

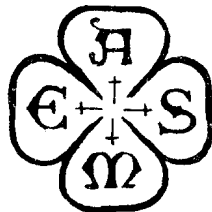
# National Historic Mechanical Engineering Landmark

PORTSMOUTH-KITTERY NAVAL SHIPBUILDING ACTIVITY

*Site of the Pioneer 18<sup>th</sup> - 19<sup>th</sup> Century Fully Integrated  
Shipbuilding Operation*

*for Building United States Warships Since*

*1774*



AMERICAN SOCIETY OF MECHANICAL ENGINEERS

MARCH 22, 1975

DEDICATION CEREMONY

Master of Ceremonies	Donald G. Chamberland, P.E., Chairman Northern New England Section, ASME
Invocation	The Rev. Dr. Wesley E. Burwell, Minister (at John Langdon's North Church, Portsmouth)
Welcome & Introduction of Honored Guests	For ASME John Parker, P.E., Vice-President Region I (New England), ASME For NAVY Captain David F. Purinton, USN Administrative Officer, PNS
A.S.M.E. Landmark Program	Donald E. Marlowe, P.E., Chairman, ASME National History & Heritage Committee
Early History of the Portsmouth-Kittery Naval Shipbuilding Era	Forrest F. Lange, P.E., Chairman, ASME Region I History & Heritage Committee
Historical slides of this Activity from Official U.S. Navy Photographs	Captain David F. Purinton, USN Administrative Officer Portsmouth Naval Shipyard
Blessing	Lt. Cdr. William D. Aders, CHC, USNR
Presentation of Plaque	Richard B. Robertson, P.E., President, National ASME, 1974-1975
Acceptance	Captain William D. McDonough, USN Commander, Portsmouth Naval Shipyard
Response for	State of Maine Governor James B. Longley  State of New Hampshire Governor Meldrim Thomson, Jr.

12 Noon  
March 22, 1975  
Portsmouth Naval Shipyard, Portsmouth, New Hampshire

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**NATIONAL HISTORIC  
MECHANICAL ENGINEERING LANDMARK  
PORTSMOUTH - KITTERY NAVAL SHIPBUILDING ACTIVITY**

**SITE OF THE PIONEER 18TH - 19TH CENTURY  
FULLY INTEGRATED SHIPBUILDING OPERATION  
FOR BUILDING UNITED STATES WARSHIPS SINCE 1774**

**1826 PLUMBERS, COPPERSMITHS, TIN  
SHOPS & PATTERN STORAGE BLDG 18**

**1837 MAST & BOAT SHOP, RIGGER &  
SAIL LOFT AND ROPE WALK BLDG 7**

**1849 SHIPWRIGHTS & JOINERS SHOPS BLDG 42**

**1853 BOILER & ENGINE HOUSE, HEAD HOUSE  
FOR DRY DOCK NO.1 BLDG 14**

**1855 MACHINE SHOP & STEAM ENGINEERING BLDG 15**

**1860 ORIGINAL ADMINISTRATION BUILDING BLDG 13**

**1892 TIMBER SHED, SAW & PLANING MILL BLDG 45**

**1893 BOILER SHOP BLDG 10**

**1894 IRON PLATE SHOP BLDG 46**

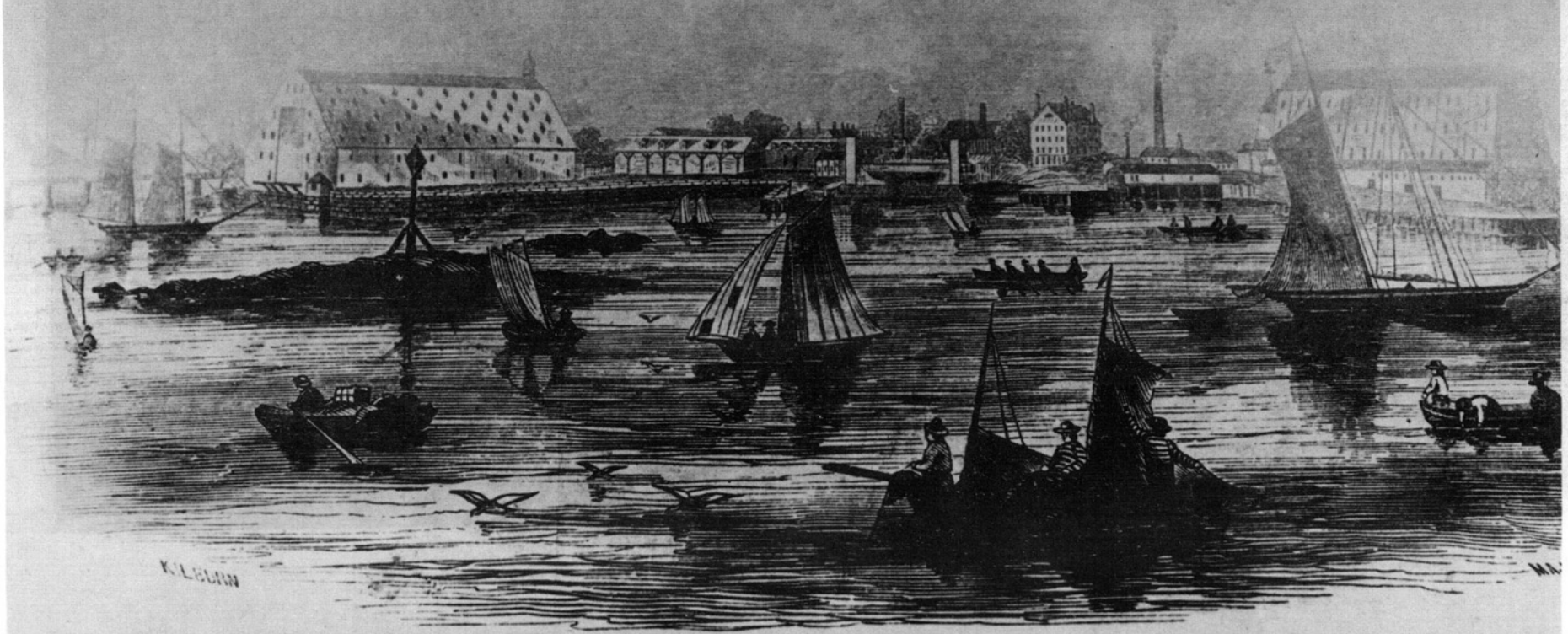
**1894 SHIP'S BELLS TOWER CLOCK,  
IN ADMINISTRATION BUILDING BLDG 13**

**1904 DRY DOCK NO. 2 PUMP HOUSE, WITH ORIGINAL  
EQUIPMENT BLDG 91**

**AMERICAN SOCIETY OF MECHANICAL ENGINEERS**

Franklin  
Shiphouse ↘

Drydock  
No. 2



VIEW THE UNITED STATES NAVY YARD, AT PORTSMOUTH, N. H.

