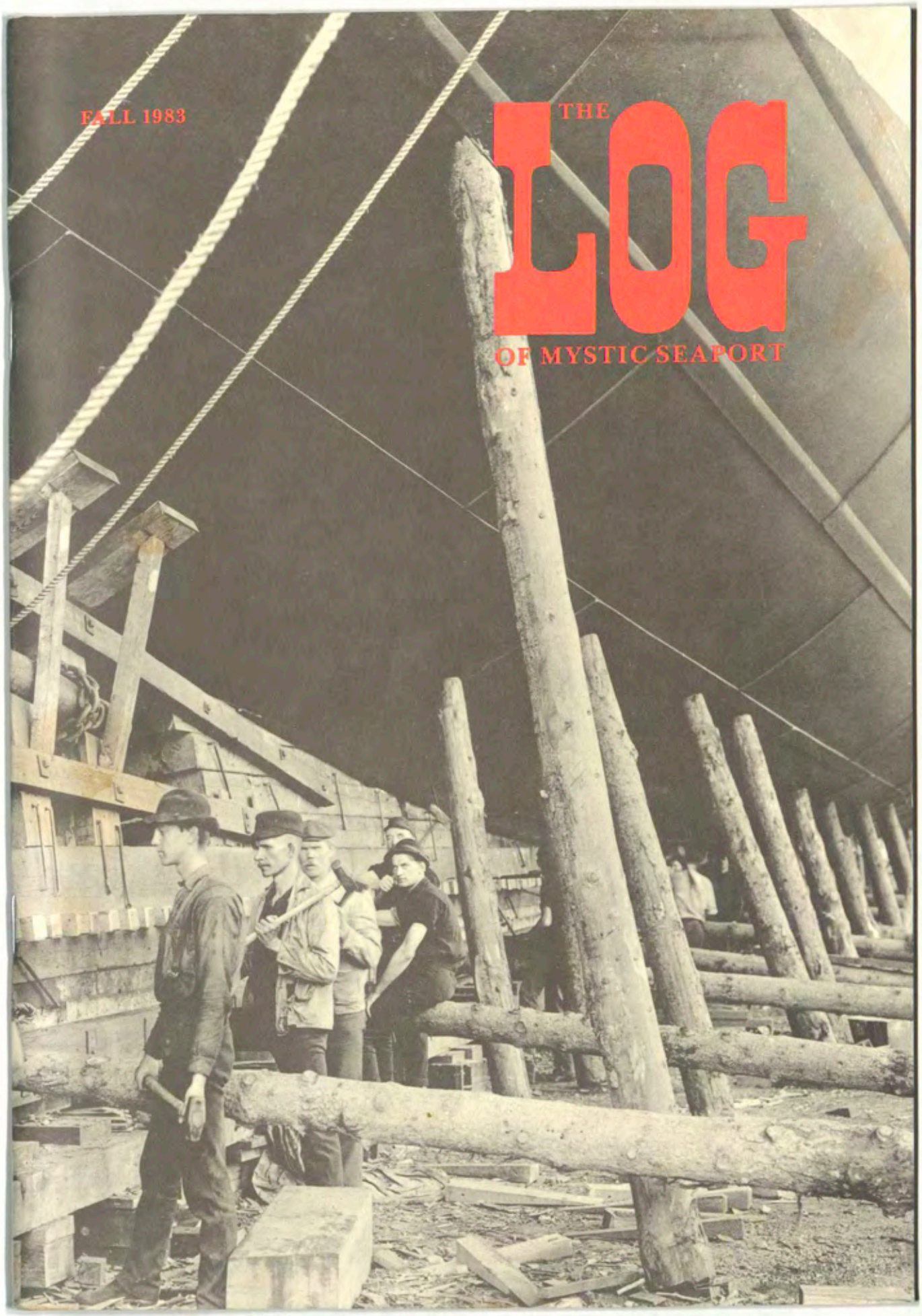


FALL 1983

THE LOG OF MYSTIC SEAPORT

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COVER: *Dwarfed by the* Thomas W. Lawson*'s steel hull, ship carpenters wedge her stern up onto the launching ways. Photo by T. E. Marr, July 1902. (Courtesy of the Peabody Museum of Salem)*

BACK COVER: *Reflecting changes in fishing techniques, the* L. A. Dunton *is joined by the dragger* Florence, *built at Mystic in 1926 and representing the technology that made fishing schooners obsolete. (Photo by Claire White-Peterson)*

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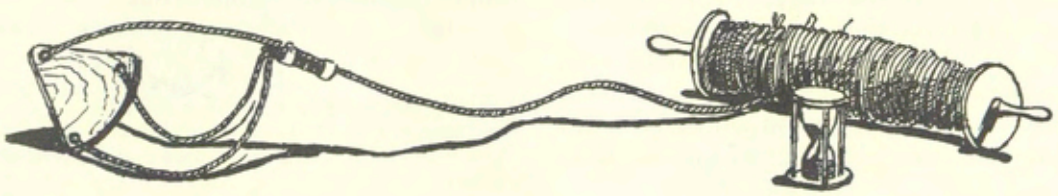
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SIGHTINGS



Each year as part of our annual Member's Day, we pause to remember those Seaport members who passed away during the year. While this is always a somber moment, there is the satisfaction of looking at the Museum as an ongoing, living memorial to all who as Trustees, Pilots, or members helped to create and sustain this institution. It is hoped that the families of these members will recognize the Seaport as a place that reflects the qualities and principles in which these people believed.

This point of the Seaport as a living memorial was brought home to me during the late spring and early summer when in the span of a few weeks we lost four people who were particularly close to the Museum. During May and June, three Trustees Emeriti, John Blair, Frank Rogers, and Jerry Bliss, and one stalwart volunteer who was also the widow of a Trustee, June Bartram, passed away. Each has left an indelible mark on the Museum.

Francis Day Rogers became involved in the Marine Historical Association in the 1930s. Throughout his nearly fifty years of association with Mystic Frank's talent as an architect and his gift as a leader influenced the Museum's appearance and its substance. I knew Frank as President and Chairman of the Board of Trustees and worked with him closely as he chaired the Curatorial Committee. The dedication and professionalism he brought to his volunteer role as Trustee won him great respect.

John P. Blair was a man who loved the sea and who applied his resources and executive skills to the work of Mystic Seaport. He was very concerned about the quality of our visitor experience rather than the quantity of our offerings. He sought to help the visitor by supporting many projects that were not particularly glamorous but were most necessary. Anyone who talked with John was impressed with the clarity of his thinking. There is abundant evidence of his wise counsel in the structure of the Museum, and our lighthouse stands as a constant reminder of his involvement.

E. Jared Bliss, Jr., can only be described as the most devoted of friends of this museum. Over many years Jerry made exceptional efforts to fulfill his responsibilities as a Trustee. With committee service giving him a very knowledgeable perspective he was a constant source of sound advice for the staff and the Trustees. His early involvement in the Pilots' program and the regularity with which he attended the Pilots' weekends, and later Library Fellows' meetings, made him a very strong presence in Mystic.

Muriel York Bartram first became associated with the Seaport through her husband, Trustee Rensselaer W. Bartram, Jr. As a team Ren and June worked on behalf of the Museum, and particularly the Curatorial Department. With their support and involvement, three buildings were constructed to house the curatorial functions. After Ren's death June continued her efforts in the Curatorial Department as a volunteer in the Registrar's Office and a personal friend to the staff for fifteen years.

The work of all of these people was something shared with their spouses. To Pauline Rogers, Edie Bliss, and Dorothy Blair we send our sympathy.

Mystic Seaport Museum is far more than a collection of ships, buildings, and artifacts. In addition to being a distinguished museum and educational resource it is without doubt a living memorial.

J. Revell Carr

The Shipyard Worker and the Iron Shipyard

NATHAN LIPFERT

Located on the Long Reach of the Kennebec River, some twelve miles from sea, Bath, Maine, is a small city on the gently sloping western bank. Although not a very early settlement, there has been fairly continuous shipbuilding activity here from about 1741. Over 5,000 vessels have been built since 1607 in the twenty-five towns that comprise the Bath customs district. More than 2,500 of them were constructed in Bath itself. Among these was the largest wooden commercial sailing vessel ever used in this country, the schooner *Wyoming*, built in 1909. In excess of 100 shipyards have done business in the city in the past 240 years, with typically a dozen or so in operation at any one time during the nineteenth century. Throughout that century the District of Bath was often second or third in the country in construction of shipping tonnage. As the century progressed and other major ports started building in iron and steel, Bath's specialty became obvious; in the early 1880s she was building more wooden vessels per year than any other place in the world.[1] This distinction became less important as the demand for wooden ships dropped off steeply at the end of the nineteenth century and the western parts of the country became more industrialized and competed with the East Coast for shipbuilding prominence.

With its strong tradition of shipbuilding, Bath is an ideal locale to study the patterns of the shipbuilding industry. The shipyard worker is a rarely-considered figure in that business. A shadowy image, he is taken for granted as a factor in history who is acted upon more often than initiating action himself. As with most workers of the past, shipyard workers are often seen as not being in control of their lives. But were they able to act to better their situations? How did they react to technological changes in their profession?

In the course of the nineteenth century, few jarring changes affected the lives of Bath shipwrights. A generation might pass with nothing to alter the daily rhythms except the old story of ever-bigger and better vessels. There were changes, of course, but though they may have seemed major to those involved, they are more analogous to the social changes with which each generation must deal. Some were beneficial changes.

Store pay was prevalent in Bath in the early 1800s. Workers had to take some or all of their pay in the form of credit on a company store, where goods could be sold at highly inflated prices. The firm of G. F. & J. Patten, which started constructing ships in Bath in 1820, is credited with being the first to pay cash for all labor, starting a trend in this regard.[2] It took many years for this to become the general rule, however, especially during hard times in the shipbuilding industry.

The daily ration of grog or rum, usually provided by the shipyard at 11:00 A.M. and 4:00 P.M., was seen as a unnecessary evil by the same forward thinkers who led the fight against store pay. When the Pattens launched their 400-ton ship *New Orleans* in 1830, it was reported that "in accordance

Nathan Lipfert is Assistant Curator at the Maine Maritime Museum in Bath, Maine. His ongoing research interest is Bath shipwrights.

with the spirit of improvement that is now abroad in our land, this vessel was built without the use of any ardent spirit – which was not only in accordance with the wishes of the workmen but much to their satisfaction and comfort."[3] All jocular imaginings of the workers' reaction to the denial of their grog notwithstanding, this change in tradition was part of a growing public desire for liquor prohibition in Maine at that time. Since alcohol is a depressant and not the stimulant it was then believed to be, foregoing the rum ration may indeed have positively affected the workers' "comfort," for their work day lasted from dawn to dusk and they needed all the energy they could muster.

Apprenticing was another factor of the shipyard worker's life which changed slowly through the years. Starting with the rigid seven-year indenture system imported from England, the shipbuilding industry gradually decided it could not afford this luxury. In the U.S., apprenticing was used primarily for training master builders and the length of time served was eventually reduced by more than half. Workers in most trades acquired their skills as helpers, picking up knowledge wherever they could, and often learning most from their fathers and other relatives. They would receive only a limited education in this fashion, however, whereas a genuine apprentice shipwright would be exposed to the whole gamut of shipyard skills.

There was a general tendency towards greater specialization in the shipyard trades, although this trend was not fully manifested until the era of steel shipbuilding. In a rural yard with few employees, everyone would do everything. In a shipbuilding center like Bath, there might be as many as 20 trades involved in the construction of a vessel (later steel yards employed as many as 160 trades). Some workers were direct employees of a shipyard; others worked for master tradesmen who brought their crews from yard to yard, contracting for work in their trade as it became available. This latter system might mean a steadier income. A caulker employed by a small yard might be out of work for several weeks between the completion of one vessel and the planking of the next.

Workers were on the job all the daylight hours, six days a week, for much of the nineteenth century. By the late 1880s, they were still working dawn to dusk during the winter, but had a daily maximum of ten hours for the summertime. The six-day week remained the norm into the twentieth century. For this labor, the Bath worker received daily wages shown in Table 1.

TABLE 1
Daily wages of Bath ship carpenters 1886-89

	1886	1887	1888	1889
Foremen				$4.00
Ship Carpenters	$1.75	$2.00	$2.00	2.50
Joiners	2.00	2.00	2.50	2.50
Dubbers	2.00	2.25	2.50	2.75
Borers	2.00	2.25	2.25	2.75
Fasteners	1.75	2.00	2.00	2.25-2.50
Caulkers	2.00	2.25	2.25	2.75
Riggers	1.75	2.00	2.00	2.50
Blacksmiths	2.25	2.25	2.50	2.50
Helpers	1.50	1.75	1.75	1.75-2.00
Teamsters				$9-$12/ week
Laborers	1.50	1.50	1.50	1.75[4]

Workers received about 25 cents extra for "old work" or repair work. The general increase in wages reflects a rebounding from a shipbuilding slump in 1885 and the beginnings of enthusiasm for the huge, multimasted wooden schooners that kept Bath shipyards in operation for many years.

