for Frankfort, Islesboro, and Vinalhaven owners.

Other vessels built at Lincolnville between 1830 and mid-century, with their reported particulars and dimensions, were:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1830-1835	FOREST	Schooner	1830	58	60	16	7
	MOUNT MORIAH	Schooner	1832	139	83	22	9
	JANE (2ND)	Schooner	1832	92	69	22	7
	MADRID	Brig	1833	164	83	21	11
	BULAH	Brig	1833	129	79	23	8
	WILLIAM WALLACE	Schooner	1834	100	71	21	8
1836-1840	MARY MARIA	Schooner	1836	113	75	22	8
	ST. LUCAR	Schooner	1838	67	63	17	7
1841-1845	EUGENE	Schooner	1842	107	79	22	7
	PIZARRO	Schooner	1843	139	83	23	8
	MARTHA WASHINGTON	Schooner	1843	128	85	23	7
	MT. VERNON	Schooner	1844	84	68	20	7
	FLORINA	Brig	1845	162	90	23	9
1846-1850	ANNANDALE	Brig	1846	177	91	24	8
	SIDI HAMET	Brig	1846	121	74	22	9
	FLYING ARROW	Schooner	1846	109	78	22	7
	PRUDENCE	Schooner	1846	101	71	23	7
	LILLY	Schooner	1847	121	79	22	8
	GENERAL TAYLOR	Schooner	1847	92	72	20	7
	GEORGIANNA	Bark	1847*	250*	—	—	—
	JULIA FORD	Brig	1848	184	95	25	10
	C. H. HALE	Schooner	1849	89	70	20	7

*Estimated. Captured by Spanish in 1852.

The schooner *Forest,* built in 1830, is a vessel of particular interest, as it is known that she was built at Lincolnville Center, five miles inland and to the north of the head of Lake Magunticook. This is a long and rather narrow lake, which runs from Lincolnville Center south-southwest and in the direction of Camden. This vessel was 60 ft. long, 16 ft. beam, and 7 ft. depth of hold according to official measurements; but she was popularly described at Camden as "a 60-ton schooner over 70 ft. long [over-all] and over 16 ft. on the beam and about 10 ft. [total] depth." The *Forest,* built by Jeremiah and Charles Wadsworth, of Lincolnville, and Joseph Jones, of Camden, with Jacob Anderson either master builder or captain, was constructed at Lincolnville Center and hauled by ox teams, in the winter, to the head of Lake Magunticook and some four miles down the lake on the ice, which was said to be

"nice level going." Following this, the oxen hauled the vessel down to and through Camden and, we are told, took her to an advantageous position on the water front, from which she was launched into Camden Harbor in the early spring. The *Forest* must have been a well-built schooner, for she saw forty-four years of active service; her end came in 1874, when she was wrecked on Mosquito Island, Port Clyde.

The schooner *Mount Moriah,* built in 1832, was reported lost at sea in 1845. The Lincolnville-built and owned bark *Georgianna* was captured by the Spanish when she was engaged in a filibustering expedition in Cuba in 1852. The vessel was confiscated, and some of the members of the crew were taken to Spain and jailed. Lincolnville families made an appeal on behalf of the imprisoned men, and international complications developed before the prisoners were released. The sizable brig *Madrid* of 164 tons, built at Lincolnville in 1833, was surprisingly for Norfolk, Va., owners (John P. Whitney et al.). The schooner *Jane* was built in 1832 for a Beverly, Mass., owner (Josiah Lovett). Robert Patterson, 5th, of Belfast, built the schooner *Martha Washington* at Lincolnville in 1843. The brig *Bulah* was built (1833) also for Belfast owners. In 1846, Lincolnville, while building two schooners for local owners, built two brigs, one for Islesboro and the other for Camden parties. In 1847, two schooners were constructed for Camden owners. In 1848, the brig *Julia Ford* of 184 tons was built for John Pendleton et al., and the address of this member of a later famous Penobscot family was stated as Boston, Mass.

Vessels built at Lincolnville from 1850 to 1867, when such construction in that section terminated, with their dimensions and tonnage, are set forth herewith:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1850-1855	M. E. TROUT	Bark	1851	253	107	26	11
	WAPPOO	Brig	1852	243	99	26	11
	LAURAVENA	Brig	1853	194	94	26	9
	SIMODA	Ship	1854	650	144	31	—
	ALMIRA COOMBS	Bark	1855	362	—	—	—
	FLYING EAGLE	Brig	1855	275	100	29	11
	WARREN	Schooner	1855*	47	—	—	—
1856-1860	N. WHITNEY	Schooner	1856	95	—	—	—
	GEORGIA	Schooner	1860	167	87	25	9
1861-1865	HATTIE COOMBS	Schooner	1862	134	80	25	8
	MARY ALICE	Schooner	1862	116	76	24	7
	ANNA WALSH	Bark	1864	575	134	30	18
	ARTHUR BURTON	Schooner	1865	197	120	29	9
1866-1867	FLORENCE N. TOWER	Schooner	1866	176	95	26	8
	E. C. CARVER	Brig	1867	279	103	27	9

*Estimated. Rebuilt in 1865 and renamed WILLIE PERRY.

The schooner *Hutoka* (Captain Drinkwater), built at Lincolnville, was lost with all hands on Peaked Hill Bar in 1855, but her dimensions and the date of building are unknown. The brig *Lauravena* was rebuilt in 1866, when thirteen years old, and renamed *Isadora.* The ship *Simoda* and the brig *Flying Eagle,* each built in the mid-fifties, were sold to British owners, the latter being rechristened *Day Star.* The schooner *N. Whitney,* built in 1856 for Rockland owners, was lost in 1870, when fourteen years old, and the schooner *Georgia* foundered in the North Atlantic in 1874, when fourteen years old; but the crew was taken off by the ship *Madam Adomer* and landed in Liverpool. The schooner *Florence N. Tower* was abandoned in the North Atlantic in 1886, when the vessel was twenty years old, and her crew was saved by the German brig *Hendrick* and taken to Hamburg.

XXXVI.

BELFAST AND NORTHPORT, MAINE

An Important Record from Colonial Days to the 1900's in the Building of Sailing Vessels of All Rigs, Including Prominent Ships of the Down Easter Type

BELFAST is a well-located city situated at the northwest angle of Penobscot Bay, ten miles west (across the bay and slightly to the north) of Castine and about twenty-eight miles from the entrance to the bay. Its geographical position is Lat. 44° 25′ 29″ N. and Long. 69° 0′ 19″ W. It is said to be (by old post roads) "forty-one miles from Augusta, thirty-two from Bangor, one hundred and ten from Portland, and two hundred and thirty-three from Boston." In a straight air line, Belfast is fifty-three miles northeast of Bath, twenty-nine miles south-southwest of Bangor, and twenty-three miles north and slightly to the east of Rockland. Belfast lies on the west bank of the Passagassawakeag River (now popularly known as Belfast River), which is, in fact, no river at all but an estuary or arm of the sea. Originally, Belfast included what is now the town of Searsport (another shipbuilding community and abode of sea captains), which seceded in 1845 and is now centered about five miles to the northeast of Belfast.

Belfast (named after Belfast, Ireland) was first settled in 1770; it was abandoned through fear of the British in August 1779 (when the population consisted of eighteen families and 109 persons—all told). In 1784, fourteen families having returned to their old homes, life in the town and its development were renewed. From old records, it would seem that probably the first vessels ever built on the Penobscot were launched in the 1770's in the Belfast-Searsport-Stockton area. After the Revolution, when cord wood became a profitable article of export from the Penobscot, coasting schooners and sloops were built in and around Belfast to handle this and other developing branches of trade.

The old records of shipbuilding at Belfast combine Belfast with Northport, which at first seems surprising, as Northport is south of the Bay of Belfast and includes the territory north of Lincolnville and Belfast, including Bayside and East Northport. In the early days of the republic, it would seem that Belfast was a sort of metropolitan center for a good part of the central western section of the Penobscot Bay region, and until Stockton became of importance and Searsport seceded, Belfast as a marine center evidently dominated most of the territory on the west bank of the Penobscot between Camden in the south and Bucksport in the north, including the islands west of Castine. Early records of shipbuilding at Belfast frequently include the name of Northport, Islesboro, Stockton, and even Lincolnville. A member of the famous shipbuilding Pendleton family (Jonathan) appears as a part owner of record of the schooner *American,* built in 1802 at either Belfast or Northport, and his residence at that time is stated as Islesboro.

The small schooner *Lucy* of 34 tons was the first recorded vessel built at Belfast-Northport. She is definitely stated as being "built within the limits of Belfast and Northport" in

1789. She was reported to be "50 feet in length, 15 feet broad in the beam, and 5 feet deep in the hold." It is said that the owner and builder of the *Lucy* was Major John Russ, of Belfast. A vessel of similar size and model but sloop-rigged, the *Nancy* of 32 tons, is known to have been built in 1794; but the schooner *Jenny Miller* of 113 tons, built by Robert and James Miller at Sandy Beach and launched October 26, 1793, was evidently the first sizable vessel built at Belfast. There are records showing that a "big sloop," the *Three Friends* of 84 tons, was built at Belfast in 1793 by "Nathaniel Patterson, farmer, and Isaac McKeen, mariner." In 1796 a vessel named the *Two Brothers* of 93 tons (length 68 ft., beam 21 ft., depth 7 ft.), reported in some old documents as a "brig" and in others as a "schooner," was constructed at Belfast. However, there is confusion in regard to builders and ownership, for the names of Robert and James Miller and of E. McFarland and B. Young appear in the records. She was evidently commanded by John Lymburner, whose family, sixty years later, was destined to furnish the captain for the mammoth clipper ship *Great Republic* of Boston, the largest sailing vessel in the world. The Belfast-built *Two Brothers* was captured and sunk by the French in the West Indies in 1800. In 1797 five schooners and a sloop were owned (and taxed) at Belfast; in 1804, twelve vessels (eight schooners and four sloops). The first recorded full-rigged ship built in the district (the *Fox,* launched in 1805) is said to have been constructed at Belfast, "near the location of the present Upper Bridge." The schooner *Harriet & Jane* is recorded as built in Northport in 1807; while the ship *Belfast,* we are told, was constructed in 1811 "at the mouth of the Goose River." There are records showing that the following craft were built in the Belfast region (including Northport) during the years 1798-1820 inclusive.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1798	RANGER	Sloop	105	72	22	8	Nathaniel, William, and Starret Patterson; Ephraim McFarland
1798	HERO (also reported as built in Searsport)	Sloop	90	—	—	—	Samuel and Robert Houston
1801	INDUSTRY (I)	Schooner	102	—	—	—	Benjamin Young and Robert Patterson
1802	AMERICAN	Schooner	98	70	22	8	Henry Pendleton, Thomas Witherle, Lemuel Drinkwater (Northport), and Jonathan Pendleton (Islesboro)
1802	MARY	Sloop	—	—	—	—	
1805	FOX	Ship	285	—	—	—	Major William Cunningham
1805	VENUS	Schooner	128	77	23	8	Ephraim McFarland and James Nesmith; David Peirce, master
1805	OLIVE BRANCH	Schooner	115	75	22	8	David Alden, James Drinkwater; Micajah Drinkwater (Northport), master
1806	EUNICE	Schooner	119	76	23	8	Thaddeus Hubbard, of Belfast, owner and master
1806	ROSANNAH	Schooner	107	—	—	—	Elwell & Grinnell
1806	PACKET ELIZA	Schooner	98	—	—	—	Ezra Ryan
1807	SUPERB (I)	Schooner	138	80	23	9	Robert and James Patterson; Jonathan White
1807	GREYHOUND	Schooner	114	—	—	—	Cram, Hartshorn & Senter
1807	SALLY	Schooner	61	59	19	7	Caleb and Nathan Smith; Daniel McLaughlin; Joshua Bangs
1807	HARRIET & JANE (also recorded as a schooner)	Sloop	36	46	15	6	James Doyle (also Derby) et al., of Belfast. Built in Northport
1810	THREE FRIENDS	Brig	—	—	—	—	Samuel French and Josiah Farrow
1811	BELFAST	Ship	225	—	—	—	Built for Boston owners by Walter Hatch, master builder
1811	ILLUMINATOR	Brig	180	—	—	—	John Angier, Jonathan White, James Patterson, et al., of Belfast, and James A. Allen, of Boston
1812	—	Brig	—	—	—	—	Built and owned by Major John Russ
1812	BELFAST (II)	Schooner	126	—	—	—	John and Samuel Gilmore

(Continued on next page)

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1812	WASHINGTON	Schooner (sloop)	35	47	14	7	William Davis et al.; Benjamin Davis, master
1813	CREOLE	Sloop	22	—	—	—	Ebenezer Meader
1816	PACKET	Schooner	133	82	23	8	Benjamin Young, John Gilmore, John B. Durham, of Belfast; Zetham and Samuel French, of Stockton; and Noah Lincoln, of Boston
1816	ABIGAIL	Schooner	116	75	22	8	Joshua Elwell, owner and master
1816	SUPERB (II)	Schooner	96	71	21	7	Ephraim McFarland, of Belfast, and Scammel Penniman, of Boston
1817	MORNING STAR	Schooner	98	73	22	7	Jones Shaw, Amos Pendleton (Northport), Jonathan Parker and Henry Blaisdell (Islesboro)
1817	POLLY	Schooner (sloop)	30	—	—	—	Thomas Stewart
1818	VENUS (II)	Schooner	127	—	—	—	McFarland & Nesmith
1819	RAMBLER	Brig	169	83	24	10	Greenleaf Porter and Hutson Bishop
1819	HANCOCK	Schooner	124	78	24	8	Ezra Ryan and Phineas Kellam
1819	JUDITH	Schooner	104	73	22	7	Thomas Witherle, Lemuel Drinkwater (Northport), and Adam Rogers (Lincolnville)
1820	INDUSTRY (II)	Schooner	112	70	24	7	Robert Patterson, Elijah Torrey, Martin Gilmore, et al.

The names of the owners are of interest, but confusion exists in regard to owners, builders, and "mariners," or the masters, of the vessels. It is noted that as early as 1793 "Nathaniel Patterson, farmer," was part owner of a Belfast-built sloop and that, in 1797, James Patterson was taxed for a schooner and N. Patterson (presumably Nathaniel) for a sloop. In 1798, Nathaniel, William, and Starret Patterson were reported part owners of the sloop *Ranger,* of which Nehemiah Patterson was master, and this sizable 105-ton vessel was re-rigged as a schooner in 1801. Robert Patterson, 4th, appears in the records as part owner of the schooner *Industry (I)* in 1801. This vessel, the following year (1802), was re-rigged as a sloop. On the assessor's books in 1804, mention is made of "William Patterson's schooner." This might refer to the sloop *Ranger,* which in 1804 was schooner-rigged, and William Patterson by that time may have bought out some or all of the original owners. In the records at the turn of the century, it is surprising to note that a person is identified as the fourth to bear his name. Robert Patterson, 4th, appears as the master of the schooner *Superb I* (138 tons) in 1807 and another Patterson (James) as part owner. In 1811, Robert Patterson, 4th, is recorded as master of the new brig *Illuminator,* of which again James Patterson is a part owner. The records show that in 1820 Robert Patterson, 5th, was master and the Pattersons part owners of the new schooner *Industry II* of 112 tons. This same Robert Patterson, 5th, appears as the owner of record of ship tonnage in the thirties, forties, and fifties, and the family name appears on Belfast marine documents after that of Robert Patterson, 5th, disappears.

The War of 1812 with Britain affected Belfast shipping. The sloop *Mary,* built in 1802, was captured in Penobscot waters and burned by the British in 1813. The brig *Three Friends,* built in 1810, was captured by the British in 1814, and her master, Capt. John Lymburner, was sent as a prisoner of war to Gibraltar, where he died later in the year at the age of forty-two years. The brig *Illuminator,* of which Robert Patterson, 4th, was master, was taken by the British while on a passage from Liverpool to New Orleans; she was sent into Halifax, Nova Scotia, and there condemned. The schooner *Washington,* built in 1812, was captured and burned by the British in Penobscot waters in 1814. We are told that a sizable brig launched at Belfast by Major John Russ just about the time that the War of 1812 broke out

"lay at wharf throughout the war at great loss to her owner." We assume that the words of the historian should not be taken literally; for as the brig was not captured or destroyed by the British, she was probably hidden during the duration of the war in shallow, protected, and inaccessible waters.

The 90-ton sloop *Hero* (built in 1798), with Capt. John Lymburner in command on a run from Belfast to Boston with wood and a few passengers, capsized October 31, 1803, during a gale near Kittery, Maine. Oliver Hills, a passenger, was drowned; his wife Margaret was taken off the wreck, but died from exposure before reaching the shore. She was buried in the cemetery at Kittery Point, and the stone over her grave bears the following epitaph:

I lost my life in the raging seas
A Sovereign God does as he please
The Kittery friends they did appear
And my remains they buried here.

The schooner *Harriet & Jane* was reported "lost in 1819," this Northport-built craft being twelve years old when her end came. The schooner *Superb (II)* had the reputation of being a fast and able 96-ton vessel of packet type and was "half owned in Boston." In the winter of 1820, while carrying twenty-one passengers from Belfast to Boston, the *Superb* was blown offshore for three weeks, and when she finally succeeded in making Provincetown, she was "in distress," without food and water, and had been given up for lost. The schooner *Morning Star,* built for Northport and Islesboro owners in 1817, was lost at Hyannis in 1842, when twenty-five years old. The schooner *Judith,* built for Northport and Lincolnville owners in 1819, was condemned in 1844, when twenty-five years old.

During the periods of Jefferson's embargo (1808-1809) and the war with England (1812-1815), practically no deep-sea merchant ships were built in the United States. Shipbuilding was active in the Belfast district in 1805-1807, in 1810, 1811, and early 1812 and was resumed in 1816 after the war.

The following statement gives the number and tonnage of vessels, identified as to date of building, name, and registered tonnage, constructed in Belfast during the period 1820-1900 inclusive. It completes a record of ships built—regarding which reliable data are available—during the years 1789-1920 inclusive, a period of 132 years out of Belfast's known shipbuilding days, which extended from the beginning of the American Revolution to the commencement of the third decade of the twentieth century.

Period Inclusive	Number of Vessels							Tonnage of Vessels						
	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total
1789-1799	—	—	—	—	3	3	6	—	—	—	—	240	227	467
1800-1809	1	—	—	—	7	1	9	285	—	—	—	748	36	1,069
1810-1819	1	—	—	2	6	3	12	225	—	—	330	722	87	1,364
1820-1829	1	—	—	5	21	1	28	313	—	—	795	2,036	31	3,175
1830-1839	2	2	—	10	43	—	57	765	533	—	1,707	4,803	—	7,808
1840-1849	5	20	—	54	40	—	119	2,270	5,156	—	9,441	4,358	—	21,225
1850-1859	23	15	—	19	31	—	88	21,004	6,943	—	4,532	3,355	—	35,834
1860-1869	12	8*	1	7	11	—	39	16,343	4,516	481	2,400	1,580	—	25,320
1870-1879	8	3	2	3	37	—	53	11,327	1,650	1,067	1,454	9,969	—	25,467
1880-1889	—	2	5	—	24	—	31	—	1,513	3,511	—	9,428	—	14,452
1890-1899	—	—	3	—	8	—	11	—	—	2,758	—	6,167	—	8,925
1900-1909	—	—	—	—	8	—	8	—	—	—	—	6,970	—	6,970
1910-1920	—	—	—	—	2	—	2	—	—	—	—	2,643	—	2,643
Total 1789-1920	53	50	11	100	241	8	463	52,532	20,311	7,817	20,659	53,019	381	154,719

*Includes one gunboat with steam power built during the Civil War.

The average tonnage per vessel of the various types, or rigs, built and the percentage that each type bears to the total are stated herewith:

Type, or Rig, of Vessels	Number*	Percentage of Total Number of All Vessels	Aggregate Tonnage	Percentage to Total Tonnage of All Vessels	Average Tonnage
Ship (three masts)	53	11.4	52,532	34.0	991
Bark (three masts)	50	10.8	20,311	13.1	406
Barkentine (three masts)	11	2.4	7,817	5.0	711
Brig	100	21.6	20,659	13.4	207
Schooner	241	52.1	53,019	34.3	220
Sloop	8	1.7	381	0.2	48
Total all vessels	463	100.0	154,719	100.0	334

The only full-rigged ship built in the 1820's was the *Alfred* of 313 tons, built in 1823 for Hutson Bishop, of Belfast, and Alfred Curtis, of Boston. This ship (103 ft. long, 26 ft. beam, and 13 ft. deep) was the first copper-fastened vessel built in Belfast. She was commanded by Capt. Henry Atwood, of Bucksport. The following table gives a list of the fifty full-rigged three-masted ships built at Belfast during each of the five decades from 1830 to 1880, the period of such construction actually being from 1837 to 1876 inclusive. (The total period of full square-rigged ship construction at Belfast, during which fifty-three such vessels were built, was from 1805 to 1876 inclusive.)

Year Built	Name of Ship	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1837	VISTULA	366	117	26	13
1838	LAUSANNE	399	117	27	14
1841	DUMBARTON	499	129	29	15
1841	OCTAVIUS	494	132	29	14
1843	LADY ARBELLA	399	120	27	14
1847	DANVERS	414	122	27	14
1848	BOTHNIA	464	127	28	14
1851	WILLIAM FROTHINGHAM	830	163	33	17
1851	JOHN W. WHITE	549	137	30	14
1852	NORTHERN CHIEF	1,137	184	37	17
1853	RALPH C. JOHNSON	1,279	190	39	19
1853	CHAPIN	833	164	34	23
1854	CORONET	1,368	196	39	20
1854	MARY McNEAR	993	170	37	21
1854	WILD CAT	756	152	34	20
1854	PEUCINIA	700	148	32	22
1854	OCEAN TRAVELLER	696	147	33	21
1855	GRANITE	1,088	180	36	18
1855	MARY HAMMOND	999	174	37	23
1855	WESTERN CHIEF	997	173	37	23
1855	LADY BLESSINGTON	995	175	35	23
1855	SPORTSMAN	626	142	31	16
1856	HUALCO	1,086	180	36	18
1856	HIRAM	853	157	33	21
1856	SEAMAN'S BRIDE	758	159	32	16
1857	EMILY GARDNER	762	160	32	16
1858	CHARLOTTE W. WHITE	1,080	180	36	18
1859	GRACE ROSS	1,073	179	36	18
1859	CONGRESS	800	160	33	16
1859	C. B. HAZELTINE	746	158	32	16
1860	ENOCH BARNARD	1,311	189	39	26
1860	INSPECTOR	1,122	182	36	18
1860	ODD FELLOW	955	170	35	20
1861	LOUIS WALSH	1,537	194	38	27
1861	LIVING AGE	1,469	187	39	26
1863	LIVE OAK	1,383	192	40	20
1864	SARDIS	1,249	185	37	24
1865	IVANHOE	1,611	202	39	28
1868	EMILY McNEAR	1,217	186	38	24
1869	CHANDOS	1,506	190	40	26
1869	LEONORA	1,492	202	39	24
1869	CORA	1,491	200	39	24

(Continued on next page)

Year Built	Name of Ship	Tonnage	Dimensions in Feet			Year Built	Name of Ship	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1870	ALICE BUCK	1,426	198	39	24	1874	FRANK PENDLETON	1,414	200	39	25
1871	NANCY PENDLETON	1,449	199	39	24	1874	R. B. FULLER	1,360	197	39	24
1872	McNEAR	1,308	190	38	24	1875	A. S. DAVIS	1,400	205	39	24
1873	ANTELOPE	1,306	198	37	24	1876	P. R. HAZEL-TINE	1,664	226	43	25

The ship *William Frothingham* was built for John W. White et al., Belfast, by White & Connor. She was sold as a New York transatlantic packet and, it is said, was later sold to Norway and renamed *William Stephenson.* She was one of the few Maine-built ships that saw service in sailing packet lines operating on schedule out of the port of New York. She operated steadily for eleven years (1857-1868) in transatlantic service for the Havre Second Line, running regularly between New York and the French port.

Belfast built two clipper ships, each of which was only a "half" clipper in sharpness of model and spar plan. The *Seaman's Bride,* launched from the yard of Carter & Company in 1856, was built for Enoch Benner, Daniel Lewis, and associates, of Boston. This *Seaman's Bride* should not be confused with the Baltimore clipper of the same name of 668 tons, built by R. & E. Bell in 1851, which was sold in 1855 to German parties and renamed *Carl Staegoman;* she was lost on Baker's Island in 1865. The Belfast-built *Seaman's Bride* made one passage around the Horn westbound to San Francisco during the clipper ship era and gave a poor sailing performance. Unfortunately, she made the run under very unfavorable conditions, and her time reported as 185 days should be considered in relation to the lengths of passage of the several real clippers that sailed from East Coast ports as she did in September 1858: *Polynesia,* 198 days; *Carrier Dove,* 158 days; *Stephen R. Mallory,* 151 days; *Galatea,* 148 days; *Fleetwing,* 146 days. The second Belfast-built clipper was the *Sportsman* of 626 tons, built 1855-1856 for J. Pierce & Company, Boston, and R. W. Cameron, New York. She did not engage in the California trade, and nothing seems to be known of her performance under canvas. The *Sportsman,* with her handsome figurehead of a western hunter carved by Rufus Emery, of Bucksport, was sold to New York owners when brand new for $31,250. Later, she became the Chilean ship *Baronese* and finally the *Enrique Wilbert* of Nicaragua.

The ship *John W. White,* built in Belfast the same year (1851) for Boston owners, was sold to Japan, re-rigged as a bark, and renamed *Nagasaki.* When on a passage from New York to London in 1862, the *Northern Chief* capsized, but the crew was rescued by the S.S. *Merlin.* The *Ralph C. Johnson,* on her maiden voyage, was sold to the British at Liverpool, and the *Coronet,* built the following year (1854), also went to English owners. (She was wrecked in the Gulf of Mexico in 1868.) The *Wild Cat,* built in 1854, was sold to the British and renamed *Tadousac;* while the ships *Mary McNear* and *Peucinia,* constructed the same year for Belfast owners, also went under foreign registry. The former became the *Maria* of Germany (lost off Cape Horn in 1871) and the latter the *Milan* of Italy. The *Mary Hammond,* built at Belfast in 1855, was sold in England and renamed *Arran.* The *Western Chief* was lost on the coast of Brazil in 1868.

The ship *Hualco* was unlucky. Leaving eastern Penobscot Bay on her maiden voyage and after dropping the pilot, she struck a pinnacle rock on Saddleback Ledge. She was sailing at a speed of 8 knots, with topgallant sails set. Her bottom was ripped open, and she sank in deep water within twenty minutes. The crew arrived back in Belfast in the ship's small boats on the same day that the new ship had left port.

The *Emily Gardner* was sold in England and renamed *Lord Brougham.* Later, she was given French registry and appeared as the *Brethene.* The *Charlotte W. White,* when on a passage from St. John to Liverpool, was lost with all hands. The *Enoch Barnard,* built in 1860

for Searsport owners, was sold in 1863 (because of the Civil War) to the British for $62,000 and renamed *Wallasea.* The *Inspector* went ashore on the Chilean coast in 1884, was condemned, sold to the Germans, and renamed *R. M. Sloman.* The *Louis Walsh,* built in 1861, was lost in Alaska in 1900, when thirty-nine years old. The *Living Age,* built the same year, felt the effects of the Civil War. She was captured and bonded by the rebel gunboat *Tuscaloosa* in 1863. When on a passage from Shields to Bombay in 1868, she was destroyed by fire. The *Live Oak,* built in 1863, had a short life, as she was lost at Valencia, Spain, in 1867. The *Ivanhoe,* Belfast's biggest ship, was sold at San Francisco in 1884. In 1894, when twenty-nine years old, she foundered off Cape Flattery, with the loss of all hands. The *Leonora,* built in 1869, was soon "sold foreign."

The *Alice Buck,* built in 1870 and owned by the Pendletons, of Searsport, was lost on the California coast in 1881, and two mates, with eleven men, were drowned. The ship *Nancy Pendleton,* built in 1871, was sold for conversion to a barge in 1893, when twenty-two years old. The *McNear,* when four years old, was driven ashore in the English Channel and abandoned by her crew; the vessel was afterwards saved by the crew of a lifeboat. The *Frank Pendleton,* built in 1874, was cut down to a barge in 1893 after nineteen years of sea service as a square-rigger. The *R. B. Fuller* was destroyed by fire on a passage, coal laden, from Cardiff to Valparaiso in 1881; all hands were saved. The *A. S. Davis* was driven ashore on Cape Henry in a heavy gale in 1878, when three years old, and nineteen out of the twenty men aboard were lost. In 1878, the *P. R. Hazeltine* struck a rock in Wollaston Bay, near Cape Horn, and sank in ten fathoms of water. The crew, in small boats, was picked up by passing vessels.

The first barks built in the Belfast-Northport district were two vessels launched in 1839, but this rig became very popular in the forties, when twenty barks were built and thirteen of them in the last three years of the decade (1847-1849 inclusive). For three-masted square-riggers, these barks were consistently small, ranging from 193 to 295 tons until 1849, when the first barks of over 300 tons register were built; but the largest bark built in the Belfast area prior to 1851 was of less than 400 tons. The following table gives a list, with particulars and dimensions, of all the barks built in the district prior to mid-nineteenth century:

Year Built	Name of Bark	Tonnage	Dimensions in Feet			Year Built	Name of Bark	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1839	HUALCO	279	98	25	13	1847	GRAMPUS	241	101	25	11
1839	DON JUAN	254	96	25	12	1848	ORTONA	277	109	26	11
1840	WYANDOTTE	287	108	25	12	1848	MARTHA ANNA	273	110	25	11
1841	RIO	198	97	25	9	1848	SULIOTE	266	105	25	11
1844	RALPH CROSS	295	106	25	12	1848	E. WILSON	248	102	25	11
1845	PROSPECT	199	92	24	10	1848	OAKES ANGIER	193	99	25	9
1846	SUCCESS	204	93	24	10	1849	LILLIAS	398	120	27	14
1846	PEQUOT	203	93	24	10	1849	RHONE	350	113	26	13
1846	SANTEE	192	98	25	9	1849	A. R. TAFT	318	102	25	13
1847	BRUNETTE	249	102	25	11	1849	WM. O. ALDEN	274	107	25	11
1847	ONYX	245	102	25	11	1849	ALEXINA	246	101	25	11

The *Wyandotte* sailed from Honduras for Bremen in 1842 and "went missing"; she was two years old when she disappeared with all hands. The *Ortona* was wrecked at the Falkland Islands in 1855, when seven years old. It is said that the first direct voyage from Maine for California was projected in and started from Belfast. On January 30, 1849, the bark *Suliote* of 266 tons, recently launched and owned by Asa Faunce et al., of Belfast, with Capt. Josiah Simpson in command, sailed with fifty passengers and a miscellaneous cargo (including a lot of hemlock boards) for the Golden Gate. She reached San Francisco on July 19, 1849, after a passage of 170 days, in the course of which she touched at Cape de Verde Islands and Valparaiso. (The net sailing time at sea was reported as 160 days.) The *Suliote* returned to the

Atlantic and continued to be operated by her original owners. On August 12, 1864, while on the way from Cow Bay to New York, she was captured by the Confederate gunboat *Tallahassee,* bonded for $5,000, and compelled to take on board three hundred passengers from the ship *Adriatic,* burned at sea. In 1867 the *Suliote* was dismasted, badly damaged, and towed into Boston, where she was condemned, sold, and rigged as a schooner by her purchasers. In November 1870, while bound from Bangor to New York, she was taken into Belfast, leaking badly, for repairs. In April 1871, it is said, the *Suliote* was "wrecked near Portsmouth, N.H.," but it is also reported that the vessel was "finally condemned at Porto Rico in 1874," when twenty-six years old. The *Oakes Angier,* named after her Belfast owner, was wrecked on the Bahamas in 1849, when only a year old. The bark *Wm. O. Alden,* with fifty adventurers to the California gold fields, sailed in December 1849 in company with the brig *San Jacinto,* and, we are told, "the two vessels arrived together at San Francisco after a passage of 150 days."

The first sizable brig, of known size, and a full-rigged two-master built in the Belfast district was evidently the *Ospray* of 180 tons, constructed in 1822 for John Clark and Greenleaf Porter, of Belfast. It was twelve years before a brig of larger size was built in the district. The following table gives a list of the thirty-eight brigs of 174 tons and over constructed at Belfast and Northport during the twenties, thirties, and forties of the nineteenth century:

Year Built	Name of Brig	Tonnage	Dimensions in Feet			Year Built	Name of Brig	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1822	OSPRAY	180	84	23	11	1846	SAN JACINTO	185	93	26	9
1826	MONTICELLO	176	82	23	11	1846	JUDGE WHITMAN	175	87	25	9
1834	ELIZA & SUSAN	241	93	24	12	1847	HURON	207	97	26	9
1835	ODEON	176	87	22	10	1847	JOSEPHINE	199	95	24	10
1836	SPARKLER	196	92	24	10	1847	RUSSIAN	197	94	25	9
1836	OCEOLA	189	90	22	11	1847	HARRIET NEWELL	194	94	25	9
1837	COCHECO	197	90	23	11	1847	NITHEROY	184	92	26	9
1839	MONACO	199	94	24	10	1847	CANOVA	181	87	24	10
1840	MATAMORA	190	91	24	10	1847	ORIZAVA	174	91	26	9
1841	VENEZUELA	196	97	24	10	1848	XENOPHON	245	99	25	11
1841	TONQUIN	194	96	23	10	1848	MARINE	216	98	26	10
1843	MAZEPPA	175	89	23	10	1848	ROSCOE	200	97	25	9
1844	MARIA SPEAR	200	98	24	10	1848	MARTHA ROGERS	198	100	25	9
1846	LEGHORN	199	95	25	9	1848	CARLANN	192	97	25	9
1846	ROLERSON	197	98	25	9	1849	R. PATTERSON	227	98	26	10
1846	MARSHALL	197	95	25	9	1849	GENERAL MARSHALL	200	95	25	10
1846	BELFAST	191	99	24	9	1849	L. R. PALMER	200	95	25	10
1846	J. P. JORDAN	191	99	24	9	1849	ELZIRA	196	96	24	10
1846	QUEEN ESTHER	189	95	25	9	1849	CHINA	177	85	23	9

The *Odeon* was lost with three of her crew in a hurricane at St. Thomas in 1837, when only two years old. The *San Jacinto,* as before mentioned, sailed in company with the bark *Wm. O. Alden* for the California gold fields in December 1849. The vessels spoke each other off Cape Horn and entered the harbor of San Francisco together. The *San Jacinto* was lost on Humboldt Bar, California, in 1851. The brig *Huron* capsized and was abandoned off Cape Cod in 1848, when a year old. The *Harriet Newell* was lost near Cardenas, Cuba, in 1857, when ten years old. Another Belfast-built and owned brig, not mentioned in the list here given, was the 168-ton *Porto Rico,* which was in the news in 1845. This vessel, when five years old, was abandoned off New York by her crew in a believedly sinking condition due to leaks, but the vessel was later brought into port by pilots. During the same year, the Belfast brig *Arixene*

of 149 tons, built in 1841, was dismasted and abandoned off Nantucket, the crew being rescued by the schooner *Montreal* of Portland. Another Belfast brig, the *Judge Mitchell* of 146 tons, built in 1847, "went missing" and disapppeared with all hands that were aboard her. Only a year old at the time of her loss, she was on a passage from Philadelphia to Boston.

During the years 1821-1849, the following thirty schooners of over 125 tons register were built in the Belfast district:

Year Built	Name of Schooner	Tonnage	Dimensions in Feet			Year Built	Name of Schooner	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1822	HARRIET & ELIZA	138	79	23	9	1838	SUPERIOR	155	87	24	8
1825	BUNKER HILL	127	79	23	8	1839	ALBERT VINAL	157	86	24	9
1826	DIANA	130	78	24	8	1839	ROCKET	140	83	23	8
1827	WALDO	126	81	23	8	1841	OHIO	148	91	24	8
1831	SCIOTO	141	81	23	9	1845	MARY FARROW	149	82	25	8
1832	COMMERCE	136	82	23	8	1845	MALABAR	126	80	24	8
1832	COMET (I)	129	77	23	9	1846	MICHIGAN	141	84	24	8
1832	ALHAMBRA	127	79	23	8	1846	MAJOR RINGGOLD	132	82	24	8
1832	MARGARET	126	81	23	8	1846	TAHMIROO	127	87	24	7
1833	TEMPERANCE	137	84	23	8	1847	MELROSE	137	83	24	8
1833	ISABELLA	129	82	23	8	1847	FLORIAN	133	85	25	7
1833	ONECO	128	81	23	8	1848	HENRY DUNSTER	145	88	24	8
1834	BALTIC	127	82	23	8	1848	LAMARTINE	142	88	25	8
1835	ABACO	133	83	23	8	1848	REBECKAH FOGG	136	86	24	8
1835	DEPOSIT	132	83	20	8	1848	HARBINGER	126	84	23	8

In addition to the foregoing list, the schooners *Nantucket* of 125 tons and *Capitol* of 124 tons were built in 1832, and the *Moro* of 124 tons was built in 1833, with many other schooners of somewhat less tonnage during the period.

The schooner *Harriet & Eliza* was lost at Eastham, Mass., in "the famous gale of 1829." The *Comet (I)* was a well-built and copper-fastened Boston packet of outstanding quality and a comfortable, fast schooner. The *Oneco* was abandoned off Hatteras in 1839, when six years old. The *Deposit* was lost in Ipswich Bay "in the great gale of December 1839." Capt. Simon G. Cottrell and three of the crew were lost, but the captain's wife and two men were saved. The *Deposit* was only four years old when this disaster occurred. Another slightly smaller Belfast-built schooner, the *Abigail & Eliza* of 119 tons, built in 1836, was also lost in this December 1839 gale. Another 1836 Belfast-built schooner, the *Brave* of 111 tons, was in service for the long span of fifty-seven years, but she came to a tragic end, being lost on Plum Island, with all hands, in 1893. The *Superior* was lost near Santo Domingo in 1841, when three years old. The *Mary Farrow* lived to a ripe old age, as she is known to have been in actual service in 1908, when sixty-three years old. The *Malabar,* built in 1845, the same time as the "Farrow schooner," was wrecked on Nantucket in 1881, when thirty-six years old. The schooner *Major Ringgold* was ashore at Nahant in 1848, and in 1853, when seven years old, she was dismasted and abandoned off Cape May. The crew of the doomed vessel was taken off by the schooner *Hardscrabble* of Baltimore. The schooner *Mary Reed* of only 102 tons, built for Belfast owners in 1846, sailed in the Gold Rush to California in 1849 with a cargo of "lumber, provisions, wagons, wheelbarrows, marble chimney-pieces etc."—a queer combination of the intensely practical and necessary items with the ornamental. The Belfast-built and owned schooner *Florian* capsized and sank in Long Island Sound in 1847, when only a few months old. Another Belfast schooner built in 1847, the *William Stevens* of 116 tons, was sunk in 1884 off Dutch Island Light, but she was raised and was in service and "going strong" in 1893, when forty-six years old. The *Rebeckah Fogg* was wrecked on Abaco Reef in 1857,

and the Belfast schooner "*D. P.*" of 120 tons, built in 1849, was in active service in 1908, when fifty-nine years of age.

No sloops were built in the Belfast district following the construction of the *Louisa* of 31 tons, in 1823, and she was the only recorded sloop-rigged vessel built after the sloop *Mary* was constructed in 1802.

Following the construction in the 1840's of a big fleet of small barks, which ranged from 192 to 398 tons register, larger barks, generally of about 400 to 500 tons were built in the fifties. The bark continued well into the sixties as a popular rig, gradually becoming larger, and barks of moderate size (468 to 785 tons) were built at intervals until 1881. Following this, the barkentine rig and the schooner supplanted the bark in popular favor. The following table gives a list of the barks built in the Belfast-Northport district during the period 1850-1881 inclusive (and to the end of merchant sail):

Year Built	Name of Bark	Tonnage	Dimensions in Feet			Year Built	Name of Bark	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1850	P. R. HAZELTINE	399	119	27	14	1858	COMET	469	134	28	19
1851	ANN JOHNSON	445	130	28	14	1862	JOHN RHYNAS	592	151	29	15
1852	JOHN GARDNER	487	128	29	15	1862	SHAMROCK	538	139	29	21
1853	MOSES KIMBALL	499	130	29	15	1862	SARAH A. STAPLES	466	126	28	18
1855	DIANA	500	131	28	15	1863	SIERRA NEVADA	590	148	29	22
1855	JOHN HOWE	359	118	29	12	1864	PALO ALTO	489	120	30	17
1856	H. D. BROOKMAN	537	140	29	21	1864	SANCHO PANZA	460	120	30	17
1856	J. U. BROOKMAN	534	140	29	21	1865	BOYNE	617	—	—	—
1856	HARRIET A. HAZELTINE	528	139	29	21	1866	VESTA VEAZIE	764	150	32	21
1856	ADRIATIC	398	120	27	14	1871	MENDEZ	552	138	29	18
1856	LAURA RUSS	284	107	26	11	1876	EMMA L. PARTRIDGE	468	139	30	15
1857	GRACE HAMMOND	499	132	29	14	1877	CHARLES STEWART	630	143	33	18
1857	COLIN McRAE	350	119	28	12	1881	SHIRLEY	785	164	34	20
1858	HARRY HAMMOND	655	146	31	22	1881	C. P. DIXON	728	152	33	20

The barkentine *Lee Yik* of 481 tons (length 133 ft., beam 32 ft., depth 13 ft.) was built at Belfast in 1862 for Baker McNear, New York, et al., and she was wrecked in a hurricane in the Caribbean Sea in 1867. Other barkentines built in the Belfast district through the years to the end of sail were:

Year Built	Name of Barkentine	Tonnage	Dimensions in Feet			Year Built	Name of Barkentine	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1874	EYVOR	580	138	32	18	1889	R. A. C. SMITH	661	164	35	18
1874	DAVID BABCOCK	487	141	32	16	1891	STEADFAST	879	187	36	17
1884	GLAD TIDINGS	654	159	33	18	1892	JOSEPHINE (1ST)	940	189	37	17
1886	PRISCILLA	644	165	34	17	1894	DORIS	944	189	37	17
1887	FRANCIS	678	164	34	18	1896	JOSEPHINE (2ND)	941	189	37	17

The bark *Moses Kimball,* built at Belfast for Belfast owners in 1853, was sold to Spain and renamed *Elias;* later she became the *Adelante.* The *Diana,* built in 1855, was sold to Nor-

way and renamed *Nord Cap.* The two "Brookman barks" were built for H. D. and J. U. Brookman, New York. The *H. D. Brookman* was abandoned when sinking in the North Atlantic in 1882, and the *J. U. Brookman,* on a passage from New York to Valparaiso, "went missing" with Capt. James H. McCrillis' wife, son, and daughter on board. The bark *Adriatic,* built in 1856, figured conspicuously in the news on her maiden voyage. Under command of Captain Durham, she collided with the French steamship *Lyonnaise* in the North Atlantic, following which the vessels separated. The Belfast-built bark proceeded to Gloucester; but the steamer sank after keeping afloat a day, and 132 persons lost their lives, only one boat-load, holding 18 persons, being saved. It was a great disaster, with the responsibility for the collision at issue and never determined.

The bark *Harry Hammond,* built for the Hazeltines, of Belfast, was sold to the Germans and renamed *Goschen;* while the *Comet,* built at Belfast the same year (1858), was sold to the Italians and renamed *Antoinetta.* The *John Rhynas,* built in 1862 for E. H. Harriman et al., Belfast, was sold to Holland and renamed *Japara.* The bark *Palo Alto* was wrecked at Porto Bello in 1883, when nineteen years old. The *Vesta Veazie,* when only a year old, was driven ashore by a typhoon near Shanghai, but all aboard were saved, including the captain's wife and two daughters. The bark *Mendez,* built in 1871 for E. V. McGilvery, of Stockton, et al., disappeared on her maiden voyage from St. John to Cuba, and nothing was ever heard of the vessel or any of the persons aboard her. The barkentine *David Babcock* was lost off the coast of Brazil in 1881, and the bark *Emma L. Partridge* was lost on Turk's Island in 1879, when only three years old. The bark *Shirley,* built in 1881, "went missing" in 1883, and the barkentine *Priscilla,* built in 1886, was lost on Cape Hatteras in 1899. The captain and ten men were saved, while the captain's wife, two sons, and a passenger were drowned. The barkentine *R. A. C. Smith,* built in 1889, when on a passage from Mauritius to New York, was wrecked on the South African coast in 1898. The barkentine *Steadfast* was lost at St. Croix, in the West Indies, on her first homeward passage in 1891, and the big barkentine *Josephine (1st),* built at Belfast but owned in Baltimore, was also lost on her maiden voyage from Brazil to Philadelphia with coffee. She went on a small sand bank at Delaware Breakwater in a fog at high tide, and when the water went down, the barkentine broke her back.

The following twenty brigs of 239 tons and over were built in the Belfast-Northport district from 1850 to the end of sail; no vessels of this rig were built after 1874.

Year Built	Name of Brig	Tonnage	Dimensions in Feet			Year Built	Name of Brig	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1852	MARY MacRAE	242	101	26	10	1856	ENTERPRISE	269	103	26	11
1853	HENRY GUILD	241	99	25	10	1860	CHRISTA C. COLSON	300	118	27	11
1853	ETOLIA	299	116	28	10	1860	R. S. HASSELL	245	95	25	9
1853	TIBERIAS	250	109	26	10	1865	SPORTSMAN	335	116	27	10
1854	ABBY ELLEN	300	117	28	10	1866	DON QUIXOTE	435	119	29	11
1854	PROGRESSIVE AGE	297	111	26	11	1866	JAMES MILLER	302	109	27	12
1854	R. C. DYER	239	109	26	9	1869	H. C. SIBLEY	553	132	30	17
1855	SELMA	298	117	23	10	1872	JOSIE C. HAZELTINE	523	130	31	18
1855	FREE STATE	298	117	23	10	1874	NED WHITE	551	131	33	18
1855	CHARLES H. FROST	248	103	28	10	1874	I. W. PARKER	380	124	30	15

In 1850 the brigs *P. Patterson* of 173 tons and *Kate Anderson* of 197 tons were built, following seven brigs of from 149 to 227 tons built in 1849. The *P. Patterson* capsized and was abandoned off Wilmington, N.C., in 1853, and the *Kate Anderson* was lost on the Bahamas in 1859. No brigs were built in the Belfast district in 1851, but in addition to the *Mary MacRae* (which was sold to Germany and renamed *Adler*) the *Amos M. Roberts* of 236 tons

was launched in 1852. Three brigs were built in 1853 and five in each of the years 1854 and 1855. The *Etolia* of 299 tons, built in 1853, was lost that same year on Turk's Island. The *Progressive Age* of 297 tons, built in 1854, was sold to the British and renamed *George F. Levett* and still later the *Evening Star.* The *R. C. Dyer,* also constructed in 1854, was sold to English owners and renamed *D. Illion.* The small brig *Marcus* of 141 tons was built in 1857, but none was built in 1858 and 1859 and again none in 1861, 1862, and 1864. The brig *R. S. Hassell,* built in 1860, drifted ashore in a calm and strong current on Colorado Reef, Cuba, in 1874 and became a total loss. The *Don Quixote* was wrecked on Arran Island in 1879. No brigs were built at Belfast in 1867 and 1868, only one in 1869, and none in 1870, 1871, and 1873. The sizable brig *Josie C. Hazeltine,* built in 1872, sailed from Troon, Scotland, for Matanzas in 1880 and "went missing" with Captain Nickerson's wife and family on board. The brig *Ned White* of 551 tons (one of the two largest Belfast-built vessels of this rig) was blown ashore and lost in a hurricane at St. Pierre, Martinique, in 1891.

The fore-and-aft-rigged schooners, which were coastwise sailing vessels, built in the Belfast district in the fifties and sixties of the nineteenth century were relatively small craft. It was well into the seventies before schooners of 300 or 400 tons were built. The first fore-and-after of over 500 tons was not launched until 1882, but a 700-tonner was built in 1884; yet it was not until 1891 that Belfast constructed its first of three schooners registering 1,000 tons or more, and the last of the big trio was an "emergency war job," built in 1919. There were many years, scattered intermittently throughout the wood shipbuilding era, in which Belfast built no schooners, but the volume of construction and the relative size of the fore-and-afters in the years during which such tonnage was built are stated comparatively in the following table:

Year	Number of Schooners	Range of Tonnage	Year	Number of Schooners	Range of Tonnage	Year	Number of Schooners	Range of Tonnage
1850	3	76 to 86	1872	6	145 to 397	1891	2	751 to 1,240
1851	11	71 to 149	1873	11	99 to 433	1899	1	858
1852	8	63 to 187	1874	10	134 to 463	1900	2	587 to 798
1853	4	51 to 199	1875	1	231	1901	1	847
1854	2	51 to 155	1876	1	439	1902	1	934
1857	3	100 to 131	1880	2	280 to 375	1903	2	853 to 970
1864	1	234	1881	3	317 to 333	1905	1	981
1866	3	64 to 170	1882	15	187 to 665	1906	1	1,000
1867	6	121 to 185	1884	1	747	1919	1	1,838
1868	1	159	1886	1	116	1920	1	805
1870	4	93 to 280	1887	1	876	A total of 117 schooners, built 1850-1920 inclusive, with a tonnage range from 51 to 1,838 tons.		
1871	4	115 to 385	1890	2	884 to 898			

The following table gives a list of the thirty-eight schooners of 375 tons and over built in the Belfast district up to the end of sail:

Year Built	Name of Schooner	Tonnage	Dimensions in Feet			Year Built	Name of Schooner	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1871	PRESCOTT HAZELTINE	385	135	32	14	1874	S. M. BIRD	443	130	32	15
1872	ALMON BIRD	397	135	32	14	1874	GEORGE L. FESSENDEN	414	134	33	15
1873	WELAKA	433	134	32	14	1874	EDWARD JOHNSON	400	129	30	15
1873	LAURA E. MESSER	426	137	32	15	1874	WALTER F. PARKER	391	135	32	14
1874	IDA E. LATHAM	463	137	33	15	1876	FRED A. CARLE	439	139	32	15
1874	WILLIAM FREDERICK	453	133	32	15						

(Continued on next page)

Year Built	Name of Schooner	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1880	STELLA M. KENYON	375	143	32	12
1882	DAYLIGHT	661	157	35	16
1882	ST. JOHNS	428	141	33	12
1882	MARY A. HALL	381	143	33	12
1883	CLARA E. COLCORD	515	147	34	12
1883	HERALD	500	144	33	12
1883	HELEN G. MOSELEY	470	146	34	13
1883	PALATKA	429	144	34	12
1883	MEYER & MULLER	421	150	36	10
1883	SCOTIA	401	138	33	12
1884	YALE	747	167	35	18
1889	OLIVE PECKER	876	169	37	18
1890	YOUNG BROTHERS	898	186	38	19
1890	NIMBUS	884	186	37	19
1891	DANIEL B. FEARING	1,240	216	43	19
1891	ELIZA J. PENDLETON	751	180	36	18
1899	PENDLETON BROTHERS (1ST)	858	184	38	18
1900	PENDLETON SISTERS (1ST)	798	175	38	19
1900	THEOLINE (1ST)	587	164	36	14
1901	HENRY B. FISKE	847	182	38	18
1902	BRINA P. PENDLETON	934	193	38	19
1903	PENDLETON BROTHERS (2ND)	970	194	39	19
1903	FRANK BARNET	853	191	38	19
1905	THEOLINE (2ND)	981	185	38	18
1906	PENDLETON SISTERS (2ND)	1,000	208	39	20
1919	JENNIE FLOOD KREGER	1,838	243	42	20
1920	BLANCHE C. PENDLETON	805	183	36	17

The three-masted schooner *S. M. Bird,* built at Belfast in 1874, is also recorded in shipping registers as of 491.45 tons (length 132 ft., beam 32.1 ft., depth 15.2 ft.).

The schooner *Magyar* of 150 tons, built at Belfast in 1852, capsized off Antigua in 1857, and the captain and three of the crew were lost; three others kept afloat twenty-eight days before they were rescued. The Belfast-built and owned schooner *Emma L. Cottrell* of 199 tons was lost on Green Key, Florida, in 1856, when three years old. The *Nathan Clifford* of 131 tons, owned in Northport, was lost near Boothbay in 1887, when thirty years old. Another small Belfast-built schooner, the *Robert S. Bell* of 100 tons, was captured and confiscated by the rebels in James River in 1861, when she was four years old. The Belfast schooner *Hattie* of 170 tons was run into and sunk in Chesapeake Bay in 1897, when thirty-one years old, by the S.S. *Dorchester.*

Four of the six schooners built at Belfast in 1867 came to a tragic end in the seventies. The *Ida S. Burgess* (185 tons) foundered in the North Atlantic because of leaks and water taken aboard during a hurricane in 1873; the *Lelia* (144 tons) was lost on Cape Cod in 1870; the *Helen M. Condon* (143 tons) was wrecked and foundered off the Atlantic Coast in 1879; and the *Nellie F. Burgess* (141 tons) was lost in 1871. Three of the four schooners built at Belfast in 1871 met disaster. The *Prescott Hazeltine* (385 tons) was destroyed by fire when at a wharf in Portland in 1890; the *J. G. Drew* (188 tons) was lost on Outer Brewster Island, Boston, in 1879; and the *Fannie & Edith* (115 tons) was wrecked on Cape Elizabeth in 1900. The *Almon Bird* (397 tons), built in 1872, was lost on Cross Island, Machias, in 1879; while the schooners *Florida* (287 tons) and *Annie L. McKeen* (244 tons), built the same year, were wrecked on Salisbury Beach in 1896 and on the Nova Scotia coast in 1891, respectively. Another Belfast schooner built in 1872, the *Flora Condon,* was engaged in regular active coasting service in 1908, when thirty-two years old.

The schooner *Welaka,* waterlogged off Cape Henry, was picked up by a steamer in 1889, but she broke adrift in a gale, stranded, and became a total loss. The schooner *A. W. Ellis* of 176 tons was launched prematurely to escape the great Belfast fire of 1873, which swept the yard of C. P. Carter & Company. Three other Belfast schooners built in 1873, in addition to the bigger *Welaka,* came to tragic ends. The *F. E. McDonald* of 253 tons was lost on Turk's Island in 1885; the *James W. Brown* of 161 tons struck a submerged wreck and was lost in Lynnhaven Bay (of the Chesapeake) in 1881; and the *Ralph Howes* of 143 tons was wrecked on Montauk Point in 1880. The schooner *William Frederick* (sizable for the period) foundered during a heavy gale in the North Atlantic in 1895, but her crew was rescued by the S.S. *Franklin.* The *Edward Johnson* of 400 tons, built at Belfast the same year (1874), was burned at Bahia, Brazil, in 1894. The schooner *Fred A. Carle* of 439 tons, built in 1876, was wrecked on the Rhode Island coast in 1885; the *Stella M. Kenyon* (375 tons) was lost on the New Jersey coast in 1890; and another Belfast-built schooner, the *Nellie S. Pickering* of 280 tons, launched in 1880, came to her end on Long Shoal, Vineyard Sound, in 1895. The Belfast schooner *Fannie A. Gorham* of 324 tons, built in 1881, was in the news when she saved some five hundred passengers from the S.S. *Oregon,* which was sinking off Fire Island, New York. The *"Gorham"* herself was lost on the Bahama Banks in 1895.

The schooner *St. Johns* was lost on Hatteras in 1890, but all of the crew except one was saved by a breeches buoy. The *Palatka* was reported to have "filled and rolled over in hurricane off Hatteras in 1889," but the crew was rescued. The *Meyer & Muller* was lost in a hurricane on Capers Island, South Carolina, in 1893; the *Clara E. Colcord* was wrecked on Cornfield Shoal in 1894; the *Penobscot* of 358 tons (built in 1882) parted her wheelropes, drifted ashore, and became a total loss in 1908. The *Yale* was in collision and sunk in a gale off Hatteras in 1899, but her crew was saved by the schooner *Jose Olaverri.* The schooner *Puritan* of 116 tons, built at Belfast in 1886, was dismasted and abandoned by her crew off Cape Ann in 1903; the vessel was afterwards brought into port and repaired.

The big schooner *Daniel B. Fearing,* built at Belfast in 1891 for Providence owners, was the only sizable centerboard schooner built on the Penobscot, and she was designed by Burgess, of Boston. The large schooners built at Belfast around the turn of the century were evidently not long-lived, for the *Pendleton Brothers* and *Pendleton Sisters,* built in 1899 and 1900, respectively, for Fields C. Pendleton, of Islesboro, et al., and the *Theoline,* built in 1900, were soon replaced by the *Pendleton Brothers (2nd)* in 1903, the *Pendleton Sisters (2nd)* in 1906, and the *Theoline (2nd)* in 1905. These vessels were the last of the legitimate tonnage built at Belfast during the era of merchant sail, although two schooners, constructed as emergency war tonnage, were built in the district in 1919-1920.

The following table gives a list of the vessels of over 1,000 tons register (all full-rigged ships) built at Belfast, mentioned according to size:

Year Built	Name of Ship	Registered Tonnage	Year Built	Name of Ship	Registered Tonnage
1876	P. R. HAZELTINE	1,664	1874	R. B. FULLER	1,360
1865	IVANHOE	1,611	1860	ENOCH BARNARD	1,311
1861	LOUIS WALSH	1,537	1872	McNEAR	1,308
1869	CHANDOS	1,506	1873	ANTELOPE	1,306
1869	LEONORA	1,492	1853	RALPH C. JOHNSON	1,279
1869	CORA	1,491	1864	SARDIS	1,249
1861	LIVING AGE	1,469	1868	EMILY NcNEAR	1,217
1871	NANCY PENDLETON	1,449	1852	NORTHERN CHIEF	1,137
1870	ALICE BUCK	1,426	1860	INSPECTOR	1,122
1874	FRANK PENDLETON	1,414	1855	GRANITE	1,088
1875	A. S. DAVIS	1,400	1856	HUALCO	1,086
1863	LIVE OAK	1,383	1858	CHARLOTTE W. WHITE	1,080
1854	CORONET	1,368	1859	GRACE ROSS	1,073

The following list gives the twenty largest barks built in the Belfast district, set forth in the order of registered tonnage:

Year Built	Name of Bark	Registered Tonnage	Year Built	Name of Bark	Registered Tonnage
1881	SHIRLEY	785	1856	H. D. BROOKMAN	537
1866	VESTA VEAZIE	764	1856	J. U. BROOKMAN	534
1881	C. P. DIXON	728	1856	HARRIET A. HAZELTINE	528
1858	HARRY HAMMOND	655	1855	DIANA	500
1877	CHARLES STEWART	630	1853	MOSES KIMBALL	499
1865	BOYNE	617	1857	GRACE HAMMOND	499
1862	JOHN RHYNAS	592	1864	PALO ALTO	489
1863	SIERRA NEVADA	590	1852	JOHN GARDNER	487
1871	MENDEZ	552	1876	EMMA L. PARTRIDGE	468
1862	SHAMROCK	538	1862	SARAH A. STAPLES	466

The following list gives the ten barkentines built at Belfast during the years 1874-1896. The only other vessel of this rig built in the district from early days to the end of merchant sail was the barkentine *Lee Yik* of 481 tons, built in 1862.