5



Building  
No. 7 ↓

**WATERPOINT VIEW ---- About 1890**



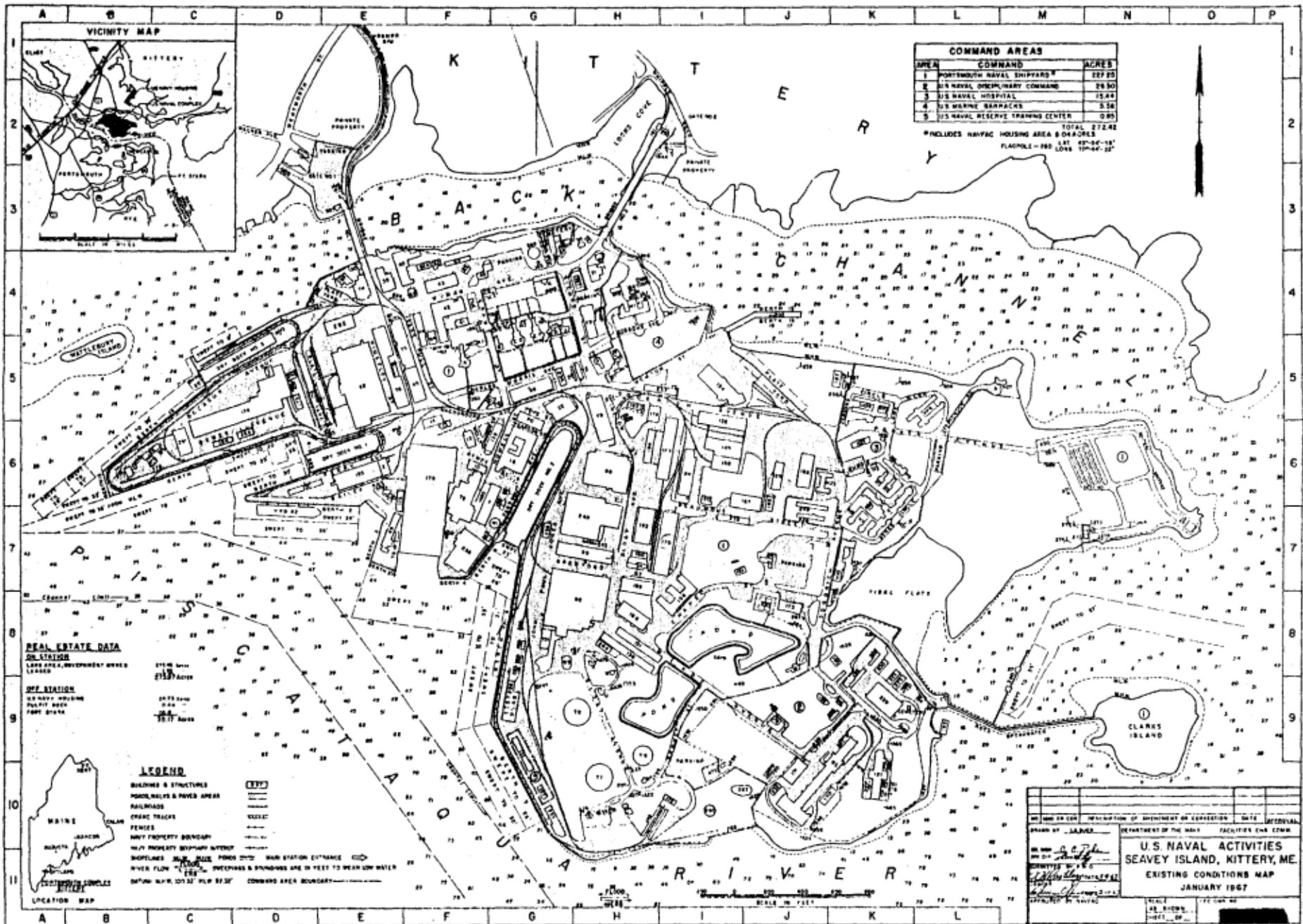
AERIAL VIEW OF PORTSMOUTH-KITTERY NAVAL SHIPBUILDING ACTIVITY (ABOUT 1965)

Plaque goes on  
this corner ↓



ADMINISTRATION BUILDING, BLDG 13





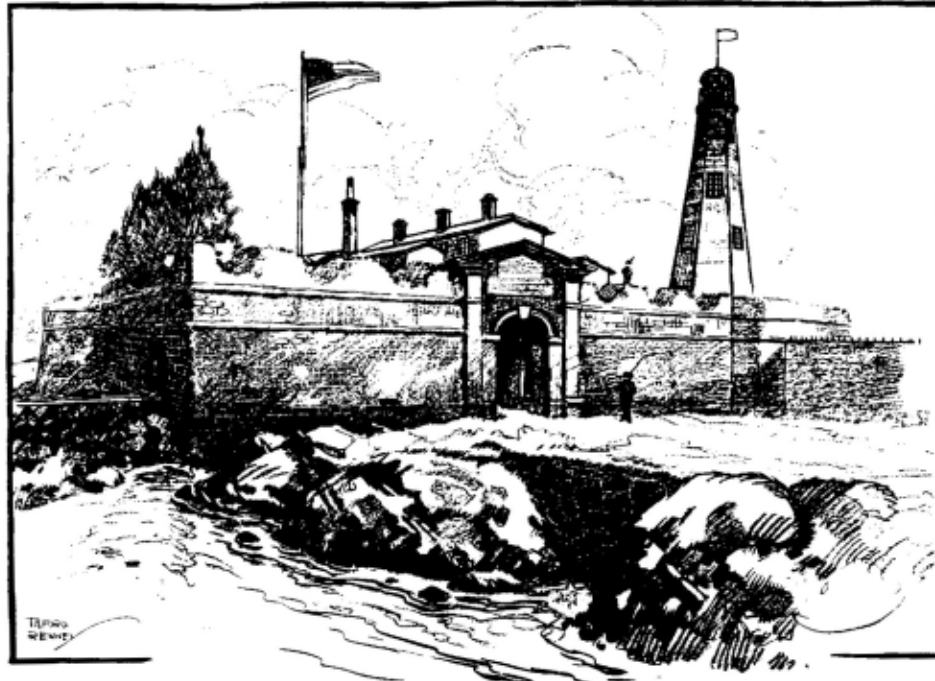
PORTSMOUTH - KITTERY NAVAL SHIPBUILDING ACTIVITY  
Site of the Pioneer 18th - 19th Century  
Fully Integrated Shipbuilding Operation for Building  
United States Warships Since 1774  
By Forrest F. Lange, P.E., December 1974

The place of the Portsmouth - Kittery Naval Shipbuilding Activity in American History is unique. Since 1690 practically all of the great masts for Royal warships of the line had come from the pine forests of New England. In 1603 Martin Pring, first visitor to the Piscataqua River, reported it<sup>1</sup> to be "a noble sheet of water, and of great depth with beautiful islands and heavy forests along its banks." In 1614 Captain<sup>1</sup> John Smith was very favorably impressed with what he saw of the river and its surroundings. "Upon his return to England he presented a chart of the coast to Prince Charles and requested that the country should be called New England." Before 1650 the British Government selected this port for a place to build ships for the Royal Navy. This resulted in bringing shipbuilding skills to this area. Naval ship construction<sup>1</sup> in the Piscataqua River began in the year 1690 on what was known in 1631 as Puddington's Islands: which were used in those days by John Puddington as a place for drying fish. The first three frigates built at Portsmouth, were for the Royal Navy. They were: the 54 gun Falkland, 1690; the 32 gun Bedford, 1696; and the 60 gun America, 1749.

In Colonial times, as a ship approached the Piscataqua River, which is the boundary between Maine and New Hampshire, it would enter a deep harbor between Kittery, Maine, on the right and New Castle, New Hampshire, on the left. On the left it would pass Castle William and Mary (now Fort Constitution) in New Castle, New Hampshire.

On December 14 and 15, 1774, Castle William and Mary was seized by the Colonists and the British flag hauled down; the military supplies were taken to up-country towns and hidden; some of the cannons were later sent to the Army at Medford; some of the powder was later used at Concord and Lexington, and in the battle of Bunker Hill. A significant fact, either ignored or overlooked by most historians, is that - not only was the fort's capture the first organized military step against the Mother Country, it also sparked the almost immediate birth of United States naval shipbuilding, just across and up the Piscataqua River, on Langdon's (now Badger's) Island. The driving of the King's forces from the Piscataqua opened the floodgates of priceless

## WHERE THE REVOLUTIONARY WAR BEGAN



FORT WILLIAM AND MARY  
(now Fort Constitution)

The above picture shows the fort as it appeared when attacked and captured by the New Hampshire patriots. Dec. 14, 1774. The powder secured here was used at the Battle of Bunker Hill. An extended account of this important historical event is given in Harper's Cyclopaedia of American History.

