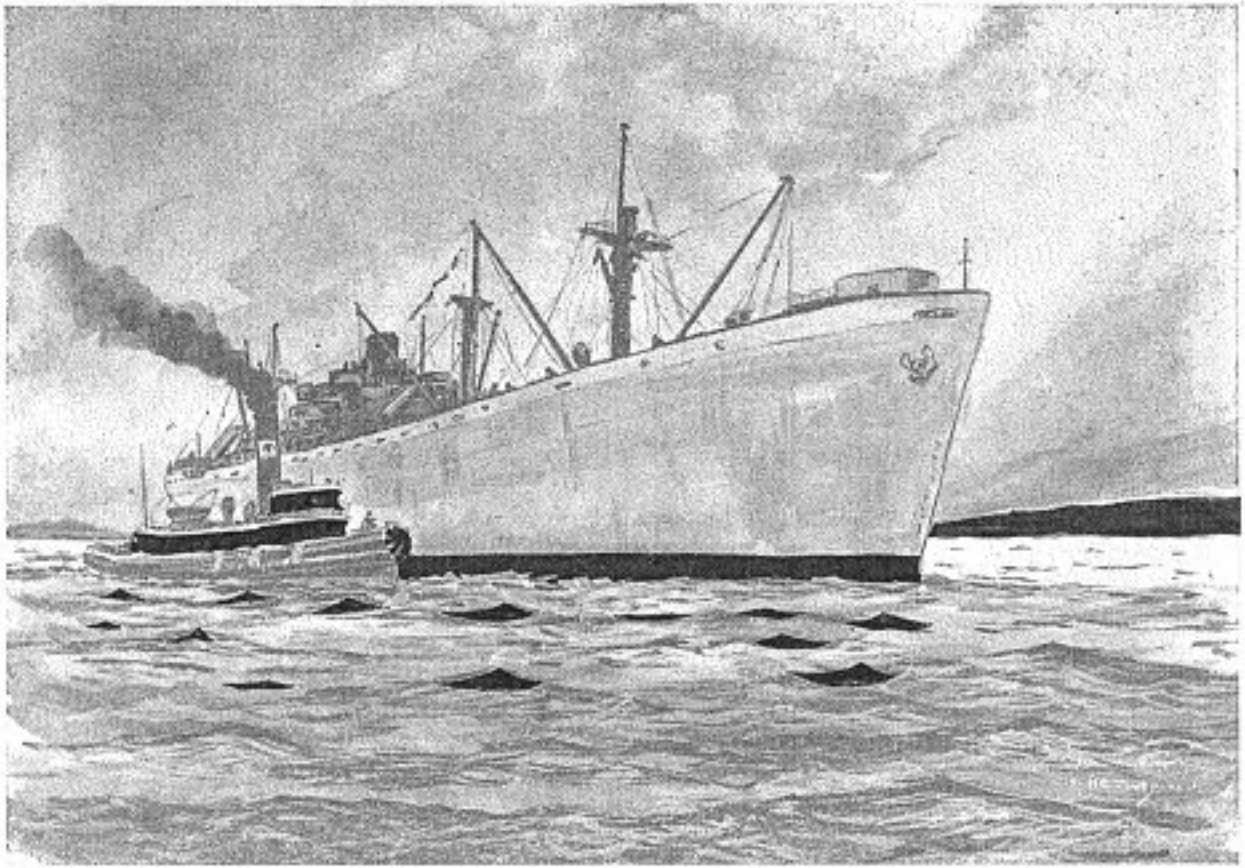

HARBOR TRIALS AT THE SHIPYARDS OF THE NEW ENGLAND SHIPBUILDING CORPORATION

*from a water-color painting by the author*

# Portland Ships Are Good Ships

*by*

Herbert G. Jones

THE BUILDING OF THIRTY BRITISH AND 236 LIBERTY SHIPS BY THE NEW ENGLAND SHIPBUILDING CORPORATION, SOUTH PORTLAND, MAINE

*Machigonne Press*
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*Designed and printed by Curtis Stuart Laughlin*

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# *Dedication*

TO MY 30,0000 FELLOW SHIPYARD WORKERS,
WHO TOILED, SWEATED, AND BLED, NOT A
LITTLE, TO SUCCESSFULLY ACCOMPLISH
A 'DIFFICULT TASK WELL DONE.'

*Other Books by Herbert G. Jones*

I Discover Maine

Old Portland Town

Maine Memories

PORTLAND SHIPS ARE GOOD SHIPS

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# Acknowledgments

*It has not been my purpose in this slim volume to portray a faithful picture of the many and complex operations of an enterprise that for nearly five years has occupied the center of Maine's economic life. Rather I have tried, before the scene fades into the background of yesterday, to present to my fellow shipyard workers a slight descriptive and pictorial record of their great achievements, despite the handicaps of insufficient equipment in the early days, 'green help,' and the incredible hardships of Maine winters.*

*A great majority of the workers in the Yard are of fine native stock drawn mainly from Maine's coastal ancestry of shipbuilders of another era, but with this difference: that in these modern times they are compelled to work admidst the clamoring din of mechanical riveters, chippers, and intricate machinery.*

*In shipbuilding architecture of today, engine and propeller have replaced mast and sail; the steel line, the hemp hawser of olden times; yet it was inevitable that these men and women with their proud heritage should have turned out good ships, to be exact, 266 of them—ships that have already added another glorious chapter to the annals of our Merchant Marine wherever they have served and 'fought.' And let it not be forgotten, too, that not only did they build them, but bought them with their savings, even manned them when necessary at the sacrifice of their lives in the further service of their country.*

*I wish to offer my sincere thanks to the Public Relations Department of the United States Maritime Commission and the War Shipping Administration, Washington, D.C., for permission to publish this book. Particularly am I indebted to the Publicity Department of the War Shipping Administration for the use of official*

*photographs and news releases; to Willis Walsh, Resident Plant Engineer, U. S. Maritime Commission, N.E.S.C.; to 'Gene' Buzzell, Director Public Relations, N.E.S.C.; to Miss Mary Roche N.E.S.C.; to Miss May Murray, Gannet Publications, Inc.; and to Mr. William Bennett, Principal Surveyor, Lloyds' Register of Shipping, New York City. Without their invaluable help and enthusiastic cooperation it would have been impossible to publish it. My grateful appreciation goes also to Mr. Frank Reil, Director of the Bureau of Information, American Merchant Marine Institute, Inc., Percival W. Wilson, American Bureau of Shipping, and to the management of the New England Shipbuilding Corporation for permitting me to include Miss Paige's* Brief History of the New England Shipbuilding Corporation *as a part of the book. To my host of friends in the Yard—many thanks.*

HERBERT G. JONES
*Dept. 23, East Yard*

# *Introduction*

IT is only poetic justice that Maine should have played ao important role in the epical drama of America's great war shipbuilding program. for Maine shipbuilding has had a long and unequalled record in the maritime history of the United States.

Indeed the proud American Merchant Marine of today actually came into being when a small group of hardy settlers of the Pine Tree State began to convert the trees of its rock-bound coast into the earliest types of ships. They built and launched the first ship built on the North American continent when the *Virginia* slid into the waters of the Kennebec in 1608.

It is fitting, too, in their need for new vessels, that the British and American governments should have turned to Portland Harbor, thus reviving the memories of this harbor's 'ship-building glories of yesteryear,' for the building of ships has always been closely allied with its waters. From its earliest boat-yards scattered along on both sides of the waterfront Portland-built ships have strained at their hawsers in ports all over the globe. Portland shipmasters, whose hands were often as accustomed to turning the pages of a Bible as to wielding a belaying pin, brought back ships the holds of which were redolent with the odor of West Indian molasses, rum, spices, and China tea, or with the stench of a cargo of slaves.

Portland-built ships, too, have carried the fame of Portland Harbor throughout the seven seas, and the port of Portland in these days became one of the most interesting and liveliest of seaports known from Calcutta to Capetown, from Hong Kong to Honolulu, and from Limehouse to Cape Horn.

Activities in shipbuilding in Portland Harbor go back as far as 1728 when Maine was still a colony of the English crown. Twenty years later the small settlement of Portland, or 'The Neck' as it was known, could boast of a fleet of vessels all Portland built and Portland owned. We readily gather how flourishing these early days of shipbuilding were when we read that the year 1816 witnessed a launching every ten days.

At the height of the clipper craze in the 1850's the whole south shore of Portland Harbor from Knightville to Cushing's Point appeared to be one continuous line of small, but bustling, shipyards, and the waters of the harbor literally echoed with the melody of caulking mallets, the busy hum of saws, and over all the pungent aroma of resin, tar, and pitch pine. Nathaniel Blanchard's yard at Knightville produced a part-clipper ship long before Donald McKay, the famous Massachusetts clipper ship builder, reached his fame; and at the Butler yards located at Pleasantdale were built two famous clippers, the *Black Squall* and *Snow Squall*. Both ships made sailing history on the China tea route. Other well-remembered yards were Turner & Cahoon on the Cape shore and 'Old Joe Dyer's,' which in 1854 launched the bark *White Sea*, the subject of a popular launching print contained in local history books.

The greatest number of shipyards, however, were clustered around old Ferry Village, now, alas! swallowed up in the hungry maw of a modern shipyard! Seventy or eighty years ago Ferry Village was a handsome fishing and shipbuilding hamlet. Its earliest settler was an Italian named Marini who obtained from the Indians for a keg of rum a grant of land which covered much of the territory on which the yards of the New England Shipbuilding Corporation are now located. It could boast of a settlement of about one hundred houses whose occupants were for the most part busily engaged in the shipbuilding activities of nearby yards. In the center of the village was a small store whose chief business was the bar presided over by a Miss Polly where nectar was dispensed at three cents a glass. Here the old duffers would congregate and talk over the future greatness of the place. A stranger listening in would have supposed that the

'Village' would soon become the Liverpool of America. How the great change was to take place they could not tell, nor did not care as long as the bar continued to discount at three per cent!

If the race of hardy Maine shipmasters has shrunk, their romantic memories somewhat dimmed, the Maine makers of ships at least have not lost their art. They have given new skills to old genius. Portland-built ships turned out at the New England Shipbuilding Corporation yards at the amazing average of two a week have lived up to their reputation as good ships and have added new lustre to their oldtime glories for staunchness and seaworthiness in every battle zone they have 'fought' from El Alamein to the Phillipines.

# PART I

# THE TODD-BATH YARD

# *'Pete' Newell's Clambake and What Came of It*

It is no mere stretch of imaginative fancy to declare that during the fateful summer of 1940 the 'lights of Britain nearly went out,' for that was the period of the 'great blitz' of the German Luftwaffe that scourged the island from Scotland to Lands' End.

The capture in rapid succession by the German armies of Holland, Belgium, and France, threatened England itself with imminent invasion. By her own admission she was losing the war at sea. For a nation that could feed itself only two months of the year, the sea lanes were vital. The U-boats were sinking her ships at the staggering rate of more than five million tons a year, while she could only build two million replacements. Even this was difficult to accomplish in the face of the continual bombing of her shipyards and ship-repairing facilities. Unless she could promptly secure a fleet of ships to replace her great losses she would inevitably starve. This fact is fully acknowledged in a recent statement in the British House of Commons by Albert V. Alexander, First Lord of the Admiralty. Speaking of those critical days he said, "We could not have survived at one period but for the persistent efficiency and continuity of our shipyards and had we not early placed an order for sixty merchant ships in the United States before she went to war."