Year Built	Name of Barkentine	Registered Tonnage	Year Built	Name of Barkentine	Registered Tonnage
1894	DORIS	944	1889	R. A. C. SMITH	661
1896	JOSEPHINE (2ND)	941	1884	GLAD TIDINGS	654
1892	JOSEPHINE (1ST)	940	1886	PRISCILLA	644
1891	STEADFAST	879	1874	EYVOR	580
1887	FRANCIS	678	1874	DAVID BABCOCK	487

Brigs were built at Belfast from 1796 to 1874, but the rig was not popular for new construction after the mid-fifties. The following table gives a list of the fourteen largest brigs built in the Belfast district, arranged in the order of their registered tonnage:

Year Built	Name of Brig	Registered Tonnage	Year Built	Name of Brig	Registered Tonnage
1869	H. C. SIBLEY	553	1860	CHRISTA C. COLSON	300
1874	NED WHITE	551	1854	ABBY ELLEN	300
1872	JOSIE C. HAZELTINE	523	1853	ETOLIA	299
1866	DON QUIXOTE	435	1855	SELMA	298
1874	I. W. PARKER	380	1855	FREE STATE	298
1865	SPORTSMAN	335	1854	PROGRESSIVE AGE	297
1866	JAMES MILLER	302	1856	ENTERPRISE	269

The following list gives the twenty largest recorded schooners (or fore-and-afters) built at Belfast, all of 500 tons or over, and constructed during the period 1882-1920, with eighteen of them built during the years 1882-1906 inclusive. The list is arranged in order according to registered tonnage. Only three schooners were of 1,000 tons or over, six of over 900 tons, thirteen of over 800 tons, and sixteen of over 700 tons. The largest schooner of the fleet, the *Jennie Flood Kreger* of 1,838 tons, and the last schooner of good size recorded as built at Belfast, the *Blanche C. Pendleton,* were contracted for during the last days of the artificial shipbuilding boom (1919-1920) brought about by the first World War of the twentieth century.

Year Built	Name of Schooner	Registered Tonnage	Year Built	Name of Schooner	Registered Tonnage
1919	JENNIE FLOOD KREGER	1,838	1903	FRANK BARNET	853
1891	DANIEL B. FEARING	1,240	1901	HENRY B. FISKE	847
1906	PENDLETON SISTERS (2ND)	1,000	1920	BLANCHE C. PENDLETON	805
1905	THEOLINE (2ND)	981	1900	PENDLETON SISTERS (1ST)	798
1903	PENDLETON BROTHERS (2ND)	970	1891	ELIZA J. PENDLETON	751
1902	BRINA P. PENDLETON	934	1884	YALE	747
1890	YOUNG BROTHERS	898	1882	DAYLIGHT	661
1890	NIMBUS	884	1900	THEOLINE (1ST)	587
1889	OLIVE PECKER	876	1883	CLARA E. COLCORD	515
1899	PENDLETON BROTHERS (1ST)	858	1883	HERALD	500

Prior to the Revolution, Falmouth (i.e., the Portland of today) was the only customs collection district in Maine, and it was established in 1758. In 1789, Congress, because of the volume of trade and activity in both shipping and shipbuilding, had to split up the large Maine area and segregate the Kennebec River, with Bath, and the Penobscot and make these districts independent of Portland. Castine, because of its prominence as a port and base during the War of the Revolution, was made the seat of customs on the Penobscot. However, in 1818, Belfast was the acknowledged leader in shipping and shipbuilding in the Penobscot area, and the territory was further divided. Belfast was decreed to be the seat of customs and the only port of entry for the district embracing the westerly shore of Penobscot Bay and River and running from Camden in the south to Bangor in the north (including these two towns). Later, there were further divisions, and even the area of Belfast township itself was reduced when Searsport, its eastern portion, seceded in 1845 to form a new and independent town, district, and government.

The Belfast-Searsport township, which later, in the days of wood sail and the Down Easter era from the 1860's to the 1890's, became famous for its sea captains, was becoming prominent for its seafaring population at the end of the thirties, as the following extract from the December 26, 1839, issue of the Belfast JOURNAL suggests:

> Belfast has suffered severely since spring among that class of her population who go down to the sea in ships. We have lost seven masters of vessels, besides many mates and sailors. Capt. Joseph Houston died at St. Augustine, of yellow fever; Capt. James Cunningham and Ambrose Farrow, in the West Indies, of the same disease; Capt. Thomas F. Patterson, of yellow fever contracted in Cuba; Capt. William O. Greely, who was probably killed by pirates in the Gulf of Mexico, in February last; Capt. Philip Eastman, in Hampton Roads, of brain disease; and recently Captain Cottrill, who perished in the late dreadful gale. All these men were young, active, and much respected.

In the seventies and eighties, that part of the original Belfast known as Searsport had become known as the home of sea captains and of the Pendletons, one of the greatest "sea captain families" in history. Later, Thomaston held the title of "the town of a hundred captains," and in this community the name of Watts was outstanding in the command of ships, as was that of Pendleton in Searsport. Bath, Maine, in the last half of the nineteenth century led the country in the building of ships, but the Penobscot outshone all other marine centers in providing able sea captains to command American ships.

In the sixties and seventies, rather full-bodied Down Easters, built for carrying both large deadweight and volume cargoes and with no pretensions of—or hope for—speed, were erroneously referred to, even in the marine press and by persons who should have known better, as "clipper ships" or "medium clippers." One such vessel was the full-bodied ship *Louis Walsh,* built in 1861 by White & Connor for the Pendletons. The "*Walsh*" was a full-bodied ship and "a big carrier for a vessel of her size." She was referred to by contemporaries as being of "the bull-dog type." Clippers were popularly likened to "greyhounds"; therefore, the difference between the *Louis Walsh* and a real clipper must have been obvious. Yet, London interests, in January 1867, referred to a "race" between the "clipper" ships *Louis Walsh* and *Charlotte W. White* (both full-bodied Down Easters built at Belfast) from Callao, Peru, to

Gibraltar. It was said that the ships left Callao together and that each made the run to Gibraltar in 104 days (which was slow time), the "*Walsh*" coming to an anchor twenty-five minutes ahead of the "*White.*" On one occasion, the first mate (Albert N. Blanchard) of the ship *Gov. Robie* was offered command of the *Louis Walsh,* but he declined, saying, "I would rather stay mate of the '*Robie*' for the '*Walsh*' will never get anywhere and if by luck she ever did, then she might never get back."

The "*Walsh,*" during the twenty-eight years that she was owned by the Pendletons, of Searsport, Maine, carried bulk cargoes generally, such as cotton, guano, and coal. In 1888, just prior to her sale to the Moore & Smith Lumber Company, of San Francisco, the *Louis Walsh* was in the public news, and during the fall months grave fears were felt for her safety; 85 per cent reinsurance was paid, but in November the ship arrived at San Francisco with coal, 204 days out from Baltimore. It appears that her skipper, Captain Pendleton, "did not relish the idea of taking the '*Walsh*' around Cape Horn," so decided to sail for San Francisco "the long way," around the Cape of Good Hope. Captain Pendleton stated that this was his firm intention before leaving Baltimore, but he had said nothing about it to anyone. The affair naturally resulted in severe criticism of Captain Pendleton and controversy in regard to the right of a ship's master to plan a long voyage over an unusual course without notifying interested parties of his intention. Very occasionally a ship, after vainly attempting to round Cape Horn in very bad weather and being rebuffed as well as "badly knocked around," has in desperation "turned tail" to the wind and seas and sailed east for the Cape of Good Hope, continuing to her Pacific port over this much longer course. Other ships have battled the elements in the vicinity of Cape Horn for ten or more weeks (the big four-masted shipentine *Edward Sewall* was, on one occasion, 67 days rounding the Horn); whereas under very favorable and most unusual conditions of wind and sea, ships have sailed from 50° S. Atlantic to 50° S. Pacific in less than a week's time.

During the Klondike Gold Rush of 1898, the *Louis Walsh* was sold to Seattle parties and sent to Alaska. (This followed a rather disastrous passage from Australia to San Francisco with coal and a mutinous crew that wanted to abandon ship. The pumps had to be worked continuously to keep her afloat.) Soon after the turn of the century, the "*Walsh*" broke adrift from her moorings at Dutch Harbor and "was blown high and dry on the spit"; she was stripped and the hull—then forty years old—broken up.

The *Ivanhoe,* built by Columbus Carter at Belfast for certain townspeople headed by Paul R. Hazeltine, was of 1,611 tons register. She was originally a three-skysail-yard- and fidded-royal-mast ship, but in later years, in the interest of economic operation, her skysails were removed and her topgallant, royal and skysail masts made (as was usual) a single spar. The *Ivanhoe* was a full-modeled, good-carrying ship for the period and, notwithstanding her original spar plans, made no pretensions for speed. In 1878 she carried 180 emigrants as well as a cargo of American manufactured goods to Sydney, Australia; but prior to 1883 she was generally engaged in the South American trade, in which she proved successful and "made good money for her owners." In 1884 the *Ivanhoe* was sold to the Black Diamond Coal Company, of San Francisco, and put in the Pacific coastwise coal trade. The ship disappeared at sea, with the loss of all aboard, during a gale of hurricane force on September 29, 1894, when twenty-nine years old, during a run, deep laden (and with four passengers), from Seattle to San Francisco. It is believed that she foundered.

The *Alice Buck* was built by Columbus Carter, master shipwright, at Belfast in 1870, being financed by Capt. Henry McGilvery of that town. She was named after a daughter of William Buck, of Bucksport, Maine, and Bucksville, S.C. (a shipping port for southern hard pine), and was of 1,426 tons register. The *Alice Buck* made several voyages in the transatlantic cotton trade before entering the California and Far Eastern trade, in which she spent most of her sea life. She is reputed to have been "a good carrier, a better-than-average sailer, and a profitable ship for her owners." The "*Buck*" was lost in September 1881 (when eleven

years old) on the Pacific Coast, about twenty miles south of the Golden Gate, while bound from New York to Portland, Ore., with a cargo of railroad iron.

The *Nancy Pendleton* was launched from the shipyard of Capt. Henry McGilvery at Belfast by Master Builder George A. Carver in August 1871. She was built for and managed by Capt. James G. Pendleton, of Searsport, and measured 1,449 tons gross and 1,385 tons net register. The *Nancy Pendleton* hailed from Belfast, and it is said that, after the sale in 1885 of the 1,491-ton ship *Cora* (built at Belfast in 1869), the vessel was the only full-rigged ship registered at that port. The "*Nancy*" was a general trader on the Seven Seas and for over twenty years made money for her owners. She carried well and showed fair speed for a ship of her fullness and spar plan. In April 1893, when twenty-one and a half years of age, she was sold in New York for conversion into a coal barge.

The ship *McNear,* named after her owner, Capt. Baker McNear, of Boston, was launched at Belfast in December 1872. She was of 1,308 tons gross and 1,245 tons net register. Following the death of Captain McNear in September 1877, the ship was sold to Arthur Sewall & Company, of Bath, which sent her out to San Francisco under the command of Capt. Wylie R. Dickinson and sold her there at a good profit. While owned by Captain McNear, the ship was operated generally in the triangular trade of coal from Britain to Hong Kong, then generally in ballast to San Francisco or Puget Sound, and grain to Europe. In 1876 the ship, when in ballast and bound from Antwerp to Newcastle-on-Tyne, went ashore on the English coast and (surprising as it may seem when all the facts are known) was abandoned by her crew, who took to the ship's boats and landed at Yarmouth. The McNear floated herself and was later boarded by men who sailed her into Deal and filed suit for about $17,000 salvage. This was contested and, for some reason or other, the Admiralty Court awarded the men who had found a deserted ship at sea and brought her safely into port only about $7,250 as compensation, although the ship's valuation was acknowledged as $45,000 at the time. In November 1878, the *McNear* was grounded off the Columbia River, with the pilot aboard, under most unusual conditions. After being delayed a week by low water, the ship crossed the bar; when she was at anchor inside, a gale blew up, and the ship dragged and went ashore below Tillamook Spit, suffering damages that cost $15,000 to repair. On May 14, 1900, the *McNear* was wrecked on Dowsett's Reef, in the Pacific, some sixty miles from Leysan Island, where she was bound to load guano. Her sea life ended when she was about seventeen and a half years old.

The ship *Frank Pendleton* was built at Belfast by Capt. Henry McGilvery (with Columbus Carter as master shipwright) and launched in October 1874. She was named after Capt. Benjamin Frank Pendleton, of Searsport, who had been master of several vessels and who became the Pendleton in the well-known firm of Pendleton, Carver & Nichols, shipowners and operators, New York. The *Frank Pendleton* was of 1,414 tons gross and 1,351 tons net register. She was a good carrier and rather slow under sail, but she is said "to have made money for her owners." The ship roamed the Seven Seas and made no Cape Horn westbound passages, but on several occasions she carried wheat from San Francisco to European ports. An attempt was made by some member of the crew to scuttle the vessel as she started to load coal at Newcastle, N.S.W., Australia, in May 1887. When she was floating light, auger holes had been bored through the hull planking; but the vicious plot was discovered before the ship took in much water, and repairs were made. The identity of the culprit or culprits was never discovered. On her last voyage in the Pacific, from Madras, India, to San Francisco, she was thrown on her beam ends in a typhoon off Formosa; her decks were under water for a day and a half, and Captain Nichols said that she "nearly foundered." Upon her arrival in New York in March 1893 with cargo from San Francisco, the *Frank Pendleton*—then nineteen years old—was sold to Lewis Luckenbach and cut down to a barge. On March 8, 1917, when in tow and deeply laden, the vessel foundered in Ambrose Channel, New York, and her career ended when she was forty-two and a half years of age.

The ship *A. S. Davis* of 1,400 tons, launched at Belfast in June 1875, was built by Columbus Carter and was named after one of the owners resident in Chelsea, Mass., and Searsport, Maine. She was managed by her skipper, Capt. James W. Ford, of Searsport, who also held the largest fractional interest in the vessel. The first voyage of the *A. S. Davis* was across the Atlantic to Liverpool, thence to Bombay and Havre. The second was from New Orleans to Europe, thence to Hong Kong, San Francisco, and Callao, Peru, where she loaded guano. She was completing the last leg of her second round voyage when she encountered disaster and was lost. The *"Davis"* had proved a good sailer as well as a good carrier by a run, coal laden, from Cardiff to Hong Kong in 104 days and a run from Hong Kong to San Francisco in 44 days. She sailed from Callao, deep laden, on July 23, 1878, and on October 22, when 91 days out and within a few hours' sail of Hampton Roads, her destination, she encountered a gale and had to heave to. During the night, she was blown on the shore and became a complete wreck. The crew climbed into the rigging, but the masts were broken off in the gale, and only one seaman (and he was washed ashore unconscious) was saved.

The largest — and, it was claimed, the finest — ship built at Belfast was a representative Down Easter christened the *P. R. Hazeltine* when launched in June 1876. This vessel was commenced and partly built by Columbus Carter, and she was said to be the one hundredth vessel constructed by him. Unfortunately, the veteran master shipwright died before the ship was ready to leave the ways. She was finished by Capt. Ezekiel Horace Herriman, who owned a quarter of her and became her commander. From the start, the *P. R. Hazeltine* (named after a Belfast merchant who was a "fraction" holder) was unfortunate. On her first ocean voyage from Bangor to Liverpool, in July 1876, with a cargo of lumber, she stranded on Cape Sable in a fog and was required to jettison part of her cargo before she could be floated. In February 1878, she was sunk by striking an uncharted reef in a bay at Wollaston Island near Cape Horn, where Captain Herriman had taken her to avoid further battling with heavy gales. As before stated, the crew was saved by passing vessels. Captain Herriman made unsuccessful attempts to salvage the ship's cargo, and the worry and failure associated with the loss drove the captain insane.

The most prominent builders in Belfast during the last quarter-century (1875-1900) of its real shipbuilding history—excluding the short artificial World War I boom—were the Carters, the Cottrills, and McDonald & Brown. The firm of C. P. Carter & Company (Columbus Carter) built clipper ships in the fifties, and its last vessel was the schooner *Pendleton Brothers* of 858 tons, built in 1899. During the last twenty-five years of Belfast's shipbuilding days, this firm built fourteen vessels aggregating 7,960 tons register; i.e., two full-rigged ships, eleven schooners, and Belfast's only steamer (since Civil War days)—the small *May Queen* of 54 tons.

White & Connor, active Belfast shipbuilding firm in the forties and to the sixties, had retired from the field, but George Washington Cottrill was building in the seventies and continued to 1890, when he built his last vessel, the barkentine *Steadfast* of 879 tons. Jacob Young Cottrill built from the spring of 1881, when he launched the bark *C. P. Dixon* of 728 tons, to the end of 1883, when he completed the schooner *Clara E. Colcord* of 515 tons. Altogether, the Cottrills built seventeen vessels at Belfast during the last quarter of the nineteenth century. They aggregated 9,698 tons register and consisted of three barks, four barkentines, and ten schooners.

McDonald & Brown launched the schooner *Stella M. Kenyon* of 375 tons in 1880 and the barkentine *Josephine (2nd)* of 940 tons in 1896. During the seventeen-year period 1880-1896 inclusive, McDonald & Brown built eleven vessels at Belfast (two barkentines and nine schooners) aggregating 7,663 tons register. This firm constructed the largest schooner (excluding war tonnage) ever built at Belfast, the *Daniel B. Fearing* of 1,240 tons, which was the biggest craft launched from a Belfast yard following the building of the Down Easter *P. R. Hazeltine* by C. P. Carter & Company in 1876. George A. Gilchrist constructed the two barkentines *Olive Pecker* of 876 tons and *R. A. C. Smith* of 661 tons in 1889 and the schooner

Theoline of 587 tons in 1900. He built, all told, three vessels aggregating 2,124 tons in the period 1889-1900 inclusive.

The last Penobscot owner of vessels built at Belfast was Fields C. Pendleton, of Islesboro, who in 1891 built the schooner *Eliza J. Pendleton* of 751 tons and, during the years 1899-1906, built five of the nine large schooners launched at Belfast. The vessels built on his order were the two schooners named *Pendleton Brothers* (1899 and 1903) of 858 and 970 tons, respectively, the *Brina P. Pendleton* (1902) of 934 tons, and the two schooners named *Pendleton Sisters* (1900 and 1906) of 798 and 1,000 tons, respectively. Daniel B. Fearing, of Providence, R.I., was the owner of the schooner *Young Brothers* of 898 tons, built in 1890, and of the centerboard Burgess-planned schooner *Daniel B. Fearing* of 1,240 tons, launched in 1891. C. Morton Stewart, of Baltimore, contracted for four barkentines of from 678 to 944 tons built at Belfast during the years 1887-1896; Boston owners took five of the last schooners built at Belfast in the twentieth century. The last vessel of size recorded as built in the district, the schooner *Blanche C. Pendleton* of 805 tons, was constructed in 1919-1920 to the order of Pendleton Bros., of New York.

XXXVII.

SEARSPORT AND STOCKTON, MAINE

A Marine Community and an Abode of Anglo-Saxon Sea Captains

In 1845, as a result of the secession of the most easterly part of Belfast, the town of Searsport was incorporated. Historian Joseph Williamson writes: "The number of polls returned from Belfast in 1842 was 822. The division reduced it to 755. A multiplication of 47, the difference, by 4⅓, which is about the ratio between polls and population, gives 206, the probable number of inhabitants set off." The town of Searsport, whose center today lies about five miles to the east and slightly to the north of the city of Belfast and is well located on Penobscot Bay, grew quickly in importance as a marine community. (As the crow flies, it is about fifty-eight miles northeast of Bath and thirteen miles from Rockland.) Searsport built ships from the fifties and vied with Belfast in the production of Down Easters after the Civil War, but from the first became an abode of mariners. Basil Lubbock, the English marine writer, in his book on THE DOWN EASTERS—AMERICAN DEEP-WATER SAILING SHIPS, said in 1929:

> Less than fifty years ago the little New England town of Searsport supplied more than 10 per cent. of America's sea captains. According to local statistics, in 1889 Searsport had 2000 inhabitants, 77 of whom were in command of American sailing ships, and 33 of whom were the proud masters of full-rigged Cape Horners. Ever since those hardy pioneers from the Old Country cleared their holdings along that thickly wooded New England seaboard, salt water has run in the blood of their descendants. The State of Maine has always wrested a living from the forests and the sea.

J. H. Sullivan has compiled a list of 149 Searsport captains, with the name of their most important—or latest—command. Only 55 family names appear in this list of skippers hailing from Searsport, Maine, and 3 of the names can boast of supplying a dozen or more masters of American square-riggers, 8 with five or more, and 16 with three or more. The following list gives the most common names of Searsport deep-sea ship captains, and the number of masters of each family who rose to command a square-rigger in the Cape Horn service or to sail the trade routes on the Seven Seas is set forth.

Family Name	Number of Deep-Sea Captains	Family Name	Number of Deep-Sea Captains	Family Name	Number of Deep-Sea Captains
Nichols	17	McGilvery	5	Dow	3
Pendleton	14	Curtis	5	Ford	3
Carver	12	Colcord	4	Goodell	3
Nickels	8	Gilkey	4	Ross	3
Blanchard	7	Colson	3	Sweetser	3
Park	7				

Some of the family names are connected with the building and operation of vessels from the earliest days of Searsport marine history. The sloop *Alexander,* built in 1805 at Searsport, was named after one of her owners, Alexander Nichols, who was also a part owner of the schooner *Belfast,* built locally in 1812, and of the schooner *Fair Play,* built in 1817. Samuel Nichols owned part of the schooner *Friendship,* built in 1806, and had an interest in the

Belfast. The most common name connected with ships throughout the Penobscot area is Pendleton, and the name is associated with marine interests in Boston and New York. A Phineas Pendleton was part owner of the schooner *Seven Friends,* built at Searsport in 1803, and also of the sloop *Alexander* (1805), the schooner *Belfast* (1812), of which he was mariner, or captain, and of the *Fair Play* (1817). Green Pendleton was a part owner of the *Seven Friends* (1803) and of the schooner *Sally,* launched locally in 1816 from the Merithew yard. In the first two decades of the nineteenth century, Isaac Carver was an owner of record of part of many of Searsport's newly built vessels, such as the *Alexander* (1805), *Friendship* (1806), *Belfast* (1812), *Packet* (1817), *Trip* (1818), and *Olive Branch* (1819). The name "Park" is connected with the building of the schooner *Seven Friends* at Searsport in 1803, for Samuel, John, and Joseph Park each owned a fraction of her, and Joseph Park, Jr., was her mariner, or captain. John and Benjamin Park were part owners of the *Friendship,* built in 1806, and of the *Benjamin & Joseph* (named after two of the brothers), which was constructed in 1811, with Joseph Park as master. He was captain of the schooner *Sally,* built in 1816, and a Sarah Park was the owner of record of part of the schooner *Fair Play* (1817). The name "Colcord" is also intimately connected with early Searsport marine history as to both ownership and operation of vessels. Benjamin Colcord held "a piece" of the 89-ton sloop *Alexander* in 1805 and of the 101-ton schooner *Friendship* in 1806, of which vessel he was master. Benjamin and John Colcord were each part owners of the 136-ton schooner *Benjamin & Joseph* (1811), and when the schooner *Fair Play* was constructed in 1817, John Colcord was the principal owner and the mariner (or captain) of the vessel. The family names of many other well-known later-day deep-sea skippers appear early in Searsport marine history. Jonathan Dow was one of the owners of the *Friendship* in 1806, and Shepherd Blanchard "held a good part" of the schooner *Alpha,* built in 1816.

It is said that the first ship commanded by a Searsport captain was the *Henry Leeds* of 379 tons, built in Prospect Marsh in 1834 for Capt. Jeremiah Sweetser. The full names of the various members of the Nichols, Pendleton, and Carver families who commanded deep-sea full-rigged ships, with the name of their most important ship or their last command, are stated herewith:

NICHOLS		PENDLETON		CARVER	
Christian, or Given, Name	Name of Ship	Christian, or Given, Name	Name of Ship	Christian, or Given, Name	Name of Ship
Charles	MELROSE	Phineas (2nd)	VISTULA	Benjamin	B. AYMAR
James	CHAMPLAIN	Phineas (3rd)	HENRY B. HYDE	Benjamin (2nd)	L. J. MORSE
George A.	ABNER COBURN	Benjamin F.	NANCY PENDLETON	James N.	CHARTER OAK
Wilfred V.	W. H. CONNOR	John G.	GRACE ROSS	John A.	JOHN BUNYAN
John P.	LIVING AGE	John G. (Jr.)	SOLFERINO	Charles G.	B. F. CARVER
Amos (Jr.)	GOVERNOR ROBIE	James G.	BELL ROCK	Phineas P.	CHARTER OAK
William G.	BELLE OF BATH	Nathan	DUMBARTON	Nathan P.	SUSAN GILMORE
Edward P.	FRANK PENDLETON	Ephraim	STATESMAN	Frank L.	S. P. HITCHCOCK
Jasper N.	CHARTER OAK	George W.	HENRY S. SANFORD	Andrew L.	MARY L. STONE
Wilson C.	RESOLUTE	Timothy C.	LOUIS WALSH	William M.	SUSAN GILMORE
Charles M.	A. J. FULLER	Frank I.	WILLIAM H. CONNOR	Caleb F.	ST. NICHOLAS
Peleg B.	R. R. THOMAS	James N.	MARY L. CUSHING	Jesse T.	ST. MARY
Cyrus G.	MATILDA	Charles	GOLDEN ROCKET		
Cyrus G. (Jr.)	R. R. THOMAS	Andrew S.	ARYAN		
Joshua B.	S. P. HITCHCOCK				
Alexander H.	ST. MARK				
Daniel C.	WANDERING JEW				

It is interesting to note that all the sea captains of Searsport have solid Anglo-Saxon names. The history of Maine and of New England shipbuilding and ship operation is an interesting and important chapter of the resourceful and courageous achievements of the rugged Anglo-Saxon race. The churchyard at Searsport, it is said, "contains many more tombstones than coffins, and the record 'Lost at sea' is carved over many a nonexisting grave." Of the seven Blanchards who were masters of deep-sea square-riggers during the last half of the nineteenth century, five brothers were lost at sea. Most of the Searsport captains had a reputation for being great sail carriers and for getting all the speed possible out of their vessels. State of Maine wood ships were generally well designed and built and both skillfully and courageously handled. When all parts of the country south and west of the Piscataqua had discontinued building wood ships, Maine-built wood square-riggers of the Down Easter type sailed the Seven Seas under the command of intelligent and bold masters, who were as keen in the running of their business as they were resourceful and brave in the handling of their vessels. The result was that Maine-built deep-sea square-riggers made good money for their owners. It is said that the *William H. Connor,* the last Down Easter built at Searsport, cost James G. Pendleton and his associates $110,000, but that "within three years of her launch the ship paid for her cost in freights." Lubbock writes: "This was no unusual profit for, according to a Searsport tradition, one of the [Pendleton] ships paid 1600 per cent. to her lucky shareholders."

Many of the Searsport captains held commands on various ships. Capt. Benjamin F. Colcord was master of the *Centennial, James G. Pendleton, Henry S. Sanford, Governor Robie, Abner Coburn,* and *William H. Connor.* Capt. Daniel C. Nichols was the skipper of the *Commodore Dupont, Robert Porter, Wandering Jew, Emily Reed,* and *Manuel Llaguno.* Capt. Henry G. Curtis commanded the *Hope, John C. Potter, State of Maine,* and *Belle of Bath,* and Capt. Charles M. Nichols (one of the few Searsport skippers who ended his career at sea in a steam vessel) was master of the bark *Patmos* and of the full-rigged ships *Henrietta, S. F. Hersey, Lucy A. Nickels,* and *A. J. Fuller.* Capt. Benjamin F. Pendleton of the ship *Nancy Pendleton* was also skipper of the brig *Leghorn,* the bark *Edgar,* and the ships *William B. Kent, Bell Rock,* and *Charlotte White,* and when he left the "*Nancy,*" he was succeeded in turn by three nephews, Phineas Pendleton, 3rd, Frank I. Pendleton, and James N. Pendleton. (Another nephew, John G. Pendleton, Jr., was lost in the ship *Solferino* in the South Atlantic, January 1863, and an earlier John G. Pendleton was lost at sea on December 2, 1847.)

The *Henry B. Hyde,* the best Down Easter ever built, was designed and constructed at Bath, Maine; but the firm of Pendleton, Carver & Nichols, shipowners and brokers of New York (all Searsport men), was her principal shareholder, and she was commanded by Phineas Pendleton, 3rd, of Searsport, Maine. The firm of Pendleton, Carver & Nichols, which did an important business in New York from 1885 to 1900 (when it sold its ships to California owners), was composed of Capt. Benjamin F. Pendleton, his son-in-law Capt. Wilfred V. Nichols, and his cousin Fred Carver, the son of Capt. Benjamin Carver of the Searsport-built ship *B. Aymar.*

Searsport captains were often quite versatile. Capt. Ferdinand Herriman of the ship *Sonntag*—and part owner—was an accomplished musician and artist. He operated as a shipwright in Liverpool, became a marine surveyor on the Great Lakes, where he established a new system for classifying vessels, and in later life held an important federal position at Washington, D.C.

Capt. William McGilvery, a native of Searsport, built ships in partnership with Capt. Daniel S. Goodell (Senior); later the partners separated, and McGilvery owned his own yard. He built the ship *S. F. Hersey* in 1865, but his business interests and political duties caused him to put the shipyard in charge of Marlboro Packard, the master builder, who launched the *Oneida (II)* of 1,074 tons in 1866 and thereafter built such ships as the *John C. Potter* (1,182 tons) in 1869, *William McGilvery* (1,270 tons) in 1870, *Premier II* (1,392 tons) in 1875,

and *William H. Connor* (1,496 tons) in 1877. Capt. William McGilvery was financially interested in all the vessels that he built and had Marlboro Packard build for him. He was a member of the state legislature and later state senator. He became a rich man, but when he died in 1876, he had lost most of his wealth by unwisely backing many of his host of friends.

As the Center of Shipbuilding Moves North and East, Searsport Yards Construct the Down Easter Type of Sailing Vessel

A shipyard was established at what is now Searsport by John Carver in 1824, and the first vessel launched was the schooner *Boston.* Between 1824 and 1864, John Carver built thirty-three schooners, brigs, and barks and the ships *B. Aymar, John Bunyan, Charter Oak,* and *B. F. Carver.* In 1833 he built the fast brig *Kentucky* of 158 tons, intended for a peaceful trader. She was later a notorious slaver, which landed cargoes of Africans in the southern states and ended her days by being deliberately run ashore and burned by her crew to prevent capture by a cordon of government gunboats between her and the open sea.

Capt. George A. Carver, a son of John Carver, commanded the brig *Amy A. Lane,* designed and built by himself at Searsport, and was skipper of the bark *Albert Russell,* built at Newburyport, Mass. He succeeded his father in the shipbuilding business and for twelve years operated the Carver shipyard at Searsport. During the twelve-year period 1864-1876, he built several vessels—schooners, barks, and brigs. He was entirely responsible for the plans and construction of the ship *Clarissa B. Carver,* the last and largest vessel launched from that yard in its history of over half a century. George A. Carver also built the ship *Nancy Pendleton* of 1,385 tons at the Henry McGilvery shipyard in Belfast in 1871. After building ships, George A. Carver went to sea as a shipmaster. Upon his retirement from the sea, he started a ship chandlery business in New York (Baker, Carver & Company), which subsequently became very important as Baker, Carver & Morrill, Inc., wholesalers, shipowners, and managers.

The fast sailer *Clarissa B. Carver* of 1,144 tons, launched from the Carver shipyard at Searsport in 1876, was 187 ft. long, 37 ft. beam, and 24 ft. deep. The vessel is credited with a phenomenally fast run from New York to Anjer in 67 days. Among her noteworthy passages were:

1882-1883:	Philadelphia to Yokohama	116 days
	Kobe to San Francisco	32 "
	San Francisco to Liverpool	102 "
1884-1885:	New York to Yokohama	137 "

December 9, 1884, to April 25, 1885. Said to be "the fastest passage ever made at that season of the year," the average for vessels leaving Atlantic ports for Japan in the month of December being 170 days, with 150 days as the shortest made during the previous fourteen years.

The *Clarissa B. Carver* was run down near the entrance to Hiogo Harbor by the British S.S. *Glamorganshire* during the night of June 7, 1885, when the vessel was only nine years old. The sailing ship had the right of way and did not change her course, and her running lights were burning brightly; nevertheless, she was rammed and sunk. Capt. Leroy Dow got all hands ashore safely and won the suit brought against the owners of the *Glamorganshire,* which judgment was sustained after an appeal had been made to the highest court in London.

The *Charter Oak* was built in 1854 by John Carver at Searsport for Walsh, Carver & Chase, New York shipowners, managers and brokers, and the Carver of this firm was Benjamin

F. Carver, the brother of the builder. A small ship, the *Charter Oak* was 165 ft. long, 33½ ft. beam, 23 ft. deep, and of 941 tons register. John Carver had built the brig *Kentucky* (158 tons) in 1833 and the ship *B. Aymar* (516 tons) in 1840 for his brother Benjamin to command, and the *Charter Oak* was large in comparison with these earlier vessels. The *Charter Oak* is said to have been "a handy little ship, generally fortunate in her operations and a profitable vessel for her owners." She crossed the Atlantic under command of Capt. James N. Carver in 1858, leaving Charleston, S.C., December 2, arriving at Havre December 19, and making a very fast passage of only 17 days. In 1883 she ran from Honolulu to New Bedford, deep laden with whale oil, in 118 days. An attempt on the part of several members of the crew to burn the *Charter Oak* occurred in September 1875 at Shanghai, but a serious disaster was prevented by the timely work of Captain Smith, the officers, and most of the crew, assisted by the sailors of the British ship *Thyatira.* The vessel saw a lot of service in the Orient, and she made two passages from China with coolies, on one of which she landed 450 Chinese at Victoria, British Columbia. In January 1878, while at Hong Kong with 250 coolies aboard destined for Honolulu, the government intervened to stop the traffic, asserting that "Chinese taken to Honolulu were treated as slaves." The *Charter Oak* had a life of thirty-five years while operating under canvas; she was then cut down to a barge, and in 1894, when deep laden and in tow, she foundered off Montauk Point when forty years old.

The *S. F. Hersey,* launched from Capt. William McGilvery's Searsport yard in October 1865, was another relatively small full-rigged ship and measured 991 tons register (length 169 ft., beam 34 ft., depth 23 ft.). She was owned principally by her builder until his death in 1876, and she was owned in Searsport until 1886, when she was acquired by R. W. Cameron & Company, of New York. Soon afterwards, she was put under the British flag, with Melbourne, Australia, as hailing port. The *"Hersey"* was a good carrier, a fair sailer, and a profitable vessel. In 1883, under command of Capt. Charles Waterhouse, she made a passage from Boston to Melbourne in 83 days. Her last days at sea were spent in the Puget Sound-Australia lumber trade, and she was finally converted into a store ship for use in an Australian port.

The *Oneida* was another Capt. William McGilvery ship and was built in his yard at Searsport by Marlboro Packard, master builder, and launched in July 1866. She was of 1,074 tons register and measured 179 ft. long, 36 ft. 5 in. beam, and 23 ft. 9 in. deep. The *Oneida* was owned in Searsport until 1888, when she was sold (being twenty-two years old) to San Francisco parties for use in the Alaskan salmon cannery trade. Frederick C. Matthews says: "The *Oneida* was a good handy ship and generally fortunate; made fairly fast passages and was a source of profit to her owners while engaged in the general carrying trade. Her voyages were to all the principal world ports and she became one of the best known of the smaller class of American ships. Included in her operations was the transportation of Chinese to the Pacific Coast of America." The *Oneida,* on a voyage from San Francisco to Thin Point, Alaska, on April 26, 1890, struck a sunken rock fifteen miles off the island of Sanak and was a total loss. The officers and crew, all the white laborers, and thirty-three Chinamen aboard were saved, but there was a panic among the Chinese, who became frightened and unmanageable, refused to obey orders, and jumped overboard. Seventy-seven of them were drowned.

The ship *John C. Potter* of 1,182 tons (length 190 ft., beam 36½ ft., depth 24 ft.) was built by Marlboro Packard, master builder, for Capt. William McGilvery and launched from the McGilvery shipyard at Searsport in April 1869. The *"Potter"* had the reputation of being "a wonderful little ship, a good carrier, smart under sail, lucky with cargoes, weather, and very profitable to her owners." She must have been well built, for after thirty-five years engaged in carrying heavy cargoes on long voyages and twenty-five years in hauling coal and ore in coastwise trade on the Pacific, she was pronounced seaworthy and in good physical condition. During one year of her operation on the Pacific, the *"Potter"* made three round voyages between San Francisco and Puget Sound inside of 30 days each. Her master received a bonus for unusually

fast sailing and rapid turnabout for each of these voyages. From May 1869, when she left the United States on her maiden voyage, the *John C. Potter*—outside of one brief call at San Francisco in 1874—had not been at any port in this country until her arrival in New York in December of 1884, a period of 15⅔ years. During those years, the ship's voyages had originated and ended at a European port. She generally took coal out to Brazil or Uruguay, thence sailing around the Horn to a West Coast South American port to load a return cargo of guano.

From Captain McGilvery's shipyard at Searsport there was launched in September 1870 a Down Easter constructed by Marlboro Packard, master builder, which was named after the owner of both the ship and the shipyard where she was built—*William McGilvery.* The vessel registered 1,270 tons and was 193 ft. long, 38 ft. beam, and 24 ft. deep. She was a good carrier and a profitable ship in the South American, transatlantic, and Cape Horn trades. She made her passages in fair time, and for some sixteen years she escaped damage from the elements. In 1886 she had a bad time of it rounding the Horn westward bound from Liverpool to San Francisco, her rudderhead twisted off, and she sustained such damage in bucking heavy seas and head gales for three weeks that she was forced to put about and make for the Falkland Islands for repairs. On August 7, 1889, when the *William McGilvery* was nineteen years old, the British ship *Norcross* rescued the officers and crew of the Searsport-built vessel, which, while on a voyage from Pisagua to New York (in Lat. 49° S. and Long. 78° W.), was found to be leaking beyond control of the pumps and in danger of foundering.

There were two Penobscot-built full-rigged ships named *Premier.* One of 1,116 tons register was built at Bangor in 1853, and the second was built by Marlboro Packard and launched from the McGilvery yard at Searsport in August 1875. This vessel was of 1,392 tons register and measured 204 ft. long, 37 ft. beam, and 24 ft. deep. The career of *Premier (II)* under the Stars and Stripes was a short one, for when only two years old she stranded at Dunkirk, loaded with guano, when in charge of a pilot. She was sold "as she lay," but was later floated, repaired, and bought by the Germans, who used her for many years in the transatlantic trade under the name *Ida and Emma.* Still later, she was operated as the *Else.*

In October 1876, following an unsatisfactory attempt to build Searsport ships in South Carolina "near the timber," Elisha Dunbar launched at Searsport the Down Easter *R. R. Thomas,* which had been built to the order of Capt. Jonathan C. Nickels, of Searsport, and was the last ship built by that captain and shipowner. The *"Thomas"* registered 1,333 tons and was 202 ft. long, 40 ft. 3 in. beam, and 24 ft. deep; she was reputed to be "a good carrier, well built, making passages in fair average time and being free from serious mishaps." She was named after Rufus R. Thomas, a native of Mount Desert, Maine. She was built to be commanded by Capt. Peleg B. Nichols, of Searsport, who, except for two voyages, was in the ship until his death at Mauritius in August 1893. His son, Cyrus G. Nichols, completed the passage to New York. Capt. Edward D. Blanchard was then put in command and continued until his death on board, in October 1898, at Montevideo, following which the mate completed the voyage to Boston. The *"Thomas"* made only one westward Cape Horn passage from an Atlantic port to San Francisco, but visited that port on several occasions from China or Japan to load wheat for British ports. During the years 1888-1889, she operated between Puget Sound and Melbourne, Valparaiso, or San Francisco, but aside from these runs, all her voyages were between Atlantic ports and those of the Far East, where she and her commanders were highly considered. In the winter of 1898-1899, when over twenty-two years old, the ship *R. R. Thomas* was sold while at Boston to Lewis Luckenbach and converted into a barge; when in tow, she foundered, January 7, 1915, off Shennecock Light, Long Island, being over thirty-eight years old at the time of her loss.

The *William H. Connor* was a sizable Down Easter, the largest vessel and the last full-rigged ship ever built at Searsport. She was of 1,496 tons register (length 210 ft., beam 40 ft., depth 24 ft.) and was built by Marlboro Packard for Capt. James G. Pendleton and launched in June 1877 from Capt. William McGilvery's old yard. The *"Connor"* proved to be a good

carrier that sailed well and delivered her cargoes in good condition. She was a fortunate and a profitable ship, for it is said that at the completion of her third round voyage, "her earnings had paid the full cost of construction." On her maiden voyage, she took a cargo of lumber to Liverpool and then ran out to Bombay from the Mersey in 90 days. For twenty-five years, the *"Connor"* was in general trade. Loaded with coal, she made three voyages around the Horn westbound from Britain to northern Pacific Coast ports. Her last voyage was from New York to Fremantle, thence to Newcastle, N.S.W., and on to Manila, Hong Kong, and back to New York, where she arrived in 1902 and was then sold and cut down for a barge. On April 22, 1909, when thirty-two years old, the *"Connor,"* in tow, was lost by collision with the schooner *Hugh Kelly* not far from Sandy Hook.

In the early seventies, it was well known and admitted on the Penobscot that the Belfast, Searsport, Prospect, Stockton area, notwithstanding its fine shipbuilding history, was no place to build the size of ship that had been in demand since the fifties. It has been said of Searsport by historian Frederick C. Matthews: "The village had at one time been very active in the shipbuilding line, but insufficient depth of water, close inshore, limited the size of the vessels constructed, and most of the output from the shipyards was schooners, brigs or barks." The shipowners of Searsport, Maine, were responsible for certain actions of historic interest when the fact was forced upon them that the demand was for ships of such size that they could no longer be built at Searsport and launched into the Penobscot at that point. In addition to building ships their way and under their own supervision in northeastern yards, such as the *Brown Brothers* at Newburyport, Mass., they were responsible for constructing the only wood vessel of any size to be built in the South and the only sizable ship ever constructed in South Carolina (excluding the one mahogany clipper, *Stephen R. Mallory* of 959 tons, built at Key West, Fla., during the boom and the great demand for marine tonnage in the fifties).

Maine, the cradle of American shipbuilders, was a natural wood shipbuilding state, and the Kennebec River—which was a water highway—drained a territory conspicuous for its timber suitable for shipbuilding. Moreover, it had the advantage at Bath—and thence oceanward—of floating the largest vessels, not only those of a size known and constructed in the seventeenth, eighteenth, and nineteenth centuries but also those of a maximum size continuing to present times. Ship carpenters settled where the timber grew or was economically accessible, and growing boys and young men were trained to be shipwrights. Gradually, "Down East," from the Merrimac in Massachusetts to Nova Scotia and Prince Edward Island, Canada, became the home of ship carpenters in America, and a large percentage of the best trained and most competent lived along the tidewaters and rivers of the state of Maine. Finally, however, the timber growing in Maine and the New England States that was suitable for and needed in shipbuilding was cut. The British Navy did much to denude the forests of white pine masting and straight trees suitable for spars, and hard woods for framing practically disappeared. Only hackmatack for ship knees was still obtained in quantity when Maine took over the national leadership in wood shipbuilding—not because it had the timber for ship framing and planking, for these it was bringing up from the South (or down from Canada), but because Maine had the men to build ships and ships were in the blood of Down Easters.

It is strange that shipbuilding, once a major industry along the shores of the Chesapeake, should have moved north and east away from the timber in the nineteenth century, and as the center of activity moved farther and farther east (Delaware, New York, Boston, Portsmouth, N.H., Maine) ever steadily toward the locations where the best and most shipwrights were to be found, ships were built more and more distant from that part of the country—the South—that had to supply the needed oak timber for framing and the hard pine for planking. The pull of the men north (and east) was much greater than the pull of the timber south in the realm of shipbuilding during the entire nineteenth century and up to the end of the era of wood construction in the United States. However, it was the shipowners of Searsport, Maine, who, refusing to move their yards a mere fifty-eight miles to Bath on the Kennebec River (as did

such famous Penobscot Bay shipowners and builders as Isaac F. Chapman and Benjamin Flint), conceived the idea of building their ships at the point in South Carolina from which timbers and planking were shipped to northern yards. As there were no shipwrights in the South, Capt. Jonathan C. Nickels, a shipowner and retired shipmaster of Searsport, Maine, sent a master builder, E. Dunbar, with a large crew of Maine ship carpenters, caulkers, riggers, blacksmiths, etc., and a supply of iron, cordage, etc., south to Bucksville, S.C., to build a ship. (This was the small port from which shipments of white oak for framing and hard southern pine for planking were sent by vessel to the shipyards of the North.)

The result was the building by Maine men, with Maine capital, at Bucksville, S.C., of the ship *Henrietta,* which, after a protracted period spent in preparation and construction, was launched in April 1875—the year the *Brown Brothers* was built at Newburyport, Mass., for Searsport owners. The *Henrietta* was a full-rigged ship of 1,203 net registered tons (201 ft. long, 39 ft. beam, and 24 ft. deep). The vessel was said to be "a well-built ship and a fair sailer." Throughout her sea life, she was referred to as "a successful vessel," but it is significant to note that the experiment by northern shipowners of building in the South was not repeated. It appears that Captain Nickels ran into "barrels of trouble" at Bucksville. The depth of water for launching bothered him, the expense of transporting men and accommodating them was much greater than anticipated, there was much difficulty in obtaining proper supplies, and the climate was unsatisfactory and the men unhappy and disgruntled. The next ship built by Captain Nickels and his Searsport partners, the *R. R. Thomas,* launched October 1876 and his last vessel, was constructed on the shores of the Penobscot, Maine.

A Record of Shipbuilding at Searsport from 1792 to 1891 Inclusive

The following table gives a record of vessels (admittedly incomplete) built at Searsport during the years 1792-1891 inclusive:

	Number of Vessels							Tonnage of Vessels						
Period Inclusive	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total
1792-1799	—	—	—	—	2	1	3	—	—	—	—	107	90	197
1800-1809	—	—	—	—	3	1	4	—	—	—	—	304	89	393
1810-1819	—	—	—	—	11	1	12	—	—	—	—	1,035	92	1,127
1820-1829	—	—	—	—	23	—	23	—	—	—	—	2,533	—	2,533
1830-1839	—	—	—	4	33	—	37	—	—	—	814	3,824	—	4,638
1840-1849	1	9	—	27	22	—	59	435	2,163	—	4,850	2,879	—	10,327
1850-1859	5	17	—	13	6	—	41	3,974	7,140	—	2,866	965	—	14,945
1860-1869	4	13	—	10	6	—	33	4,015	6,546	—	3,140	876	—	14,577
1870-1879	5	6	1	—	3	—	15	6,692	3,942	403	—	405	—	11,442
1880-1889	—	—	—	—	3	—	3	—	—	—	—	820	—	820
1890-1891	—	—	1	—	1	—	2	—	—	713	—	610	—	1,323
Total 1792-1891	15	45	2	54	113	3	232	15,116	19,791	1,116	11,670	14,358	271	62,322

The following table gives a list, with known particulars, of twenty vessels reported to have been built at Searsport during the period 1792-1820 inclusive:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Owner, Builder, or Mariner
1792	MARY	Schooner	24	28	12	6	Andrew Leach, Searsport; Henry True, mariner
1795	ENDEAVOUR	Schooner	83	64	22	7	Ephraim Stinson, Searsport; Alban Elwell, Islesboro; Samuel Davis, mariner
1798	HERO	Sloop	90	72	20	7	Joseph, Samuel, and Robert Houston, Searsport; also Jabez Hatch, Boston; Joseph Butman, mariner
1803	SEVEN FRIENDS	Schooner	89	69	22	7	Samuel, John, and Joseph Park; Green and Phineas Pendleton; Joseph Park, Jr., mariner, Searsport
1805	ALEXANDER	Sloop	89	70	21	7	Gilmore, Sargent, Carver, Colcord, and Nichols, Searsport; also W. Vose, Boston; Phineas Pendleton, mariner
1806	FRIENDSHIP (1ST)	Schooner	101	73	22	7	Colcord, Tripp, Park, Nichols, Dow, Matthews, Carver, Griffin, Searsport; Benjamin Colcord, mariner
1807	GREYHOUND	Schooner	114	81	23	8	John Cochran and Henry Davidson, Searsport; William Clewley, mariner
1811	BENJAMIN & JOSEPH	Schooner	136	85	22	8	Park, Staples, Leach, Colcord, Searsport; Joseph Park, mariner
1812	BELFAST	Schooner	125	77	23	8	Pendleton, Nichols, Tripp, Carver, Gilmore, Searsport; Phineas Pendleton, mariner
1816	SALLY	Schooner	111	76	22	8	Leach, Lane, Pendleton, Munsey, Black, Searsport; Joseph Park, mariner
1816	INDEPENDENCE (1ST)	Schooner	101	77	21	7	Nickerson family, Searsport; Henry Ames, mariner
1816	ALPHA	Schooner	49	57	16	6	Charles and Joseph Gordon, Shepherd Blanchard, Alexander Todd, Searsport; John Gordon, mariner
1816	SALLY ANN	Schooner	38	49	16	6	Andrew Leach, William Clewley, Searsport
1817	FAIR PLAY	Schooner	123	81	23	8	Colcord, Sawyer, Nichols, Pendleton, Griffin, Kidder, Park, Searsport; John Colcord, mariner
1817	PACKET	Schooner	102	76	23	7	Fowler, Carver, Porter, Treat, Merithew, Nickerson, Searsport; Miles Fowler, mariner
1817	MINERVA	Sloop	92	73	22	7	Nickerson, Perkins, Tripp, Smith, Sargent, Butman, Gilmore, Searsport; Enoch Perkins, mariner
1818	TRIP	Schooner (pink)	41	50	17	6	Carver, Nickerson, Curtis, Munsey, Searsport; Stevens, Castine; Ebenezer Greenlaw, mariner
1819	PROSPECT	Schooner	124	70	23	8	Dow, Munsey, Perkins, Merithew, Blake, Clifford, Smart, Searsport; Enoch Perkins, mariner
1819	OLIVE BRANCH	Schooner	85	69	20	7	Carver, Fowler, Searsport; John Berry, mariner
1820	JANE & SALLY	Schooner (pink)	29	43	13	6	James Field, Henry Black, Searsport

The sloop *Hero* capsized and was abandoned off Kittery Point in 1803, when the vessel was five years old. The schooner *Friendship,* built at Mill Brook in 1806, like the sloop *Alexander,* which preceded her by a year, was a sort of community affair, being financed jointly by many Searsport residents. Among the list of owners appear such family names as Nichols, Pendleton, Colcord, Park, Carver, Dow, etc. As before mentioned, Benjamin Colcord commanded the *Friendship* and Phineas Pendleton the *Alexander.* The schooner *Benjamin & Joseph,* built in 1811, of which Joseph Park was master, was constructed at Brigadier's Island and was later sold to Boston parties. The schooner *Belfast* (125 tons), of which Phineas Pendleton was captain, was also built at Brigadier's Island; she was launched in 1812, was sent to sea about the time that the War of 1812 commenced, and, when only a few months old, was captured by the British outside Whitehead.

The *Sally* was built in the Merithew yard in 1816 just after the war, which had greatly affected Penobscot marine activities. Originally, she had Joseph Park as captain. In 1827, when only nine years old, she was rebuilt, and in 1842, when twenty-six years old, she was abandoned off Monhegan when waterlogged and leaking beyond control of the pumps. The *Independence* and *Sally Ann,* also constructed at Searsport in 1816, were built at Mill Brook and the Leach yard (near the ball ground), respectively. Of the 1816 Searsport production of ships, the *Sally Ann* was sold in Sedgwick in 1823 and the *Alpha* at Deer Isle in 1830. An interesting historical comment says that the *Sally Ann* had a long busy life and "died of old age." The schooner *Fair Play,* of which the Colcords, Nichols', Pendletons, Parks, Sawyers, Griffins, and Kidders owned fractions and John Colcord was master, was lost in 1827, when ten years old. The sloop *Minerva,* built the same year (1817) and enlarged and re-rigged as a schooner in 1827, came to a tragic end on Cape Ann. The schooners *Trip,* built in 1818, and *Jane & Sally,* built in 1820, were small craft and had sterns that classified them as "pinks." The schooner *Prospect,* built by a group of Searsport owners in 1819, was lost on Cape Hatteras in 1823, when four years old, and the schooner *Olive Branch,* built in 1819 by Isaac Carver and the Fowler brothers, of Searsport, was lost on Libby Island, Jonesport, in 1837, when eighteen years old.

The following vessels are set forth as the largest or most important of their type and rig built during each of the periods as stated. From these records, it appears that full-rigged ships were built at Searsport during the period 1840-1877 inclusive and ranged in size from a recorded 435 tons for the earliest vessel to 1,496 tons for the last and largest ship, the *William H. Connor,* built in 1877.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1821-1825	MARTHA JANE	Schooner	1822	141	84	23	8
	FLORIDA	Schooner	1822	133	83	23	8
	SUPERIOR	Schooner	1825	123	81	23	8
	CARAVAN	Schooner	1821	120	81	22	8
1826-1830	PRESIDENT	Schooner	1828	140	86	24	8
	ACADIA	Schooner	1830	136	82	24	8
	CATHERINE NICKELS	Schooner	1826	134	83	24	8
	GOOD INTENT	Schooner	1828	131	80	23	8
	PEGGY	Schooner	1826	126	82	23	8
1831-1835	ATLANTIC	Brig	1832	232	94	23	12
	KENTUCKY (1ST)	Brig	1833	223	94	24	11
	SADIE	Brig	1831	185	90	22	10
	JOHN FREDERICK	Schooner	1833	137	82	24	8
	SWANVILLE	Schooner	1831	135	80	24	8
	ATLANTIC	Schooner	1833	133	81	24	8
1836-1840	B. AYMAR	Ship	1840	435	128	27	14
	GRAND TURK	Brig	1837	174	91	24	9
	ROSS	Brig	1840	171	90	24	9
	CHALLENGE	Schooner	1840	166	89	24	9
	BATAVIA	Schooner	1839	162	81	24	9
	GENOA	Schooner	1839	153	86	24	8
	CENTURION	Schooner	1840	147	86	24	8
1841-1845	OVANDO	Bark	1841	300	106	25	13
	JOHN CARVER	Bark	1841	298	109	25	12
	CUBA	Bark	1841	233	100	24	11
	BALTIC	Brig	1843	217	95	23	11
	DEMERARA	Brig	1842	193	95	24	10
	TANGIER	Brig	1842	175	92	24	9
	GENEVA	Schooner	1841	160	89	24	9
	ITALIAN	Schooner	1845	157	87	24	8
	AVON	Schooner	1844	143	85	24	8

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1846-1850	JOHN BUNYAN	Ship	1850	597	144	30	15
	MARY ELIZABETH	Bark	1850	399	123	27	13
	J. B. JOHNSON	Bark	1850	273	103	26	12
	P. PENDLETON	Bark	1847	269	118	26	13
	HENRY MATHEWS	Brig	1849	249	99	24	12
	FRANKLIN ADAMS	Brig	1846	199	93	24	10
	MELAZZO	Brig	1846	199	96	24	10
	G. W. PICKERING	Schooner	1847	159	90	24	8
	TENNESSEE	Schooner	1846	154	86	24	8
	MARY BROOKS	Schooner	1846	146	87	24	7
1851-1855	MARTIN LUTHER	Ship	1854	984	174	35	18
	CHARTER OAK	Ship	1854	841	165	33	17
	MARY GOODELL	Ship	1854	718	158	31	16
	HENRY BUCK	Bark	1852	594	140	31	15
	FANNY BUCK	Bark	1853	583	140	30	15
	LUCY A. NICKELS	Bark	1855	523	137	30	15
	IZA	Brig	1855	280	—	—	—
	KENTUCKY (2ND)	Brig	1855	268	110	27	10
	TRIESTE	Brig	1851	249	103	25	11
	GEORGE AMOS	Schooner	1854	199	96	23	9
	CHESLEY MATHEWS	Schooner	1854	173	93	25	9
	PHILIP GILKEY	Schooner	1853	153	89	25	8
1856-1860	MATILDA	Ship	1857	834	161	34	17
	MOONBEAM	Bark	1859	641	142	32	16
	INVESTIGATOR	Bark	1856	597	141	31	16
	SUSAN A. BLAISDELL	Bark	1860	570	138	30	15
	HYDRA	Brig	1860	280	101	26	12
	CHARLES WESLEY	Brig	1859	242	104	27	10
	PARAGON	Schooner	1856	190	90	26	9
	JANE	Schooner	1860	59	53	17	8
1861-1865	S. F. HERSEY	Ship	1865	991	169	35	23
	B. F. CARVER	Ship	1862	649	148	31	21
	ROBERT PORTER	Bark	1865	840	152	34	22
	ALEXINE	Bark	1862	473	130	28	14
	EMMA F. HARRIMAN	Bark	1861	437	120	28	15
	ATLANTIC	Brig	1864	372	121	29	12
	JEREMIAH	Brig	1863	316	111	27	12
	POTOMAC	Brig	1864	180	91	24	9
	DAVID NICHOLS	Schooner	1865	205	93	25	11
	MARTHA MARIA	Schooner	1865	185	106	27	10
	CHATTANOOGA	Schooner	1865	156	93	26	8
1866-1870	WILLIAM McGILVERY	Ship	1870	1,270	192	38	24
	JOHN C. POTTER	Ship	1869	1,244	190	37	24
	ONEIDA	Ship	1866	1,131	179	37	24
	GOODELL	Bark	1866	840	160	34	22
	AUGUSTINE KOBBE	Bark	1866	532	136	31	17
	CLARA	Bark	1867	524	140	30	19
	H. H. WRIGHT	Brig	1869	407	137	29	15
	J. H. LANE	Brig	1869	392	134	31	15
	AMY A. LANE	Brig	1867	388	119	27	12
	STEPHEN E. WOODBURY	Schooner	1866	117	91	23	8
1871-1875	PREMIER	Ship	1875	1,392	204	37	25
	WEALTHY PENDLETON	Bark	1874	809	165	35	19
	HERBERT BLACK	Bark	1873	573	141	31	19

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	BEATRICE HAVENER	Bark	1874	553	145	32	16
	CLARA E. McGILVERY	Barkentine	1873	403	137	30	17
	LIZZIE LANE	Schooner	1874	231	116	30	9
	F. A. COLCORD	Schooner	1872	88	82	24	7
	BRUNETTE	Schooner	1871	86	78	24	7
1876-1880	WILLIAM H. CONNOR	Ship	1877	1,496	210	40	24
	R. R. THOMAS	Ship	1876	1,389	202	40	24
	CLARISSA B. CARVER	Ship	1876	1,144	187	38	24
	C. D. BRYANT	Bark	1878	929	173	37	21
1881-1891	MABEL I. MEYERS	Barkentine	1891	713	168	35	17
	GEORGIA GILKEY	Schooner	1890	610	158	36	12
	SALLY I'ON	Schooner	1884	523	144	35	13
	LACKAWANNA	Schooner	1881	166	102	28	8

The following vessels also appear in shipping registers as built in Searsport:

Year Built	Name	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1855	TALAVERA	Bark	522.07	125.8	29	17.95
1856	ABERDEEN	Bark	321.81	112	27	12.95
1856	PARAGON	Schooner	153.21	96.6	25.5	8.7
1865	TANGIER	Schooner	159.36	93.7	24.3	9.3

The schooner *Caravan,* built in 1821 by Jeremiah Sweetser et al., Searsport, fell a victim to pirates off Cuba, as did also the schooner *Martha Jane,* built the following year by Miles Fowler et al. The schooner *Friendship (2nd),* built by Samuel Nichols and associates in 1822, was lost at sea, and the schooner *Boston,* built in 1824 by Woodburn Carver et al. (with John Carver as master builder), was also "taken by pirates." The three schooners built at Searsport in 1825 had as master builders James Perkins, Nathaniel Gilmore, and John Carver, respectively, and the latter shipwright built the schooner *Superior* of 123 tons for William Nichols that year. Three schooners were built at Searsport in 1826, and all came to a tragic end. The *Peggy,* built for Benjamin Young, was abandoned at sea; the *Hannah & Jane,* built for Isaac Carver, was lost on Cape Cod; and the *Catherine Nickels,* built for David Nickels (2nd), was lost at Nahant in 1839, when thirteen years old.