The cut is a copy of a picture owned by Major David Urch of this city, who has kindly permitted its use in this publication. (This picture is copyrighted.)

shipbuilding know-how. The release of this shipbuilding talent into channels to build ships for the defense of American Independence was a direct result of putting Castle William and Mary out of business. In brief, 1774 actually marks this country's first organized step in the construction of United States Naval Fighting Ships in the Piscataqua, needed by the Continental Congress, to hold the line against the King's Navy.

It became obvious that war with England was unavoidable and that a navy was necessary to protect our seaboard. The first specific thinking in the direction of a Continental Navy apparently originated, on August 26, 1775, when Rhode Island Assembly passed a resolution - "that the building and equipping of an American fleet, as soon as possible, would greatly and essentially conduce to the preservation of the lives, liberty and property of the good people of these colonies." On December 13, 1775 Congress authorized thirteen frigates to be ready in three months; which included the Raleigh, to be built at Portsmouth under the direction of John Langdon.

The natural location of the port, with its many advantages for the purpose of Naval Station, became obvious to the Colonists. Steps were immediately taken to establish a ship building yard here. The honorable John Langdon, who was a leader in the capture of Castle William and Mary, tendered the use of Langdon's (now Badger's) Island to the Continental Congress. It was accepted and this island was used exclusively by the government for naval purposes, until the official "Navy Yard" was established in 1800.

On the acceptance of Langdon's Island, by the Continental Congress, the keel of the 32 gun frigate, Raleigh, was laid, on March 21, 1775: it was launched sixty days later, on May 21, 1775, six weeks before the Declaration of Independence. The Raleigh engaged the British on several occasions on its way to France from Portsmouth, in August 1776, to pick up military stores. A full complement of guns was not secured for the Raleigh until it reached France late in December 1777: 26 .- 12 pounders and 6 - 6 pounders. In February 1778 she sailed from L'Orient and on the 9th of March was chased by the British but escaped. On the 25th of September 1778 she sailed from Boston with a convoy, engaged the British during which the ship was crippled and grounded. It was then captured by two British ships, removed from the rocks, and later placed in the British Navy.

The second ship built here for the Continental Navy was the 18 gun sloop, Ranger, John Paul Jones' ship, which was built in 1776 on the same blocks as the Raleigh, and launched May 10, 1777. In Congress, June 14, 1777 it was resolved that the Flag of the

thirteen United States be thirteen stripes, alternate red and white, that the Union be thirteen stars, white, in a blue field, representing a new constellation. It was also resolved that Captain John Paul Jones be appointed to command the Ranger, ship of war. He sailed for France from Portsmouth December 20, 1777, and his was probably the first ship that bore the national flag to Europe. On February 13, 1778 John Paul Jones' ship the Ranger, with the Stars and Stripes on her gaff, received the first salutes by a foreign power, from the French flagship, Robuste. After several engagements along the Irish Coast and in the English Channel the Ranger captured the British sloop of war, Drake, and returned to Brest, France on May 8, 1778, after which John Paul Jones was transferred to the command of another vessel. The exploits of the Raleigh and Ranger, and other early ships of the Continental Navy are interestingly set forth in the book "Sea of Glory" by Nathan Miller.

Under a Congressional Order of November 9, 1776 the keel of the 74 gun ship of the line America was laid at Langdon's (now Badger's) Island. The America was the heaviest ship that had ever been laid down on the continent for which she was named; and the first ship of her class ever built by the Confederated Colonies after their rupture with the mother country. It was launched November 5, 1782 and turned over to France as a present for their assistance in behalf of the United States and for the loss of their 74 gun ship, "Magnifique," by an accident in Boston Harbor in 1782. Four more naval sailing ships followed: 32 gun frigate Crescent, 1778; 24 gun sloop Portsmouth, 1797; 14 gun Schooner Scammel, 1798; 38 gun frigate Congress, 1799.

The Navy Department was formed April 30, 1798, at which time it was separated from the War Department. On April 25, 1800 the Secretary of the Navy recommended the purchase of the 58 acre Dennett's (Fernald's) Island, adjacent to Langdon's Island, for the site of a Navy Yard. This island had been in the Fernald family since 1645 when it was known as Lay Claim Island. Sensing that this island would some day be wanted by the government, this island had been purchased in June 1794 by Mr. Samuel Sheafe, from the estate of Thomas Fernald, for \$650.00. In September he sold the island to William Dennett for \$1700.00 (with a profit of \$1050 in three months). It was purchased by the government on June 12, 1800 for \$5,500.00, and was known thereafter as the "Navy Yard," until September 14, 1945; after which it was made a component of the U.S. Naval Base, Portsmouth, New Hampshire. However, since December 31, 1962, when the Naval Base was disestablished, it has been known as the Portsmouth Naval Shipyard, Portsmouth, New Hampshire.

After the purchase of Dennett's Island the government property on Langdon's Island was moved to Dennett's Island. The island was cleared and the required sheds, smithshop and saw pits erected: a few small boats for the use of the yard were built. In 1806 a First Lieutenant of Marines, with one sergeant, two corporals, fifteen soldiers, and two musicians were ordered by the Navy Department to this Station as a garrison to protect government property on the island. A small gunboat called the "Bee" was ordered for the protection of the harbor and to act as a guard ship.

The war of 1812 injected a new<sup>1</sup> aspect into Naval Shipyard operation. (Quote) "In March 1812, the Wasp, a sloop of war, Rattlesnake, a schooner and the Enterprise, a brig, were reported as being at the Yard, and received some slight repairs. Several gun boats (4 or 5) were also ordered to do duty here. On the 4th of October, Captain Isaac Hull (USN 1812-1815) took command of the Navy Yard as Commandant. Sailing Master Nathaniel Stoodley was ordered to the command of the gun boats at the Navy Yard." During 1814 it was almost impossible to leave or enter the harbor without capture."

"March 1814 the<sup>1</sup> keel of the 74 gun ship Washington was laid." "She was<sup>1</sup> launched in July of the year following." "In the fall of 1814 the British fleet<sup>1</sup> could be seen plainly outside the harbor blockading the Port, and it being the impression of Commodore Hull that an attempt would be made by the enemy to burn the Washington, then almost ready to launch, he requested the officers of the local militia to meet at the Yard and agree upon some plan of cooperation should any attack be made." An attack was not made. The Washington was fitted out and became the flagship of Commodore I. Chauncey, commanding the Mediterranean Squadron. "The Washington<sup>1</sup> sailed in October 1815 for Europe where she remained as Flagship of the Squadron until 1818. Subsequent<sup>3</sup> to the Washington about forty three ships were built at this Navy Yard prior to 1912.

The unsettled state of affairs, internal revolution, feeble governments, a low state of morality in surrounding communities and the debasing influence of war, had conspired to foster a system of piratical enterprises in the West Indies, In the fall of 1820 the accounts of these piracies were received in the United States, and the government immediately ordered the building of several small vessels of light-draught and heavy armament for the purpose of exterminating the outlaws. The schooner, Porpoise, was begun in September 1820 and launched on November 26, 1820: 178 tons; 10 six pounders and one long 18 pounder.