A statistical picture of the average Maine worker in a wooden shipyard can be drawn from data published in the annual reports of the Bureau of Industrial and Labor Statistics for the State of Maine from 1888 to 1895. At this time the average wooden shipyard worker was forty-two years old and worked ten hours per day for $2.43, earn-



Workers pose in front of a vessel in frame at Bath's Percy & Small Shipyard in the early 1900s. Percy & Small set up their wooden shipyard in 1897, when Bath already had two steel shipyards. The man in the white hat and tie is Miles M. Merry, master builder. (Courtesy of Maine Maritime Museum, Bath, Maine)

ing $541 per year from his trade. If anyone else in his 3.7-member family worked (there was a 17 percent chance of this), they brought in another $150, bringing the average gross family income up to $567. The annual cost of living averaged $474, including $200 for food, $100 for clothing, and $37 for fuel and lights (11 percent paid nothing for this last item). For seventy-two working days out of every year the worker was unable to get to work, primarily because of weather, but also because of sickness and other causes. Forty-five percent rented living space, 11 percent lived in boardinghouses, and 44 percent owned homes (11 percent of the homes were mortgaged). The average shipyard worker's home was worth $1508. Sixty-six percent of the workers belonged to labor organizations, 50 percent received weekly benefits when sick, and 23 percent had life insurance. Seventy-five percent had saved money during the past year, although only 36 percent actually had savings accounts. Altogether, it was not a very grim life, but not an easy one, either. In fact, due to the high number of days these workers were unable to get to the shipyards, it was possible to maintain a higher annual income by working for lower wages at a more sheltered trade.

Bath was a small community, with less than 10,000 inhabitants during the nineteenth century, and this fact undoubtedly influenced management-labor relations. There was little rampaging industrialism here. Shipyards were often owned by one or two men, and the owner was often



The crew of the marine railway operated by Goss, Sawyer & Packard of Bath, 1876-84, pose with some of their tools. These men repaired wooden steamers and sailing vessels. (Courtesy of Maine Maritime Museum, Bath, Maine)

the master builder, working in the yard with his employees. Personal relationships were highly valued in true small town fashion and consequently labor relations did not have the violent overtones they often took on in large industrial centers. Unions did form, of course, and shipyard owners (particularly the owners of the larger yards) tried to prevent their establishment. However, with the unions came not reckless demands but a new sense of participation in the industry, a feeling of responsibility. The first strike at the shipyard of the Bath Iron Works was not for higher wages or shorter hours, but to protest the placing of an untrained, one-eyed individual on a riveting crew. This was claimed to be a situation of danger to the riveters and potential embarrassment to the yard, which was under constant scrutiny by government inspectors. The strike failed, but the intent was nonetheless honorable.[5] Another indication of this sense of responsibility is seen in another strike, this time a city-wide action of the ship carpenters, asking for higher wages but timed so that most yards were finishing up old contracts (fixed price, naturally) and would have a chance to figure in the increased labor prices when bidding on new contracts. One doubts that the shipyard owners were overwhelmed by this thoughtfulness, but they did grant the increase immediately and on a friendly basis.[6]

With this new feeling of participation in the business of shipbuilding, were the workers better able to adapt to changes within the industry? As has been mentioned, radical change did not happen often in the shipyards. However, there was one datable, relatively earthshattering change.

To a Bath inhabitant with no maritime interests or connections, the change may have been largely an audible one: the accustomed noises–tapping, rapping, clicking, chopping, whirring, buzzing, and boring–had given way to sounds of another sort: rattling, clanging, shrieking, whanging, and dinging. Even the dullest denizen

of this city would have perceived the difference. The change was, of course, the switch from wood to iron and steel construction of hulls. Were workers, trained and given experience in a yard building wooden vessels, likely to adapt to working with the new material? Were they forced to adapt as their yards converted to steel construction or went out of business due to the slump in the market of wooden hulls?

Maine shipyards had hung on to wooden shipbuilding long after suitable materials had been exhausted within the state. Framing timber and planking from the southern states and masts from the Northwest were imported to construct many Maine vessels. After European shipyards had gone almost exclusively to iron and steel, and after iron shipbuilding had become an established fact in other parts of the United States, wooden hulls kept sliding from Maine building slips, due to natural maritime conservatism, a supply of second-rate local timber, and low-cost skilled labor.[7] The reason for the cheapness of the labor was Maine's rural coastal economy. Living costs were lower than in many shipbuilding centers, and there was little in the way of industrial competition to tempt workers away from the shipyards. Actually, in Bath itself the wages of the shipyard trades were higher than in most of the U.S. by the late 1880s, so only skill and tradition were keeping her yards in business.

In 1881, with iron shipbuilding well established on the Delaware River and in New York City, the Bath Board of Trade was still hotly debating the pros and cons of iron and wooden vessels. Members of this group were all businessmen. Although not all shipbuilders (the president of the group was a druggist) they were vitally aware that all businesses in Bath were deeply affected by activities in the shipyards. Labor union actions in previous years had brought in strikebreakers from the Maritime Provinces. This brought immediate grief to the native workers, to be sure, but eventually their employers realized that it was a no-win situation. There were dark mutterings that

> while it is a fact that more ship carpenters are today employed in Bath shipyards than ever before, it is also a fact that a large proportion of these mechanics are foreigners who weekly send their wages home, spending but little among our traders here. We must, as one gentleman put it, establish some kind of industry that will bring among us a spending class who will put in our city the wages that they earn here, benefiting all alike.[8]

There is also evidence of the feelings of local workers about outside labor. In 1894 workmen were installing a pipe to bring water under the Kennebec River, from a nearby reservoir, to Bath. About fifty Boston Italians were brought up by steamer to dig the trench. A few days later, the following letter appeared in the local paper:

> TO THE EDITORS OF THE TIMES:
>
> DEAR SIR:—Yesterday morning some fifty or sixty men of Bath, went across the river expecting to get work, when, to their surprise, they found foreigners at work. We would like to ask, how are white men to live after being out of work all winter? If anyone disputes this let them look around the streets of Bath and see the men walking around with their hands in their pockets looking for a job.
>
> Is there no one to intercede for us, for we don't take money out of the town, but give every businessman a chance to live.
>
> A WORKING MAN.[9]

This is truly an inflammatory letter. However, beyond the implications that Italians are not Caucasians and that non-Caucasians can live just fine without jobs all winter, beyond the fact that unskilled labor is the matter in question, and beneath all the rhetoric are the same emotions felt by the native shipyard workers when foreigners (including out-of-staters) were hired to fill their places.

Besides the question of hiring local workers, several members of the Board of Trade were beginning to realize that in coming years Bath was going to have to build iron

ships or none at all. The Board investigated diversification of Bath's industry, but put much effort into educating themselves in iron shipbuilding. At their 9 June 1881 meeting, George Moulton, Jr., machinist, read aloud a letter to Parker M. Whitmore, broker, of Bath, from Joseph Ellis of Liverpool, which described the costs and physical properties of an iron shipbuilding plant, and included this warning: "The greatest difficulty is with the workmen. It was the work of more than a generation to create and organize a class of mechanics suited to iron shipbuilding."[10]

Whether this particular caution had any effect is not clear, but no iron shipyard was immediately forthcoming. As a step in that direction, however, a marine engine works–the Goss Marine Iron Works–was in operation in Bath by 1883. Bath businessmen might still be able to deny the inevitability of iron hulls, but steam engines were obviously here to stay, if only in wooden vessels. A year later, Henry Hall's census report on the shipbuilding industry offered confirmation of this approach to the problem. He described iron shipbuilding: "The most work appears to have been done in New York, the industry being fostered in that city by the great marine engine shops.... The workmen are recruited from the machine and boiler shops, but a number have also been obtained from the old wooden shipyards."[11]

The founder of steel shipbuilding in Bath was Thomas W. Hyde, a Civil War general who returned to his home town in 1865 and purchased a small foundry that had been in business under various owners since the 1830s. The foundry, started by William V. and Oliver Moses, boasted a small pattern shop and a single furnace, but was not even located on the water. General Hyde energetically improved the plant of his Bath Iron Foundry and added to the line of simple marine hardware it produced. By the 1870s the foundry was manufacturing both hand and steam windlasses, hoisting engines, and wrecking pumps, as well as chocks, hawsepipes, chain stoppers, and other heavy iron and brass castings. By 1879 the operation was known as the Bath Iron Works, and in 1884 it was incorporated under the name of Bath Iron Works, Ltd.

In 1882 General Hyde was one of the group of Bath capitalists who founded the Goss Marine Iron Works. This company opened for business the following year on the shore of the Kennebec River, near the center of Bath's commercial waterfront. The plant manufactured steam engines, boilers, compressors, and tanks, including the first triple-expansion marine steam engine built on the Atlantic coast of the U.S. Unfortunately, the engine works had severe money problems that led to its being purchased in 1885 by the New England Ship Building Company, which operated a wooden shipyard in Bath. The plant came to be popularly known as the New England Iron Works. Reorganization within the New England Ship Building Company, of which Hyde also owned a part, soon made him one-half of an executive committee (with Arthur Sewall) formed to run the business. Sewall ran the shipyard and General Hyde had control of the engine and boiler works.

By 1888 the firm was forced to shut down because of financial difficulties. General Hyde had become a principal creditor by supplying iron, brass, and bronze castings, and was able to buy the engine works for a modest price. The works, which had employed 100 men when it closed, was reopened a few months later as the South Division of Hyde's Bath Iron Works, Ltd., with 23 employees. Hyde lost no time in hiring new workers and working toward the goal of an iron shipyard.

Improvements were made in the facilities, and adjoining property was purchased to allow for expansion. The betterment of the plant was pursued with such vigor that within two years the payroll had increased to 500 men, and a "lady stenographer."[12] Bath Iron Works' (B.I.W.'s) Hull

#1 was produced in 1890. However, this vessel – the passenger steamer *Cottage City* – had a wooden hull that was subcontracted to the New England Company shipyard; B.I.W. supplied only her machinery. It was to the Navy that General Hyde looked for the impetus to get B.I.W. started building iron vessels.[13]

In 1889 a government inspector was invited to examine the plant for suitability for the construction of steel vessels for the United States Navy. Naval Constructor Philip Hichborn arrived in July for an inspection tour, and was evidently delighted with what he saw. In his glowing report to the Secretary of the Navy, later published in the local newspaper, Hichborn stressed that, "...there is no trouble to be anticipated from lack of experienced labor." He then proceeded with what seems to be a statement of Naval policy on the suitability of ship carpenters for work in a steel shipyard:

> ship building has reached an important position among the industries of the place, and in consequence an abundance of experienced ship carpenters are to be found among the population.... These mechanics, being intelligent and skillful workmen, and having had even in the construction of wooden vessels considerable experience in metal work, pass readily from the use of wood to the working of iron or steel in ship construction.

Constructor Hichborn went on to call the workers trained in wooden shipbuilding "superior to the class of ironworkers employed in many yards...."[14]

The Chief of the Bureau of Construction backed Hichborn up: "It has been the impression of many people that there would be some difficulty in getting the ship carpenters to change from wood to steel. This is all a mistake. It is the experience of the Cramps, the Roaches, and the Union Iron Works of San Francisco – that these men make the very best of workmen. All they need is a little breaking in."[15]

In January 1891 the keels for hulls #2 and #3 were laid; they were the Navy's steel gunboats *Machias* and *Castine*. That month General Hyde drove the first iron ship rivet used in Maine.

The work force continued to grow steadily and rapidly. By 1900 B.I.W. employed 900 men, almost half of Bath's shipyard employees.[16] General Hyde did not rely on trained workers from outside the community but took seriously the task of educating native employees. Local newspapers of the period occasionally made passing mention of individuals who were apprentices at B.I.W.; no one was ever identified as an apprentice from any other shipyard or business. For supervisory positions, however, Hyde sometimes felt obliged to turn to experienced people. The yard's first superintendent of hull construction, for example, was Charles Hanscom, pirated by the good general from the Navy Department's Bureau of Construction & Repair.

The only other Bath yard to embrace the new material before World War I was that of A. Sewall & Company. The Sewall family had been building, owning, and operating wooden sailing vessels in Bath since 1823, and they refused to make the jump to steam that many of their peers were making. However, Arthur Sewall was deeply concerned over the difficulty that American wooden sailing vessels were having competing with European metal ships and barks. Although he worried that he was using "a little more boldness than good business judgement," he set about converting his yard to steel in 1892. He reputedly felt with Naval Constructor Hichborn that the mechanics he already employed, trained in wooden construction, would be able to handle the steel. However, he was concerned that their superintendent be someone acquainted with steel sailing vessels, the like of whom did not exist in Bath, or, for that matter, in this country. The building of steel sailing vessels had not become an industry in the United States, nor would it ever.[17]

The obvious place to turn was Great Britain, and consequently naval architect J.F. Waddington of Liverpool was engaged to design and oversee the construction of the first steel sailing vessel built in this country: the *Dirigo,* launched 3 February 1894. Waddington left before *Dirigo*'s completion due to a personality clash with Arthur Sewall, but he set a trend for the introduction of skilled foreign labor; almost 6 percent of Bath's ironworkers would eventually come from England, Ireland, and Scotland.