The master builders recorded at Searsport as operating in 1827 were William Nichols, James Blanchard, Jr., James Nichols, and John Carver. The principal owners of the five schooners constructed (of from 125 to 86 tons) were reported as John Fowler, Benjamin Colcord, Jr., Benjamin Houston, Woodburn Nichols, Philip Gilkey, et al. Of this 1827-built fleet, the *Ceres* foundered at sea, the *Charlotte* was lost on Pollock Rip, and the *Royal Welcome* came to her end on Muscle Ridges. Four schooners were built at Searsport in 1828 by Timothy Porter, Samuel Mathews, Phineas Pendleton, Jr., and Benjamin Colcord (and their friends), respectively, and the master builders of record were Benjamin Tripp, William Nichols, and Isaac Carver. The careers of the entire quartet ended disastrously. The *Good Intent* capsized and sank; while the *President* was lost on Cape Elizabeth, the *Maine* on Monhegan, and the *Mary & Wealthy* (the Pendleton schooner) at Charleston, S.C. The schooner *New York,* built at Searsport in 1830 (John Carver, master builder), was lost in the Gulf of Mexico, and another of John Carver's productions, the schooner *Champion* of 129 tons, built in 1831 for the Gilkeys, of Searsport, was reported as still in active service in 1898, when sixty-seven years old.

The master builders operating in Searsport in 1832 and building six schooners and a brig were James Blanchard, Jr., Jeremiah Merithew (who built two schooners that year), James

Nichols, Benjamin Tripp, William Nichols, and John Carver. Commencing in the twenties, the Searsport records of new ships began to pay more attention to the name of the master shipwrights (who actually built the vessels) than to the mariners (who rigged and outfitted them and first took them to sea) or even to the fractional owners. Of the vessels built in 1832, the schooner *Two Sons* "went missing" in 1841, with nine men aboard, somewhere off Nova Scotia, and the schooner *Hudson* foundered in the Atlantic, her crew being saved by the ship *North America* and taken all the way to Australia before the men were landed. Of the eleven vessels built in Searsport in 1833 (one brig and ten schooners), the brig *Kentucky (1st),* built by John Carver, master builder, for Benjamin Carver et al., was sold in Baltimore and became a slaver. We are told that the vessel "was caught and sawed in two." The schooner *Oregon* was lost when a year old. The *Monadnock* came to her end on the Newfoundland coast and the *Henry* in Long Island Sound. The *St. Cloud* was lost on Cape Ann in 1839, and the *Baltimore* came to a tragic end in 1841; but the *John Frederick* had been in service twenty-eight years when she was lost off Cross Island, Machias, in 1861.

Of the twelve vessels built at Searsport during the years 1834-1839 inclusive, the *Helen Mar* was lost at sea with all hands, the *Vandalia* was destroyed by fire at Pensacola, Fla., the *Grand Turk* foundered, and the *Genoa* was lost on Cape Cod. The *Mexican* was lost on Squam Bar, Ipswich, but this was in 1890, when she was fifty-five years old and after she had lived a long life of usefulness. For years, the *Mexican* operated as a Bangor-Boston packet and was admittedly "the fastest topsail schooner on Penobscot Bay." The master builders of eleven of these dozen Searsport vessels, built two per year for a six-year period (1834-1839 inclusive), were John Carver (four), Henry Mathews (four), Jeremiah Merithew (two), and Sebra Crooker (one); the owners of record were John Clifford, Nathaniel Munsey, Benjamin Colcord, Amos Ellis, Andrew J. Ross, W. P. Burrill, Amos Nichols, Samuel Park, Philip Gilkey, John Shirley, William C. Lanpher, et al., all of Searsport.

In 1840 Searsport built its first full-rigged ship, the *B. Aymar,* built for Woodburn Carver et al., by John Carver, master builder. During that same year, the brig *Ross* was built, but her career was very brief, as she was lost with all hands on her maiden voyage. The brig *Calcutta,* built for Benjamin B. Park et al. by Henry Mathews, master builder, was condemned in the West Indies, and the schooner *Halcyon* (Miles Fowler, owner, and Sebra Crooker, master builder) was lost on Cape Elizabeth. The schooner *Centurion,* built in 1840 by Henry Mathews, master builder, was still in active service in 1893, when fifty-three years old. The bark *John Carver* of 298 tons, built in 1841 for Albert Carver and named after a leading and successful Searsport master shipwright, was sold to New Bedford parties as a whaler. The schooner *Geneva,* built the same year, also by John Carver, was lost near Scituate through no fault of the vessel herself. The brigs *Demerara* and *Tangier,* built in 1842, met disaster; the former was lost on South Shoals and the latter sunk off Nova Scotia, while the brig *Baltic,* built the following year (Henry Mathews, master builder), was abandoned at sea. Five vessels built at Searsport in 1845 had tragic ends. The largest of the eight vessels built that year, the bark *Solomon Piper,* was lost on Cape Cod, and the next largest of the fleet, the bark *David Nickels,* named after her owner and constructed by Chesley Mathews as master builder, was lost with all hands. The brig *Telos* (Henry Mathews, master builder) foundered at sea, the schooner *Italian* was lost on Fire Island with all hands, and the schooner *F. A. Heath* was lost on the New Jersey coast. Each of these schooners had been built by John Carver, the former for Clark Nichols and the latter for Cyrus True et al., of Searsport.

Of the fourteen vessels built at Searsport in 1846 (eight brigs and six schooners), the brig *Roamer* (160 tons) was sold in Canada, and the brig *Franklin Adams* (199 tons) was sold in California. The brig *Benjamin Carver,* named after her owner and built by John Carver, master builder, was forty-one years old when she was lost on ledges off Whitehead in 1887. The brig *Sea Beau* was lost on the Delaware Capes and the schooner *Tennessee* on Abaco Island; while the schooner *Mary Brooks* was lost at sea with all hands. Searsport built seven vessels in 1847 (two barks, four brigs, and one schooner). The bark *P. Pendleton* (John Carver, master builder), built for Phineas Pendleton, was sold to Britain and renamed *Janet Dalglish;* the bark

J. Merithew was sold in California and was lost at the mouth of the Columbia River in 1853. The brig *Albatross* was lost at sea with all hands, and the brig *Mariel* was lost near Cohasset with all aboard. The schooner *G. W. Pickering* was lost on the Florida coast.

Six vessels were built at Searsport in 1848—one bark, four brigs, and one schooner. The brig *Isaac Carver,* named after the owner and built by John Carver, master builder, was lost in the West Indies. The brig *Isola,* built for James G. Park et al. by Henry Mathews, master builder, was in service for thirty-six years, but in 1884 she was driven ashore on Mattituck Beach, Long Island, during a snowstorm. The brig *Lewis Bean* was lost in the West Indies, and the schooner *Bangor (2nd),* of which Benjamin Colcord was master builder, was abandoned at sea. Searsport launched four brigs in 1849, and the largest, the *Henry Mathews*—named after the master builder—was burned at Boston. The *Alpheus Field* was lost on Barnegat and the *Keoka,* built for Phineas P. Carver by John Carver, master builder, on the coast of Ireland.

During 1850, the first year of the clipper ship decade, Searsport built one ship and two barks, but all three vessels were far from being clippers. The full-bodied ship *John Bunyan* was constructed for Benjamin Carver et al. by John Carver, master builder. The bark *Mary Elizabeth* was built for Benjamin Colcord by Sebra Crooker, master builder, and the bark *J. B. Johnson* was built for William McGilvery by Marshall Dutch, master builder. This vessel was lost in the West Indies. In 1851 six vessels were built in the town—two barks, three brigs, and one schooner. The largest of them, the bark *B. Colcord* (named after her owner), was sold to New Bedford as a whaler; the bark *Henrietta,* owned by William McGilvery, was lost on Fire Island; the brig *Mercy S. Cousins* was lost on Cape Cod; and the brig *Trieste* (Henry Mathews, master builder) was abandoned at sea. The schooner *Alfred F. Howe,* built by John Carver, master builder, was still in service in 1898, when forty-seven years old.

Four barks and a brig (five vessels all told) were built at Searsport in 1852. The largest of the quintet, the bark *Henry Buck* (William McGilvery, owner; John Carver, master builder) was sold in Oregon. The bark *John Wesley* was lost on the coast of Florida, and the bark *Sarah A. Nickels,* built for Jonathan C. Nickels et al. by Marshall Dutch, master builder, was lost on Nantucket Shoals. Of the six vessels built at Searsport in 1853 (one bark, three brigs, and two schooners), the bark *Fanny Buck* stranded on Cape Cod during her maiden voyage in "the great December 1853 gale." Left high and dry at low water, she was refloated, sold to the Norwegians, and renamed *Martha.* The brig *Stephen Thurston* was lost with all hands; the brig *Altavela* was later re-rigged as a schooner and was lost on Barnegat in 1884, when twenty-nine years old; and the schooner *Philip Gilkey* was "run into and sunk." In the records of 1853, John F. Nichols, John Carver, Henry Mathews, Marshall Dutch, John Shirley, and Isaac W. Havener are given as master builders, and Havener is recorded as both owner and master builder of the schooner *Rainbow.*

Three ships, a bark, and two schooners were built at Searsport in 1854. The ship *Martin Luther* (Amos Nichols et al., owner; James S. Burgin, master builder) was sold to Italy and renamed *Dea del Mare* and later *Anna Pizzarono.* The ship *Charter Oak* was built by John Carver, master builder, and in her later years was cut down and operated as a towing barge. The ship *Mary Goodell* was built for Daniel S. Goodell by Eben Mayo, master builder. The bark *Trovatore,* built for William McGilvery by John F. Nichols, master builder, capsized in the Mediterranean. The schooner *George Amos,* built for Peleg Nichols by James S. Burgin, master builder, was lost on the Nova Scotian coast. The schooner *Chesley Mathews,* named after her owner, was constructed by Henry Mathews, master builder. Searsport built seven vessels in 1855—all square-riggers (two barks and five brigs). The bark *Talavera* was abandoned at sea, and the brig *B. K. Eaton* was captured by the Confederates and burned in 1861, with the captain and crew thrown into jail; the brig *Waccamaw,* built for Henry Buck, of Bucksville, S.C., by Henry Mathews, master builder, was lost at sea with all hands. The brig *Iza* of 280 tons was built by Henry Mathews, master builder, for Joseph Williams, of Charlestown, Mass., who was recorded as both owner and master. The owners of record of the Searsport-

owned vessels were Jonathan C. Nickels, Benjamin S. Merithew, Clark Nichols, Theophilus Eaton, and Jeremiah Sweetser; while the master builders were Marshall Dutch, Elisha Dunbar, John Carver, Marlboro Packard, and Henry Mathews.

In 1856, Searsport built four barks and a schooner. The bark *Orchilla,* built for Ralph Devereaux by Henry Mathews, master builder, was abandoned at sea; the bark *Tejuca* (Marlboro Packard, master builder) was lost at sea with all hands; and the schooner *Paragon,* built for Jeremiah Merithew & Son by Philip Gilkey, master builder, was condemned and broken up at Rockland in 1894, when the vessel was thirty-eight years old. The largest of the 1856 fleet, the bark *Investigator* of 597 tons, was built for Phineas Pendleton by John Carver, master builder, and the next largest vessel built in the town that year was the bark *Aberdeen,* constructed by Elisha Dunbar, master builder, for Franklin Rice, master and managing owner.

The ship *Matilda,* built by Marlboro Packard, master builder, for Amos Nichols et al. in 1857, was later re-rigged as a bark and as such was in service in 1893, when thirty-six years old. Of the two vessels built at Searsport in 1859, the brig *Charles Wesley* of 242 tons, built for Jeremiah Merithew et al. by Marshall Dutch, master builder, was lost off Salem. In 1860, Searsport built four vessels, the master builders of the three largest being Elisha Dunbar, Marshall Dutch, and Marlboro Packard, respectively. The owners of record were Mary Goodell et al. of the bark *Susan A. Blaisdell,* George McClure et al. of the bark *Almona,* and William McGilvery of the brig *Hydra.* This latter vessel was lost on the Bahama Banks. The bark *Emma F. Harriman* (Elisha Dunbar, master builder), built in 1861, was in service as the barkentine *Leslie D.* in 1898, when thirty-seven years old, and the schooner *William Butman,* built the same year by George A. Carver, master builder, for Benjamin Colcord et al., was sold in Salem for conversion to a house-boat. The ship *B. F. Carver,* built in 1862 for John Carver et al., by George A. Carver, master builder, was wrecked on her maiden voyage on Chaudalier Shoal at the mouth of the Mississippi. The bark *Alexine,* built the same year by Elisha Dunbar, master builder, for Robert Porter et al., was sold to Holland owners and renamed *Libra.* Another vessel built in 1862 was the bark *Commodore Dupont,* which was constructed for Clark Nichols et al. by Marlboro Packard, master builder. The bark *Desiah* of 421 tons, built in 1863 for William McGilvery by Marlboro Packard, master builder, was abandoned at sea. Of the four vessels built at Searsport in 1864, the bark *Arletta,* owned by Andrew D. Colcord et al. and built by Marshall Dutch, was sold to Portugal and renamed *Nobreza.* The bark *Alina,* built by George A. Carver, master builder, was captured and sunk by the Confederate gunboat *Shenandoah* in 1862, off the Brazilian coast. The brigs *Atlantic* and *Potomac* were lost at Tortugas and on Grand Manan (in 1874), respectively, and they were constructed by George A. Carver, master builder, for Jonathan Dow et al. and Phineas Pendleton et al., respectively.

In 1865 an era of large construction commenced at Searsport, which carried through to the late 1870's. In 1865, Marlboro Packard built the 991-ton ship *S. F. Hersey,* and Elisha Dunbar built the 840-ton bark *Robert Porter.* The former was sold in Australia, and the latter was sunk in the South Atlantic. During the same year, George A. Carver, master builder, built the bark *Fannie* and the schooner *Chattanooga* for Theophilus Eaton et al. and William McGilvery et al., respectively. The *Fannie* was lost on the coast of Norway, and the *Chattanooga* was wrecked at Orleans, Mass., in 1890. The schooner *David Nichols,* also built in 1865 for Islesboro parties, foundered in a hurricane while at anchor off Florida reefs in 1876.

The ship *Oneida,* built by Marlboro Packard for James McGilvery et al. in 1866, was lost as a whaler in the Bering Sea, and the bark *Goodell,* the second largest vessel built at Searsport that year, was lost on the New Jersey coast in 1893, when twenty-seven years old; this bark was built for Daniel S. Goodell et al. by Elisha Dunbar, master builder. George A. Carver, master builder, constructed the bark *Augustine Kobbe* and the brig *Clytie* in 1866, the former for Isaac Carver et al. and the latter for John H. Lane et al.; the *Clytie* came to her end on the coast of Cuba. A fifth vessel built in Searsport that year, the schooner *Stephen E. Woodbury,* was constructed by Marlboro Packard, master builder, for William McGilvery, and this little vessel of 117 tons was run into and sunk off Cape Cod. In 1867, Marshall Dutch, master builder, constructed the bark *Clara* of 524 tons for Martha A. Nichols et al., and George A. Carver launched

the brig *Amy A. Lane* for John Carver et al. The *Clara* had a tragic end on a dangerous coast. When anchored off Port Elizabeth, South Africa, she dragged ashore in a heavy southeast gale. Fortunately, Capt. E. P. Nichols, his wife and family, with the entire crew, were saved by a breeches buoy. The only vessel built at Searsport in 1868, the brig *Amelia Emma,* built for Clark Nichols et al. by Marlboro Packard, master builder, was lost on the Bahama Banks.

The ship *John C. Potter* and three brigs were built at Searsport in 1869. The *"Potter,"* constructed by Marlboro Packard, was operating as a towing barge in 1908, when thirty-nine years old. The brig *H. H. Wright* of 407 tons was constructed by Marshall Dutch, master builder, for William Meyers et al., and the brig *J. H. Lane* of 392 tons was built by George A. Carver, master builder, for Benjamin Carver et al. She was lost in 1886, when seventeen years old, by being dragged ashore on the Florida coast in a hurricane. The third brig was a relatively small vessel of 163 tons named the *Elisha F. Dunbar* and owned by William McGilvery et al.; she was constructed by Elisha Dunbar, master builder. Her end came following a collision at sea off the Azores, the brig being condemned after she had succeeded in reaching Fayal. The only vessel built at Searsport in 1870 was "the big ship" *William McGilvery* of 1,270 tons, constructed by Marlboro Packard, master builder, for Capt. Albert V. Nickels et al. This vessel foundered in a heavy gale off Cape Horn when under the command of Capt. Norman Dunbar, but the crew was taken off by the British bark *Norcross.* During the years 1871 and 1872, one bark and two small schooners were built at Searsport, the bark being the *T. F. Whiton* (or *Whitten*) of 547 tons, built for Benjamin Carver by George A. Carver, master builder. This vessel, with Capt. James Nickels in command, was lost at Penzance, England, but all aboard were safely taken off the doomed vessel by a breeches buoy. In 1873 the bark *Herbert Black* (573 tons) and the barkentine *Clara E. McGilvery* (403 tons) were built by Marlboro Packard, master builder, for Forrest W. Treat and Joseph Walnutt et al., respectively. The *"Black"* was lost on the coast of England, and the *"McGilvery"* came to her end on the Carolina coast.

In 1874 two barks and a schooner were built at Searsport. The bark *Wealthy Pendleton* of 809 tons was constructed by Josiah Dutch, master builder, for William H. Blanchard et al.; she was lost on the Patagonia coast. The bark *Beatrice Havener* of 553 tons was built by Elisha Dunbar, master builder, for Isaac W. Havener et al., and she was lost in the North Atlantic. The schooner *Lizzie Lane* of 231 tons was built by Josiah Dutch, master builder, for John H. Lane et al., and this vessel was lost in the West Indies. In 1875, Marlboro Packard built the only two vessels constructed in Searsport. The ship *Premier* of 1,392 tons was built to the order of John W. McGilvery et al., and the bark *Fred W. Carlon* of 531 tons was built for Jonathan C. Nickels et al. The bark was wrecked at Bermuda, but the ship *Premier* went ashore at Dunkirk in 1879, when four years old, and was condemned and sold.

Two vessels were built at Searsport in 1876, and each was a sizable full-rigged ship. The *R. R. Thomas* of 1,389 tons was constructed by Elisha Dunbar, master builder, and she ended her days as a towing barge when sail was no longer profitable. The *Clarissa B. Carver* of 1,144 tons was built by George A. Carver, master builder, for Jonathan Dow et al. As before stated, she was sunk in the Japanese harbor of Hiogo. Searsport's largest ship, the *William H. Connor* of 1,496 tons, was built by Marlboro Packard in 1877, and she ended her days as a tow barge when operation under sail proved no longer profitable. In 1878 the sizable bark *C. D. Bryant* of 929 tons was constructed by Josiah Dutch, master builder, for James G. Pendleton et al., and the vessel was operating in 1925, when forty-seven years old. Small schooners were built at Searsport in 1881 and 1882, and somewhat larger, but by no means big, schooners were also built, one each year, during 1884 and 1890. With the construction of the barkentine *Mabel I. Meyers* by Josiah Dutch, master builder, for William Meyers et al. in 1891, the building of vessels in the Searsport district came to an end. Of the last five vessels built at Searsport (1881-1891 inclusive), the schooner *Lackawanna* (166 tons) was lost at San Domingo, the schooner *Edward L. Warren* (131 tons) foundered off South Shoal Lightship, the schooner *Sally I'On* (523 tons) was burned at Portland, Maine, the schooner *Georgia Gilkey* (610 tons) was sold to Spain, and Searsport's last vessel, the barkentine *Mabel I. Meyers* (713 tons), was sunk by the battleship U.S.S. *Nebraska* off Cape Cod.

A list of ships, barkentines, and brigs built at Searsport, Maine, has been published that sets forth the following vessels of the three rigs stated. It will be noted that barks are not set forth as such, and evidently confusion exists in the records between barks and barkentines; for one set of official records credits Searsport with building forty-five barks and two barkentines during the period 1840-1891, while the other tabulates forty-eight "barkentines" built at Searsport during the years 1841-1891 inclusive and does not include the bark *Ovando* of 300 tons, reported built in 1841. Many variations will be noticed in the tonnage of certain vessels as set forth on different records. The ship *B. Aymar,* built in 1840, was registered as 435 tons, but in a later list of ships the tonnage is set forth as 516. The *Charter Oak,* built in 1854 and measured as 841 tons, later is stated as of 964 and also 961 tons. Such discrepancies evidently disappear when the records refer to ships built and measured by the new tonnage formula that was supposed to be made effective in 1865. Some differences are also evident in names and year built.

Year Built	Name of Ship	Commander	Builder	Tonnage
1840	B. AYMAR	Benjamin Carver, 1st	John Carver	516
1850	JOHN BUNYAN	Amos Nichols	John Carver	647
1854	CHARTER OAK	Phineas Pendleton, 2nd	John Carver	964
1854	MARTIN LUTHER	Amos Nichols	James Burgin	984
1854	MARY GOODELL	Daniel S. Goodell	Eben Mayo	761
1857	MATILDA	Robert Porter	Marlboro Packard	849
1862	B. F. CARVER	Charles G. Carver	George A. Carver	648
1865	S. F. HERSEY	Everett Staples	Marlboro Packard	990
1866	ONEIDA	James McGilvery	Marlboro Packard	1,180
1869	JOHN C. POTTER	George McClure	Marlboro Packard	1,244
1870	WILLIAM McGILVERY	Albert V. Nickels	Marlboro Packard	1,300
1875	PREMIER	John W. McGilvery	Marlboro Packard	1,392
1876	R. R. THOMAS	Peleg B. Nichols	Elisha Dunbar	1,389
1876	CLARISSA B. CARVER	John Dow	George A. Carver	1,144
1877	WILLIAM H. CONNOR	John G. Pendleton	Marlboro Packard	1,496

Year Built	Name of "Barkentine"	Commander	Builder	Tonnage
1841	CUBA	Alfred Blanchard	Henry Mathews	233
1842	JOHN CARVER (also recorded as 1841)	Phineas Pendleton	John Carver	319
1842	WHITTEN	Samuel Curtis	John Carver	375
1845	DAVID NICKELS	David Nickels	Chesley Mathews	193
1845	S. PICKER	Joseph C. Merithew	John Shirley	196
1847	P. PENDLETON	Samuel Curtis	John Carver	376
1847	J. MERITHEW	Freeman McGilvery	John Shirley	276
1848	D. S. GOODELL	Daniel S. Goodell	Marshall Dutch	196
1850	J. B. JOHNSON	Everett Staples	Marshall Dutch	273
1850	MARY ELIZABETH	Daniel S. Goodell	Sebra Crooker	398
1851	B. COLCORD	Benjamin B. Park	Marshall Dutch	293
1851	HENRIETTA	Willard J. Treat	Marshall Dutch	286
1852	HENRY BUCK	Phineas Pendleton	John Carver	583
1852	JOHN WESLEY	Lebbeus Curtis	John Shirley	520
1852	SARAH A. NICKELS	Jonathan C. Nickels	Marshall Dutch	348
1852	ELIZA A. COCHRAN	Franklin Cochran	Henry Mathews	301
1853	FANNY BUCK	John W. McGilvery	Marshall Dutch	583
1854	TROVATORE	Phineas P. Carver	John F. Nichols	319
1855	TALAVERA	Benjamin S. Merithew	Elisha Dunbar	522
1855	LUCY A. NICKELS	David Nickels	Marshall Dutch	525
1856	ABERDEEN	Benjamin F. Rice	Elisha Dunbar	321

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Year Built	Name of "Barkentine"	Commander	Builder	Tonnage
1856	TEJUCA	Horace Harriman	Marlboro Packard	324
1856	ORCHILLA	Ralph Devereaux	Henry Mathews	339
1856	INVESTIGATOR	Phineas Pendleton	John Carver	599
1859	MOONBEAM	Amos Dow	Marlboro Packard	692
1860	S. BLAISDELL	Theophilus Eaton	Elisha Dunbar	613
1860	ALMONA	Augustus Lamphor	Marshall Dutch	438
1861	EMMA F. HARRIMAN	Ferd Herriman	Elisha Dunbar	391
1862	COMMODORE DUPONT	Thomas Clifford	Marlboro Packard	434
1862	ALEXINE	Levi Crockett	Elisha Dunbar	472
1863	DESIAH	Lincoln Gilkey	Marlboro Packard	565
1864	ARLETTA	Andrew D. Colcord	Marshall Dutch	373
1864	ALINA	Everett Staples	George A. Carver	425
1865	FANNIE	Charles G. Carver	George A. Carver	405
1865	ROBERT PORTER	Cyrus G. Nichols	Elisha Dunbar	840
1866	AUGUSTINE KOBBE	Phineas Carver	George A. Carver	532
1866	GOODELL	William H. Goodell	Elisha Dunbar	839
1867	CLARA	David Nickels	Marshall Dutch	523
1871	T. F. WHITTEN (or WHITON)	Benjamin Carver	George A. Carver	532
1873	HERBERT BLACK	Forrest W. Treat	Marlboro Packard	573
1873	CLARA E. McGILVERY	Joseph Walnutt	Marlboro Packard	502
1875	FRED W. CARLON	William Carlon	Marlboro Packard	531
1874	BEATRICE HAVENER	Isaac W. Havener	Elisha Dunbar	552
1874	WEALTHY PENDLETON	William H. Blanchard	Josiah Dutch	809
1878	C. D. BRYANT	Jasper D. Nichols	Josiah Dutch	929
1891	MABEL I. MEYERS	William Meyers	Josiah Dutch	669

Year Built	Name of Brig	Commander	Builder	Tonnage
1833	KENTUCKY 1ST	Benjamin Carver	John Carver	158
1837	GRAND TURK	John P. Nichols	John Shirley	196
1840	CALCUTTA	Benjamin B. Park	Henry Mathews	163
1840	ROSS	George Dyer	John Shirley	185
1842	TANGIER	Joseph Park	John Shirley	165
1842	DEMERARA	John C. Blanchard	Henry Mathews	192
1843	BALTIC	Jeremiah Sweetser, 1st	Henry Mathews	217
1845	TELOS	Elisha Lamphor	Henry Mathews	168
1845	VIATOR	Lebbeus Curtis	John Carver	—
1845	CHARLES HEATH	Augustus Lamphor	John Shirley	163
1845	SEA BELLE	I. N. Harriman	James Blanchard	172
1846	FRANKLIN ADAMS	Leonard Felker	John Shirley	182
1846	BENJAMIN CARVER	James N. Carver	John Carver	155
1846	MELAZZO	Amos Nichols	Henry Mathews	169
1846	CATHERINE NICKELS	J. C. Nickels	Henry Mathews	192
1846	T. P. PERKINS	Welcome Gilkey	T. P. Perkins	194
1846	ROAMER	Robert Porter	William Nichols	158
1847	ALBATROSS	Frank Cochran	Henry Mathews	177
1847	SEA BEAU (also recorded as 1846)	Richard Merithew	James Burgin	167
1847	MARIEL	Hezekiah Staples	James Burgin	182
1847	ALPHEUS FIELD	Getchell A. Maddocks	Alpheus Field	176
1848	LEWIS BEAN	James C. Park	Marshall Dutch	148
1848	ELIZA MERITHEW	Alexander Griffin	John Shirley	152
1848	MERCY COUSINS	James C. Park	John Shirley	164
1848	ISAAC CARVER	Eben Curtis	John Carver	180
1849	KEOKA	Phineas P. Carver	John Carver	160
1849	HENRY MATHEWS	I. N. Harriman	Henry Mathews	169
1849	MARSHALL DUTCH	John W. McGilvery	Marshall Dutch	168

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Year Built	Name of Brig	Commander	Builder	Tonnage
1851	HARRIET McGILVERY	Levi Crockett	Marshall Dutch	169
1852	MARY E. THOMPSON	Jeremiah Grant	Marshall Dutch	184
1853	PRENTISS HOBBS	Nathan P. Carver	John F. Nichols	177
1853	ALTAVELA	Charles G. Carver	John Carver	183
1853	STEPHEN THURSTON	John C. Beals	John Shirley	188
1854	GEORGE AMOS	Peleg Nichols	James S. Burgin	169
1854	IZA	Thomas Williams	Henry Mathews	164
1854	CHESLEY	Jeremiah Warren	Henry Mathews	159
1855	B. K. EATON	Theophilus Eaton	Marshall Dutch	196
1855	A. J. ROSS	Jeremiah Sweetser	Marlboro Packard	197
1855	KENTUCKY 2ND	James Nickels	John Carver	250
1859	CHARLES WESLEY	James McGilvery	Marshall Dutch	182
1860	HYDRA	Horatio Harriman	Marlboro Packard	196
1863	JEREMIAH	William Ford	Marshall Dutch	302
1864	ATLANTIC	John Dow	George A. Carver	262
1866	CLYTIE	John Dow	George A. Carver	369
1867	AMY A. LANE	Andrew L. Carver	George A. Carver	368
1867	MANSON	R. C. Gilkey	Elisha Dunbar	264
1868	AMELIA EMMA	William Carlon	Marlboro Packard	273
1869	ELISHA F. DUNBAR	W. S. Nickels	Elisha Dunbar	269
1869	H. H. WRIGHT	William Meyers	Marshall Dutch	407
1869	J. H. LANE	Franklin Shute	George A. Carver	391

Shipbuilding Activities at Stockton, Maine, Cover a Period of 148 Years — 1774-1921 Inclusive

It is difficult to differentiate between Searsport and Stockton (and, in fact, between Belfast, Searsport, and Stockton at times); but certain vessels are definitely stated to have been built at Stockton, and a list of them is presented herewith covering a wide range of 148 years, 1774-1921 inclusive.

Period Inclusive	Number of Vessels							Tonnage of Vessels						
	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total
1774	—	—	—	—	1	—	1	—	—	—	—	75	—	75
1790-1799	—	—	—	—	2	1	3	—	—	—	—	181	80	261
1800-1809	—	—	—	—	5	1	6	—	—	—	—	506	97	603
1810-1819	—	—	—	—	1	—	1	—	—	—	—	100	—	100
1820-1829	—	—	—	—	5	—	5	—	—	—	—	256	—	256
1830-1839	1	—	—	2	13	—	16	379	—	—	282	1,443	—	2,104
1840-1849	—	4	—	14	15	—	33	—	1,057	—	2,553	1,975	—	5,585
1850-1859	5	14	1	19	6	—	45	3,926	4,955	297	4,253	614	—	14,045
1860-1869	—	19	—	21	19	—	59	—	10,289	—	7,321	2,669	—	20,279
1870-1879	1	6	—	1	12	—	20	1,004	4,117	—	352	1,945	—	7,418
1880-1889	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1890-1899	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1900-1909	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1910-1921	—	—	—	—	5	—	5	—	—	—	—	5,611	—	5,611
Total 1774-1921	7	43	1	57	84	2	194	5,309	20,418	297	14,761	15,375	177	56,337

A schooner (name unknown), one of the first two vessels of which there is any record, was launched in 1774 at Sandy Point. She was owned by Col. Thomas Goldthwait, commander of Fort Pownal, et al., was apparently of about 75 tons, and is referred to in the records of Fort Pownal, which have been preserved by the Hichborn family, of Stockton. Colonel Goldthwait was not popular during the Revolution, and it is said of him: "An ardent loyalist and unscrupulous in his dealings, he antagonized the settlers, allowed Fort Pownal to be dismantled and burned by Captain Mowatt in 1775, and later escaped to Halifax." After a lapse of several years, records show that in 1791 Robert Hichborn, of Boston, purchased Cape Jellison and began building a small fleet of packet sloops and schooners to run to Boston. From 1791 to 1800, he is known to have built several of these, "but most of their names [and particulars] have been lost." However, the name of "Robert Hichborn, merchant," of Stockton, is recorded as builder of the 91-ton schooner *Susanna* in 1793, of which John Lord, of Stockton, was "mariner." In 1794, Hichborn is known to have built the schooner *Susan & Eliza,* which, with all hands and passengers on board, was lost on Cape Ann during a severe storm; in this tragic disaster, "33 souls were lost, including the two daughters of Robert Hichborn, the owner, for whom the vessel was named."

It is known that prior to 1820 many vessels were constructed at Stockton, concerning which records of name, tonnage, and year built are not available. Crawford Staples launched at least six schooners between 1802 and 1819, but particulars of all but two of them have been lost. John Clifford is known to have built "six sloops and schooners at Lowder Brook, between 1806 and 1820," but particulars of only one of the vessels can be found, and that is the schooner *John* of 100 tons (length 73 ft., beam 22 ft., depth 7 ft.), built in 1806 for the following Stockton owners: John Clifford, John Martin, William Staples, John Shute, and James Treat. It would seem that John Clifford built the schooner *Traveller* in 1815 (particulars unknown), in which he had a joint interest with William Clewley, mariner, Crawford Staples, and Simeon Fletcher — all of Stockton. John Clifford is also a recorded part owner of the 99-ton schooner *Jefferson* (length 72 ft., beam 22 ft., depth 7 ft.), built in 1806 by Crawford & Jotham Staples, with William Clewley as mariner; the other owners are given as Paul Hichborn and James Blanchard. Other early vessels built at Stockton, prior to 1831, were:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1795	ENDEAVOR	Sloop	80	—	—	—	William Griffin, yeoman; Isaac Griffin, mariner
1800	MARY ANN	Schooner	120	75	23	8	Samuel Ginn, Prospect; James Ginn, Bucksport; Samuel Keyes, mariner
1800	ROVER	Schooner	91	69	21	7	Lathly Rich, Frankfort; John Wells, Newburyport; Elisha Eldridge, mariner
1801	PROVIDENCE	Sloop	97	69	22	8	John Cousens and John Martin, of Stockton; John Houghton, of Milton, Mass.
1803	DILIGENCE	Schooner	96	72	22	7	Samuel & Daniel Ginn, of Prospect; Samuel French, mariner
1820	THREE BROTHERS	Schooner (pink)	40	51	15	6	William, Nathaniel, and Jacob Clifford
1820	HORNET	Schooner (pink)	33	47	13	6	Thomas Crockett, builder and owner
1821	ROSE IN BLOOM	Schooner	51	56	16	6	Thomas Blanchard et al.
1825	PROSPECT	Schooner	99	74	22	7	Ezra Treat et al.
1826	VIOLET	Schooner	33	44	14	6	Peleg & Ebenezer Griffin

The old Stockton shipbuilding and shipowning family names were in evidence as long as vessels were constructed in the community. Through the years, many Hichborns, of Stockton, were interested in new ships built in the town, from Robert in 1791 to N. G. from 1845 to 1874 and William from 1847 to 1875, including Henry A., Wilson, Thomas W., and Josiah F. The William and Isaac Griffin family of 1795 carried on as Peleg and Ebenezer in

1826; a Peleg Griffin built a sizable bark in 1855; Andrew D. built in 1862 and E. B. Griffin in 1867. The Staples family, which built as early as 1802, had a Charles S. building as late as 1874, Horace and Albert in 1873, Henry S. from 1859 to 1869, James S. in 1868 and James Staples, Jr., in 1855, H. L. in 1867, Crawford S. in 1866, Peleg from 1849 to 1855, and Everett Staples from 1846 to the building of "the big ship" *Jacob Badger* in 1854. John Clifford built in 1806 and Thomas P. Clifford in 1868. Members of the Ginn family were owners of a schooner built at Stockton in 1800 and of another built in 1867. James Blanchard was part owner of a schooner built in 1806; whereas C. L. Blanchard, of Stockton, built a schooner in 1867, and William F. Blanchard, of Boston, built a sizable brig in 1868. William Mudgett built the schooner *William* in 1835, and members of the family, singly and as a partnership, constructed vessels at Stockton into the 1870's. Particulars, with dimensions, of the largest and most important vessels built of each type during each of the stated periods are set forth herewith:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1831-1840	HENRY LEEDS	Ship	1834	379	116	27	—
	NORTH AMERICA	Brig	1832	154	82	24	9
	ALVARA	Brig	1833	128	83	23	8
	MARY	Schooner	1832	144	83	22	9
	CANAZA	Schooner	1836	137	83	24	8
	ELIZA HUPPER	Schooner	1832	133	82	23	8
1841-1845	E. CHURCHILL	Bark	1844	212	97	25	10
	BRAZILIAN	Brig	1841	163	94	24	8
	VANDALIER	Schooner	1841	166	92	24	9
	MATILDA	Schooner	1845	146	86	25	8
	TIOGA	Schooner	1845	146	85	25	8
1846-1850	COSTARILLA	Bark	1849	368	119	26	13
	DENCY	Bark	1849	242	101	25	11
	EDGAR	Bark	1848	235	101	25	11
	JAMES CROSBY	Brig	1847	200	94	25	10
	WILLIAM McGILVERY	Brig	1847	199	93	25	10
	SEA MAID	Brig	1848	199	96	25	10
	BENGUELA	Brig	1849	199	96	24	10
	MADONNA	Schooner	1846	147	86	24	8
	HENRY ATKINS	Schooner	1847	146	85	25	8
	MILWAUKEE	Schooner	1848	145	87	24	8
1851-1855	JACOB BADGER	Ship	1854	1,048	175	38	18
	CLYDESDALE	Ship	1855	933	—	—	—
	LOCH LAMAR	Ship	1853	650	138	33	20
	MONTANA	Bark	1854	600	143	30	15
	JOHN GRIFFIN	Bark	1855	396	126	28	12
	M. J. COLCORD	Bark	1855	374	120	29	12
	ORELIA	Brig	1855	298	112	27	11
	CRIMEA	Brig	1854	274	106	27	11
	LEONARD BERRY	Brig	1854	249	102	27	10
	LOCH LOMOND	Brig	1855	249	101	25	11
	ANGELINE	Schooner	1855	149	88	23	8
	GOLDEN EAGLE	Schooner	1853	98	72	19	8
	NORTHERN EAGLE	Schooner	1853	91	70	20	7
1856-1860	E. SHERMAN	Ship	1856	698	150	32	22
	HENRY B. WRIGHT	Ship	1858	597	144	30	15
	GARIBALDI	Bark	1860	599	138	31	20
	HARVEST HOME	Bark	1860	596	140	31	19
	C. S. FLETCHER	Bark	1856	540	130	30	15

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
	NELLIE MERRILL	Barkentine	1859	297	123	28	10
	FAUSTINA	Brig	1857	249	101	25	11
	DANIEL BOONE	Brig	1857	182	95	25	8
	WINDWARD	Schooner	1860	187	93	26	8
	CANEMA	Schooner	1857	125	84	23	7
	EMPRESS	Schooner	1856	98	74	22	7
1861-1865	HELEN ANGIER	Bark	1865	655	147	32	20
	SHARPSBURG	Bark	1862	525	136	29	15
	McGILVERY	Bark	1863	518	140	28	14
	STOCKTON	Brig	1863	400	120	27	17
	L. STAPLES	Brig	1865	368	123	28	12
	T. J. MAGUIRE	Brig	1865	349	121	27	14
	DAKOTAH	Schooner	1863	195	98	26	9
	DAY BREAK	Schooner	1865	175	99	27	8
	DONNA ANNA	Schooner	1861	148	90	25	8
1866-1870	SONNTAG	Ship	1870	1,004	171	36	21
	DIRIGO	Bark	1868	684	145	30	20
	ABEYONE	Bark	1866	627	140	31	20
	LELIA M. LONG	Bark	1866	610	141	30	19
	FLORENCE L. HENDERSON	Brig	1869	461	131	30	16
	ABBIE CLIFFORD	Brig	1867	451	123	29	17
	HERMAN	Brig	1868	448	123	29	17
	BELLE CROWELL	Schooner	1870	328	127	30	13
	DAVID BABCOCK	Schooner	1867	251	120	28	9
	JOSEPH SEGAR	Schooner	1866	187	109	27	9
1871-1875	WILLARD MUDGETT	Bark	1874	875	160	34	21
	CAPRERA	Bark	1875	709	144	32	20
	GEORGE KREMELBERG	Bark	1875	695	150	32	18
	BRIGADIER	Schooner	1873	314	117	29	10
	DIONE	Schooner	1871	211	111	28	9
	D. H. INGRAHAM	Schooner	1874	203	—	—	—

From these lists, compiled from official records, it would seem that two ships of over 1,000 tons register were built at Stockton, and these were the *Jacob Badger* of 1,048 tons, built in 1854, and the *Sonntag* of 1,004 tons, built in 1870; yet a historian says: "The ship *Sonntag* was built at Stockton, Maine [which is in the Belfast-Searsport-Stockton-Prospect area], in 1870 by A. P. Goodhue, and this vessel and the *Henry B. Wright* were the only full-rigged ships built at Stockton, although the bark *Willard Mudgett* was launched from a Stockton yard in 1874 and several smaller craft were built there."

The *Sonntag* was built to the order of Capt. William McGilvery, the shipowner of Searsport, Capt. Ferdinand de Soto Herriman, who was to command her, and Capt. Harry W. Herriman, who was her master later. She was a small ship of 976 tons register and measured 171 ft. long, 36 ft. beam, and 21 ft. deep. She was named in honor of William L. Sonntag, of New York, a well-known landscape painter. This Stockton-built ship was too sharp-lined for a Down Easter. She had "sharp entrance lines with a rather fine run and her stern lines showed a tendency to allow of her being easily pooped while running before high seas"; yet, with carrying capacity sacrificed in an effort to obtain speed, the vessel was a relatively slow sailer and made nowhere near as good time in her passages as many quite full-bodied and big cargo-carrying Down Easters. The ship was quite fortunate in the weather that she encountered and in finding paying freights; she had no serious mishaps, and "she managed to pay good dividends to her owners." The *Sonntag* made three round voyages from the North Atlantic to the Golden Gate city, but her early years were spent generally in the South American trade. She also engaged in the transatlantic trade, carrying cotton from southern ports and

lumber from New Brunswick to England. Her later years were spent mostly in voyaging to Australia, China, and the East Indies. In 1875 the vessel was sold by her original Searsport owners to J. Baker & Company, of Boston, which re-rigged her as a bark. In 1890, after five years of deep-sea service as a full-rigged ship and fifteen years as a bark, she was cut down to a barge, and her days were ended in the coastwise coal trade.

The third most important vessel ever built at Stockton was the bark *Willard Mudgett,* launched by Alvah Mudgett in 1874 and named in honor of the builder's father, who for many years had operated a yard in Stockton and built small craft — schooners, brigs, and an occasional bark. Alvah Mudgett succeeded his father in shipbuilding. The *"Mudgett"* registered 837 tons and was 160 ft. long, 34 ft. beam, and 21 ft. deep. She was owned by the builder and associates and during her early career was managed by Alvah Mudgett. Later, she was acquired by Capt. William H. Blanchard, of Searsport (who, incidentally, had been master of seven barks — *Addie Morrill, Evanell, Czarina, Tejuca, Henry Buck, Wealthy Pendleton,* and *Herbert Black* as well as of the ships *Bosphorus, Alice Buck, Phineas Pendleton,* and *Governor Robie).* The *"Mudgett"* was a fast sailer, and under the command of Capt. Phineas Banning Blanchard (known as Banning Blanchard) she made a series of phenomenally fast record or near record passages. In 1901 she ran from Buenos Aires to Cape Town with a cargo of hay and, after a poor start, averaged 300 miles a day for the balance of the passage, completing the run in 15 days. From Cape Town she made the 5,400-mile passage to Barbados in 24 days. After sailing to Boston, she loaded for Sierra Leone and made that port in 17 days, with a daily average of 228 miles for the passage. She then sailed from Konakri, French Guinea, to Turk's Island, British West Indies, in 14 days, averaging 242 miles daily. On one occasion, while the *Willard Mudgett* was on the African coast, she lost an anchor, broke a hawse pipe, and damaged her second main bower by the loss of a fluke. Captain Blanchard, having heard on a previous voyage to Turk's Island of the loss of the bark *Annie Lewis* of Portland, Maine (a vessel about the size of the *"Mudgett"),* made for the wreck. After two days' work, he salvaged a hawse pipe and two anchors from the wreck of the *"Lewis"* and proceeded on his way well equipped and with the new hawse pipe in position.

For many years, the *Willard Mudgett* was engaged in trade with the Far East and Australia, but when sailing vessels were forced off these trade routes, she was operated on the Atlantic. The end of the *"Mudgett,"* after a successful sea life of thirty years, was both sad and sudden. On September 10, 1904, under command of Capt. Fred P. Blanchard and with the skipper's father, Capt. William H. Blanchard (retired and one of the owners of the bark), aboard as a passenger, she cleared Norfolk, Va., with a cargo of coal bound for Bangor, Maine, where she was scheduled to load wood box shooks for Valparaiso, Chile. Nothing has ever been heard of her or of any of the persons aboard her since she sailed out of the Chesapeake, and it is presumed that she foundered in a hurricane about September 13-14.

As early as 1800, Stockton was building vessels for out-of-town owners, and by 1801 not only was Prospect, Bucksport, and Frankfort capital invested in Stockton-built ships but also parts of the vessels were owned in Newburyport and Milton, Mass.

The bark *E. Churchill* (212 tons), built at Stockton in 1844 for Benjamin Colcord, of Searsport, et al., was sold to the British and renamed *Daisy,* and the schooner *Matilda* (146 tons), built for N. G. Hichborn et al. the following year (1845), was sold to Australians and re-rigged as a brig. The schooner *Diadem* (119 tons), built for Jacob Black et al. in 1846, foundered off Cape Ann in 1889, when forty-three years old, but all on board were taken off the vessel by the schooner *J. C. Cotter.* The brig *James Crosby* (200 tons), built in 1847 for Green Pendleton, of Searsport, et al., while on a passage from Haiti to Philadelphia loaded with logwood, was set ashore by the current in Crooked Island Passage in 1876, when the vessel was twenty-nine years old. The brig *W. J. Treat* of 199 tons, built in 1853 for Henry H. Park, of Searsport, was sold in England and renamed *Harry,* and a brig of similar size, the *Lanzarote,* built the same year for Otis L. Harriman, of Stockton, was sold to the Brazilians and was renamed *Jaboatao* and later *Guararapes.* The ship *Jacob Badger* of 1,048 tons, built in 1854, was also sold to Brazil and renamed *Iris.* The bark *John Griffin* (396 tons), built in

1855 for Peleg Griffin et al., was sold to Norway and became the *Avance;* while the brig *Orelia* (298 tons), built the same year for J. T. Blanchard et al., was re-rigged as a schooner and renamed *Susan H. Gibson.* The bark *C. S. Fletcher* (540 tons), built in 1856, was renamed *Golden Eagle,* and when she went under the Norwegian flag, she was known as the *Victoria.* The bark *Garibaldi* (599 tons), built in 1860, was renamed *Oregon,* and when sold to Germany, she became the *Black Diamond.* The bark *Lizzie Rice* (499 tons), built in 1861, was later the Spanish bark *Ersilla,* and the brig *Caprera* (323 tons), built in 1864, was sold to Spain and renamed *Guadalquiver* in 1881. The schooner *M. L. Crockett,* built in 1868, was destroyed by fire in Portland Harbor in 1891, when twenty-three years old, and the brig *Salista* (352 tons), built in 1870 for H. R. Partridge, of Stockton, et al., was sold to Greece and renamed *Penelope Floriza.*

Most of the vessels built at Stockton during its construction boom in the forties, fifties, and sixties were for groups of Stockton owners; but a few vessels were built for nearby Searsport people and for other Penobscot owners, with an occasional vessel being ordered or promptly acquired by Massachusetts (and a bark in 1858 by New York) interests. Of the forty-three vessels built during the five-year period 1865-1869 inclusive, all were owned in Stockton except two barks and a brig built for Searsport people, a brig owned in Swanville and one in Bangor, a brig and a schooner in Boston, and a brig in Worcester, Mass. Of the twenty vessels built at Stockton during its last six legitimate shipbuilding years (1870-1875 inclusive), all were for local owners and management except a schooner built for Belfast and another for Bangor parties.

With the construction of the two barks *Caprera* (709 tons) and *George Kremelberg* (695 tons) in 1875, legitimate shipbuilding ceased at Stockton. However, during the years 1918-1921, the following five sizable schooners were constructed as emergency war and post-war tonnage, being ordered by Boston owners to benefit temporarily by trade conditions brought about by World War I and a prevailing lack of available mercantile vessels.

Year Built	Name of Schooner	Tonnage	Dimensions in Feet			Owner	Builder
			Length	Beam	Depth		
1918	GLADYS M. TAYLOR	967	191	38	19	Crowell & Thurlow, Boston	James M. Parker, master builder
1919	HERBERT L. RAWDING	1,220	202	39	22	Atlantic Coast Co., Inc.	James M. Parker, master builder
1919	A. ERNEST MILLS	947	190	37	19	Crowell & Thurlow, Boston	James M. Parker, master builder
1920	MAURICE R. THURLOW	1,172	203	40	22	Louis K. Thurlow, Boston	(E. L. Wasson, master)
1921	ALCAEUS HOOPER	1,305	207	41	22	Crowell & Thurlow, Boston	Stockton Yard, Inc.

XXXVIII.

BUCKSPORT AND ORLAND, MAINE

A Record of the Vessels of Each Rig Built at Bucksport, 1770-1905

BUCKSPORT is, in reality, at what can be considered the head, or northern end, of the great Penobscot Bay or the outer waters of the Penobscot River. It is on the east bank opposite Fort Knox. The town of Orland lies slightly to the east of Bucksport and at the head of a creek from the Penobscot. There are records of the following vessels built at Bucksport during the years 1770-1905, but the list is not a complete one and in this respect resembles available shipbuilding records of all Maine towns.

	Number of Vessels							Tonnage of Vessels						
Period Inclusive	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Barken-tines	Brigs	Schoon-ers	Sloops	Total
1770-1779	—	—	—	—	—	1	1	—	—	—	—	—	60	60
1790-1799	—	—	—	—	2	1	3	—	—	—	—	181	44	225
1800-1809	—	—	—	2	3	2	7	—	—	—	243	309	130	682
1810-1819	—	—	—	—	10	—	10	—	—	—	—	746	—	746
1820-1829	1	—	—	3	14	—	18	396	—	—	512	1,385	—	2,293
1830-1839	—	—	—	—	10	—	10	—	—	—	—	848	—	848
1840-1849	—	1	—	4	25	—	30	—	249	—	664	2,916	—	3,829
1850-1859	3	5	—	15	32	3	58	2,529	2,359	—	3,547	4,040	138	12,613
1860-1869	1	13	—	3	13	—	30	797	6,565	—	878	1,688	—	9,928
1870-1879	1	3	1	—	20	—	25	1,379	2,219	464	—	4,130	—	8,192
1880-1889	—	1	3	—	5	—	9	—	649	1,571	—	1,124	—	3,344
1890-1899	—	—	1	—	1	—	2	—	—	658	—	444	—	1,102
1900-1905	—	1	—	—	3	—	4	—	654	—	—	3,983	—	4,637
Total 1770-1905	6	24	5	27	138	7	207	5,101	12,695	2,693	5,844	21,794	372	48,499

Records show that the sloop *Hannah* of 60 tons was built at Bucksport in 1770, and this was probably the first vessel built on the Penobscot Bay or River. This vessel was burned by the British sloop-of-war *Nautilus* in the destruction of the town in 1779. The schooner *Favorite,* built at Bucksport in 1801, is reported as the first vessel constructed by Capt. James Ginn in the town. It would seem that this founder of the famous Penobscot Bay Ginn family migrated from Maryland to Orrington in 1775, moved to Orland in 1791, where, we are told, "he built two vessels," and finally settled in Bucksport in 1800. Members of the Ginn (or Genn) family were continuously engaged in shipbuilding and the operation of vessels in that area from revolutionary days to the 1880's. Prior to 1814, James, Daniel, and William R. Ginn were recorded as Bucksport shipbuilders and owners, with Joshua Ginn, of Bucksport, and Thomas Ginn, of Vinalhaven, as mariners. Other later Ginns prominent in Bucksport shipbuilding and shipping were Herod, Alfred W., William H., John, and Mark. In later gener-

ations, the name "Ginn" was changed to "Genn," and William H. Genn was a very prominent Bucksport shipbuilder in the fifties, sixties, and seventies. He was master builder of the brigs *Reporter,* built in 1852, and *Proteus,* built in 1857. He established his own yard and built the bark *William H. Genn* of 518 tons in the Genn shipyard in 1874. The last vessel built by William H. Genn in his own yard, on his own account, was the barkentine *Arlington* of 503 tons, launched in 1883.

Rufus Buck, in his manuscript history of Bucksport, states that up to the year 1810 there had been built in that town "three ships, four brigs, seven schooners, and two sloops." More detailed records of such construction are unavailable in this the twentieth century, but there are set forth herewith data in regard to the building of eleven instead of sixteen vessels. No ships are included, and two instead of four brigs are listed. Whereas the number of fore-and-afters is the same (i.e., nine of them), the following list records five schooners and four sloops, and Buck mentions seven schooners and two sloops. It is probable that two of the vessels built as sloops were later re-rigged as schooners, but the omission of five square-riggers from the list (three ships and two brigs) is unfortunate and unexplainable. However, it is well known by marine historians that the preserved records of early Maine shipbuilding are deplorably incomplete.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1770	HANNAH	Sloop	60	—	—	—	Jonathan Buck, merchant and shipwright
1793	SALLY	Sloop	44	—	—	—	Roderick McDonald; John and Lathley Lewis, mariners
1796	WILLIAM	Schooner	81	61	20	8	Benjamin Willis, Jr., of Haverhill; David Low, mariner, of Bucksport
1798	—	Schooner	100	—	—	—	"Built by Greenough"
1800	BEE	Brig	107	71	22	8	Benjamin Buck, of Bucksport; Moses Brown, of Newburyport; Ebenezer Choate, mariner
1800	CLARISSA & ELIZA	Schooner	110	72	22	8	Asa Peabody, Caleb Hall; Heman Smith, mariner
1801	FAVORITE	Schooner	—	—	—	—	Capt. James Ginn
1803	SUCKEY	Brig	136	78	22	9	Samuel G. Towne, owner and builder; Jacob Sherburne, mariner
1803	UNION	Schooner	99	70	21	8	David Howes, Seth and Abner Curtis, Eliakim Darling; Stowers Arey, mariner
1805	POLLY	Sloop	89	68	22	7	Eliakim Darling, Daniel Spofford, Anson Lanpher, mariner, of Bucksport; Joseph Lee, of Orland
		(Was a privateer in the War of 1812.)					
1807	GLEANER	Sloop	41	47	18	6	Daniel and William R. Ginn; Joshua Ginn, mariner

The schooner *Estelle* of 444 tons is said to have been the last vessel built in Bucksport proper, following which vessels built in the Bucksport region were laid down on Verona Island. The last vessel mentioned, the steam auxiliary bark *Roosevelt* of 654 tons, was built in 1905 on Verona Island for Admiral Peary. The schooner *William Beazley* and barkentine *Allanwilde* are reported to have been built at "the Verona yard" in 1881 and 1884, respectively. The ship *Hope* of 797 tons and the bark *Hudson* of 673 tons were built in the sixties in the Bucksport "Swazey yard," which also laid down in the early nineties the last vessels built in Bucksport proper. The "Buck yard" built ships in the sixties and seventies, and the "Genn yard" was active in the sixties, seventies, and early eighties, but little is known of the real builders or even of the site of the shipyards of many of the vessels built in this territory. Bucksport was generally considered in the nineteenth century as a suitable setting for the building of moderate-sized wood sailing vessels. The ship *Ganges* of 396 tons was launched in 1828, but in 1856 the ship *Edward G. Peters* of 1,292 tons was built, in 1876 the ship *N. T. Hill* of 1,379 tons, and in 1900-1901 the schooners *James W. Paul* of 1,808 tons and *Edward T. Stotesbury*

of 1,446 tons. Many sizable barks and barkentines were built during the years 1859-1905, the largest being the bark *Penobscot* of 1,133 tons, constructed in the Genn yard in 1878.

Rufus Buck wrote that between the years 1813 and 1845 "five ships, two barks, thirteen brigs, seventy schooners, and one sloop" were built at Bucksport. These total ninety-one vessels for the stated period, of which twenty were square-riggers. It is believed that the number of vessels stated by Buck as having been built in the specified thirty-three-year period is substantially correct and probably slightly understated in the earlier years; but particulars (such as tonnage, year built, type, and builders or owners) for only forty-six vessels constructed during the period are available, and the list covers one ship, five brigs, and forty schooners. Authentic data of the other four ships, two barks, eight brigs, thirty schooners, and a sloop (or forty-five vessels in all, which represent about one-half of the claimed total) have evidently not been preserved. The Buck family could be expected to have authoritative information regarding the number and types of vessels built at Bucksport from 1770, when Jonathan Buck, merchant and shipwright, built his first vessel there, and for a period at least as long as the Buck family was interested in the building and operation of ships. Other members of the family who were marine-minded and practically interested in vessels were Benjamin, James, William, George, Joseph, Charles, Henry, and Rufus. The schooner *Raven* of 161 tons was built by Rufus Buck and Henry Darling, of Bucksport, in 1852 and the schooner *Post Boy (2nd)* by John W. Swazey, Rufus Buck, et al. in 1872. With his inheritance and family connections, Rufus Buck was well fitted to write of shipbuilding at that center up to 1845.

Joseph L. Buck was probably the greatest of the family of builders who were resident at Bucksport. He constructed important vessels during the years 1847-1872. In 1867, Joseph L. Buck moved his shipyard to Verona Island and in that year built the 440-ton bark *Joseph B. Bradley*. In 1872 he built the schooner *B. F. Farnham* (174 tons), and the following year (1873) saw the last vessel built by Joseph L. Buck in his Verona yard, this being the schooner *John Douglass* of 189 tons. During the fifties and sixties, R. P. Buck, of New York, was financially interested in many of the vessels built at Bucksport. In 1869 he was the principal owner of the sizable bark *R. P. Buck* of 927 tons, which was built in the Buck yard by Joseph L. Buck. (This vessel was lost on her homeward passage from Java in 1872.) Just before Joseph L. owned his own yard, the 200-ton brig *Lillian,* built at the Swazey yard in 1851, had as part owners (with Sewall Swazey) Henry Buck, of Bucksville, S.C., Charles Buck, then of Boston, Mass., and R. P. Buck, of New York. Again in 1867, Henry Buck, of Bucksville, S.C., and R. P. Buck, of New York, were principal owners (with Sewall Swazey) of the 673-ton bark *Hudson,* built in the Swazey yard at Bucksport.

William Beazley, who bought the Joseph L. Buck yard on Verona Island in 1873, formed a group that built its first vessel (the schooner *Caroline C. Farnsworth* of 87 tons) in 1852 and developed into William Beazley & Company, which built its last vessel (the schooner *Estelle* of 444 tons) in 1891 in Bucksport proper. The schooner *Jennie Beazley* of 204 tons was built in 1876 and in 1881 the schooner *William Beazley* of 239 tons together with a barkentine *(H. C. Bucknam)* of 429 tons. Edward L. Beazley was prominent in constructing Beazley vessels in the eighties and to the end of the family's building career. With William, he built the schooner *Carrie A. Bucknam* in the Beazley Verona yard in 1882, but it was Edward L. who built the barkentine *Grace Lynwood* of 658 tons, followed by the schooner *Estelle* of 444 tons, in the former Swazey yard. Beazley's Verona yard was later used by McKay & Dix for the building of the sizable schooners *Edward T. Stotesbury* of 1,446 tons in 1900 and *James W. Paul* of 1,808 tons in 1901; also of the steam auxiliary bark-rigged *Roosevelt* of 654 tons in 1905 for Admiral Peary. (This vessel was used successfully for the discovery of the North Pole.)