A brief description of the "Mast and Boat Shop and Rigger



WARSHIPS BUILT AT PORTSMOUTH-KITTERY NAVAL SHIPBUILDING  
ACTIVITY PRIOR TO SUBMARINE ERA

<u>NAME</u>	<u>GUNS</u>	<u>CLASS</u>	<u>YEAR</u>
FALKLAND	54	Frigate	1690) Built for Royal
BEDFORD	32	"	1696) Navy in Portsmouth
AMERICA	60	"	1749)
RALEIGH	22	"	1775)
RANGER	18	Sloop	1776) For Colonial Navy
AMERICA #	74	Ship of Line	1776)
CRESCENT *	32	Frigate	1778) Built on Badgers
PORTSMOUTH	24	Sloop	1797) Island
SCAMMEL	14	Schooner	1798)
CONGRESS	38	Frigate	1799)

\* - Presented to Algiers

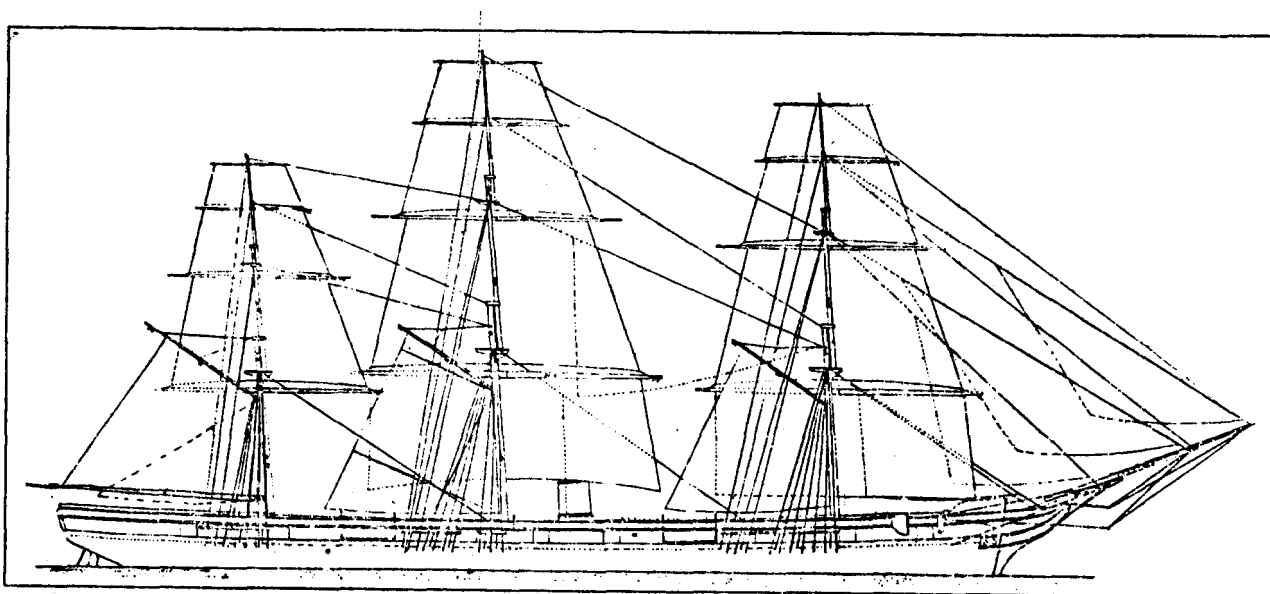
# - Presented to France

For U.S. Navy in Navy Yard

WASHINGTON	74	Ship	1814
ALABAMA	74	"	1817
PORPOISE	11	Schooner	1820
SANTEE	44	Frigate	1820
CONCORD	24	Sloop	1827
PREBLE	20	"	1839
CONGRESS	50	Frigate	1841
SARATOGA	24	Sloop	1842
PORTSMOUTH	24	"	1843
SARANAC	11	S.Frigate	1848
		(Launched)	1855
Light Ship (NANTUCKET)			1855
JAMESTOWN	24	Sloop	1857
MOHICAN	9	Steam Sloop	1857
OSSIPEE	9	"	1861
KEARSARGE	9	"	1861
SEBAGO	9	"	1861
MAHASKA	9	"	1861
SACRAMENTO	10	"	1862
SONOMA	10	"	1862
CONNEMAUGH	10	"	1862
SASACUS	10	"	1863
FRANKLIN	60	Steam Frigate	1863
PAWTUXENT	9	Sidewheel	1863
NIPSUC	9	"	1863
SHAWMUT	6	"	1863
DECOTA	10	"	1863
ALABAMA			
(NEW HAMPSHIRE)		(Launched)	1864



<u>NAME</u>	<u>GUNS</u>	<u>CLASS</u>	<u>YEAR</u>
PASSACONAWAY (Thunderer Mass.)	4	Ironclad	1864
PORT FIRE		Tug	1864
BLUE LIGHT		Tug	1864
AGAMENTICUS (Terror)	4	Ironclad	1864
PISCATAQUA (Delaware)	21	Sloop of War	1864
MINNETONKA (California)	15	"	1864
ILLINOIS	15	"	1864
CONTOOHOOK (Albany)	15	Sidewheel	1864
BENECIA	11	"	1865
MONONGAHELA	10	"	1869
MARION	10	Steam Sloop	1873
ENTERPRISE	7	"	1873
ESSEX	76	"	1874



*Screw Steam Sloop U.S.S. Kearsarge*

*Built: 1861*

695 tons with armament consisting of:

- 2 11" Smooth bore dahlgrens
- 1 30 Pounder Parrett Rifle
- 4 32 pounders

Keel laid in 1861 at Portsmouth Naval Shipyard (Kittery Navy Yard), launched same year on October 5, 1861. Fought and sank the Alabama off Cherbourg on 19 June 1864.

and Sail Loft," building 7, built in 1837, will give some idea of what was going on at the Navy Yard in that era. The walls of the building are constructed of large granite blocks; hardware is hand forged; roof is hand hewn timber construction, fastened with wood pegs. There was an open canal down the center of the building, parts of which can still be seen at low tide. Long logs were floated into the building, raised to the first floor with hoists and winches, and made into long masts for the fighting ships built at this Navy Yard at that time. Some of the hoists are still in the attic of the building: the ropes went down through hatches in the floors. The building is still used as the Riggers Shop. The Franklin Shiphouse was completed in 1838 and burned in 1936. It was one of the largest shiphouses in the United States. In 1840, winter regulations required that when the mercury is down to 5 above zero, a black ball is to be hoisted at the flag pole to let the mechanics and laborers know they will not be mustered that day. Wood shears, for mounting masts on vessels, were first used on the Yard in 1841. The first steam vessel built on the Yard was the side wheel frigate Saranac, 1238 tons launched November 14, 1848.

In 1851 a contract was entered into to construct, with all the necessary machinery and appendages, a Floating Balance Dry Dock and Marine Railway: it was tested and accepted in June, 1852. The dock was constructed on Pierce's Island, opposite the Navy Yard, and then floated across the river. It was 350 feet long and 105 feet 4 inches wide outside, with walls 38 feet high. The wall or chamber on each side was 7 feet 8 inches wide. On each wall was an engine and boiler of 50 horsepower geared and connected with twelve pumps. These pumps raised seventeen thousand, four hundred and eighteen tons of water per hour and were capable of raising a ship of 5000 tons weight.

"The ship<sup>1</sup> was drawn out of the dock, on the marine railway, on an elevation of one inch in eight feet. The apparatus by which the ship is drawn upon the railway is an exceedingly ingenious and complicated piece of mechanism. It is a hydraulic engine operated by steam; the weight of the cylinder alone, is eleven tons and the piston nearly two tons. It moves the ship at the rate of one foot per minute. There was not a more effective dock on this side of the Atlantic." The Head House, boiler and engine house were completed in 1853, It was successfully operated until sold on May 18, 1907. The basin built for the dock is now Dry Dock No. 1. The Head House is now building 14 (the Bank) and the engine house is now building 15 (the Post Office).



Wooden Floating  
Dry Dock

OLD FLOATING DRY DOCK

1884

On June 7, 1855 the frigate, Constitution, arrived for a thorough overhaul and rebuilding. So that we do not become unmindful of the fact that these were hard times in those days too, the Centennial<sup>1</sup> History reads, "1860 opened with poor prospects for the yard: the appropriations were exhausted, and no work of any importance could be accomplished. The saluting Battery upon the wall near the timber dock was built and the guns mounted." "On the first of October, Captain John Pope was relieved as Commandant by Captain G. F. Pierson. Orders were received to send the frigate Constitution to the Naval Academy at Annapolis to be used as a school ship for midshipmen; and Lieutenant David D. Porter was ordered to command her." "Her crew having arrived from Boston, she sailed on the sixth of August 1860, with a light breeze from the north."