Mark W. Hennessy, chronicler of the Sewall steel ships, states that *Dirigo* was actually built by Sewall's crew of woodworkers under Waddington's direction.[18] Unfortunately, this is demonstrably untrue. Waddington's neatly typewritten accounts still exist in the archives of the Maine Maritime Museum at Bath, and therein are listed the names of thirty-three men, thirteen of them listed as "so and so & Co.," who were paid for plating, riveting, drilling, caulking, and other activities in the assembling of a steel hull. Checking these thirty-three names in the Bath city directories reveals that none of them lived in Bath before the Sewall yard started building in steel, and only seven or eight lived in Bath after *Dirigo*'s completion. Of the two whose birthplaces were found, one was Scottish. Thus it seems likely that quite a number of foreign or non-Maine workmen were employed in the ironwork of this vessel. This deduction is reinforced by a later newspaper article mentioning that some of the Sewall shipyard riveters were leaving town, since the four-masted bark they had been working on was almost completely plated.[19]

Waddington's accounts do not include joinerwork, decking, or rigging, and it is quite possible that Sewall's native workers were given these jobs. The Sewall yard did not employ many workers; in 1900, when they were still building steel sailing vessels, about thirty-five were on the payroll.[20] The

Ship fasteners at Bath's Kelley-Spear yard use a pneumatic auger and hammer on a barge in the early 1900s. (Courtesy of Maine Maritime Museum, Bath, Maine)



Bath city directory for 1901 lists thirty-four men as employed by Arthur Sewall & Co. Of these, none had worked on *Dirigo* seven years previously, only sixteen had jobs in Bath before working at Sewall's, and just fifteen had jobs in the city after the yard shut down in 1903. Fully 56 percent left town when the yard closed. This indicates a transient work force, *not* one of the benefits the Board of Trade had hoped would come from the establishment of the steel shipbuilding industry in Bath. Fourteen of the men are identified in tax records, including thirteen who stayed in town after 1903. The tax books show that only eight (57 percent) of this group were born in Bath or surrounding towns. One would expect an even lower percentage of Bath natives among those who left town. Thus it seems that the Sewall yard, operating sporadically and constructing only eleven vessels during the eleven years they were building in steel, did not add greatly to the employment of Bath workmen.

Since the small group employed in the Sewall yard cannot be assumed to be representative of the majority of the shipyard work force in the city, other methods must be employed to learn if workers from wooden yards participated in the change from wood to steel construction. Toward this end, the professional histories of over 3,000 Bath workmen and women in shipbuilding and allied trades between 1871 and 1906 were compiled from the city directories.[21] Trades included were carpenters, joiners, ship carpenters, plankworkers, liners (who planned the planking pattern), dubbers (who shaped the face of frames to receive planking), painters, fasteners, riggers, sparmakers, caulkers, machinists, moulders, riveters, drillers, ship fitters, pipe fitters, ironworkers, draughtsmen, blacksmiths, anglesmiths, coppersmiths, boilermakers, polishers, brass finishers, patternmakers, marine engineers, platers, etc., as well as those merely listed as employed at a particular shipyard, ship foundry, or engine works. From this collection of people was selected a group of 545 carpenters, ship carpenters, and joiners who had active careers during the first decade or so of steel shipbuilding in Bath. There may be some overlap with house carpenters and house joiners (many well-known ship carpenters, even master builders, were sometimes listed merely as carpenters) but as many as possible from those trades were sorted out. Of these 545 men obviously involved in wooden shipbuilding, only 17–3.1 percent–changed their trade to one useful in steel shipbuilding. Even among the 17, listed in Table 2, there are some questionable cases.

TABLE 2
Wooden Ship Carpenters Who Took up Metal Ship Trades.

1. Llewellyn Adams, joiner, became Llewellyn F. Adams, machinist. That addition of the middle initial introduces the possibility that these are different generations, but the residence remained the same so he is on the list.

2. Joseph F. Atkinson, ship carpenter, became a driller. It is possible that this word was used to describe users of pneumatic augers in wooden yards, but it is usually associated with iron/steel construction.

3. Michael Cavanaugh, carpenter, became a ship fitter.

4. Albion K. Chaney, ship carpenter, became a ship fitter.

5. John Deans, ship carpenter, became a riveter.

6. Henry P. Getchell, ship joiner, became a marine engineer.

7. Melvin O. Glass, ship carpenter, became a machinist in the mid-1890s.

8. Francis Lightbody, later listed as Frank, proceeded from ship carpenter to fastener to machinist to Bath Iron Works inspector.

9. H. Frank Marr, joiner, became a moulder in a ship foundry.

10. Chester G. Martin, carpenter, became a machinist.

11. Leander F. Miller, carpenter, became a blacksmith in the '80s and '90s, and is listed as a ship carpenter in 1901.

12. Charles Norris, carpenter, became a polisher.

13. Wilmot K. Patten, carpenter, became a marine engineer.

14. Joseph E. Remick, joiner, became an iron ship fitter.

15. Michael J. Sheridan, carpenter, became a machinist.

16. Herbert L. Sidelinger, ship carpenter, became a ship fitter.

17. Edwin N. Sprague, carpenter, became a moulder at the Bath Iron Works.

Even a list this long may be stretching things a bit. It will be noticed that if only known iron shipyard experience is counted, this group is further reduced. The roster could have been enlarged by including those working at iron shipyards in nonmetalworking trades (iron shipyards maintained carpentry shops for building launching ways, cradles, and staging, as well as joiner shops for interior finish work), but the purpose of the study was to identify those who kept up with the change in building materials. Consequently, those working at steel shipyards in woodworking trades and in unskilled positions (gateman, laborer) were not added to the list.

There were at least 150 career changes among the 545 men, enumerated in Table 3 below.

Obviously, the vast majority of these changes (97 percent, in fact) had nothing to do with learning to work with steel instead of wood.

A second issue involves another exercise in demography. The reader will remember the Board of Trade's concern that too large a portion of Bath's work force was comprised of foreigners. This fear, smacking of jingoism, was a legitimate worry, for out-of-staters (particularly Canadians) in the shipyards were overly multitudinous for the good of the local workers. Labor or-

TABLE 3 *New Occupations of Carpenters, Ship Carpenters, and Joiners*

New Occupation	Number Entering It	New Occupation	Number Entering It	New Occupation	Number Entering It
Fastener	15	Upholsterer	2	Quarryman	1
Grocer	8	Draughtsman	2	City Liquor Agent	1
Clerk	8	Marine Engineer	2	Fruit & Confectionary Store	1
Patternmaker	8	Truckman	2	Toolsharpener, B.I.W.	1
Laborer	6	Wheelwright	2	Carpenter & Builder	1
Machinist	5	Moulder	2	Dubber	1
Farmer	5	Police Officer	2	Ship Furniture Manufacturer	1
Painter	4	Driller	1	Foreman Joiner, B.I.W.	1
Ship Fitter	4	Hostler	1	City Marshal	1
Shipbuilder	4	Superintendent, Home for Aged Couples & Old Men	1	Blacksmith	1
Master Builder	4	Saw Filer & Bicycle Dealer	1	Joiner, B.I.W.	1
Employed B.I.W.	4	Foreman Carpenter, B.I.W.	1	Fisherman	1
Sparmaker	3	Laborer, B.I.W.	1	Polisher	1
Liner	3	Riveter	1	Foreman, Marine Railway	1
Seaman	3	Gunsmith	1	Musician	1
Stevedore	3	Cabinetmaker	1	Caulker	1
Millman	3	Agent	1	Engineer	1
Master Mariner	3	Inmate, City Almshouse	1	Insurance Agent	1
Foreman	3	Watchman	1	City Messenger	1
Driver	2	Peddler	1	Street Commissioner	1
Building Mover	2	Electrician	1		
Tinsmith	2				



Work crew on the deck of a Navy torpedo boat at Bath Iron Works, ca. 1900.
Are any of these men reformed ship carpenters? How many were born in Maine?
(Courtesy of Maine Maritime Museum, Bath, Maine)

ganization and maintaining decent wage levels were extremely difficult, since a handy supply of eager, inexpensive skilled hands were always available to the shipbuilders. The switch to steel shipbuilding certainly did not solve this problem.

In surveying the skilled metal-working tradesmen (machinists, moulders, fitters, riveters, ironworkers, draughtsmen, blacksmiths, engineers, coppersmiths, polishers, boilermakers) as well as those simply listed as employed at Bath Iron Works, Hyde Windlass Company, or Torrey Roller Bushing Works, the following proportions of birthplaces were found in Bath's 1900 census. Sixty-six percent were Maine natives; 12 percent were born in Canada; 12 percent in England, Ireland, and Scotland; 7 percent elsewhere in the U.S.; and 3 percent in various other countries, mostly Scandinavia and Northern Europe.

An examination of Bath's 1907 ward lists, which also give birthplaces, confirms these figures. Of men in the same occupations listed above, 68.2 percent were born in Maine, 7.6 percent elsewhere in the U.S., 15.8 percent in Canada, 5.8 percent in England, Ireland, and Scotland, and 2.6 percent in other countries. Looked at another way, the Bath natives comprised 30.8 percent, those born elsewhere in Maine 37.4 percent and the foreign faction totalled 24.2 percent. The percentage of foreign-born inhabitants in the country as a whole was only 13.6 percent,[22] so Bath, being in a border state, was the site of a concentration of immigrants. The establishment of a technologically-progressive, modern industry had done little to change that situation.

Thus, we are left to examine what all these statistics reveal. The workers in wooden yards did not flock to the steel ship-

yards, and they must have seen little reason to do so. The capitalists themselves did not provide sterling examples for their workers to follow. Of the nineteen wooden shipyards in Bath during the 1890s, only one converted to the use of steel. Skilled workers in the woodworking trades in 1890 still had more than thirty years before the last wooden yard in Bath shut down. Although they did not know it, the majority of them would be able to spend the rest of their working lives in the trade for which they were trained. Certainly they would discourage their sons from following in their footsteps, but their own lives were fairly secure. They also had the option of leaving town to look for carpentry jobs in other more industrialized parts of the country. Many did leave, but so did many ironworkers, and there is no indication of greater-than-normal mobility.

There was also little to be gained monetarily by leaving the wooden yards. In 1891 Bath machinists were making $2.50 per day, whereas skilled wood shipyard workers were receiving $2.50 to $3.50.[23] A local paper claimed that B.I.W. riveters were making $3.20 to $3.85 per day at this same time.[24] Later comparison of wages is difficult since the Sewall yard and, to a lesser extent, B.I.W., paid on a piecework basis rather than by the day, as the woodworkers wages were reported. The metalworkers may occasionally have had an advantage, but there is little evidence of this.

Another factor which may have discouraged workers from leaving their wooden trades was the local focus of labor organization at the time. As was mentioned, 66 percent of the workers belonged to labor organizations. These seem to have been strictly local trade unions, rigidly divided

Demonstrating the survival of wooden trades in a steel shipyard, joiners employed at Bath's Texas Steamship Company parade for Armistice Day, 1919. The Texas yard built steel tankers, freighters, and other vessels during and just after the First World War. (Courtesy of Maine Maritime Museum, Bath, Maine)



along occupational lines; caulkers, carpenters, fasteners, joiners, etc., each had their own group in the city. There is no evidence that any were allied with national or industry-wide unions at this period. A tight social unit, such a local union would obviously discourage its members from leaving the fold, either for a new place or a new profession. This was the worker's peer group, and possibly would have a greater influence than would employers.[25]

From our perspective we may legitimately feel that the change from wood to steel vessel construction was a good thing, a necessary step to ensure Bath's continued survival. The comments of Philip Hichborn and others, arguing that shipwrights were able to adapt easily to a new material, sound *so* reasonable. The statistical evidence, however, reveals that most shipyard workers in Bath, at least, did not agree. Regardless of how they felt about progress and the prosperity of the community, they were not ready to change their careers. The older men worked out their lives in a dying industry, and a new generation of shipyard workers was trained for the challenges of the future.

NOTES

[1]William A. Baker, *A Maritime History of Bath, Maine, and the Kennebec River Region* (Bath, Maine: Marine Research Society of Bath, 1973), p. 612.

[2]*Bath Commercial*, 7 July 1877.

[3]*Maine Inquirer*, 10 December 1830.

[4]*American Sentinel*, 23 January 1890. The same list is in *The 3rd Annual Report of the Bureau of Industrial and Labor Statisitics for the State of Maine, 1889*.

[5]*Bath Daily Times*, 15, 16, 17 June 1896.

[6]*Ibid.*, 23 October 1899.

[7]John G. B. Hutchins, *The American Maritime Industries and Public Policy, 1789-1914* (Cambridge, Massachusetts: Harvard University Press, 1941), p. 383.

[8]*American Sentinel*, 9 June 1881.

[9]*Bath Daily Times*, 26 April 1894.

[10]*American Sentinel*, 9 June 1881.

[11]Henry Hall, *Report of the Ship-Building Industry of the United States* (Washington, D.C.: U.S. Government Printing Office, 1884), pp. 197-198.

[12]*American Sentinel*, 18 December 1890.