The Swazey family was prominent in shipbuilding at Bucksport for at least fifty-seven years, for it is known that John Swazey was one of the builders of the schooner *Myrtle* (96 tons) in 1815, and John W. Swazey built the schooner *Post Boy (2nd)* of 171 tons in 1872, which, it was said, was "the last vessel built in the Swazey yard." John and Thomas Swazey

built the schooner *Pactolus* (99 tons) in 1820. Charles Swazey was interested in the building of the schooner *Mary Eliza* (88 tons) in 1823, and John Swazey was connected with the construction of the ship *Ganges* of 396 tons in 1828. John M. Swazey was interested, with the Bucks and others, in the building of the schooner *Nancy R. Heagan* (179 tons) in 1850, and Joseph L. Swazey was the master of the brig *Lillian,* built in 1851. However, Sewall Swazey founded the Swazey shipyard, and he built the schooner *Amanda* (108 tons) there in 1849, followed by the brigs *Lillian* (200 tons) and *Humboldt* (191 tons) in 1851 and the *Reporter* (193 tons) in 1852. In 1860, Sewall Swazey built the bark *Josie Nicholas* (365 tons) and the schooner *Petrel* (116 tons), followed by the ship *Hope* (797 tons) in 1862, the bark *Hudson* (673 tons) in 1867, and the barkentine *Geneva* (464 tons) in 1872. As before stated, the last vessel reported as being built in the Swazey yard was the schooner *Post Boy (2nd),* with owners as John W. Swazey, Rufus Buck, et al., and Benjamin Robinson, master.

The Spofford family was active in Bucksport shipbuilding and operation from an early date, as in 1805 Daniel Spofford was one of the owner-builders of the sloop *Polly* (89 tons). In 1868, Franklin Spofford built the 218-ton brig named after himself, and Frederick and Franklin Spofford jointly owned the schooner *Fred Spofford* of 168 tons, built in the Beazley yard. (Unfortunately, both of these vessels had short lives; the brig was lost on her first voyage to the West Indies, and the schooner was lost at sea in 1871, when three years old.) Daniel and Parker Spofford were shipowner-builders until well into the 1820's, and Daniel and Franklin Spofford were part owners of the ship *Ganges* (396 tons), built in 1828. Thereafter, until 1868, Franklin and Frederick were interested in ships and at times active in building. Franklin, with others, built the schooner *Sarah Moore* (122 tons) in 1848, the brig *Webster Kelley* (200 tons) in 1852, and the schooner *Julia E. Gamage* (140 tons) in 1859. In 1850, Frederick built the schooner *Caroline Grant* (145 tons), and he was one of the principal owners of the schooner *Nancy R. Heagan* (179 tons), built in the Buck yard. The following year (1851), Frederick joined with Sewall Swazey in building the brig *Humboldt* of 191 tons.

Another early Bucksport family of distinction in shipbuilding and marine matters was that of the Darlings. Eliakim was part owner of the schooner *Union* (99 tons), built in 1803, and of the sloop *Polly* (89 tons), built in 1805. Henry was one of the owner-builders of the schooner *Alfeira* (51 tons) in 1815 and of the schooner *Dolphin* (53 tons) in 1817. In 1819, Eliakim and Henry Darling built the 91-ton schooner *Larch,* and either this partnership or Henry personally was interested in the building of vessels until 1827, when the schooner *Packet* (106 tons) was built. From 1828, when Henry held a substantial interest in the ship *Ganges* (396 tons), to 1852, when the schooner *Raven* (161 tons) was built, Henry Darling was a prominent shipowner-builder of Bucksport. In 1860 he was honored when James G. Pendleton et al. named a 436-ton bark, the *Henry Darling,* after him.

After the middle of the nineteenth century, the name of Nahum T. Hill became conspicuously connected with Bucksport shipbuilding. In 1856 he built the brig *Circassian* of 227 tons; in 1859 the brig *L. M. Merritt* of 367 tons; in 1864 the bark *Homeward Bound* of 583 tons (built in conjunction with William H. Genn and in the Genn yard), which vessel was sold in San Francisco; in 1866 the bark *Megunticook* (442 tons); and in 1867 the bark *Proteus* (648 tons). After building barks, schooners, and barkentines during 1869-1874, Nahum T. Hill built in 1876 what was said to be "the finest and largest full-rigged ship ever built in the Bucksport district," the *N. T. Hill* of 1,379 tons, named after himself. (This vessel "went missing" in 1878 on her first return passage when bound from Rangoon to Liverpool.) In 1878, Nahum T. Hill, in conjunction with William H. Genn, built the big bark *Penobscot* of 1,133 tons in the Genn yard and, during the next two years, built the barks *Boylston* of 568 tons and *Lapland* (649 tons) at the same yard. It would seem that the *Lapland,* built in 1880, was the last vessel constructed by Nahum T. Hill, but he is known to have built a lot of sizable tonnage at Bucksport during the quarter of a century from 1856 to 1880 inclusive. Whereas the ship *N. T. Hill* had an unusually short life, the bark *Boylston,* built shortly after her, was in steady service as a square-rigger for thirty-one years, and it is known that she was engaged in active sea service in 1932, when fifty-three years old.

The following table gives a list of the largest and most important vessels of each type (or rig) built at Bucksport during the various periods as stated covering the years 1810-1905 inclusive.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1810-1819	DILIGENCE	Schooner	1819	131	80	24	8
	TRAVELLER	Schooner	1811	109	73	22	8
	MYRTLE	Schooner	1815	96	64	22	8
	LARCH	Schooner	1819	91	67	20	8
1820-1829	GANGES	Ship	1828	396	116	28	14
	BUCK	Brig	1822	218	88	24	12
	BUCKSPORT	Brig	1822	155	79	22	10
	COMET	Brig	1820	139	76	22	10
	RUBY	Schooner	1820	119	71	22	9
	EMIGRANT	Schooner	1826	111	76	22	8
	ALBION	Schooner	1824	107	75	22	8
	BOLIVAR	Schooner	1825	100	73	22	7
1830-1839	ORRALLOO	Schooner	1839	122	76	21	9
	MARCELLUS	Schooner	1837	119	79	23	8
	TARQUIN	Schooner	1839	115	—	—	—
	GAZELLE	Schooner	1838	100	62	19	8
1840-1849	TEMPLETON	Bark	1847	249	—	—	—
	MOSELLE	Brig	1843	183	—	—	—
	ELLEN REED	Brig	1849	168	—	—	—
	HYLAS	Brig	1847	160	—	—	—
	LYRA	Brig	1843	153	83	24	8
	YANKEE BLADE	Schooner	1849	171	92	25	9
	WM. R. GENN	Schooner	1845	161	94	25	8
	MARCIA TRIBOU	Schooner	1847	157	86	25	9
1850-1854	JOHN KNOX	Ship	1854	641	150	30	21
	MALINA	Bark	1850	317	113	25	12
	WINYAW	Brig	1854	243	105	26	10
	JOSEPH P. ELLICOTT	Brig	1853	238	103	25	10
	ANN C. PRATT	Brig	1850	220	84	25	12
	LILLIAN	Brig	1851	200	100	26	9
	GINNETHA	Schooner	1854	193	—	—	—
	NANCY R. HEAGAN	Schooner	1850	179	94	24	9
	SEA BREEZE	Schooner	1851	179	95	25	9
	RAVEN	Schooner	1852	161	93	25	8
	CHOCTAW	Sloop	1854	51	61	16	6
	UNCLE TOM	Sloop	1853	44	61	18	5
1855-1859	EDWARD D. PETERS	Ship	1856	1,292	184	37	24
	AZZAN	Ship	1855	596	144	30	20
	PATMOS	Bark	1859	739	144	30	21
	AGDA	Bark	1855	618	—	—	—
	ERNESTINE GIDDINGS	Bark	1855	378	123	28	12
	CIENFUEGOS	Bark	1855	307	122	28	12
	L. M. MERRITT	Brig	1859	367	114	27	16
	BELLE BARNARD	Brig	1857	305	115	28	11
	PROTEUS	Brig	1857	302	112	27	11
	WENONAH	Brig	1856	278	113	26	10
	DELMONT	Schooner	1858	198	97	25	9
	JULIA E. GAMAGE	Schooner	1858	140	83	25	8
	GEORGE & ARTHUR	Schooner	1855	136	84	22	9

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1860-1864	HOPE	Ship	1862	797	154	32	20
	HOMEWARD BOUND	Bark	1864	583	132	30	18
	HARRY BOOTH	Bark	1861	472	—	—	—
	HENRY DARLING	Bark	1860	436	126	27	13
	W. E. ANDERSON	Bark	1860	420	122	28	13
	GEORGE W. ROSEVELT	Bark	1862	399	117	27	12
	JOSIE NICHOLAS	Bark	1860	365	120	28	12
	ALBERTI	Brig	1861	390	122	28	16
	JOSIE GILKEY	Brig	1862	270	109	26	9
	A. COLBY	Schooner	1860	176	92	25	9
	NORA	Schooner	1861	132	91	25	8
	PETREL	Schooner	1860	116	80	20	8
1865-1869	R. P. BUCK	Bark	1869	927	164	37	21
	HUDSON	Bark	1867	673	152	32	20
	PROTEUS	Bark	1867	648	154	32	20
	MEGUNTICOOK	Bark	1866	442	128	30	17
	JOSEPH B. BRADLEY	Bark	1867	440	119	28	15
	HANCOCK	Bark	1869	391	121	29	12
	CARO	Bark	1865	369	119	28	14
	FRANKLIN SPOFFORD	Brig	1868	218	109	29	10
	M. A. FOLSOM	Schooner	1869	207	107	28	10
	J. M. MORALES	Schooner	1867	177	98	28	9
	ALICE B. GARDNER	Schooner	1869	170	103	27	9
1870-1874	WILLIAM H. GENN	Bark	1874	518	135	31	17
	GENEVA	Barkentine	1872	464	129	31	17
	CHARLES H. FABENS	Schooner	1874	388	131	31	10
	E. S. NEWMAN	Schooner	1872	330	133	31	11
	WALDEMAR	Schooner	1872	269	117	29	10
	LAMOINE	Schooner	1870	246	115	29	10
	E. H. HARRIMAN	Schooner	1874	238	121	29	9
	THOMAS W. HOLDER	Schooner	1875	231	121	28	9
1875-1879	N. T. HILL	Ship	1876	1,379	200	39	24
	PENOBSCOT	Bark	1878	1,133	187	37	23
	BOYLSTON	Bark	1879	568	136	32	18
	KIT CARSON	Schooner	1877	212	108	28	9
	JENNIE BEAZLEY	Schooner	1876	204	106	29	9
	NELLIE E. GRAY	Schooner	1879	86	—	—	—
1880-1884	LAPLAND	Bark	1880	649	148	33	19
	ALLANWILDE	Barkentine	1884	639	154	34	12
	ARLINGTON	Barkentine	1883	503	144	34	12
	H. C. BUCKNAM	Barkentine	1881	429	125	29	18
	NOROMBEGA	Schooner	1884	295	137	32	9
	CARRIE A. BUCKNAM	Schooner	1882	287	128	29	10
	SUSIE P. OLIVER	Schooner	1882	272	129	32	9
	WILLIAM BEAZLEY	Schooner	1881	239	113	29	9
	THAYER KIMBALL	Schooner	1880	97	84	23	8
	FANNIE HAYDEN	Schooner	1883	31	59	19	6
1885-1905	GRACE LYNWOOD	Barkentine	1890	658	156	34	18
	ESTELLE	Schooner	1891	444	140	33	12
	EDWARD T. STOTESBURY	Schooner	1900	1,446	210	42	22
	THALLIUM	Schooner	1900	729	164	36	17
	JAMES W. PAUL	Schooner	1901	1,808	250	43	22
	ROOSEVELT	Steam auxiliary bark	1905	654	182	36	16

The foregoing list includes all the vessels built at Bucksport after the year 1875 to the end of construction in 1905. There was no building during the period from 1885 to 1890 inclusive or from 1892 to 1899 inclusive.

The *Ruby* of 119 tons, built by the Spoffords in 1820, in certain registers is recorded as a brig and not a schooner, as she was apparently re-rigged as a brig in 1822. The brig *Isola* of 192 tons, built at Searsport in 1848, was rebuilt at Bucksport in the 1860's and is recorded as a two-masted schooner of 155.6 tons (93.7 ft. length, 25.9 ft. beam, and 9.3 ft. depth). She was lost on Long Island in 1884. The three-masted schooner *Lamoine,* built in 1870, was also registered as of 232 tons (115 ft. long, 21.8 ft. beam, and 9.7 ft. deep). The three-masted schooner *E. S. Newman,* built in 1872, is also recorded as of 392.68 tons.

The schooner *Franklin* of 89 tons, built by "Moses, James & Joseph Buck, Sewall Lake, William Mudgett, of Bucksport, and John Hopkins of Orland" in 1823, was in service for sixty-three years and was not withdrawn and broken up until 1885. The schooner *Marcellus* of 119 tons, built by Henry Darling et al., also lived to a ripe old age, but her end was disastrous. In the famous "blizzard of 1898," the *Marcellus,* then sixty-one years old, when in Gloucester Harbor, dragged into the schooner *James Holmes* of Belfast, and the vessels became entangled. They were driven ashore, and all on board were lost. The schooner *Sarah Hall* of 123 tons, built in 1842 for Capt. John Peirce et al., Bucksport, and Jesse Lewis and William Hall, of Cambridge, ran as a successful packet for many years and, it is said, "often made faster passages between the Penobscot and Boston Harbor than did steamboats in the run." The brig *Lyra* of 153 tons, built in 1843 for Deer Isle parties, was re-rigged as a schooner in 1866, when twenty-three years old. The schooner *Susan Ross* of 104 tons, built in 1844, had a long life, for she is known to have been trading in 1898, when fifty-four years old. The schooner *Flores* of 100 tons, built in 1846 for Bucksport, Castine, and New Orleans owners, was sold to Mexico and renamed *Rafeala.* The schooner *Mentora* of 100 tons, built by Joseph L. Buck et al., of Bucksport, with John Douglass as master builder, was launched in 1847 fully rigged, with provisions and stores aboard. After leaving the ways, she proceeded promptly to sea on her maiden voyage and the commencement of a long life. She is known to have been in active service when some sixty years old, and in 1932 (eighty-five years after building) what was left of the vessel was in the mud off Bucksport. The schooner *Sarah Moore* (122 tons), built in 1848 by Spofford and Darling, of Bucksport, with Stockton and Orland parties, saw service for thirty-four years, being broken up in 1882. The schooner *Jenny Lind* of 75 tons, built at Bucksport in 1849, was promptly sold to New York owners. The schooner *Caroline Grant* of 145 tons, built in 1850 by Frederick Spofford, of Bucksport, and Charles Abbott, of Castine, was broken up in 1878, when twenty-eight years old. The schooner *Sea Breeze* of 179 tons, built by Henry Darling and other Bucksport, Penobscot Bay, and Boston investors in 1851, was trading in 1898, when forty-seven years old.

The brig *Webster Kelley* of 200 tons, built in 1852, was lost at Jones Inlet, Long Island, N.Y., in 1874, when twenty-two years old, and the schooners *Raven* of 161 tons and *Mary E. Pearson* of 147 tons, launched the same year, are known to have been in active service in 1898 and 1893, respectively, when forty-six and forty-one years old. The topsail schooner *Rattlesnake* of 112 tons was built in 1852 by Eliphalet Parker as master builder. (He is said to have been the first shipbuilder in Bucksport "to lay down the bow and stern of a vessel on the floor.") Evidently, the *Rattlesnake* was a well-modeled and rigged vessel, for she was reputed to be "the queen of the Bucksport coasting fleet." She and the schooner *Mexican* of Searsport were credited by contemporary authorities with being "the fastest vessels on Penobscot Bay." The brig *Windward* of 199 tons, built in 1853, was sold to England and renamed *Black Swan.* The schooner *William Carroll* of 121 tons, built in 1853, was lost in 1886, when thirty-three years old, and the schooner *May Flower* of 104 tons, built at the same time, foundered in the North Atlantic when on a passage to the West Indies; Captain Williams and three men were picked up by a passing vessel, carried to the East Indies, and returned home after an absence of twenty-two months. The brig *Winyaw* of 243 tons, built by the Bucks in 1854, sailed from

Portland for Tortugas in 1862, when eight years old, and "went missing." The schooner *Harper* of 126 tons, also built in 1854, was lost in 1885, when thirty-one years old.

The ship *Azzan* of 596 tons, built in 1855, was sold to Norway and renamed *Oscar;* later, she went under the German flag and became the *Kati.* The bark *Ernestine Giddings* (378 tons), built the same year, was sold to the British and renamed *Ernestine.* Later, she became the Danish bark *Dan.* The bark *Cienfuegos* (307 tons) was sold to New York, and the schooners *Fleetwing* of 149 tons and *George & Arthur* of 136 tons, also built in 1855, went under the British flag during the Civil War. The ship *Edward D. Peters* of 1,292 tons, reported as "very deep and narrow," apparently "tipped over when launched." She was restored to her equilibrium, ballasted, and completed, but was later sold to the Dutch and in 1866 was known as the ship *Java* of Holland. The schooner *Joseph P. Ames,* built in the Beazley yard in 1857 and named after her master builder, dragged ashore in a severe gale on Isle of Shoals in 1876 and became a loss when nineteen years old. The schooner *Princess* of 97 tons, built in 1858, was engaged in trading for some half-century, when she was laid up, and "her bones lay on the beach at Penobscot village" some seventy-five years after she was launched. The bark *Patmos* of 739 tons, built at Bucksport the same time as the schooner *Princess,* met a tragic end, being destroyed by fire off Cape Horn in 1875, when eighteen years old. Capt. Charles M. Nichols, of Searsport, was in command, and during a heavy gale all hands (and the captain and his wife) were compelled to abandon the bark and take to the small boats. They were picked up by the bark *Pasithea* of Liverpool, which vessel, we are told, was "caught on lee shore next day," but Captain Nichols "took charge and worked her off." The schooner *Golden Light* of 106 tons was built in 1859 by Joshua, John, and Joseph Whitmore, of Whitmore's Island (Verona), with Mark Whitmore, of Deer Isle, and Enoch Barnard, of Bucksport. She is said to have been "the first vessel on record built on Verona Island," where Bucksport's last floating tonnage was constructed.

The bark *Josie Nicholas* (365 tons), built in 1860, was later renamed *Thomas Haynes,* and the schooner *A. Colby* (176 tons), built at the same time, was put under the British flag during the Civil War and renamed *Dearborn.* The brig *Alberti* (390 tons), built in the Buck yard in 1861, while on a passage from St. Jago, Cuba, to New York in 1879 (when nineteen years old), foundered in a severe West Indian hurricane. Capt. William R. Parker was lost, but all others aboard were saved. The brig *Josie Gilkey* (270 tons), built in 1862 for the Gilkeys, of Searsport, was put under the British flag because of the Civil War and renamed *Alexander.* The bark *Homeward Bound* (583 tons), built in the Genn yard in 1864, was sold to San Francisco owners. The schooner *Orono* (63 tons), built in 1864, was abandoned at sea in 1883, when nineteen years old, and the schooner *Onward* (100 tons), built in 1866, was still engaged in trading in 1898, when thirty-two years old. The brig *Franklin Spofford* (218 tons), built in 1868, had a very short life, being lost on her maiden voyage to the West Indies, and the schooner *Fred Spofford* (168 tons), built at the same time, also was unfortunate, being lost at sea in 1871, when only three years old. The third vessel built at Bucksport that year (1868), the schooner *Webster Barnard* (150 tons), is known to have been engaged in active trading when over thirty years old. The bark *Hancock* (391 tons) lived to a ripe old age and was in steady service when forty years old, but the three other vessels built at Bucksport in 1869 came to tragic ends. The largest of them, the bark *R. P. Buck* (927 tons), was lost in 1872, when only three years old, on a passage home from Java. The schooner *M. A. Folsom* (207 tons) was abandoned in the North Atlantic in 1884, and the schooner *Alice B. Gardner* (170 tons), while on a passage from Cienfuegos to Philadelphia, ran into heavy weather. She was dismasted, badly battered and waterlogged, and the crew was taken off her by the bark *Accumpta.*

The schooner *Harry White* (180 tons), built in 1870, was run into and sunk by the S.S. *Joseph Stickney* off Watch Hill in 1892. The schooner *Laura* (145 tons), built the same year, foundered in 1885. The schooner *Joseph G. Stover* (153 tons), built in 1871, was wrecked in 1886, when seventeen years old. The last vessel built in the Swazey yard, the schooner *Post Boy (2nd)* of 171 tons, launched in 1872, was wrecked on Burnt Island in 1903, when thirty-

one years old, and the schooner *John Wentworth* of 124 tons, built at the same time in the Beazley yard, foundered in a gale in 1881 (when nine years old), the crew being removed from the sinking vessel by the Danish brig *Elise*. The schooner *Annie R. Lewis* of 217 tons, built in 1873 also in the Beazley yard, is known to have been in active service in 1908, when thirty-five years old. The bark *William H. Genn* of 518 tons, built in the Genn yard in 1874, was lost in 1881 (when seven years old) on Serrana Key, Gulf of Mexico, when on a passage from Aspinwall to Pensacola. As before stated, the ship *N. T. Hill* of 1,379 tons, built in 1876, "went missing" in 1878 during the return passage of her maiden voyage, and the schooner *Jennie Beazley* of 204 tons, built in the Verona yard also in 1876, was driven ashore in a gale at Carrituck in 1886 and became a total loss when ten years old. The bark *Boylston* (568 tons), built in the Genn yard in 1879, was in service as a tow barge when fifty-three years old, and her end is not known.

The schooner *Thayer Kimball* (97 tons), reported "rebuilt in 1880 on Parker's Marine Railway and name changed," is said to have been the schooner *Lady of the Ocean* of 118 tons, built at Bristol in 1849. When reconstructed and her tonnage reduced 21 tons (or 18 per cent), the old vessel was thirty-one years old. The barkentine *H. C. Bucknam* (429 tons), built in the Verona yard in 1881, had a short life, as she drifted ashore in a calm and strong current on Mona Key, Cuba, in 1883, when only two years old. The schooner *Carrie A. Bucknam* (287 tons), built in the Verona yard in 1882, was waterlogged and abandoned in the North Atlantic in 1887, when only five years old, and the crew was picked up in small boats by the Italian bark *Expressott*. The 31-ton schooner *Fannie Hayden*, built at Bucksport in 1883, was "sold as a pilot boat in the South."

Particulars of Sailing Vessels Recorded as Built at Orland, 1794-1876

Orland built the "big ship" *Hiram* of 342 tons in 1796, and throughout its shipbuilding career, which continued to 1876, built only three larger vessels. These were the ship *Fanny Fosdick* of 730 tons in 1854, the bark *Forest Belle* of 370 tons, launched three years later, and the brig *L. Warren* of 360 tons, built in 1867. The following sixty vessels, aggregating 9,083 tons and averaging 151½ tons per bottom (all rigs) are known to have been built at Orland during the years 1794-1876 inclusive. Practically half of the number of vessels and well over half the reported tonnage were launched during the decade 1850-1859 inclusive.

	Number of Vessels						Tonnage of Vessels					
Period Inclusive	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schoon-ers	Sloops	Total
1794-1799	1	—	1	1	—	3	342	—	126	85	—	553
1800-1809	—	—	—	1	1	2	—	—	—	92	90	182
1810-1819	—	—	2	1	—	3	—	—	377	130	—	507
1820-1829	—	—	—	—	—	—	—	—	—	—	—	—
1830-1839	—	—	—	5	1	6	—	—	—	567	42	609
1840-1849	—	—	—	7	—	7	—	—	—	663	—	663
1850-1859	1	3	3	22	—	29	730	923	572	2,611	—	4,836
1860-1869	—	—	2	5	—	7	—	—	593	665	—	1,258
1870-1876	—	—	—	3	—	3	—	—	—	475	—	475
Total 1794-1876	2	3	8	45	2	60	1,072	923	1,668	5,288	132	9,083

The following table gives the particulars of the fourteen vessels known to have been built in Orland during the period 1794-1839 inclusive:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1794	PEGGY	Schooner	85	67	22	7	James Ginn, trader, of Orland; John Atkins, of Castine, mariner; built by James Ginn "at the Falls"
1796	HIRAM	Ship	342	98	28	17	Samuel A. Whitney, mariner, and William Whitney, of Castine
1798	ORLAND	Brig	126	76	23	8	James Ginn and Joseph Lee, of Orland; Nathaniel Atkins, mariner; built by James Ginn "below the Falls"
1802	LUCINA	Schooner	92	69	21	7	Joseph Lee, of Orland; Thatcher Avery, Nathaniel Atkins, mariner, of Castine
1805	LYDIA	Sloop (re-rigged as a schooner)	90	70	22	7	Horatio Mason, Moses Saunders, Joseph Lee, Asa Turner, mariner, all of Orland
1815	TRIO	Schooner	130	76	24	9	John Lee, of Orland; William Witherle and John H. Jarvis, of Castine; Joseph Wescott, mariner
1816	MARGARET	Brig (re-rigged as a schooner in 1829)	141	81	24	8	John Lee, of Orland; Joseph Bryant, Silas H. Martin, mariner, of Castine
1819	SARAH LEE	Brig	236	88	25	12	John Lee, of Orland; William Witherle and John H. Jarvis, of Castine; Henry Whitney, mariner
1830	NANCY	Sloop	42	48	16	6	Built at Orland for William Spofford, of Thomaston, owner and mariner
1833	AUGUSTA	Schooner	119	80	23	8	James Hatch, Islesboro, owner; James L. Hatch, mariner
1834	ATLANTIC	Schooner	97	71	19	8	William Jarvis, Hez. Williams, et al., Castine; Benjamin Raynes, mariner
1835	OLINTHUS	Schooner	109	75	19	9	Henry Partridge, Orland; Thomas Adams, Castine, et al.; Oliver Bowley, mariner
1836	HUDSON	Schooner	120	76	22	8	Pillsbury Coombs, Orland, et al.; David Wasson, Brooksville, mariner
1838	FREDERICK WARREN	Schooner	122	81	23	8	James and Samuel Warren, Orland; John Swazey, Bucksport, et al.

According to "Incidents in the Life of Samuel Austin Whitney" and other historical works and records, the ship *Hiram* was captured four times by the French in the West Indies in 1800 and recaptured by her Yankee master. William Witherle, of Castine, who with his associate, John H. Jarvis, furnished much of the money for building the schooner *Trio* (130 tons) and the brig *Sarah Lee* (236 tons) in 1815 and 1819, respectively, kept records that place the total cost of the schooner at $5,600 (or $43 per ton) and of the brig at $10,800 (or about $46 per ton). Whereas James Ginn was Orland's pioneer shipbuilder, Joseph Lee, who was associated with Ginn in the building of the brig *Orland* in 1798, continued to construct at Orland after Ginn had moved to Bucksport, and Lee was Orland's leading and virtually only consistent builder during the first two decades of the nineteenth century. The schooner *Hudson* of 120 tons, built in 1836, was in service for forty-two years before she was lost in 1878, and the schooner *Frederick Warren* of 122 tons, built in 1838, was driven ashore during a 70-mile gale at Chatham, Mass., in 1875 and, through no fault of her own, was lost when thirty-seven years old.

The following vessels, with stated dimensions and particulars, are herein set forth as the largest or most important built at Orland during each of the several periods covering, in the aggregate, the years 1840-1876 inclusive. The year 1876 marks the end of shipbuilding in the district, with the building of the 197-ton schooner *Hunter*.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1840-1849	FRANCENA	Schooner	1848	123	79	23	8
	GLENDOWER	Schooner	1840	112	76	19	9
	HYDRANGEA	Schooner	1849	102	78	20	8
	SARAH BUCK	Schooner	1847	93	73	21	7
	MARY FRANCES	Schooner	1849	83	67	21	7
1850-1854	FANNY FOSDICK	Ship	1854	730	155	32	16
	NARRAMISSIC	Bark	1852	299	115	26	11
	TRIBUNE	Brig	1851	196	—	—	—
	SAMUEL P. BROWN	Brig	1850	182	94	24	8
	NORTHERN LIGHT	Schooner	1850	171	—	—	—
	FRANCES NEWTON	Schooner	1852	159	92	24	8
	CHARLOTTE E. BUCK	Schooner	1851	148	89	24	8
	CARO AMELIA	Schooner	1854	138	—	—	—
1855-1859	FOREST BELLE	Bark	1857	370	122	28	12
	ARCADIA	Bark	1857	254	—	—	—
	ADELINE P. FLUKER	Brig	1855	194	93	26	9
	MASONIC	Schooner	1855	181	96	25	9
	EMMA MAYO	Schooner	1857	147	88	24	8
	CURLEW	Schooner	1857	110	74	21	7
	JUNO	Schooner	1859	105	75	21	8
	GRAPE SHOT	Schooner	1859	105	75	20	8
1860-1864	FRANK MARIA	Schooner	1861	135	84	25	8
	W. T. EMERSON	Schooner	1860	120	77	23	8
	OLIVE HAYWARD	Schooner	1860	117	78	21	8
1865-1869	L. WARREN	Brig	1867	360	117	29	12
	CHARLOTTE BUCK	Brig	1865	233	100	25	11
	WELLINGTON	Schooner	1865	171	96	28	11
	WILLIAM E. BARNES	Schooner	1869	122	81	24	8
1870-1876	RUTH DARLING	Schooner	1874	203	107	28	10
	HUNTER	Schooner	1876	197	105	28	9
	ANNIE POWERS	Schooner	1871	75	75	22	7

According to local tradition, the schooner *Peucinian* of 75 tons, built at Orland in 1845 for Bucksport owners, is said to have been "the homeliest vessel ever built" in that part of the world; she was rebuilt in Bucksport in 1864, when nineteen years old. The schooner *Sarah Buck* of 93 tons, built in 1847, was run into and sunk off Monhegan in 1872, when twenty-five years old. The brig *Samuel P. Brown* of 182 tons was re-rigged as a schooner in 1874 after twenty-four years of service as a square-rigger. The schooner *Caro Amelia* of 138 tons, built in 1854, was sold in Curacao and renamed *Margaretta.* The brig *Adeline P. Fluker* of 194 tons, built in 1855, was put under the British flag during the Civil War and renamed *Eclipse.* The schooner *May Queen* of 100 tons, built in 1858, was in service in 1898, when forty years old, and the schooner *W. T. Emerson* of 120 tons, built in 1860, was trading in 1908, when forty-eight years old. The brig *Charlotte Buck* of 233 tons was lost in 1869, when four years old, and all of the six vessels built at Orland between the years 1861 and 1876 came to tragic ends. The schooner *Wellington* (171 tons), built in 1865, was lost at sea in 1879, when fourteen years old. The brig *L. Warren* (360 tons), built in 1867, ran on Alacran's Reef, Gulf of Mexico, in 1876 when under full sail and was a total loss when nine years old; Capt. Mark Gray and the crew reached Progresso safely in the ship's boats. The schooner *William E. Barnes* (122 tons), built in 1869, was lost in 1888, when nineteen years old. The schooner *Annie Powers* (75 tons), built in 1871, was wrecked when a year old, and the schooner *Ruth Darling*

(203 tons), built in 1874, was run down and sunk by the S.S. *Wyanoke* off Hatteras in 1889 (with two men drowned), when the vessel was fifteen years old.

The Partridge family was outstandingly interested in shipbuilding at Orland during the period 1835-1865. Henry Partridge built during the period 1835-1845, followed by Isaac and Joseph in 1849. In 1855, George, Isaac, Jonathan, Joseph, and Charles Partridge were active, together with Washington Partridge in 1857 and 1859 and Isaac Partridge in 1861 and 1865. Leander and Ira Partridge were masters of record of new vessels in 1852 and 1855, respectively. The schooners *M. S. Partridge* and *George M. Partridge* were built in 1854. From 1847 to 1874, the name of the leading builder in Orland was John Buck, who built fifteen vessels (two brigs and thirteen schooners), and the last vessel built in the town (in 1876), the schooner *Hunter* of 197 tons, was owned by John A. Buck, who was also recorded as the master builder.

XXXIX.

FRANKFORT AND WINTERPORT, MAINE

A Shipping Community Originally Settled by "Seamen, Traders, Mariners, and Captains," with a Record of Its Shipbuilding, 1794-1880

THE PRESENT town of Winterport, Maine, which lies on the west bank of the Penobscot River (Lat. 44° 38′ N.; Long. 68° 50′ W.), some twelve miles as the crow flies southwest of Bangor and seventeen miles northeast of Belfast, is the most active and historic part of the old town of Frankfort and was incorporated as a separate town in April 1860, closely following the end of the clipper ship decade with the shipbuilding boom and just before the commencement of the Civil War. The name Frankfort was derived from the use of the designation "French Fort," of which there were many in Maine in the eighteenth century. A deed dated 1753 speaks of land "in the district called Frankfort on the east side of Kennebeck River in the county of York" (the later town of Frankfort is thirty-seven miles east of Waterville on the Kennebec), and one in 1772 mentions "a new plantation called Frankfort." On June 25, 1789, an act was passed incorporating a town by the name of Frankfort, which was modified as to area on February 1, 1790; but the suggestion of the original thirty-nine petitioners of May 16, 1789, and the fifty revisionist petitioners of November 28, 1789, that the new town be named Knoxbury or Knoxburg—in honor of General Knox, the trusted friend of Washington—was ignored because of the enmity of Governor Hancock toward General Knox. It is interesting to note that among the petitioners for the incorporation of the new town that bordered Belfast to the west and included Marsh River on the northeast appear the names of William and Peleg Pendleton; James, James, Jr., and David Nichols; Daniel Goodell, Abraham Mudgett, and Joshua Treat—all important in the annals of shipbuilding on the Penobscot.

We find Frankfort referred to in the middle of the nineteenth century as "a pleasant shipbuilding town at the head of winter navigation on one of our noblest rivers." When the town of Winterport superseded the old town of Frankfort, it was described as "thirteen miles from Bangor, the head of [summer] navigation on the Penobscot, and forty-seven miles from the ocean; the [Marsh] River is a quarter of a mile wide and from 3¾ to 5¼ fathoms deep at mean low water and brackish at high tide and into it have been launched several 1,500-ton ships." It was said at the time, "The name Frankfort savors too much of the French—also of Frankfort in Germany. It means nothing as far as our town is concerned, and we have never approved of the name. The new name of Winterport is at least distinctive, for we know of no other town in the world that bears the name; it is also descriptive, for the town lies on the river as far north as is navigable in the winter season and it is the farthest upriver winter port on the Penobscot." The McKenny Wharf, when owned by Lathly Rich, was a busy shipping center, especially in the late fall, winter, and early spring, and the terminus or "winter port" for vessels, all passengers and freight for Bangor being landed there and sent forward by coach and teams. We read from Frankfort under date of April 15, 1847, "It has been constant

sledding till the 10th of the month, the river is not open yet. . . . The boats are crowding into Frankfort, Coaches and Stages are crammed and crowded full."

As early as 1792, there is a record of Captain Oakman's taking up land at Frankfort in 1787 and engaging in the business of cutting and selling wood and shipping the fruits of his labor to the Boston market in a sloop, which, presumably, he himself built. John Kempton, a mariner born in Plymouth, Mass., in 1740, purchased 300 acres of land in the spring of 1793 and engaged in the lumber business; for on September 11, 1796, there is a record of his shipping spruce spars to Philadelphia, which were loaded in Oak Point Cove, on the brig *Fair America* (Capt. Richard Calley). It has been said that the first building of sizable vessels occurred at John Kempton's wharf; that the *Cynthia* of 115 tons was built there soon after the turn of the century; and that a vessel was on the stocks in 1812 "which Kempton burned, when he heard that the British were coming up the river, to prevent her from falling into their hands." The Thompsons, who also had a wharf at Oak Point, had a vessel partly in frame in 1812, and they suspended all work on her until the war was over. Tisdale Dean was an early settler and later, in partnership with others, did an extensive trade with the West Indies under the firm name of Andrews, Ware & Dean, exporting forest products (oak barrel staves, rift clapboards and shingles, spruce knees, bark, etc.). This firm built the 115-ton topsail schooner *Orion* in 1807 and probably many other vessels of which no records exist. A schooner of 92 tons named the *Franklin* was built at Frankfort in 1810. A brig, *Nancy & Hannah,* built for Capt. Arthur Childs, and a vessel named the *William,* built by Captain Andrews of the firm Andrews, Ware & Dean for his son of that name, are known to have been built in the early twenties; but undoubtedly a large number of deep-sea and river trading craft were launched from Frankfort yards in the first half of the twentieth century of which no records have been preserved.

It is said that, from the very first, the settlement of Frankfort was destined to be a shipping community, for "the original settlers were seafarers and deeds describe them as seaman, trader, mariner, or captain and their former homes were Plymouth, Wellfleet, Bristol, and Provincetown." We are told, "One chose his lot because it was good woodland and he could make and sell products of the trees; another could see in the oak groves future ships which would carry his lumber abroad and return from distant countries laden with desirable foreign products." A successful settler was a businessman who marketed his product, and historians tell us that nearly every settler bore the name of captain and "either owned his own vessel or was master of one owned by his neighbor." The trading was not only along the coast with sloops and schooners but also to the Indies and to more distant ports with topsail schooners and brigs and, years later, with barks and ships.

The *Balloon,* a schooner of 80 tons, was one of Frankfort's well-known early vessels. She was built about 1832 and rebuilt in 1843, and because she was painted bright blue she was nicknamed the *Blue Loon.* This little vessel made many voyages to the West Indies and Canary Islands and was in active service during the sixties and seventies. Among the vessels known to have been built in the late forties are the schooner *Ruth Thomas* (97 tons), the schooner *Captain John* (91 tons), and the bark *T. O. Thompson* (130 tons).

The Bone and Muscle Society was formed at Frankfort and consisted of a dozen competent mechanics who were to build ships, do all the work, and share the profits. They started to build a vessel, but the project failed through lack of capital and leadership. The partially built craft was put up for auction to liquidate the affairs of the society and was purchased by Treat & Company, which finished her and named her the *Alpine*—evidently a popular name, for there were at least three *Alpines* built at Frankfort.

The shipbuilding records that are available for Frankfort and Winterport suggest the inadequacy of obtainable data to present a fairly complete record of the community's achievements in the building of ships, and the shortcomings applicable to Frankfort and Winterport are an indication of the incompleteness of the accessible records covering the ship construction

of any and all Maine towns. The following table is supposedly an authoritative record of the vessels built at Winterport-Frankfort during the years 1794-1880:

Period Inclusive	Number of Vessels						Tonnage of Vessels					
	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schooners	Sloops	Total
1794-1799	—	—	—	1	1	2	—	—	—	116	96	212
1800-1809	—	—	1	14	—	15	—	—	155	1,436	—	1,591
1810-1819	—	—	2	8	1	11	—	—	263	658	50	971
1820-1829	1	—	7	12	1	21	343	—	1,289	1,140	100	2,872
1830-1839	—	—	—	2	—	2	—	—	—	220	—	220
1840-1849	—	2	2	8	—	12	—	460	646	779	—	1,885
1850-1859	13	3	9	12	—	37	12,545	1,392	2,248	1,376	—	17,561
1860-1869	—	6	2	11	—	19	—	3,623	674	1,588	—	5,885
1870-1880	—	—	—	5	—	5	—	—	—	590	—	590
Total 1794-1880	14	11	23	73	3	124	12,888	5,475	5,275	7,903	246	31,787

The following vessels, according to available records, were built in Winterport and Frankfort prior to 1810:

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet			Owner, Builder, or Mariner
				Length	Beam	Depth	
1794	HOPE	Sloop	96	—	—	—	Tobias Oakman and Miller Johnson
1797	LYDIA	Schooner	116	74	23	8	John Crosby and James Boyd; Samuel Bartlett, mariner
1800	WALDO	Schooner	137	80	23	9	Samuel Holbrook; Abel Curtis, mariner
1801	HANNAH	Schooner	85	66	20	8	Jonathan Merrill, of Newburyport, owner and master
1802	FRIENDSHIP	Brig	155	81	24	9	William McGlathery; Eleazer Giles, mariner; John Adams, Peter and Aaron Littlefield
1802	HOPE	Schooner	103	69	22	8	Nehemiah Rich, mariner; Moses and Amos Patten and Abner Tyler, of Bangor
1803	PACKET	Schooner	102	69	22	8	John Barker and Moses and Amos Patten, of Bangor; Aaron Tufts, of Dudley; Levi Young, mariner
1803	HARRIOT	Schooner	89	67	20	8	Enoch and Henry Sampson; John Martin, mariner
1804	POLLY	Schooner	118	75	22	8	William McGlathery; Samuel and Daniel Ginn, of Prospect; John Martin, mariner
1805	CATHERINE	Schooner	125	77	23	8	Waldo Peirce; Abel Curtis, mariner
1805	CYNTHIA	Schooner	115	—	—	—	John Kempton
1806	BETSEY	Schooner	110	71	24	8	John Kempton; David Hawes and Samuel Rider, of Bucksport; Joshua Atwood, mariner
1806	MARTHA	Schooner	106	73	21	8	Alexander Milliken; Reuben Rich, mariner
1807	WILLIAM (1ST)	Schooner	128	76	23	9	William McGlathery, mariner; John Martin, of Prospect
1807	NANCY	Schooner	107	73	22	8	Jonathan Merrill, owner and master
1807	ORION	Schooner	—	—	—	—	Andrews, Ware & Dean, of Winterport
1809	INDUSTRY	Schooner	111	72	22	8	Lathly Rich, mariner; Stevens Atwood

Records show that the following two-masted schooners were built at Frankfort: *Dove* of 100 tons (74 ft. length, 20.6 ft. beam, 7 ft. depth), built in 1820; *Franklin* of 60 tons (64.6 ft. length, 20.1 ft. beam, 5.5 ft. depth), built in 1847; and *Angeroia* of 62 tons (66 ft. length, 16.4 ft. beam, 7.7 ft. depth), built in 1848.

The following table gives the dimensions and particulars of the largest and most important vessels of each type or rig built in the Winterport and Frankfort district during the various periods as set forth, which collectively embrace the years 1810-1880 inclusive:

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1810-1819	RISING STATES	Brig	1811	132	78	23	8
	UPTON	Brig	1818	131	79	23	8
	RAMBLER	Schooner	1816	122	76	23	8
	CAROLINE	Schooner	1819	111	75	22	8
	TRITON	Schooner	1819	110	74	23	8
	ALEXANDER	Schooner	1812	104	72	21	8
	JULIAN	Sloop	1816	50	57	17	6
1820-1829	CANOVA	Ship	1823	343	111	26	13
	STATE OF MAINE	Brig	1823	246	91	24	13
	PARKER	Brig	1824	215	87	23	12
	FOUR SONS	Brig	1822	194	84	23	11
	CAROLINE	Brig	1826	182	88	23	10
	NANCY & HANNAH	Schooner	1826	130	78	23	8
	NORTH BRANCH	Schooner	1827	128	81	24	8
	WILLIAM KING	Schooner	1820	111	75	23	8
	BOSTON PACKET	Sloop	1820	100	74	22	7
1830-1839	PARIS	Schooner	1832	131	81	23	8
	NANCY TREAT (I)	Schooner	1834	90	70	20	7
	WILLIAM (2ND)	Schooner	1839	89	75	20	8
1840-1849	NEHEMIAH RICH	Bark	1847	260	—	—	—
	NANCY TREAT (II)	Bark	1848	200	—	—	—
	ISABELLA JEWETT	Brig	1843	198	98	25	9
	ELLEN MARIA	Brig	1848	—	—	—	—
	CHARLES	Schooner	1840	140	79	23	9
	RUTH THOMAS	Schooner	1845	135	85	24	8
	T. O. THOMPSON (mentioned also as a bark)	Schooner	1846	130	—	—	—
	TAMERLANE	Schooner	1841	127	79	23	8
	CAPTAIN JOHN	Schooner	1848	114	70	22	8
1850-1859	SPITFIRE	Ship	1853	1,520	206	39	—
	NONPAREIL (launched in 1853)	Ship	1854	1,431	220	42	23
	FLYING DRAGON	Ship	1853	1,400	—	—	—
	AREY	Ship	1856	1,207	185	38	24
	FLYING ARROW	Ship	1852	944	—	—	—
	ADDISON GILBERT	Ship	1855	861	159	32	20
	RACE POINT	Ship	1855	850	—	—	—
	EASTERN STATE	Ship	1851	813	158	33	22
	ROBERT TREAT	Ship	1855	724	—	—	—
	GIBRALTAR	Ship	1854	721	147	33	23
	SPEEDWELL	Ship	1854	691	—	—	—
	FRANCE	Ship	1856	633	142	31	—
	DANIEL SHARP	Ship	1850	—	—	—	—
	CZARINA	Bark	1859	601	127	31	20
	JAMES M. CHURCHILL	Bark	1855	416	126	29	16
	F. S. MEANS	Bark	1854	375	121	28	12
	SPARKLING SEA	Brig	1858	434	115	29	15
	ROBIN	Brig	1857	275	108	28	10
	M. A. HERRARA	Brig	1858	275	108	28	10
	ADA S. WISWELL	Schooner	1854	198	—	—	—
	LATH RICH	Schooner	1855	190	98	25	9
	DANIEL WILLIAMS	Schooner	1858	161	94	24	8

(Continued on next page)

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1860-1869	JOHN DWYER	Bark	1864	732	154	34	19
	WARREN	Bark	1864	695	146	32	19
	GEORGE TREAT	Bark	1866	639	134	28	20
	FLOR DEL MAR	Bark	1863	626	141	32	13
	LIBERTAD	Bark	1864	526	132	27	11
	T. K. WELDON	Bark	1865	405	123	29	18
	ALPINE	Brig	1863	515	133	30	17
	E. P. TREAT	Brig	1862	159	117	26	8
	MARY A. RICH (re-rigged as barkentine AUGUSTA)	Schooner	1863	422	130	31	10
	ANNIE BELL	Schooner	1860	213	112	26	8
1870-1880	SADIE COREY	Schooner	1880	156	102	28	7
	SPEEDWELL	Schooner	1872	143	96	26	9
	ANN ELIZA	Schooner	1870	98	88	24	8

All of the thirteen ships and eleven barks reported built at Winterport-Frankfort during the forties, fifties, and sixties are set forth in the foregoing table; also all the sloops (for there were few of them) and the largest of the brigs and schooners built in each of the several decades. Besides the vessels mentioned in the table, the following craft—all small schooners—were built in the district during the last years (1865-1880 inclusive) that ships were constructed at Winterport-Frankfort:

Year Built	Name of Schooner	Tonnage	Dimensions in Feet			Remarks
			Length	Beam	Depth	
1865	FRANKLIN TREAT	110	—	—	—	Built at the Marsh by Treat & Co. for Franklin Treat et al., Winterport
1865	ALICE TREAT	50	55	18	7	Owned by Alvah Mudgett et al., Stockton
1866	RIPPLING WAVE	180	94	25	9	Built for Franklin Treat, Winterport, et al.
1867	LUCY M. COLLINS	168	101	28	8	Built at Dunham yard by Dunham & Eveleth for Rich, Collins, et al.
1867	CHARLES E. MOODY	126	94	26	9	Built at the Marsh by Treat & Co. for Franklin Treat et al.
1868	GIPSY	60	57	17	6	Owned by J. & C. H. Treat et al., Winterport; renamed POLLY ANN
1869	FOREST BELLE	82	76	23	7	Owned "Down East" in 1884
1869	ENTERPRISE	50	45	15	7	C. H. Barker, of Portland, owner and master
1870	ANNIE LINA	97	—	—	—	J. K. Clark, of Winterport, owner and master
1870	ROBERT BYRON	96	88	23	8	Built at the Marsh by Treat & Co. for James Thurston, Rockport, et al.

But little, if anything, is known of the actual place of building of most of the Winterport-Frankfort vessels, but it is reported that the bark *Nancy Treat,* the brig *Ellen Maria,* and the schooners *Speedwell, Ann Eliza,* and *Robert Byron* were among the many vessels built at "The Marsh" during the period 1848-1872. The bark *Nehemiah Rich* is recorded as being built at the Williams yard in 1847; while the three sizable ships built in 1852-1853 were said to have been built at the Dunham yard. Incidentally, the Dunhams built three clipper ships of from 1,089 to 1,431 tons during these years, but the name and tonnage of only one, the *Nonpareil,* agree with the data set forth in the before-stated list. The *Spitfire* of 1,520 tons, built in 1853, was constructed by James Arey & Company. The *Arey* (renamed *Caroline*) of 1,123 tons was built by Williams & Arey in 1856, and George Dunham built the clipper *Ocean Spray* of 1,089 tons in 1852. The ship *Flying Dragon* (1,400 tons) is a vessel of mystery. There are records showing that such a vessel was actually built and launched from the Dunham yard in 1853 for Dunham, Cutter & Company, of Winterport, and the launching of this "extreme clipper of superior construction" was recorded in the REPUBLICAN JOURNAL of Belfast. However, the only American clipper named *Flying Dragon* was a Bath-built ship of very different dimensions, and the *Flying Dragon* of Winterport-Frankfort does not appear in any register or list of

American vessels. It is suggested that she was promptly "sold foreign." The third clipper actually built at the Dunham yard was constructed by Isaac Dunham and was named both *Flying Arrow* in 1853 and *Wings of the Wind* in 1856. Her original name, when launched in December 1852 and before she was sold to operating owners, was *Flying Yankee.*

The schooner *Enterprise* (59 tons), built in 1817, was lost in 1834, when seventeen years old; the schooner *Triton* (110 tons), built in 1819, was lost in 1831, when twelve years old; and the schooner *Mary & Margaret* (97 tons), launched in 1821, came to her end twelve years later (in 1833). The schooner *Rooks* (93 tons), built in 1823, was lost in 1825, when only two years old. The ship *Canova* of 343 tons, the first full-rigged three-master built in the Winterport-Frankfort district, was constructed by Joshua Treat and Oliver Parker; she was sold on the stocks as a bare completed hull to William Witherle and John H. Jarvis, of Castine, who, after the vessel was launched, towed her by rowboats to Castine to be rigged, equipped, and finished. Witherle's books give the total cost of the ship, including coppering, as $18,009 (or $52½ per ton). The brig *State of Maine* (246 tons), built the same year as the ship *Canova* (1823), came to a tragic end in the Atlantic in 1856, when thirty-three years old. When on a passage from Winterport to Cardenas, she became waterlogged and badly battered during heavy weather. The wreck was sighted by the schooner *Mars* of Halifax in a heavy gale, but boats could not be used to transfer the crew from the sinking vessel. Captain Philbrook was saved by use of rope, but others attempting this mode of transfer were drowned, and two men remained aboard. The *Mars* stood by the doomed brig all night, but when dawn broke the *State of Maine* had disappeared, having foundered during the night. The brig *Susan* (164 tons), built in 1826 for Jonathan Treat, of Winterport, had a long life of sixty years, but she was lost at sea in 1886. The schooner *Nancy & Hannah,* built the same year, was lost when making her maiden passage, bound for Cuba.

The schooner *North Branch* (128 tons), built in 1827, was lost in 1842, when fifteen years old, and the schooner *Paris* (131 tons), built in 1832 (the only two vessels recorded built during the twelve-year period 1827-1838 inclusive), was lost in 1841, when nine years old. The schooner *Tamerlane* of 127 tons, built in 1841, was lost with all hands in 1849, when eight years old. The brig *Isabella Jewett* (198 tons), built in 1843 for Bangor and Bucksport owners, lived a long life and in 1886, when forty-three years old, was re-rigged as a schooner. The 200-ton bark *Nancy Treat,* built for James Treat, of Winterport, in 1848, had a brief and disastrous career. On her maiden voyage, she was abandoned in the North Atlantic. The wreck was later reported by the schooner *Sarah Maria,* "with no one on board." The crew, which had taken to the small boats, was never heard from, and the derelict bark foundered. The brig *Ellen Maria,* also built in 1848, was lost in 1856, when eight years old; but the schooner *Captain John* (114 tons), which was the third vessel built in the district in 1848, is known to have been actively engaged in trading in 1885, when the fore-and-after was thirty-seven years old. The ship *Daniel Sharp,* built at the Dunham yard in 1850, was sold in England, and the ship *Eastern State,* built at the same yard the following year (1851), was sold in Ireland. The ships *Flying Arrow, Spitfire, Nonpareil, Gibraltar, Speedwell,* and *Arey (Caroline),* built during the years 1852-1856, all ultimately went under the British flag. The ship *Addison Gilbert* (861 tons), built at the Dunham yard in 1855, was sold to the Italians and renamed *Uno;* in 1868 she was owned by the Norwegians. In the eighties, her hailing port was Stavanger. The ship *France* (633 tons), built in 1856 at the Dunham yard, was sold during the Civil War (1863) to the Germans for $30,000 and renamed *Goethe.*

The bark *F. S. Means* (375 tons), built at the Marsh in 1854, was sold in South Africa during the Civil War and renamed *Ansdell.* In 1885, when thirty-one years old, she was owned in Newcastle, N.S.W., Australia. The brig *Plumas* (191 tons), also built in 1854, was sold in Valparaiso after she had been aground in 1860. The vessel was renamed *Cornelia Saevedra.* Whereas the schooner *Ada S. Wiswell* (198 tons) is recorded as being built at the Marsh in 1854, this was in reality a reconstruction job, as the vessel was actually built much earlier and had operated for many years prior to 1854 under a different name. The ship *Race*

Point (850 tons), built by Williams & Arey in 1855, was owned by Provincetown people. The ship *Robert Treat* (724 tons), built in 1855, by Treat & Company for Webster Treat, of Winterport, et al., with George Treat as master, is reported as being "the largest vessel ever built at the Marsh."

The name of the brig *Robin* of 275 tons, built in 1857, is of interest. She was constructed and owned by Treat & Company, of Winterport, and the name was chosen when the vessel was building because robins built a nest under the bow. The launching was delayed until the fledglings left the nest, and we are told that the vessel was always extremely lucky. The brigs *M. A. Herrara* (275 tons) and *Sparkling Sea* (434 tons), built in 1858, went under British registry during the Civil War, as did the bark *Czarina* (601 tons) and the schooner *Alice* (99 tons), built in 1859. The *Czarina,* in 1880, when twenty-one years old, went under the Norwegian flag and was renamed *Anna.* The brig *E. P. Treat* (159 tons), built in 1862, was sold in Australia because of the Civil War and renamed *Restless.* The bark *Flor del Mar* (626 tons) and the brig *Alpine* (515 tons), built by Treat & Company, Winterport, in 1863, were put under the British flag because of conditions brought about by the Civil War; the former was renamed *Kate Merrill* and, later, when sold in Norway, became the *Kate.* The three-masted schooner *Mary A. Rich* (422 tons), built in the Dunham yard for Lathly Rich, of Winterport, was later sold in Sweden, re-rigged as a barkentine, and renamed *Augusta.* The barks *John Dwyer* (732 tons) and *Warren* (695 tons), built by the Treats in 1864, went under British registry. Most of the vessels built in the district during the last twenty years or so of its ship construction history were "built at the Marsh by the Treats." The Dunham yard is known to have continued operations until 1867, for in that year Dunham & Eveleth launched the schooner *Lucy M. Collins* from that site, which had become well known during the clipper ship decade of the fifties.

Prospect, to the south of Frankfort and lying between what is now North Searsport and the Penobscot River, built some sizable vessels in early days, for registers record the following craft built at Prospect.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1825	JAMES AND CAROLINE	Schooner	107	75.7	21.6	7.5
1831	VAN BUREN	Schooner	102	75.8	22.1	7
1832	NORTH AMERICA	Brig	154	81.6	23.6	9.7
1832	ELIZA HUPPER	Schooner	133	81.5	23.1	8.1
1834	SEVEN SISTERS	Schooner	116	80	22.7	7.2
1839	WILLIAM	Schooner	108	65	19.3	8.2
1844	E. CHURCHILL	Bark	212	97	24.5	10
1850	H. P. CUSHING	Schooner	152	90.5	23.5	8.2
1855	JAMES DAVIS	Brig	167	104.5	27.2	9.8

Newburgh, which lies to the northwest of Winterport is credited with building some vessels, one of which was the schooner *Sophia Maria* of 59½ tons (length 56 ft. 7 in., beam 17 ft. 1 in., depth 7 ft.), reported built in 1834.

In the middle of the nineteenth century, Frankfort was a flourishing town. A paper in the early fifties describes it as having "abundant wharves, numerous shipyards already renowned to the ends of the earth for the magnificent structures they have given to the seas, lumber manufactories driven by steam which cease not their din day nor night for the greater part of the year." In those days, Frankfort's water front was "fringed with twelve wharves," and they were the scene of its business activity. Various members of the Treat family built at the Marsh, and in the village there were five yards, the largest being owned and operated by Treat & Company, the Dunhams (Isaac and George), and Williams (also Williams & Arey and James Arey & Company).

The following table gives a list of vessels—compiled by Ada Douglas Littlefield in 1907—built at Frankfort and the Marsh during the period 1851-1880 and identified as to name,

year built, rig, and tonnage. Many variations are evident in rigs, names, and figures when they are compared with other records. (An additional forty vessels known as to name, but lacking in description, tonnage, and year built, have been omitted.)

Name of Vessel	Rig	Tonnage	Year Built	Where Built	Builder
EASTERN STATE	Ship	813	1851	Frankfort	Dunham
CAROLINE E. KELLY	Bark	237	1851	Frankfort	Seabury
MARIEL	Schooner	84	1851	Frankfort	
OCEAN SPRAY	Ship	1,089	1852	Frankfort	George Dunham
FLYING ARROW	Ship	1,092	1852	Frankfort	Isaac Dunham
NONPAREIL	Ship	1,431	1853	Frankfort	Dunham & Co.
SPITFIRE	Ship	1,520	1853	Frankfort	James Arey & Co.
FANNIE	Bark	155	1853	Frankfort	Williams
	(recorded elsewhere as a brig)				
L. J. KNIGHT	Schooner	203	1853	Marsh	
ISABELLA JEWETT	Schooner	173	1853	Frankfort	
GIBRALTAR	Ship	721	1854	Frankfort	Williams & Arey
ANSDELL (F. S. MEANS)	Bark	328	1854	Marsh	
CORNELIA SAEVEDRA (formerly brig PLUMAS)	Bark	191	1854	Marsh	
ADA S. WISWELL	Schooner	198	1854	Marsh	
SPEEDWELL	Bark	691	1854	Frankfort	Dunhams
	(recorded elsewhere as a ship)				
ADDISON GILBERT	Ship	861	1855	Frankfort	Dunhams
LATH RICH	Schooner	190	1855	Frankfort	Dunhams
FRANCE	Ship	363	1856	Frankfort	Dunham
	(recorded elsewhere as of 633 tons)				
AREY (CAROLINE)	Ship	1,123	1856	Frankfort	Williams & Arey
ROBIN	Bark	309	1857	Frankfort	Treat & Co.
	(recorded elsewhere as a brig)				
M. A. HERRARA	Bark	385	1858	Frankfort	Treat & Co.
	(recorded elsewhere as a brig of 275 tons)				
SPARKLING SEA	Brig	278	1858	Marsh	
	(recorded elsewhere as of 434 tons)				
CARRIE M. RICH	Schooner	132	1858	Frankfort	L. Rich (Dunham)
DANIEL WILLIAMS	Schooner	132	1858	Frankfort	D. Williams (& Arey)
ANNA (CZARINA)	Bark	601	1859	Frankfort	Treat & Co.
ALICE	Schooner	99	1859	Frankfort	Treat & Co.
ALBERT TREAT	Schooner	149	1859	Marsh	
BENJAMIN WILLIS	Schooner	91	1859	Frankfort	Williams & Arey
ANNIE BELL	Schooner	213	1860	Marsh	
LIGHT BOAT	Schooner	121	1861	Marsh	
RESTLESS (E. P. TREAT)	Brig	259	1862		
AUGUSTA (MARY A. RICH)	Bark	422	1863	Frankfort	Treat & Co.
	(recorded elsewhere as a barkentine)				
BALTIC	Schooner	105	1863	Frankfort	Treat & Co.
FLOR DEL MAR (KATE MERRILL; also KATE)	Bark	625	1863	Marsh	
HESPERUS	Schooner	88	1864	Frankfort	
LIBERTAD	Ship	526	1864	Marsh	
	(recorded elsewhere as a bark)				
T. K. WELDON	Bark	405	1865	Marsh	Doyle & White
GEORGE TREAT	Bark	639	1866	Frankfort	Treat & Co.
RIPPLING WAVE	Schooner	180	1866	Marsh	
LUCY M. COLLINS	Schooner	167	1867	Frankfort	Dunham & Eveleth
CHARLES E. MOODY	Schooner	126	1867	Marsh	
GIPSEY	Sloop	33	1868	Winterport	J. & C. H. Treat
FOREST BELL (or BELLE)	Schooner	84	1869	Frankfort	
SAVANNAH	Schooner	67	1870	Marsh	
ANN ELIZA	Schooner	97	1870	Marsh	F. Treat & Co.
ROBERT BYRON	Schooner	96	1870	Marsh	
MEXICAN	Schooner	92	1872	Marsh	
SADIE COREY	Schooner	156	1880	Winterport	

The following is a recapitulation of the number of each rig and the tonnage of the vessels as before mentioned, including one bark and six schooners built prior to 1850.