Early in September, 1940 the British Government decided to send a technical merchant shipbuilding mission to this country to obtain in the shortest possible time sixty 'tramp' ships of 10,000 tons each. It was headed by Mr. R. C. Thompson, man-

aging director of a large British shipbuilding concern. The other four members of the mission were: Mr. Harry Hunter, the marine engineer of the group; Mr. William Bennett, Principal Surveyor of Lloyds' Register, New York; Mr. J. S. Heck, Principal Engineer Surveyor of Lloyds; and Mr. R. R. Powell, an assistant secretary of the British Admiralty. The three first-named were ultimately closely connected with the construction of the Todd-Bath yard and the British ships, and were familiar figures during that period. Thompson and Hunter arrived in New York on October 3rd and within a few hours had their first meeting with the rest of the members of the mission who were already in this country. They went to Washington and had a talk with the then British Ambassador, Lord Lothian, who advised them on the political background. They also saw Admiral 'Jerry' Land, Chairman of the United States Marjtime Commission. When he heard what the British mission was seeking, Admiral Land exclaimed, "Sixty ships! There are no existing shipyards where you'll get that number of vessels!"

"You haven't the facilities?" asked Mr. Thompson.

"No," replied the Admiral, "you will have to see about building your own shipyards over here."

In October the British party began a vast circular tour of North America by airplane in which they covered thousands of miles, visiting existing shipyards, surveying numerable mudflats and stretches of coast where shipyards might be built, and inspected the entire shipbuilding resources of the country. "We had the definite impression," remarked Mr. Thompson, "when we visited several firms, big as well as small, that they were being invited to back a losing horse."

After making various contacts in New York and elsewhere, the mission met Todd Shipyards, Inc. and found that they were associated with a group of Pacific Coast civil engineering contractors known as the 'Six Services,' headed by Henry J. Kaiser. They produced for inspection a nice colored drawing of a modern British tramp steamer and offered to build ships for the mission providing they had reciprocating engines and water-tube boilers. It was apparent by this time to the members of

the British Purchasing Mission that they would be unable to place any contracts of the magnitude required at existing shipyards. And for possible sites for constructing new yards they had a very restricted choice as they had to pick places that were already centers of population. Richmond, California and South Portland, Maine were ultimately decided upon.

While Mr. Hunter remained in this country with the rest of the mission to deal with the scores of preliminary problems that occurred, Mr. Thompson set sail for England to report to the Admiralty, taking with him the draft contract plans and blueprints. He sailed on a fast British liner without escort, relying on the speed of the vessel to elude the submarines, with the result that he not only nearly lost the contract papers, but his life as well. At six o'clock one icy morning half way across the Atlantic, a torpedo struck the ship.

"I was asleep in my cabin when the explosion occurred," he relates. "The whole vessel shuddered and seemed to drop. I threw on more clothes, grabbed my dispatch case in which were the contracts and documents and rushed up on deck. I scrambled into one of the lifeboats as the ship slid beneath the heavy swell. I pulled an oar with the other passengers for nine hours before we were rescued, with the precious dispatch case at my feet. The papers were sea-sodden and partly unrecognizable and had to be retyped before I could deliver them to the Admiralty."

Finally, on December 20, 1940, a contract was signed between the English Government and the Todd Shipyard Corporation of New York for the latter to construct two seven-berth shipyards, one at Richmond, California and the other at South Portland, Maine, and thereafter to build thirty 10,000ton d.w.-freighters at each yard.

The Todd-Bath Iron Shipbuilding Corporation, headed by William S. Newell, and the Todd-California Shipbuilding Corporation, headed by Henry J. Kaiser, both subsidiaries of the New York Todd Shipyard Corporation were to build the ships and the yards. This was the kind of contract that William Newell, or 'Pete' as he was popularly known by his workmen, had been looking for for years. He was prepared for it when it

came and had visualized in his mind a new type of shipyard and an ideal site on which to build it. The story of how 'Pete' came to South Portland and achieved his great success and the almost impossible is graphically told in M. B. Palmer's book **We Fight With Merchant Ships,* and reprinted here with the consent of the publishers.

"One day in 1938 Newell dropped in for a chat at the offices of Gibbs and Cox, New York ship designers. He had nothing in particular on his mind that day, but his eye was caught by a large veiled drawing on an easel. His curiosity piqued, he asked what it was, but was told the whole thing was very hush-hush and just to forget about it. On 'Pete's' promise that he would reveal nothing of what he saw, the architect took off the cloth and the shipbuilder let out a long whistle. There before him was the most fantastic warship he had ever seen, an 80,000 ton monster dreadnaught—half battleship and half aircraft carrier superbly gunned and armored against the heaviest aerial attack. This naval gargantua, Newell learned, had been designed by the New York naval architects on request of the Russian Government.

"Why there's not a yard in the country can handle that order!" Pete exclaimed. "You couldn't find a spot to build her in." Then, after a moment, he went on, "But I can tell you where."

"Gibbs and Cox picked up its ears. Where did he mean? Newell answered cryptically by asking for an office boy. To the youngster he said, 'Now, Johnny, you know where such and such a marine store is—go over there and get me a map of Portland Harbor.'

"When the boy came back with the map 'Pete' excitedly pointed out a bit of undeveloped shoreline in South Portland. There wasn't any shipyard there, not so much as a single way or crane or railroad spur. But Newell knew that strip of land he said. Twenty feet down through mud and sand was a solid

**We Fight With Merchant Ships, M. B. Palmer, Bobbs Merrill Co., Indianapolis.*

rock ledge. His idea was to shovel down to the rock and build the Russian dreadnaught, not on conventional ways, but in an open-water slip. Flood gates on the seaward end would be hoisted up when the job was finished and the ship could be towed right out into the harbor.

"Back in Maine, Newell went forward with his plan. He got a friend in the oil business to secure an option on the stretch of land for five hundred dollars. If anyone heard of the deal, Newell reasoned, he would imagine the oil company had bought it for storage tanks. No one would suspect the shipbuilder. Three thousand dollars he laid out surveying the land and drilling down to rock. His statement that there was a solid foundation twenty feet down was corroborated. For himself he was even more convinced than ever that his idea was sound.

"'I didn't tell anybody what I was doing,' Newell says slyly, 'not even my wife. If she'd known I was spending all that money, she'd be after me. But you know,' the round sparkling-eyed shipbuilder continued, 'it's like some guys to play poker. I had a wonderful time with it—and in the end I got my money back, although the Russian ship was never built.'"

When the British came along looking for a place to build their emergency cargo vessels, Washington remembered the insistent man from Maine. Officials from the State Department, Navy, Maritime Commission, British Purchasing Mission, and Todd officials from New York went buzzing up to Portland. Some 250 strong, they were in the energetic Newell's hands from seven in the morning until eight at night. Their host outdid himself. "I took 'em around over thirty miles. We all had a wonderful time, clambake and everything," he recounts happily. Whether it was the clambake, Newell's enthusiasm or what, he finally sold his idea that day.

A super salesman as he is a super shipbuilder, 'Pete,' with nothing more to show than a map, and a mud-flat, and an idea had secured himself a $50,000,000 contract! Plus the gastronomic joys of a real old-fashioned Down East clambake!

# *From Swamp and Mud-Flat to Modern Shipyard*

GOD made this place for a shipyard ten million years ago, but He didn't tell anybody about it," once remarked William S. Newell as he surveyed the mudflats upon which his beloved basins in the East Area now stand. But somebody, most ungraciously, must have tipped off the British many years ago, for they had their canny eyes cast upon this spot as a likely place for a shipyard 171 years ago. In fact had it not been for a stubborn motley band of American soldiers under the command of General Washington at Valley Forge, who just didn't know when they were beaten, the East Yard site might well have become another huge 'Singapore of the West' under the rule of an English king.

History records the fact that as far back as 1774 the British Navy, which then patrolled and controlled the whole region of Casco Bay, recognized the great strategic value and adaptability of the site on which the East Yard now stands. They actually conceived the plan of establishing a Royal dockyard and shipbuilding plant which would be the largest in the world at that time.

But the historic Battle of Lexington shattered that idea! Then, history repeated itself, this time more successfully when 167 years later the British Government moved in, and the East Yard site became a British shipyard and thirty British ships under British supervision were built under the fluttering of a British Union Jack!

It was on December 20, 1940 that local newspaper headlines came out with the long-awaited announcement that Portland

Harbor was to become the scene of a huge shipbuilding revival to be located on the deserted site of the old Cumberland Shipyards on the South Portland shore. In earlier days this yard had been devoted to the construction of wooden barges and small craft.

On that day, too, the British Purchasing Commission had signed the all-important documents making funds available for the building of the yard and thirty Ocean-type cargo carriers. Under the administration of William S. Newell, the Todd-Bath Iron Shipbuilding Corporation was organized and barely was the ink dry on the British contract before Pete gave the go-ahead signal to the Sanders Engineering Company who were to construct the basins and the shipyard. In fact, the men in the employ of the engineering company had already completed their surveys and had begun to cut and burn the heavy alder growth that covered most of the area of the old yard.

Soon the quiet environs of the South Portland waterfront began to buzz with the ceaseless and noisy activities of huge seventy-ton steam shovels, bulldozers, the whine of timber saws, and the constant rumble of heavy trucks as they excavated thousands of cubic yards of earth daily. And in one short year, like the fabled Phoenix of antiquity, a modern producing shipbuilding plant rose from the dead ashes of a long-abandoned site.

But such a terse description hardly conveys an adequate picture of the tremendous planning, the engineering achievement, and the overcoming of almost superhuman difficulties that was necessary in the accomplishment of a modern shipbuilding miracle. The president of the New York Todd Shipyard Corporation, John D. Reilly, estimated that it would take at least eighteen months to complete the building of the thirty British ships after the necessary basins had been completed. Actually just 466 days were required to complete the thirty ships from the date of the laying of the first British keel on May 24th, 1941. The record speaks for itself:

| | |
|---|---|
| *December* 20, 1940 | The British contracts signed. |
| *May* 24, 1941 | First British keel laid. |

| | |
|---|---|
| *July* 1941 | 6 more keels laid, filling the basins. |
| *December* 20, 1941 | Two ships floated to the outfitting pier to to be completed. |
| *February* 1942 | First British ship steams out of Portland Harbor carrying 10,000 tons of war 'Bundles for Britain.' |
| *November* 18, 1942 | Delivery of the thirtieth ship to the British. |

As a prelude to the excavation of the spacious construction basin it was necessary to construct a 1,500 foot steel and dirt cofferdam to keep the waters of the harbor out while work on the basin itself was carried to completion. By the end of the first week of January, 1941, heavy wooden piling was being driven, and the following week trucks started moving one thousand tons of steel sheet piling that were to make up the sides of the cofferdam. Somewhat of an engineering feat, the cofferdam was completed in four weeks to the day from the time the first pile was driven.

While the cofferdam was under construction workmen were busy on preliminary work excavating the huge ship construction basin. To give an idea of the immensity of the task, no less than thirty thousand cubic yards of solid ledge and 230,000 cubic yards of soil material had to be removed. More than three thousand creosoted wood piles were used as foundations and tiebacks for the steel sheet piling. These piles were all driven to the ledge as in the case of the steel sheet piling. It is interesting to note that Maine virgin pines from Norway more than 180 years old were used for the process. Many of them towered seventy to eighty feet above the ground before they were logged.