[13]The material regarding the creation of the Bath Iron Works was garnered from William A. Baker's *Maritime History of Bath*, from the notes of Mark Hennessy in the Maine Maritime Museum at Bath, and from many local newspapers of the period.

[14]*American Sentinel*, 29 August 1889.

[15]Mark W. Hennessy, notes on the Bath Iron Works in the Archives of the Maine Maritime Museum, Bath, Maine.

[16]*Fourteenth Annual Report of the Bureau of Industrial and Labor Statistics for the State of Maine: 1900* (Augusta, Maine: Kennebec Journal Printing, 1901), pp. 48, 53.

[17]Hutchins, pp. 414-417.

[18]Mark W. Hennessy, *The Sewall Ships of Steel* (Augusta, Maine: Kennebec Journal Press, 1937), p. 67.

[19]*Bath Enterprise*, 31 December 1898. The vessel referred to is the *Arthur Sewall*.

[20]*Report of the Bureau of Industrial and Labor Statistics, Maine, 1900*, p. 53.

[21]*City of Bath Directories*, 1871-72, 1874, 1880-81, 1887, 1888, 1897, 1901, 1905-06.

[22]U.S. Bureau of the Census, *Historical Statistics of the United States, 1789-1945* (Washington, D.C.: U.S. Government Printing Office, 1949), p. 30.

[23]*Fifth Annual Report of the Bureau of Industrial and Labor Statistics for the State of Maine: 1891* (Augusta, Maine: Kennebec Journal Printing, 1892), pp. 42, 82.

[24]*Bath Daily Times*, 15 May 1891.

[25]It is interesting to note that this influence of the unions may have changed. In the years after the First World War workers were far more likely to list their employers than their trades in the city directories. Whether this was a result of the growth of national trade unions, more powerful politically but less influential on a personal, social level, or whether it reflects the increased importance and control of the capitalists, and whether the factionalism of the shops or trades has grown again in recent years are matters for speculation and future study.

Death of a Schooner

DONALD H. DYAL

The barkentine *Auburndale* lay at the wharf, her wooden sides scarred from years of battle with wind and wave. She did not have many more years to live. Her master, Captain George W. Dow, lingered at the ship's rail for a last look at the vessel that had been his home for several years. Born and bred in Hancock, Maine, Captain Dow was a seaman of wide experience who had sailed in many ships. But he had become comfortable with the *Auburndale;* they had both grown older together.[1]

Dow was self-confident, self-assured, and independent in thought and action. And yet, as he contemplated his next command, there may have been some slight disquiet – an indefinable uneasiness. For Captain Dow had been asked to take over one of the most unusual ships ever built for her first transatlantic voyage: the seven-masted, schooner-rigged, sailing oil-tanker *Thomas W. Lawson.*

Anyone conversant with maritime affairs in 1907 knew of the *Thomas W. Lawson.* Bowdoin B. Crowninshield had designed the *Lawson* to be the last word in schooner development. Launched in 1902 at the Fore River Yard at Quincy, Massachusetts, the *Lawson* had captured superlatives from the time her design and construction were first made public. She was the largest sailing ship ever built and the most modern. She was also the strongest schooner, having been built entirely of steel. She stretched almost 500 feet from the tip of her bowsprit to her stern. Her owners hoped to cash in on economies of size. She did not need to load ballast for stiffening inasmuch as she was built with a double bottom that could accommodate 1,069 tons of water ballast. The water carried in her tanks gave her enough stability to carry her rig with an empty hold.[2]

Labor-saving devices were rare in sailing ships but the *Lawson* had them in abundance. The stockless anchors, the sails, and the steering were all operated with the assistance of steam power. Engines and other machinery were so arranged that only two engineers were needed. The forward engine room also had a dynamo to provide electric lights throughout the ship, and telephones linked the wheelhouse with the two engine rooms. She even had steam heat for the cabins and crew quarters.[3] John Crowley, manager of the Coastwise Transportation Company which operated the *Lawson,* observed that the ship's sailors did not have to put their hands to a pump nor "to a rope, hardly."[4] The *Lawson* routinely shipped a crew of eighteen men: twelve before the mast, two mates, two engineers, a cook, and a steward. While it may sound from Crowley's description that the crew spent more time in deck chairs than working, in reality, there was still plenty of work on the windjammer. Ample evidence of that can be found in the history and narratives of those who sailed in her and schooners like her.

While the *Lawson* was big, economical, and modern, she was also clumsy and had about as much handling finesse as a blackjack dealer wearing mittens. Arthur Crowley, brother of John and master of the *Lawson* for her first five years, had her on and off the bottom half a dozen times, partly because of her size and also because of her

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sluggishness when lightly loaded. When down to her marks, she drew almost thirty feet, making Newport News, Virginia, a prime coal port, and Boston just about the only East Coast ports she could negotiate. Even her designer, B. B. Crowninshield, noted that when loaded light or in light winds she was very difficult and occasionally impossible to steer or tack. After her conversion to an oil tanker, with the addition of wooden bulkheads to her holds in 1906, she nearly capsized twice: once in a test of the bulkheads and once while loading oil.[5] Of course, such characteristics did not especially endear her to her crews.

The contemporary press also reacted unkindly to the ship. When launched, the maritime journal *The Rudder* commented that the *Thomas W. Lawson* was "about as ugly a specimen of naval architecture as ever floated." The article went on to lay the blame for her aesthetic failings on her seven-masted rig.[6] Subsequent journalism on the *Lawson* has not been much kinder. William A. Fairburn cataloged a host of the *Lawson*'s real and supposed faults and concluded that she was a "brute" and a "white elephant."[7] In all fairness, many of the faults of the *Lawson* were not of her making. While it is true that she was too big to be wholly effective in the coastwise trade, her owners testified that she was originally built for the offshore trades – not coastwise. Economics may have forced her into a trade for which she was ill-designed. And it must be remembered that she did make money for her owners, which of course was the reason for her existence.[8]

Captain Dow, who knew some of the details of the *Lawson*'s checkered career, was not overly concerned about the challenge facing him; but he did not ignore it either. He had been asked to sail with a full cargo of oil across the Atlantic in the sailing tanker's first offshore voyage. Sensing a personal need for an officer upon whom he could rely implicitly, Dow decided to seek out Bent T. Libby, an old crony of his from the *Auburndale*. Libby owed a debt to Dow for helping him become the first mate in the *Auburndale*. Since then, Libby had left the sea to work for Armour and Company in Boston. After leaving the *Auburndale* and Captain Dow, Libby had risen to a good position with Armour, and established a family. When Dow approached Libby about the voyage and the *Lawson*, Libby understandably did not want to make the trip. But Captain Dow insisted. Dow reminded him of his debt and Libby agreed reluctantly to "one last voyage." Libby probably did not realize how true those words were as he said goodbye to his wife and children. For while this was the *Thomas W. Lawson*'s first transatlantic voyage, it was also her last. Libby's wife and children never saw him again.[9]

Libby and second mate O. Crocker joined Captain Dow aboard the *Lawson* in

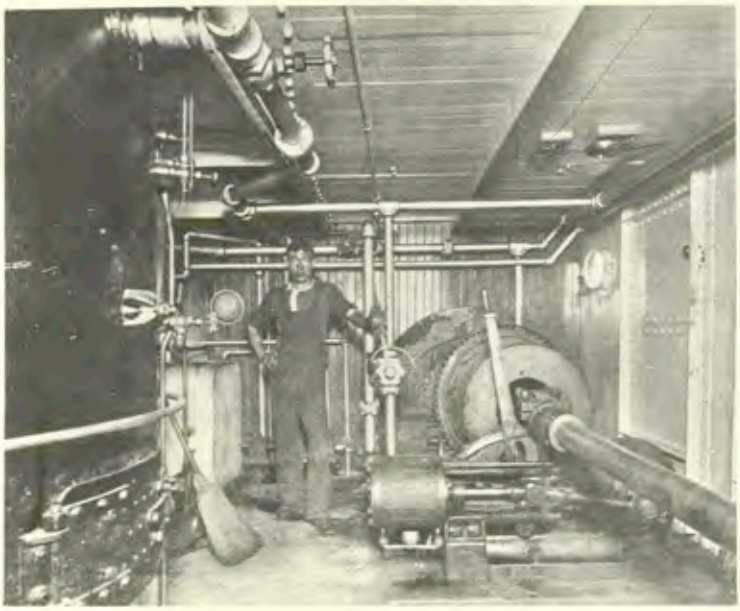


Looking aft on the deck of the *Thomas W. Lawson*. Built at a cost of $250,000, she was launched only eight months after her keel was laid. (*Marine Engineering*, November 1902)

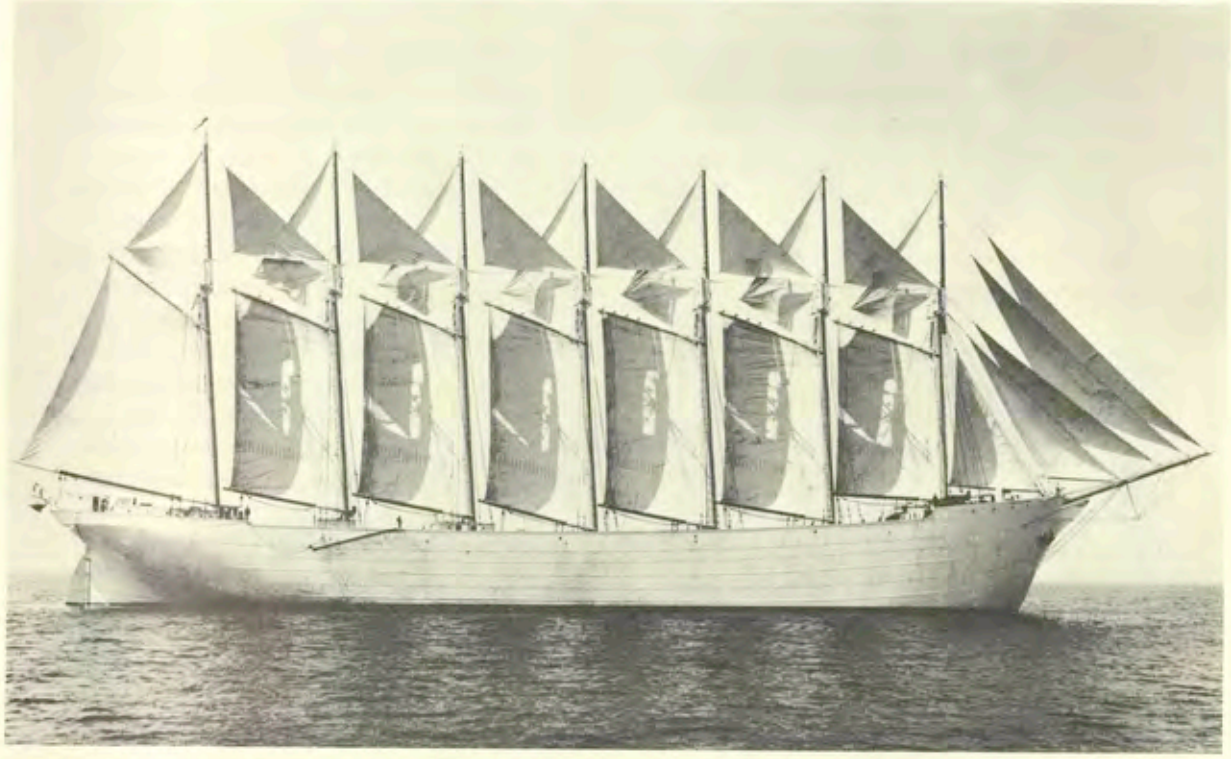
Philadelphia on 4 November 1907.[10] During the next ten days they supervised the loading of 60,000 barrels of oil into the *Lawson*'s tanks while Dow shipped a crew. On 15 November, while Captain Dow was ashore clearing his ship through customs, six of the newly-signed crew left the *Lawson*. They quit the ship because of some petty dissatisfaction. Nevertheless, they were the lucky ones. When Dow returned and found that he had lost half of his crew, he signed on six seamen who were literally just standing on the pier.[11] The crew, typical of sailing ships of the era, was an international grab bag. Besides the U.S. citizens, there were men from Scandinavia, Germany, Austria, Great Britain, Russia, and South America.[12]

The nineteenth found the tug *Paraguay* towing the *Lawson* into the wintery Atlantic Ocean.[13] After a few days of moderate winds and seas, the *Lawson* ran head-on into a southerly gale off the Grand Banks. Crew and ship were strained and tested as she successively lost sail after sail until one complete suit of sails was blown away. Scudding along under bare poles, the *Lawson* endured horrendous seas, which swept away deck fittings, lifeboats, and life rafts.