In the spring of 1861, because of the threatening aspects of the political affairs of the country, the Commandant requested permission to fortify the defenses of the harbor. In April, the news of the attack upon Fort Sumter by the Confederate troops brought on a crisis, and on April 27th, 1861 orders were received to put the Yard on a war footing; and to fortify Fort Sullivan on Seavey Island with a battery of eight inch guns. War was now considered declared with the Southern States which had seceded. All ships of war were instructed to capture, sink, burn or destroy vessels on the high seas, hostile to the United States Government. The keels of the 9 gun steam sloops of war Ossipee and Kearsarge were laid. The armament of the 695 ton screw steam (sailing) sloop, Kearsarge, consisted of: two 11 inch smooth bore Dahlgrens, one 30 pounder Parrott Rifle and four 32 pounders. It was launched the same year on October 5, 1861.

"1862 saw the Yard being worked to its fullest capacity. Over two thousand workmen were employed, facilities were expanded, and five new steam sloops were commenced, and several others were repaired and fitted for sea. Several temporary sheds were erected to accomodate the different departments which were now being crowded to their utmost extent with work." "On November 18, 1863 the keel of the four gun ironclad Passaconaway was laid and another four gun ironclad Agamenticus launched and fitted for sea the following year." "The<sup>1</sup> year 1864 opened gloomily for the country; the war dragged along and the Yard still continued to teem with workmen and the wharves to be crowded with vessels."

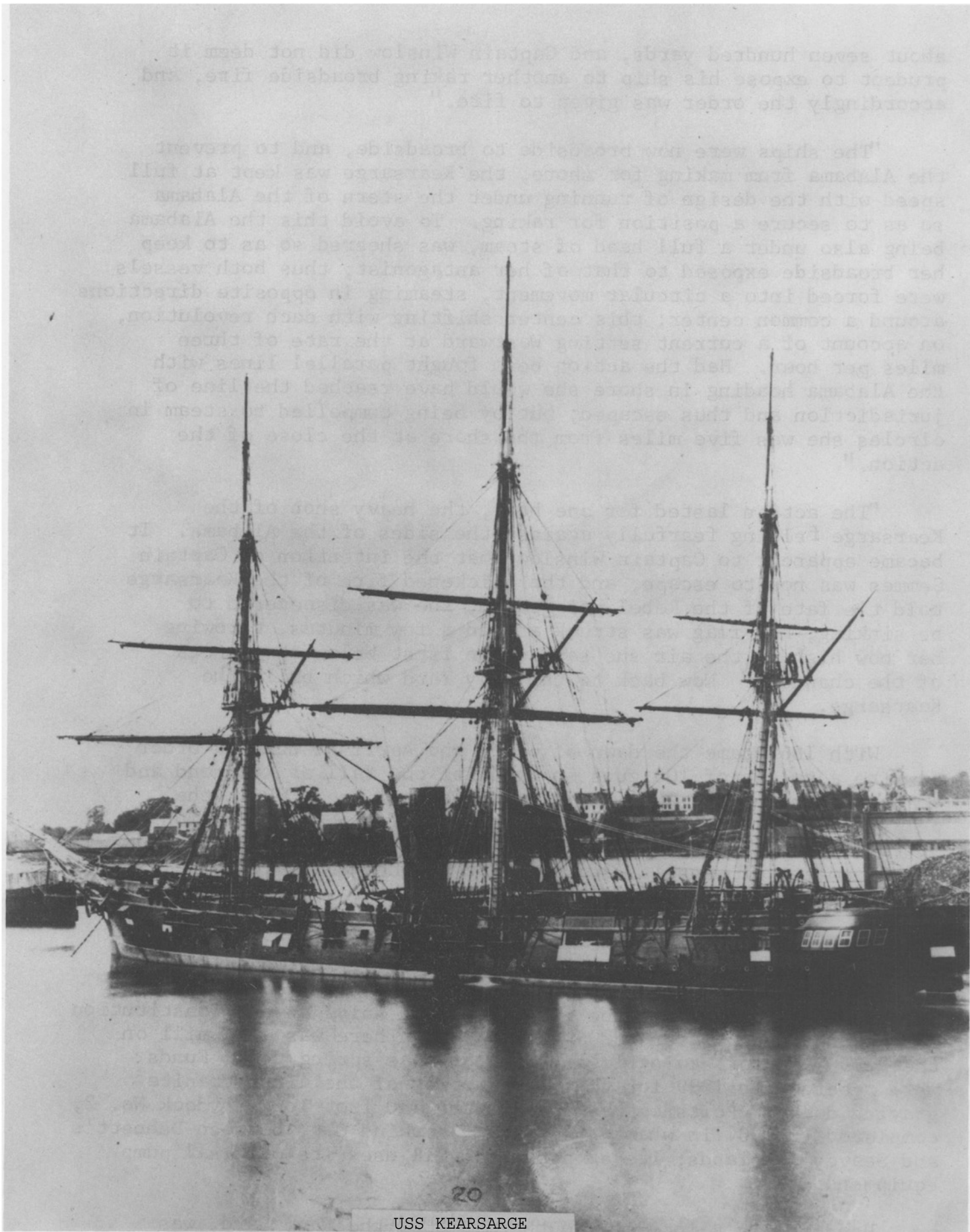
Let us now leave the gloom of 1864 for a moment to make a few observations. Iron water tanks were first used for vessels of war built by the Navy Yard in 1832. Steam was first used in heating the larger buildings in 1870, in lieu of stoves. In the

early 1870's a gas-works was built. The last of the steam-sail ships were built in the early 1870's. On February 28, 1882, the first telephone connecting the Yard with Portsmouth was placed in operation. In 1822, the Constitution arrived in tow and was decked over; it served as a museum until it was removed to Boston in the 1890's. It is presently again being put into first class condition at Boston, by Portsmouth Naval Shipyard personnel. In 1909 the first 100 ton steel shears were erected, in lieu of the wood shears formerly used, north of the coal plant.

The middle of 1864 brought encouraging war news, about a Portsmouth built ship. On June 19, 1864 the Kearsarge fought and sank the Alabama, a Confederate ship off Cherbourg, France. An interesting "blow by blow" account of this naval duel is quoted<sup>1</sup> to show how these early naval weapons of war, built at this Navy Yard were used in early naval warfare. The entire following account<sup>1</sup> is quoted. "After many months search the rebel vessel was discovered and blockaded in the port of Cherbourg, France in June, 1864. On the 6th of June, 1864, the Commander of the Alabama sent a challenge to Captain Winslow to meet him upon the sea beyond the limits of jurisdiction - the challenge was at once accepted. On Sunday morning, June 19, 1864, the Alabama having made all possible preparations to insure success, steamed out of Cherbourg harbor accompanied by the French ironclad frigate Couronne. The morning was a fine one. the sea was calm, and a light haze spread like a transparent veil over the water adding beauty to the scene, without obscuring the movements of either ship. The French frigate accompanied the Alabama only so as to make it certain that she would not be attacked until beyond the line of French jurisdiction."

"The Alabama was discovered by the Kearsarge just twenty minutes past ten o'clock, and immediately the Kearsarge was cleared for action and her head put seaward with the double intention of avoiding all questions about jurisdiction, and of drawing the enemy so far from shore that, in the event of her being disabled, she could not escape by running into French waters. Having reached a point seven miles from shore, the Kearsarge was put about and steered directly for her antagonist, with guns pivoted to starboard. The moment that the Kearsarge came around, the Alabama sheered, presented her starboard battery and slowed her engines. When at the distance of a mile the Alabama opened her broadside, hoping to cripple her antagonist, but, except cutting some of her rigging no damage was done."