At the turn of the year, access roads to the waterfront were being built and drillings were taken to determine the depth of adequate foundations for the concrete piers. Temporary lighting facilities were installed and floodlights set up to provide illumination for the army of workmen. Night was as busy as

day! Meanwhile a three months dredging project had been started to clear an area twelve hundred feet long and nearly four hundred feet wide to a depth of fifteen feet below the water mark at the site of the big fitting out pier which now juts nearly a thousand feet into the harbor.

But a shipyard and men to do the work cannot produce ships without the steel that goes into them. Steel must be fabricated and there can be no waiting for parts: thus it became necessary to build a large plate yard some two or three miles from the shipyard. The great steel plates and pieces of structural iron could be received there before actual ship construction started. There they were stored in racks, each bearing painted markings that indicated to the initiated just where in the framework of a ship it was to be placed. Truck roads and eventually spur tracks were laid to facilitate the hauling of the plates to the yard.

Hauling of fill from the site of the shipyard, which seemed at the time a never-ending task, was completed early in April, permitting the erection of the necessary buildings to house the fast-growing number of indoor machine workers and administration officials. The first building to rise above the ground was the administration office for the management and clerical staff. It was ready for occupancy early in June 1941. A month later the imposing plate shop was ready, built of standard steel, brick, and concrete, measuring 550 feet long and one hundred feet in width. Here are contained the oil furnaces for the heating and bending of metal plates of all sizes. The practically all-glass machine shop was completed in September, and the three hundred foot long warehouse in which are stored the many thousand component parts that go to the making of a ship was in full operation by October of the same year.

Perhaps the most impressive thing of all to a layman is the extensive use of glass in the big buildings of the yard, most of them with their whole wall area constructed of shimmering plate a quarter of an inch thick. Examples of glass here are thought to surpass any other industrial plant in the State. The plate shop, machine shop, warehouse, electrical and plumbing

building, the administration offices, and the looming mold loft all illustrate the potentialities of this method of construction. The north light thus obtained is considered the best possible light to work with, and the modern character of the whole is further enhanced by the use of corrugated asbestos in place of iron and steel under the roof supports of the main buildings. Engineers estimate that a total of 184,000 square feet of glass, enough to cover four and a quarter acres of ground if it were laid flat, has gone into the buildings of the Todd-Bath yard.

With the rigid demands of war, the yard suffered many early difficulties through lack of cranes, scarcity of materials, and unskilled help. However, as the heavy equipment began to arrive and was placed in operation, the ships began to take form in the basins. Construction crews of the Sanders Engineering Company, builders of the yard, worked sometimes but a few feet from men actually engaged in the building of ships. On May 24th, 1941, five months after the work of building the basins had started, the first keel was laid. This later developed into what was called Hull No. 1, to have the name *Ocean Liberty* bestowed upon it at its launching by Mrs. Sumner Sewall, wife of the governor of Maine.

From this point development of both shipyard and ships gained momentum. By the last week of June 1941 four keels had been laid. The demand for electric welders was now becoming great. A significant event in the shipyard was the opening of a free school for welders on February 24th, 1941. Here young men prepared for the thousands of electric welding jobs that were to be open. The school soon began to operate around the clock in six four-hour shifts.

August and September of 1941 still saw buildings under construction, but they looked more every day as if they had been in use for many months, and by the 22nd of October in that year the Sanders Engineering Company had completed their task. They finished the job in the record span of ten months, turning it over to the Todd-Bath Corporation.

The personnel problem presented many difficulties which had to be solved, especially in the hiring and training of green

help. One of the main factors that influenced the British to build their ships in Maine was that labor was available and fairly plentiful. But the greater part of this labor was entirely unskilled in the tasks they were to perform, and modern shipbuilders had practically to be created overnight. Until recently every ship built in Maine was almost a custom-made product. The little boatyards scattered along the coast that built fishermen, small sailing craft, and many of the other sixteen to sixty footers, still constructed their vessels much in the same manner as did their forefathers. Now for the first time in history modern factory technique had to be applied to the oldfashioned shipbuilding industry.

So when Pete Newell, with the guidance of a few key men from his Bath yard proposed to transform an army of farmers, auto salesmen, clerks, butchers, teachers, lawyers, artists, and professional men of all types into welders, burners, shipfitters, electricians, painters, et cetera, there were grave misgivings from the old-timers. "You can't build ships that way—thar's goin' to be trouble!"

Nevertheless the greenhorns were hired—they had to be because there wasn't anybody else. And the speed and efficiency with which the yard came into being is a high tribute to the ability of these inexperienced greenhorns to make good in a big job. The building of the thirty British ships in the remarkable time of 466 days in spite of all handicaps is the result of the combined teamwork of all who worked in the yard from superintendent to the lowly helper.

Certainly it is this very teamwork and enthusiastic spirit which has infused utterly inexperienced help from every walk of life to tackle new and strange jobs that has won our battle on the production front. It may well prove in the end to be America's 'secret weapon' that will win the war on the battle front.

# *Building Ships Below the Sea*

THOSE of us who can still recall snatches of our early English history, might remember a pretty medieval legend concerning King Canute, the Saxon ruler of nearly a thousand years ago. According to it, the great king wearied of the flattery of his courtiers who would have him believe they thought him to be all-powerful, determined to give them a lesson. He had his throne placed near the seashore just before time for high water, and as the tide came up he commanded it in stern tones to go back. Then turning to his amazed courtiers, he told them to cease believing him to be possessed of supernatural powers as his word had no power over the water at his feet.

Nevertheless, here was Pete Newell before a group of America's leading shipbuilders and engineers gathered on his mudflat site, proposing literally to roll back the waters of Portland Harbor and construct a huge concrete and steel basin below sea level in which to build his ships. No wonder his audience shook their heads in skeptical dismay. "Now, Pete," exclaimed Kaiser, "you can't build ships in a drydock!"

"You build dams and things like that," rejoined Newell. "You are an engineer. I'm only a shipbuilder and a sort of amateur engineer, but I know I can do it."

Unconvinced that Pete's basin idea was sound or workable, the 'engineer' Kaiser went on to California to build his shipyard in the old and conventional manner, while the shipbuilder and 'amateur engineer' determined to carry through his experimental and untried way.

The idea that 'only a shipbuilder' would ever attempt an

engineering feat so revolutionary and of such magnitude, strained the imagination of the experts. For centuries men had been building ships either singly, or on shipways, until Newell pioneered his mass-production building basins. Here was the most ingenious and forward step in shipbuilding since steel hulls replaced wooden bottoms. As one writer put it: "The assembly line has gone to sea at last! You don't have to build your ships on an incline. You needn't spend weeks worrying whether your ship is going to slide down the ways on launching day or refuse to budge. Forget all about the tons of grease. All these problems vanish if you 'build your ships in a bathtub.'"

Pete would be the first to disclaim any credit for originating the basin idea: nevertheless he is the first man in this country, or anywhere else for that matter, to construct a drydock for the single purpose of building a ship in it. In an address given before The Society of Naval Architects and Marine Engineers a year or so ago he described his novel project and how it operates. "The Todd-Bath shipyard was designed and built at South Portland, Maine, by the Todd-Bath Iron Shipbuilding Corporation for the construction of cargo ships for the British Government. While there is nothing new about the construction of vessels in dry docks, it is believed that there are very few, if any, shipyards previously deliberately built on the basin or dry dock idea.

"This particular shipyard was built on the basin type because the site selected was particularly suited for the purpose. At depths commencing twenty feet below natural grade, and going deeper, but generally in a level condition parallel to what was to become the axis of the vessels, a hard rock ledge formed an ideal base foundation. The foregoing, together with the fact that the overburden was largely gray and blue clay and gravel, meant ideal foundation and soil conditions; also where piling would be resorted to, such piles could be of easily procurable length and diameter and all could be end bearing.

"The ships are constructed in three basins, two of which have two building berths and one has three building berths, making a total of seven building berths. Each berth is separated

by craneways, the basins being separated by watertight concrete divisions which also serve as craneways. The sea ends of the basins are closed by steel gates, each gate unit being twelve feet wide and eighteen feet high, sliding in and supported by perpendicular I-beam columns. These columns are socketed into the basin sills and their top ends are secured and supported by steel bridges which also serve as walkways along the entire sea end of the group of basins. There are six gates to each building berth, making a grand total of forty-two units.

"The keel blocks are of steel. Although they are portable, they remain in place usually all of the time and do not have to be removed because at launching time the vessel floats up from these blocks, as is the case also with the bottom shoring which does not have to be removed for launching. The level of mean low water is seven feet above the top of the basin floor. At the time of low water the flooding of the basins can begin by water being passed through the pumps and in through the pump suctions to the basins. To open the basins for launching, the gates are removed first, one by one, using the cranes that serve the berth for lifting them. The vertical I-beam gate supports are next removed. The steel bridge is not removed until immediately after the christening of the vessels as the christening party uses these steel bridges as a means of accéss to the bow of the ship."

The gates are of simple plate and I-beam stiffener construction. In operation and installation they are handled not unlike the tailboard of a cart. The gates are sealed watertight by a strip of rubber belting attached permanently to the sides of the gate and lapping out onto the vertical supportsing I-beam, the pressure of the outside water forcing these strips of belting tightly against a projection on the I-beams.

After the gates of the dock are opened, tug boats hitch hawsers to the new ship and pull it from the flooded dock, move it around to the fitting out pier where the finishing touches are put on. After the dock gates are put back in position, pumps start taking the water out, a process of some hours, and then another keel is almost immediately laid on the blocks.

Mr. Newell is firmly convinced his basins can be most economically operated in normal times. It has proved popular with the people working in them and has definite advantages over the conventional type shipway. Vessels building are low and easy of access, are on an even keel, and have a measure of weather protection both in winter and summer that has been found of advantage in the Maine climate, and which is not possible with inclined building berths above ground. Furthermore, launching costs and hazards are practically eliminated.

Maybe 'Pete's' method of building ships in a 'sunken bathtub' is revolutionary and unorthodox, but he demonstrated to the shipbuilding world that it was not necessary to build ships the hard way—on stilts—and proved it!

# *Thirty 'Ocean' Type Ships Completed in 466 Days*



In the quaint phraseology of Biblical days, it might be truthfully said that the 'Ocean' type British ships as built in the Todd-Bath shipyard begat the U.S. Maritime Liberty ship and the 'Ocean' type Britisher was spawned from an earlier 'Empire' type fleet of cargo carriers designed by Joseph L. Thompson, Ltd., shipbuilders in Great Britain, with a slight difference in the dimensions.

By happy coincidence the parent ship of this Empire fleet was named *Empire Liberty* and the happy warrior of the great U.S. Maritime Commission shipbuilding program is known throughout the seven seas as the Liberty ship. All very entwined, so to speak, and forges perhaps another link in our international relations.

Before the British Purchasing Commission left England on its quest to build British ships in this country, it was recognized that the usual type of British tramp ship machinery, mainly reciprocating steam engines with coal burning Scotch boilers, was not available to any great extent in this country, and while this was the preferred type the mission was left a free hand in the matter of machinery type. Such machinery was looked upon in the United States as archaic, particularly the use of coal as fuel for ocean-going ships. However, at the end of 1940, coal was still readily available to Britain, and it seemed advisable from the many points of view to adhere to a familiar type of machinery with the avoidance of anything of the nature of a technical adventure. As their cargoes would be eastbound they could

easily carry enough coal for the voyage to and from England. The type of ship to be built, too, was governed by many factors. It had to be a vessel capable of carrying 10,000 tons of cargo, but having limited beam and draft to make it suitable for use in small out-of-the-way British harbors to escape the German air 'blitz.' The bunkers had to be of sufficient capacity for long voyages, and the vessels were designed for the burning of coal as oil is not so universally obtainable as coal. The selection of the type of machinery, too, was governed to a large extent by the need of early delivery of the ships. The propelling unit finally decided upon consisted of three Scotch boilers with triple-expansion reciprocating main engine of 2,500 horsepower, giving a service speed of about eleven knots.