	Number of Vessels						Tonnage of Vessels					
Period	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schooners	Sloops	Total
Prior to 1850	—	1	—	6	—	7	—	130	—	564	—	694
1851-1855	7	5	—	5	—	17	7,527	1,602	—	848	—	9,977
1856-1860	2	3	1	6	—	12	1,486	1,295	278	816	—	3,875
1861-1865	1	3	1	3	—	8	526	1,452	259	314	—	2,551
1866-1870	—	1	—	7	1	9	—	639	—	817	33	1,489
After 1870	—	—	—	2	—	2	—	—	—	248	—	248
Total	10	13	2	29	1	55	9,539	5,118	537	3,607	33	18,834

Average tonnage of ships, 953 tons; of barks, 394 tons; of brigs, 268½ tons; and of schooners, 124 tons — an average for the fifty-five vessels of all rigs of 342 tons.

The following are the names of the forty known vessels omitted from the before-stated list because of lack of descriptive data:

ADAM TREAT	CONOVA	JOAN	NANCY TREAT
ALBUS	DANIEL SHARP	JOHN DWYER	REYNARD
ALPINE	EDDIE P. TREAT	JOHN HENRY	ROBERT TREAT
ANNIE M. RICH	ELLEN	LUCINDA MARIA	SAMUEL LARRABEE
ANN L. TYLER	ELLEN MARIA	L. W. RICH	SARAH PARKER
ARABELLA	EVELYN TREAT	MARIA HOPKINS	T. O. CUNNINGHAM
ARGUS	FRANK TREAT	MARION A. GORDS	WARREN
ARKANSAS	HARRIET CHURCHILL	MARY B. RICH	WEBSTER
BARBADOES	HATTIE HILLIARD	MARY E. LONG	WILD PIGEON
BLOOMER	JAMES M. CHURCHILL	NANCY & HANNAH	WILLIAM

It is estimated that four of these forty vessels were ships averaging 500 tons, five were barks of 300 tons, thirteen were brigs of 210 tons, and eighteen were schooners averaging 130 tons. With this assumption, the total tonnage of ninety-five identified vessels built at Frankfort and the Marsh is 27,404 tons—an average of 288 tons per vessel. The most important identified builders of these vessels were: the Dunhams (George, Isaac, Dunham & Company, and Dunham & Eveleth); the Treats (Treat & Company, J. & C. Treat in 1868, and F. Treat & Company in 1870); Williams & Arey (including Williams and James Arey & Company); Seabury; and Doyle & White. It would seem that a number of these "unidentified" vessels are the same as those herein recorded as built at Frankfort. A search of the American Lloyd's Registry (1860) shows the ship *Albus* of 687 tons (149 ft. length, 30 ft. 10 in. beam, 23 ft. depth), built at Frankfort, Maine, in 1849; the bark *John Henry* of 435 tons (125 ft. length, 26 ft. beam, 18 ft. depth), built at Frankfort in 1852; the brig *Arabella* of 291 tons (117 ft. length, 29 ft. beam, 11 ft. 6 in. depth), built at Frankfort in 1854; and the schooner *Hattie Hilliard* of 114 tons, built at Frankfort in 1855.

Joshua Treat was one of the first white settlers on the Penobscot, and his name appears in the list of petitioners for the incorporation of the township dated "May ye 16, 1789." Lieut. Joshua Treat took part in the expedition of 1759 "to open up the whole of the River Valley" and clean up "a den of savages and a lurking place for some renegade French." Joshua Treat, Jr., built a house in Frankfort in 1774. Treat & Company was in business for several decades, and the firm of Joshua and Charles Treat continued the business around mid-century and the

Civil War period. James Treat was active in the building and operation of ships, and other Treats mentioned in the records are Ezra and Upton, who were shipbuilders and shipowners.

Isaac and George Dunham were brothers who ran "two shipyards at the foot of Dean Street, one above and one below the wharf." Among the vessels built by them, it is said, were "the *Addison Gilbert, Daniel Sharp, Mary E. Long, Arabella, France, Lucy M. Collins, Eastern State, Speedwell, Reynard,* and *Nonpareil.*" Lathly Rich also had constructed at the Dunham yard the so-called "Rich Fleet" named for himself and the members of his family: *Annie M., Carrie M., Mary A., Mary B., L. W.,* and *Lath Rich.* He finally purchased the property of the Dunhams, who, it would seem, over-extended themselves in building sharp-modeled and heavily canvased ships during the clipper ship boom, which ended too quickly for them. George Dunham worked for many years as a foreman shipwright at Yarmouth on Casco Bay. He married a daughter of David Pratt, a pioneer master builder in that locality, built several vessels in partnership with his brother-in-law, Albion Seabury, and others, and moved to Frankfort in 1849, where, it was said in Yarmouth, he was "to build ships by contract." Possibly, the Seabury who is reported to have built some vessels at Frankfort was one of the Yarmouth Seaburys, who were a very prominent shipbuilding family.

The bark *James M. Churchill,* launched by Treat & Company in 1855, was built for the South American trade. During the Civil War, she was put under the British flag. In the eighties, she was operating under the name *Harlingen* and was under the flag of Holland. She was reported lost in 1883, when twenty-eight years old. A vessel named *Harriet Churchill* is recorded as built in 1856, also by Treat & Company, but nothing is known of her size or rig. She was wrecked "in the outer harbor at Cardenas on her maiden voyage." At the time, the brig *Ellen Maria,* another Treat-built vessel, was in that port, so it was decided to salvage the *"Churchill"* and put all spars and top hamper on board the *Ellen Maria* to be carried back to Frankfort, together with the crew of the wrecked vessel. On the homeward run, the *Ellen Maria* was driven ashore on Cape Cod, and only one man—the mate, who was washed ashore on a spar—was saved of the two crews aboard the brig.

The *Robin,* built by Treat & Company in 1857, was put in the Cuban trade and is said to have been a most successful vessel. During the Civil War, she was put under the English flag like many other Maine vessels and, in the seventies and eighties, was owned abroad and operated from a Baltic port.

The *Czarina,* built by Treat & Company in 1859, had a dramatic and unfortunate maiden voyage. While the ship was returning to the United States from St. Petersburg via Shields, England (where she signed up a new first mate), trouble developed on board, and one morning the officers and steward were found dead and the first mate's body locked in his room. The mate had killed the captain and officers and then taken his own life. The cook proved to be enough of a navigator to sail the vessel toward the American coast. She was picked up about a hundred miles off Sandy Hook, and an officer, who was put aboard, brought her into New York Harbor. The *Czarina* then went in the Argentine trade, was bought by a Buenos Aires firm, and in later years was known as the *Anna.* Following the launch of the *Czarina,* Treat & Company constructed a vessel that was christened *Fischer* and was named after a member of the West India firm for which she was built. Upon the outbreak of the Civil War, the owners refused to take the vessel, and she was left on the builders' hands. She was renamed *Alice,* put under the British flag, and sent to the St. Lawrence as a mackerel fisher.

The last vessel built by the Treats was the *Samuel Larrabee.* Capt. William Thompson took her to Savannah, there loaded a cargo of cotton and sailed for Bremen, and was never heard of again.

Frankfort Launches Five Clipper Ships, 1852-1856

Frankfort built five clipper ships in the clipper ship decade of 1850-1859 inclusive and in tonnage constructed of this type of fast merchant sailer was exceeded by only four Maine towns — Rockland, Damariscotta, Bath, and Richmond. Of the five clipper ships built, the Dunhams launched three and Arey and his associates (who built just above the Dunhams), two. The following tables give a list of the clipper ships built at Frankfort, with a record of their westbound around-the-Horn passages to San Francisco during the years 1853-1860:

Name of Ship	Year Built	Tonnage	Registered Dimensions in Feet and Inches: Length	Beam	Depth	Builder	Owner
OCEAN SPRAY	1852	1,089	174	37	23	George Dunham	Veasie & Co., Bangor, and Ralph C. Johnson
FLYING ARROW (WINGS OF THE WIND)	1852	1,092	170- 8	37-10	23- 4	Isaac Dunham	Manning, Stanwood & Co. and Thomas Gray, Boston
NONPAREIL	1853	1,431	220	41- 6	22- 5	Dunham & Co.	Thomas Richardson & Co., New York
Total for three Dunham ships, 3,612 tons — an average of 1,204 tons.							
SPITFIRE	1853	1,520	206- 2	39	20	James Arey & Co.	Thomas Gray and Manning & Stanwood, Boston
AREY (CAROLINE)	1856	1,123	179- 7	36-11	23	Williams & Arey	Wakeman, Dimon & Co., New York
Total for two Arey ships, 2,643 tons — an average of 1,321½ tons.							
Total for five Frankfort ships, 6,255 tons — an average of 1,251 tons.							

Name of Ship	Westbound Passages around Cape Horn to California, 1853-1860: Number	Length of Passages in Days: Average	Shortest	Longest
OCEAN SPRAY	1	135	135	135
FLYING ARROW (WINGS OF THE WIND)	2	139½	136	143
NONPAREIL	2	122	115	129
Total for three Dunham ships	5	131½	115	143
SPITFIRE	3	114⅔	107	119
AREY (CAROLINE)*	—	—	—	—
Total for two Arey ships	3	114⅔	107	119
Total for five Frankfort ships	8	125	107	143

*Editor's note: In this compilation, the author has not credited the AREY with the long 174-day passage (port to port) recorded in Volume III, page 1888, made by a ship AREY, with departure from New York on July 11, 1859, and arrival at San Francisco January 1, 1860. However, the ship AREY of 1,137 tons (length 185 ft., beam 38 ft., depth 24 ft.), built in 1856 by Williams & Arey, Frankfort, Maine, is listed in Lloyd's Registry of American and Foreign Shipping of 1860 as owned by Wakeman, Dimon & Company; hailing port, New York; captain, H. Wilson. She is recorded in Lloyd's Registry of 1865 as the CAROLINE of London, with same dimensions and tonnage.

The *Ocean Spray,* built by George Dunham with the construction financed by partners, was an average sailer for a clipper, but she was short-lived. In 1857, when only five years old, she had to be abandoned by her crew during a voyage from London to Madras, India.

The *Flying Arrow,* launched by Isaac Dunham in December 1852, was built for the account of James Arey & Company under the supervision of Captain Arey. She was christened the *Flying Yankee,* but when taken by Captain Arey to Boston for sale, she was promptly purchased by Manning, Stanwood & Company and Thomas Gray of that port and renamed *Flying Arrow.* This ship was a medium and not an extreme clipper, and her career — at least while under the American flag — has been described as "one continuous series of disasters." She sailed from Boston for San Francisco on her maiden voyage January 20, 1853, under the command of Capt. Charles T. Treadwell. When four days out, she was struck by a squall and dismasted; after drifting for twenty-two days and making water badly, notwithstanding steady pumping, she was picked up by the S.S. *Great Western* and towed into St. Thomas. All the cargo was discharged and new masts built. Yellow fever broke out among the passengers and crew, and the fatalities were very large. As a new crew could not be obtained, the ship was forced to return; she reached New York August 4 — 196 days after leaving Boston. Captain Treadwell relinquished command, and Captain Clark succeeded him. The ship resumed her voyage August 10 and reached San Francisco December 31 after a passage of 143 days, during which the main topgallant mast was carried away and the topmast sprung off the Horn. The *Flying Arrow* had certainly done no "flying" on her maiden voyage, for it took her 345 days to reach her destination from the time of her sailing from Boston. On her second voyage under command of Captain Treadwell, the ship reached San Francisco on April 13, 1855, after a passage reported as "136 days from New York." When a week out, she had lost all three topgallant masts, broken her steering gear, and suffered hull damage, while the cargo had shifted. It required a week's time to straighten up the ship, make repairs, and get the water out of her. On November 9, 1855, the *Flying Arrow* sailed from Melbourne in ballast, and the next day she was totally dismasted. The ship was towed back to port by the S.S. *Marion,* and once more the owners had to pay salvage, this time $7,000 (on her maiden voyage, it was $10,000). By this time, the owners were disgusted with the ship and her persistent bad luck and shortcomings. She was sold January 16, 1856, when three years old, for only $15,000, and her new owners, G. Duncan & Company, London, re-rigged and refitted her and gave her a third name — *Wings of the Wind.*

The *Nonpareil* was built by George and Isaac Dunham and associates (as Dunham & Company) with George Dunham as master builder. She was launched in November 1853 and was built "on spec," as were a goodly percentage of the vessels constructed in Maine in those days. Her owner-builders sent the ship to Boston to be sold by the firm of Summers & Swift, which advertised that she "was built of the best materials; was well sparred and furnished; designed and fitted out as a first-class packet and a real clipper." The *Nonpareil* was the sharpest modeled and the fastest of the three Dunham-built clippers, but she arrived in Boston for sale in January 1854 about the time that the boom was waning and the market for clippers was weakening. She lay idle at Grand Junction Wharf, East Boston, for several weeks. Finally, she was put at a berth to load for New Orleans, but a few days before sailing she was sold for $76,000 to Thomas Richardson & Company, New York. The *Nonpareil* sailed from Boston on March 6, 1854, and it took her a month to reach New Orleans; however, it is said that this slow time was two days faster than that of the clipper *Panther,* which arrived at New Orleans the same day, April 6, and had left Boston March 4. From New Orleans, the *Nonpareil* sailed for Liverpool and operated as a transatlantic packet for a time between Philadelphia and Liverpool. She is credited with a 16-day passage eastbound and is reported to have left Philadelphia March 27, 1855, and arrived at Liverpool April 12, "making the run from the Delaware Capes to the Mersey in 13 days." After being chartered by the French Government and making a voyage to the Crimea, she sailed from Liverpool December 10, 1855, for Philadelphia, which she did not reach until February 9, 1856, after "a miserable passage of 61 days." The ship continued to operate as a packet in the Philadelphia-Liverpool service until the fall of 1858; her best eastward passages were 20 and 22 days, and the best westbound run was 32 days. The *Nonpareil's* westbound passages to San Francisco were from

New York, and she reached the city of the Golden Gate on April 7, 1859, after a run of 115 days and on August 24, 1860, after a passage of 129 days. On the first passage, she was 23 days to the equator, 56 days to Cape Horn, and 96 days to the Pacific equator; on her second passage she made these points in 29, 63, and 97 days, respectively. Sailing from Shanghai October 2, 1859, she reached New York February 7, 1860, after a passage of 128 days and a run from Anjer of 87 days. The ship sailed from San Francisco October 7, 1860, and reached Falmouth, England, in 106 days; she then crossed the Atlantic in ballast in 40 days and made a third westbound passage (New York to San Francisco) in 124 days, passing through the Golden Gate October 22, 1861. Her eastward passage to Falmouth required 138 days, following which she crossed the Atlantic in 32 days, reaching New York July 17, 1862.

The *Nonpareil* saw some service as an army transport during the Civil War and then went under the British flag without change of either name or real ownership. The ship is credited with some fast runs between 1863 and 1870, and she also made some long passages. She made one eastbound around-the-Horn run to Falmouth in 100 days, arriving February 16, 1866, and it is claimed — but not confirmed — that she "ran from Shanghai to Liverpool in 84 days." (It is more probable that the time given was that from Anjer to Liverpool.) The *Nonpareil* sailed from Bombay June 27, 1871, and foundered at sea on October 11, when about eighteen years old. Only three persons out of twenty-five aboard were saved. Following the death of Thomas Richardson in 1865, the *Nonpareil* became the property of the Globe Navigation Company, of Liverpool, but she was sold in 1869 to W. S. Lishman, of Newcastle, England.

The *Spitfire,* launched from the yard of James Arey & Company, Frankfort, Maine, on September 3, 1853, was an extreme clipper ship and had been built to the order of Thomas Gray and Manning & Stanwood, of Boston, Mass. On her maiden voyage, under the command of Capt. John W. Arey, she sailed from Boston October 24, 1853, and arrived at San Francisco February 20, 1854, 119 days out from Boston, but her actual sailing days at sea on the passage were reported as "100 days from Boston." Two weeks after leaving that port, in Lat. 27° N., the *Spitfire* sprung her bowsprit and two topmasts and suffered other damage to spars and rigging. The ship was required to put into Rio de Janeiro for repairs, and she was at Rio from November 27 to December 16. After leaving Rio, the *Spitfire* did some fast sailing. She made Staten Island in 16 days, was 48 days from Rio to the Pacific equator, and during the next 17 days covered 4,500 miles — an average of 265 miles per day with one day's run of 340 miles. She reached the Golden Gate 65 days out from Rio, which was fast sailing. On this passage, the *Spitfire* passed the clipper *Cyclone* in the South Pacific soon after clearing the Horn and beat her four days on the run up to San Francisco. On the return leg of the maiden voyage, the *Spitfire* was 51 days to Callao and from there, guano laden, 41 days to the Atlantic equator and 64 days to Hampton Roads, where she arrived October 14, 1854. The vessel made two more westbound passages around the Horn in the clipper ship decade of 1850-1860 in 118 days and 107 days (each from Boston to San Francisco), and she later made a fourth westbound run to California — under a reduced spar and sail plan — arriving at San Francisco June 3, 1862, after a passage of 127 days from New York. Her time between points on each of these three complete runs to San Francisco from a North Atlantic coast port is set forth comparatively herewith:

Between Points	Voyage No. 1	Voyage No. 2	Voyage No. 3	Average
	Days	*Days*	*Days*	*Days*
From sailing port to equator (Atlantic)	32	24	24	26½
From equator (Atlantic) to passage Straits of Le Maire	25	28	28	27
From Straits of Le Maire to equator (Pacific)	40	33	47	40
From equator (Pacific) to San Francisco	21	22	28	23½
From North Atlantic port to San Francisco	118	107	127	117

On the 118-day passage, the *Spitfire* met the clipper ship *Golden City* in the Straits of Le Maire, and the *Spitfire* arrived at San Francisco thirteen days ahead of the *Golden City*. The vessel made some tea runs from China to London in 1855-1858 in good time and in 1860, loaded with 1,465 tons of wheat and flour, sailed from San Francisco eastward around the Horn to Queenstown in 109 days. In 1862-1863, the *Spitfire* made another eastbound run of 44 days from San Francisco to Callao and 89 days from Callao to Queenstown. It is evident that she was a slower sailer following the repairs and alterations made on her in 1860 — inspired by necessary economy of operation. The *Spitfire* was sold in London in April 1863 because of conditions brought about by the Civil War, and she operated for years with W. N. De Matus as registered owner; hailing port, London.

The *Arey* was built in 1856 by Williams & Arey for the firm's own account and was sold to Wakeman, Dimon & Company, New York. She is listed in Lloyd's Registry of 1860 as the *Arey* of 1,137 tons, owned by Wakeman, Dimon & Company; hailing port, New York. She was sold to the British and renamed *Caroline*. She is recorded in Lloyd's Registry of 1865 as the *Caroline* of 1,137 tons; hailing port, London; owner, J. Ewing; captain, Attridge. She is reported as operating in the middle of the seventies as the ship *Nautilus* of London.

XL.

BANGOR, MAINE, ON THE PENOBSCOT

Shipbuilding in the Bangor-Hampden-Brewer-Orrington Area, 1791-1919

BANGOR IS AN old sawmill town of importance and is located on the west bank of the Penobscot River at the head of navigation and where the Kenduskeag runs into the Penobscot. It is fifty-four miles in a direct air line north of Green Island (which, off Vinalhaven, faces the Atlantic to the south) and is fifty-one miles northeast of Rockland, twenty-nine miles northeast of Belfast, and fifteen miles north of Bucksport, where Penobscot Bay can be said to commence and the Penobscot River end. Bangor and its companion town of Brewer, on the east bank of the Penobscot and directly across the river from Bangor, have been shipbuilding towns from the days of the earliest settlers, but, unfortunately, the records of building activity are meager.

In 1604, Samuel de Champlain journeyed up the Penobscot to the site of Bangor in search of the legendary city of Norumbega, but found there only an important rendezvous of the Indians. The first permanent settler, Jacob Buswell, arrived from Salisbury, Mass., in 1769, and other colonists quickly followed. The place became known as Kenduskeag or Conduskeag, the Indian and present name for the little river that empties into the Penobscot at this point, and was incorporated into a town in 1791. The name Bangor was decided upon in Boston by the petitioner, Seth Noble, in place of the Indian name of Kenduskeag and the suggested and sometimes used name of Sunbury. Tradition tells us that the first boat for river use was built here in 1772, at which time the first sawmill was put in operation, but evidently the first sizable vessel was not launched until 1791. Bangor was occupied by the British in 1814; shipbuilding, which had been spasmodic from 1791 to 1813, was suspended, but was resumed with energy following the close of the war. The Penobscot was well bridged and Bangor and Brewer thus connected in 1832, and Bangor was incorporated as a city in 1834.

The following tables show the number and tonnage of vessels of each type and rig known to have been built at Bangor, at Brewer across the river, and at nearby Orrington during the years 1791-1919 inclusive.

Period Inclusive	Number of Vessels							
	Ships	Barks	Barkentines	Brigs	Schooners	Sloops	Steamers	Total
1791-1799	—	—	—	4	1	2	—	7
1800-1809	—	—	—	1	6	—	—	7
1810-1819	1	—	—	2	21	2	—	26
1820-1829	2	—	—	13	18	—	—	33
1830-1839	—	1	—	2	16	2	—	21
1840-1849	—	3	—	12	28	1	—	44

(Continued on next page)

Period Inclusive	Number of Vessels							
	Ships	Barks	Barkentines	Brigs	Schooners	Sloops	Steamers	Total
1850-1859	5	9	—	42	34	3	—	93
1860-1869	12	13	—	35	39	—	2	101
1870-1879	3	—	3	3	20	—	—	29
1880-1889	—	—	—	1	16	—	1	18
1890-1899	—	—	1	—	2	—	—	3
1900-1919	—	—	—	—	6	—	—	6
Total 1791-1919	23	26	4	115	207	10	3	388

Period Inclusive	Tonnage of Vessels							
	Ships	Barks	Barkentines	Brigs	Schooners	Sloops	Steamers	Total
1791-1799	—	—	—	556	118	136	—	810
1800-1809	—	—	—	162	637	—	—	799
1810-1819	264	—	—	366	1,667	192	—	2,489
1820-1829	728	—	—	2,370	1,954	—	—	5,052
1830-1839	—	261	—	307	1,908	88	—	2,564
1840-1849	—	802	—	2,030	3,158	50	—	6,040
1850-1859	4,703	3,112	—	9,525	4,303	152	—	21,795
1860-1869	11,146	7,467	—	9,592	6,804	—	757	35,766
1870-1879	4,116	—	1,528	1,237	3,640	—	—	10,521
1880-1889	—	—	—	371	4,313	—	289	4,973
1890-1899	—	—	888	—	762	—	—	1,650
1900-1919	—	—	—	—	6,620	—	—	6,620
Total 1791-1919	20,957	11,642	2,416	26,516	35,884	618	1,046	99,079

During the last decade of the eighteenth century, the largest vessels built at Bangor were the brigs *Industry* of 136 tons, built in 1793, *Sebastas Neptune* of 143 tons and *Dolly* of 128 tons, launched in 1796, and *Friendship* of 149 tons, put in the water a year later. These vessels were about 75 ft. long, 22½ ft. beam, and 10½ ft. deep. The schooner *General Greene* of 118 tons (71 ft. long, 22 ft. beam, and 9 ft. deep) was built in 1799 for Robert Treat (owner of the brig *Industry* and of the sloops *Polly* and *Sally),* and of the sloops known to have been built in the nineties, the *Polly* of 79 tons, launched in 1791, and the *Sally* of 57 tons, constructed in 1794, were the largest. In 1801 the brig *Racket* of 162 tons was built with a registered length of 81 ft., a beam of 24 ft., and a depth of hold of 10 ft. The sloop *Polly,* which is generally considered as the first real vessel built in the Bangor region, was constructed for "Robert Treat, merchant, of Bangor," with "Bryant Bradley, mariner, of Orrington," by "William Boyd, master builder." It is said that she was built above the Falls near the present location of Mount Hope Cemetery. "Deacon" William Boyd went to Bangor from Worcester in 1789 and, we are told, "built the first vessels on the upper Penobscot River." In the REMINISCENCES OF DANIEL WEBSTER, OF ORONO, we read: "After Deacon Boyd had begun to build his vessels, others followed, and up to the time the toll-bridge was built there was a schooner or two on the stocks above Treat's Falls every spring. Schooners regularly sailed up above the Falls to load bark, lumber, and potatoes. This was the earliest settlement in Bangor."

The schooner *Triton* of 122 tons, built in 1800, is said to have been "the first vessel built in Brewer," and we are told that "previous to 1800 all vessels in this region had been built on the Bangor side of the river." The *Triton* was 78 ft. long, 23 ft. beam, and 8 ft. deep, and the owners of record were William & Charles Rice, of Brewer. In 1801 the 120-ton schooner *Betsey* (length 71 ft., beam 22 ft., depth 9 ft.) was built for Robert Treat, of Bangor. In the REMINISCENCES OF DANIEL WEBSTER, referring to shipbuilding in 1803, we read: "I remember that Captain Samuel Lowder built three vessels above the Falls about this time. One was the schooner *Eddington* [of 80 tons; length 68 ft., beam 21 ft., depth 8 ft.], one was built just above the Red Bridge, and the other just this side of Fort Hill at the upper end of Mount

Hope Cemetery." Other vessels built at Bangor, Brewer, and Orrington prior to the War of 1812 with Britain were:

Year Built	Rig	Name	Built at	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1802	Schooner	MADOCKAWANDO	Brewer	115	76	21	8
1804	Schooner	JOANNA	Brewer	89	70	22	7
1805	Schooner	SALLY (1ST)	Brewer	111	73	23	8
1810	Schooner	BREVIS	Orrington	58	55	17	7
1810	Sloop	BETSEY	Brewer	86	65	21	7
1811	Ship	"Mr. Leavitt's ship"*	Bangor	264	—	—	—
1811	Brig	ANGELINE	Brewer	163	71	22	12
1811	Schooner	NEPTUNE'S BARGE	Bangor	110	75	22	8
1811	Schooner	HANCOCK	Bangor	83	66	21	7
1813	Schooner	HOPE	Bangor	38	40	15	6
1813	Schooner (pink)	CATO	Orrington	25	43	12	5

*In Godfrey's ANNALS OF BANGOR, we read: "Mr. Leavitt's ship, built by the Websters, was launched October 12, 1811. She was the first ship ever built in Bangor."

Of the before-mentioned vessels, the schooners *Neptune's Barge* and *Hancock* were later reported "burned by the British at the capture of Bangor in 1814." In Williamson's HISTORY OF MAINE, we read that after the capture of Castine in 1814, the British went up the Penobscot to Bangor, with a naval and military force, and occupied the town. "There were seventeen vessels in the harbor at the time. One vessel was being built in Bangor and three in Brewer. On threat of burning these four vessels on the stocks, the town of Bangor was bonded to the amount of $30,000 to deliver them at Castine when launched. The next day, in spite of this agreement, they were burned, together with ten other vessels in the stream; the remaining seven vessels were taken down the river. The names of the burned vessels which have been preserved are: brig *Caravan;* schooners *Neptune's Barge, Thinks-I-to-Myself, Eunice & Polly, Gladiator,* and *Three Brothers;* sloop *Ranger.* Those carried away were the *Bangor Packet;* the schooner *Oliver Spear;* the schooner *Hancock,* which was retaken; the *Lucy,* which was lost; and the beautiful boat *Cato,* which could not be recovered." However, the schooner *Thinks-I-to-Myself* must have been saved, as she was reported later as operating as a privateer under British colors. A new *Bangor Packet* of 129 tons (length 77 ft., beam 23 ft., depth 8 ft.) was built in 1815, but she was lost in 1821. With the war over, the following additional vessels were built during the last four years of the second decade of the nineteenth century:

Year Built	Rig	Name	Built at	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1816	Schooner	WILLIAM GRAY	Bangor	157	77	24	10
1816	Schooner	DECATUR	Orrington	65	63	18	7
1816	Schooner	AMERICA	Bangor	—	—	—	—
1816	Sloop	HERALD	Bangor	106	74	23	7
1817	Schooner	ELLEN	Bangor	98	67	22	8
1817	Schooner	HYDER ALI	Bangor	84	64	20	8
1817	Schooner (pink)	TYRO	Orrington	64	62	17	7
1817	Schooner (pink)	INDUSTRY	Orrington	61	64	17	7
1817	Schooner (pink)	JOSEPH	Bangor	57	56	16	7
1817	Schooner (pink)	FLORA	Bangor	50	55	15	6
1817	Schooner (pink)	GLEANER	Bangor	45	48	15	6
1817	Schooner (pink)	SALLY (2ND)	Bangor	42	46	15	6
1818	Schooner	AURORA	Brewer	115	76	24	8
1819	Brig	LEVANT	Brewer	203	82	23	12
1819	Schooner	LITTLE WILLIAM	Bangor	120	72	22	9
1819	Schooner	LITTLE CHERUB	Bangor	83	61	19	9
1819	Schooner	SPARROW	Bangor	83	60	19	9

Only three square-rigged three-masted ships were constructed in the Bangor area prior to the fifties and the boom connected with the clipper ship decade. These ships, with all the barks and brigs built prior to the mid-nineteenth century that registered over 200 tons, are set forth herewith:

Year Built	Rig	Name	Built at	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1811	Ship	"Mr. Leavitt's ship"	Bangor	264	—	—	—
1826	Ship	SIROC	Bangor	371	110	27	14
1826	Ship	NEW ENGLAND	Brewer	357	115	26	13
1838	Bark	ROTHSCHILD	Brewer	261	101	24	12
1843	Bark	WARWICK	—	327	110	26	12½
1849	Bark	GOLD HUNTER	Bangor	281	105	25	12
1819	Brig	LEVANT	Brewer	203	83	23	12
1821	Brig	SERENA	Brewer	207	84	24	12
1824	Brig	GOLIATH	Brewer	281	96	26	13
1824	Brig	BANGOR	Bangor	255	87	24	14

Three additional brigs approaching 200 tons were built in 1822; these were the *Juniper* of 197 tons (81 ft. long, 24 ft. beam, 12 ft. deep), the *Commerce* of 187 tons (79 ft. long, 24 ft. beam, 12 ft. deep), and the *Jew* of 187 tons (79 ft. long, 23 ft. beam, 12 ft. deep). At least two of these three vessels were built at Brewer. The brig *General Bolivar* of 196 tons was built at Brewer in 1825; this vessel was 86 ft. long, 23 ft. beam, and 15 ft. deep, and she was owned in Boston, Mass. In 1846 the brig *Sarah* of 197 tons (95 ft. long, 25 ft. beam, 10 ft. deep) was built for John W. McGilvery, of Searsport, and in 1847 the brig *Tivola* of 194 tons (length 95 ft., beam 24 ft., depth 10 ft.) was built by Timothy Crosby as master builder and sold to Quebec owners. In the same year, the brigs *A. Hayford* of 187 tons and *Lucy Atwood* of 181 tons were built, the latter at Orrington, and in the following year (1848) the brig *Niagara* of 199 tons was constructed.

The largest schooners (those of over 125 tons) built in the Bangor-Brewer-Orrington area during the three decades preceding mid-century were as follows:

Year Built	Name of Schooner	Built at	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1820	GENERAL McCOMB	Bangor	163	79	24	10
1823	COLUMBIA	Bangor	125	78	23	8
1824	PIONEER	Brewer	126	78	23	8
1825	ELIZABETH	Brewer	128	72	22	10
1826	MORNING STAR	Bangor	144	85	24	8
1826	KATAHDIN	Brewer	140	82	24	8
1826	CAROLINE	Bangor	130	79	24	8
1826	PRUDENCE	Orrington	128	80	23	8
1832	NEW ENGLAND	Bangor	134	83	23	8
1833	OREGON	Brewer	132	84	23	8
1833	UNITED STATES	Bangor	152	88	24	8
1833	CORINTHIAN	Bangor	128	—	—	—
1837	ORIANA	Bangor	137	—	—	—
1839	ROCHAMBEAU	Brewer	163	87	24	9
1839	ALPINE	Bangor	160	88	23	9
1840	ELIZA LELAND	Bangor	153	85	24	9
1841	MARS HILL	Bangor	139	84	24	8
1845	ADVANCE	Brewer	162	83	24	9
1845	H. M. JENKINS	Brewer	143	87	24	8
1845	ADELINE HAMLIN	Bangor	135	86	24	7
1846	OTTOMAN	Bangor	141	83	24	7
1848	JAMES BLISS	Bangor	154	92	25	8
1848	MEDFORD	Brewer	125	79	24	7
1849	KITE	—	143	—	—	—

It is known that for the next twenty years after 1826 the available records of vessels built in the Bangor area, which includes Brewer and Orrington, "show only a portion of the vessels that must have been built in these towns." This comment applies with equal force to all rigs.

The sloops built in the region (not already mentioned) following the sloop *Herald* (built in 1816) up to the end of sail were:

Year Built	Name of Sloop	Built at	Tonnage	Dimensions in Feet		
				Length	Beam	Depth
1832	CAESAR*	Brewer	53	58	17	6
1834	GLADIATOR	Brewer	35	39	13	6
1849	WYANDOT	Orrington	50	57	16	5
1850	BELL ROCK	Brewer	49	60	15	5
1853	DOLPHIN	Brewer	52	62	18	5
1854	HARLEQUIN	Brewer	51	64	14	5

*The CAESAR was lost when seven years old "in the great gale of 1839."

The construction of three-masted square-rigged sailing ships was resumed at Bangor and Brewer during the national shipbuilding boom of the early fifties. The following vessels of this class were built during the period from 1852 to the end of sail:

Year	Name of Ship	Tonnage	Dimensions in Feet			Year	Name of Ship	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1852	JAMES LITTLEFIELD	—	—	—	—	1864	DAVID BROWN	905	162	35	24
1853	PREMIER (I)	1,116	180	38	19	1865	S. D. THURSTON	1,219	185	37	24
1854	BOSPHORUS	1,380	185	38	22	1865	JENNIE HIGHT	1,116	178	36	22½
1854	DELFT HAVEN	975	169	34	21	1865	HATTIE E. TAPLEY	946	163	33	22
1857	SARAH MARCH	532	131	29	19	1865	FLORENCE TREAT	790	152	33	20
1862	NORA	925	—	—	—	1866	PHINEAS PENDLETON*	1,332	185	37	23½
1863	NEVADA	866	162	32	21	1866	HOSEA RICH	714	147	31	20
1863	F. CARVER	743	152	32	21	1874	HARRIET H. McGILVERY	1,328	190	37	23½
1863	EVENING STAR	650	140	30	20	1875	LUCY A. NICKELS (II)	1,395	199	38	24
1864	DUMBARTON	940	170	35	23	1877	LLEWELLYN J. MORSE**	1,393	198	37	24

*Also stated as 1,253 tons. **Also stated as 1,325 tons.

The ship *James Littlefield* was built in the Cooper yard, Brewer, and was launched fully rigged. With a large crowd on board, she capsized, and one person was drowned. But little is known of this ship. She was captured and scuttled by the Confederate raider *Tallahassee* off Nova Scotia in 1864, when carrying coal from Cardiff to New York. The *Premier* was sold in Norway in 1874. The *Delft Haven* was built in the Cooper yard, Brewer. The *Sarah March* was sold to the British, and the *Nevada,* which was built in the Oakes yard, Brewer, was sold to the Norwegians and renamed *St. Olaf.* The *F. Carver,* built in the Dunning yard, Brewer, was sold in England and renamed *Adelaide Baker.* The *Evening Star* was built in Brewer and in 1885, when twenty-three years old, was re-rigged as a bark. The *Dumbarton,* built in Brewer for the Pendletons, of Searsport, was later sold in Belgium and renamed *Cornelie David.* The *David Brown,* built in the Dunning yard, Brewer, was put under the British flag and, it is said, "paid for herself on her first round voyage to Australia." The *S. D.*

Thurston was built for Thurston & Crosby, Bangor, in the Crosby yard. The *Jennie Hight* was launched at the Tewksbury yard, Brewer, and on her maiden passage from the Penobscot to New Orleans she was lost on the Florida Reefs. The *Hattie E. Tapley* and the *Florence Treat* were built in Brewer, the former at the Dunning yard and the latter by Gibbs & Phillips.

The *Phineas Pendleton* was built for the Pendletons, of Searsport, in the Dunning yard, Brewer, and she was burned at Manila in 1885, when nineteen years old. The *Hosea Rich* was built in Brewer and was later sold in Italy, re-rigged as a bark, and renamed *Ottila.* The *Harriet H. McGilvery* was built by the McGilverys, of Searsport, at their own yard in Brewer, which also built the *Lucy A. Nickels,* a vessel that saw twenty-three years' service as a ship. In 1898, she was converted into a coal barge and was lost in tow on Long Island in 1901. The *Llewellyn J. Morse,* the last of the Bangor fleet of full-rigged ships, was built in the Oakes yard, Brewer. She was sold on the Pacific Coast in 1888 and was operated as a salmon packer from 1895 to 1922. In 1925 she was sold to moving picture interests of Los Angeles, and in 1932, when fifty-five years old, she was in service as a fishing barge.

The following twenty-two barks were built in the Bangor-Brewer area during the period 1851-1869, and these were followed by four barkentines, built during 1872-1890 inclusive.

			Dimensions in Feet						Dimensions in Feet		
Year	Name	Tonnage	Length	Beam	Depth	Year	Name	Tonnage	Length	Beam	Depth
1851	PAMPHYLIA	252	—	—	—	1862	IRONSIDES	525	130	28	18
1852	NAZARENE	247	—	—	—	1862	MONITOR	500	128	28	18
1852	CORNIOLA	237	—	—	—	1863	JAMES E. BRETT	531	136	29	19
1853	SARAH PARK	699	149	32	22	1864	CHARLOTTE A. LITTLEFIELD	548	138	28	18
1853	JULIA E. AREY	162	—	—	—	1866	AFRICA	682	—	—	—
1854	MARTHA W. BABBIDGE	299	—	—	—	1866	HELENA	603	138	30	18
1855	DAMON	400	129	24	13	1866	ARGENTINE	578	138	31	18
1856	JULIA COBB	444	139	29	—	1866	ALBERT EMERSON	—	—	—	—
1859	J. M. THURSTON	372	123	28	20	1869	CARRIE WYMAN	459	126	29	17
1861	AMANDA	598	—	—	—	1872	JOSEPH BAKER*	540	139	31	14
1862	TEMPLAR	637	135	30	18	1875	MARY JENNESS*	480	134	31	16
1862	LIMERICK LASS	607	139	30	19	1876	FORMOSA*	508	138	31	17
1862	CITY OF BANGOR	599	139	30	16	1890	THOMAS J. STEWART*	888	168	36	19

*These four vessels were barkentine-rigged with three masts.

Nineteen of the before-mentioned twenty-six barks and barkentines were built in Brewer and two (the *Corniola* and *Julia E. Arey*) in Orrington. The *Nazarene* was sold to Britain and renamed *Village Belle.* The *J. M. Thurston* was also sold to the British and renamed *Florence & Anne.* The *Amanda,* built in the Crosby yard, Bangor, was captured and burned during the Civil War by the *Alabama.* The *Limerick Lass* was sold in Russia and was renamed *Angelus* and later *Ludvig Wilhelm.* The *City of Bangor* was sold to the Swedes and became the *Hindostan.* The *James E. Brett,* built in the Crosby yard, Bangor, was sold to Norway and renamed *Nat.* The *Carrie Wyman,* built at Brewer by the McGilverys, of Searsport, was sold in the East Indies. The *Thomas J. Stewart,* built in the Stetson yard, Brewer, was the last square-rigged vessel built on the upper Penobscot.

In the late 1840's, a dozen brigs of from 141 tons (*Allston* in 1846) to 199 tons (*Niagara* in 1848) were built in the Bangor-Brewer area. The brig *William F. Safford* of 164 tons, built in 1848, had a peculiar and tragic experience, as she sank when at anchor in East River, New York, because of floating ice. The report says: "Anchor watch neglected duty, all hands

being below asleep, trapped in the cabin and drowned. Captain's wife and two children lost with others." After this catastrophe, the *"Safford"* was raised and evidently resumed service. In 1851 ten brigs were constructed of from 148 to 242 tons, the largest being the *Greyhound,* which was put under the British flag during the Civil War and renamed *Cabaritta.* Another of this large fleet of 1851 Bangor-built brigs, the *Abner Taylor* of 170 tons (constructed across the river in Brewer), was in active service in 1898, when forty-seven years old, re-rigged as a schooner. Other sizable brig-rigged craft built in 1851 were the *Kate Foster* of 199 tons and the *Helen Maria* of 180 tons, each of which was laid down in Bangor proper. In 1852 two brigs were built, the *George W. Jones* of 199 tons and the *William Moore* of 170 tons (the latter in Brewer), following which, in 1853, seven brigs were launched. In that year, the era of the 300-ton upper Penobscot brig really commenced with the building of the *Executive* of 299 tons. The following list gives the thirty-six Bangor-Brewer-Orrington brigs of over 250 tons that were built, and all were constructed during the period 1853-1883 inclusive.

Year Built	Name of Brig	Tonnage	Dimensions in Feet			Year Built	Name of Brig	Tonnage	Dimensions in Feet		
			Length	Beam	Depth				Length	Beam	Depth
1853	EXECUTIVE	299	111	26	11	1864	ATLAS	424	118	28	16
1853	JOHN HATHAWAY	276	108	28	9	1864	FIDELIA	331	112	28	17
1854	MUNGO PARK	308	—	—	—	1864	KATAHDIN	257	113	29	9
1854	LUCY HAYWOOD	300	97	25	11	1865	RACHEL CONEY	261	117	28	10
1854	ITASCA	300	—	—	—	1865	EUGENIA	253	115	28	11
1854	ABBY THAXTER	288	105	25	10	1866	ALICE STARRETT	354	119	29	12
1856	RICHMOND	302	112	28	10	1866	NIMWAUKE	347	116	29	10
1856	S. T. NORCROSS	285	—	—	—	1866	CHARLOTTE	335	116	29	15
1856	MARY STEWART	283	110	28	10	1867	MAURICE	310	118	29	10
1856	OPEN SEA	274	—	—	—	1867	E. C. REDMOND	276	—	—	—
1857	ANNA WELLINGTON	296	114	27	11	1867	HENRY STEWART	270	114	28	10
1857	LIZZIE	284	117	28	10	1867	MANSON	251	105	25	12
1857	RENSHAW	275	112	27	11	1868	CLARA JENKINS	403	125	29	16
1858	AROOSTOOK	280	112	26	—	1868	D. R. STOCKWELL	360	—	—	—
1860	AMERICAN UNION	292	111	28	11	1869	CARRIE E. PICKERING	278	119	29	10
1860	URANUS	285	101	26	10	1875	HENRY SMITH	494	134	31	17
1861	MOSES DAY	343	—	—	—	1877	HAVILAH	507	134	31	17
1862	CAROLINE EDDY	314	110	28	12	1883	TELOS	371	128	30	11

At least seventeen of the before-mentioned brigs were built in Brewer and two in Orrington. Another brig of interest, built in 1866, was the *Caroline Gulliver* (tonnage unknown), launched in Brewer. This vessel "went missing" during a passage to Europe. After her sailing, nothing was ever heard from either the brig or any of the persons aboard.

The *Mungo Park,* built in 1854 for Searsport owners, was sold in England and renamed *Jessie;* while the *Lucy Haywood,* built for Bangor owners the same year, was put under the British flag during the Civil War and was later sold to the Norwegians, being renamed *Eckernfoerde.* The *Abby Thaxter,* also built in 1854, was lost in a fog on White Head in 1889, when thirty-five years old. The *Mary Stewart* (later registered as a schooner of 218 tons), built in 1856, was in active service in 1898, when forty-two years old. The *Anna Wellington* was sold in Dominica. The *American Union* was fitted with the "Forbes rig" and, it was reported, was built at the Cooper yard, Brewer, "in only 90 days." The *Uranus,* built at Brewer at about the same time, was sold in Baltimore. The *Katahdin,* built at Brewer in 1864, was in service

in 1898, when thirty-four years old. The *Rachel Coney,* built in the Oakes yard, Brewer, for Bangor owners, was lost on the coast of Cuba. The *Carrie E. Pickering,* built in the Tewksbury yard, Brewer, in 1869, was lost on Cape Henlopen in 1900, when thirty-one years old.

Schooners, which were built in good numbers in the Bangor district in the 1840's and for the three decades prior thereto, were built in quantity during the fifties and sixties. However, these vessels, being small, were built for coasting service. The first three-masted schooner to be built in the Penobscot area was the *General Banks* of 298 tons, described as "a big schooner of record size," which was launched in Brewer in 1863. No schooner larger than the *General Banks* was built in the Bangor area until 1880. The following table gives a list of the forty-five schooners of over 150 tons register constructed in Bangor, Brewer, and Orrington during the thirty-year period 1850-1879 inclusive.

Year Built	Name of Schooner	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1852	M. SEWALL	159	73	25	8
1853	MISSISSIPPI	160	—	—	—
1854	NORMAN	200	—	—	—
1854	WILLIAM ABBOTT	180	95	25	8
1855	J. HATHORN	185	—	—	—
1856	WEST WIND	181	—	—	—
1857	JOHN CLARK	183	—	—	—
1858	CAROLINE A. FARNSWORTH	170	91	26	8
1860	JAMES O'DONOHUE	194	97	27	9
1860	CELIA M. CARVER	166	90	25	8
1863	GENERAL BANKS	298	117	29	10
1863	JULY FOURTH	165	90	26	8
1864	ELLA HODSDEN	230	106	28	9
1864	MARY PATTEN	228	105	27	10
1864	MOSES PATTEN	204	100	26	9
1864	ELLEN PERKINS	172	100	25	9
1865	IZETTA	200	107	27	9
1865	MATTIE HOLMES	160	108	26	9
1866	PAUL SEAVEY	237	107	26	9
1866	MARY COLLINS	230	111	28	9
1866	NAONTA	220	120	28	9
1867	FRED SMITH	200	110	27	9
1867	NELLIE TREAT	193	106	27	9
1867	CHARLES E. HELLIER	179	101	28	8
1868	ADDIE L. CUTLER	153	—	—	—
1869	HELEN A. BOWEN	221	111	28	9
1869	JOSEPH OAKES	206	103	28	9
1869	MARY ANN McCANN	205	102	27	9
1869	EMMA GREEN	190	108	27	8
1869	CHIMO	185	107	28	8
1869	WILLIAM CONNERS	182	106	27	8
1869	PENOBSCOT	160	—	—	—
1870	LIZZIE COCHRAN	184	108	27	9
1871	CARRIE E. WOODBURY	260	127	29	10
1871	ADDIE G. BRYANT	237	124	28	10
1872	MAUDE BARBOUR	186	108	31	9
1873	EMMA H. DRUMMOND	296	124	30	10
1873	S. F. SEABURY	220	117	28	9
1873	MILLIE TRIM	181	101	28	9
1874	LANIE COBB	231	114	30	9
1874	DORA M. FRENCH	216	113	29	9
1874	MARK PENDLETON	199	109	26	8
1875	MAUD BRIGGS	250	—	—	—
1877	LESTER A. LEWIS	237	124	29	10
1878	JOHN S. CASE	193	111	29	9

At least twenty-eight of the before-mentioned sizable schooners for the period were built in Brewer, and one was launched in Orrington.

The *M. Sewall* was lost on Nantucket during a snowstorm in 1877. This schooner was twenty-five years old when wrecked. The *William Abbott* was described as a "clipper schooner" and was speedy. She ran as a packet between Bangor and New York for many years. The *July Fourth,* built at Brewer in 1863 by Oakes & Doane and rebuilt by Henry Lord at Bucksport in 1875, was in active service in 1908, when forty-five years old. The *Ellen Perkins,* built in the Crosby yard, Bangor, in 1864, was lost on Nantucket in 1896, when thirty-two years old. We are told that this vessel and the schooner *Joseph Oakes* of 206 tons, built by Oakes & Doane at Brewer in 1869, were lost the same night (the latter on the Sow and Pigs, Cuttyhunk) when commanded by two brothers named Smith and that the schooners were owned at the time by Sylvanus Haskell, of Deer Isle (Penobscot Bay). The *Izetta,* built in the Dunning yard, Brewer, in 1865, was in service in 1915, when half a century old. The

Mattie Holmes was rammed and sunk in Long Island Sound by a Rockland schooner. The *Emma Green,* built in the Crosby yard, Bangor, in 1869, was lost on a passage from New York to Bangor in 1896; she was twenty-seven years old when her end came. The two largest schooners built in the Bangor area in 1871 came to a tragic end; the *Carrie E. Woodbury* piled up on the Florida coast, and the *Addie G. Bryant* sank in a collision with an iron barge in a tow off Cape Cod. The *Emma H. Drummond* was lost on the Cuban coast. The schooner *Lester A. Lewis,* built in 1877 at the Crosby yard, Bangor, and owned by Fields Pendleton, Islesboro, et al., was lost with all hands at Provincetown in "the November blizzard of 1898." We are told: "Her officers and crew were ship masters from Islesboro whose vessels were temporarily laid up." This marine loss was "the worst disaster in the history of that town."

Schooner construction in the Bangor area following the end of the seventies of the nineteenth century can be divided into three periods: (1) 1880-1891 inclusive, when ten schooners of some 300 to 416 tons register were built; (2) 1902-1904, when three large schooners of from 1,038 to 1,589 tons were launched; and (3) the war years of 1918-1919, when three sizable schooners of from 714 to 987 tons were constructed, following which shipbuilding on the upper Penobscot terminated. The following table gives a list, with particulars, of all schooners of 297 tons and over built in the Bangor district from and including 1881 to the end of sail.

Year Built	Name of Schooner	Tonnage	Dimensions in Feet		
			Length	Beam	Depth
1881	JAMES A. GARFIELD	416	142	32	12
1881	WILLIE L. NEWTON	366	140	32	12
1882	F. C. PENDLETON	408	146	33	12
1882	ISAIAH K. STETSON	297	140	31	10
1883	EDWARD STEWART	398	141	33	12
1883	HATTIE H. BARBOUR	302	121	32	12
1884	HENRY CROSBY	391	145	33	13
1886	GERTRUDE A. BARTLETT	375	139	34	11
1890	CELIA F.	412	146	34	12
1891	AETNA	350	134	32	12
1902	SAMUEL B. HATHAWAY	1,038	207	38	18
1903	HORACE A. STONE	1,376	208	39	21
1904	AUGUSTUS H. BABCOCK	1,589	216	41	19
1918	CHARLES D. STANFORD	714	173	37	13
1919	JAMES E. COBURN	987	189	39	19
1919	KATHERINE MAY	916	184	38	19

The *James A. Garfield,* built in the Oakes yard at Brewer, was lost in a hurricane at Appalachicola, Fla. The *Edward Stewart,* built in the Stetson yard at Brewer, was lost on ledges off Quoddy Head. The three schooners *Henry Crosby, Louise Hastings,* and *Gertrude A. Bartlett* were built in 1884-1886 also at the Stetson yard in Brewer; while Barbour Brothers built the *Celia F.* and *Aetna* in Brewer in 1890-1891. Shipbuilding was quiet in the upper Penobscot from 1891 to 1902, but in the latter year the first of a trio of relatively large schooners was built at the Stetson yard, Brewer. This was the *Samuel B. Hathaway* and was owned by the Boston Maritime Corporation. The third and last member of the "big fore-and-afters," the *Augustus H. Babcock,* was burned at sea when carrying a cargo of case oil. The first of a trio of sizable schooners, constructed as emergency tonnage as the first World War ended, was built in Brewer by the Bangor-Brewer Shipbuilding Company. This vessel, the *Charles D. Stanford,* sailed from Portland in 1932 and "went missing," being lost with all hands. The second schooner of the war trio, the *James E. Coburn,* was built in South Orrington by the Boston & Penobscot Shipbuilding Company, and the last of the three, launched in 1919, the *Katherine May,* was built in Bangor by the Bangor Shipbuilding Corporation. This last upper Penobscot-built vessel was stranded at Bermuda in 1921. She was condemned and sold to the British and in 1932, when thirteen years old, was owned in the Maritime Provinces.

The number and average size of the fore-and-afters built in the Bangor district during the various periods were as follows:

Period Inclusive	Number of Schooners Built	Aver. Tonnage per Schooner	Period Inclusive	Number of Schooners Built	Aver. Tonnage per Schooner
1900-1919	6	1,103	1860-1869	39	174
1890-1899	2	381	1850-1859	34	127
1880-1889	16	270	1840-1849	28	113
1870-1879	20	182	1830-1839	16	119

We are told that the commencement of the third decade of the nineteenth century inaugurated "the golden age of lumbering and shipbuilding" for Bangor, "when fortunes were amassed and fine homes were built." These were planned and the city streets laid out by Boston's leading architects. During the clipper ship decade (1850-1859), Bangor built no real clippers, and the four sizable three-masted square-riggers (three ships and a bark) that were constructed in the fifties were built during 1853-1854, when the California Gold Rush was waning as far as migration from the East to the West Coast was concerned and shipping was commencing to slump. During the depression and the panic of 1857, Bangor was hit hard in its prime industry—lumber. The Civil War followed, but of the late sixties it was said, "Shipyards located along a mile of river front at Bangor built vessels which carried Maine pine to all parts of the globe"; and again, "By 1870, Bangor was one of the foremost lumber markets not only of the country but also of the whole world." It is surprising to note the volume of building of substantial vessels in the upper Penobscot during the Civil War years. The Bangor district launched twelve full-rigged ships and eleven sizable barks during the years 1862-1866 inclusive, and shipbuilding activity during a period of national marine trading depression was greater in and around Bangor during this period than in the California Gold Rush and clipper ship boom years.

The number and average size of the square-riggers of each type built in the Bangor-Brewer district during each of the seven decades 1810-1879 were as follows:

	Ships		Barks		Brigs	
Period Inclusive	Number	Average Tonnage	Number	Average Tonnage	Number	Average Tonnage
1870-1879	3	1,372	—	—	3	412
1860-1869	12	929	13	574	35	274
1850-1859	5	941	9	346	42	227
1840-1849	—	—	3	267	12	169
1830-1839	—	—	1	261	2	153
1820-1829	2	364	—	—	13	182
1810-1819	1	264	—	—	2	183

The first full-modeled full-rigged ship built at Bangor of the type that became known as the Down Easter was the *Premier I,* constructed in 1853 for Boston owners. Early in her career, the *Premier* was purchased by Capt. Andrew Jackson Ross, of Searsport, Maine, who commanded her for several years. When he retired from sea life to live ashore (and, later, to build some vessels at Belfast), he passed over the command to Capt. John W. McGilvery, brother of Capt. William McGilvery, shipbuilder and owner, of Searsport. The *Premier I,* popularly referred to by the Penobscot marine fraternity as the Bangor *Premier* to distinguish her from the *Premier II* of 1,392 tons built at the McGilvery yard at Searsport by Marlboro Packard in 1875, was engaged in the general carrying trade, operating principally between European ports, the West Coast of South America, and the East Indies. During the sixties, she made three westbound passages around Cape Horn. The ship had full lines and was an

average carrier and ordinary as to length of passage considering that she was a Down Easter with positively no resemblance in hull or rig to a clipper, although she was built at the height of the national clipper shipbuilding boom. In 1874, when twenty-one years old, she was sold to Norwegian owners upon her arrival at Liverpool with a cargo of guano from Howland's Island in the Pacific.

No real clipper ships were built at either Bangor or Brewer, but toward the end of the clipper shipbuilding decade of 1850-1859, when no more extreme clippers—or merchant sailing vessels built for speed alone—were being laid down in any shipyard of the United States, a so-called medium, or half, clipper ship was built at Brewer, Maine, for Moses Giddings and E. S. Dole, of Bangor. This vessel, which was the little full-rigged and rather heavily sparred ship *Golden Rocket,* was of 608 tons register, and she was launched into the Penobscot River in the fall of 1858. The ship sailed from Bangor for Boston on November 11, 1858, with a large number of passengers aboard, and after loading at Boston, she cleared that port December 8 for San Francisco, where she arrived on May 18, 1859, after a passage reported as 158 days. Captain Pendleton, of Searsport, was in command on this westward passage around the Horn, but he left the little ship at San Francisco, and Captain Collins was appointed master when she sailed for the West Coast of South America to load guano.

The *Golden Rocket* had a short life, for on July 13, 1861 (when only two and three-quarters years old), while on a voyage in ballast from Havana to Cienfuegos under the command of Captain Bailey, she was captured off the Isle of Pines and burned by the armed Confederate commerce raider *Sumter,* commanded by the famous Captain Semmes. The *"Rocket,"* at the time of her capture, was beating to windward when intercepted by the *Sumter.* She was flying the British flag until the vessels were less than a mile apart, when the raider displayed the Stars and Bars and fired a shot across the bow of the astonished *Golden Rocket.* This was the first capture of the *Sumter* and Captain Semmes' first prize of the Civil War. The crew of the *"Rocket"* was transferred to the *Sumter,* and the Yankee trader, with no cargo aboard, was set on fire. Captain Semmes expressed his sadist sentiments regarding the capture and destruction of the *Golden Rocket* in the INDEX of May 1, 1862, as follows:

> It was about 10 o-clock at night when the first glare of light burst from her cabin hatch. Few on board can forget the spectacle. A ship set on fire at sea! It would seem that man was almost warring with his Maker. Her condition helpless—the red flames licking the rigging as they climbed aloft, the sparks and the pieces of burning rope taken off by the wind and flying miles to leeward; the ghastly glare thrown upon the dark sea as far as the eye could reach and then the deathlike stillness of the scene—all these combined to place the *Golden Rocket* on the tablet of our memories forever.

The Down Easters PHINEAS PENDLETON, LUCY A. NICKELS, *and* LLEWELLYN J. MORSE

In 1866, following the Civil War, the *Phineas Pendleton* was launched into the Penobscot River from the shipyard of Dunning & Company, Brewer, Maine. She was built to the order of Capt. Phineas Pendleton, 2nd, and other members of the Pendleton family resident in Searsport, Maine, and was the second vessel to carry the name, the first being a bark built a quarter of a century earlier. Captain Pendleton, for whom these vessels were named, was born in Searsport in 1806 and died there in 1895. Master of a schooner before he was twenty-one years of age, he was thirty-six when he commanded his first square-rigger (the bark *J. Carver*) and forty-eight when he became master of his first full-rigged ship. All together,

he commanded a total of twenty-eight different vessels, taking them when new and not staying long in any one. It is said of him, "He never had to buy a coil of rope or a new sail, nor did he ever meet with disaster." (The Pendleton bark *Wealthy Pendleton,* incidentally, was named after Capt. Phineas Pendleton's wife, whose maiden name was Miss Wealthy Carver.) The *Phineas Pendleton* spent the greater part of her sea life in trade between Britain and ports in India and Australasia. One of the passages, it is said, occupied three years, extending from July 1870 to June 1873. The ship made a few guano voyages, met with no serious mishaps prior to her loss by fire while loading at Manila in August 1885, and "was generally fortunate in her operations and profitable to her owners." She was nineteen years old when destroyed, and the cause of the fire was never known.

