THE CHARLESTOWN NAVY YARD
1842-1890

By

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and

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This study is the third in a multi-volume history of the Charlestown or Boston Navy Yard prepared under the auspices of the National Park Service. By virtue of legislation adopted by Congress in 1974, there came into being the Boston National Historical Park under the management of the National Park Service. The new park included part of the Charlestown Navy Yard, which, until 1973, had been a functioning industrial establishment of the United States Navy. No complete, comprehensive history of the yard then existed, and, in 1976, the task of preparing such a study was assigned to Edwin C. Bearss, at that time a Historian with the Denver Service Center and subsequently Chief Historian, National Park Service. Bearss researched the yard's past from its beginnings in 1800 to the turn of century, and he prepared drafts of chapters covering the period to the end of Reconstruction. His efforts resulted in the publication in 1984 of a history of the facility during its first four decades.¹ By that time, the Park Service had made arrangements with me for an investigation of the yard in the twentieth century, and my study covering the period 1890 to 1973 was published in 1988.²

Several years thereafter, it was decided that, utilizing Bearss's unfinished drafts, I should do what was necessary to complete the history of the yard, that is to produce a work on the remaining chronological segment, 1842 to 1890. Thus, the present study.

Essentially, this study represents the efforts of two writers, operating independent of one another. The coverage of the years 1842 to 1865 is mainly the work of Edwin Bearss, my role being that of editor. The Bearss drafts of the earliest chapters, that is for the first part of the 1840s, were practically finished versions. For the subsequent period, his chapters remained unfinished and preliminary efforts. That for the era after the Civil War was merely the beginnings of a draft, and, obviously, he had intended to do more research. I elected to use 1865 as the starting point for my research and writing.

Doubtless, had he remained with the project, Bearss would have gone over all of his chapters and made additions, deletions, modifications, and other changes. Instead, I engaged in that activity, and, in consultation with members of the staff of the Boston National Historical Park, I made several changes. Bearss utilizes the tours of duty of the various commandants of the Charlestown Navy Yard to establish the time span covered by each of his chapters, a generally useful device. However, it appeared to me that the Civil War should be regarded as a complete chronological entity and should be covered in a single chapter. To accomplish that, I reorganized the information in the Bearss draft for the period 1855 to 1866. On a smaller scale, but with the same intent, I rearranged materials so as to consolidate coverage of the Mexican War. I also produced the "Prologue" and wrote introductions and conclusions to some of the Bearss chapters.

Bearss has responsibility for the factual presentation of the period to 1865. Except in connection with the "Prologue," I engaged in no research directed at the years before Appomattox. However, I did not ignore important documents dealing with events before 1865 when I came across them in investigating the later period. In a few instances, information unearthed by Bearss has been incorporated into my discussion of the yard's history after the Civil War. However, I am entirely answerable for the accuracy of the second half of this study. The arguments, observations, and opinions advanced in the concluding section are my own.

All of the illustrations, photographs, and yard plans included in this volume have been provided me by the Boston National Historical Park from its collection. I owe thanks to Louis Hutchins, Historian at the park, for his assistance in this and in other matters.

It is also a pleasure to acknowledge the aid given me by several other individuals during the preparation of this study. Once again I thank Stanley P. Tozeski, National Archives-New England Region, Waltham, Massachusetts, for his aid during the many days I spent at his depository. I am also grateful to Iris

Irwin and other members of the staff of the Government Documents Section, B. Davis Schwartz Memorial Library, C.W. Post Center, Long Island University. Barry Zerby rendered me friendly and expert assistance during my research at the National Archives in Washington. A visit to the Navy Department Library, Naval Historical Center, Washington Navy Yard, proved a pleasant and rewarding one, mainly because of the aid given me by Jean Horc.