One of the biggest decisions the mission had to make was whether the ships should be welded or riveted in the English fashion. A cable was sent to the British Admiralty before the mission gave its approval to welding. "Presume you have no objection to welding?"

Back flashed the reply, "No, providing you are satisfied."

Mass welding production in the modern style was, and still is, unknown in British shipbuilding yards where riveting is the customary method. In England it takes a year or so to train an efficient riveter, whereas a good welder can be turned out in this country in about three months. The hulls of the British ships built in the Todd-Bath yard were originally designed in Great Britain for riveting construction, and complete sets of plans were forwarded to this country where they were redrawn insofar as welded construction was concerned by the New York architects, Gibbs & Cox. There was no other course as it would have been impractical to train efficient riveters in the time available, whereas properly staffed and equipped welding schools were already in the process of formation.

Thus these shipyards, the Todd-Bath in Maine and the Kaiser yard in Richmond, California, were the first in this country, or anywhere else for that matter, to be laid out for the construction of practically all-welded ships. Without early adoption of the new method of mass welding production, the

speed and volume that has been accomplished in America's great shipbuilding production would not have been possible. The experience gained too in the building of the sixty British ships in this country was of inestimable value when the great Liberty ship program got under way.

Due to the switch-over from riveted construction to welded construction, the usual shipbuilding practice had of necessity to be revolutionized, and this, together with the fact that the earlier ships were built while the shipyards were still incomplete made it impossible to build the first few vessels in record time Later in the program, however, both shipyards were producing vessels at the remarkable rate of better than one a week. Despite the somewhat slow start, both shipyards completed their contracts well ahead of schedule, and subsequent reports of the vessels, a majority of which are still on the job, indicate that the first span of the Atlantic 'bridge of ships' has been highly successful and of tremendous value in the war effort.

The Todd-Bath yard was laid out with the expectation that the first ship of the British contract would be delivered in approximately 9½ months from the time of the commencement of the building of the yard and the entire thirty ships to be built in 24 months. Actually the first ship was not delivered until 14 months after the start of the yard, due to the very late deliveries of cranes servicing the basins. Steel had been fabricated and subsections were ready for keel laying five months after the beginning of the yard, but could not be handled until 3½ months later because of crane facilities. In spite of this initial handicap the thirty ships were delivered in 22½ months after the commencement of the yard or 1½ months ahead of the contract date.

Both the Todd-Bath and the Kaiser yard at Richmond started the construction of their respective yards about the same time at the beginning of 1941, and both had similar contracts to fulfill: the building of thirty 'Ocean' type British cargo carriers. Thus a comparison of the performance of the two yards is interesting. Both yards had to be designed and built on unimproved sites, the Maine yard starting at a hard time during

winter weather, and the California one during a severe rainy season. The California yard is built entirely on wooden piles and arranged as a normal yard as regards launching. The Kaiser group,too, had the great advantage of having available a highly efficient team well experienced in the handling of bigger contracts, having just completed the Coulee Dam project. They also had the immediate use of thirty-five ton cranes while the Todd-Bath yard had to wait several months for delivery of the smaller twenty-five ton cranes.

One hundred and fifty-six days after the signing of the contract the keel for the first vessel was laid in the Todd-Bath basin, while in California the first keel was laid 115 days after their contract was signed. The difference of forty-one days was incurred by the delay in crane delivery and the longer time consumed in building the concrete basins. The Todd-Bath completed its contract in 699 running days from the date of signing the contract as compared with 580 days required by the Kaiser yard. Here is a complete comparative chart as published by William S. Newell:

| | *Richmond Yard No. 1* | *Todd-Bath* |
|---|---|---|
| Date of contract | Dec. 20, 1940 | Dec. 20, 1940 |
| Number of ships completed | 30 | 30 |
| Number of building ways | 7 | 7 |
| Average days to build each ship | 128 | 124 |
| Average days on the ways | 90 | 87 |
| Average days at fitting out dock | 38 | 37 |
| Shortest and longest time on ways | 44-202 | 42-171 |
| Shortest and longest time at fitting out dock | 21-77 | 13-100 |
| Shortest and longest time to build | 68-253 | 58-223 |
| Days from keel laying first ship to completion of last ship | 474 | 466 |
| Days from signing contract to keel laying first ship | 115 | 231 |
| Average days keel laying to delivery (last 23 ships) | 98 | 97 |

The vessels compare very favorably in workmanship, materials, and operating efficiency with the Liberty ships. To quote Lloyds' Register of Shipping: "It is worthy of note that despite the fact that these vessels were pioneers in welded freighter construction, there has been no case in which serious fractures have developed."

And it is safe to say that no group of war cargo ships has seen more service, served more battle ports on every front and done its task more nobly and well than this little fleet of thirty Britishers built at the Todd-Bath yard. In fact, Todd-Bath has been well represented in all major operations of the war from North Africa to Normandy. The *Ocean Traveller, Ocean Stranger, Ocean Gallant, Ocean Seaman, Ocean Glory, Ocean Pilgrim,* and *Ocean Rider* were well in the vanguard in the North African Campaign of 1943. The *Ocean Rider* got torpedoed in the No. 1 hold off Algiers, but reached England under temporary repairs.

The *Ocean Glory* 'got hers' at Sicily. Her hold full of gasoline, she started to blaze and was put out of her 'misery' by an English destroyer. "But," writes a correspondent, "anyone seeing the pounding she got before she went down would get an awful lot of confidence in welded jobs."

A lucky ship has been the *Ocean Courier*. Torpedoes have crossed her, bombs plastered all around her, but she was not hit and only received minor damage. One time in the Mediterrean she was attacked by three Focke Wolfes who turned and attacked again as long as they had bombs left, but all missed.

"One day," writes one of her crew, "we had the most remarkable luck. We were in the wing column steaming with nets down when the Commodore of the convoy shifted us for some unknown reason to another column. No sooner had the other ship taken our position in the column, when bang! she went up with a torpedo!"

Capt. Charles Patton of Whitby, England, skipper of the 10,100-ton British merchant ship, *Ocean Faith*, recently visited Portland for the first time since his ship was launched at the South Portland yards in May, 1942.

Holder of the order of the British Empire for superb seaman-

ship in bringing the *Ocean Faith* to port after she had been bombed while carrying explosives in the Mediterranean, Capt. Patton has experienced many hairbreadth escapes in the past two-and-a-half years. While en route for Murmansk, Russia, bombed and torpedoed ships were exploding all around his ship.

Dubbed by her men the 'Old Faithful,' the *Ocean Faith* nearly met her end when hit by a Nazi bomb while on convoy duty. As the bomb tore through the ship, a huge volume of water flooded her decks and poured into the engine room. Almost immediately flames burst from the forward hold, packed with a thousand tons of bombs and shells. Bravery and quick thinking on the part of two of her crew who played a hose on the flames quelled the fire, and while other British seamen pumped vigorously to keep the twenty feet of water which flooded the hold from rising, the engines started and the *Ocean Faith* kept up with the convoy. Three days later, six hundred miles distant, the ship reached a port where a patch-pad was fitted over her side. Twice as she continued her journey the pad came adrift, but the captain pulled the crippled ship through until she reached her destination.

Captain Patton, who went to sea in 1915, faced similar dangers in the last war. When only sixteen years old he was torpedo d twice within six hours. He has been sailing the seas twenty-nine years and says the *Ocean Faith* is one of the best ships he has commanded.

"I'll never leave her so long as she is afloat," he promised.

# PART II

## THE MARITIME TAKES OVER

# *The Liberty Ship Program Begins*

It is safe to say that if any one section of the war production were to be singled out for special prominence, it would probably be ship construction. When President Roosevelt, at the outset of the war, called for an Atlantic 'Bridge of Ships,' a construction goal of eight million deadweight tons of new merchant shipping for 1942, there were many skeptical experts who declared it a most fantastic objective.

Never before had any nation attempted to build so mighty a fleet in so short a time. In the last war we broke records when we sent 10,000-ton steel merchant ships down the ways at an average rate of one every four months. As late as 1938 the entire output of the combined shipyards of the country was but a ship a week.

On Victory Fleet Day, September 27, 1942, however, American shipbuilding industry really had something to crow about. It had reached a shipbuilding capacity greater than that of all other nations in the world combined. The second anniversary of Victory Fleet Day, which was celebrated throughout the country on September 27th, 1943, marked the world's most outstanding accomplishment in shipbuilding. Nothing in maritime history even approaches that achievement of 22,000,000 deadweight tons. Every shipyard record known to man had been shattered, not once, but many times. It is something in which every man and woman in our shipyards may take pride.

Responsibility for success or failure of this huge shipbuilding program rested with Rear Admiral Emory S. Land, who was appointed Chairman of the U.S. Maritime Commission in 1937.

When he assumed command our merchant marine had deteriorated so badly that he often referred to it as America's 'cross-eyed step child.' Looking around for a likely spot on the North Atlantic coast for the building of one of his emergency shipyards he remembered the persistent man from Maine, William S. Newell, under whose enthusiastic guidance the Todd-Bath yard was rapidly assuming shape and getting into production. He asked Newell if he would undertake the building of another yard alongside the Todd-Bath yard for the purpose of building Liberty ships. 'Pete' promptly got to work.

"I got one of those aerial photographers," he says, "and had him photograph the adjacent shoreline in South Portland. Then I took my pencil and marked on the print the location of the proposed machine shops, the piers and the ways, and everything, only where I was drawing it was all water. That didn't matter because I knew there was a good ledge there, too, with only a few feet of mud, then deep water farther out. All I had to do was put in the fill."

Thus the West Yard of the New England Shipbuilding Corporation came into being in the Spring of 1941. The method of ship construction here, however, in contrast to the East Yard basins, was the conventional ship ways, allowing the vessels to slide down into the water in a traditional manner. The original Maritime plans called for the construction of only four ways, but this was later increased to six.

When the time came for the erection of the various work building and storage facilities, it was found that structural iron and steel, due to war demands, was practically unobtainable. Consequently in building the huge fabrication plant, seven hundred feet long and fifty feet high, the assembly building of the same dimensions, and the warehouse, all structural iron has been replaced by wood, thus conserving critical materials. Not only have the results been eminently satisfactory, but these buildings are regarded as distinguished examples of industrial architecture.

Early in 1942 the United States Navy took possession of a part of the shoreline area for the purpose of putting in a repair

drydock. They filled in a great expanse of the harbor water between the breakwater and Cushings' Point. The drydock itself, in three sections, was towed to the spot from a southern port ready to be installed, but the whole project was abandoned and the entire filled-in land turned over to the Maritime Commission for their use.