Approaching the southern coast of England, the big schooner's crew could count only six sails and one twenty-foot boat remaining. The crew, while uninjured, was nevertheless exhausted.[14] Because of the storms, Captain Dow could make no navigational observations, so he was unsure of the ship's position. In addition, the severe loss of sails rendered the *Lawson* difficult to maneuver. Dow groped along. On the afternoon of 13 December, as the weather cleared slightly, alarm seized the entire crew: The *Lawson* was wallowing between waves in the narrow reaches of Broad Sound, well inside of the lighthouse on Bishop Rock in one of the most notorious ship graveyards of the world–the Scilly Isles. The waters around the *Lawson* seethed with granite fangs of rock that had torn and mangled hundreds of ships for centuries. Nearby were Nundeeps Rocks and Gunners Ledge; the *Lawson* was hemmed between rocks lurking just below the surging waves and the black jagged cliffs of uninhabited Annet Island and Hellweathers Reef to the southeast. There was no room to wear ship and not enough sail left to tack the giant bluff-bowed *Lawson* back out of the Sound to the safety of the open sea. Captain Dow brought the ship's head into the wind and dropped her two 10,000 pound anchors, expecting to ride out the afternoon and evening at the end of the ship's cables. Dow had great confidence in the *Lawson*'s massive anchors and gear. It was Friday the thirteenth of December–an



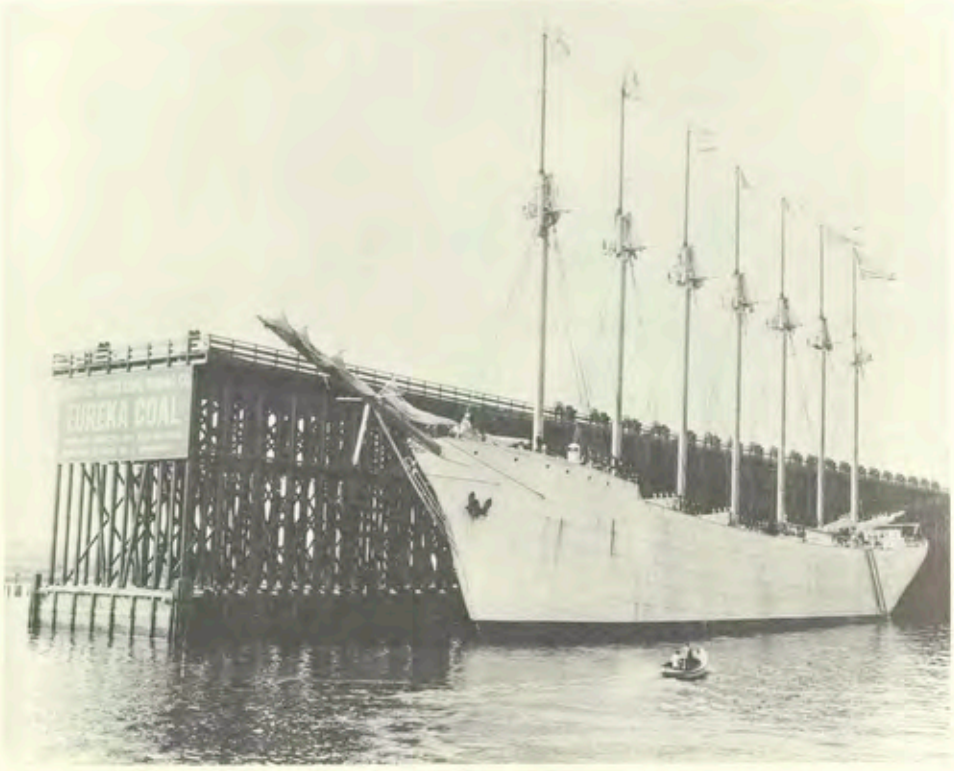
An engineer works in the *Lawson*'s after engine room, which contained one of the vessel's two steam boilers and a twenty-five horsepower winch. The boilers provided steam to power five winches, the windlass, capstan, steering gear, pumps, and a dynamo for electricity to run lights and the telephone system. Steam also heated the quarters. Survivor Rowe was an engineer. (*Marine Engineering*, November 1902)



The *Thomas W. Lawson* under full sail, September 1902. She carried 43,000 square feet of sail. With 135-foot steel lower masts and wooden topmasts, her mastheads were 155 feet above the deck. Photo by Nathaniel Stebbins. (83.23.1)

ill omen which did not go unnoticed among the crew.[15]

The arrival of the big schooner in Broad Sound created a stir among the ever-watchful inhabitants of the nearby islands. Constantly on the lookout for vessels in distress, Bishop Lighthouse fired off several signals to the nearby St. Agnes and St. Mary's lifeboat stations.[16] Aware of the *Lawson*'s extreme danger, the St. Agnes boat hit the surf around 4:00 P.M. for the long pull to the precariously tethered schooner. The St. Mary's boat launched about 4:25 P.M. for the same destination. The seas were moderate and choppy, with the wind blowing about force 6 or 7 [25 to 38 mph]. The St. Agnes boat reached the schooner a little after 5:00. Pulling up under the stern of the *Lawson*, William George Mortimer, coxswain of the lifeboat, shouted up to the deck asking if the schooner needed assistance. There was no response. Mortimer shouted again and this time Captain Dow came to the rail and to the surprise of the men in the boat, declined their help. Mortimer and his crew told the Captain that his ship was in a perilous position and renewed the offer of help. Dow said he was all right. The schooner was not then riding heavily in the sea. In the lifeboat, however, it was another matter entirely. Icy seas from the northwest continually broke over the lifeboat drenching everyone and everything. Mortimer and his crew pulled alongside again to try to convince the Captain to slip the cables and run out Broad Sound to the open sea, but Dow chose to stay. Intermittenly, the squalls and fog would clear and Dow could see the islands and rocks around him. Reluctantly, Dow called down to the lifeboat to request a pilot. William Thomas Hicks, one of the lifeboat crew and a Trinity pilot, went aboard. While the wind had moderated some, the seas were heavy and getting worse. The men in the lifeboat found it impossible to stay alongside the *Lawson*.



The *Thomas W. Lawson* alongside a coal pier, probably at Newport News, Virginia. It was estimated that she earned about $75,000 a year in the coal trade. (59.1254)

The crew of the schooner threw the boat a line and the lifeboat drifted astern at about 5:30. Shortly after 6:00 the St. Mary's boat arrived and someone on the schooner hailed it. While maneuvering near the stern of the big schooner, the St. Mary's boat got under the quarter of the *Lawson* and smashed the boat's mast. Dow asked the St. Mary's boat to return and wire to Falmouth for tugs to tow the *Lawson* out of danger. The seas were running very high by now, and the St. Mary's boat returned at 7:30 to wire for the tugs. The wind had increased to force 10 [over 55 mph] and the seas were very high, rough, and cold.[17]

Meanwhile, Mortimer and the crew of the St. Agnes boat were going through their own crisis. The bitter cold combined with the constant heavy seas crashing over the boat had wrought havoc among the lifeboat crew. Hicks had sent down hot coffee and bread to the men in the lifeboat, but the rigors of exposure were such that one of the crew was unconscious. Mortimer and the crew talked the issue over – they feared that their boatmate was dying or possibly already dead. Dow was still obstinate in his refusal of help. With considerable effort, Mortimer's crew pulled alongside the *Lawson* again and shouted up to Hicks that they had to go back to St. Agnes. They also told Hicks to signal if anything happened. Hicks replied that he surely would and nervously added, "Keep a good lookout." Then the St. Agnes boat rowed off into the gale, finally arriving back at the St. Agnes station. The injured crew member revived several hours later.[18]

At St. Mary's, the boat crew wired for tugs on the mainland. Two tugs left Falmouth at 10:20 Friday night to rescue the schooner, but by then the wind and the seas were so formidable that they were forced to turn back. The wind had increased to 90 miles per hour during the night. A wire had also been sent to Penzance to rouse the steamer

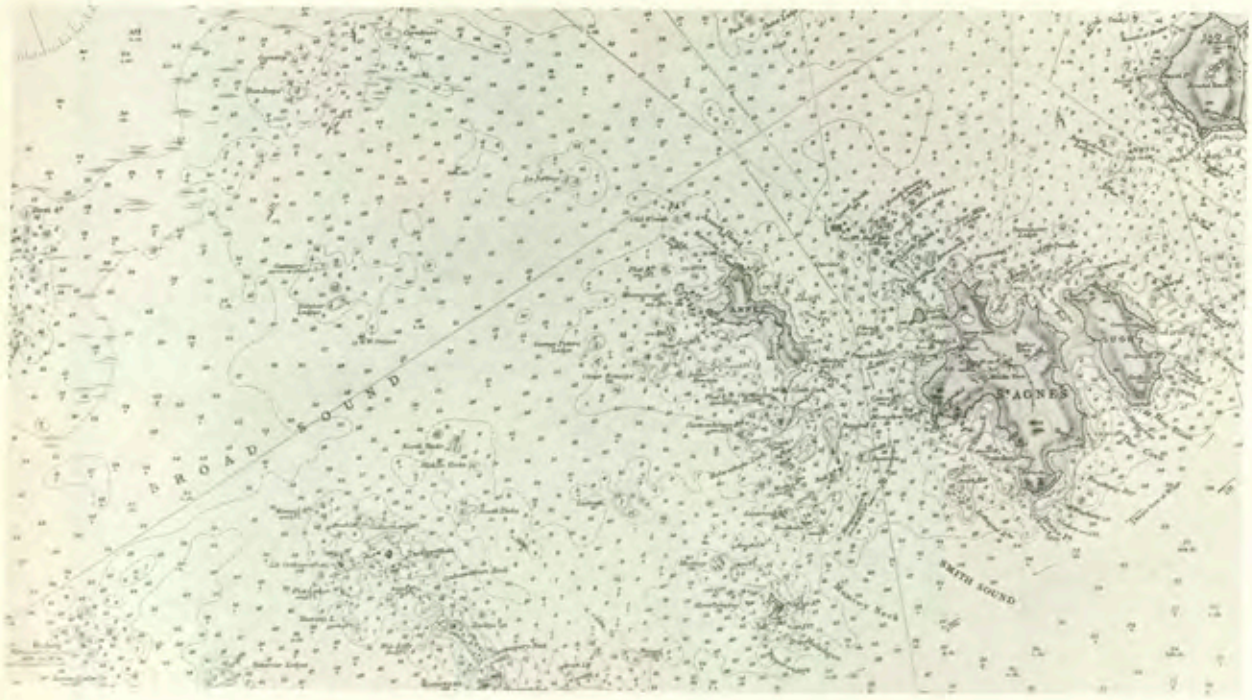
Lyonesse, but the fierceness of the hurricane likewise turned her back to port.[19] The *Thomas W. Lawson,* straining against her cable in gargantuan seas and shrieking wind, was alone facing the tempest.

Thomas F. Bradley, divisional officer of the coastguard, was very concerned about the precarious position of the ship in the Sound. He communicated with the various stations on the islands to keep a sharp watch on the *Lawson*'s lights in case she should begin to drag toward the rocks. Visibility was none too good with the terrific wind, clouds, and flying spray. Nevertheless a ceaseless vigil was kept on the islands for the schooner. About 2:30 A.M. Saturday the *Lawson*'s lights disappeared. Mortimer noticed their absence, but kept searching. After all, it was not unusual for a ship's lights to blow out – especially in such a high wind. Since no flares or other distress signals had shown, Mortimer concluded that the *Lawson* had just lost her lights. Israel Hicks, a Trinity boatman and relative of the pilot left on the *Lawson,* also saw the ship's lights go out and shortly thereafter noticed a heavy stench of oil in the wind. Hicks ran out to tell Mortimer that he thought the ship had wrecked.[20] Mortimer was confused – if the *Lawson* was in trouble, why was there no signal, no flare? Both Hicks and Mortimer concluded that it would be suicide to take a boat out in the hurricane. A pall of uncertainty and helplessness settled over the St. Agnes station.

The lookout at St. Mary's roused Bradley at about 3:15 Saturday morning and told him that the lights of the *Lawson* had been obscured since 2:50. Bradley hurriedly dressed and ran to see for himself. Noting the impossible conditions of wind and sea and the gloomy blackness where the ship's lights had been, Bradley expressed a hope that the giant schooner had slipped her cables and sailed off westward out of danger for "there is nothing we can do for her now."[21] Indeed, there was nothing anyone could do for the *Lawson;* for even as Bradley spoke, the schooner had already been ripped apart and buried in her cold, sodden grave along with most of her crew.

When the St. Agnes boat left the *Lawson* shortly after 9:00 P.M. Friday, Captain Dow felt that the ship was not in any grave

Detail from a British Admiralty chart of the Scilly Isles, 1887 edition. Note Bishop Rock, lower left; Broad Sound, left center; Annet, center; St. Agnes, right center; and St. Mary's, upper right.



danger. Hicks, the pilot, seemed to be in agreement. Both believed that the massive ground tackle of the *Lawson* was sufficient to hold her anywhere.[22] However, this confidence was not shared by the rest of the crew. As the wind and the sea increased in force, great mountainous combers crashed over the tanker. The schooner lunged and lurched on her port cable–the only one that was holding.[23] A counter-wave action caused by the sloshing of waves of oil in her tanks made the *Lawson* a very uncomfortable ship.