In 1875 the Down Easter *Lucy A. Nickels II* was built in Bangor by Oakes & Doane. She was named after the wife of her first master, Capt. David Nickels, of Searsport. (An earlier *Lucy A. Nickels* was bark-rigged, of about 500 tons, and had been built in Searsport, Maine, in 1855 for the same captain to command; she was lost prior to 1875.) The ship *Lucy A. Nickels II* was a good carrier and a fair sailer, with some good passages to her credit, and several of her mediocre passages were made in better time than were those of vessels with some reputation for speed that sailed over the same course at about the same time. For instance, the *"Nickels"* arrived in New York in February 1894, 83 days from Anjer, which was a fair run but not fast. However, it becomes a very good performance compared with that of the celebrated *Wandering Jew,* which cleared the Sunda Straits six days ahead of the *"Nickels"* and arrived at New York eleven days after her, making the passage in 100 days. Under the command of Capt. Charles M. Nichols, the ship made a run from New York to Melbourne in 86 days and one from Hong Kong to New York in 91 days. In 1898 the *Lucy A. Nickels,* upon her arrival at New York from Hong Kong, was sold for conversion into a coal barge. She was then twenty-three years old. A few years later, she was lost when she broke away from her tug in a gale and was driven ashore and wrecked on the Long Island shore between Fire Island and Montauk Point.

The ship *Llewellyn J. Morse* was built by Joseph Oakes & Son, of Brewer, Maine, for the lumber merchant of Bangor whose name she bore. The vessel was launched in August 1877 and was of 1,325 tons register, measuring 198 ft. 2 in. long, 36 ft. 6 in. beam, and 24 ft. deep. She was generally engaged in trade with the Far East. However, in 1882-1883, she made two westbound passages around Cape Horn and carried grain from San Francisco to Britain. In 1888 she was acquired by John Rosenfeld, of San Francisco, who operated her for seven years in the Cape Horn trade and sold her in 1895, when eighteen years old, to the Alaska Packers Association. Her last voyage as a salmon packer was made in 1922. After a lay-up of three years, she was sold to the moving picture industry, which cheaply revamped her to resemble the *Constitution* in the picture "Old Ironsides." After the experience in the movies, the old ship—being forty-nine years old—was converted into a fishing barge. The *Llewellyn J. Morse* carried good bulk and deadweight cargoes for a ship of her tonnage, and she made good time on her passages for a vessel of her model fullness and spar plan. The average of eight westbound runs around the Horn was 132 days, two of 121 days being the shortest; the longest passage was 149 days, on which she encountered heavy gales in both the South Atlantic and South Pacific. Eastbound around the Horn, the *"Morse"* averaged 118 days, the two shortest runs being passages from San Francisco of 105 days to Liverpool and of 110 days to New York; the longest was 127 days to New York. In 1891 the *"Morse,"* loaded with nitrate, made a passage of 88 days from Iquique to New York.

Square-rigged ship construction in the Bangor district really ended with the building of the three-masted ship *Llewellyn J. Morse* and of the big brig *Havilah* of 507 tons in 1877. Thereafter, some fore-and-afters were constructed, but no full-rigged ships. The brig *Telos* of 371 tons was built in 1883, and after a period of years in which no vessels of any type were launched, the barkentine *Thomas J. Stewart* of 888 tons was built in 1890. This three-masted barkentine, the only vessel with square sails built in the Bangor district since 1877 and the last square-rigged vessel built on the upper Penobscot, was launched from the Stetson

yard at Brewer. No vessels were built in the area from 1891 to 1902, and after the construction of three sizable schooners in 1902-1904, legitimate shipbuilding was ended at Bangor and Brewer in the early middle of the first decade of the twentieth century after a known history of 113 years. The schooners built during 1918-1919 were emergency "war tonnage" and, as was to be expected, were expensive and uneconomical; their careers were short.

The Shipbuilding Record of Hampden, Maine, 1793-1872

Hampden, which is some five miles southwest of Bangor and on the west bank of the Penobscot, has never been as closely associated in shipbuilding with Bangor as have Brewer and, to a lesser extent, Orrington, each of which is on the east bank of the river. The relationship of Hampden to Bangor is geographically somewhat similar to that of Searsport and Belfast, but in the fifties Bangor and Brewer built sizable ships. Hampden built sizable ships for the period in 1800-1801 and antedated Bangor by some eleven years in the construction of an ocean-going full-rigged three-master. After building two ships of 291 and 213 tons in 1801 and 1800, respectively, Hampden rested on its laurels and did not build any other vessel of 200 tons until in the late boom year of 1854, when it constructed the ship *Maverick* of 707 tons. Following this, Hampden built the bark *May Stetson* of 348 tons in 1860, but no more full-rigged ships and no other vessels of any rig exceeding 250 tons. The following list gives the vessels reported to have been built at Hampden during the years 1793-1872 inclusive:

Period Inclusive	Number of Vessels						Tonnage of Vessels					
	Ships	Barks	Brigs	Schoon-ers	Sloops	Total	Ships	Barks	Brigs	Schooners	Sloops	Total
1793-1799	—	—	—	4	—	4	—	—	—	440	—	440
1800-1809	2	—	—	6	1	9	404	—	—	628	77	1,109
1810-1819	—	—	2	17	3	22	—	—	299	1,385	163	1,847
1820-1829	—	—	4	12	—	16	—	—	634	1,163	—	1,797
1830-1839	—	—	—	7	—	7	—	—	—	638	—	638
1840-1849	—	—	—	9	—	9	—	—	—	723	—	723
1850-1859	1	—	2	11	—	14	707	—	427	1,215	—	2,349
1860-1869	—	1	—	3	—	4	—	348	—	457	—	805
1870-1872	—	—	—	2	—	2	—	—	—	196	—	196
Total 1793-1872	3	1	8	71	4	87	1,111	348	1,360	6,845	240	9,904

Hampden built vessels at an early date for river and coastal work, and it is known that in the last decade of the eighteenth century "vessels of 120 tons were built." Four schooners constructed in the years 1793-1796 averaged 110 tons and were "seaworthy but light draft vessels suitable for river and coast work of 22-foot beam." The ship *Sally* of 291 tons, built in 1800, was an outstandingly big ship for the Penobscot, and she was constructed with good beam and depth for deep-sea service. This vessel's depth of 17 ft. was conspicuously large, being 3 ft. greater than that of the 371-ton ship *Siroc,* built at Bangor in 1826, and 4 ft. larger than that of the 357-ton ship *New England,* launched the same year. She had the same beam (26 ft.) as the *Sally,* which was built twenty-six years before her.

The following table gives a list of vessels, with their particulars and dimensions, reported as being built at Hampden during the years 1793-1815 inclusive; i.e., from early days to the shipbuilding boom years of 1816-1818 following the close of the War of 1812 with Britain.

Year Built	Name of Vessel	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Owner, Builder, or Mariner
1793	DISPATCH	Schooner	118	—	—	—	John Crosby, merchant; Robert Wheeler, mariner
1794	VENUS	Schooner	111	—	—	—	Benjamin Smith, merchant; Nicholas Crosby, Salem, mariner
1795	LARK	Schooner	119	73	22	9	John Crosby et al.; Heman Smith, mariner
1796	DOVE	Schooner	92	67	22	7	Robert Treat, Bangor; Daniel Partridge, Orland; James & Edward Robinson, Dorchester
1800	SALLY	Ship	291	95	26	17	John Crosby et al.; Samuel Bartlett, mariner
1801	HAMPDEN	Ship	213	85	24	12	Jesse Holbrook, mariner; Abel Curtis, Bucksport, et al.
1801	HARRIOT	Schooner	129	77	22	8	Samuel Holbrook, Reuben Newcome; Reuben Newcome, Jr., mariner
1801	MATILDA	Schooner	103	71	22	8	John Crosby, Richard Kent, et al.
1803	PACKET	Schooner	102	69	22	8	Timothy Lombard, Frankfort, owner and mariner
1805	ENTERPRISE	Schooner	100	72	21	8	Oliver Currier, Reuben Newcome, and Boston party
1805	RANGER	Schooner	100	69	21	7	Isaac Hopkins et al., Hampden
1805	JULIAN	Schooner	94	72	21	7	John Emery; John Emery, Jr., mariner
1809	PENOBSCOT PACKET	Sloop	77	66	20	7	Isaac Hopkins, David Piper, et al.; Isaac Hopkins, Jr., mariner
1811	DIANA	Schooner	110	61	22	10	Reuben Myrick et al.; Amasa Knowles, mariner
1811	GLADIATOR	Schooner	96	64	21	8	Knowles, Newcome, Merrill, Grant, et al.
1811	BETSY	Schooner	92	67	21	8	Robert Carey, owner and mariner
1812	OCEAN	Schooner	105	70	22	8	Solomon Hersey; Nehemiah Rich, mariner, Frankfort
1812	HOPE	Schooner	96	68	23	8	Turner, H. & J. Harding, Snow, and Knowles
1813	VICTORY (1ST)	Schooner	52	50	17	7	Robert and John Carey
1814	SALLY	Schooner	98	72	22	8	Joseph Bryant and Rufus K. Hardy, Castine
1815	DOLPHIN	Schooner (pink)	40	43	13	5	Isaac Hopkins, owner and mariner

It will be noted that several fathers were owners or part owners of vessels, of which a son was mariner or captain; such as Reuben Newcome of the *Harriot* (1801) and *Enterprise* (1805), John Emery of the *Julian* (1805), and Isaac Hopkins of the *Penobscot Packet* (1809). Some captains appear as both the owner and mariner of record; such as Timothy Lombard of the *Packet* (1803), Robert Carey of the *Betsy* (1811), and Isaac Hopkins of the *Dolphin* (1815). The schooners *Ranger* and *Gladiator* were burned at Bangor by the British in 1814 during the War of 1812. At this time, British forces occupied Hampden, and it is said that "several vessels were on the stocks nearing completion" in Hampden yards. "The town was bonded to the amount of $15,000 to deliver these vessels at Castine when launched, and at least one vessel was delivered. The close of the war rendered the bond inoperative."

The following list gives a record of the most important vessels of each type, with particulars and dimensions, built at Hampden during certain periods of time from 1816 to the end of the town's shipbuilding activities in 1872. It will be noted that the only sizable vessel of any rig built at Hampden throughout the years was the ship *Maverick* of 707 tons, launched during the national shipbuilding boom year of 1854.

Period	Name of Vessel	Rig	Year Built	Tonnage	Dimensions in Feet		
					Length	Beam	Depth
1816-1820	ALERT	Brig	1817	159	79	23	10
	ELMIRA	Brig	1816	140	81	24	9
	MONROE	Schooner	1817	117	75	22	8
	CYRUS	Schooner	1817	108	73	23	8
	VICTORY (2ND)	Schooner	1818	104	72	23	8
	NEW PACKET	Schooner	1816	103	73	21	8
	PACKET	Sloop	1817	44	52	15	6
1821-1825	SARAH ANN	Brig	1824	194	84	24	11
	FRANCES & SOPHIA	Brig	1825	138	82	24	8
	CADMUS	Brig	1821	133	72	22	10
	ENTERPRISE	Schooner	1825	135	81	22	9
	PACKET	Schooner	1825	125	77	24	8
	MAGNET	Schooner	1823	122	77	23	8
	SOPHRONIA	Schooner	1825	114	76	23	8
1826-1830	LYDIA	Brig	1826	169	86	24	9
	NELSON	Schooner	1826	144	82	24	9
	INDEPENDENCE	Schooner	1826	105	72	19	9
	HYDASPE	Schooner	1828	78	62	19	8
1831-1835	LA GRANGE	Schooner	1832	139	82	23	8
	INCREASE	Schooner	1832	86	69	20	7
	ZEPHYR	Schooner	1834	80	66	19	8
	COLONEL SIMMONS	Schooner	1835	72	—	—	—
	YOUNG TELL	Schooner	1832	45	47	16	5
1836-1840	HELLESPONT	Schooner	1836	126	80	23	8
	J. WARREN	Schooner	1836	90	70	21	7
1841-1845	EXPRESS	Schooner	1842	130	—	—	—
	CATHERINE	Schooner	1841	79	69	20	6
	VIRGINIA	Schooner	1845	45	—	—	—
	HOLBROOK	Schooner	1845	36	44	14	6
	CHARLOTTE	Schooner	1841	31	41	14	5
1846-1850	DR. ROGERS	Schooner	1850	128	81	27	7
	ELIAS DUDLEY	Schooner	1848	124	—	—	—
	CAPITOL	Schooner	1847	113	—	—	—
	JULIA & MARY	Schooner	1848	100	75	23	7
	ADVANCE	Schooner	1846	65	—	—	—
1851-1855	MAVERICK	Ship	1854	707	152	34	20
	STARLIGHT	Brig	1854	182	102	25	9
	ANNA ELIZABETH	Schooner	1853	151	92	26	8
	JULIA ROGERS	Schooner	1855	145	83	24	6
	HAMPDEN BELLE	Schooner	1854	139	86	24	8
	ARCADE	Schooner	1855	122	70	23	8
	WILLIAM PICKERING	Schooner	1851	100	82	24	8
	DAVID K. AREY	Schooner	1852	99	79	22	8
	MINERVA	Schooner	1851	81	68	20	7
1856-1860	MAY STETSON	Bark	1860	348	107	27	14
	OCEAN SPRAY	Brig	1857	245	105	26	10
	DEFIANCE	Schooner	1859	118	84	26	8
1861-1872	WARD J. PARKS	Schooner	1866	239	113	27	10
	DAHLIA	Schooner	1861	126	87	26	7
	MARY A. RICE	Schooner	1871	121	98	27	7
	RINGLEADER	Schooner	1868	92	82	24	7
	ISABEL	Schooner	1872	75	73	19	5

In the preceding list, all the ships, barks, and brigs are enumerated and all the "sizable" schooners, only small schooners and sloops being omitted. During the years 1826-1850 and from 1856 to 1872 inclusive, all the vessels built in the district are set forth.

The brig *Elmira,* built in 1816, was lost on Cape Ann in 1876 after sixty years of sea service. The schooner *New Packet,* built at the same time, was lost on Monhegan Island in 1843, when twenty-seven years old. The schooner *Enterprise,* built in 1825, was lost with all hands off Mt. Desert Light in 1837, when twelve years old; the schooner *Sophronia* was lost in 1835, when ten years old; and the schooner *Packet,* launched the same year, came to her end in 1833, when eight years old. All the three schooners built at Hampden in 1825 came to a tragic end in from eight to twelve years. The brig *Lydia* was lost in 1827, when only a year old, but the schooner *Young Tell,* built in 1832, was still engaged in service in 1893, when sixty-one years old. The schooner *J. Warren,* built in 1836, is known to have been trading in 1898, when sixty-two years old, and the schooner *William Pickering,* built in 1851, was in service in 1908, when fifty-seven years old. The ship *Maverick* was sold to Britain and renamed *Cordillera;* she was later owned in Chile, was rigged as a bark, and named *Anna Delfina.* The brig *Starlight* was put under the British flag during the Civil War and renamed *Edward;* when lost in 1870, she was owned in South Africa and named *Sophie.* The brig *Ocean Spray* was sold in the West Indies, renamed *Robertina,* and lost in 1871, when fourteen years old.

Some Hampden-built vessels were owned in Boston. The schooner *Nelson* was built in 1826 for Eastport owners, and the schooner *Hydaspe* was launched the following year for Thomaston parties. The schooner *Zephyr,* built in 1834, was also owned in Thomaston. The three schooners built at Hampden in 1832 were for Waldoboro, Belfast, and North Haven owners, respectively. All of the vessels built during the period 1828-1847 inclusive seem to have been for out-of-town owners, and whereas most hailed from Penobscot ports, one schooner was built for Marblehead and one for Chatham parties, and in 1850 a vessel was constructed for Salem owners. The schooner *Ward J. Parks* of 239 tons, built at Hampden in 1866, traveled far from home for a vessel of her rig; for in 1870, when four years old, she was sold in San Francisco.

XLI.

THE MACHIAS DISTRICT, MAINE

WHAT WE TERM the Machias, or No. 4, geographical marine district of Maine covers the eastern coast line (with its inlets and rivers) of the state and extends from the easterly portion of the Acadia National Park at Schoodic Point and Frenchmans Bay (just east of Bar Harbor) to Lubec, Eastport, the Passamaquoddy, and the Canadian border. Since the days of the early settlers, ships have been built in this area, and vessels for coastwise trade were constructed in the latter part of the seventeenth century and throughout the eighteenth and a good part of the nineteenth centuries. As far as shipbuilding is concerned, this eastern frontier territory of the United States is a land of tradition and legend rather than of authenticated history. Therefore, we are compelled to confine most of our discussion of vessels built in this district to the middle and third quarter of the nineteenth century. Although the regional division is termed the Machias district and vessels were built at and around Machias and at many other suitable points on an extensive coast line, practically all the ships of size launched in this territory during the clipper ship and Down Easter eras were constructed at Robbinston, Pembroke, Eastport, Trescott, and Calais, which are towns located in the extreme eastern portion of the state. The Passamaquoddy, or waters separating the United States from Canada, can be considered the only important waters into which ships have been launched east of the Penobscot. As far as tonnage built is concerned, the Machias district could more fittingly be designated the Passamaquoddy area. A recent search of the available records reveals 110 vessels built at Calais, 17 at Robbinston, 26 at Perry, 27 at Eastport, 33 at Lubec, 39 at Pembroke, 12 at Trescott, 15 at Dennysville, 3 at Whiting, and 38 at Cutler. The available information regarding these vessels, with year built, rig, tonnage, and dimensions, has been compiled for each Maine town and is given in Section XLIV under the heading, "The Passamaquoddy Area."

Far Eastern Maine Builds Twelve Clipper Ships, 1850-1855

During the clipper shipbuilding decade of 1850-1859 inclusive, this so-called Machias district launched twelve clipper ships aggregating 10,184 tons. This is a larger number of ships, with greater tonnage, than was built in the No. 1 (or Portland) district, which, extending from the busy Piscataqua River on the southwest to Freeport (Casco Bay) on the northeast, turned out only eight clipper ships totaling 6,206 registered tons. Of the twelve clippers laid down in the No. 4, and most easterly, marine district of Maine, Robbinston built five, Pembroke three, and Eastport and Trescott two each. Robbinston, at the mouth of the St. Croix at the Passamaquoddy, is the most northerly shipbuilding town in the state of Maine

with the exception of Calais. Robbinston lies eleven miles southeast of Calais (as the crow flies) and is about fourteen miles northwest of Eastport, the most easterly shipbuilding community in the United States. Pembroke lies nine or ten miles northwest of Eastport and is some fifteen miles (in a direct air line) south and slightly east of Calais. Trescott is on the cape leading to Lubec and is south and somewhat to the west of Eastport and Lubec.

The following table gives a list of the dozen clipper ships built in the eastern part of the state (No. 4, or Machias, district), with a record of their sailing performances westbound in the Cape Horn service to California during the clipper ship era (1850-1860).

Year Built, Name, and Registered Tonnage	Dimensions in Feet			Builder	Owner	Westbound Passages around the Horn to California 1850-1860				
								Time in Days		
	Length	Beam	Depth			Years	Number	Average	Shortest	Longest
A. *Built at Robbinston, Maine*										
FRANCIS PALMER (bark); 1852; 302 tons	125	25	11.7	J. M. Balkesn	Kesing & Brown, San Francisco	No record available.				
JUNIPER; 1853; 514 tons	141.2	28	13		Aymar & Co., New York	1853	1 (off Cape Horn 49 days; at Callao 8 days)	208	208	208
RED GAUNTLET; 1853; 1,038 tons	178	35.5	22	James W. Cox	James W. Cox; F. Boyd & Co., Boston	1854 1855	2	156½	119	194
VIRGINIA; 1854; 959 tons	175.2	34.3	21.2	Rose	Geo. W. Hunter, Boston	—	—	—	—	—
DICTATOR; 1855; 1,293 tons	189	38.4	23.7	James W. Cox	James W. Cox; Samuel Train, Medford	—	—	—	—	—
B. *Built at Pembroke, Maine*										
COMET (bark); 1852; 536 tons	144	29	13.5		Edward C. Bates et al., Boston	1852 1853	2	124½	116	133
QUEEN OF THE PACIFIC; 1852; 1,357 tons	197	39.5	26.7	Isaac Ewell	Reed, Wade & Co., Boston	1853 1858	2	162	131	193
WESTERN CONTINENT; 1853; 1,272 tons	188	38	24	S. C. Foster	John Mayo, Boston	1854 1856	2	148½	121	176
C. *Built at Eastport, Maine*										
GREY FEATHER; 1850; 587 tons	138.3	30.4	19	C. S. Husten	L. H. Sampson & Co., New York	1851 1852 1858	3	130½	126	138
CRYSTAL PALACE; 1854; 653 tons	149.7	30.7	19		E. M. Robinson et al., New York	—	—	—	—	—
D. *Built at Trescott, Maine*										
KATE HAYES; 1851; 700 tons	149.1	33	22		Stephen W. Dana et al., Boston	1852	1	157	157	157
SEA LARK; 1852; 973 tons	172	35	17.5		Samuel G. Reed, Boston, and E. Mott Robinson, New Bedford	—	—	—	—	—
Total of twelve ships of 10,184 tons built in far eastern Maine.....						1851-1858	13	149	116	208

The *Francis Palmer* and *Juniper* were too small for Cape Horn service, although each made one westbound passage. There is no record available of that of the *Francis Palmer,* but the *Juniper* had a disastrous experience. She cleared Boston June 6, 1853, and did not arrive at San Francisco, according to customhouse records, until January 4, 1854 (i.e., 212 days later). The ship's log gives the time of passage from anchorage Boston Harbor to anchorage San Francisco Bay as 208 days and reports battling heavy gales and head seas for 49 days (seven weeks) off Cape Horn and being compelled after that experience to put into Callao, Peru, "for water, provisions, and repairs," where she lay for eight days and, it is said, "lost two weeks' time by changing our course and putting into and getting out of Callao under bad sailing conditions." The weather experienced by the little *Juniper* on this passage caused the *Arab,* which reached San Francisco two days after the *Juniper,* to make a slow run of 184 days from Boston to the Golden Gate and the *Wisconsin* (which cleared New York when the *Arab* left Boston) a passage of 168 days. The fast Maine-built *Flying Dragon,* sailing after the *Juniper* and reaching San Francisco nineteen days before her after a passage of 148 days, reported "31 days off Horn; lost jib booms, sprung bowsprit and fore yard." Captain Baker of the *Flying Dragon* died on this outbound voyage. The *Juniper,* with Captain Lefevre in command, was lost on a reef below Pernambuco on November 12, 1857. The *Francis Palmer* operated on the Pacific in the fifties and sixties and was still engaging successfully in that trade in the seventies.

The *Dictator* (Capt. T. Everett) was described as "a rather full-modelled medium clipper with long spars." Evidently, she carried well but was not very speedy. Samuel Train, of Medford, Mass., sold the ship to Charles R. Green, New York, and her end came when, during the Civil War, she was captured and burned by the Confederate commerce raider *Georgia* in April 1863.

The *Red Gauntlet* was the most famous and fastest clipper ship built at Robbinston, Maine. She was managed by F. Boyd & Company, Boston, her principal owner, but James W. Cox, her builder, retained a substantial interest in the vessel. The maiden voyage of the *Red Gauntlet,* with Capt. Thomas Andrews in command, was a round trip between Boston and Liverpool, on which she made the westbound run in 35 days. The vessel, well laden, cleared from Boston for California on August 12, 1854, and arrived at San Francisco December 9 after 119 days and a reported passage from harbor to harbor of 118 days. She ran from Boston to the line in 34 days; thence to 50° S. Atlantic in 26 days; from 50° S. Atlantic to 50° S. Pacific (i.e., the rounding of Cape Horn) in 15 days; thence to the line in 21 days; and from there to within fifty miles of the Golden Gate in 17 days, where she was becalmed and required 5 days to make port.

This passage of 118 days (and all but fifty miles of the sixteen-thousand-odd-mile course in 113 days) shows up as a brilliant performance compared with the sailing record of all the other clippers that made passages at approximately the same time: *Celestial* and *Sting Ray,* each 133 days; *Whistler,* 131 days; *Flying Eagle,* 134 days; *Thomas Wattson,* 141 days; *Wild Duck,* 129 days; *Antelope,* 138 days; and *Osborne Howes,* 151 days—an average for eight reputedly fast clippers of 136¼ days, or over eighteen days longer than the passage of the *Red Gauntlet.*

Continuing her first voyage to the Pacific, the *Red Gauntlet* sailed from San Francisco to Shanghai in 52 days and from that port to New York in 111 days. Her next passage westbound around the Horn to the Golden Gate was an unlucky one. She experienced wretched weather in the Atlantic and was 51 days to the equator and 80 days to 50° S. Atlantic; she rounded the Horn against heavy head gales, requiring 29 days to run to 50° S. Pacific, and suffered some damage. (The rudderhead was broken and bow damaged both above and below water; an entire suit of sails and some spars were lost, her seams started, and for a day or more she had five feet of water in her hold.) As the officers and crew "suffered terribly from cold and exposure and the ship had been badly battered," Captain Andrews headed for Valparaiso, where she arrived December 17, 1855, 120 days out from New York. The vessel required 25

days for repairs, following which she made a run of 49 days to San Francisco and completed the passage in 194 days, with actual sailing time of 169 days. Sailing from San Francisco April 2, 1856, the *Red Gauntlet* made Honolulu in 17 days and from there made a remarkably fast run of 19 days to Hong Kong, where she arrived May 14, having cleared Honolulu April 24. This passage equaled the all-time record of the *Memnon,* made in December 1850, and beat by over two days the much-heralded run of 21 days 13 hours made by the *R. B. Forbes* (during which she averaged 250 miles a day over the 5,400-mile course).

During the next few years, the passages of the *Red Gauntlet* included a 92-day run from New York to Melbourne, thence 34 days to Batavia, and from there 55 days to St. Helena and 36 days more to the Needles Light; in 1859 she made a run from Manila to New York in 103 days. In 1861, with cut-down spars and reduced sail spread, she made a third westbound passage to San Francisco in 144 days, experiencing wretched weather and twenty-five days of heavy gales rounding the Horn. In the winter of 1862-1863, during the Civil War, she saw service as a government transport. Being released from such duties, the *Red Gauntlet,* loaded principally with coal and ice, sailed from Boston May 22, 1863, for Hong Kong. On June 14, when in Lat. 8° N. and Long. 34° W., she was intercepted by the Confederate raider *Florida.* The *"Gauntlet's"* coal was transferred to the *Florida,* after which the captured ship was destroyed by fire. Claims filed with the Geneva Awards Commission for the loss of the *Red Gauntlet* totaled $124,475 and consisted of $60,851 for the ship (she was insured in Boston for $41,000), $32,678 for cargo, $15,188 freight money, $5,675 wages of thirty-eight men for seven months (the expected period of the voyage), etc.

The *Comet,* built at Pembroke, was a clipper bark of 536 tons—a small but fast and seaworthy vessel. (This *Comet* should not be confused with the big clipper ship *Comet* of 1,836 tons built by William H. Webb, of New York, in 1851.) The Maine-built bark *Comet* has been credited with a westbound Cape Horn passage of 112 days, but this was probably the run that she made clearing Boston August 25, 1852, and arriving at San Francisco December 19 —an elapsed time of 116 days and much faster than the passages of the three other (much larger) clippers sailing about the same time, as the following analysis shows:

Name of Clipper	Registered Tonnage	Port of Departure	Date of Sailing 1852	Date of Arrival San Francisco	Time of Passage in Days
CORINGA	777	Boston	Aug. 23	Jan. 2, 1853	132
SYREN	1,064	New York	Aug. 25	Dec. 23, 1852	120
COMET (bark)	536	Boston	Aug. 25	Dec. 19, 1852	116
MONSOON	773	Boston	Aug. 28	Jan. 5, 1853	130

In 1853 the diminutive *Comet* took part in a race of some 12,000 miles from Anjer to the home ports of New York and Boston. The contestants left Anjer April 27, and the time and port of their arrival (and relative size of the vessels) were as follows:

Name of Vessel	Registered Tonnage	Port of Arrival	Date of Arrival 1853	Time of Passage in Days
SAMUEL RUSSELL	957	New York	July 26	90
N. B. PALMER	1,400	New York	July 28	92
WILD PIGEON	996	New York	July 28	92
COMET (bark)	536	Boston	July 29	93
JOSHUA BATES	620	New York	Aug. 2	97

The little Pembroke-built bark was only 38 per cent the tonnage of the largest of her competitors and only 48 per cent as large as the three full-rigged extreme clipper ships that sailed from Anjer with her. Following a three-month ocean voyage, she made her unloading dock after a passage only 3 per cent longer than the shortest time made by any of the ships and 4½ per cent less than that of the only vessel in the race that was somewhere near her own tonnage; i.e., the Donald McKay-built *Joshua Bates.*

The *Queen of the Pacific,* a medium clipper launched at Pembroke in November 1852, was an unfortunate ship. She is said by her command to have been "a fair sailer," but her sea life was only of seven years and was replete with mishaps; on three of her five completed voyages she was forced to put into some port en route. The *"Queen"* sailed from Boston January 26, 1853, for San Francisco on her maiden voyage with Capt. W. Reed in command. Reaching warm waters, the ship "became very crank and could not carry sail," as part of her ice cargo melted. She battled gales and heavy seas around the Horn for a month, lost a topmast, injured her bow, and started bad leaks. The vessel made for Valparaiso for repairs, arriving there 131 days out from Boston. She was in port ten days and, leaving Valparaiso, ran to San Francisco in 53 days. The *"Queen"* then crossed the Pacific to Singapore in 64 days and ran from Calcutta to Boston in 119 days. Her next voyage was to Callao, from which port she ran to Hampton Roads in 72 days, following which she took coal to Nicaragua and went to Calcutta and back home. In January 1857, she sailed from New York, coal laden, for San Juan del Sur. Dismasted, she put into St. Thomas leaking badly. She was condemned and sold, and the voyage was abandoned. After being repaired by her new owners, the *Queen of the Pacific,* with Captain Du Bois in command, sailed from New York on July 8, 1858, for San Francisco. It is said that early in the voyage the fresh water tanks gave out and that she had to run to Pernambuco, which she reached 37 days out. From Pernambuco (where she stayed five days), the *"Queen"* was 26 days to the Straits of Le Maire, was 14 days rounding the Horn, and on the 77th day out from Pernambuco was 600 miles from San Francisco. Due to bad sailing conditions, 12 days were required to complete the passage of 131 days elapsed time and 126 sailing days from New York, which, considering the conditions encountered, was a good run. Returning east, the ship made New York in 107 days from San Francisco. On the vessel's third voyage to California, she was wrecked (September 19, 1859) on a reef 180 miles north of Pernambuco.

The *Western Continent,* built in 1853 by S. C. Foster, of Pembroke, made a good passage of 121 days westbound to San Francisco in 1854, but her second run around the Horn was made under far less favorable conditions. She cleared from New York May 22, 1856, under the command of Captain Burnham and did not arrive at San Francisco until November 15 (176 days out), having had to make Valparaiso for repairs en route. This passage does not seem so bad when it is known that the clipper *Rapid* (1,115 tons), built by Roosevelt & Joyce, New York, with Captain Winsor in command, sailing four days after the *Western Continent,* did not arrive at the Golden Gate until January 5, 1857, or fifty-one days after the *Western Continent;* she too had to make port en route for repairs, and her passage—clearance to entry—occupied 224 days.

Eastport, which occupies Moose Island in Passamaquoddy Bay, is a port of entry and the most easterly city and shipbuilding community in the United States. It was settled by fishermen in 1782, became a port of entry in 1790, and was incorporated as a town in 1798. Fishing craft were built at Eastport closely following the Revolutionary War, and sizable schooners were built there for fisheries and coastwise trading during the first quarter of the nineteenth century. Eastport was taken by the British July 11, 1814, and was held by them for four years before it was surrendered in accordance with the decisions of commissioners appointed under the Treaty of Ghent.

Two clipper ships were built at Eastport during the first half of the clipper ship decade. The *Grey Feather,* built by C. S. Husten in 1850, was a fast sailer and a historic vessel. Considering her size, she made all her three westbound Cape Horn runs in fast time and on one of them beat the big *Manitou* by 40 days, the *Crest of the Wave* by 35 days, the *Ocean Belle* by 29 days, the *Moonlight* by 22 days, the *Sea Nymph* by 9 days, and the *Intrepid* by 4 days. In 1854, with Capt. Daniel McLaughlin in command, she made a passage from Melbourne to Calcutta, which is said to have been the quickest run ever made between the two ports. The log shows that the little ship dropped her pilot leaving Melbourne at 6:00 P.M., June 8, and took a pilot aboard off Calcutta at 11:45 P.M., July 14, after a record-making passage of

36 days 5¾ hours. The *Grey Feather* was sold in 1862 because of the Civil War; she was acquired by shipowners of Bremen, Germany, and renamed *Ida.*

The *Crystal Palace,* another small Eastport-built clipper, launched in 1854, was somewhat larger than the *Grey Feather,* but little is known of her sailing performance. She is said to have been "a good carrier, loftily sparred, and a smart and handy sailer." It is said that her captain claimed for his ship a record run in the China-to-England tea trade upon her arrival at Plymouth on October 27 and London on October 29, 1859, from Macao.

The Typical Down Easter ANNIE H. SMITH, *Built at Calais*

Calais is at the head of navigation of the St. Croix River—the international boundary—and about twelve miles from the river's mouth. It is the most northerly port of entry and shipbuilding town in Maine and is some twenty-four miles northeast of Eastport. The first permanent settler in this locality was David Hill, a lumber operator, who established himself in 1779. The entire site of the present city of Calais was sold by Massachusetts in 1789 for $4,000 to Waterman Thomas, and in 1802 the first sawmill was built. Being primarily a lumber center and trading post, Calais built wood ships for the freighting of forest products from around the turn of the century. Such construction was given impetus when peace was declared following the War of 1812. No clipper ships were built at Calais, but small, full-bodied coasting schooners and brigs and some deep-sea square-riggers were built at Calais and on the lower St. Croix.

The full-rigged, full-bodied, and well-sparred ship *Annie H. Smith* was built for the brothers F. H. and William H. Smith (F. H. Smith & Company), New York, and launched from the yard of Nickerson & Rideout, Calais, Maine, in December 1876. F. H. Smith & Company was interested primarily in coasting schooners and barkentines, but in 1883 this firm built the ship *William H. Smith* at Bath, Maine. The *Annie H. Smith* (named after F. H. Smith's daughter) was deemed an important vessel and a big ship to be built around the Passamaquoddy and northern Maine. She was "a typical Down Easter" of 1,503 tons register and measured 200 ft. long, 40 ft. beam, and 24½ ft. deep. The maiden voyage of the *Annie H. Smith* was a very successful around-the-world voyage made in very good time: New York to Melbourne (with general cargo and 360 passengers), 74 days; Newcastle to San Francisco, coal laden, 62 days; San Francisco to Liverpool with wheat, 118 days. The total time at sea, North Atlantic to North Atlantic, with paying cargo, was 254 days. (She then crossed the Atlantic westbound to New York in ballast.) Following this voyage, the ship operated in trade mainly with the Far East, with an occasional passage around the Horn from the North Atlantic, and at intervals she crossed the Pacific and loaded California wheat for Europe. In 1883, with Capt. Rowland B. Brown in command, the *Annie H. Smith* ran from Cardiff to Hong Kong in 97 days. Her last eastward run around the Horn was a good passage of 119 days, loaded with lumber, from Port Blakely to New York. Her last westbound passage was a long run of 210 days from New York to Seattle, during which terrific weather was experienced. She was badly battered off Cape Horn, with much damage to spars, rigging and sails, and the rudderhead was twisted off. The ship *San Joaquin* and the bark *Adolph Obrig* experienced the same weather, and all three ships were compelled to put back into Port Stanley for repairs, causing detention of over a month. In 1893, after seventeen years' sea life under canvas, the *Annie H. Smith* was sold to Lewis Luckenbach, who converted her into a coal barge. She foundered in tow off Fire Island on May 6, 1917, when forty-one years old.

A Record of Sailing Ship Construction in Machias, East Machias, and Machiasport

Ships were built at various points on the Maine coast between Bar Harbor and Eastport from early colonial days, but authentic records of their number, size, and type are impossible to find. Gouldsboro and Steuben on Gouldsboro Bay; Cherryfield on the Narraguagus River; Millbridge, Harrington, and Addison on Pleasant Bay; Jonesboro on the Chandler River, which empties into Englishmans Bay; Larrabee and Machiasport on Machias Bay, with Machias on the Machias River, and Cutler, South Trescott, and Lubec farther to the east were all (including many other shore-front, inlet, and river-bank locations) active shipbuilding centers around the turn of the century and during much of the first half of the nineteenth century. Moreover, these little Down East yards did not build for coastwise trade alone; they sent their little square-riggers to trade on the Seven Seas, and some of the yards both sold their product built "on spec" to Massachusetts shipowners and constructed ships on order for such owners. Shipbuilding in the yards of eastern Maine was detrimentally affected far more than that in any other part of the country by the War of the Revolution, the years of the embargo, and the War of 1812. These yards and the various harbors and shipping ports, being close to the Canadian border, were watched and harassed steadily by fast, well-armed, small craft of the British Navy. It was not until about 1816 that the "way Down East" shipyards were able to function without enemy interference, with confiscation or destruction, but from the 1820's on, there was much building. To illustrate the sort of vessels constructed in this part of Maine in the forties to the eighties of the last century, the experience and building record of John Shaw, of Machias, is set forth herewith.

John Shaw commenced his shipbuilding career at Steuben (located on the northern end of Gouldsboro Bay), where he was born. In early 1847, he built the 150-ton brig *Masardis* at Cherryfield on the Narraguagus River and later in the year, needing deeper water, laid down the larger brig *C. W. Brinkerhoff* of 237 tons at Machiasport (located at the northwest corner of Machias Bay), about twenty-seven miles to the east of Cherryfield. Not satisfied with the setting of either the Machiasport or Cherryfield yard, Shaw, in 1848, laid down a 150-ton schooner (the *Jacob Longfellow*) at Machias—which is three or four miles west of Machiasport—and a 137-ton schooner (the *Tyrone*) at Harrington, located on the north of Pleasant Bay and about eighteen miles southwest of Machias. After launching four vessels from four different yards located in four different towns or villages within a space of two years, Shaw decided that the site at Machias was the best for his purpose, and it was there that he established his permanent yard and from which he launched fifty-two vessels (twenty-two of which were square-riggers) during the forty-three-year period 1848-1890 inclusive. The following table gives the number, type, and tonnage of the fifty-five vessels built by John Shaw:

Period Inclusive	Number of Vessels					Tonnage of Vessels				
	Barks	Barkentines	Brigs	Schooners	Total	Barks	Barkentines	Brigs	Schooners	Total
1847-1850	—	—	5	3	8	—	—	964	422	1,386
1851-1855	2	—	8	4	14	650	—	1,764	588	3,002
1856-1860	—	—	2	7	9	—	—	529	1,100	1,629
1861-1865	3	—	—	2	5	1,397	—	—	387	1,784
1866-1870	—	—	2	6	8	—	—	652	1,013	1,665
1871-1875	—	—	—	5	5	—	—	—	1,336	1,336
1876-1880	1	1	—	—	2	749	570	—	—	1,319
1881-1885	—	—	—	1	1	—	—	—	437	437
1886-1890	—	—	—	3	3	—	—	—	1,367	1,367
Total 1847-1890	6	1	17	31	55	2,796	570	3,909	6,650	13,925

Average tonnage per vessel—barks, 466 tons; barkentines, 570 tons; brigs, 230 tons; schooners, 214½ tons; all rigs, 253 tons.

The largest vessels built by John Shaw at Machias (and elsewhere in that territory) were:

Year Built	Name	Rig	Tonnage	Year Built	Name	Rig	Tonnage
1877	VIRGINIA	Bark	749	1874	MIRANDA	Schooner	448
1889	H. E. THOMPSON	Schooner	649	1883	MINA BELLE	Schooner	437
1886	FRED A. SMALL	Schooner	588	1864	HOPE	Bark	433
1863	EXILE	Bark	577	1866	JOSIE	Brig	390
1876	BONNY DOON	Barkentine	570	1862	ORPHAN	Bark	387

Whereas John Shaw built small vessels, 42 per cent of them were built for long ocean voyages and foreign trade, and it was the boast of Machias that "Shaw's vessels have sailed on every sea on the face of the globe."

The following list of vessels built at Machias, East Machias, and Machiasport has been taken from the available customhouse records. (As in all records of this nature, there are evident variations in names, etc.)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet			Number of Masts
					Length	Beam	Depth	
1786	SUCCESS	Machias	Schooner	63	—	—	—	—
1795	ELIZA	Machias	Schooner	112	69	22	8.8	—
1801	HANNAH	Machias	Schooner	66	61.5	17.5	7	2
1801	SUSANNAH	Machias	Schooner	120	73	22.4	8.6	2
1805	THREE POLLYS	Machias	Schooner	63	53.4	18	7.8	2
1806	THREE BROTHERS	Machias	Schooner	120	76.2	22.7	8	2
1807	RESOLUTION	Machias	Brig	136	74.5	22.6	9.5	2
1811	TWO BROTHERS	Machias	Schooner	114	75.8	22.2	7.8	2
1812	WASHINGTON	Machias	Schooner	126	80	22.5	8	2
1815	GENERAL GATES	Machias	Brig	198	80.6	23.8	11.9	2
1815	LASSELL	Machias	Schooner	158	72.8	23	11.1	2
1815	SALLY ANN	Machias	Brig	192	80.8	23.3	11.7	2
1817	POLLY	Machias	Schooner	20	37.5	12.5	5.2	2
1818	CAROLINE AND NANCY	Machias	Schooner	90	59.4	19.4	9.2	2
1818	ELIZA	Machias	Schooner	34	48.1	14.4	5.7	2
1818	ELIZA ANN	Machias	Schooner	96	72.3	22	7	2
1819	MARY	Machias	Brig	132	78.4	22.5	8.6	2
1819	SUSAN	Machias	Schooner	131	78.5	22.8	8.4	2
1820	INCREASE	Machias	Schooner	71	34.8	12.4	5.8	2
1821	DIRIGO	Machias	Brig	139	80.4	22.6	8.8	2
1823	STRANGER	Machias	Brig	195	83.8	22.3	11	2
1824	CONSTELLATION	East Machias	Schooner	126	78	23.3	8	2
1824	MARY AND REBECCA	Machias	Schooner	132	80.8	23.4	8	2
1824	ORION	Machias	Brig	143	81.7	23.6	8.4	2
1825	ANTOINETTE	Machias	Brig	173	81.8	23.8	10.3	2
1825	FRANKLIN	Machias	Schooner	74	65.8	20.1	6.5	2
1825	PRESIDENT	Machias	Schooner	135	79.3	25.4	8.3	2
1826	GENERAL JACKSON	East Machias	Schooner	139	84.3	23.8	7.9	2
1826	GEORGE WASHINGTON	East Machias	Brig	230	88.3	24.5	12.1	2
1826	GOOD HOPE	East Machias	Schooner	105	67.3	21.6	8.5	2
1827	NEW ENGLAND	East Machias	Schooner	127	78	23.3	8.2	2
1828	JACKSON	Machiasport	Schooner	43	48.5	16	6.6	2
1828	OLD HUNDRED	East Machias	Schooner	117	75.8	22.6	7.9	2

(Continued on next page)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1831	DAVENPORT	East Machias	Schooner	139	80.8	23.5	8.4	2
1831	JOHN KELLAR	East Machias	Schooner	133	78.7	23.1	8.4	2
1833	LUCINDA	Machias	Schooner	137	78.5	22.9	8.8	2
1833	OAK HILL	East Machias	Schooner	140	81.3	23.1	8.4	2
1834	BOSTON	East Machias	Schooner	148	81.8	23.3	8.8	2
1835	BOSTON	East Machias	Schooner	106	81	24.2	8.5	2
1836	FRANKLIN	Machiasport	Schooner	141	80.5	24.1	8.3	2
1838	CHARLES L. VOSE	Machias	Schooner	159	81.7	24.3	9.3	2
1838	PATRIOT	Machias	Schooner	145	79.9	23.8	8.8	2
1839	ANTOINETTE	Machiasport	Schooner	156	84.2	24	8.8	2
1839	JUAN J. DE CARTAGENA	East Machias	Brig	151	83.2	24.4	8.6	2
1839	MARS HILL	East Machias	Brig	161	85.3	24	9	2
1839	SWALLOW	East Machias	Schooner	34	46	13	6.5	2
1840	AMANDA	Machias	Schooner	178	87.8	24.9	9.3	2
1840	CITIZEN	East Machias	Brig	187	89.5	24.9	9.4	2
1840	JOHN HILL	Machias	Schooner	152	81	24.2	9	2
1840	LUCY PENNIMAN	East Machias	Bark	270	101.5	24.5	12	3
1841	BROTHERS	East Machias	Brig	220	95.1	24.2	10.8	2
1841	GEORGE W. GIFFORD	Machias	Brig	185	87.4	24.8	9.8	2
1841	H. B. FOSTER	East Machias	Schooner	133	81.3	24.3	7.8	2
1841	MARGARETTA	Machiasport	Brig	235	95.1	24.9	11.5	2
1841	MARY AND ELIZABETH	Machias	Schooner	139	81.3	24.4	8.1	2
1841	WILLIAM	Machiasport	Brig	129	79.3	22.9	8.2	2
1842	MARTIN W. BRETT	Machias	Bark	228	95.8	25	10.8	3
1842	T. R. JONES	Machias	Schooner	121	77.6	22.6	7.9	2
1843	EGERONAUT	Machias	Schooner	128	73.8	23.2	7.9	2
1843	LOWELL	Machias	Brig	219	91.9	25.6	10.6	2
1843	VANCOUVER	Machiasport	Schooner	21	42.5	12.3	4.6	2
1844	ADALINE AND ROSINA	East Machias	Schooner	110	75.7	22.8	7.4	2
1844	E. RANDALL	East Machias	Schooner	143	81.7	24	8.4	2
1844	FRANCES	Machias	Brig	163	85.5	24.2	9	2
1845	C. L. SNOW	East Machias	Schooner	141	80.6	23.9	8.4	2
1845	GEORGE EVANS	East Machias	Schooner	127	79	23.7	7.7	2
1846	B. A. TUFTS	Machiasport	Schooner	161	89	24	8.5	2
1846	JACOB AND WILLIAM	Machiasport	Schooner	131	80.8	23.9	7.8	2
1846	WILLIAM POPE	East Machias	Schooner	130	80.5	23.8	7.8	2
1847	G. W. BRINCK-ERHOFF	Machiasport	Brig	231	97.2	25.1	10.6	2
1847	LUCY ELLEN	Machiasport	Bark	196	93.8	24	9.8	3
1847	SAM SMALL	Machiasport	Brig	165	87	24.5	8.8	2
1847	SARAH	Machiasport	Brig	203	93	24.8	9.9	2
1848	AGATE	Machiasport	Brig	195	95.4	24.2	9.4	2
1848	JACOB LONGFELLOW	Machias	Schooner	145	85.5	25	7.8	2
1848	O'BRIEN	Machiasport	Schooner	149	85.4	24.8	8.1	2
1848	TALBOT	East Machias	Schooner	148	85.5	25	8	2
1848	YANTIC	East Machias	Schooner	108	78	22	7.2	2
1849	CAMEO	Machias	Schooner	136	84.6	22.8	8	2
1849	KATE HEATH	Machiasport	Brig	189	94	25.3	9	2
1849	LEONICE	Machias	Brig	220	99	24.3	10.2	2

(Continued on next page)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1849	PRESTO	Machiasport	Schooner	118	78.8	22.8	7.5	2
1849	SUSAN	Machias	Brig	199	94.8	25	9.5	2
1850	HENRY LAURENS	East Machias	Schooner	147	84.7	24	8.3	2
1850	J. B. BROWN	East Machias	Schooner	180	92.8	25.1	8.8	2
1850	NEPTUNE	East Machias	Schooner	139	85	23.8	7.8	2
1850	OLIVE	Machias	Brig	193	96.5	25	9	2
1850	SARAH	Machias	Schooner	136	84.3	23.7	7.8	2
1850	THOMAS M. MAYHEW	East Machias	Schooner	177	91.7	25	8.8	2
1851	CELT	Machias	Brig	150	87	24	8.2	2
1851	CONDOR	East Machias	Brig	178	93.3	25	8.6	2
1851	DIDO	Machiasport	Brig	163	82.3	23.6	8.8	2
1851	FLYING CLOUD	Machiasport	Schooner	21	35.5	11.6	6.1	2
1851	KALUNA	East Machias	Schooner	150	86.8	24.3	8.1	2
1851	MIRANDA	East Machias	Schooner	158	86.6	24.1	8.6	2
1851	NEW YORK PACKET	Machias	Schooner	150	86.5	23.8	8.3	2
1851	RELIEF	Machias	Schooner	150	87.5	23.8	8.2	2
1851	UNION	East Machias	Schooner	150	88	24.2	8	2
1852	AMYTIS	Machias	Schooner	106	76.8	22.1	7.2	2
1852	BONAPARTE	Machiasport	Brig	171	92	24	8.8	2
1852	CRAWFORD	East Machias	Brig	191	95.4	25.1	9	2
1852	ELVIRA	Machias	Schooner	152	89.8	23.8	8.3	2
1852	LINDA	East Machias	Brig	76	96.4	24.7	8.3	2
1852	L. P. FOSTER	East Machias	Schooner	194	97.2	25.7	8.8	2
1852	MANUELLA	East Machias	Schooner	154	87	25	8.1	2
1852	MARTHA JANE	Machias	Schooner	198	95.7	26.3	8.9	2
1852	MARY LOWELL	East Machias	Brig	191	95	25	9.1	2
1852	MIRANDA	East Machias	Brig	189	95.2	24.9	8.9	2
1852	VIRGINIA	Machias	Bark	298	113.4	26.2	11.1	3
1853	DOLPHIN	East Machias	Schooner	149	89	24.3	7.9	2
1853	ENTERPRIZE	Machiasport	Schooner	26	39.3	12.7	6.1	2
1853	EUREKA	East Machias	Brig	181	94	25.3	8.6	2
1853	GIPSY	East Machias	Schooner	146	84.6	24.9	8	2
1853	INDUSTRY	Machias	Brig	177	96.2	24.5	8.4	2
1853	JOSIAH JEX	Machias	Brig	216	97.8	26.1	9.6	2
1853	KOLOA	East Machias	Schooner	197	98	26	8.8	2
1853	MARY CAPEN	East Machias	Schooner	195	95	25.9	9	2
1853	SARAH BERNICE	Machiasport	Schooner	210	100	26.3	9	2
1854	B. G. CHALONER	East Machias	Schooner	199	98.5	26	8.8	2
1854	JENNY FORD	East Machias	Bark	397	133.3	30.3	10.8	3
1854	LAURA	Machias	Brig	217	100.5	25.7	9.4	2
1854	S. H. TALBOT	East Machias	Ship	593	143.9	29.9	14.9	3
1854	SITKA	East Machias	Brig	228	102.5	26.3	9.5	2
1854	STATE OF MAINE	Machias	Brig	339	119.7	27.1	11.5	2
1854	WAREDALE	East Machias	Brig	222	103.5	26.4	9.1	2
1854	WILLIE	Machias	Brig	217	100.5	25.7	9.4	2
1855	COLONEL PENNIMAN	Machias	Brig	248	106	26.6	9.8	2
1855	MARY ALICE	Machias	Schooner	181	92	25.4	8.8	2
1855	MARY O. DONWORTH	Machias	Bark	357	120	28.2	11.7	3
1855	NATHAN	Machias	Brig	233	103.8	26.3	9.6	2
1855	SIAK	East Machias	Schooner	153	86.5	24.5	8.3	2
1855	STAR	East Machias	Schooner	118	86.7	24.6	8.2	2

(Continued on next page)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1856	ALAMO	East Machias	Brig	172	93.6	24.8	8.3	2
1856	CRUSOE	East Machias	Schooner	148	88.2	24.8	7.8	2
1856	JOHN SHAW	Machias	Schooner	157	89.2	23.9	8.3	2
1856	KASBEC	East Machias	Schooner	159	88	24.7	8.3	2
1856	LAKWA	East Machias	Schooner	175	95	27	8	2
1856	ORIENTAL	East Machias	Schooner	197	97	27.2	8.5	2
1856	SAHWA	East Machias	Schooner	179	95	27	8	2
1856	SARAH FLAGG	Machias	Brig	250	106	26.6	9.9	2
1856	VIGO	East Machias	Bark	415	126	30	12.2	3
1857	AMELIA	Machias	Schooner	147	85	24	7.8	2
1857	CARROLL	East Machias	Schooner	138	84.8	24.8	7.8	2
1857	GARLAND	East Machias	Schooner	191	95	26.1	8.8	2
1857	PARAN	East Machias	Schooner	143	87.5	23.8	7.8	2
1857	VIOLA	Machias	Schooner	199	91.8	25.8	8.8	2
1858	CAROLINE	East Machias	Brig	200	99.5	26.8	8	2
1858	MACHIAS	Machias	Brig	245	106.7	26.8	9.6	2
1858	MARTHA NICKELS	Machias	Schooner	169	91	25.4	8.3	2
1858	TOANDO	East Machias	Schooner	167	89.5	25	8.5	2
1859	CALMUCK	East Machias	Brig	299	112.4	28.1	10.6	2
1859	EURUS	East Machias	Brig	199	99	26.3	8.7	2
1859	GEORGE	Machias	Schooner	145	85.5	24.8	7.8	2
1859	HARRIET NEWELL	Machias	Schooner	163	92.2	25.3	7.9	2
1859	J. W. WOODRUFF	Machiasport	Brig	174	90	24.1	9.1	2
1859	KARNAK	East Machias	Brig	286	108.5	30	10	2
1860	CENTAUR	East Machias	Brig	226	101.4	26.8	9.3	2
1860	COSSIS ANN	Machias	Brig	269	108.6	27.3	10.1	2
1860	J. W. SPENCER	Machias	Brig	328	118	27.7	11.1	2
1860	MAGNET	East Machias	Schooner	180	91.6	25.6	8.8	2
1860	PALMETTO	Machiasport	Brig	272	108.3	29	9.1	2
1860	VICTOR	East Machias	Ship	746	150	33	16.5	3
1860	ZINA	Machias	Schooner	122	80.3	23.4	7.5	2
1861	COSMOS	East Machias	Brig	217	102	26.7	9	2
1861	KODIAK	East Machias	Brig	398	130	30	11.3	2
1861	UDOLA	East Machias	Brig	319	117	28	10.8	2
1862	OZELL	East Machias	Schooner	181	90.3	25.5	9	2
1862	ORPHAN	Machias	Bark	390	119.6	26.8	13.3	3
1863	EXILE	Machias	Bark	578	140	30	15	3
1863	JASON	Machias	Schooner	162	88.8	23.7	8.8	2
1863	KEOKUK	East Machias	Schooner	191	95.4	25.3	8.9	2
1863	MANLIUS	East Machias	Brig	259	110.3	28.5	9.3	2
1863	NAVIGATOR	East Machias	Schooner	147	86.6	23.4	8.3	2
1863	NICOLA	East Machias	Schooner	172	94.5	25.5	8.1	2
1863	RENO	East Machias	Schooner	171	93.8	25.4	8.1	2
1864	ALCORA	East Machias	Schooner	198	94.5	25.7	9.3	2
1864	KORET	East Machias	Brig	278	110.7	29	9.8	2
1864	NEVA	East Machias	Brig	226	102.6	26.3	9.4	2
1864	OLIVE FRANCE	East Machias	Brig	293	110	27	11	2
1864	OMAHA	East Machias	Brig	296	110	28.8	10.5	2
1864	SINOLOA	East Machias	Schooner	170	95.8	24.9	8	2
1864	ZAMPA	East Machias	Schooner	184	95.5	25.7	8.5	2
1865	CYGNUS	East Machias	Schooner	186	101.5	26.2	9.5	2
1865	HAMBURG	East Machias	Schooner	183	102.1	26.1	9	2
1865	I. M. WISTELL	East Machias	Brig	380	125.4	29.4	9.8	2
1865	KORET	East Machias	Schooner	139	93	25	8.2	2

(Continued on next page)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1865	ONTARA	Machias	Schooner	278	102.1	27.5	9.9	2
1865	RAVEN	Machias	Brig	375	117.8	27.4	16.5	2
1866	DECORRA	Machias	Schooner	159	96	25.4	9.3	2
1866	ERT	Machias	Schooner	144	92.6	25.9	9.2	2
1866	JOSIE	Machias	Brig	391	115.4	27.6	16.4	2
1866	KALMER	East Machias	Schooner	156	96	25.7	8.7	2
1866	KALON	East Machias	Schooner	143	95.4	23.4	8	2
1866	KOLON	East Machias	Schooner	150	95.5	25.3	8.5	2
1866	KOSSAK	East Machias	Brig	345	114.2	28.1	15.4	2
1866	SABAO	Machias	Schooner	146	87.5	25.8	9.6	2
1866	SUSAN ABBIE	East Machias	Schooner	164	98.5	26	9	2
1866	TALLY HO	East Machias	Brig	332	113	28.7	14.1	2
1867	ADELIZA	East Machias	Schooner	185	108.5	28.2	9	2
1867	ALASKA	East Machias	Schooner	174	102	26.1	9.1	2
1867	ALPHA	East Machias	Schooner	144	96	26.3	8.3	2
1867	ELLA M. PENNELL	Machiasport	Schooner	194	104	28.7	9.2	2
1867	HARRY	Machias	Brig	262	118	27	11.7	2
1867	HELEN J. HOLWAY	Machias	Schooner	223	100.8	26.2	9.9	2
1867	LUGANO	East Machias	Schooner	174	104.5	28.1	9	2
1868	ABBIE INGALLS	Machias	Schooner	188	106	26.2	10	2
1868	BETA	East Machias	Schooner	152	98	26.2	8.6	2
1868	FIVE SISTERS	Machias	Schooner	146	92.5	25.2	9.2	2
1868	MAUNA LOA	East Machias	Schooner	139	96	26.5	8.5	2
1869	ELLA BROWN	East Machias	Schooner	164	101.5	26.3	8.8	2
1869	GAMMA	East Machias	Schooner	162	100.5	26.3	8.8	2
1869	LUCY HAMMOND	East Machias	Schooner	158	96.5	26.3	8.5	2
1869	SARAH B	Machias	Schooner	151	96	28.3	7.9	2
1869	VARUNA	Machias	Schooner	129	84	29.3	7.7	2
1870	FRANK	Machias	Schooner	100	79.5	23.8	7.7	2
1870	PARA	East Machias	Schooner	115	92	26	7.6	2
1870	POHONO	Machias	Bark	471	139.8	28.6	16.6	3
1871	ETTA WHITTEMORE	East Machias	Brig	411	127.2	30.5	15.6	2
1871	LEVINIA F. WARREN	Machiasport	Schooner	299	112	26.7	9.5	3
1871	L. F. MUNSON	East Machias	Brig	412	123	30.4	15.2	2
1871	LUCY LEE	Machias	Schooner	135	93.5	25.2	8.4	2
1871	NELLIE SHAW	Machias	Schooner	269	104	28.7	9.1	2
1871	NULATO	Machias	Schooner	130	95.5	25.1	8.2	2
1871	SAARBRUCK	East Machias	Schooner	163	99.5	26.5	8.7	2
1872	ALMA	East Machias	Schooner	180	104	26.6	8.8	2
1872	ANITA	East Machias	Schooner	404	124	29	15.3	3
1872	GEORGE WALKER	Machias	Schooner	372	121	29.3	10.3	3
1872	KELPIE	East Machias	Schooner	126	88	25.7	7.9	2
1872	KOCHEKO	East Machias	Schooner	319	125	29.7	10.1	3
1872	MARTHA GALE	Machias	Schooner	348	117	27.2	12	3
1872	MAUD	Machiasport	Schooner	398	127	29.8	13.9	3
1872	NETTIE WALKER	Machias	Schooner	124	90	24	8.2	2
1872	XIMENA	Machias	Schooner	104	80	24.6	7	2
1873	ALDINE	East Machias	Schooner	203	105.5	26.7	9.6	2
1873	ALLEGRO	East Machias	Schooner	173	100	26.5	9.1	2
1873	GEORGE D. PERRY	Machias	Schooner	124	88.4	24.3	8.3	2
1873	KENSETT	East Machias	Schooner	459	132	30	16.7	3
1873	MARY HELEN	East Machias	Schooner	217	109	26.2	8.5	3
1873	NELLIE F.	East Machias	Schooner	106	86.5	22.5	8.1	2
1873	OLUSTEE	East Machias	Bark	470	133.5	29.9	16.6	3
1873	WAN BUN	Machias	Brig	508	137	30.1	17.2	2

(Continued on next page)

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet			Number of Masts
					Length	Beam	Depth	
1874	ADA WISWELL	East Machias	Bark	558	140	30.2	16.9	3
1874	AKBAR	Machias	Brig	432	127.5	28.5	16.8	2
1874	A. McNICHOL	East Machias	Schooner	122	93	24.7	7.9	2
1874	JAMES R. TALBOT	East Machias	Schooner	316	116	27	13.9	3
1874	MARY BARTLETT	Machias	Brig	358	117	27.3	16.1	2
1874	MIRANDA	Machias	Schooner	448	130	29.5	16.6	3
1874	RIALTO	East Machias	Brig	478	129.5	30.5	16.7	2
1874	T. A. STUART	Machiasport	Schooner	179	105	27	8.8	2
1875	ARCOT	East Machias	Brig	401	124.5	29.5	15.1	2
1875	ELLEN M. MITCHELL	Machiasport	Brig	395	132.7	33	12.5	2
1875	ELLEN M. MITCHELL	Machiasport	Schooner	379	132.7	33	12.5	3
1875	KALALIS	East Machias	Bark	560	141.3	30.3	17.3	3
1876	BONNY DOON	Machias	Bark	570	138.5	30.6	17.3	3
1877	KENNARD	East Machias	Bark	617	144.5	33.3	17.6	3
1877	MARY T. KIMBALL	East Machias	Brig	477	134.6	32	15.3	2
1877	MOTLEY	Machias	Brig	591	142.3	31.5	17.4	2
1877	VIRGINIA	Machias	Bark	750	154.2	33.5	19.9	3
1880	GEORGE A. CROWLEY	Machiasport	Schooner	9	28.8	11.9	4.8	2
1880	W. R. CHESTER	Machias	Schooner	127	85.7	24.8	8.1	2
1883	HARRY C. CHESTER	East Machias	Schooner	72	74.7	23	6.9	2
1883	JUMBO	East Machias	Schooner	22	48.5	15	4.1	2
1883	MINA BELLE	Machias	Schooner	445	131.2	32.4	12.8	3
1883	PANCHITA	East Machias	Schooner	412	135.9	32	12.8	3
1886	FRED A. SMALL	Machias	Schooner	588	142.1	32	18.2	3
1889	H. E. THOMPSON	Machias	Schooner	649	153.4	32.5	18.1	3
1889	T. W. COOPER	East Machias	Schooner	150	99	28.3	8.3	2
1890	ELEANOR M. WILLIAMS	Machias	Bark	682	159.4	32.8	18.2	3
1890	LELIA SMITH	East Machias	Schooner	264	128.3	31.2	10.7	3
1891	ABBIE G. COLE	East Machias	Schooner	273	129.2	30.6	10.3	3
1891	REGINA	Machias	Schooner	108	87.8	25.5	7.6	2
1893	NETTIE M.	Machias	Schooner	10	32.2	12.4	4.6	2
1895	AILSA	Machias	Gas screw	8	37.5	13.2	5.6	1
1899	JENNIE G. LOGAN	Machias	Schooner	16	44	14.2	6.4	2
1899	SADIE	Machias	Schooner	11	46.5	14.2	6.8	2
1901	EMILY I. WHITE	Machias	Schooner	352	130.7	33.7	10.7	3
1904	MOLLIE S. LOOK	Machias	Schooner	457	159	36.1	12.8	3
1919	CUTLER	Machias	Schooner barge	1,322	203.6	37.6	19.6	3
1919	JONESPORT	Machias	Schooner barge	1,323	230.6	37.6	19.6	3
1919	WELLESLEY	Machias	Schooner	1,307	230.6	37.6	19.6	3
1920	LEONA AND MARION	Machias	Schooner	314	134	28	9.4	3
1920	SPINDRIFT	Machias	Schooner	720	180.1	38.2	14	4
1932	HAMRAH	Machiasport	Schooner	21	49.1	12.2	6.5	2

XLII.