The West Yard, known as the South Portland Shipbuilding Corporation, under the supervision of the Maritime, began to function in the spring of 1941. The first Liberty ship was launched on May 16th, 1942. As the *John Davenport*, she was the first of 236 'ugly ducklings' to be built by the New England Shipbuilding Corporation as their magnificent contribution to the Liberty 'Bridge of Ships.' Incidentally it might be truthfully claimed that the Liberty ship found its inception in the South Portland shipyards of the New England Shipbuilding Corporation. When Gibbs and Cox, ship architects of New York City, were called upon by the Todd Shipyards Corporation to produce a design for the Liberty ship, they followed closely the British 'Ocean' type that were then being constructed at the Todd-Bath yard. The hull design is quite similar, as is the main engine design. They also standardized the same auxiliaries and equipment as those used on the British ships. This made the Liberty readily adapted to operation by British crews and to emergency repairs in every port in the world. Another advantage of the fundamental British design is that American crews can move from one Liberty to another and feel at home. The main difference between the 'Ocean' type Britisher and the Maritime Liberty lies in their rearrangement of the accomodation to house the whole crew amidships and the adoption of water-tube boilers and oil burners.

At the completion of the British contract for building thirty ships in the Todd-Bath yard, the East Area and the West Area were combined by the Maritime Commission, and on April 1st, 1943, the entire organization became the New England Shipbuilding Corporation, operating as one unit as an affiliate of Todd Shipyards Corporation of New York City. This greatly facilitated the progress of much-needed Liberty ships.

To perform this task adequately an organization of nearly thirty thousand shipbuilders was created almost overnight. A migratory army of unskilled help flocked to the yard from every community in the State of Maine as well as from neighboring states. Scarcity of materials, lack of suitable yard machinery, and the necessity of training green hands, called for superhuman effort on the part of both labor and management alike. Yet it must be noted with pride, that in spite of all difficulties and encountering some of the bitterest weather in years, the employees of N.E.S.C. have never failed to meet their ship schedules assigned to them by the Maritime authorities. To quote from a recent book by Agnes E. Meyer, *Journey Through Chaos*, a searching investigation of America's industrial home front, "the absenteeism and turnover in the N.E.S.C. yards were below that of other yards in the sunny West Coast and the Gulf states, and indicates the tenacity and determination of the Maine people. To my knowledge nobody has given these Portland workers the credit they deserve for this achievement."

The first women, outside of clerical workers, came into the yard in September 1942, to be trained as tackers and burners, eventually as machine workers, pipe coverers, spray painters, even crane operators. At one time there were 3,700 women employed, coming from eighty-three different communities, some commuting from New Hampshire, sixty-five miles over bad roads.

Shipbuilding at one time would have stopped at the sight of a woman on the ways, but today the picture has changed. They are accepted by the men in shipyards as fellow workers, doing men's work and for the most part doing it well. Mrs. Meyer in *Journey Through Chaos*, who investigated the yard while on her travels through the various shipyards in the country, declares: "My greatest admiration will always be reserved for the women who work out-of-doors in the Maine shipyards. It is no sinecure to be a welder on the West Coast or Southern shipyards, but the weather conditions in Maine where the thermometer often to 20° and 30° below zero were a test of character that no other group of workers had to meet. Not in Great Britain nor in any

part of our own industrial front have I met war-workers who carry as heavy a load as do these women." (The author himself can testify to an all-time low record of 40 below zero registered outside his office on the outfitting pier in the East yard.)

In every Maritime emergency shipyard in the country the great Liberty shipbuilding program will come to a close by June 1945. By that time the New England Shipbuilding Corporation will have completed its assigned quota of 236 Liberty ships, equalling nearly 2,500,000 deadweight tons of shipping.

It has been claimed that the creation of the Liberty ship, the tough workhorse of the sea, is the greatest achievement of the war production that bridged the Atlantic in the nick of time. The characteristics of this vessel as conceived in the original plans were minimum cost, rapidity of construction, and simplicity of operation. Against a normal twenty years of life for the best cargo ships, the Liberty has but five to offer. After that she becomes obsolescent. But compared with the Hog Islander of the last war she is a sea-queen on every count. Certainly she is nothing to be ashamed of. She carries nearly three thousand more cargo tons than the Hog Islander and travels one to three knots faster. She is a lot better than we might have expected.

Early in the Liberty ship program, there was a hue and cry over certain structural difficulties encountered in some of them, but there were no fundamental troubles that could not be solved. Investigations showed that very few lives were lost as a result of structural failures. There were ship architect critics who declared they were built too fast and were made for one trip only, and predicted failure and were especially derisive of the adoption of the new method of welding ships in place of the long standing practice of riveting. But it has been proved that without the early and general adoption of welded construction in the shipbuilding program, the speed and volume that has been accomplished would have been impossible. Contrary to a widespread impression hull fractures have not been confined to Liberty ships, but also occur in other types, and official investigations show practically all fractures that have occurred have been mostly the result of imperfect welding workmanship and

not the method itself. While mass production welding in the building of ships is modern, ship welding itself is not new. A nine days' wonder was the first all-welded vessel ever constructed, turned out in Providence, Rhode Island in 1925. She was a one-piece tanker barge used for transporting oil between Fall River and New Bedford. A strictly all-welded ship in the present war, the *U.S. Sea Porpoise* survived a severe underwater explosion and suffered only three minor fractures.

The building of a Liberty ship is a complicated and highly technical undertaking. Hundreds of companies and many states are drawn upon for materials and supplies that must go into her construction. To the statistically minded reader the following facts might be of interest. It takes 52.08 miles of welding to build a Liberty ship, 28,000 rivets, 6,400,000 pounds or 3,200 tons of steel, 7½ miles of pipe, 4¾ miles of electric cable, 25 tons of paint, 301,071 gallons of water for testing purposes, 900,000 cubic feet of oxygen and 250,000 cubic feet of acetylene gas, besides many other items too numerous to mention.

In length she is 441 feet, about half as long as the famous *Normandie*, and 57 feet in beam. She has two complete decks and five copious holds divided by seven watertight bulkheads. Her carrying capacity is 9,146 tons, and a 2,500 horsepoer reciprocating engine provides the propulsion. She is single-screw and of full scantling type. She carries a crew of forty, and thirty more hands in the Navy gun crew, making a total of seventy. She is also equipped with guns and antiaircraft protection which she has used with telling effect on every battle front throughout the seven seas. She is a unit complete enough to voyage all over the world.

The Liberty ship has proved, too, that she 'can take it.' It took the Japanese twenty-seven hours to destroy the first Liberty sunk in the Philipine campaign. Many have been torpedoed, towed in to port, repaired and rushed back to sea carrying more cargoes to the fighting fronts. Liberty is a good name for a vessel with which we fought the war of supply, whose holds were crammed with precious cargo at times well below

her Plimsoll marks. In one sense she is as much a combatant as a warship.

No keener or more severe critics of a ship are there than the masters and engineers of the ships themselves. Here are a few of the many tributes paid to some of the Portland built ships by captains and officers who sailed them. They give high praise to their workmanship, the quality of their equipment, and their seaworthiness. Captain Hans Anderson writes of the *Charles Sumner:*

"The *Charles Sumner* has just completed her fourth voyage, travelling over 50,000 miles. As far as the weather is concerned, this ship has experienced some of the roughest. I have not one single complaint about the welding or riveting—no sign of a crack or leak. We have short wave radio equipment and it has never gone back on us. Winches have worked very well and they are strong and easy to operate. Booms, falls and blocks are as good now as the day they were installed. Steering gear is very good and vessel manoeuvers easily. I hope you will tell the New England shipyard people that the *Charles Sumner* has behaved like a champion."

Frank A. Milton, master of the *Enoch Train*, writes: "The *Enoch Train* has completed her first voyage to the United Kingdom, and I would like to have her builders know about her performance. The welding is thoroughly satisfactory. Cargo gear excellent. The engine has shown a lot of power and answers quickly to the bells. She has scarcely any vibration and is a fine handling ship. Judging from the fine workmanship and the materials that have gone into the *Enoch Train* I can see that the builders and shipworkers have left nothing undone to turn out a 'bang-out' job."

The following is from George M. Leggate, Third Officer of the *Samythian:* "I should like to take this opportunity to thank all the N.E.S.C. workers who put so much brains and brawn into our ship and also to say that of all the Liberty ships I have seen in the far corners of the earth, I have yet to find one which can touch the *Samythian* for workmanship and general finish.

During the many months of her life so far she has not failed in a single detail.

Thus Portland Ships built in the yards of N.E.S.C. are Good Ships! Wherever they have served in all quarters of the globe, they have lived up to, and in some cases enhanced, the glowing traditions of the Liberty name!

# *Portland 'Liberties' Earn Wartime Laurels*

IT was a happy choice when the members of the United States Maritime Commission decided to name the 'truck horse of the sea' the Liberty ship, for the first naval battle this country ever fought was won by an earlier Liberty, the *Machias Liberty*, which successfully fought the 'First Battle of the Revolution' as it is known in Maine history. Not only was it our first naval battle, but it was the first occasion a British ship had ever been captured by an American ship, and the first time a British ship had hauled down its flag to us.

Back in 1771 the little town of Machias far up on the Maine coast had not been greatly disturbed by British rule. They were far from the center of things and not in any way important. Only in one thing had they suffered at the hands of King George. All the tallest and straightest pines in their forests had been set apart to make masts and spars for His Majesty's warships. But when in the course of the Revolution they heard that their fellowmen in Massachusetts had been fired upon and killed by the redcoat hirelings of the king, these men of Machias raged with zeal for the cause of liberty.

A heavily armed British man-of-war, the *Margaretta* lay at anchor in Machias River guarding the British sloop *Unity* at the dock loading lumber for the British garrison in Boston. Under the leadership of an impetuous Irishman, Jeremiah O'Brien, a handful of local townspeople made up of lumberjacks, loggers, farmers, and fishermen determined to capture the *Margaretta*. All they had for weapons were a few pitchforks, axes, some swivel guns and flintlocks. In the bloody battle that ensued they not only captured the English cutter but the sloop as

well, and after arming her with guns from the former, Captain O'Brien and his crew rechristened the sloop the *Machias Liberty* and sailed for Boston for further escapades against the British.

Today, too, we fight with merchant ships as well as with battle-wagons, and in almost every part of the globe the Portland Liberties have gallantly upheld the fighting traditions of their famous Maine predecessor. Take for example the heroic and thrilling battle-action of the *Anne Bradstreet*, launched from the West Yard on December 27th, 1942. She was a part of a convoy bound from Oran to Gibraltar when Nazi torpedo planes and dive bombers raced over the horizon for a swift low-level attack. The first victim of the American freighter was a huge four-motored Junkers 80. "When it banked to launch torpedoes at two other Liberties," relates the Captain of the *Anne Bradstreet*, "it offered for a second an almost stationary target of which our gunners took full advantage. The plane seemed to fall apart in mid-air, burst into flames, and crashed into the sea. Meanwhile the crew of another gun was blazing away at a Heinkel which loosed its bombs while barely clearing the masts. With a shrill piercing scream the plane pulled out of its dive and at unbelievable speed turned out to sea. A column of black smoke began pouring from its tail. All the bombs missed their mark but the gunners of the ship didn't. Their withering fire followed the crippled, wobbling plane until it dived into the water. Meanwhile a Dornier appeared at lightning speed, angling for position to bomb other ships, its machine guns firing on us. We greeted it with all our guns. With a deafening roar this plane came in so low through a wall of fire that it looked like a crash dive. As it came in, white streaks of smoke began spurting from the fuselage. When it was so close the goggles of the pilot were discernible, it released its three bombs, pulled out and away. Our vessel seemed doomed, yet fantastic as it must appear, the bombs missed their target."

The master of the *Anne Bradstreet*, Captain S. Saamundse, paid tribute to the Navy gunners aboard his ship who repelled the attack. The efficient commander of the gunners was Ensign John R. Gosnell of Sherman Mills, Maine. They destroyed four

enemy planes, and the ship suffered only minor damage with one gunner wounded by shrapnel.