Suddenly, about 1:15 A.M. Saturday, the thunderous boom of a parting cable pierced the wailing wind and distracted the crew from the constant tumult of the sea. The *Lawson* began to drift toward the menacing rocks.[24] All of the crew and officers donned life belts and worked to preserve the ship. The dragging starboard anchor seemed to find no purchase. When at last the anchor caught, the cable snapped right at the hawse pipe. Anchorless in the hurricane, only a little more than a mile from the gaping jaws of Hellweathers Reef, the *Lawson* did not have a chance. About an hour after the first cable parted, the *Lawson* struck Shag Rock just a few hundred yards northwest of Hellweathers Reef.[25] Dow, Libby, pilot Hicks, the steward, and engineer Rowe were in the rigging of the seventh mast when the ship struck the submerged rocks. The rest of the crew was scattered around the ship–mostly on the forecastle. There was a hideous grinding and crashing as the *Lawson* worked against the granite ledge. The whole starboard side of the ship caved in, loosening the rigging. Wave after wave pummelled the *Lawson* and sent frightening shudders through the ship. The rigging reeled under the onslaught of wind, wave, and rock. Rowe, lurching and swaying in the rigging next to pilot Hicks, asked the pilot if there was any way to get ashore. It was obvious to both that the *Lawson* did not have much time left. Hicks, intimately familiar with every treacherous nook and cranny, sadly shook his head.[26] Pilot Hicks lashed himself to the rigging and prepared to die. Rowe, realizing that the *Lawson* would soon be torn apart, desperately hurled himself into the brawling seas deciding to take a chance rather than meet certain death on the doomed schooner. Rowe had barely splashed into the water when another leaden wave heaved the *Lawson* broadside against the rocks. Immediately the schooner broke in two between the sixth and seventh masts, and the stern sank like a stone. The rest of the ship rolled over, heaving everyone into the frigid seas. The ruptured tanks of the ship spewed thousands of gallons of oil, covering everything and everybody.[27]

Rowe saw Hicks, still lashed to the rigging, disappear beneath the waves. That was the last anyone ever saw of pilot Billy Hicks. A big, oil-soaked chunk of timber surfed by on one of the waves. Rowe seized an end of it as it hurtled past and climbed on. He watched helplessly as two men struggled in the icy water near him. One was smashed against a ledge of rocks; the other became engulfed in some sinking rigging which pulled him beneath the waves. Rowe washed up on one of the ledges of uninhabited Annet Island, smashing his kneecap in the process. The sea tossed Captain Dow onto the same ledge with his ribs crushed and an arm broken. Both suffered intensely from injuries, exposure to the cold, and the omnipresent oil. Rowe managed to drag Dow to safety on a higher ledge before collapsing himself.[28] They would lay there twelve more hours before rescue. It would be three hours before the lifeboat stations knew for sure that there had been a wreck.

At daybreak, lookouts searched in vain for the ship, but the large oil slick and tangle of wreckage against the leeward rocks told the story. The weather was still fearfully rough but Frederick C. Hicks, the grown son of pilot Hicks, begged to launch a gig and search for survivors. Hicks got a

group of eight volunteers together (five of whom were named Hicks) and set out in the venerable St. Agnes gig *Slippen* shortly after dawn.[29] Landing at barren Annet Island, the rescue party found seaman George Allen alive huddled under a rock for protection. Allen was apparently one of the last of the seamen washed from the forecastle of the wrecked schooner. Allen had broken ribs and severe internal injuries, from which he died the next day. The Hicks boat also located two bodies on this trip – each mangled and torn by the rocks. After taking Allen to St. Agnes for care, the *Slippen* returned at about 2:30 Saturday afternoon to continue the search.[30] On Hellweathers Carn, they found Edward Rowe and hauled him into the gig with much difficulty. Rowe insisted that the rescuers return for Captain Dow. The Captain, suffering from injuries, salt water, and oil, could not help himself. To add to the problem, the gig could not land due to the rough seas and threatening rocks. Fred Hicks, the son of the lost pilot, tied a rope around his waist and crawled and swam over rocks and through angry surf some fifty yards to the ledge where Dow lay. Securely tying the rope around the semiconscious Dow, Hicks swam back to the gig. His crewmates were able to pull Dow and the exhausted Hicks into the *Slippen*.[31] Subsequent trips brought back a total of fourteen bodies. The abuse of sea and rock hampered the identification of the dead. One of the bodies was headless and several others were without extremities or various limbs. Of the nineteen souls on the *Lawson*, only two survivors – Dow and Rowe – and fourteen bodies were recovered.[32]

Despite the spectacular loss of the *Lawson* and the shock to the shipping world, the heroic efforts of the rescue crew thrilled many. Joseph G. Stephens, American Consul at Plymouth, England, recommended

The forward section of the *Thomas W. Lawson* lies capsized off the shore of Annet, December 1907. Bishop Light is on the horizon, left. Plans to salvage the *Lawson* were unsuccessful. (Copyrighted photo, F. E. Gibson, Scilly Isles)



some sort of award or recognition for the lifeboat crew that had rescued Dow and Rowe and the bodies of the rest of the crew.[33] Accordingly, the American government presented each crewman a gold medal. Frederick C. Hicks was singled out for special attention. As Stephens observed in a dispatch to Washington: "Had it not been for his gallantry no one would have survived." As an expression of the nation's gratitude, a specially engraved gold watch and chain were presented to Frederick C. Hicks. Until his death just a few years ago, Hicks was always very proud of that gold watch.[34]

Some authors have suggested that the loss of the *Lawson* also sounded the death knell of the large schooner generally. Such was not the case. Economics, not the loss of the *Lawson*, dictated the end of the large schooners. Coastwise Transportation, the owners of the *Lawson*, converted to steamships in just a few years, only to be swallowed by railroad competition a few years after that.[35] While the tragedy of the *Lawson* caused tongues to wag and heads to shake, the fate of the big schooner had already been written on the wall. Instead, the death of the *Lawson* was a human drama that affected the lives of all those touched by the big schooner.

NOTES

[1]Thomas Hornsby, "The last voyage of the *Thomas W. Lawson*," *Nautical Research Journal* 5 (April 1953): 58.

[2]B. B. Crowninshield, *Fore-and-Afters* (Boston: Houghton, Mifflin Company, 1940), pp. 53-54.

[3]Hornsby, p. 54.

[4]*Hearings before the Merchant Marine Commission*, 3 vols. (Washington, D.C.: Government Printing Office, 1904), 1: 669.

[5]Crowinshield, p. 55; William H. Bunting, *Portrait of a Port: Boston, 1852-1914* (Cambridge, Massachusetts: Harvard University Press, 1971), p. 94; W. J. Lewis Parker, *The Great Coal Schooners of New England, 1870-1914* (Mystic, Connecticut: Marine Historical Association, 1948), p. 79; Hornsby, p. 56.

[6]"The Seven-master," *The Rudder* 13 (September 1902): 423.

[7]William A. Fairburn, *Merchant Sail*, 6 vols. (Center Lovell, Maine: Fairburn Marine Educational Foundation, 1945-1955), 4:2614; Louis R. Granger, "Black Sheep of the Schooner Fleet," *Sealift* 24 (September 1974): 20-23.

[8]Bunting, p. 94; *Hearings*, 1:668-69. John G. Crowley, general manager of the Coastwise Transportation Company, testified before the Merchant Marine Commission that the *Lawson* and another steel schooner, the *William L. Douglas*, were intended for foreign trade, not the coasting trade.

[9]Hornsby, p. 58.

[10]*Philadelphia Public Ledger*, 15 December 1907.

[11]Hornsby, p. 58.

[12]*Times* (London), 16 December 1907, p. 6; *Philadelphia Inquirer*, 15 December 1907; *New York Times*, 15 December 1907, p. 2; *Philadelphia Public Ledger*, 15 December 1907; *Boston Globe*, 15 December 1907.

[13]*Philadelphia Inquirer*, 15 December 1907.

[14]*Plymouth* (England) *Western Weekly News*, 21 December 1907. Reprinted as "Wreck of the *Thomas W. Laswon*," in *The American Neptune* 29 (April 1969): 136-37. Hereafter cited as "Wreck of the *Lawson*."

[15]*Ibid.*, pp. 133, 137.

[16]*Ibid.*, pp. 133, 135.

[17]*Ibid.*, pp. 133, 135, 137.

[18]*Ibid.*, pp. 133, 135; *Times* (London), 16 December 1907, p. 6.

[19]"Wreck of the *Lawson*," pp. 133, 135-36.

[20]*Ibid.*

[21]*Ibid.*; *Times* (London), 16 December 1907, p. 6.

[22]"Wreck of the *Lawson*," p. 137.

[23]*Ibid.*, pp. 137-38.

[24]*Ibid.*

[25]Richard Larn, *Cornish Shipwrecks; The Isles of Scilly* (Newton Abbott: David and Charles, 1971), p. 84. The exact location of the wreck has been verified by recent dives on the site.

[26]"Wreck of the *Lawson*," p. 134.

[27]Hornsby, p. 59.

[28]"Wreck of the *Lawson*," pp. 134, 136-37.

[29]Larn, p. 83.

[30]"Wreck of the *Lawson*," p. 134.

[31]*Ibid.*

[32]*Ibid.*, p. 135; Hornsby, p. 59.

[33]Despatch of Joseph G. Stephens to Assistant Secretary of State, 16 January 1908, *Various Papers Relating to the Wreck of the* Thomas W. Lawson, microfilm roll NA350, G. W. Blunt White Library, Mystic Seaport Museum, Mystic, Connecticut.

[34]*Ibid.*

[35]Crowinshield, p. 56; Paul C. Morris, *American Sailing Coasters of the North Atlantic* (Chardon, Ohio: Bloch and Osborn, 1973), pp. 86-87.

The *Benj. F. Packard*, 1883-1983

On 11 November 1883 a crowd gathered at the Goss, Sawyer & Packard shipyard in Bath, Maine, to watch a new ship slide into the Kennebec River. She was the last square rigged vessel launched by this yard, for a decade the most active in Bath. Her namesake, Benjamin F. Packard (1826-1885), was a partner and master builder in the yard.

Since the late 1860s Maine shipyards had specialized in producing what we call "Down Easters," large, efficient square-riggers for the trade between the East Coast and California. The short-lived period of the clippers was over before the Civil War. Low-volume, high-value cargo now made the trip by steamship or railroad, but sailing vessels continued to dominate the carriage of bulk cargo through the 1880s. As grain became the new golden product of California, export trade expanded in the early 1870s to employ as many as 600 sailing vessels.

For the 200 American ships similar to the *Packard*, a typical year began with a run from New York or Baltimore to San Francisco with manufactured goods, coal, or railroad iron. Foreign vessels were restricted from American coastwise trade so the Down Easters were protected from competition on this run. By the 1880s many American vessels instead took cargoes of case oil (kerosene) to the Orient and then proceeded to California. In California, the vessels were chartered to carry wheat, usually to Falmouth or Queenstown, there to receive orders to deliver the cargoes at such North European ports as Liverpool, Antwerp, or Hamburg. With mixed goods, or in ballast, they returned to New York to begin the cycle again. Alternative cargoes and routes included Hawaiian sugar, Pacific Northwest lumber, and Chilean nitrates round the Horn to the East Coast or Europe.

The *Packard* entered this complex world of trade under the management of John R. Kelley. About 1887 Bath's progressive, populist "maritime prince" Arthur Sewall purchased her and his firm of A. Sewall & Company operated her for twenty years.

The *Packard* was quite typical of the Down Easter type. At 2,130 tons gross, she was 244 feet in length, 43 in breadth, and 26½ in depth, and could carry about 3,000 tons of freight. She carried three skysails, but, despite this lofty rig, she was routinely handled by a crew of about twenty-five men. Her cabin arrangement was described in the *Bath Daily Times* four days after her launch.

> The cabin is built for convenience and is a fine one. The main cabin is veneered work and is composed of French burl, mahogany, rose wood and birds eye maple and is prettily put together. The panels are French burl and birds eye maple, moulding and stiles are mahogany. Grounds and pilasters are of rose wood, cornices of birds eye maple and freize mahogany. The sofas are satin plush. The stand has an Italian marble top with silver railings. The captain's room is finished with mahogany and walnut. The bath room and dispensary are connected.... The medicine chest is black walnut. The state rooms are all finished with black walnut and ash. The forward cabin is of ash and walnut. The pantry is made of the latter wood. The cabin is roomy and is a "daisy."

She could clip off twelve knots in strong winds, but the *Packard* set no sailing records. In fact, her average for passages from the East Coast to San Francisco was a slow 148 days, 130 being the shortest. Her 94-day passage from San Francisco to New York in 1892 was the only run that was not noticeably slow. She met her share of gales while rounding Cape Horn, recorded in log entries such as the one for 31 December 1892:

P.M. ship hove to on port tack. Blowing a violent gale with terrific squalls. Blew away lower fore and main topsails. Decks full of water[.] cabin and lazarete flooded. Ship laboring heavily. 5 A.M. gale[.] taking off [ ] lower topsails. + set fore. Day ends with gale moderating. A ship in company. 5 A.M. wore ship to Westward. During this gale the ship has done some very heavy rolling and has a bad list to starboard. Pumps carefully attended.