THE DISTRICT BETWEEN THE MACHIAS AREA AND GOULDSBORO

A. Jonesboro

THE FOLLOWING vessels were built at Jonesboro, Maine, according to the available custom-house records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1816	ROGUE	Schooner	158	84.1	23.2	9.2	2
1817	PEGGY	Schooner	33	45.3	14.3	6.1	2
1820	STRANGER	Schooner	50	56.5	15.2	6.7	2
1821	STEPHEN JONES	Schooner	63	57.1	16.8	7.6	2
1822	AGENORIA	Brig	171	80	23	10.7	2
1826	ALBATROSS	Schooner	27	40.6	13.2	6	2
1831	TWO BROTHERS	Schooner	96	70.8	21.7	7.2	2
1833	ANN ELIZA	Schooner	120	74.8	22.8	8.2	2
1838	BANNER	Schooner	132	78.3	23.5	8.3	2
1846	MAY FLOWER	Schooner	133	81.4	24	7.8	2
1847	DESDEMONA	Bark	198	104.5	25.2	12.6	3
1848	F. A. PEARLEY	Bark	250	101	25	11.1	3
1849	KATE LINCOLN	Bark	273	104.5	25.1	11.6	3
1850	LADY SUFFOLK	Bark	200	96.7	24.5	9.4	3
1851	SOPHIA	Bark	197	96.3	25.2	9.2	3
1851	W. T. RICHARDSON	Brig	179	92.5	26	8.5	2
1855	DUBLIN	Bark	378	122	29.2	11.8	3
1855	MARY ANN	Schooner	108	71.8	23.4	7.6	2
1858	J. W. DEERING	Schooner	157	84.4	24.8	8.7	2
1863	MARCUS HUNTER	Schooner	231	103.4	26.3	9.5	2
1864	E. RICHARDSON	Schooner	258	105.5	27.7	9.9	2
1868	LIZZIE BREWSTER	Schooner	100	80.5	26.6	6.7	2
1871	KIOKA	Schooner	84	71	23.5	7.3	2
1873	ANNIE LEE	Schooner	120	89	26.2	7.4	2
1873	ULRICA R. SMITH	Schooner	125	90	26.2	7.8	2
1874	L. AND M. DONOVAN	Schooner	265	119.7	30.1	10.4	3
1874	SARAH P	Schooner	62	72	23.1	5.6	2
1875	NETTIE B. DOBBIN	Schooner	101	81	26	7.1	2
1881	NED P. WALKER	Schooner	98	81.4	24.3	6.8	2
1883	ABBIE S. WALKER	Schooner	191	103.7	28.7	8.5	3
1884	HARVESTER	Schooner	77	75.3	23.5	6.9	2
1885	CARRIE MAY	Schooner	34	56.8	20.7	5.3	2
1886	GEORGE A. LAWRY	Schooner	103	85.7	23.8	7.6	2
1887	VOLUNTEER	Schooner	64	67	23.7	6.3	2

B. Jonesport

The following list of vessels recorded as built at Jonesport, Maine, has been taken from the available customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1838	COMMODORE HULL	Brig	118	73.5	21.9	8.5	2
1838	GRACE FERRY	Bark	299	102	25.6	12.8	3
1847	MELISSA ANN	Brig	174	89	25.7	8.9	2
1848	ALEXANDER MILLIKEN	Brig	176	88.6	24.8	9.2	2
1849	R. AND L. LAMSON	Brig	156	85.2	25.3	8.3	2
1852	NORTHERN LIGHT	Schooner	138	80	22.8	8.6	2
1854	D. J. SAWYER	Schooner	188	91.5	26.3	9	2
1854	OCEAN BELLE	Schooner	81	67.8	21.2	6.5	2
1855	A. J. DYER	Schooner	131	75.8	24.3	8.3	2
1860	EMELINE G. SAWYER	Schooner	184	91	26.3	8.8	2
1862	MARY	Schooner	197	97.8	26.1	8.7	2
1863	HENRY	Schooner	193	94	26.1	9	2
1866	IDA MAY	Schooner	174	102	26.6	9	2
1867	PEIRO	Schooner	122	86.9	25.8	7.8	2
1868	D. SAWYER	Schooner	120	89.8	24.7	7.8	2
1869	E. M. SAWYER	Schooner	131	94	26.2	7.9	2
1869	L. HOLWAY	Schooner	121	88	26	7.7	2
1870	NILLISSON	Schooner	267	108.5	30	9.2	2
1872	ADA BARKER	Schooner	231	113	30	9.3	3
1872	CLARA E. ROGERS	Schooner	144	97	26.6	8.2	2
1873	FLORENCE P. HALL	Schooner	137	93.5	25.6	7.8	2
1873	STEPHEN J. WATTS	Schooner	105	84	25.8	7.3	2
1890	D. J. SAWYER	Schooner	326	136.8	32.4	10.8	3

C. Columbia

The following vessels were built at Columbia and Columbia Falls, Maine, according to available customhouse records.

Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet			Number of Masts
					Length	Beam	Depth	
1799	COLUMBIA	Columbia	Schooner	98	71.6	20	7.7	2
1803	VICTORY	Columbia	Schooner	120	75.3	23	8.1	2
1804	MARY ANNE	Columbia	Ship	240	85	25.6	12.8	3
1804	WILLIAM	Columbia	Schooner	117	73	22.5	8.3	2
1805	FREDERICK AUGUSTUS	Columbia	Ship	329	99.9	27.4	13.7	3
1805	LOUISA	Columbia	Brig	173	85.2	24.5	9.4	2
1806	GEORGE	Columbia	Brig	210	78.8	25	12.5	2
1806	LUCY	Columbia	Schooner	96	72.6	21.2	7.2	2
1806	PERSEVERANCE	Columbia	Ship	327	102	26.9	13.4	3
1807	FRANKLIN	Columbia	Ship	313	99.3	26.7	13.3	3
1807	MARK	Columbia	Schooner	136	77	23.7	8.7	2
1807	WASHINGTON	Columbia	Ship	271	89	26.6	13.3	3
1808	REGIA	Columbia	Schooner	43	50.8	16.4	6.1	2

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Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1810	ROBINSON POTTER	Columbia	Ship	366	102.6	28.5	14.2	3
1811	SHIBBOLETH	Columbia	Schooner	176	76.3	23	11.6	2
1815	ANTELOPE	Columbia	Brig	165	80.6	22.7	10.3	2
1815	SPRUCE	Columbia	Schooner	99	64	20	9	2
1817	NANCY	Columbia	Schooner	121	72.9	21.6	8.7	2
1819	AZORES	Columbia	Brig	169	82.2	23.7	10	2
1819	SPARTAN	Columbia	Schooner	43	53.5	14.5	6.2	2
1822	ST. MICHAEL	Columbia	Schooner	127	72.7	21.3	9.4	2
1825	HERALD	Columbia	Brig	174	80.8	23.2	10.7	2
1825	PLEIADES	Columbia	Schooner	114	75.2	22.9	7.7	2
1827	VOLANT	Columbia	Schooner	74	63.5	20.7	6.7	2
1833	CYGNET	Columbia	Schooner	129	81.6	22.8	7.9	2
1840	RADIUS	Columbia	Brig	195	86.7	24.4	10.5	2
1841	SULTANA	Columbia	Schooner	138	81.3	23.7	8.3	2
1845	JOSEPH CRANDON	Columbia	Schooner	171	83	23.9	9.6	2
1846	TANGENT	Columbia	Schooner	135	75	23.8	8.3	2
1846	WREATH	Columbia	Schooner	128	81.2	23	7.8	2
1847	A. H. WASS	Columbia	Brig	171	84.5	13.9	9.7	2
1847	ALICE BENTLEY	Columbia	Brig	197	88	24.8	10.3	2
1847	EDWIN JOHNSON	Columbia	Bark	290	105	25.6	12	3
1848	E. WRIGHT	Columbia	Schooner	157	84.7	23.5	9	2
1851	CAROLINE A. WHITE	Columbia	Brig	191	94	25.7	9	2
1851	REINDEER	Columbia	Bark	248	100	25.2	11	3
1852	MARY AND FRANCES	Columbia	Schooner	143	85	24.2	8	2
1852	MARY E. GAGE	Columbia	Schooner	110	76	22.3	7.5	2
1854	ANDREW PETERS	Columbia	Schooner	117	91.1	23.2	8.1	2
1854	CRYSTAL PALACE	Columbia	Schooner	155	91	24	8	2
1854	G. L. BUCKNAM	Columbia	Brig	196	96.5	26.2	8.8	2
1854	HENRY BROOKS	Columbia	Brig	198	96	26	9	2
1854	S. AND B. SMALL	Columbia	Schooner	178	92	25.2	8.7	2
1855	BALTIC	Columbia	Schooner	144	85	24.3	8	2
1855	SYLVI	Columbia	Schooner	102	74.5	22.1	7.2	2
1856	B. F. NASH	Columbia	Brig	409	119.5	37.8	12.3	2
1856	J. W. DRISCO	Columbia	Schooner	197	96	26.5	8.8	2
1856	LIZABEL	Columbia	Brig	298	111.2	27.2	11	2
1856	MINNIE MILLER	Columbia	Brig	283	104.5	28.4	10	2
1859	PEDRO SANCHES DOLZ	Columbia	Brig	203	93.4	27.1	9.2	2
1860	M. S. HATHAWAY	Columbia	Schooner	200	100	26.5	8.6	2
1862	E. S. CONANT	Columbia	Schooner	127	76.3	26.2	7.6	2
1863	A. RICHARDS	Columbia Falls	Brig	274	109	28.3	10	2
1864	A. RICHARDS	Columbia Falls	Schooner	226	95.6	27.1	10	2
1864	A. T. KINGSLEY	Columbia Falls	Schooner	170	97.5	27.2	9	2
1864	S. P. ADAMS	Columbia Falls	Schooner	214	93	27.2	9.7	2
1866	FANNY AND MAY	Columbia Falls	Schooner	137	89.5	26.5	8.2	2
1867	CALLAO	Columbia Falls	Brig	446	124.4	30.2	16.7	2
1867	EDITH	Columbia Falls	Brig	197	102.1	28.7	9.5	2
1867	GUIDING STAR	Columbia Falls	Brig	209	104.3	28.9	9.9	2
1867	WILLIE HARRIS	Columbia Falls	Schooner	108	88	25.5	7.1	2
1869	MARY	Columbia	Schooner	122	86.9	25.9	8	2
1869	SARAH AND EMMA	Columbia Falls	Brig	322	113	28.8	14	2
1870	JOSIE	Columbia Falls	Schooner	83	75.1	25.3	6.6	2
1871	ATALAYA	Columbia Falls	Brig	418	122	29	14.5	2
1871	GERTRUDE PLUMMER	Columbia	Schooner	171	95	26.4	9.3	2
1872	DOLLY VARDEN	Columbia Falls	Schooner	108	84	25.5	7.1	2

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Year Built	Name	Town	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1872	JOHN SWAN	Columbia Falls	Brig	528	127	31.5	17.5	2
1873	EAGLE ROCK	Columbia Falls	Schooner	481	131.6	32	15.6	3
1873	GREKA	Columbia Falls	Schooner	120	87.7	25.5	7.3	2
1873	HENRY S. GREGG	Columbia Falls	Bark	495	131.6	32	15.9	3
1873	ORRIE V. DRISKO	Columbia Falls	Schooner	321	119.5	30	8.8	3
1873	YREKA	Columbia Falls	Schooner	120	87.7	25.5	7.3	2
1874	ANNA BELLE	Columbia Falls	Schooner	181	103	29	8.5	2
1874	JUNIETTA	Columbia Falls	Schooner	86	74.5	23.6	6.6	2
1874	LEONORA	Columbia Falls	Brig	459	126.5	30.6	16.1	2
1874	LYGONIA	Columbia Falls	Schooner	181	103.1	29.1	8.1	2
1874	MARENA	Columbia Falls	Brig	425	125.6	30.5	15.1	2
1875	JOHN H. CRANDON	Columbia Falls	Brig	517	129.1	31.2	16.9	2
1876	JUSTINE H. INGERSOLL	Columbia Falls	Bark	609	142.1	31.5	17.5	3
1877	CHARLES DEERING	Columbia Falls	Bark	810	156.4	34.6	20.3	3
1882	J. B. RABEL	Columbia Falls	Bark	428	143.9	33.2	12.4	3
1882	MODOC	Columbia Falls	Schooner	180	99.8	29.4	8.5	2
1883	ISAAC CARLTON	Columbia Falls	Schooner	432	133.5	33	14.3	3
1883	JENNIE HALL	Columbia Falls	Schooner	312	121.8	32.1	10.5	3
1883	MARCIA BAILEY	Columbia Falls	Schooner	70	73	22	6.4	2
1886	GEORGE H. DAVENPORT	Columbia Falls	Schooner	54	69.5	19.8	6.1	2
1888	LUCY BELLE	Columbia Falls	Schooner	87	79.3	24.5	6.5	2
1889	EDNA	Columbia Falls	Schooner	309	122.5	32.7	10.4	3
1889	JOHN SWAN	Columbia Falls	Bark	685	149.5	34.1	18.6	3
1890	CHARLES A. GILBERG	Columbia Falls	Schooner	462	142.8	32.4	10.9	3
1890	JEROME B. LOOK	Columbia Falls	Schooner	343	135.4	32.2	10.7	3
1890	JOSEPHINE ELLICOTT	Columbia Falls	Schooner	372	141.9	33.1	10.8	3
1891	A. R. KEENE	Columbia Falls	Schooner	364	138.5	32.9	10.7	3
1893	PEPE RAMIREZ	Columbia Falls	Schooner	428	146.2	32.8	12.2	3

D. Addison

The town of Addison, Maine, is credited with building the following vessels according to available customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1800	UNION	Schooner	99	71.2	20.9	7.7	2
1801	POLLY	Schooner	115	74	22	8	2
1802	ACTIVE	Schooner	96	70.8	21.7	7.3	2
1811	ELIZA	Schooner	41	46.8	15.7	6.7	2
1812	REBECCA	Schooner	27	42.2	13.9	5.4	2
1813	DOLPHIN	Schooner	30	43.5	13.5	6	2
1815	BETSEY	Schooner	42	48.3	15.3	6.8	2
1815	FANNY	Brig	155	78	22.3	10.2	2
1816	AMERICA	Schooner	160	81.9	23.3	9.6	2
1816	MARY ANN	Brig	176	80.2	23.4	10.7	2
1817	FRANCES	Brig	182	83.2	24.3	10.3	2
1817	PLANTER	Schooner	113	71.7	21.8	8.5	2
1819	MARY	Schooner	41	50.1	14.9	6.3	2
1819	MOUNT HOPE	Brig	206	85.9	24.9	11.1	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1820	WILLIAM	Schooner	41	50.5	14.5	6.5	2
1826	MARY	Schooner	105	69.7	22.5	7.9	2
1827	NEW YORK	Schooner	109	73.5	22.8	7.7	2
1829	NANCY ANN	Schooner	28	41.6	12.6	6.2	2
1830	ONLY DAUGHTER	Schooner	31	42	13.3	6.6	2
1831	ADDISON	Schooner	115	74	22.3	8.1	2
1831	LE BARRON	Brig	170	80.5	22.6	10.7	2
1832	ENTERPRIZE	Schooner	153	82.1	24.5	8.8	2
1832	MARY ANN	Schooner	124	79	20.7	8	2
1832	SUPERIOR	Schooner	153	82	24.4	8.8	2
1833	BILLINGS	Schooner	155	83.3	24.3	8.8	2
1833	GLOBE	Schooner	159	77.3	23.3	10.2	2
1835	SIDNEY	Schooner	120	75	22.7	8.2	2
1836	RISING SUN	Schooner	131	80.8	23	8.1	2
1837	HELEN GRAY	Schooner	188	90.2	24.4	9.7	2
1837	WASHINGTON	Brig	177	83.7	24.3	10	2
1838	ATLANTIC	Schooner	103	76	19.7	7.8	2
1839	LARCH	Schooner	124	75.3	20.7	8.7	2
1839	LEXINGTON	Schooner	145	80.8	24.1	8.6	2
1840	BRILLIANT	Schooner	100	72.3	22.8	7.1	2
1840	WAMPANOAG	Brig	181	88.5	24.1	9.6	2
1841	ARCTURUS	Brig	191	85.8	23.8	10.7	2
1842	JEFFERSON	Brig	198	86.4	24.3	10.8	2
1845	WESCOGUS	Schooner	165	84	24.7	9.2	2
1846	SEA GULL	Schooner	160	85.4	24.1	8.9	2
1847	OTHELLO	Brig	185	85.2	24.5	10.2	2
1848	MATAMORAS	Brig	189	90.6	24.2	9.7	2
1848	MORNING STAR	Schooner	175	86	24.5	9.5	2
1848	N. C. HARRIS	Schooner	148	82	24.1	8.6	2
1849	BERNICE	Schooner	113	74.5	23.1	7.7	2
1849	GIRAFFE	Schooner	122	82.3	24	7.1	2
1849	J. A. HOBART	Schooner	149	83.8	25	8.3	2
1852	PARROLA	Schooner	197	90	25.7	9.7	2
1852	WAVE	Schooner	130	86	23.2	7.3	2
1853	A. K. McKENZIE	Schooner	173	92	25.5	8.4	2
1854	SEVEN SISTERS	Schooner	127	81.4	23.1	7.8	2
1857	FANNY HAMILTON	Bark	384	121.3	28.3	12.3	3
1857	J. AND H. CROWLEY	Brig	240	105.9	28.3	8.1	2
1861	EVELYN	Schooner	106	83	25.5	7.7	2
1861	EVELYN	Schooner	162	91.1	25.7	7.9	2
1862	ANNA W. LEWIS	Bark	523	128.4	30	15	3
1863	ELVINA A. CONANT	Schooner	168	89.4	25.6	8.4	2
1863	SARAH GOODNOW	Brig	372	114.3	26.9	13.5	2
1863	SEA BRIDE	Bark	554	135	30	15	3
1864	MARY AND EMMA	Schooner	165	98.6	26.5	8.5	2
1864	OCEAN BELLE	Schooner	192	93.5	26.2	8.9	2
1865	JOHN S. MOULTON	Schooner	160	103	26.9	7.8	2
1865	JOSEPHINE B. KNOWLES	Schooner	134	97.7	26.3	8.8	2
1865	PACIFIC	Schooner	127	88.6	26.4	7.8	2
1866	NELLIE CHAPIN	Bark	567	133.2	30.3	18.8	3
1867	ADALINE RICHARDSON	Brig	223	107.3	28.2	10.5	2
1867	JAMES WARREN	Schooner	117	88.3	25.8	7.7	2
1867	OSPREY	Schooner	157	96.2	27.5	8.4	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1868	HENRY	Schooner	140	90.4	26	8.9	2
1868	L. AND M. KNOWLES	Schooner	177	97.3	28.1	9.1	2
1868	UNCLE TOM	Schooner	122	86.5	26.5	7.9	2
1869	MELONA M. KNOWLES	Schooner	206	105.5	28.3	9.3	2
1869	OLIVE	Schooner	142	96.3	26.5	8.4	2
1869	VELMA	Schooner	97	81.4	25.5	6.9	2
1870	J. C. NASH	Schooner	136	91.8	25.8	9	2
1870	TARRY NOT	Schooner	247	112.8	28.8	8.6	2
1870	VICTOR	Schooner	146	96	26.2	7.9	2
1871	CLARA LOUISE	Brig	211	103.4	24.4	8.3	2
1871	EBEN FISHER	Schooner	256	108.5	30.5	9.2	3
1872	SPEEDWELL	Schooner	419	127	30.1	11.6	3
1873	A. B. PERRY	Schooner	221	114.2	28.8	8.5	3
1873	LEANDER A. KNOWLES	Schooner	464	132	30.5	11.3	3
1873	SILVER SPRAY	Schooner	182	101.5	27.7	8.9	2
1874	ADA P. GOULD	Bark	521	131.6	31.2	17.5	3
1875	MARY E. RUSSELL	Bark	575	145.8	31.9	17.9	3
1876	ELLEN H. MUNROE	Brig	499	130.8	32.4	16.9	2
1876	WALTER L. PLUMMER	Schooner	332	122.8	29	12	3
1882	SHOO FLY	Schooner	15	40.1	13.4	5.3	2
1890	MILDRED A. POPE	Schooner	86	79.6	24.2	7.1	2
1891	ANNIE M. PREBLE	Schooner	97	82.5	24.2	7.3	2

E. Harrington

The following vessels are recorded in customhouse records as constructed at Harrington, Maine. The "barks" *Ethel V. Boynton* and *Herbert Fuller,* built in 1890, are recorded in 1897 as barkentine-rigged and owned or managed in Machias. The three-masted schooner *Bertram N. White,* built in 1892, is recorded as owned or managed by D. J. Sawyer, of Machias. The three-masted schooner *E. I. White,* built in 1895, was owned by E. I. White, also of Machias. It is of interest to note that Harrington participated in the artificial shipbuilding boom years brought about by the first World War and constructed four sizable four-masted schooners registering over 1,000 tons each (1918-1920).

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1793	JENNY	Schooner	53	57.8	17	6.3	2
1805	BOREAL	Ship	186	78	23.5	11.8	3
1807	SEA FLOWER	Schooner	73	42	13.3	5	2
1817	DILLIGENT	Schooner	25	39.8	12.7	5.8	2
1821	TWO BROTHERS	Schooner	50	52.9	15.1	7.2	2
1825	VICTORY	Schooner	114	75.7	22.8	7.7	2
1826	JUBILEE	Schooner	132	79	23.8	8.4	2
1827	GALAXY	Schooner	114	72.3	23.3	8	2
1828	ELIZA ANN	Schooner	87	67.5	21.8	7	2
1828	JOHN STILLMAN	Schooner	65	58.4	19.3	6.8	2
1830	ENTERPRIZE	Schooner	40	50	15.3	6.7	2
1831	EMBLEM	Schooner	119	75.2	23.3	7.9	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1831	INDEPENDENCE	Schooner	103	72.8	22.4	7.3	2
1831	MARY ANN	Schooner	97	71.7	22.5	7	2
1832	ANGELINE	Brig	168	85.8	24.3	9.3	2
1833	CAROLINE	Schooner	136	82.5	22.3	8.4	2
1833	FAME	Schooner	112	75.3	22.5	7.7	2
1833	IRENE	Schooner	116	75	22.8	7.8	2
1833	SUPERB	Schooner	128	75	23.3	8.2	2
1833	SUPERIOR	Schooner	103	74.8	21.2	7.4	2
1840	CONGRESS	Schooner	143	80.8	24.3	8.4	2
1840	GEORGE WARREN	Schooner	120	74.3	24	7.9	2
1840	MAJESTIC	Brig	186	88.2	25.3	9.5	2
1840	UNITED STATES	Schooner	150	82.4	24.2	8.7	2
1842	STATESMAN	Schooner	135	79.3	24.8	8.2	2
1843	ORIENTAL	Schooner	140	80.2	23.7	8.5	2
1844	AURORA	Schooner	98	72	22	7.2	2
1844	CYPRESS	Schooner	99	71.6	21.5	7.4	2
1846	ANTOINETTE	Schooner	162	87.5	24.4	8.7	2
1847	ISABELLA	Schooner	163	88.8	24.1	8.3	2
1847	MARGARET G. DAVIS	Brig	161	84.5	24.2	9	2
1847	ORION	Schooner	149	79.7	24.3	8.9	2
1847	RICHARD INGERSOLL	Brig	150	80.8	24.3	8.8	2
1847	WILLIAM M. HARRIS	Bark	199	95	24.3	9.7	3
1848	E. H. NASH	Schooner	118	77	22.8	7.8	2
1848	TYRONE	Schooner	103	83.3	22.7	7.6	2
1849	ALBERT	Schooner	99	72	21.8	7.4	2
1849	ELDORADO	Schooner	109	73.3	22.2	7.8	2
1850	THREE SISTERS	Schooner	143	83.5	23.6	8.3	2
1851	L. W. NASH	Bark	275	104	25.6	11	3
1851	ROAN	Schooner	127	78	23.7	8	2
1851	WILLIAM H. MITCHELL	Schooner	180	93	26	8.5	2
1852	EVERGLADE	Schooner	166	85.5	25.8	8.8	2
1852	P. B. COFFIN	Schooner	159	80.5	25.7	8.7	2
1852	RIO	Schooner	126	79	24.5	7.6	2
1853	RICHARD N. TORRY	Brig	179	92	25.4	8.6	2
1854	AUGUSTA	Schooner	166	89.5	25.5	8.3	2
1854	IRENE	Schooner	135	90	25.5	8.5	2
1854	IRENE	Brig	170	90	55.5	8.5	2
1855	ARTHEMUS	Schooner	154	85.2	25.3	8.3	2
1855	BEATRICE	Brig	199	94.3	26.5	9.1	2
1855	FRANCES ARTHEMUS	Schooner	154	85.2	25.3	8.3	2
1857	C. B. ALLEN	Brig	242	100.5	27.7	10.1	2
1857	WILLIAM R. SAWYER	Brig	168	92	26	8.7	2
1858	CONSTITUTION	Schooner	160	87	24.5	8.6	2
1860	CHEVIOT	Schooner	128	78.8	23.4	8	2
1860	UNION	Schooner	118	82	25.6	7.6	2
1862	ANTIETAM	Schooner	95	77	23.5	7.6	2
1862	DIRIGO	Brig	396	108.7	28.7	14.3	2
1864	J. LEIGHTON	Brig	145	91.9	26.4	8	2
1864	JULIA	Schooner	143	82	23.9	8.3	2
1864	LIZZIE	Schooner	105	77	23	8	2
1866	GAZETTE	Brig	326	112	28.3	13.6	2
1867	EVA N. JOHNSON	Brig	248	110.6	28.2	11	2
1867	MARY B. HARRIS	Schooner	165	94.8	27.5	9.8	2
1868	ABBIE H. HODGMAN	Schooner	153	89.7	27.6	8.7	2

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1868	ELIZA J. STAPLES	Schooner	164	91.9	27.7	9	2
1868	GEORGE ANNIE	Bark	559	133.1	30	18.8	3
1868	MARY E. PENNELL	Brig	252	110	28.2	11.2	2
1869	ACELIA THURLOW	Brig	474	125.2	30	17.4	2
1869	ANNIE TIBBETTS	Schooner	159	94.5	27.8	9.1	2
1869	CORA NASH	Schooner	174	98	27	9.8	2
1869	ELIZA B. COFFIN	Schooner	132	87.8	26.6	8.5	2
1869	HARMON CURTIS	Schooner	188	98.5	28.2	9.1	2
1870	SEA DOG	Schooner	134	86.5	27.2	8.5	2
1871	ALZENA	Schooner	284	114.8	28	13.3	2
1871	WINNER	Schooner	185	99.7	28.3	9.1	2
1872	CYPRESS	Schooner	66	70.1	20.5	6.6	2
1872	ELLA	Schooner	106	85.3	24.7	7.5	2
1872	FLORA M. CROWLEY	Schooner	271	112	28.8	11.8	3
1872	JAMES M. RILEY	Schooner	459	127.4	31	11.6	3
1872	SUSAN P. THURLOW	Schooner	460	126.4	31.1	16.6	3
1873	ACARA	Schooner	143	91.5	27.3	8.2	2
1873	C. C. SWEENEY	Brig	623	135	33.5	17.4	2
1873	GEORGIA	Schooner	351	122	30.4	13.5	3
1873	KALUNA	Brig	348	121	30.4	12.7	2
1873	LILLIAN	Bark	618	135	35.6	17.4	3
1873	SPEEDWAY	Schooner	323	117.4	31	12.3	2
1874	ALTA V. COLE	Schooner	203	106	29.1	9.3	2
1874	C. C. ROBINSON	Brig	360	127.5	31.4	12	2
1874	HELEN	Schooner	195	104	28.9	9.1	2
1874	H. EMMA RILEY	Schooner	329	123.3	30.3	12.1	3
1874	J. C. READ	Schooner	324	122	31.2	11.8	3
1874	JOHN F. ROTTMAN	Bark	633	138.8	33.3	17.8	3
1874	JOHN H. CONVERSE	Schooner	332	124	30.3	12.1	3
1874	MINA A. READ	Schooner	321	121.6	31.3	11.8	3
1875	CHARLES T. RUSSELL	Bark	731	150.4	35.4	18.7	3
1875	PAJARO	Schooner	219	111	29.1	9.6	2
1875	S. W. PERRY	Schooner	84	76.5	25	7.4	2
1876	TILLIE BAKER	Bark	719	150.1	34	18.7	3
1878	EVIE J. RAY	Bark	956	161.2	35.1	21.7	3
1878	SAMUEL H. NICKERSON	Bark	755	152	34.2	19.7	3
1882	DAISY READ	Barkentine	445	136.3	33.1	13	3
1882	NELLIE E. RUMBALL	Bark	421	136.4	32.8	12.8	3
1883	EMITA	Bark	449	139.5	32.9	12.9	3
1883	JOE READ	Bark	468	141.6	33.4	12.9	3
1884	KATE	Bark	561	142.7	32.8	18.1	3
1889	CLIFFORD I. WHITE	Schooner	290	122.2	32.5	10.4	3
1889	JOHANNA SWAN	Schooner	635	150.5	35.5	12.5	3
1890	ETHEL V. BOYNTON	Bark	703	161.3	34	16.2	3
1890	HERBERT FULLER	Bark	743	158.3	35.5	18	3
1891	GRACIE J.	Schooner	55	69.6	22.1	5.8	2
1892	BERTRAM N. WHITE	Schooner	447	145.2	35.1	12.3	3
1895	E. I. WHITE	Schooner	410	146.7	35.7	12.4	3
1917	LIZZIE D. PEABODY	Schooner	129	86	26.8	8.6	2
1917	LUCY EVELYN	Schooner	374	139.9	32.4	11.1	3
1918	SALLY PERSIS NOYES	Schooner	1,035	187	28.3	19.4	4
1919	DORIS HAMLIN	Schooner	1,063	220.5	38.8	18.5	4
1919	VELMA L. HAMLIN	Schooner	1,091	200	38.8	19.3	4
1920	MABEL A. FRYE	Schooner	1,152	193.8	37.4	20.4	4

F. Cherryfield

The following table gives a list, with particulars, of vessels given in customhouse records as built at Cherryfield, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1826	DESPATCH	Schooner	135	76.7	23.3	8.8	2
1826	INDUSTRY	Schooner	140	78.8	23.8	8.8	2
1826	SARAH G	Brig	187	82	24.5	10.7	2
1827	VOLANT	Schooner	131	78.3	23.1	8.3	2
1828	FRANKLIN	Schooner	133	77	24	8.3	2
1830	FARMER	Schooner	115	76	22.3	7.8	2
1830	GEORGE WASHINGTON	Brig	166	79.3	24.4	10	2
1831	FRONTIER	Schooner	56	58.8	16.2	6.8	2
1831	ONTARIO	Brig	186	85.2	25	10.1	2
1832	FRANCES	Schooner	170	85.2	24.5	9.2	2
1832	LEWIS	Brig	202	84.4	24	10.9	2
1833	ATLANTIC	Brig	216	90.5	24	11.3	2
1833	FRIENDS	Schooner	132	81.3	23.4	8	2
1835	SPLENDID	Schooner	111	74	23.5	7.5	2
1837	GRAND TURK	Brig	195	86	24	10.8	2
1839	RELIEF	Brig	166	84.2	24.5	8.7	2
1841	PRESIDENT	Schooner	162	86.6	24.7	8.7	2
1845	KATAHDIN	Schooner	148	82.6	24.3	8.6	2
1845	NICTOUS	Schooner	82	75.7	23.3	7.3	2
1846	GASSABEAS	Schooner	133	80.2	23.8	8.1	2
1848	ORONOCO	Brig	183	88	24	9.8	2
1854	ROBERT FOSTER	Schooner	102	79	28.7	7.7	2
1854	ROBIN	Schooner	164	87	23.2	8.6	2
1855	MOONLIGHT	Brig	277	103.7	27.2	11	2
1856	LUCRETIA	Brig	260	105	26.3	10.5	2
1857	JOHN P. BENT	Schooner	87	76.2	22.9	7.4	2
1860	MILWAUKEE	Brig	159	94.3	26.2	9	2
1860	SUSAN MOORE	Schooner	193	95.2	27.3	8.5	2
1863	ALEXANDER NICKELS	Brig	271	110	26.5	9.5	2
1865	MARIPOSA	Brig	298	109.8	27.2	9.5	2
1865	SOPHIA	Schooner	134	91.4	25	8	2
1866	ANGELIA	Brig	281	105.6	27.7	13.2	2
1866	KATE FOSTER	Brig	168	93.3	26.2	8.9	2
1866	PERSIS HINCKLEY	Brig	192	103.5	27.2	9.1	2
1867	J. W. COFFIN	Schooner	154	92.7	27	8.7	2
1868	EVA L. LEONARDS	Schooner	115	83.2	25.2	8	2
1868	LOOKOUT	Schooner	139	87.3	26.1	7.9	2
1869	CAROLINE	Schooner	111	80.5	27.4	7.4	2
1869	MARGARET	Schooner	115	81.8	27.4	7.4	2
1869	SHARON	Brig	279	103.1	27.4	13.4	2
1870	JULIET	Schooner	196	96.2	26	11.2	2
1871	ENTERPRIZE	Schooner	136	88.8	26	8.2	2
1871	WIGWAM	Schooner	124	86.2	25.5	7.5	2
1872	ARCTOUSE	Schooner	82	74.9	23.4	7.4	2
1872	HASCA	Schooner	88	83	24.5	6	2
1872	IDA	Schooner	57	72.4	21	5.1	2
1872	SABAO	Schooner	155	97	26	8	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1873	COMO	Schooner	134	98.6	28.2	6.6	2
1874	ALEXANDER CAMPBELL	Bark	475	139.6	31.4	12.2	3
1874	ANNIE AND LILLY	Brig	291	114.4	30.5	11.9	2
1875	LEXINGTON	Schooner	150	97.8	28.2	7.3	2
1876	HENRY T. WING	Brig	500	126.2	30.6	17.1	2
1877	IDA	Schooner	68	74	24	5.8	2
1879	ITASCA	Schooner	75	72.2	24.3	5.9	2
1880	LITTLE DAVID	Schooner	15	37	14.4	5	2
1881	CHARLIE AND WILLIE	Schooner	16	40.2	15.5	4.7	2
1881	J. CHESTER WOOD	Schooner	70	68.6	23	6.5	2
1882	HATTIE GODFREY	Schooner	104	87	26.4	6.4	2
1882	MAY BROWN	Schooner	60	69.8	22.5	5.7	2
1883	JENNY LIND	Schooner	117	90.8	25.9	7.5	2
1884	CARRIE C. WARE	Schooner	176	105.4	28.7	8.4	3
1884	MOPANG	Schooner	74	72.4	22.2	6.2	2
1888	LUCY MAY	Schooner	99	84.8	25.4	6.5	2
1889	CLARA J.	Schooner	86	78.7	24.5	6.3	2
1890	ETHEL	Schooner	141	98.9	27.8	7.3	2
1890	FLORENCE A.	Schooner	143	96.5	27.4	7.2	2
1892	CORA M.	Schooner	145	97.8	26.5	7.8	3
1893	WILLIAM F. CAMPBELL	Schooner	201	112.8	29.5	8.3	3

G. Millbridge

The following table gives the vessels recorded in available customhouse records as built in Millbridge, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1845	VIRGINIA	Schooner	55	62	20.3	6.4	2
1848	CELESTINA	Brig	199	93.5	24.9	9.6	2
1849	ATLANTIC	Brig	196	90.5	24.2	10.2	2
1851	CUBA	Brig	199	94	25	9.6	2
1855	VOLUNTEER	Schooner	178	92	25.2	8.7	2
1858	GIPSY	Schooner	20	37	12	5.3	2
1860	ESSEX	Schooner	21	49.4	14.5	5.6	2
1867	MAHASKA	Schooner	118	89	27	7.7	2
1867	SHANNON	Brig	374	119.8	29.2	14.7	2
1869	JOSEPHINE	Schooner	137	90	27	8.1	2
1869	SHAMROCK	Brig	475	128.7	29.7	16.7	2
1870	ENNIS	Brig	295	115.6	27.7	12	2
1870	EUREKA	Schooner	157	100.5	27	8	2
1870	GRACE B. WEST	Schooner	219	102	27.2	11.5	2
1871	E. S. WILSON	Schooner	24	50	16.7	5.2	2
1871	LIZZIE ZITTLOSEN	Brig	284	114.6	28.9	12.2	2
1871	TENERIFFE	Brig	543	130.5	31.5	17.5	2
1872	TARIFA	Brig	533	129.3	31.6	17.2	2
1873	CADET	Brig	442	133.7	30.5	11.9	2
1873	DAVID H. FOLCK	Schooner	446	134.1	30.6	6.1	2
1873	MARY FINK	Brig	427	132.4	30.2	12	2
1873	REGINA FOLCK	Bark	533	133.5	30.5	17.1	3

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1874	ADOLF ENGLES	Bark	648	142	32.3	18.2	3
1874	ALONZO SMALL	Bark	459	138.5	30.1	12.1	3
1874	BATAVIA	Bark	661	144.5	33.9	17.2	3
1874	DORIS ECKHOFF	Bark	557	142.3	30.8	17.1	3
1874	GEORGIETTA	Bark	436	138.5	30.1	12.6	3
1874	GRACE VAN DUSEN	Schooner	303	125.6	33.1	9	3
1874	SOPHIA R. LUHRS	Bark	661	144.7	34	18.2	3
1875	CHARLES F. WARD	Bark	542	138.4	32.9	17.4	3
1875	ETNA	Schooner	313	117.5	30	12	3
1875	G. REUSENS	Bark	471	135.5	29.5	16.9	3
1875	TEEKALET	Bark	717	151.5	34.2	19.7	3
1876	ILLIE	Bark	758	152.8	34.2	19.9	3
1876	JOSIE	Schooner	24	46.8	15	6.5	2
1877	AGNES BELLE	Schooner	30	58.4	18.3	6.6	2
1877	VILORA H. HOPKINS	Bark	977	167.8	36.1	21.6	3
1878	CORYPHENE	Bark	812	160.2	34.2	20.4	3
1878	JOKER	Schooner	14	37.7	14.8	4.3	2
1878	LAHAINA	Brig	418	126.3	32	12.5	2
1878	RAINBOW	Schooner	27	53.8	16.5	4.3	2
1879	A. L. MITCHELL	Schooner	147	96.7	28.2	7.7	2
1879	FRED AND JACK	Schooner	31	54.1	18.4	5.3	2
1879	HELEN M.	Schooner	36	51.9	19.1	5.5	2
1879	LAURA	Schooner	525	138.9	32.7	14.7	3
1880	ADDIE J.	Schooner	42	58	19.3	5.7	2
1880	AUBURNDALE	Bark	629	149.3	32.6	17.3	3
1881	ELDORA	Schooner	52	62.4	22.2	5.9	2
1881	EMMA	Schooner	46	60.1	20.2	5.6	2
1881	GEORGE C. WAINWRIGHT	Schooner	52	69.5	22.2	4.5	2
1881	MABEL	Schooner	29	49.5	18.4	5	2
1882	INEZ	Schooner	67	70	22.5	6.3	2
1882	LULU	Schooner	61	64.9	21.5	5.8	2
1882	NELSON E. NEWBURY	Schooner	659	148.2	35.4	16.5	3
1882	SUSIE J. SAWYER	Schooner	131	95.2	27	6.6	2
1882	VERNON	Schooner	66	78.8	23.4	5.7	2
1883	EUGENIE	Schooner	89	79.2	24.1	6.8	2
1883	GLENULLEN	Schooner	70	73.4	22.5	6.3	2
1883	KATE B. OGDEN	Schooner	594	148	35	16.1	3
1883	LINCOLN	Schooner	39	54.3	19.3	5.9	2
1883	MAUD S.	Schooner	43	59.1	19.2	5.1	2
1883	NELLIE SMITH	Bark	567	146.3	33	17.9	3
1883	RIPPLE	Schooner	94	80.2	24.6	7.1	2
1883	SYLVANUS G. HASKELL	Schooner	330	135	32.1	10.5	3
1884	VIDETTE	Bark	540	141.6	33.3	16	3
1885	VENTURA	Bark	663	153.6	34.7	17.7	3
1886	CLINTON	Schooner	23	50.8	17.2	4.6	2
1886	MOLLIE PHILLIPS	Schooner	42	53.5	17.8	6.3	2
1887	EDITH AND MAY	Schooner	110	90.9	26.1	7.3	2
1887	MABEL	Schooner	37	54	16.7	6.8	2
1887	WEST END	Bark	122	94.9	26.2	6.5	3
1888	DRISKO	Schooner	248	116.4	32.4	9.2	3
1888	ROGERS	Schooner	253	115.2	31.5	9.5	3
1889	BERTHA V.	Schooner	56	67.8	22.6	5.8	2
1889	JOE	Schooner	113	91.8	24.5	7.2	2
1889	MARY L. CROSLEY	Schooner	463	143.1	34.2	12.4	3
1889	S. F. COOLIDGE	Schooner	425	130.5	32.3	15	3

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1890	ANNA PENDLETON	Schooner	521	157	34.7	12.8	3
1890	CHARLES K. BUCKLEY	Schooner	482	153.4	34.2	12.5	3
1890	EDWARD H. BLAKE	Schooner	517	154.7	34.6	13	2
1891	EVA MAY	Schooner	150	100.5	27.8	7.7	2
1891	ROBERT S. PATTERSON	Bark	720	164.8	35.1	17.5	3
1891	S. G. HASKELL	Schooner	647	160.2	34.7	14.3	3
1892	E. A. WHITMORE	Schooner	36	55.1	18.5	5.4	2
1894	EDNA M. CHAMPION	Schooner	855	178.9	36.4	18.6	4
1895	HARRY A. BERWIND	Schooner	911	191.7	38.2	17.4	4
1897	NOKOMIS	Schooner	245	120.7	32	10.1	3
1899	IONA TUNNELL	Schooner	1,118	208.8	41.1	18.6	4
1899	JOHN MAXWELL	Schooner	445	152.4	35.3	12.7	3
1900	NINETTA M. PORCELLA	Schooner	466	161.8	35.5	12.7	3
1900	W. R. PERKINS	Schooner	178	101.6	26.9	9	3
1901	FRANCES C. TUNNELL	Schooner	1,239	217.1	41	19.6	4
1901	LEJOK	Schooner	297	134.6	32	10.6	3
1902	ALICE LORD	Schooner	373	134.1	32	10.3	3
1903	EMMA S. LORD	Schooner	300	139.8	32.2	10.5	3
1904	FLORA A. KIMBALL	Schooner	321	140.7	32.3	11.4	3
1904	MYRTLE TUNNELL	Schooner	1,294	219.7	41.7	19.2	4
1905	MARJORIE A. SPENCER	Schooner	336	141.7	32.4	11.5	3
1906	JAMES T. MAXWELL, JR.	Schooner	589	165.4	36.1	12.9	3
1906	SAWYER BROTHERS	Schooner	347	129.6	32.3	10.3	3
1907	FRANCES V. SAWYER	Schooner	324	144.7	32.2	10.8	3
1909	MELBOURNE P. SMITH	Schooner	651	174.7	35.8	13	4
1912	R. B. WHITE	Schooner	482	147.4	32.4	13.5	3
1914	JESSIE	Schooner	166	106	26.8	7.7	2
1915	HERBERT LORING	Schooner	78	72.6	23.2	8.2	2
1916	GRAND TRUNK	Schooner	540	165.4	35.1	13.4	3
1917	JOAN KIELBERG	Schooner	661	171.4	37.1	14	4
1918	WILBERT S. BARTLETT	Schooner	742	183.1	37.5	14	4
1919	J. K. MITCHELL	Schooner	383	142.6	32	10.7	3

H. Steuben

The following vessels were constructed at Steuben, Maine, according to the available customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1796	RUBY	Schooner	54	54.7	17.7	6.6	2
1801	BETSEY	Schooner	115	69.3	22.8	8.6	2
1802	COLUMBIA	Schooner	92	64.2	20	8.4	2
1805	SEA FLOWER	Schooner	106	70	21.7	8.2	2
1806	JUNO	Schooner	21	41.9	12.1	4.8	2
1806	ORION	Ship	176	78.3	22.7	11.3	3
1810	MARY	Schooner	119	74.2	20.7	8.8	2
1811	WILLIAM	Schooner	94	73	21.8	6.8	2
1812	GEORGE WASHINGTON	Brig	154	84	23	9.1	2

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1815	CONCORD	Schooner	127	72.3	22	9.3	2
1815	ELIZA ANN	Brig	202	91.1	23.8	10.5	2
1817	ELIZA	Schooner	35	46.1	13.3	6.7	2
1817	LIVELY	Schooner	21	38.8	11.1	5.6	2
1818	COMMODORE PERRY	Schooner	87	68.3	20.8	7.2	2
1819	ENTERPRIZE	Schooner	74	57.5	17.7	8.4	2
1819	MARY	Schooner	28	40	12.9	6	2
1819	SOPHIA AND NANCY	Schooner	123	73.7	22	8.8	2
1820	COMMERCE	Schooner	47	52.3	16	6.5	2
1820	ELIZA JANE	Schooner	109	68.6	19.8	9.3	2
1820	GALAXY	Brig	155	77	22.8	10.3	2
1820	WASHINGTON	Schooner	79	61.5	19.8	7.6	2
1821	ALMIRA	Schooner	82	62	19.3	8	2
1821	ORION	Schooner	50	54.2	16.1	6.6	2
1821	RISING SUN	Schooner	103	66.7	20.2	8.8	2
1821	VICTORY	Schooner	122	70.7	20.7	9.6	2
1822	FREEMASON	Schooner	90	62	20.8	8.3	2
1822	ORRA MARIA	Schooner	100	69.5	21.5	7.8	2
1823	ATLANTIC	Brig	151	76.2	22.7	10.2	2
1823	CURLEW	Schooner	72	61.4	19	7.3	2
1823	MAINE	Schooner	109	74.6	22.3	7.6	2
1824	DIANA	Schooner	142	73.3	22.2	10.2	2
1824	LAFAYETTE	Schooner	103	68.6	21.3	8.3	2
1824	WILLIAM AND LOUISA	Schooner	76	62.2	22.2	6.6	2
1825	ADAMS	Schooner	129	74.2	23.3	8.7	2
1825	AMELIA	Schooner	144	78.5	23.5	9	2
1825	ANTELOPE	Schooner	105	70.8	23	7.6	2
1825	GOVERNOR LINCOLN	Brig	134	74.7	22.3	9.3	2
1825	HARRIET FRANCIS	Schooner	68	62.2	20.4	6.3	2
1825	MARGARET	Schooner	110	74	22.7	7.6	2
1825	MECHANIC	Schooner	108	70.4	21.9	8.2	2
1825	TWO SISTERS	Schooner	64	56	18.6	7.3	2
1825	WILLIAM AND JAMES	Schooner	66	60.7	20	6.4	2
1826	ALBION	Schooner	46	49	17	6.7	2
1826	COLLECTOR	Schooner	104	75.8	21.8	7.6	2
1826	MARTHA ANN	Brig	162	80.4	24.1	9.5	2
1826	RUBY	Schooner	97	64.2	21	8	2
1826	SHIBBOLETH	Brig	188	86.1	24.7	10.2	2
1827	GREEK	Schooner	99	68.3	21	8	2
1827	LEXINGTON	Schooner	82	63.3	20.2	7.5	2
1827	ONLY DAUGHTER	Schooner	125	77.2	22.7	8.2	2
1827	ONLY SON	Brig	178	83.5	23.9	10.2	2
1829	BARON	Brig	138	77	22	9.3	2
1830	EMERALD	Schooner	73	63	19.8	6.8	2
1831	FREEDOM	Schooner	40	40	16.1	6.2	2
1831	VELOCITY	Schooner	113	70.2	22.2	8.5	2
1832	CARROLL	Schooner	104	73.3	21.7	7.6	2
1832	THOMAS H. JENKS	Schooner	99	70	22.2	7.4	2
1832	TWO SONS	Schooner	40	49.2	14.7	6.4	2
1833	PANDORA	Brig	212	85.8	23.8	11.8	2
1833	VIGILANCE	Schooner	108	72	23.3	7.6	2
1834	CHAPELL	Schooner	135	79	23.4	8.4	2
1834	JASPER	Schooner	91	66	20.6	7.8	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1837	ROCHESTER	Schooner	148	82.6	23.5	8.7	2
1839	TREMONT	Brig	172	83.5	24	9.8	2
1840	BILLOW	Schooner	63	70.8	20.9	6.8	2
1847	RUBY	Schooner	128	77.7	23	8.2	2
1854	CANOVA	Schooner	137	86.2	22.2	7.9	2
1857	ADVANCE	Schooner	74	73.5	23	6.5	2
1859	DEMOCRAT	Schooner	20	40.3	14.5	6	2
1869	ORBIT	Brig	313	112	29.2	13.3	2
1877	EAGLE	Schooner	103	83.4	26.5	6.6	2
1878	EDITH B. COOMBS	Schooner	114	83.4	24.2	9.3	2
1884	SADIE AND LILLIE	Schooner	56	63.8	22.5	6.1	2
1885	ROSA E.	Schooner	38	61.4	19	5.1	2

I. Gouldsboro

The following vessels were built at Gouldsboro, Maine, according to available customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1783	HAWK	Schooner	21	38	11.7	5.5	2
1823	PROSPECT	Schooner	68	60.7	19.6	6.7	2
1823	WILLIAM	Schooner	110	70	21.5	8.5	2
1824	PILOT	Schooner	85	68	21.7	6.7	2
1824	VINEYARD	Schooner	77	60	18.8	8	2
1825	LIGONIA	Schooner	115	73.5	22.7	8	2
1826	VENUS	Schooner	143	81.3	23.8	8.5	2
1832	DAWN	Schooner	86	68.7	20.8	7	2
1832	PIONEER	Schooner	127	78.7	23.2	8	2
1834	MARTHA WOOD	Schooner	115	73.5	22.2	8.2	2
1846	D. C. BROOKS	Schooner	132	79.3	23	8.3	2
1849	WHITAKER	Brig	183	91.8	24.1	9.4	2
1852	CONDOR	Brig	191	84.5	23.6	9.6	2
1852	N. JONES	Schooner	71	71	21.9	7.5	2
1854	OROZIMBO	Schooner	162	97	25	9	2
1856	F. TAFT	Schooner	156	84	25.4	8.4	2
1856	J. C. HARADEN	Schooner	70	73	22.5	6.7	2
1856	J. COOLIDGE	Schooner	53	65.5	19.9	6.9	2
1857	T. R. HAMMOND	Schooner	64	67.5	22.5	6.5	2
1863	PONVERT	Brig	265	109.9	27.9	9.7	2
1866	CLARABELL	Brig	326	112.5	28	11.8	2
1866	SULLIVAN	Brig	345	115.5	28.2	15.2	2
1874	VINEYARD	Schooner	205	113.3	30	9.9	3
1890	SETH NYMAN	Schooner	49	62.5	20.6	5.3	2
1895	HATTIE LORING	Schooner	47	64.7	20	7.5	2

XLIII.