Not so fortunate, however, was the *Richard Hovey*, launched in the West Area on March 14th, 1943. She was sunk by torpedoes fired from a Japanese submarine in the Arabian Sea. One torpedo killed three men in the engine room and a fourth to die was a Navy commander who succumbed as a result of burns after being picked up many days afterwards.

Although the Japanese submarine machine-gunned the lifeboats launched from the sinking ship and rammed one of them, no other lives were lost. Captain Hans Thorsen, master of the *Richard Hovey*, and three of his crew were taken prisoner aboard the submarine. Twenty-five others were rescued three days after the sinking. The lives of thirty-eight were saved by the skill of a Junior Assistant Engineer, John A. Drechsler, who with bits of pipe and rubber hose wrenched from a life raft, fashioned a still in which he produced sixty gallons of potable water. This provided a ration of seven ounces a day, sufficient to sustain the men until they were rescued by a British ship.

As their peril to the United Nations was reduced, German submarine commanders resorted to taking prisoner at gun-point the masters and chief engineers of merchant vessels which they were able to sink. Captain Owen R. Reed, the master of the *William King*, West Area, October 24th, 1942, was a victim of this practise. His ship was sunk by torpedoes in the Indian Ocean while on her way from Arabia to South Africa, after discharging a cargo of war supplies for Russia at a Persian port. Early in the afternoon the first torpedo hit the fire-room bulkhead. Two lifeboats were blown to bits by the explosion. A second torpedo missed the ship by barely two feet, but a third sent the *William King* to the bottom within a few minutes. The remaining lifeboats had been successfully lowered following the order to abandon ship, and when the vessel had disappeared beneath the waves, the U-boat surfaced. A short machine gun barrage was put down around the lifeboats by the submarine. Captain Reed was ordered to identify himself and surrender, The captain complied. Bidding his men farewell, he went aboard

the submarine. He is now reported interned in Java. Three crew members were killed when the torpedo exploded in the engine room while another was blown from the bridge and never seen again. The survivors were picked up by a British naval craft.

The *Edward H. Crockett*, West Area, January 25th, 1944, was lost while in convoy on the way to Murmansk, Russia, when it was hit by one torpedo. The propeller shaft was broken and the ship's power plant was disabled, leaving the ship in total darkness. The crew and gunners managed to escape with the exception of one seaman.

The *Daniel Webster*, West Area, January 28th, 1943, was strafed and torpedoed by German torpedo planes in the Mediterranean, was badly crippled, but managed to make port and discharge her war cargo. The first torpedo launched to not more than forty feet above the sea missed. A third crashed into the ship's hull below the foremast and exploded.It failed to set the ship afire, however, and there were no casualties. With five feet of water in her hold the *Daniel Webster* with the assistance of tugs was beached and her cargo landed.

A Maine man, Captain Harry W. Lyons of South Paris, was in command of the *James G. Blaine*, West Area, September 7th, 1942, when she was attacked by a fleet of enemy planes while travelling out of Algiers. "We were the last ship in the port column of the convoy," he says, "and by the time we opened fire all ships appeared to be in action which confused the formation of planes. A plane to our starboard into which we sent a line of tracers dropped slowly with one motor smoking, hit the water, bounced a few times, and nosed into the sea, leaving a patch of burning gasoline floating on the waves. Six other planes formed to stern and although they came in raining bombs and torpedoes, the rapid fire of the ship's guns was too hot for them. The planes continued to dive in and pull away, but several were sent into the sea, leaving only floating islands of flaming gasoline. Our ship appeared to be doomed when a torpedo was seen to be rising directly at her amidships. When the missile was only seventy feet from its target it was blown from the water by a Naval gunner on one of the other ships in the convoy. For

this feat the gunner, Charles E. Teppin, was cited by the Secretary of the Navy. Chief Officer J. L. Murphy, in command during the attack said in his report: "Our gun crew and Lt. (jg) Flory deserve the utmost credit. They acted with great courage and efficiency during the attacks, and I regard them as the finest crew and officer I have ever encountered."

The ill-fated *Julia Ward Howe*, West Area, November 26th, 1942, was torpedoed without warning, two missiles striking her on the starboard side, causing the vessel to break in half and to sink immediately. The captain was killed and three others lost, but the remainder of the crew was picked up by a Portugese destroyer and taken to the Azores.

The *George Cleeve*, East Area, June 23rd, 1943, was the victim of an attack on an Allied convoy, but proved unsinkable. She was delivering war cargo to the Mediterranean front. Fortunately there was only one fatality, the Second Assistant Engineer, who was killed when the torpedo hit the engine room. The master, Captain Donald L. McDonald, and eight other crew members were hurt. "The damaged but unsinkable *George Cleeve*," says a W.S.A. release, "was towed to Africa and beached where valuable equipment was salvaged."

According to information received by the New England Shipbuilding Corporation, the *Sumner I. Kimball*, East Area, October 10th, 1943, the *William P. Frye*, West Area, February 11th, 1943, and the *Charles Sumner*, East Area, April 15th, 1943, have either been lost or damaged by enemy action.

Seven Liberty ships, each carrying the evidence of previous encounter with the enemy, were among the twenty-two cargo vessels which were purposely sunk in one of the most unique operations in the history of warfare. Sailed, and in some cases, towed across the channel from England, they were filled with concrete and systematically sunk to create artificial breakwaters used in the construction of landing ports for the great Normandy beach invasion. One of the Liberties chosen for this operation was the *George S. Wasson*, launched in the East Area December 7th, 1943.

# *Brief History of the New England Shipbuilding Corporation**

THEY broke ground and started clearing brush the day after Christmas, 1940," Bill Boissonneault recalled on December 18 during a lull in his work as materials coordinator in the East Area welding department. "That was just about four years ago. . . . and look at it now!"

Now, it is one of the United States Maritime Commission's major emergency shipyards, building Liberty ships at the rate of nine a month . . . some of them on ways that rise out of Casco Bay on the South Portland side, and some of them in basins built on a ledge of rock around a jetty from the ways. The six ways in the West Area and the three basins in the East Area provide a total of thirteen building berths for the New England Shipbuilding Corporation.

But back in the days Bill Boissonneault remembers, the present yard, with its 20,000 employees, was hardly a speck on the edge of the dream a Maine man had of building ships in basins . . . thirty cargo vessels for the British Ministry of Shipping.

William S. Newell, Henry Kaiser, and John D. Reilly, giants of a kind, saw the possibilities and formulated the plans for such a shipyard. They organized the Todd-Bath Iron Shipbuilding Corporation with Mr. Newell as President. Mr. Kaiser was already deep in the difficulties of getting another shipyard started on the West Coast, so he withdrew. That was 1941.

The first of the thirty ships for the British Ministry was to be

**Compiled by Miss E. K. Paige, formerly editor of the* Keel, *N.E.S.C., and now with Todd Shipyards, Inc., New York.*

delivered about nine and a half months after the beginning of construction of the yard, the last to be ready fifteen months later . . . the entire contract to be completed in twenty-four months.

Handicaps were taken in stride . . . scarcity of materials, lack of suitable yard machinery, 'green' personnel, Maine winter—and still the contract was completed a month and a half ahead of schedule. About 85% of the employees were wholly inexperienced in shipbuilding of any kind, let alone the mass production assembly line variety necessary to meet the terms of this contract.

To accomplish this, the man load was increased from the original estimate of 9,000-10,000 to 15,000. This meant, inevitably, that the yard was overloaded, a situation that added somewhat to the operating problem.

For the most part, everyone pulled together in the early days. Bill Boissonneault's observation, looking back, is typical:

"When I heard that 'Uncle Pete' Newell was starting a shipyard I came over to get a job. I'd heard about him for years. First I worked with the Sanders Engineering Company, on the pumps in Basin 1, when they were laying the first concrete floor. They kept digging in new places around the yard to put up more buildings and they changed the road every few days. We had to look around to find our way in!

"The work itself was new to me, but hard work was not. We were all learning together. The shipfitters were as green as the rest of us. On Hulls 1 and 2 everything was put together piece by piece like a puzzle.

"After they started welding, I knew I wanted to do that, so I went to the welding school. The welding shed, with twenty-five machines, was between Flat 1 and Flat 2. We had no office. The leadman made out the slips and we went to work. The lines had to go right from there down into the basins. Sometimes it took three or four leads to reach all the way to the other end of the basin. I was a welder's helper at first, so I know what it meant to keep a long line free.

"It's a lot different now, when in the East Area alone we

have 439 welding machines and 52 tacking machines. What's the difference? Well, a tacking machine is the same as a welding machine, but by changing the control, five or six tackers can work from one machine, but only one welder can work from a welding machine at a time.

"The first three welding leadmen in the yard, John McCarthy, Joe LeFebvre and Milton (Mickey) Footer, are still here. So's Ed Folsom, who put in the drainage system for the basins."

Bill's recollections of the beginnings of his department can be repeated throughout the yard, with different names and different material—but the same spirit.

Three months after the work was started on the British ships, the first Liberty ship keel was laid in the adjoining yard—now the West Area, the then newly formed South Portland Shipbuilding Corporation. It was on April 1, 1943, that the two yards became the New England Shipbuilding Corporation, operating under one management as an affiliate of Todd Shipyards Corporation.

August 16, 1942, was an outstanding day in the life of the yard, for on that day six ships were named . . . five in East Area basins, then still the T-BI yard, and one in the West Area (SPSC). Distinguished guests attended "the first event of this size to be held in an American shipyard since the start of this country's vast emergency ship construction program."

To December 1944, a total of 235 vessels of approximately 10,000 tons each had come from the thirteen building berths. At its peak, employment reached 30,000, but with reorganization and increased skill cutting the manhours required for each vessel, the figure at the end of 1944 was 18,000. The first ship was 279 days from keel to delivery. The December 1944 ships averaged 52½ days each.

On August 31, 1943, Vice-Admiral Emory S. Land, Chairman of the Maritime Commission, presented the Commission's 'M' pennant with one gold star, signifying the completion of one round of the ways in less then the contract time. Since then, nine additional stars have been earned and on October 27, 1944,

the Commission's Eagle Pennant was awarded—recognition of continuously improving production schedules.

A token presentation of the Commission's Merit Badge was made to Willard Elliott who, at 65, was the oldest hand riveter in the State of Maine. Honor was paid to the ingenuity and hard work that had combined to produce 'from the swampland and tidewater flats a modern shipyard."

The first women, outside of clerical workers, came to the yard in September 1942, were trained in the yard's school as tack welders, and several of them—now first class welders—are still here. With the exception of one West Coast yard, the New England Shipbuilding Corporation employs a larger percentage of women in production than any shipyard in the country.

Bill Boissonneault, well along at his trade and by then a leadman, had the first group of women welders on the second shift. It was November 16. His considered opinion of women in production is this: "If she's sincerely in here to work, a woman is more conscientious than a man on the same job." Bill can cite dozens of individual instances in which women are doing outstanding work. "I never felt," he says, "that the women were coming here to take jobs away from men. There was enough work for everybody and the women came in just the same as the men—to help with the war effort and do the job that had to be done. Sure—some of them wanted the money . . . but so did a lot of the men. And the rank and file of the workers here today, from what I see, are interested in their jobs. I guess they feel about the way I do. I have fifteen nephews in the armed forces. They're doing their part over there and I'm doing my part here. But we're all working for the same thing."