"The Kearsarge was now given more speed although no shot had yet been fired. A second and third broadside were fired by the Alabama but did no great execution. The two ships were now distant



20

USS KEARSARGE

about seven hundred yards, and Captain Winslow did not deem it prudent to expose his ship to another raking broadside fire, and accordingly the order was given to fire."

"The ships were now broadside to broadside, and to prevent the Alabama from making for shore, the Kearsarge was kept at full speed with the design of running under the stern of the Alabama so as to secure a position for raking. To avoid this the Alabama being also under a full head of steam, was sheered so as to keep her broadside exposed to that of her antagonist; thus both vessels were forced into a circular movement, steaming in opposite directions around a common center; this center shifting with each revolution, on account of a current setting Westward at the rate of three miles per hour. Had the action been fought parallel lines with the Alabama heading in shore she would have reached the line of jurisdiction and thus escaped; but by being compelled to steam in circles she was five miles from the shore at the close of the action."

"The action lasted for one hour, the heavy shot of the Kearsarge felling fearfully against the sides of the Alabama. It became apparent to Captain Winslow that the intention of Captain Semmes was now to escape, and the quickened fire of the Kearsarge told the fate of the Rebel was sealed; she was discovered to be sinking, her flag was struck and in a few minutes, throwing her bow high in the air she sank stern first below the waters of the channel." Now back to the Navy Yard which built the Kearsarge.

With 1865 came the dawn of peace and April brought an order to fire a salute of 100 guns in honor of the fall of Richmond and the surrender of the Rebel Army under General Lee. While the people were rejoicing, the appalling news of the assassination of President Lincoln was received. However, the war was over and large numbers of vessels were arriving at the Navy Yard to be put out of commission and sold.

On November 3, 1866 the adjacent Seavey's Island of 105 acres was purchased by the government for \$105,000. The two islands were separated by Jenkins Gut. There is a pond on Seavey Island in which oak timbers for the repair of such ships as the Constitution were stored under water for preservation. There was a sawmill on the Navy Yard for sawing logs. The pond was spring fed. Funds were received in 1899 for the construction of the first granite graving dock at Portsmouth. This is the 750 foot long drydock No. 2, completed in 1904 in what was formerly Jenkins Gut, between Dennett's and Seavey's Islands; its pump house still uses its original pump equipment.

Henderson's Point, the Southern tip of the Navy Yard, was blown up in July 1905 by 45 tons of dynamite. The point originally

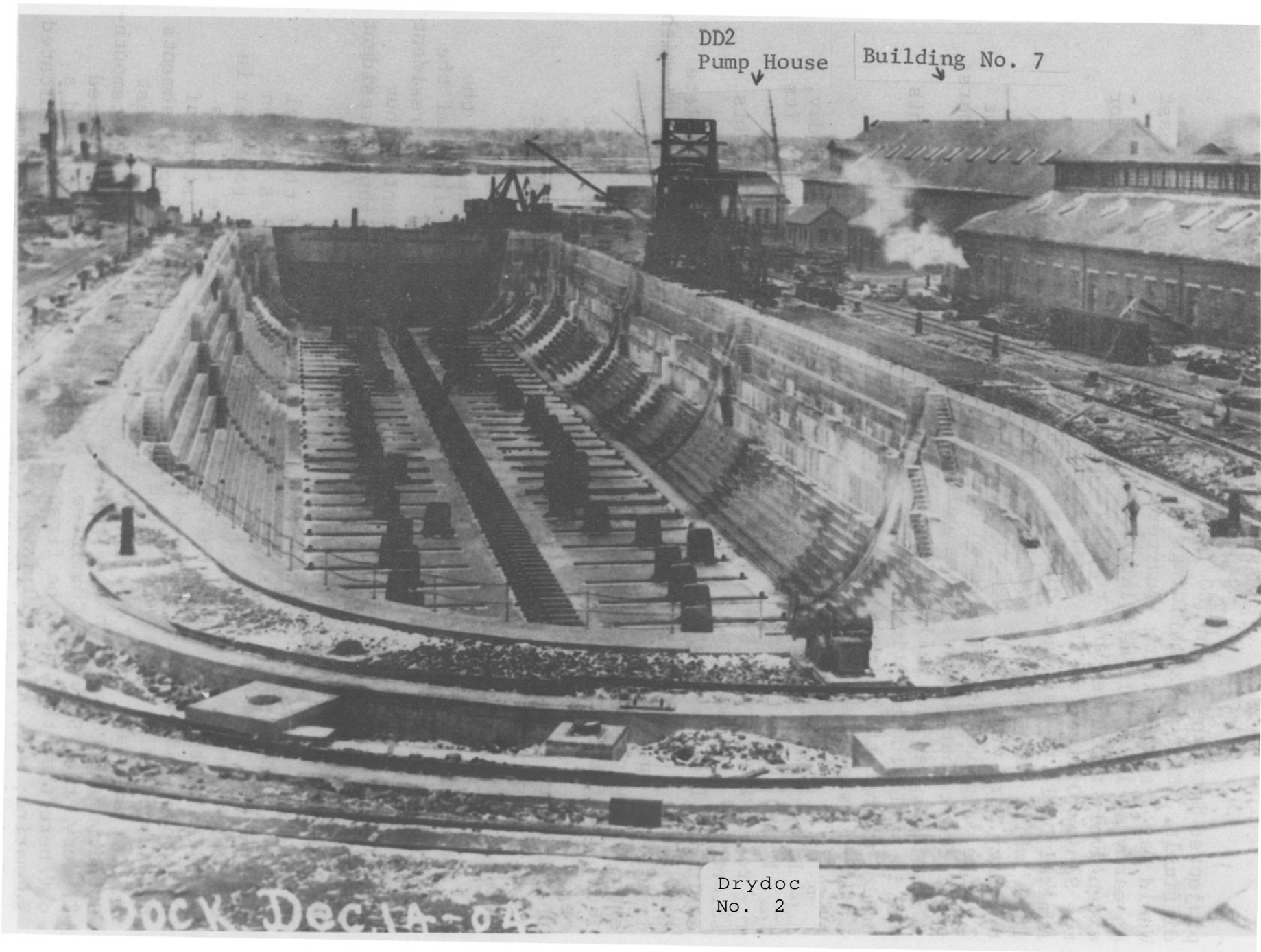
projected into the river 500 feet, making navigation extremely difficult. Fifty-six buildings built at this Navy Yard before World War I still exist. Quarters "A" was on the island at least as early as 1724. It was later moved to higher ground and extensively remodeled and rebuilt. It has served as quarters for the Senior Officer of the Naval Base or Navy Yard ever since. Admiral David G. Farragut died at Quarters "A" on August 14, 1870, while visiting the Commandant. Over thirty buildings on the Navy Yard were built before 1900. In the tower of building 13 (the original Administration Building) is the country's first tower clock that strikes ships bells instead of striking the hours: it was designed and built by two shipyard employees in 1894 and is still in operation. It is on the northeast corner of this building that the National Historic Mechanical Engineering Landmark is placed.

From the very beginning of this country, to the present day, this Naval Shipbuilding Activity has served the nation during its entire growth through the sail and steam era into the most scientific and advanced use of atomic power in submarines. This early naval shipbuilding industrial complex was truly self sufficient. It represents one of this country's earliest complete industrial operations: it had its own foundry, forge shop, blacksmith shop, woodworking shop, rope walk, and even grew some of its own food. In fact, in 1820, when pirates in the West Indies were becoming a nuisance, the government authorized the building of the schooner Porpoise to help exterminate the<sup>2</sup> outlaws. There is an entry in the log for August 15th saying "Yard men at the Isles of Shoals in pursuit of a pirate."