And twenty days later, off the Horn, they were "reefing furling and making sail about all the time.... When ship was heading to the Southward was jumping bows under and when heading to Northward rolling heavily keeping decks flooded." But that was typical for the Down Easters, and the *Packard* was, all in all, an unexceptional, slow, steady performer in the Cape Horn trade for twenty-five years.

The notoriety she gained was largely due to Captain Zaccheus "Tiger" Allen, who, with the exception of one voyage, commanded her from 1889 until 1904. He had a reputation for brutality, which was shared by his son who served as mate on occasion.

The *Benj. F. Packard* under sail.
Photo by Ewing Galloway. (74.1017)



Tiger Allen appeared at least once in the "Red Record," a column in the newspaper of the Sailors' Union of the Pacific that recounted cases of brutality at sea. Others considered Allen an excellent navigator and a fair, if stern, disciplinarian in an age of low-quality, hard-to-manage crews.

When the Northwest Fisheries Company purchased the *Packard* in 1908 she joined the fleet of once-proud square-riggers that sailed to Alaska each spring with crews and machinery for the salmon fishery. In the fall, laden with canned salmon, she returned to Seattle. In 1918 the Booth Fisheries Company of Port Townsend purchased her, and in 1924 she made her last salmon voyage.

With a timber cargo, she then embarked for New York on her last ocean passage. An ignominious one it was, made at the end of a towboat hawser via the Panama Canal. Though various proposals were made to preserve the *Packard* as a gallery, museum, or exhibition ship, little was done to maintain her. She spent several years aground in Manhasset Bay, Long Island, and in 1930 was towed to Rye, New York, where she was featured as a "clipper ship" at the Playland amusement park.

Damaged by the 1938 hurricane, and deteriorating structurally, the ship was condemned. Through the efforts of Clifford D. Mallory, Sr., the panelling from the after cabin and other items were salvaged for the Marine Historical Association, now Mystic Seaport Museum.

In the spring of 1939 the *Benj. F. Packard*, last of the Down Easters, was towed into Long Island Sound off Eaton's Neck and scuttled.

To commemorate the Down Easters, the first portion of the *Benj. F. Packard* Exhibit opened at Mystic Seaport in 1973. The panels from the after cabin were restored by Tage Frid and installed under the sponsorship of the Mallory family. Other pieces of the ship were also presented to the Museum, and in 1976 the full exhibit was



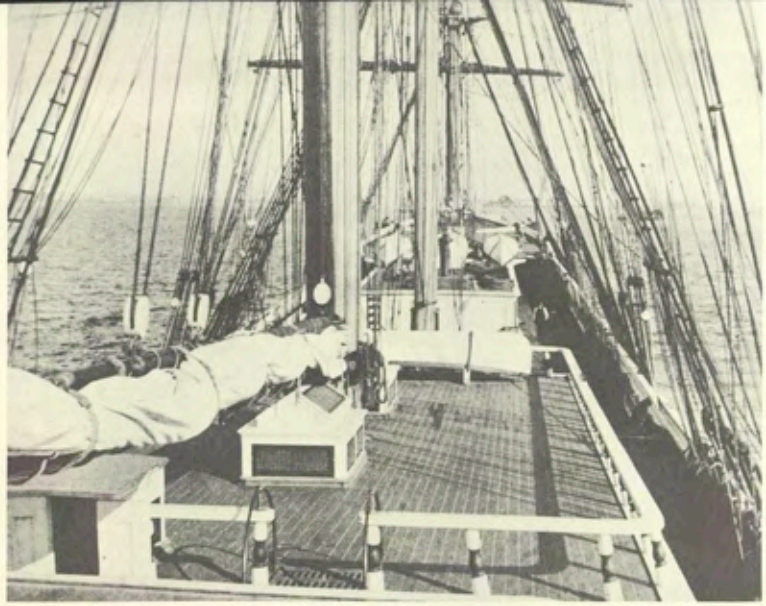
The *Packard* loading cargo in New York, ca. 1895. Photo by Thomas A. Luke. (Courtesy of the Peabody Museum of Salem)

opened. In spirit, a hundred years after her launching, the *Benj. F. Packard* lives on in the *Benj. F. Packard* Exhibit.

Specific information on the *Benj. F. Packard* can be found in Frederick C. Matthews's *American Merchant Ships, 1850-1900* (Salem: Marine Research Society, 1930); William A. Baker's *A Maritime History of Bath, Maine and the Kennebec River Region,* vol. 2 (Bath: Marine Research Society of Bath, 1973); Log 785, *Benj. F. Packard,* 5 May 1892–20 March 1893, G. W. Blunt White Library, Mystic Seaport (original at Maine Maritime Museum, Bath, Maine); and Mystic Seaport's *Wind Rose,* February 1975. Basil Lubbock's *The Down Easters: American Deep-water Sailing Ships, 1869-1929* (Boston: Charles E. Lauriat Company, 1929) should be used with caution.

Information on the role of the Down Easters, and life aboard them, can be found in Baker's *Maritime History of Bath;* John G. B. Hutchins's *The American Maritime Industries and Public Policy, 1789-1914* (Cambridge: Harvard University Press, 1941); Felix Riesenberg's *Under Sail: A Boy's Voyage Around Cape Horn* (New York: Macmillan Company, 1918); and Oliver E. Allen's *The Windjammers* (Alexandria, Virginia: Time-Life Books, 1978).

Research by Andrew W. German
Photo selection by Stuart L. Parnes



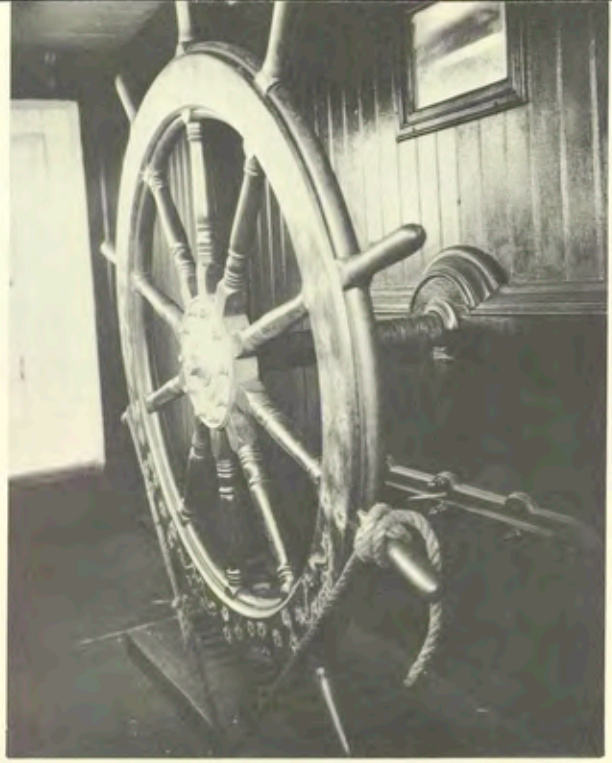
View forward from the top of the wheelhouse, New York Harbor. (Courtesy of E. C. Mansur)



Captain Zaccheus "Tiger" Allen. (Courtesy of E. C. Mansur)



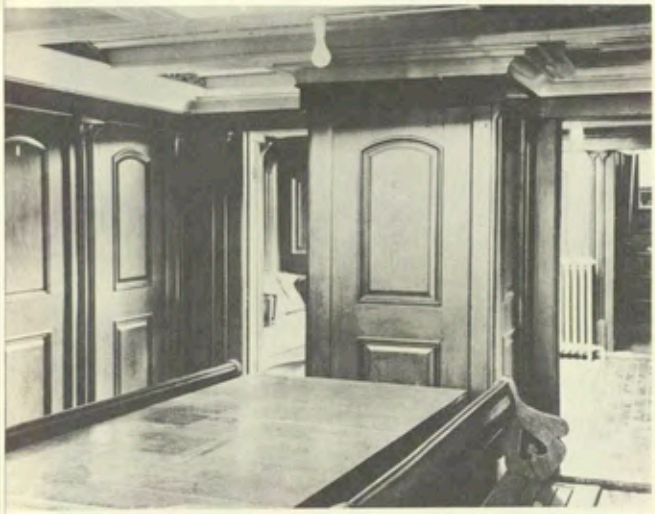
The *Packard*'s crew, ca. 1890s. At far right is mate Ralph Allen, son of the captain. Next to him is second mate Tom Turner, another two-fisted "bucko." (Courtesy of E. C. Mansur)



Like most later American square riggers, the *Packard* had a wheelhouse to shelter the helmsman. Note the brass inlays on the wheel and the needle protruding through a slot in the bulkhead to indicate the position of the rudder. (76.143.20)

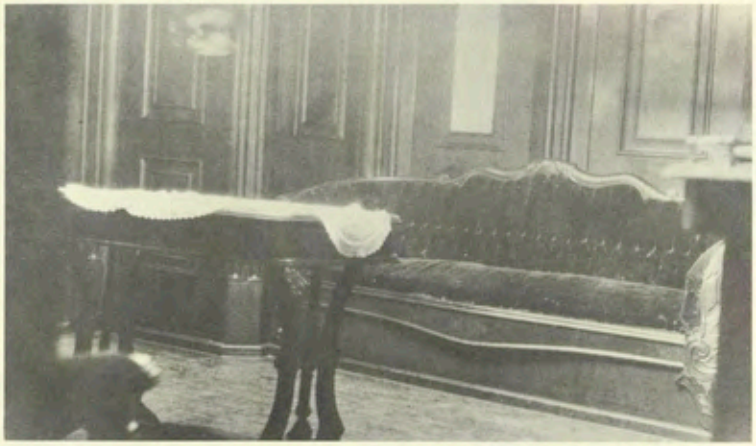
Looking aft from the deckhouse forecastle, while the *Packard* was at Playland in the 1930s. (Courtesy of Courtney Allen)

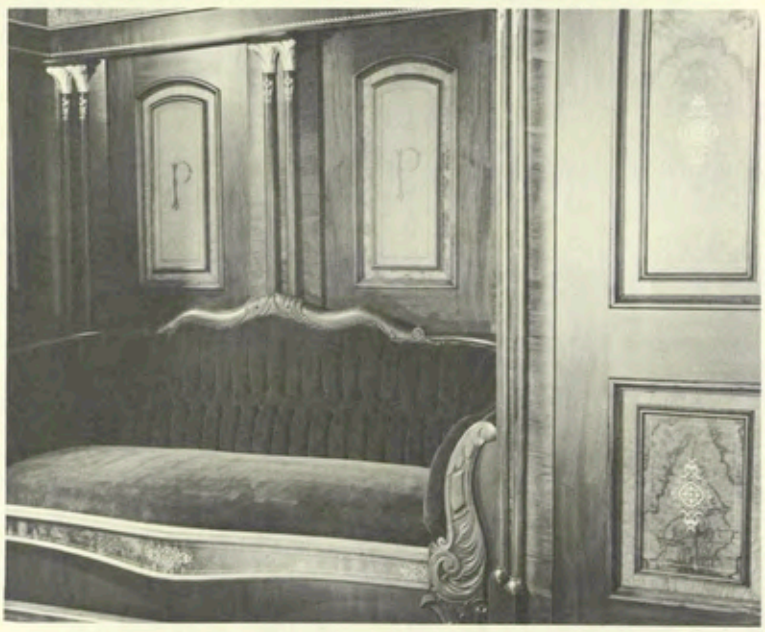






Looking from the officers' mess into the captain's day cabin, ca. 1938, left (Seaport Photo Archives); and the same view as restored in the *Benj. F. Packard* Exhibit at the Seaport, right. (Photo by Mary Anne Stets)





Interior of the captain's day cabin at it was in service, above (Seaport Photo Archives); and as reassembled in the exhibit, below. (Photo by Mary Anne Stets)

ACQUISITIONS

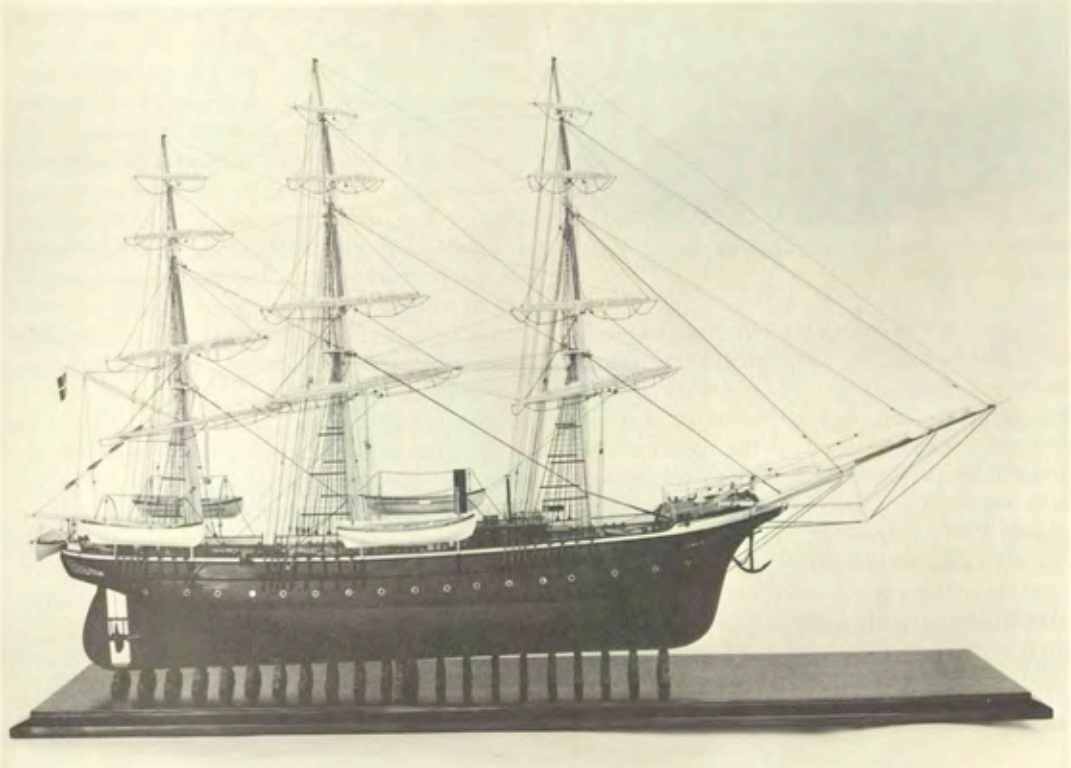


This pair of seaboots was owned by Karl Christiaan Frederick Carlsen (1859-1896), who served aboard the Red Star Line steamer *Belgenland* during the 1880s. The Red Star Line provided passenger service between Antwerp, Belgium, and New York.