Employees to whom shipyard work was new were given thirty hours training after they were hired—instruction in subjects related to shipbuilding and job instruction training. If they proved to be unadapted to the work they applied for, this period gave an opportunity for readjustment and whenever possible the worker was fitted for the job he could do best.

Supplementary training or 'upgrading' was open to all who were interested. Attendance was voluntary. Supervisory train-

ing was provided by a series of discussion groups or conferences of leading men, conducted under the guidance of a trained conference leader. Due to the need for quick training, there was no time for the long range program of apprentice training familiar in private shipyards the world over.

Until the Office of Defense Transportation enforced gasoline and tire rationing there was virtually no transportation problem for the yard's workers. Distances made little difference to the men and women who came from 'farms, garages, schools, restaurants, stores, mills, logging camps and elsewhere" to build the South Portland ships.

When 'three gallons a week and no recapping' led to sharing the ride on a large scale, a Personal Service Department was set up within the yard (May 1942) to help people who were under the jurisdiction of some thirty-five separate and scattered local boards. Some good employees were lost when local boards refused gasoline for occupational driving 'if the applicant lived near a bus line,' even if the starting point happened to be sixty miles from the shipyard clockhouse and traveling by bus presented greater hardship than riding in an automobile. (Many workers stand in buses, night and morning, or whenever their shifts begin and end, for distances up to sixty-five miles each way.) This department also helped to solve housing problems.

Yard hospital facilities are comprehensive, including an operating room, X-ray room, diet kitchen, beds for sixteen patients, and accomodations for those convalescing or waiting for transportation home after treatment for minor injuries. A staff of four doctors and fourteen nurses is on duty in the main hospital building, with eight additional nurses in the First Aid Station in the East Area.

Well equipped and well manned Fire and Safety Departments do their part in keeping up production, no small assignment in a group equal in numbers to, for instance, Lewiston or Waterville or Bangor.

Response to War Bond drives has resulted in earning the Treasury 'T' flag (Fifth War Loan) and a special commendation

from the Secretary of the Treasury for topping the Sixth War Loan quota by 7.69%.

Since the early days, when the yard's entire output was for a foreign flag, South Portland Liberty ships have been built to sail for Belgium, the Netherlands and Greece, as well as a large number for Great Britain. The latter vessels were renamed as they were assigned to British interests, each with the prefix *Sam*. Thus the *S.S. Bronson Alcott* became the *S.S. Samavon*.

The roster of names carried around the world as part of South Portland's contribution to the war effort is studded with stars from several sections of the American firmament. Fifty-four walks of life are represented among the men and women whose names have gone out from this yard.

To single out a few, there are *Julia Ward Howe* and *Ethan Allen, James G. Blaine* and *Eugene Field, Winslow Homer* and *Emily Dickinson, Nordica* and *Peregrine White*. Then *Calvin Coolidge* and *Alfred E. Smith, Daniel Webster, Harriet Beecher Stowe, Bert Williams* and *Cyrus H. K. Curtis, Lou Gehrig* and *William Lyon Phelps*.

*Webb Miller* and *Edward H. Crockett* bring the list up to date and so do *Joseph Squires* and *Michael Moran*, the first two known for their coverage of war news, the third a seaman who gave his life that the other crew members could escape when their ship sank, and the fourth a man whose fleet of tugs is as much a part of New York Harbor as Miss Liberty or the skyline. Truly—New England Ship presents a picture of democracy at work.

Officers of the New England Shipbuilding Corporation include: Andrew B. Sides, President; Walter L. Green, Vice-President and General Manager; J. William Schulze, Vice-President and Comptroller; John H. Baker, Secretary; John E. Sturm, Treasurer.

Officials of the U.S. Maritime Commission at New England Ship include: Willis J. Walsh, Resident Plant Engineer; Captain Soren Willesen, Principal Hull Inspector; E. C. Orne, Principal Machinery Inspector; Otto H. Schulze, Resident Auditor; A. Max Kelly, Purchase Comptroller.

# COMPLETE SUMMARY OF BRITISH AND LIBERTY SHIPS

LAUNCHED FROM EAST AND WEST AREAS
DECEMBER 1941 TO JULY 1945

# *Complete Summary of British and Liberty Ships*

LAUNCHED FROM EAST AND WEST AREAS
DECEMBER 1941 TO JULY 1945

## BRITISH SHIPS—EAST AREA

| *No.* | *Basin* | *Name* | *Date Launched* |
|---|---|---|---|
| 1 | 1 | Ocean Liberty | December 20, 1941 |
| 2 | 1 | Ocean Freedom | December 20, 1941 |
| 3 | 2 | Ocean Peace | February 8, 1942 |
| 4 | 2 | Ocean Justice | February 8, 1942 |
| 5 | 3 | Ocean Honour | March 23, 1942 |
| 6 | 3 | Ocean Faith | March 23, 1942 |
| 7 | 3 | Ocean Hope | March 23, 1942 |
| 8 | 1 | Ocean Pride | April 19, 1942 |
| 9 | 1 | Ocean Might | April 19, 1942 |
| 10 | 2 | Ocean Courage | May 22, 1942 |
| 11 | 2 | Ocean Fame | May 22, 1942 |
| 12 | 3 | Ocean Strength | June 14, 1942 |
| 13 | 3 | Ocean Trader | June 14, 1942 |
| 14 | 3 | Ocean Wanderer | June 14, 1942 |
| 15 | 1 | Ocean Pilgrim | June 28, 1942 |
| 16 | 1 | Ocean Merchant | June 28, 1942 |
| 17 | 2 | Ocean Rider | July 19, 1942 |
| 18 | 2 | Ocean Athlete | July 19, 1942 |
| 19 | 3 | Ocean Wayfarer | August 16, 1942 |
| 20 | 3 | Ocean Stranger | August 16, 1942 |
| 21 | 3 | Ocean Traveler | August 16, 1942 |
| 22 | 1 | Ocean Seaman | August 16, 1942 |
| 23 | 1 | Ocean Gallant | August 16, 1942 |
| 24 | 2 | Ocean Courier | September 7, 1942 |
| 25 | 2 | Ocean Messenger | September 7, 1942 |
| 26 | 1 | Ocean Angel | September 27, 1942 |
| 27 | 1 | Ocean Hunter | September 27, 1942 |
| 28 | 3 | Ocean Crusader | October 18, 1942 |
| 29 | 3 | Ocean Gypsy | October 18, 1942 |
| 30 | 3 | Ocean Glory | October 18, 1942 |

## LIBERTY SHIPS—EAST AREA

| *Basin* | *Name* | *Date Launched* |
|---|---|---|
| 2 | William Pitt Fessenden | November 11, 1942 |
| 2 | Winslow Homer | November 11, 1942 |
| 1 | John Murray Forbes | November 26, 1942 |
| 1 | Augustine Heard | November 26, 1942 |
| 3 | Edward Preble | December 27, 1942 |
| 3 | Calvin Coolidge | December 27, 1942 |
| 3 | John A. Dix | December 27, 1942 |
| 2 | Walter E. Ranger | January 31, 1943 |
| 2 | Noah Webster | January 31, 1943 |
| 1 | Eliphalet Nott | February 14, 1943 |
| 1 | Isaac Sharpless | February 14, 1943 |
| 3 | Timothy Dwight | March 7, 1943 |
| 3 | Ezra Cornell | March 7, 1943 |
| 3 | Francis Amasa Walker | March 7, 1943 |
| 2 | Joseph Warren | April 5, 1943 |
| 2 | Emma Willard | April 5, 1943 |
| 1 | William Phipps | April 15, 1943 |
| 1 | Charles Sumner | April 15, 1943 |
| 3 | Asa Gray | May 3, 1943 |
| 3 | Mary Lyon | May 3, 1943 |
| 3 | Henry Wilson | May 3 1943 |
| 2 | Charles W. Elliot | May 24, 1943 |
| 2 | Harriet Beecher Stowe | May 24, 1943 |
| 1 | Eugene Hale | June 7, 1943 |
| 1 | Robert Treat | June 7, 1943 |
| 3 | George Cleve | June 23, 1943 |
| 3 | Jacob H. Gallinger | June 23, 1943 |
| 3 | Silvester Gardiner | June 23, 1943 |
| 2 | Robert Jordan | July 18, 1943 |
| 2 | Robert Rogers | July 18, 1943 |
| 1 | Ezra Weston | July 28, 1943 |
| 1 | Josiah Quincy | July 28, 1943 |
| 3 | William Sturgis | August 12, 1943 |
| 3 | Ferdinando Gorges | August 12, 1943 |
| 3 | John Mason | August 12, 1943 |
| 2 | Cyrus H. K. Curtis | August 31, 1943 |
| 2 | William DeWitt Hyde (*Hellas*) | August 31, 1943 |
| 1 | Park Holland | September 14, 1943 |
| 1 | Peregrine White | September 14, 1943 |
| 3 | John Fairfield | October 10, 1943 |
| 3 | Sumner I. Kimball | October 10, 1943 |

| *No.* | *Basin* | *Name* | *Date Launched* |
|---|---|---|---|
| 72 | 3 | Robert I. Vann | October 10, 1943 |
| 73 | 2 | Omer E. Chapman | October 21, 1943 |
| 74 | 2 | George Popham | October 21, 1943 |
| 75 | 1 | Barrett Wendell (*Samphill*) | November 4, 1943 |
| 76 | 1 | William Pitt Preble | November 4, 1943 |
| 77 | 3 | Percy D. Haughton (*Samtrent*) | November 24, 1943 |
| 78 | 3 | Robert R. Randall | November 24, 1943 |
| 79 | 3 | Mercy Warren | November 24, 1943 |
| 80 | 2 | Webb Miller | December 7, 1943 |
| 81 | 2 | George S. Wasson | December 7, 1943 |
| 82 | 1 | Eugene O'Donnell | December 20, 1943 |
| 83 | 1 | Samdon | December 20, 1943 |
| 84 | 3 | Samythian | January 13, 1944 |
| 85 | 3 | Susan Colby | January 13, 1943 |
| 86 | 3 | Samearn | January 13, 1943 |
| 87 | 2 | Samteviot | January 28. 1944 |
| 88 | 2 | Sarah Orne Jewett | January 28, 1944 |
| 89 | 1 | Samtyne | February 16, 1944 |
| 90 | 1 | Samstrae | February 16, 1944 |
| 91 | 3 | Samderwent | March 7, 1944 |
| 92 | 3 | Samsperrin | March 7, 1944 |
| 93 | 3 | Arthur Sewall | March 7, 1944 |
| 94 | 2 | Park Benjamin | March 18, 1944 |
| 95 | 2 | Samderry | March 18, 1944 |
| 96 | 1 | Elijah Kellogg | April 5, 1944 |
| 97 | 1 | Charles Dauray | April 5, 1944 |
| 98 | 3 | Raymond B. Stevens | April 19, 1944 |
| 99 | 3 | Samwake | April 19, 1944 |
| 100 | 3 | Samoresby | April 19, 1944 |
| 101 | 2 | Samsuva | May 6, 1944 |
| 102 | 2 | Samidway | May 6, 1944 |
| 103 | 1 | Samsmola | May 20, 1944 |
| 104 | 1 | George Hawley | May 20, 1944 |
| 105 | 3 | Joseph Augustine Chevalier | June 7, 1944 |
| 106 | 3 | William Leavitt | June 7, 1944 |
| 107 | 3 | Miaoulis | June 7, 1944 |
| 108 | 2 | Thomas H. Sumner | June 24, 1944 |
| 109 | 2 | Joseph C. Lincoln | June 24, 1944 |
| 110 | 1 | George L. Farley | July 12, 1944 |
| 111 | 1 | Andrew J. Newbury | July 12, 1944 |
| 112 | 3 | Lot M. Morrill | July 29, 1944 |
| 113 | 3 | Joseph N. Dinand | July 29, 1944 |
| 114 | 3 | Harold I. Pratt | Jult 29, 1944 |