The early significance of this Navy Yard is evidenced by the visit of General Lafayette on September 21, 1824. President of the United States, James K. Polk, visited the Yard in 1847. Ex-President Franklin Pierce visited the Yard July 9, 1861. President Arthur arrived by ship on September 8, 1882 and stayed overnight. President Taft visited the Yard on December 23, 1912.

The submarine era was ushered in by the laying of the keel for the L-8 on November 2, 1914. In 1915, while the L-8 was on the blocks in the Franklin Shiphouse, a blimp was put together in the mold loft and taken to the Franklin Shiphouse where it was inflated, while the L-8 was under construction. The history of the submarine era is not repeated here as the Yard's accomplishments in that area are aptly set forth in "Realm of the World's Finest Submarines - Portsmouth Naval Shipyard;" published by the Portsmouth-Kittery Armed Services Committee. However, it should be pointed out here that this was the first government Navy Yard to build a submarine; was, and still is, the only government shipyard dedicated exclusively to submarine engineering; and the first government shipyard to build a nuclear powered submarine.





DD2  
Pump House

Building No. 7

Drydoc  
No. 2

Dock Dec 14-04



PORTSMOUTH-KITTERY NAVAL SHIPBUILDING ACTIVITY EXTANT BUILDINGS  
CONSTRUCTED PRIOR TO YEAR 1900

<u>Building No.</u>	<u>Year Built</u>	<u>Original Building Usage</u>
2	1865	provisions and clothing
7	1837	mast and boat shop, rigger and sail loft
10	1893	boiler shop
13	1860	office of administration
14	1853	head house, boiler and engine house
15	1855	machine shop and steam engineering
18	1826	plumbers, coppersmiths, tin shops, metal storage and pattern lofts
20	1865	
22	1857	ordnance and armory building
25	1859	shot and shell storage
27	1864	point shop
29	1865	ordnance store house
31	1859	magazine (ammo storage)
32	1848	magazine " "
33	1855	shell house " "
34	1857	shell house " "
35	1851	shell house " "
40	1851	stable for yard cattle
41	1886	
42	1849	shipwright and joiners shops
44	1859	storage of tanks
45	1892	timber shed, saw and planing mill
46	1894	iron plate shop
55	1849	oakum house and watchmans quarters
59	1865	boathouse and carpenter shop
60	1904	boat shop and storage
62	1873	gas house
63	1874	
64	1869	fire engine house
66	1874	tool house and paint shop
68	1850	quarters
69	1888	pumping station
70	1883	ice house (demolished)

It is important to remember that not only did the capture of Castle William and Mary spark American independence; the fort's capture also resulted in immediately putting the shipbuilding skills in the area to work building United States Naval fighting ships for the naval defense of that American independence - right from the beginning of these United States two hundred years ago.

In conclusion, quoting<sup>1</sup> again from the Centennial History of this famous Naval Shipbuilding Activity, written a hundred years ago - "We have followed - - - the immense strides that improvement has taken both in construction of ships, and in ordnance; these we have traced from the bluff bows, high poops and six pounder guns of the frigate Falkland in 1690 to the yacht-like model, powerful armament and elegant engines of the sloop, Marion, now lying at the wharf and ready to sail on a cruise; the wide superiority of the one over and other is greater than even the lapse of time would seem to indicate. The giant "Steam" so modestly and so cautiously introduced on the island now revolves the wheels of the entire establishment, the deep water front and wharves accessible at all seasons, bear testimony to the sound judgment of those through whose influence this site was secured for a Naval Station. While the harbors of Boston, New York and Philadelphia are obstructed with ice to a great extent during severe winters, the waters of the Piscataqua ebb and flow as the pulses of nature free and deep." - - - "A Station having so good a record and possessing so many peculiar advantages, we doubt not will be cherished by the government till developed and furnished with means of constructing the finest ships."

On the occasion of the dedication of this activity as a National Historic Mechanical Engineering Landmark, by the American Society of Mechanical Engineers with a bronze plaque, one hundred years after the above quotation was written, it can truly be said that the Portsmouth-Kittery Naval Shipbuilding Activity actually became the "Realm of the World's Finest - Submarines."

#### REFERENCES

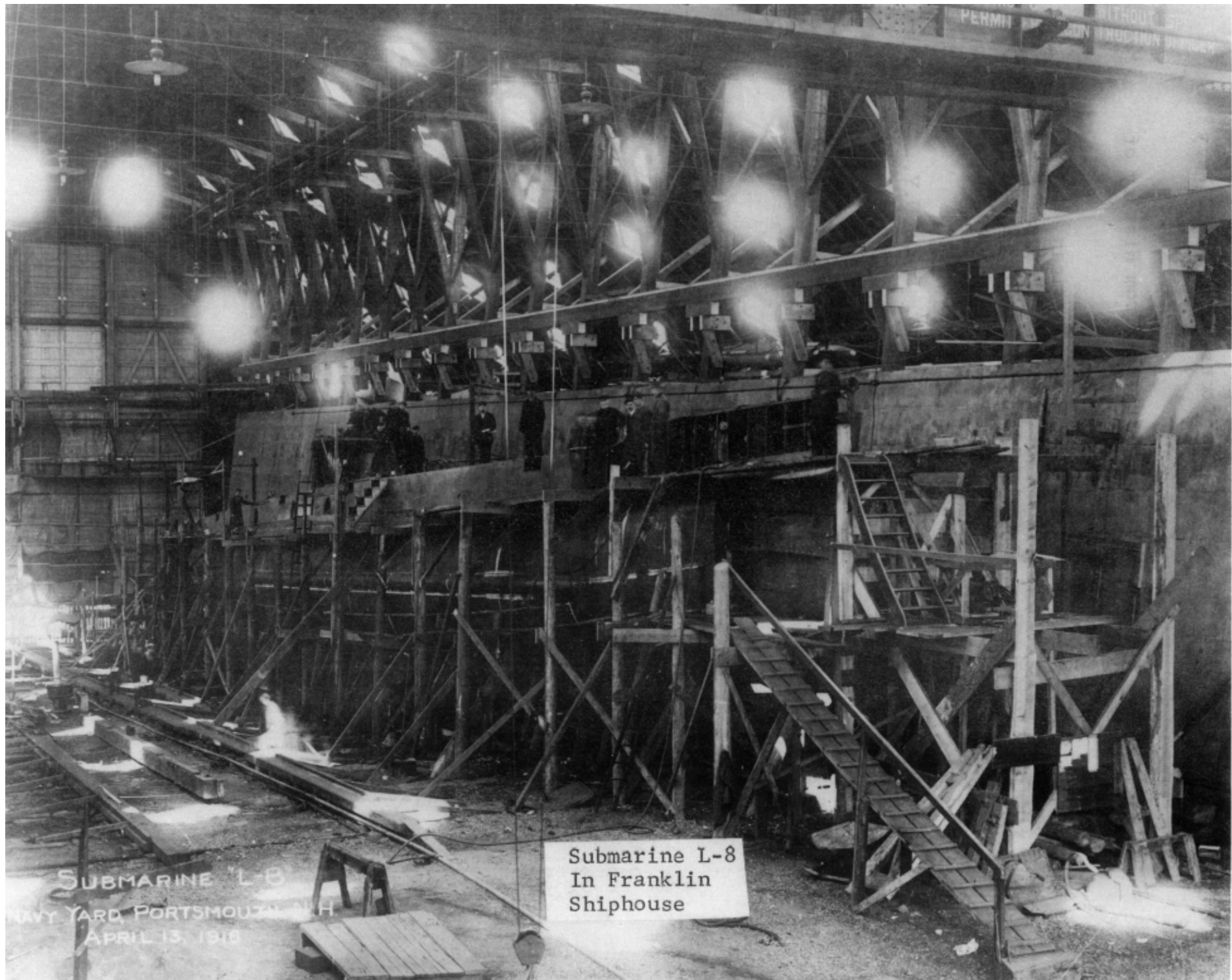
Most of the information used in this historic account, of the beginning of U. S. Naval Shipbuilding in the Piscataqua, is either taken or quoted from the Centennial History of the U. S. Navy Yard and other documents not readily available. For additional accounts, on the capture of Castle William and Mary and the exploits of the Continental Navy, interested readers are invited to review the bibliography included with each of the last two of the following references:

- 1 Centennial History of the U. S. Navy Yard at Portsmouth N H., Walter E. H. Fentriss, published by O.M. Knight, 1876.