THE DISTRICT BETWEEN GOULDSBORO AND BLUEHILL BAY

A. Sullivan

According to available customhouse records, the following brigs, schooners, and one bark were built at Sullivan, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1798	DIANA	Schooner	88	77.3	20.8	7.3	2
1808	JUNO	Schooner	91	55	22	7.2	2
1811	HELENA	Schooner	87	58.7	20.3	6.9	2
1815	JAMES	Schooner	25	35	12	5.8	2
1816	BETSEY	Schooner	61	46	18	7	2
1816	FOX	Schooner	40	42.3	14.4	6.2	2
1817	HOTSPUR	Schooner	79	64.2	19.2	7.9	2
1818	GENERAL JACKSON	Schooner	58	57	17.5	6.8	2
1818	MARY	Schooner	47	51.5	16.2	6.6	2
1820	MARS	Schooner	102	74.3	21.3	7.3	2
1823	COOPERS FANCY	Schooner	48	54	15.1	6.7	2
1823	HERO	Schooner	97	68.9	20.6	7.9	2
1824	LAUREL	Schooner	86	69.2	20.5	7	2
1825	AMERICA	Brig	158	79.6	22.1	10	2
1826	LEOPARD	Schooner	90	68	21.3	7.3	2
1826	PANAMA	Schooner	95	69.5	21.3	7.4	—
1828	FAME	Schooner	138	79.8	23.3	9.1	2
1829	DEPENDENCE	Schooner	99	73.1	21.6	7.2	2
1838	PIONEER	Schooner	44	50	15.3	6.7	2
1840	AMETHYST	Schooner	138	82.7	22.9	8.4	2
1843	PANAMA	Schooner	65	68.5	21.2	7	2
1844	WARREN	Schooner	124	78.1	23.4	8.1	2
1846	PALOS	Schooner	129	80.8	23.2	7.2	2
1846	VANDALIA	Schooner	108	78	21	7	2
1847	AMANDA CLIFFORD	Schooner	101	74.3	20	7.6	2
1847	DIRIGO	Schooner	114	73.4	23.3	7.1	2
1848	OLANDO	Brig	134	81.4	22.5	8.3	2
1849	KOSSUTH	Schooner	103	80.3	23	8.9	2
1849	POWLOWNA	Schooner	30	55	15.6	6.1	2
1851	A. C. BUCKHANAN	Bark	276	109.3	28	10.1	3
1852	ENTERPRISE	Schooner	135	82.2	22.4	8.3	2
1852	METEOR	Brig	284	106.3	26.5	11.3	2
1854	CANOVA	Schooner	102	85.5	22.4	7.8	2
1854	CHIMBORAZO	Brig	217	102.4	26.9	8.8	2
1855	CRUSADER	Brig	324	116.3	27.4	11.2	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1855	HANCOCK	Brig	289	113.9	28	10.1	2
1855	N. HARVEY	Schooner	38	55.3	19.7	6.4	2
1855	WAKEAG	Schooner	168	90	25.2	8.4	2
1856	VANDALIA	Schooner	92	78.4	22.2	7.3	2
1857	C. W. CONNOR	Schooner	137	79.3	22.8	8.8	2
1861	OPHIA	Schooner	98	80.5	23	8	2
1865	EVERGLADE	Schooner	122	83.8	25.7	8.5	2
1866	MAINE	Schooner	54	64.3	20.8	6	2
1868	MORANCY	Schooner	198	103.3	29.3	9	2
1868	S. J. GILMORE	Schooner	123	86.4	27.1	7.9	2
1869	EVELINE	Schooner	123	91.7	25.9	7.5	2
1870	FOREST CITY	Schooner	118 g. 112 n.	87.9	27	7.2	2

B. Franklin

The following list, with particulars, gives the vessels recorded as built at Franklin, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1825	COLUMBIA	Schooner	94	74	20.3	7.1	2
1826	DIRIGO	Schooner	116	73.4	22.2	8	2
1832	ARMADILLO	Schooner	105	71.7	22	7.6	2
1840	OSPREY	Schooner	32	43	15.6	5.8	2
1847	CORNELIA	Brig	127	79.8	22.7	8	2
1848	POTOMAC	Schooner	108	80.3	21.4	7.1	2
1849	GRECIAN	Schooner	91	80	22.5	7.2	2
1851	MAINE	Schooner	102	76.5	22.2	6.9	2
1851	MARIEL	Schooner	102	72.5	22.2	6.9	2
1851	MORRILL	Schooner	102	72.5	22.2	6.9	2
1852	JOHN BOYNTON	Brig	209	92.3	25.5	10.1	2
1854	F. S. MEANS	Bark	376	120.8	27.6	12.4	3
1854	J. WEST	Brig	196	95	25	9.3	2
1854	MARIEL	Schooner	80	75.7	22.2	6.7	2
1856	LA PLATA	Schooner	122	79	23.4	7.6	2
1859	ALBERT TREAT	Schooner	141	87	23.9	7.8	2
1864	FRANKLIN	Schooner	121	82.3	23.8	7.1	2
1864	HESPERUS	Schooner	110	78	21.9	7.6	2
1865	C. S. DYER	Schooner	73	76.1	22.1	6.5	2
1866	M. C. MOSELEY	Schooner	175	103.8	28.3	9.6	2
1866	M. M. POTE	Schooner	149	92.6	27.1	8.7	2
1866	NELLIE WARE	Brig	249	102	28.2	13.3	2
1867	J. P. WYMAN	Schooner	165	100.4	26.2	8.7	2
1874	W. H. CARD	Schooner	125 g. 119 n.	91.1	27.4	7.7	2
1875	H. C. BUNKER	Schooner	113	86.6	24.6	7.5	2
1877	J. H. BUTLER	Schooner	43	61.3	19.2	5.6	2
1882	ANNIE E. RICKERSON	Schooner	213	112.4	29.7	10.6	3
1896	WILLIE L. MAXWELL	Schooner	315	131.6	32.7	9.5	3

C. Hancock

The following brig and two-masted schooners are recorded as built at Hancock, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1838	CINCINNATUS	Schooner	100	73	21.3	7.3	2
1841	CASDDA	Brig	162	86.3	23.3	9.1	2
1846	JOHN HANCOCK	Schooner	116	79.8	23.2	7.2	2
1847	WARRINGTON	Schooner	103	74	22	7.3	2
1848	C. PERRY	Schooner	25	39.4	13.5	5.6	2
1849	MARIA FOSS	Schooner	130	81.9	22.8	7.9	2
1851	ALMIRA JOY	Schooner	98	74.5	20.2	7.5	2
1851	OCEAN WAVE	Schooner	68	61.5	16.7	7.5	2
1852	FRANKLIN	Schooner	89	71.5	19.6	7	2
1853	SARAH WOOSTER	Schooner	145	94	24	8	2
1857	UNION	Schooner	67	64.6	21.2	7.1	2
1858	ASTORIA	Schooner	103	75.2	21.1	7.4	2
1858	D. N. RICHARDS	Schooner	99	73	22	7.2	2
1862	LAUREL	Schooner	110	76.6	21.9	7.5	2
1865	WATCHMAN	Schooner	78	76.8	21.3	7.7	2
1866	EAGLE	Schooner	63	66	21	7.4	2
1867	A. B. CRABTREE	Schooner	96	87.7	23.2	7.2	2
1867	STAMPEDE	Schooner	145	94	26.8	8	2
1868	SEA QUEEN	Schooner	80	75	22	6.8	2
1869	WOODCOCK	Schooner	44 g. 42 n.	57.8	18	7.1	2
1871	NEPONSET	Schooner	52	52.2	18.1	7.3	2
1871	OMAHA	Schooner	116	89	24.3	8.3	2
1872	BRAVE	Schooner	113	85.8	25.2	7.9	2
1874	MARY JANE LEE	Schooner	128	91.1	26.4	7.9	2

D. Lamoine

The following schooners are recorded as built at Lamoine, Maine, according to custom-house records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1870	HARVEST HOME	Schooner	74	78	22.6	7.6	2
1875	CLIFFORD	Schooner	276	120.5	29.5	10	2
1876	GEORGE W. COLLINS	Schooner	84	79	24.3	7	2
1876	WALTER M. YOUNG	Schooner	99	81.2	22.8	9	2
1877	IRVING LESLIE	Schooner	100 g. 95 n.	83	23	8	2
1877	JENNIE A. STUBBS	Schooner	198	111.8	27.6	10.7	3
1883	NELLIE COLEMAN	Schooner	161 g. 152 n.	97	25.7	9.5	2

E. Trenton

The following list gives the schooners, brigs, and one bark recorded as built at Trenton, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1815	PENGUIN	Schooner	34	35.4	13.8	6.6	2
1816	INDEPENDENCE	Schooner	138	66.4	23.5	8.3	2
1820	DESPATCH	Schooner	74	68.4	19.2	6.4	2
1824	AURORA	Schooner	28	43.3	12.5	5.9	2
1824	BEAVER	Brig	181	80	23.8	11.2	2
1825	JULIA ANN	Schooner	108	74.5	21.9	7.7	2
1834	DANIEL WEBSTER	Schooner	74	66.4	19.5	6.5	2
1834	DISPATCH	Schooner	74	68.4	19.8	6.4	2
1836	LEADER	Schooner	40	50	14.1	6.4	2
1836	RIVAL	Schooner	23	47	14	6	2
1837	FAIR DEALER	Schooner	93	71.7	20.8	7.2	2
1837	PIONEER	Brig	149	78	22	9.9	2
1838	MAINE	Schooner	36	46.5	13.8	6.4	2
1842	WILLIAM JOY	Bark	204	102	24.3	9.1	3
1843	MARY ELIZABETH	Schooner	105	75.3	22.6	7.1	2
1843	TRENTON	Schooner	25	47.7	15	6.2	2
1846	MAGNOLIA	Schooner	54	55.3	16.3	6.8	2
1847	MATILDA	Schooner	44	52.3	14.8	6.5	2
1848	BURMAH	Schooner	110	79.5	21.8	7.2	2
1849	ACTION	Schooner	40	47.6	14.4	6.9	2
1849	H. COUSINS	Brig	156	86.8	23.3	8.8	2
1850	CANTOR	Schooner	53	56	16	6.8	2
1850	CONTENT	Schooner	58	55.8	16.5	7.3	2
1850	ITALIAN	Schooner	67	62.3	16.8	7.3	2
1850	SCIOTA	Schooner	33	53	15.7	6.5	2
1851	GRACE	Schooner	56	67.1	20	6.7	2
1852	VOLANT	Schooner	94	77.6	23.9	7	2
1853	CEYLON	Schooner	64	60	17.1	7.2	2
1854	HARRIET	Schooner	147	83.3	23.8	8.5	2
1854	MARATINA	Brig	235	102.5	25.2	10.2	2
1855	SEA FLOWER	Schooner	48	60.9	17.3	7.5	2
1856	A. G. ROGERS	Schooner	52	65.5	18.4	7	2
1857	D. H. HODGKINS	Schooner	66	62	17.3	7	2
1857	SPRINGBOK	Schooner	113	78.6	21.4	7.6	2
1858	H. S. BOYNTON	Schooner	109	74.3	21.3	7.9	2
1860	MARY JANE BELCHER	Schooner	24	39.3	14.3	5.3	2
1860	PALMETTO	Schooner	172	90	24.3	8.9	2
1861	ENGINEER	Schooner	165	84.5	24.3	9.3	2
1861	LEWIS H. SMITH	Schooner	80	65.3	19.1	7.4	2
1866	MOUNTAIN LAUREL	Schooner	142	88.6	25.6	8.4	2
1867	FLEETWING	Schooner	53	63	19.5	7	2
1868	LIZZIE LEE	Schooner	92	79	23	8.1	2
1869	A. B. HIGGINS	Schooner	43	60	17.9	6.9	2
1869	E. H. KING	Schooner	106	85.9	24	7.8	2
1871	ONWARD	Schooner	63	44.3	17.9	4	2

F. Eden (Bar Harbor)

According to available customhouse records, the following brigs and two-masted schooners were built at Eden, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1809	HAZARD	Schooner	121	62.8	23.1	7.9	2
1817	HULDAH & JUDAH	Schooner	127	78.3	23.5	8	2
1818	ATLANTIC	Schooner	64	59.7	18.2	6.8	2
1818	FIVE BROTHERS	Schooner	88	55.5	20.9	7.5	2
1819	PELGUIN	Brig	196	83.3	24.5	11.1	2
1823	CAMBRIAN	Schooner	104	73.2	22.3	7.4	2
1823	ONLY DAUGHTER	Schooner	122	77.8	24.6	7.5	2
1824	CREDIT	Schooner	40	50	14.7	6.2	2
1824	PERSEVERANCE	Schooner	143	72	24.3	10	2
1825	MARY JANE	Brig	167	78.4	23.2	10.6	2
1827	FREDONIA	Schooner	90	67	21.6	7.3	2
1828	ADAMS	Brig	181	81.3	24.1	8.5	2
1829	CHARLES	Schooner	38	46.8	13.8	6.8	2
1829	EXCHANGE	Schooner	58	52.8	16	8	2
1829	WAVE	Schooner	80	61.8	17.6	8.3	2
1829	WILLIAM	Schooner	36	45.8	13.7	6.8	2
1831	CABINET	Brig	191	85.8	24.2	10.5	2
1831	GEORGE	Schooner	38	45.6	14.5	6.7	2
1832	VOLTA	Brig	235	90.8	24.3	12.1	2
1833	NEPTUNE	Brig	136	77.3	20.8	9.2	2
1834	HANNAH AND ABIGAIL	Brig	132	80.3	22.8	8.3	2
1835	COMET	Brig	184	90.5	23.9	9.6	2
1835	McDONEUGH	Schooner	45	48.7	16.6	6.7	2
1835	MIRANDA	Schooner	56	57.8	17.1	6.6	2
1836	MARGARET ANN	Brig	203	93.3	24.4	10	2
1838	JOHN FAIRFIELD	Schooner	100	73.5	21.7	7.3	2
1838	MARTHA ANN	Schooner	49	53	16	6.7	2
1839	JULIA ANN	Schooner	103	73.8	20.6	7	2
1841	M. JOY	Brig	147	82	22.7	9	2
1843	CHASTENA	Brig	141	86.8	23	8	2
1845	PENENIAH AND JOSEPHINE	Schooner	89	74	19.3	7	2
1845	VIRGINIA	Schooner	67	63.3	19.5	6.3	2
1846	ANCONA	Schooner	28	40.7	13.8	6	2
1847	ALICE R.	Schooner	75	64.7	19.6	6.1	2
1847	ALVARADO	Brig	142	82.5	23.3	8.6	2
1847	BARCELONA	Schooner	116	79.1	21.4	7.8	2
1847	ENDORA	Schooner	116	77.5	22.7	7.6	2
1848	AMANDA PARSONS	Brig	127	79.5	23	8	2
1848	CAUCASIAN	Schooner	102	76.1	21.1	7.3	2
1848	DELMA	Brig	161	84.8	24.2	9	2
1848	HENRIETTE	Schooner	100	72.8	21.5	7.4	2
1849	CAPTAIN JOHN	Schooner	114	73.3	22.5	7.6	2
1849	DEXALO	Schooner	68	71	21.2	7.1	2
1849	PHILADELPHIA	Schooner	99	73.4	21.9	7	2
1851	CHASTENA	Brig	141	86.8	23	8	2
1851	VERMONT	Brig	171	88.3	23.1	9	2
1851	WANDERER	Schooner	117	77	22.9	7.7	2
1852	TRENTON	Schooner	129	84.5	24.9	8.8	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1853	AVONDALE	Brig	196	96	25.8	9.2	2
1853	FANNY FERN	Schooner	62	62.7	20.5	5.8	2
1853	HAMOR	Schooner	119	77.5	22	8	2
1853	MATILDA	Brig	200	96.3	25.2	9.3	2
1853	ONTARIO	Schooner	94	74.9	23.4	7.3	2
1853	ONWARD	Schooner	123	81	22.8	7.8	2
1853	PANSY COUSINS	Schooner	143	84	23.3	8.3	2
1854	A. HOOPER	Schooner	67	97.3	21.7	6.7	2
1854	ELMIRAL	Schooner	22	49.5	15.7	6	2
1854	FLORA KING	Schooner	119	92.4	24	7.8	2
1854	LIGONIA	Schooner	115	73.5	22.8	8	2
1855	MINDORA	Schooner	122	87.6	25	8	2
1857	CEMANTHA HOPKINS	Brig	181	94.7	25	8.6	2
1858	CLARINDA	Schooner	87	70	22.8	6.4	2
1858	GAME COCK	Schooner	63	68.8	23	6.8	2
1859	AZALIA	Schooner	13	39	13.3	5.2	2
1859	HATTIE M. MAYO	Schooner	69	71	22.5	7	2
1860	EOLA	Schooner	22	38.6	13.1	5.3	2
1863	E. H. PRAY	Schooner	43	57.7	19.3	6	2
1865	E. M. BRANSCOM	Schooner	86	72.5	22.6	7.8	2
1868	KATE P. LUNT	Schooner	202	106	28.1	8.8	2
1869	CORA BELLE	Schooner	32	50	17.7	5.3	2
1869	E. L. HIGGINS	Schooner	105	76.7	23.4	8	2
1871	AGNES MABEL	Schooner	28	54.7	18.7	4.7	2
1871	EASTERN QUEEN	Schooner	68	77.4	22.7	7	2
1872	ADELLE PRAY	Schooner	33	53.2	19.1	5.4	2
1880	SCUD	Schooner	29 g. 27 n.	60.2	18.2	4	2
1886	KATE L. PRAY	Schooner	59	68	21.3	6.5	2

G. Mount Desert

The following brigs and two-masted schooners are recorded as built at Mount Desert, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1811	CLEOPATRA	Schooner	142	65.2	23.6	8.8	2
1816	RABBIT	Schooner	104	60.1	20.6	7.7	2
1820	WILLING MAID	Schooner	38	41	13.2	6	2
1821	CONGRESS	Schooner	122	79.5	23.5	7.5	2
1821	MINERVA	Schooner	75	64	18.8	8.3	2
1822	HERALD	Schooner	138	80.4	23.4	8.4	2
1822	PROOF GLASS	Schooner	83	67	20.2	7	2
1823	FAIR TRADER	Schooner	105	77.3	23.7	6.8	2
1823	WELCOME RETURN	Schooner	131	42.5	24	7.1	2
1825	BRANCH	Schooner	90	69.8	21.3	7.1	2
1826	ACTRESS	Brig	151	76.2	23.7	9.9	2
1826	AMETHYST	Schooner	137	83.3	23.9	7.1	2
1826	BRILLIANT	Schooner	84	70.1	20.8	6.7	2
1826	EXCHANGE	Schooner	133	80.8	23.5	8.1	2
1826	VALANT	Schooner	57	56.3	16.1	7.3	2
1827	ANTIOCH	Schooner	155	84.3	24.1	8.9	2
1827	INDUSTRY	Schooner	137	83.2	23.5	8	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1831	ENTERPRISE	Schooner	69	62.4	19.4	6.6	2
1833	ATLAS	Brig	184	87	25	9.7	2
1833	JASPER	Schooner	158	83	24.3	8.2	2
1834	COMPAER	Schooner	94	72.3	20.1	7.3	2
1835	MARIOVA	Schooner	88	75	20.3	6.2	2
1838	ENVOY	Brig	174	85.3	23.2	10.9	2
1842	CORAL	Schooner	92	65.1	21.4	7.8	2
1846	ABIGAIL HAYNES	Schooner	124	82	23.1	7.6	2
1847	JUDITH WARD	Schooner	133	84.5	23.1	7.7	2
1848	ALVARADO	Schooner	100	83.6	24.2	7.6	2
1848	EMMA FRANCES	Brig	128	88.3	24.3	9.4	2
1851	HALCYON	Schooner	131	78.2	22.2	8.2	2
1851	VALPARAISO	Schooner	75	68	19.5	6.6	2
1851	VIXEN	Schooner	37	56	16.4	6.6	2
1853	JUDITH H. SOMES	Schooner	241	100	25.1	10.8	2
1854	GEORGE KILBURN	Schooner	142	89.5	25.5	9	2
1865	NAID	Schooner	9	35.5	12.7	5.1	2
1867	EMMA LOUISE	Schooner	118	88	25	7.8	2
1867	GEORGE B. SOMES	Schooner	118	88	25.7	8.2	2
1868	JOHN SOMES	Schooner	137	81.7	26.2	8.4	2
1869	H. S. BILLINGS	Schooner	109	84	25.6	7.1	2
1871	ELLA ENDORA	Schooner	31 g. 30 n.	52.2	19	4.9	2
1872	MARY F. CUSHMAN (or MARY T. CUSHMAN)	Schooner	76	78.6	24.6	6.5	2
1873	FLORA GRINDLE	Schooner	37 g. 35 n.	55.9	19.2	5.7	2

H. Tremont

The following sailing vessels, all two-masted schooners, are recorded as built at Tremont, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1847	PAVILION	Schooner	114	84.9	24.8	7.8	2
1848	MANCHESTER	Schooner	60	59.3	17.1	6.8	2
1849	MONTEZUMA	Schooner	83	73	22	7	2
1850	JOSEPHINE	Schooner	101	74	22	7.2	2
1852	ROMP	Schooner	88	74	23	7	2
1853	BELLE	Schooner	54	62.7	20.5	6.3	2
1854	CAROLINE C.	Schooner	90	75	23	7.8	2
1854	LOOKOUT	Schooner	124	87.3	24.6	8.4	2
1859	ANTELOPE	Schooner	114	74.9	23	7.9	2
1865	NORTHERN LIGHT	Schooner	139	90	26.5	9	2
1869	A. T. HAYNES	Schooner	29	49	18	5	2
1869	LIGHT OF THE EAST	Schooner	136	90	27	6	2
1872	FRED C. HOLDEN	Schooner	137	96.8	27.2	7.9	2
1872	SILVER HEELS	Schooner	134 g. 103 n.	87.8	25.7	7.5	2
1874	ABRAHAM RICHARDSON	Schooner	154	99	27	8.3	2

I. Cranberry Isles

The following two-masted sailing vessels are recorded as built at Cranberry Isles, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1810	FOUR SISTERS	Schooner	132	71.4	22.5	9.6	2
1816	CONSTITUTION	Schooner	142	66.2	23	8.9	2
1818	WASHINGTON	Schooner	81	66	20.3	7	2
1824	EMBLEM	Brig	234	91	24.8	11.8	2
1825	CRANBERRY	Schooner	57	56.7	17.8	6.7	2
1832	FACTOR	Schooner	121	81.4	24.3	8.2	2
1845	EMBLEM	Schooner	140	85.4	24.1	8.2	2
1846	ZULMA	Schooner	98	76.8	21.3	6.8	2
1857	NONPAREIL	Schooner	20	46.2	15.4	5.1	2
1861	CASHIER	Schooner	30	49.8	17.8	5.3	2

J. Ellsworth

The following list gives available particulars of vessels built at Ellsworth, Maine, from 1812 to 1893 according to customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1812	FAVORITE	Schooner	152	86.8	20.4	8.5	2
1816	FAIR PLAY	Brig	202	81.6	24.6	11.7	2
1816	PACKET	Schooner	132	80.3	23.7	8	2
1817	CHARLES AND MARY	Schooner	90	71.3	22.8	6.7	2
1818	EXPERIMENT	Schooner	64	52.5	16.4	6.6	2
1819	DECANTER	Schooner	147	81.6	24	8.8	2
1822	HOPE	Schooner	146	84.5	24.3	8.2	2
1827	MARY ANN	Schooner	140	79.3	24.2	8.5	2
1828	DESPATCH PACKET	Schooner	90	67.3	18.1	8	2
1830	FAME	Schooner	131	80	23.5	8	2
1830	HENRY CLAY	Schooner	131	76.8	22.8	8.1	2
1831	ANTIOCH	Schooner	103	68	19.2	8.7	2
1832	ATTALIA	Schooner	112	73.1	18.8	9.2	2
1834	CLARION	Brig	211	91.8	23.3	11.1	2
1835	ACTIVE	Schooner	100	74.6	21.7	7.2	2
1836	CURLEW	Schooner	90	75.7	20.5	6.6	2
1838	ABIGAIL	Schooner	103	73.4	21.3	7.4	2
1838	ARIEL	Schooner	41	51	14.1	6.5	2
1840	AURORA	Schooner	160	86.4	24.8	8.6	2
1840	JANE	Schooner	21	38.8	10.8	5.7	2
1840	VALHALLA	Schooner	141	85.4	23.5	7.9	2
1841	ARBOREER	Schooner	70	63.8	18.8	6.8	2
1841	MOGUL	Schooner	119	78.6	22.2	7.2	2
1843	LEADER	Schooner	56	56.2	16.2	7.1	2
1845	LOUIS WALSH	Schooner	103	86.2	23.3	8.5	2
1845	MADAGASCAR	Schooner	142	85.4	23.7	8	2

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1846	ABIGAIL HAYNES	Schooner	99	80.1	23	7.3	2
1846	BANGOR	Schooner	100	80.5	25.7	7.6	2
1846	WILLIAM B. PETERS	Schooner	124	81.8	25.3	7	2
1846	WINTHROP	Brig	144	86.8	23.6	8	2
1847	LEJOK	Schooner	125	80.5	23.7	7.6	2
1848	GENERAL JONES	Bark	296	105	25	12.5	3
1849	AGNES	Schooner	94	79.8	22.2	6.9	2
1849	CERESCO	Schooner	95	75	21.7	6.9	2
1849	DOLPHIN	Schooner	137	83.6	23.4	8	2
1851	MARY ELIZABETH	Schooner	74	65.8	19.7	6.7	2
1852	CASTILIAN	Schooner	160	90.5	24.3	8.3	2
1852	DORIS	Schooner	61	66.5	20.5	7.6	2
1852	EDWARD	Schooner	89	76.3	22	7.6	2
1852	JUDGE HATHAWAY	Brig	215	98	24.8	9.9	2
1853	DORIS	Schooner	94	69.3	21.1	7.6	2
1853	FORMOSA	Bark	349	124	25.9	11.8	3
1853	LA GRANGE	Schooner	143	82.4	24	8	2
1853	LOTUS	Schooner	133	82	22.8	8.1	2
1853	MANHATTAN	Brig	258	106.8	26.5	10.2	2
1853	WILLIAM HILL	Schooner	103	72.6	22.6	7.4	2
1854	DUNKIRK	Brig	293	113	26.6	10.1	2
1854	FREDONIA	Brig	259	108.7	25.5	10.3	2
1854	PHEBE M. TINKER	Brig	286	105.6	26	10.4	2
1854	SALLIE	Schooner	15	42.5	14	4.6	2
1855	MARY C. HASKELL	Brig	286	114	25.4	10.8	2
1855	WALTHAM	Brig	185	93.4	24.8	9	2
1856	VALETTA	Schooner	163	92.5	24.8	8.6	2
1860	MINNEOLA	Schooner	68 g. 65 n.	69.3	21.2	7	2
1860	RATAN	Schooner	61	66.3	21.3	6.7	2
1861	FAIR WIND	Schooner	96 g. 91 n.	83.2	24.6	7.3	2
1861	FORESTER	Schooner	55 g. 52 n.	68.5	19.5	6.1	2
1862	JAMES TILDEN	Schooner	117	80.3	23.5	7.1	2
1862	LEADER	Schooner	89	70	18.8	7.6	2
1863	FLORA A. SAWYER	Schooner	106	84.1	24.2	7.3	2
1864	COL. JONES	Schooner	147	77	23.5	9.4	2
1864	WARRENTON	Schooner	88	73.7	22.8	7.4	2
1865	EMILY	Schooner	81	64.6	22.8	8	2
1865	MYRONUS	Schooner	282 g. 268 n.	118.5	27.5	11.6	3
1866	BONNY IRIS	Schooner	81	76.7	22.3	7.3	2
1866	CORRIENTES	Brig	382	120.3	29	13	2
1867	MARY A. HOLT	Schooner	193	105	27.9	9.3	2
1867	MARY AUGUSTA	Schooner	199 g. 189 n.	104	27.4	11.9	2
1868	ELLA MAY	Schooner	144	94.5	27.2	8.5	2
1869	A. K. WOODWARD	Schooner	110	88	24.5	7.4	2
1869	J. M. KENNEDY	Schooner	120 g. 114 n.	87.5	25.4	7.2	2
1869	KATE GRANT	Schooner	133	95	25.8	8	2
1869	LOUISA WILSON	Schooner	130	94	26	7	2
1870	ALTAVELIA	Schooner	126	93.5	27.6	7.1	2
1870	ANNIE HARPER	Schooner	135	95	26	8.1	2
1870	CHARLES UPTON	Schooner	89	82	23.9	7	2

(Continued on next page)

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1870	GEORGIETTA	Schooner	142	99	27	8.1	2
1870	LAVOLTA	Schooner	205	104	28	11.4	2
1870	MAID OF THE MIST	Schooner	134	95.5	26.7	7.8	2
1870	STORM PETREL	Schooner	174	100.9	27.5	10.8	2
1870	WESLEY ABBOTT	Schooner	144 g. 137 n.	95	27	8.5	2
1871	D. S. LAWRENCE	Schooner	70	71	23.3	6.6	2
1871	FAIR WIND	Schooner	88	81.7	24.1	7	2
1871	WILLIAM A. ARCHER	Schooner	95	85	25.8	7.1	2
1872	ADAM BOWLEY	Schooner	108	86.4	26.9	7.6	2
1872	EXPRESS	Schooner	29 g. 28 n.	52.9	17	5.7	2
1873	ANNA S. MURCH	Schooner	114	91.5	27	7.1	2
1873	CITY OF CHELSEA	Schooner	151	102	27.3	8.2	2
1873	DEXTER CLARK	Schooner	142	104.4	28.5	7.3	2
1873	FRANK A. MAGEE	Schooner	131 g. 124 n.	90.5	26.9	7.6	2
1873	JULIA EDNA	Schooner	26	49.7	17	5.3	2
1873	LEONORA	Schooner	116 g. 110 n.	94	26	7.5	2
1873	MARY LORD	Schooner	365	131.1	30	11	3
1873	NELLIE GRANT	Schooner	139 g. 132 n.	93.8	26.6	9.6	2
1874	JOSHUA GRINDLE	Schooner	183	105	28.2	8.7	3
1874	SENATOR	Schooner	61	67.9	21.3	6.5	2
1874	WILLIAM PICKERING	Schooner	100	82.4	24	7.9	2
1875	ANNIE S. HALL	Barkentine	455	137.8	31	14.6	3
1875	CERES	Schooner	54	64.4	19.6	6.9	2
1875	CLIO CHILCOTT	Schooner	89	76.3	25	7.3	2
1875	MARY C. HALE	Bark	568	137.3	34.1	15.8	3
1876	JOHN C. REED	Schooner	100	82.4	25.5	7.3	2
1876	OLIVE BRANCH	Schooner	92	80.8	22.6	7.3	2
1877	JULIA	Bark	799 g. 759 n.	155.1	34	20.1	3
1877	N. HARVEY	Schooner	38	55.3	20	5.7	2
1877	STATELY	Schooner	60	54	14.8	6.5	2
1878	RALPH K. GRANT	Schooner	47	60.5	20.1	6.2	2
1878	SHETLAND (unrigged hull intended for bark)	Bark	684	143	33.3	17.6	—
1879	F. D. HODGKINS	Schooner	178 g. 169 n.	107.6	25.7	10.8	3
1879	JOHN J. TAYLOR	Schooner	267	115.7	28.5	12.1	3
1879	WILLIAM F. GREEN	Schooner	217	115.7	28.5	12.1	3
1883	LEWIS KING	Schooner	150 g. 142 n.	99.9	25.9	8.7	2
1884	SARAH A. BLAISDELL	Schooner	114 g. 108 n.	84.3	24.1	8.3	2
1890	HARRY W. HAYNES	Schooner	295	129.3	31	9.8	3
1893	GRACE	Schooner	63	69	21.5	6.6	2

K. Surry

The following names and particulars of schooners, brigs, and barks built at Surry, Maine, are taken from available customhouse records.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1828	JOANNA	Schooner	27	39.5	13.3	6.1	—
1836	MARQUIS	Schooner	91	69.6	21.2	7	2
1837	ORATOR	Schooner	121	78.2	29	7.8	2
1838	MARY ANN	Schooner	55	58.4	15.7	6.8	2
1839	ADELAIDE	Schooner	90	77.4	23.2	6.9	2
1839	OTRANTO	Schooner	105	79.6	23.2	8.2	2
1841	EBRO	Schooner	108	75	22.6	7.3	2
1845	FLORENCE	Brig	197	79.4	23.9	10.2	2
1846	ALBATROSS	Schooner	140	84	23.8	8	2
1846	J. S. CABOT	Schooner	136	84.3	23.7	7.8	2
1847	ELLA	Bark	360	113.8	26.4	13.2	3
1847	FRANCIS ELLEN	Schooner	98	79.8	24.3	7.6	2
1847	J. KENNEDY	Schooner	98	79	24	7	2
1848	LYDIA JANE	Schooner	146	83.5	24.3	8.3	2
1848	SARAH OLNEY	Bark	200	95	24.6	9.8	3
1849	ADELAIDE	Schooner	113	79.4	23.2	7.1	2
1849	MARTIN VAN BUREN	Brig	170	88.8	23.9	9	2
1852	CREDIT	Schooner	53	51	17.5	7.2	2
1852	KATE MEANS	Brig	186	88.3	24.8	9.8	2
1853	EMILY DODGE	Brig	158	93.5	23	8.2	2
1853	MARTHA WASHINGTON	Brig	277	103.3	26.5	11.3	2
1854	E. A. CHASE	Bark	342	120.2	27.1	11.5	3
1855	DASHAWAY	Schooner	117	78.6	23.7	7.4	2
1855	H. MEANS	Brig	186	93.3	25.2	9	2
1855	MILL CREEK	Schooner	108	74	23.2	7.3	2
1858	EXTRAL	Schooner	73	62.3	17.2	7.8	2
1860	CONQUEROR	Schooner	31	45.5	14.5	5.5	2
1860	EXPERIMENT	Schooner	197	93	24.8	9.8	2
1862	FRANCIS COFFIN	Schooner	126	82	24.8	7.2	2
1862	FRANCONIA	Schooner	156	93.5	26	8.3	2
1864	FRANCIS COFFIN	Schooner	98 g. 93 n.	78.6	25.9	7.2	2
1866	MOTTANO	Schooner	320	108.2	29.4	12	2
1870	JAMES K. LAWRENCE	Schooner	136	97.3	26.5	8.6	2
1873	FLORIDA	Schooner	125	88.7	24.6	8.7	2
1873	HATTIE L. CARTER	Schooner	111	90	26.6	7.7	2
1873	WESTERLOO	Schooner	82	76.3	24.8	7	2

L. Blue Hill (and Seaville)

The available customhouse records give the following two-masted sailing vessels as built at Blue Hill (and Seaville), Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1817	VOLANT	Schooner	122	79.9	23.3	7.6	2
1820	CONQUEST	Schooner	100	73.3	21.9	7.2	2
1825	BRILLIANT	Schooner	127	78.2	22.2	8.1	2
1825	JULIAN	Schooner	113	76.2	21.5	7.7	2
1833	MAGNOLIA	Schooner	83	76.6	22.7	7.1	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1836	VENUS	Schooner	101	73.7	22.2	7.2	2
1838	ABIGAIL	Schooner	92	67	19.7	8.1	2
1845	ARZOO	Schooner	74	67.4	19.4	6.6	2
1845	SAMUEL LEWIS	Schooner	87	77.5	22	7.6	2
1846	BELLE	Schooner	106	76.5	22.2	7.2	2
1846	CARESSA	Schooner	67	67	19.1	6	2
1846	ELIZABETH	Schooner	57 g. 54 n.	66	20.4	6.3	2
1846	GEORGE GILMAN	Schooner	65	64.2	20	6.2	2
1847	FORESTER	Schooner	55	68.5	19.5	6.1	—
1847	JOHN SNOW	Schooner	135	83	24.3	7.8	2
1848	ALVARADO	Schooner	127	83.7	23.1	7.6	2
1851	COUNSELOR	Schooner	111	77	23	7.3	2
1852	SENATOR	Schooner	58	65.5	20.9	6.6	2
1852	ZICAVO	Schooner	99	81.8	23.5	7.6	2
1853	JULIA ELIZABETH	Schooner	105	84	24.2	7.9	2
1855	ANNA GARDNER	Schooner	149	88.2	23.1	8	2
1855	MINA W. HOLT	Brig	263	99.2	27	11.2	2
1855	PYTHON	Schooner	94	81.6	24.4	7.7	2
1859	BELLE	Schooner	21	39	11	5.3	2
1891	HAZEL DELL	Schooner	112	93.8	28.4	8.5	2

Records also show that the schooners *Susan Taylor* (104½ tons) and *St. Leon* (74 tons) were built at Blue Hill in 1837 and the schooner *Lois M. Candage* (45 tons) in 1912.

XLIV.

THE PASSAMAQUODDY AREA

A. Calais

A RECENT SEARCH of available customhouse records gives a number of vessels built at Calais, Maine, especially during the 1860's and 1870's, as the following list shows. The largest vessel recorded is the Down Easter *Annie H. Smith* of 1,503 tons, built in 1876 by Nickerson & Rideout. Details of this ship are given in the section covering the Machias area (XLI) under the caption, "The Typical Down Easter *Annie H. Smith,* Built at Calais."

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1832	POMFRET	Schooner	121	72.6	21.6	8.9	2
1840	RIVAL	Schooner	143	—	—	—	—
1842	FREEPORT	Schooner	48	55.2	17.2	5.9	2
1844	HENRY	Schooner	129	78.3	21.7	8.7	2
1847	A. SAWYER	Schooner	128	79.4	22.2	8.3	2
1847	AURORA	Brig	138	75.5	21.6	9.7	2
1854	BLACK HAWK	Brig	240	99.8	25.9	10.4	2
1858	B. YOUNG	Brig	141	88.4	23.6	9.4	2
1859	LAMPLIGHTER	Bark	248	110	29.2	9.5	3
1860	JEDDIE	Schooner	127	88	24.5	9.2	2
1862	NELLIE TARBOX	Schooner	169	86.6	26.2	8.6	2
1863	DELIA HINDS	Schooner	98	78.3	22.7	8	—
1864	ALLIGATOR	Schooner	123	92	26	7	2
1864	CHATTANOOGA	Bark	527	135	30	18	3
1864	JOHN BOYNTON	Schooner	102	78.5	22	8.1	2
1865	ELMER E. HAWES	Schooner	38	60	18	8	—
1865	WHITE SWAN	Schooner	142	93	23.8	8	2
1866	A. H. SAWYER	Schooner	88	72	22.8	7.2	2
1866	F. H. TODD	Brig	336	118.7	27.5	14	2
1866	JOHN E. CHASE	Bark	668	152	32	18	3
1866	ST. CROIX	Schooner	234	112	28.6	9.3	2
1867	ADDIE MURCHIE	Schooner	153	96	26	8	2
1867	CARDENAS	Bark	388	131.8	30.3	12	3
1867	HELEN G. KING	Schooner	147	93	25.3	9	2
1867	HELEN M. WAITE	Schooner	124	88.5	27	7.2	2
1867	HENRY G. FAY	Schooner	183	100.5	27	9.4	—
1867	MAGGIE J. CHADWICK	Schooner	287	126	29.3	10.2	2
1867	MARY AND ELIZA	Schooner	183	100.5	27	9.4	2
1867	NELLIE	Schooner	95	78	23.5	8.1	2
1867	RING DOVE	Schooner	158	93.4	24.3	8.8	2
1867	STARLIGHT	Schooner	154	100	26	9	2
1868	GEORGIA TODD	Schooner	175	105	26.7	8.9	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1868	LETTIE WELLS	Schooner	192	106.5	27.9	9.9	2
1868	MIST	Schooner	50	72	22	5.8	—
1868	MORELIGHT	Schooner	127	89	24.8	8.8	2
1868	SARAH A. REED	Schooner	159	100	26	8	2
1869	ANNIE MURCHIE	Schooner	201	110	27.5	9.2	2
1869	C. H. EATON	Schooner	170	101	27	9	2
1869	GEORGIA STAPLES	Schooner	154	97	27	9	2
1869	MERCY T. TRUNDY	Schooner	174	101	26.8	9.2	2
1869	OWEN P. HINDS	Schooner	140	97.5	28	7.7	2
1869	WILLIAM DEMING	Schooner	179	104	27.8	8.8	2
1870	MARY J. WARD	Schooner	192	109	29.8	9	2
1870	TERRAPIN	Schooner	128	95	26	7.4	2
1870	WILLIAM G. R. MOWRY	Schooner	159	99.1	27.3	8.3	2
1870	WILLARD G. PATTON	Schooner	518	142	31.6	16	3
1871	B. F. WAITE	Schooner	160	96	25.4	9	2
1871	E. & J. OAKLEY	Schooner	172	113	28	7.9	2
1871	ETTA MAY	Schooner	152	96	27.8	8.5	2
1871	G. M. PORTER	Schooner	144	98	26.7	8	2
1871	L. L. HAMLIN	Schooner	147	105	26.6	8.8	2
1871	TROTT KING	Schooner	151	100	27.3	8.5	2
1872	B. L. EATON	Schooner	171	102	27.5	9	—
1872	ELIZA SAWYER	Schooner	149	98	27.8	8	2
1872	EMMA McADAM	Schooner	166	101	27.4	8.6	2
1872	FANNY PIKE	Schooner	148	93	26	8.6	2
1872	JAMES S. PIKE	Schooner	69	70.5	23	6.8	—
1872	JENNIE M. MURPHY	Schooner	171	95	25.7	9.4	2
1872	LOUISA A. BOARDMAN	Schooner	113	93	26.8	7	2
1872	LUNET	Schooner	180	103	28	8	2
1872	ONTARIO	Schooner	94	74.9	23.4	7.3	—
1872	SETH W. SMITH	Schooner	198	114	28.2	9.6	2
1873	ADDIE SAWYER	Schooner	132	93	26.8	8.1	2
1873	ADDIE TODD	Schooner	155	105	29.4	8.7	2
1873	ALICE T. BOARDMAN	Schooner	124	96	27	7.5	2
1873	ALMARETTA	Schooner	318	134	32	10.8	3
1873	B. L. EATON	Schooner	171	102	27.5	9	2
1873	EMMA CROSBY	Schooner	226	120	29.3	9.7	3
1873	ERNST T. LEE	Schooner	173	104	27.5	9	2
1873	HATTIE E. KING	Schooner	199	115	28.3	9	3
1873	LOTTIE	Schooner	100	79	25.1	7.1	2
1873	PHILIP FITZPATRICK	Bark	582	147	32.4	17	3
1873	RACHEL L. HERSEY	Schooner	231	119	29.3	9.3	3
1873	ST. MARY	Schooner	173	29.6	9.8	4.4	—
1873	WILLIAM TODD	Schooner	135	96	27.3	8.7	2
1873	WILLIAM WHITEHEAD	Schooner	150	96.5	28.2	7.4	2
1874	ANNIE K. EATON	Schooner	185	112.5	29.5	9.3	3
1874	COOK BORDEN	Schooner	170	107.5	29.6	9	3
1874	E. & G. W. HINDS	Schooner	115	89	26	8.3	2
1874	ELIZABETH M. COOK	Schooner	282	104.8	32.4	10.9	3
1874	FREDDIE EATON	Schooner	89	84	23.6	7.4	—
1874	JED F. DUREN	Schooner	112	87	26.4	7.9	2
1874	MAGGIE TODD	Schooner	125	102	26.8	7.5	2
1874	MOTT HAVEN	Schooner	143	91	24.5	8.5	2
1874	NELLIE EATON	Schooner	118	87.5	26	8.1	2
1874	PRIDE OF THE EAST	Schooner	182	105	27.5	8.9	2
1874	SARAH EATON	Schooner	199	110	29	9	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1875	ALBERT SCHULTZ	Barkentine	498	136	33.3	17	3
1875	JOHN A. LORD	Schooner	175	105	27.6	9	2
1875	JOHN C. NOYES	Brig	362	126	30.3	12.9	2
1875	MABEL	Schooner	186	105	27.5	9.2	2
1875	MARION P. CHAMPLIN	Schooner	199	108	27.8	9.7	2
1875	SETH M. TODD	Schooner	195	114	29.5	9.6	3
1876	ADA F. CROSBY	Bark	559	140	32.2	14.8	3
1876	ANNIE H. SMITH	Ship	1,503	200	40	24.5	3
1876	OLIVE THURLOW	Bark	660	149	32.7	17.6	3
1876	WILLIAM H. BOARDMAN	Schooner	150	101	27.5	9	—
1876	WILLIAM H. THOMAS	Bark	661	147	32	18.4	3
1877	NELLIE BRETT	Bark	726	157	33.1	18.3	3
1877	WILLIE DE WOLF	Schooner	95	89	23.5	7.8	2
1878	CARRIE BELLE	Schooner	26	47	18	6.5	2
1878	EUGENE HALE	Brig	443	124	29	17.7	2
1878	MARY HASBROUCK	Bark	772	154	33.3	19.5	3
1879	FRANK A. NELSON	Schooner	43	61.6	23	7.5	2
1879	WALTER FRANKLIN	Schooner	39	50	20	7.5	2
1882	MARY ELLEN	Schooner	84	79.5	26.7	5.6	—
1884	GRACE GOWER	Schooner	241	120	34	8.5	3
1890	FRED GOWER	Schooner	819	182.7	38.1	17.4	3
1891	JULIA A. WARR	Schooner	214	110	28.6	8	3
1891	VILA Y. HERMANO	Schooner	327	131.7	31.3	10.5	3

B. Robbinston

The following brigs and schooners are recorded as built at Robbinston, Maine, according to available customhouse records. Robbinston is also credited with constructing four ships and one bark of the clipper type, particulars of which are given in Section XLI covering the Machias district.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1817	GENERAL BREWER	Schooner	115	—	—	—	—
1831	MAC	Schooner	80	—	—	—	—
1836	BRIDE	Schooner	95	69.6	17.8	8.5	2
1837	ANN DENMAN	Schooner	89	69.1	18.8	7.8	2
1840	LOUISA	Schooner	26	40.2	13.2	5.9	2
1841	OPENAGO	Brig	147	—	—	—	2
1851	GOLDFINCH	Bark	316	—	—	—	3
1853	KNIGHT	Schooner	164	86.2	24.1	8.7	2
1854	RION BRADBURY	Brig	343	114.6	28.5	11.7	2
1855	RESOLUTE	Brig	173	90	23.8	9.1	2
1855	W. P. RITCHIE	Schooner	98	83.6	24.6	6.8	2
1867	CALVIN	Schooner	169	95	26.6	9.4	2
1871	JAMES S. PIKE	Schooner	70	70.5	23.8	6.6	2
1872	LUCY WENTWORTH	Schooner	73	78	24	6.1	2
1873	NELLIE CLARK	Schooner	160	103	27.9	9.2	2
1875	FLEETWING	Schooner	83	76	27.7	8.2	2
1883	LADY LIBO	Schooner	10	30.8	13.2	5	2

C. Perry

The available customhouse records give the following schooners built at Perry, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1820	NANCY	Schooner	25	39.2	14.2	5.3	2
1838	OLMSTEAD	Schooner	20	35.2	11.5	5.7	2
1849	WILMINGTON	Schooner	97	69.5	22.2	7.4	2
1864	PERCY	Schooner	81	75.7	21.6	6.9	2
1866	F. A. PIKE	Schooner	125	92	26.2	8	2
1866	SENATOR GRIMES	Schooner	125	92	26.2	8	2
1867	E. C. GATES	Schooner	103	100	27	7.3	2
1867	JED FRYE	Schooner	147	100	26.2	8	2
1867	WILLIAM DUREN	Schooner	101	83	25	7	2
1868	MARY LEE NORTON	Schooner	112	85.5	23.2	8	2
1868	MAUD MALLOCH	Schooner	117	87.5	25.5	7.7	2
1868	ROSWELL	Schooner	284	106	27.2	13.1	2
1869	HATTIE ELLEN	Schooner	156	102.5	27.2	8.6	2
1869	SUNBEAM	Schooner	118	87	24.3	7.5	2
1870	H. E. WELLMAN	Schooner	112	87	25.6	7.6	2
1870	MARIA C. FRYE	Schooner	194	107	27.3	9.5	2
1870	NELLIE SCOTT	Schooner	297	108.8	28.3	13.7	2
1870	S. B. HUME	Schooner	333	115	28.4	14	2
1870	SWALLOW	Schooner	100	85.2	24.4	7.2	2
1872	MARY F. PIKE (or MARY E. PIKE)	Schooner	125	91	26.6	7.8	2
1872	VASHTI R. GATES	Schooner	115	90	28	6.7	2
1883	GERTRUDE L. TRUNDY	Schooner	486	151	35.5	12.5	3
1884	REBECCA F. LAMDIN	Schooner	464	145	33.5	13	3
1885	ALICE M.	Schooner	7	38.8	12.5	5.5	2
1891	VICTOR	Schooner	778	171	35.6	17.3	3
1899	EDITH T.	Schooner	13	44	14.3	6.7	2

D. Eastport

A search of the records gives the following vessels built at Eastport, Maine. Eastport is also credited with constructing two ships of the clipper type, the *Grey Feather* and *Crystal Palace,* built in 1850 and 1854, respectively. Particulars of these ships are given in Section XLI ("The Machias District, Maine").

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1820	FAIR PLAY	Schooner	52	52.3	19.8	6.7	2
1825	BOUNDARY	Schooner	141	79	23.5	9.1	2
1848	Z. A. PAINE	Schooner	95	94.8	20.1	8	2
1851	TRIAD	Brig	236	97	25	10.4	2
1863	ADDIE P. STIMPSON	Schooner	95	76.4	24	7.2	2
1864	LUCY	Schooner	135	87.5	24.8	9	2
1866	ADA ADELIA	Schooner	18	48	16.7	4.5	2
1866	BERTHA SOUDER	Schooner	192	100	27	10.8	2
1867	WILLIAM R. PAGE	Schooner	81	83	23.8	8.1	2
1868	PALOS	Schooner	199	104.5	27.3	10.3	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1870	DAISY BOYNTON	Brig	410	117.5	29.8	16.7	2
1872	ANNIE	Schooner	13	37	14.1	5	2
1874	TWO SISTERS	Schooner	8	38	13.5	4.6	2
1875	C. B. PAINE	Schooner	207	103	28.2	9.9	2
1878	ALERT	Schooner	10	31.4	12.8	5.5	2
1882	MARTHA A.	Schooner	9	31.8	11.8	6.5	2
1885	EVA N.	Schooner	10	34.7	12.7	4.6	2
1886	GRACIE G.	Schooner	7	31.1	12.1	5.5	2
1886	MAY FLOWER	Schooner	9	33.2	11.8	5.3	2
1887	S. E. JORDAN	Schooner	10	32	13	5	2
1892	MAC	Schooner	9	38	12.3	6.2	2
1901	BESSIE A. ANDERSON	Schooner	18	47.2	15.5	6.9	2
1901	FLORENCE MAY	Schooner	14	43.2	14.8	7.2	2
1902	AUBREY A.	Gas screw	14	40	14.4	6.5	1
1903	ROBERT C. HARRIS	Schooner	22	48.5	16.5	7.5	2
1903	KEARSARGE	Schooner	18	44.6	15.1	7.2	2
1920	MARY B. HOLMES	Schooner	15	42.2	12.3	4.7	2

E. Lubec

According to available customhouse records, the following vessels were built at Lubec, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1826	PIONEER	Schooner	55	56.8	18.6	6.2	2
1850	BENJAMIN	Schooner	71	71	22.3	6	2
1853	R. B. CLARK	Schooner	164	87	25.9	8.4	—
1859	ALMON ROWELL	Brig	287	105.7	27.2	11	2
1860	LUCY NEAL	Schooner	10	32	12	4	2
1863	GENERAL MEADE	Schooner	73	68	19	8	2
1864	CLARA JANE	Schooner	125	86.4	26.4	8.1	2
1865	ADDIE RYARSON	Schooner	178	98.7	26	9.7	2
1867	MARY E. STAPLES	Schooner	216	104.5	28.3	10.3	2
1869	MARY A. HARMON	Schooner	320	117.8	28.4	14.6	2
1869	QUODDY	Schooner	168	102.5	27	9.1	2
1870	ALCYONE	Schooner	258	107	28.4	8.9	2
1870	ALLEGIANCE	Schooner	258	107	28.4	8.9	2
1871	C. P. GERRISH	Schooner	190	103.5	27.7	10	2
1871	MARCIA REYNOLDS	Schooner	294	120	29.9	13.5	3
1871	SEA LARK	Schooner	138	92	26.4	9	2
1872	LIZZIE DEWEY	Schooner	374	128	30.8	14.9	3
1872	NELLIE J. DINSMORE	Schooner	371	123	30.7	15.4	3
1872	SAMMY FORD	Schooner	108	87	25.4	7.9	2
1873	CARL D. LATHROP	Schooner	293	110	29	13.8	2
1873	CHARLIE MORTON	Schooner	317	112	30.7	14.1	2
1874	CHARLES E. SEARS	Schooner	160	96	26.6	9.5	2
1874	LIZZIE B. McNICHOL	Schooner	162	96.5	27.2	9.4	2
1876	CENTENNIAL	Schooner	9	32.2	11.8	5	2
1876	EAST WIND	Schooner	9	30	12	5	—
1877	LITTLE LUCY	Schooner	11	35.3	13	5.5	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1881	BLOOMER	Schooner	9	32	12	5	—
1888	AGNES B.	Schooner	11	37.5	13.5	5.5	2
1892	TWILIGHT	Schooner	7	33.5	12	5.2	2
1897	LUNETTE	Schooner	16	42.2	15.2	6	2
1903	MARY M. LORD	Schooner	22	50.6	16.2	7.1	2
1903	RELIANCE	Schooner	21	52.7	15.9	7	2
1911	ARLENE	Gas screw	10	39.3	11.7	4.5	1

F. Pembroke

The following vessels, with particulars, are recorded as built at Pembroke, Maine. The bark *Comet* (536 tons; built in 1852) and the ships *Queen of the Pacific* (1,357 tons; built in 1852) and *Western Continent* (1,272 tons; built in 1853) are also credited to Pembroke. These vessels of clipper type are described in Section XLI on the Machias area under the caption, "Far Eastern Maine Builds Twelve Clipper Ships, 1850-1855."

Year Built	Name	Rig	Tonnage	Dimensions in Feet Length	Beam	Depth	Number of Masts
1803	MAYFLOWER	Schooner	80	65	18.5	7.5	2
1848	JULIA A. RICH	Schooner	106	81.2	23.2	7.4	2
1850	PEMBROKE	Brig	191	89	25	9.8	2
1854	ROBERT MOWE	Schooner	166	97	25.3	10.4	2
1855	AMERICAN EAGLE	Schooner	103	79.7	23.5	7.6	2
1863	MARTHA A. BERRY	Brig	335	116.5	28	15.1	2
1864	CLARA JANE	Schooner	125	86.5	25.3	8.1	2
1864	FARRAGUT	Schooner	220	116	27.6	9	2
1866	PINTA	Schooner	54	64	19	6	2
1867	ZELIA	Schooner	212	103.2	26.6	9.2	2
1868	GEORGE LOWE	Schooner	78	78	22.8	6.5	2
	(schooner of same dimensions recorded as JUDGE LOW; built same year)						
1868	M. J. LAUGHTON	Schooner	126	89	27	7.5	2
1868	SPARLET (or SPARTEL)	Schooner	133	91	27	7.6	2
1869	ANNA FRYE	Schooner	128	93	26.2	8	2
1869	GAZELLE	Schooner	25	57	18	6	2
1869	SANDALPHEN	Schooner	92	82	22.5	7.5	2
1869	S. L. BURNS	Schooner	173	106	28.7	9	2
1870	HESTER A. BLANCHARD	Schooner	503	125	30	15.3	2
1870	H. T. TOWNSEND	Schooner	202	104.4	29	9	2
1870	IDA ELLA	Schooner	89	82	24.7	7.2	2
1870	SYRA	Bark	514	131	33.2	17.7	3
1871	ANNIE GUS	Schooner	99	87.5	24	7.5	2
1871	EMMA W. DAY	Schooner	81	78.5	24	8.4	2
1871	L. STANDISH	Schooner	115	89	25.7	7.5	2
1871	SCIO	Schooner	143	95	27.9	8.3	2
1871	SCUD	Schooner	120	86	23.5	8	2
1872	ALICE DEAN	Schooner	42	63	19	6.7	2
1872	ALMEDA	Schooner	162	99	28	8.8	2
1872	BERTHA J. FELLOWS	Schooner	154	100	28	8.5	2
1872	LIZZIE B. GREGG	Schooner	246	105	28.8	9.1	2
1872	ZEPHYR	Schooner	9	37.3	5.6	2	2

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Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1873	ALBERT H. WAITE	Schooner	294	114	29	13.8	2
1873	H. S. BRIDGES	Schooner	177	106	28	8.1	2
1874	NORMAN	Schooner	335	127	30.3	14.5	3
1874	ZELIA	Schooner	122	91	27	7.3	2
1875	CLYTIE	Schooner	438	141	32.3	15	3
1877	CHARLIE ROSS	Schooner	12	36	12.9	5.6	2
1877	GLENEIDA	Bark	784	162	34.8	20	3
1884	HANNAH F. CARLETON	Schooner	214	103.3	30	10.6	2

G. Trescott

A recent search of the records gives the following brigs and schooners built at Trescott, Maine. The two ships of clipper type credited to Trescott are the *Kate Hayes* of 700 tons and *Sea Lark* of 973 tons, built in 1851 and 1852, respectively. The available particulars of these vessels are given in Section XLI covering the Machias area.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1832	EDWARD D. PETERS	Schooner	134	79	23.7	8.3	2
1833	HANNAH	Schooner	89	67.7	21.3	7.3	2
1835	FOREST	Schooner	110	74.2	23.1	7.5	2
1838	MARTHA	Schooner	100	71	21.8	7.5	2
1838	MARY	Schooner	112	73.8	23.4	7.6	2
1839	CHARLES HAMMOND	Brig	161	85.8	24.6	8.8	2
1841	JOHN	Schooner	110	74.5	22.8	7.5	2
1844	PROTECTION	Brig	136	81.2	22.7	8.4	2
1845	ASHLAND	Schooner	109	73.8	22.3	7.7	2
1845	MYRRH	Schooner	30	42.9	13.5	6.1	2
1846	JOHN BALCH	Schooner	139	87.3	24.2	8.2	2
1857	W. D. RICE	Brig	239	104.3	25.7	9.9	2

H. Dennysville

The following vessels are recorded as built at Dennysville, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1849	FRANKLIN	Schooner	89	74	21	7	2
1852	MARY	Schooner	79	80	23.8	7	2
1857	ADELINE	Schooner	97	78	26.1	7.3	2
1860	LYNDON	Schooner	97	81.5	25	6.9	2
1867	ADA S. ALLEN	Schooner	150	94	27	9	2
1868	HIRAM TUCKER	Schooner	112	88	26	7.3	2
1868	M. A. COOMBS	Schooner	190	107	27.3	9.3	2
1870	T. W. ALLEN	Schooner	113	83.9	26.1	7.5	2
1872	THOMAS WATT	Schooner	183	106	28.6	9	2
1873	MARIA S.	Schooner	105	81	26	7.6	2
1874	VIOLA MAY	Schooner	172	103	27.7	8.8	2
1884	JULIA AND GERTIE	Schooner	16	37.2	15.6	4.8	2
1919	ESTHER K.	Schooner	1,001	186.5	33	18.7	4
1923	ANNA SOPHIA	Schooner	201	102	30.6	8.5	2
1927	AEROLITE	Oil screw	26	51.2	14.7	6.2	2

I. Whiting

The following schooners are recorded as built at Whiting, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1825	IVY	Schooner	140	78.5	23.7	8.8	2
1866	NORTHERN LIGHT	Schooner	158	97.5	27.9	8.6	2
1876	CLARA DINSMORE	Schooner	58	70	21	6.6	2

J. Cutler

The available customhouse records give the following sailing vessels built at Cutler, Maine.

Year Built	Name	Rig	Tonnage	Dimensions in Feet			Number of Masts
				Length	Beam	Depth	
1826	PRINCE	Schooner	99	66	19.2	9	2
1827	SWAN	Schooner	75	59.5	18.5	8	2
1841	NANCY W. STEVENS	Bark	346	105.5	27.2	13.6	3
1845	CUTLER	Schooner	131	79.5	22.8	8.3	2
1846	MARIA	Brig	144	81.3	23	8.8	2
1846	QUINCY	Brig	168	84.7	24.6	9.2	2
1846	SUTTON	Brig	196	92	24.7	9.7	2
1847	ELIZABETH ANN	Schooner	22	36.3	11.8	6.8	2
1848	EUREKA	Bark	276	103.6	25.8	11.5	3
1849	CALIFORNIA PACKET	Ship	602	144.5	30.1	15	3
1849	KATE	Schooner	144	83.7	24.6	8.1	2
1851	JUSTINA	Schooner	114	75	21.8	8	3
1857	INLET	Schooner	33	43.8	13.2	6.7	2
1858	UNION	Schooner	21	38	12.5	5.2	2
1859	SARAH	Schooner	152	84	25.4	8.2	2
1859	WILLIE	Schooner	160	88	25	8.3	2
1860	LOTTIE	Schooner	225	100	27.7	9.5	2
1860	NATHANIEL STEVENS	Brig	199	98.3	25.8	8.9	2
1862	HARRIOT STEVENS	Bark	463	121	29.2	14.6	3
1862	OLIVE JANE	Bark	359	102	28.3	14.2	3
1863	EVELYN	Bark	499	126.5	29.5	14.8	3
1863	SOL WILDES	Bark	489	125.6	29.3	14.7	3
1864	CARRIE ESTELLE	Brig	249	100.5	28	10.1	2
1864	JOHN BRIGHTMAN	Brig	338	110.8	29.3	10.7	2
1864	MARY D. HASKELL	Schooner	295	113	30	9.8	2
1865	FIVE BROTHERS	Brig	396	119.2	29	16.3	2
1866	ANNIE M. GOODWIN	Bark	445	123	30.7	15.8	3
1866	ELIZA STEVENS	Brig	445	125.2	30.8	15.5	2
1866	WALDO	Bark	444	124.5	30	16.3	3
1867	OSMYN	Bark	370	126	30	15.7	3
1867	ROSE HASKELL	Schooner	420	125.5	30	16.5	3
1868	VIRGINIA	Schooner	196	103	28.8	9.8	2
1869	EMILY CURTIS	Schooner	240	112	28.7	10.3	2
1872	FANNY FLINT	Schooner	176	101	28.9	8.7	2
1873	MAGGIE HARTHAN	Schooner	331	113	29.5	14	2
1874	EMMA K. SMALLEY	Schooner	196	101.4	29.7	9.1	2
1875	HARRY AND FRED	Schooner	196	105	28.5	8.6	2
1904	KEYSTONE	Schooner	21	47	15.4	6.3	2