The boots are leather with wooden sole and toe resembling a clog. The sole is raised except at the heel and under the ball of the foot, presumably to keep the wearer's feet a bit drier on a storm-washed deck. The boots were donated by the owner's grandson, Henry Carlson. [83.15]

This model, which represents the *Georg Stage* (later the *Joseph Conrad*) as she was when launched in 1882, was built by Seaport staff model-maker William S. Quincy, Jr. It is a companion piece to the model of the *Joseph Conrad* that he presented to the Museum exactly thirty years ago. Plans for the *Georg Stage* were drawn by Danish naval architect Bernhard Bruncke and furnished by the Danish Maritime Museum at Kronborg Castle.

The two models will be exhibited together to show the changes that have taken place during the ship's hundred-year career. Original features of the vessel which the model displays are the short forecastle head, the short forward deckhouse, a tall stack for the steam engine, a skylight where the charthouse is now, a hoistable propeller, and the hammock nettings above the rails. Built to ¼" scale, the model is 40" long overall. [83.78]

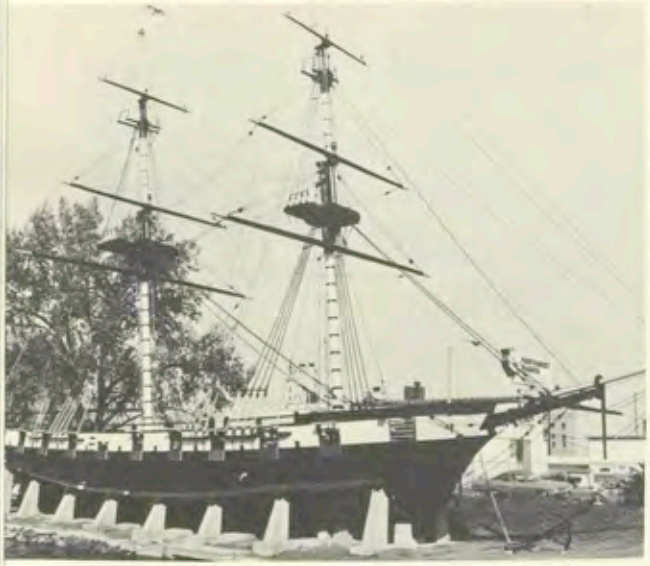


HISTORIC SHIPS

The *Niagara*

Resting high and dry near the shore of Lake Erie in Erie, Pennsylvania, the *Niagara* is historic in two senses. She not only contains part of the structure of the War-of-1812 brig she represents, but she is also an early example of ship restoration, having been raised and reconstructed seventy years ago.

The *Niagara* owes her existence to the unpopular War of 1812, during which America attempted to assert her rights on the high seas and to protect her interests in the territories around the Great Lakes.



Niagara (Courtesy of the Pennsylvania Historical and Museum Commission)

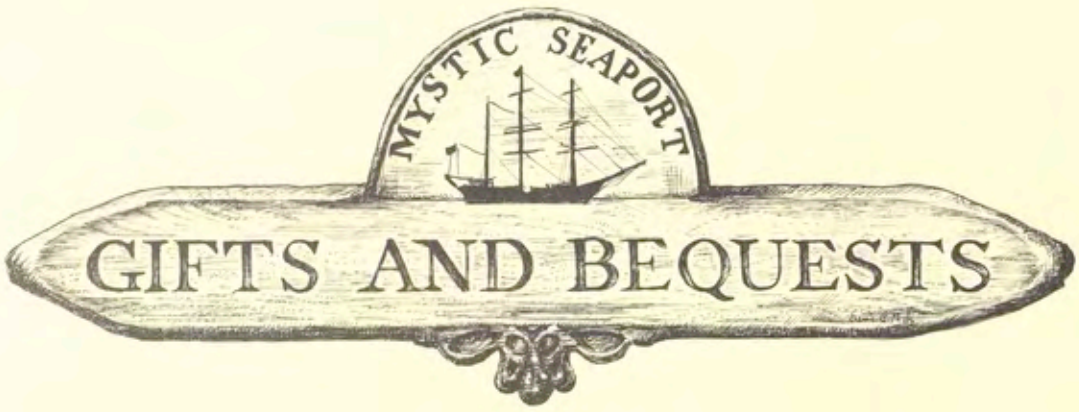
To counter the British fleet of small warships on the Lakes, the Navy Department sent Daniel Dobbins to build six American vessels at Erie, Pennsylvania. Shipwrights, materials, and armaments for these vessels on the frontier were brought from Pittsburgh, Philadelphia, and even Washington, D.C. Commander Oliver Hazard Perry arrived in March 1813 to take command of a fleet of nine vessels.

In August, Perry got his vessels out of Erie's shallow harbor with some difficulty and prepared to meet the British fleet. On 10 September 1813, with his "DON'T GIVE UP THE SHIP" battle flag flying from the flagship *Lawrence,* Perry led his fleet into battle. For some reason, Commander Elliott of the *Niagara* did not join the fray. With his flagship demolished, Perry transferred to the *Niagara* and brought her into action, defeating the remnants of the British fleet. In his report, Perry made the now-famous statement: 'We have met the enemy and they are ours: Two ships, two Brigs one Schooner and one Sloop." This action helped secure the Northwest against the British in Canada.

The hurredly-built *Niagara* survived the war and entered more peaceful service, but when she began to rot she was abandoned and sank in Misery Bay at Erie. As the centennial of the Battle of Lake Erie approached, a group decided to raise the *Niagara* as a monument. The remains of the hull were winched up from the lake early in 1913.

The *Niagara*'s second historic phase then began. Unlike the well-preserved War-of-1812 vessels recently discovered and photographed at the bottom of Lake Ontario, only the lower portion of the *Niagara*'s hull had survived. The deck was gone and no detailed plans of the vessel survived. Wooden shipwrights of the day had to extrapolate, combining knowledge gained from the existing structure with assumptions about the vessels Dobbins had built and with their own shipbuilding experience. By the summer of 1913 they had launched a vessel that incorporated portions of the original *Niagara,* and probably closely resembled her. This vessel made a triumphant tour of Lake Erie ports during the centennial celebration. Since 1913, the *Niagara* has been reconstructed twice more, but still retains her original keel.

Maintained by the Pennsylvania Historical and Museum Commission, the *Niagara* today stands as a monument to the War of 1812. But she also serves as a reminder that ship restoration principles and techniques change. Conceivably, with evidence gained from marine archaeology and other sources, the *Niagara* reconstruction may become even more accurate as it approaches its bicentennial.



GIFTS AND BEQUESTS

The development of the museum–the buildings, ships and wharves, the exhibits, books and manuscripts–give eloquent testimony to the generosity of members and other friends of Mystic Seaport Museum. There are continuing opportunities for gifts and bequests which will help assure its future strength and development.

Members of the Seaport who have not already done so are urged to perpetuate their interest in the work of the museum through a bequest. Some members will want to make a specific bequest while others may want to designate Mystic Seaport Museum as a residuary or contingent beneficiary of all or a portion of their estate.

Mystic Seaport Museum is a nonprofit institution publicly supported by gifts and grants. Contributions are deductible within legal limits for Federal income tax purposes. Inquiries regarding gifts and bequests are encouraged and may be directed to the Director of Resource Development.

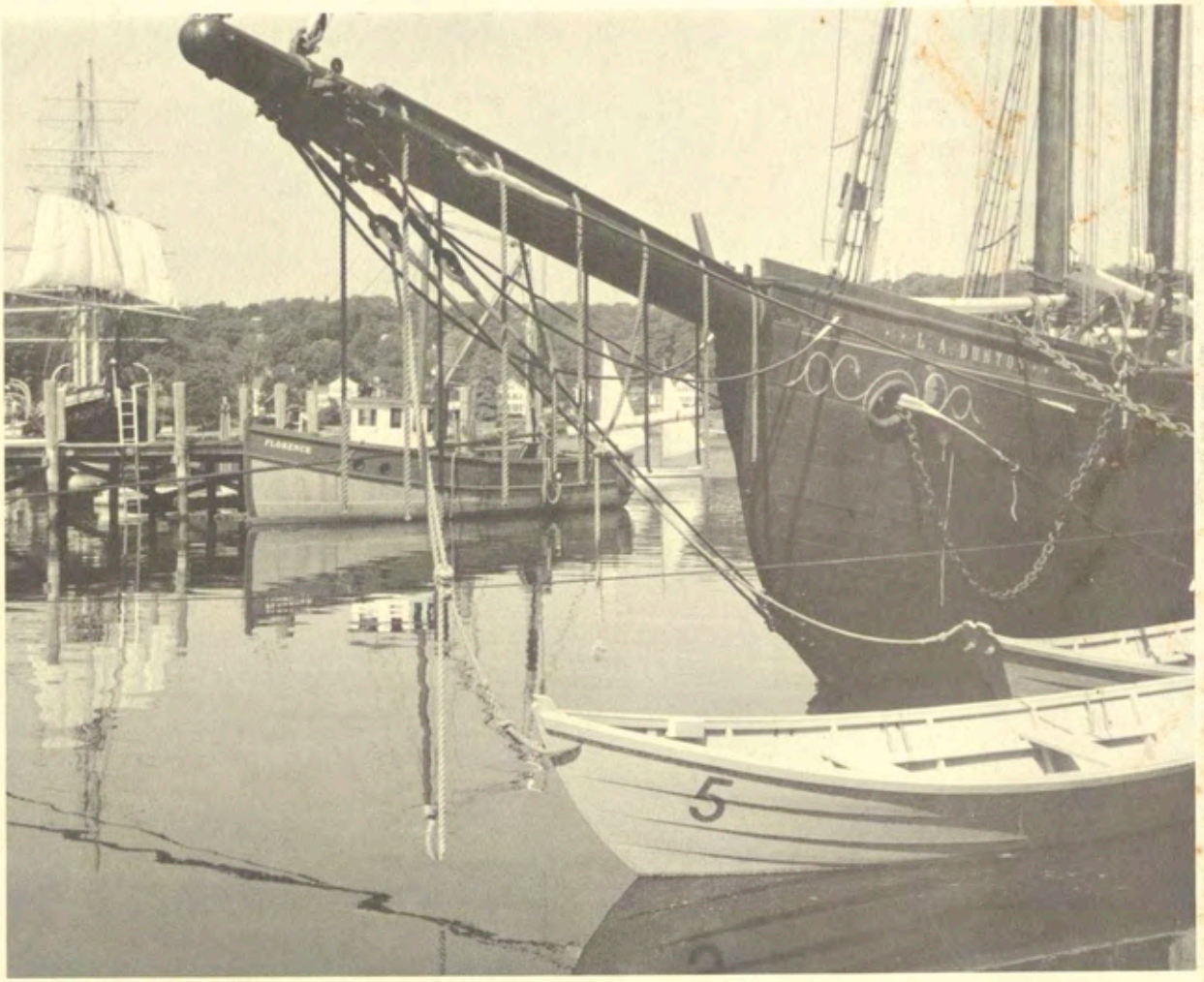
SUGGESTED FORMS FOR BEQUESTS

General

I give and bequeath to Mystic Seaport Museum, Inc., a corporation existing under and by virtue of a charter granted by the State of Connecticut, and located in Mystic (Town of Stonington) in said State, $ . . . . . , to be used (or the net income to be used) at the discretion of the Trustees of said Corporation.

Residuary

All the rest, residue, and remainder of my real and personal estate I devise and bequeath to Mystic Seaport Museum, Inc., a corporation existing under and by virtue of a charter granted by the State of Connecticut, and located in Mystic (Town of Stonington) in said State, said estate to be used (or the net income to be used) at the discretion of the Trustees of said Corporation.



THE LOG OF MYSTIC SEAPORT

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