FRANKLIN SHIPHOUSE

- 2 Brief Resume of the History of the Portsmouth, N. H. Navy Yard, December 1935.
- 3 Ships built at Portsmouth Naval Shipyard (From History of Portsmouth Naval Shipyard 1800-1958).
- 4 Fort William and Mary - 1774, Prelude to American Independence and the Naval Defense Thereof. Forrest F. Lange, P.E., July 1974. Planned for release in its Bicentennial Book by the New Hampshire Sons of the American Revolution in 1976.
- 5 Sea of Glory, Nathan Miller; David McKay Co. Inc., N.Y.



Submarine L-8  
In Franklin  
Shiphouse

SUBMARINE L-8  
NAVY YARD, PORTSMOUTH, N.H.  
APRIL 13, 1916

PERMIT TO WORK WITHOUT SUPERVISOR

## HISTORIC ENGINEERING RECORD AND NATIONAL LANDMARKS PROGRAMS

This nation's Bicentennial Celebration has sparked the American Society of Mechanical Engineers to institute a History and Heritage Committee. The charge given these people is to use volunteer assistance to gather data on everything that has a mechanical engineering connection 75 or so years ago. Each Section of the ASME has such a committee to gather data on local sites and artifacts.

The history and Heritage Committees have settled on attaining two objectives: (1) a listing of industrial operations and related mechanical engineering artifacts in what they have designated as a "Historic Engineering Record," and (2) a "National Historic Mechanical Engineering Landmarks" program. The former is a record of detailed studies of sites in each local area; the latter is a demarcation of local sites which are of national significance-- people or events which have contributed to the general development of mankind.

Forrest F. Lange of Portsmouth, N.H. was the first chairman of the History and Heritage Committee of this local section of the ASME--which covers Maine and New Hampshire. He compiled a list of grist mills, saw mills, tide mills, and other items of interest in these states and published the Section's Historic Engineering Record. Mr. Lange's work on this Record has been nationally recognized as an outstanding contribution to the history and heritage of our country.

There are 232 separate listings in this local Record, copies of which can be obtained by sending \$2.50 to Richard A. Griffin, Sec.-Treas., ASME, 875 Washington Road, Rye, New Hampshire 03870.

The overall objective of the ASME's History and Heritage Committees is to promote a general awareness of our technological heritage among both engineers and the general public. To attain this objective, new material is continually being gathered with a view toward publishing a supplement to the local Record when sufficient new sites and artifacts of mechanical engineering have been uncovered. In order to do this, every person who reads this notice is invited to send the ASME a note concerning any site or artifact that he or she knows of or hears of. Such notes should be sent to the Northern New England Section of the ASME. Please address them to Laurance E. Webber, CIID, Kingsbury Hall, UNH, Durham, New Hampshire 03824.

The National Historic Mechanical Engineering Landmarks Program evolved naturally from the Historic Engineering Record Program. Illustrative of this evolution is the recognition of the Portsmouth/Kittery Naval Shipbuilding Activity as a National Landmark--the site was first listed in this Section's Historic Engineering Record.



## ACKNOWLEDGMENTS

### THE NATIONAL AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Richard B. Robertson, President 1974-1975  
Charles L. Tutt, Jr., President-Elect 1975-1976  
Dr. Rogers B. Finch, Executive Director and Secretary  
Prof. John Parker, Vice-President, Region I (New England States)

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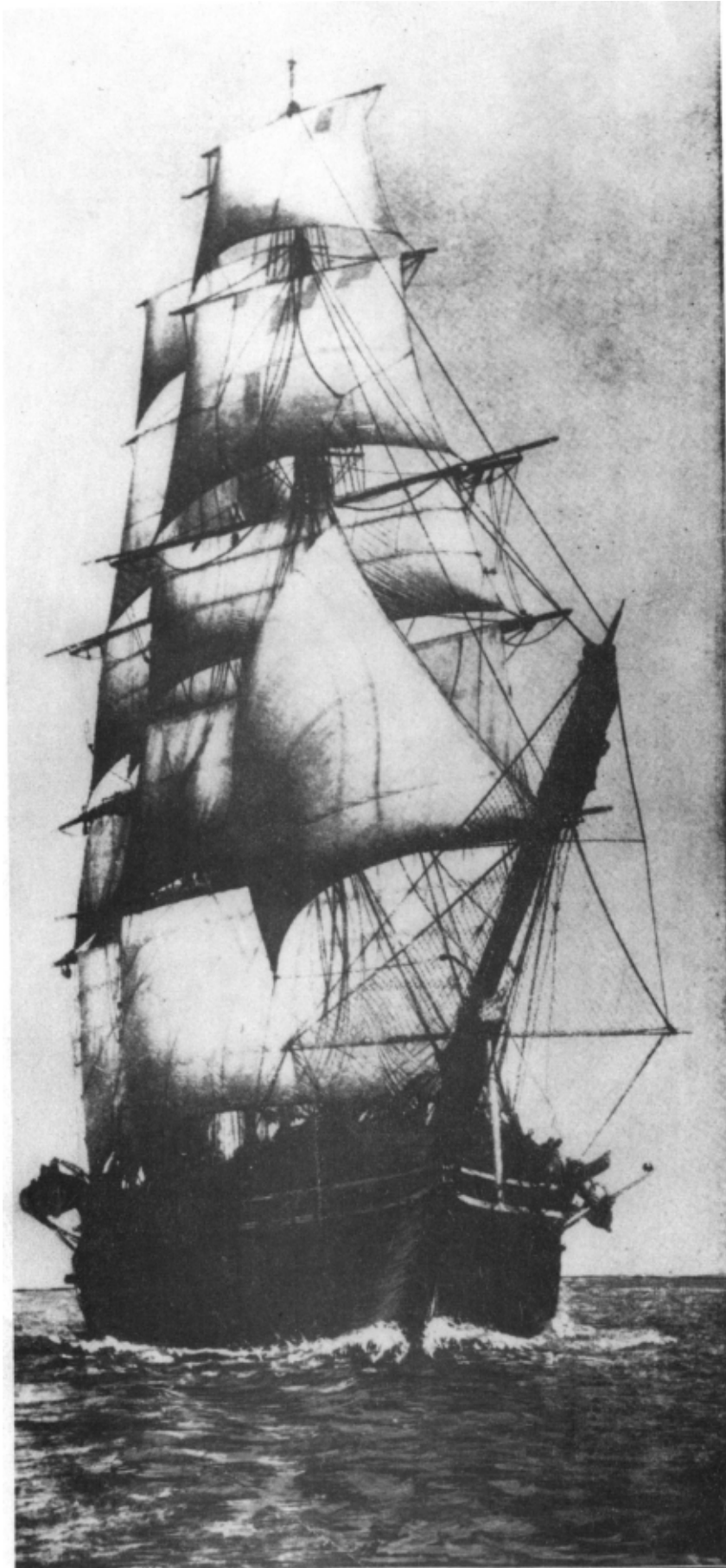
### THE PORTSMOUTH NAVAL SHIPYARD

Rear Admiral Elmer T. Westfall, Commander 1971-1974  
Captain William D. McDonough, Commander  
Captain David F. Purinton, Administrative Officer

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Robert B. Perkins  
Karen B. Morin  
Robert P. Chamberland (Cover and Plaque Layouts)





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THE PORTSMOUTH