| *No.* | *Basin* | *Name* | *Date Launched* |
|---|---|---|---|
| 115 | 2 | Thomas Bradlee | August 16, 1944 |
| 116 | 2 | William Tyler | August 16, 1944 |
| 117 | 1 | Archibald R. Mansfield | August 31, 1944 |
| 118 | 1 | Galen L. Stone | August 31, 1944 |
| 119 | 3 | Robert B. Forbes | September 19, 1944 |
| 120 | 3 | Frank P. Reed | September 19, 1944 |
| 121 | 3 | Michael Anagnos | September 19, 1944 |
| 122 | 2 | Loammi Baldwin | October 3, 1944 |
| 123 | 2 | James T. Fields | October 3, 1944 |
| 124 | 1 | Charles Tufts | October 7,1 1944 |
| 125 | 1 | Kenyon L. Butterfield | October 17, 1944 |
| 126 | 3 | Winthrop L. Marvin | November 3, 1944 |
| 127 | 3 | Belle Island | November 3, 1944 |
| 128 | 3 | Liguria | November 3, 1944 |
| 129 | 2 | Coaster's Harbor | November 16, 1944 |
| 130 | 2 | Edmond Mallet | November 16, 1944 |
| 131 | 1 | Thomas F. Meagan | December 3, 1944 |
| 132 | 1 | Joseph Lee | December 3, 1944 |
| 133 | 3 | Joshua Slocum | December 17, 1944 |
| 134 | 3 | Julia P. Shaw | December 17, 1944 |
| 135 | 3 | Paul Buck | December 17, 1944 |
| 136 | 2 | F. Scott Fitzgerald | January 16, 1945 |
| 137 | 2 | Ezra Meech | January 16, 1945 |
| 138 | 1 | Leon S. Merrill | January 27, 1945 |
| 139 | 1 | Francis A. Retka | January 27, 1945 |
| 140 | 3 | William Bevan | February 21, 1945 |
| 141 | 3 | Charles N. Cole | February 21, 1945 |
| 142 | 3 | George W. Lawson | February 21, 1945 |
| 143 | 2 | Richard D. Lyons | March 13, 1945 |
| 144 | 2 | George N. Drake | March 13, 1945 |
| 145 | 1 | Lawrence T. Sullivan | March 28, 1945 |
| 146 | 1 | Joseph Carrigan | March 28, 1945 |
| 147 | 3 | Elwin F. Knowles | April 14, 1945 |
| 148 | 3 | Ernest L. Dawson | April 14, 1945 |
| 149 | 2 | Oliver Westover | May 3, 1945 |
| 150 | 2 | Frederick Austin | May 3, 1945 |
| 151 | 1 | Allen G. Collins | May 21, 1945 |
| 152 | 1 | John Robert Gordon | May 21, 1945 |
| 153 | 2 | Harold H. Brown | June 23, 1945 |
| 154 | 2 | Stanley R. Fisher | June 23, 1945 |

## LIBERTY SHIPS — WEST AREA

| *No.* | *Way* | *Name* | *Date Launched* |
|---|---|---|---|
| 1 | 1 | John Davenport | May 15, 1942 |
| 2 | 2 | John D. Winthrop | June 7, 1942 |
| 3 | 3 | Thomas Hooker | July 13, 1942 |
| 4 | 4 | Ethan Allen | August 16, 1942 |
| 5 | 5 | James G. Blaine | September 7, 1942 |
| 6 | 6 | Herman Melville | October 6, 1942 |
| 7 | 1 | Josiah Bartlett | September 27, 1942 |
| 8 | 2 | William King | October 21, 1942 |
| 9 | 3 | John Carver | October 31, 1942 |
| 10 | 4 | William Bradford | November 14, 1942 |
| 11 | 5 | Julia Ward Howe | November 26, 1942 |
| 12 | 1 | William Brewster | December ,8 1942 |
| 13 | 6 | Anne Bradstreet | December 27, 1942 |
| 14 | 2 | Lou Gehrig | January 17, 1943 |
| 15 | 3 | Daniel Webster | January 28, 1943 |
| 16 | 4 | William Pierce Frye | February 11, 1943 |
| 17 | 5 | John Trumbull | February 25, 1943 |
| 18 | 1 | Hannibal Hamlin | March 5, 1943 |
| 19 | 6 | Richard Hovey | March 14, 1943 |
| 20 | 2 | John Sullivan | March 28, 1943 |
| 21 | 3 | John Chandler | April 8, 1943 |
| 22 | 4 | John Holmes | April 18, 1943 |
| 23 | 5 | Emily Dickinson | April 26, 1943 |
| 24 | 1 | Thomas W. Hyde | May 5, 1943 |
| 25 | 6 | Eugene Field | May 13, 1943 |
| 26 | 2 | George F. Patten | May 22, 1943 |
| 27 | 3 | William Pepperell | June 3, 1943 |
| 28 | 4 | Thomas B. Reed | June 9, 1943 |
| 29 | 5 | Joshua L. Chamberlain | June 14, 1943 |
| 30 | 1 | **Jeremiah O'Brien** | **June 19, 1943** |
| 31 | 6 | John A. Poor | June 23, 1943 |
| 32 | 2 | Harry A. Garfield | July 23, 1943 |
| 33 | 3 | Arthur L. Perry | August 8, 1943 |
| 34 | 4 | Nelson Dingley | July 20, 1943 |
| 35 | 5 | James Bowdoin | August 1, 1943 |
| 36 | 1 | Henry Jocelyn | August 16, 1943 |
| 37 | 6 | Bartholomew Gosnold | August 22, 1943 |
| 38 | 2 | Anna Howard Shaw | August 31, 1943 |
| 39 | 3 | Tobias Lear (*Fort Orange*) | September 11, 1943 |
| 40 | 4 | William H. Todd (*America*) | September 19, 1943 |
| 41 | 5 | John N. Robbins | September 30, 1943 |

| *No.* | *Way* | *Name* | *Date Launched* |
|---|---|---|---|
| 42 | 1 | Thomas Clyde | October 5, 1943 |
| 43 | 6 | Enoch Train | October 12, 1943 |
| 44 | 4 | William Blackstone (*Samtucky*) | October 18, 1943 |
| 45 | 2 | Jeremiah Chaplin (*Samarkon*) | October 31, 1943 |
| 46 | 5 | Elias H. Derby (*Samlong*) | November 7, 1943 |
| 47 | 3 | Mary Wilkins Freeman | November 13, 1943 |
| 48 | 1 | J. Willard Gibbs | November 21, 1943 |
| 49 | 6 | James Manning | November 28, 1943 |
| 50 | 4 | Charles A. Young (*Samspring*) | December 3, 1943 |
| 51 | 2 | Peleg Wadsworth (*Samtampa*) | December 9, 1943 |
| 52 | 5 | Bronson Alcott (*Samavon*) | December 18, 1943 |
| 53 | 3 | Edward Kavanaugh | December 24, 1943 |
| 54 | 1 | George T. Angell | January 8, 1944 |
| 55 | 6 | Edward H. Crockett | January 15, 1944 |
| 56 | 4 | Renald Fernald | January 20, 1944 |
| 57 | 2 | Samannan | January 31, 1944 |
| 58 | 5 | Washington Allston | February 9, 1944 |
| 59 | 3 | Frederick W. Taylor | February 17, 1944 |
| 60 | 1 | Samwye | February 26, 1944 |
| 61 | 6 | Stanton H. King | March 4, 1944 |
| 62 | 4 | Samdaring | March 11, 1944 |
| 63 | 2 | Lillian Nordica | March 17, 1944 |
| 64 | 5 | Belgian Tenacity | March 28, 1944 |
| 65 | 3 | Samadre | April 4, 1944 |
| 66 | 1 | Sambanka | April 11, 1944 |
| 67 | 6 | George Eldridge | April 18, 1944 |
| 68 | 4 | Samadang | April 22, 1944 |
| 69 | 2 | Hadley F. Brown | April 29, 1944 |
| 70 | 5 | John Chester Kendall | May 9, 1944 |
| 71 | 3 | Joseph I. Kemp | May 16, 1944 |
| 72 | 1 | Joseph Squires | May 22, 1944 |
| 73 | 6 | Harriet Tubman | June 3, 1944 |
| 74 | 2 | Aram J. Pothier | June 16, 1944 |
| 75 | 4 | Ernest W. Gibson | June 10, 1944 |
| 76 | 5 | Augustus P. Loring | June 27, 1944 |
| 77 | 3 | B. Charney Vladeck | July 7, 1944 |
| 78 | 1 | James Sullivan | July 13, 1944 |
| 79 | 6 | Edward E. Spafford | July 22, 1944 |
| 80 | 4 | Marcus H. Tracy | July 31, 1944 |
| 81 | 2 | George N. Seger | August 8, 1944 |
| 82 | 5 | Michael Moran | August 16, 1944 |
| 83 | 3 | William Lyon Phelps | August 24, 1944 |
| 84 | 1 | C. H. M. Jones | August 31, 1944 |

| *No.* | *Way* | *Name* | *Date Launched* |
|---|---|---|---|
| 85 | 6 | Ferdinand Gagnon | September 8, 1944 |
| 86 | 4 | Elijah Cobb | September 16, 1944 |
| 87 | 2 | Robert R. McBurney | September 22, 1944 |
| 88 | 5 | Edward L. Logan | September 29, 1944 |
| 89 | 3 | Abraham Rosenberg | October 7, 1944 |
| 90 | 1 | Wilson B. Keene | October 14, 1944 |
| 91 | 6 | Iolanda | October 21, 1944 |
| 92 | 4 | Belgian Unity | October 30, 1944 |
| 93 | 2 | Mathew Sheehan | November 4, 1944 |
| 94 | 5 | Fred Bouchard | November 11, 1944 |
| 95 | 3 | Bert Williams | November 18, 1944 |
| 96 | 1 | Cuttyhunk Island | November 26, 1944 |
| 97 | 6 | Calvin Austin | December 4, 1944 |
| 98 | 4 | Avery Island | December 13, 1944 |
| 99 | 2 | Indian Island | December 19, 1944 |
| 100 | 5 | William A. Dobson | December 24, 1944 |
| 101 | 3 | Kent Island | January 9, 1944 |
| 102 | 1 | Alfred E. Smith | January 17, 1945 |
| 103 | 6 | T. S. Gold | January 23, 1945 |
| 104 | 4 | James A. Butts | February 3, 1945 |
| 105 | 2 | Clarence F. Peck | February 10, 1945 |
| 106 | 5 | Donald H. Holland | February 20, 1945 |
| 107 | 3 | Wilfred R. Bellevue | March 3, 1945 |
| 108 | 1 | Fred E. Joyce | March 12, 1945 |
| 109 | 6 | Elias Reisberg | March 17, 1945 |
| 110 | 4 | William H. Lane | March 29, 1945 |
| 111 | 2 | Lief M. Olson | April 7, 1945 |
| 112 | 5 | Charles H. Shaw | April 21, 1945 |