Frederick R. Black
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THE NAVY AND THE YARD IN THE EARLY 1840S

In his first annual report, submitted in December 1841, Secretary of the Navy Abel P. Upshur stated that the United States Navy consisted of a total of sixty-seven vessels. Of the fifty-three in commission, thirty-two were on active duty with one of eight squadrons. The Mediterranean Squadron consisted of three ships; Pacific, six; Coast of Brazil, six; East Indies, two; and West Indies, three. Three vessels constituted the "Exploring Expedition," last reported at the Sandwich Islands. Seven small schooners composed a naval contingent cooperating with the U.S. Army in a campaign against Indians in Florida. The Navy maintained a squadron off the coast of West Africa, but at the time of Upshur's report, no ships were at that station. The brig Dolphin and the steamer Fulton were on special duty. The organization of the fleet underwent modification in the following year, when, consistent with an act of Congress, the Navy established the Home Squadron, some of its units being transferred from the now discontinued West Indies Squadron.1

Most of the vessels not on active assignment in December 1841 were at the navy yards, being under repair, in ordinary, or under construction. In addition, the service maintained five receiving ships, also distributed among the navy yards. For example, at the end of 1841, vessels at the Charlestown Navy Yard included the receiving ship Columbus and five ships undergoing repairs, Ohio, Columbia, John Adams, Erie, and Grampus.2

By the early 1840s, the Navy had only begun, in hesitant fashion, to utilize steam for ship propulsion. The second Fulton, a paddlewheeler, made her maiden voyage in 1837. In accord with a naval appropriations enactment of March 1839, the Philadelphia Navy Yard undertook construction of Mississippi, and the Brooklyn yard Missouri, two steam-powered paddlewheelers, and, in December 1841, both were being outfitted and were almost ready for sea. However, in his report of that month, Secretary Upshur also noted that orders had been given for the completion of four sailing frigates, including Cumberland, whose keel had been laid at the Boston yard in 1826. According to one naval historian, the Navy lacked a sense of direction,

a failing characterized in 1842 by the completion of Mississippi and Missouri and the simultaneous launch of Cumberland and Savannah. The paddle steamers were advanced vessels; but Cumberland and Savannah were two of the frigates laid down after the War of 1812, frigates which the paddle steamers made obsolescent. . . . [T]o produce these four ships in the same year, with two of them based on plans devised a quarter of a century before, showed just how confused the mid-century Navy had become.3

The technological disparity within the Navy became even greater when the Philadelphia yard began construction of a steam-powered, iron-hulled, screw-propelled vessel. When completed in 1843, this ship, the

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2 Annual Report, Secretary of Navy, 1841, p. 401.

Chart 1. CHARLESTOWN NAVY YARD, C. 1834. This map originally appeared in Edwin C. Bearss, Charlestown Navy Yard, 1800-1842, p. 1834. Construction of the Ropewalk constituted the most significant alteration in the yard's physical plant in the years between 1834 and 1842. Among other new buildings were Storehouse No. 15 and Shiphouse No. 39.
original *Princeton*, was the first warship of its kind in the world.4

The resistance to steam and other innovations partly came from a central element within the administration of the Navy Department. An act of Congress in 1815 had established a Board of Navy Commissioners, consisting of three commissioned officers, to advise and assist the Secretary of the Navy. At the time, this change constituted a genuine reform, since it gave professional officers influence in management of naval affairs. However, over the years no alteration occurred in the composition of the board, whose members remained committed to the naval technological current in the War of 1812. By the late 1830s, it was recognized that another weakness of the Board of Navy Commissioners was that none of the individuals who composed it could be held responsible for any maladministration that might occur. Not surprisingly, in a reform move of the early 1840s, the board was eliminated.5

In addition to its ships at sea and the Department in Washington, the Navy consisted of a number of shore establishments, the most important for this study being the industrial facilities known as navy yards. In 1841, at the beginning of the Harrison-Tyler administration, six yards were then engaged in the work of repairing, maintaining, and occasionally constructing ships. Some of the yards also manufactured equipment required by the Navy afloat. Functioning navy yards existed at Portsmouth, Charlestown, Brooklyn, Philadelphia, Washington, and Norfolk. A seventh facility was being developed at Pensacola, Florida, but had not yet acquired the capacity for ship repairs. The Mexican War would greatly stimulate the growth of the establishment at Pensacola. In 1841, the Navy Department also had the property and plans for a yard at Memphis, Tennessee, regarded as an appropriate site for the construction of steamers and, more importantly, for the manufacture of cordage, being located near the nation's main hemp producing region. In 1854, at the direction of Congress, the Navy gave the Tennessee yard to the city of Memphis, and the Ropewalk at the Charlestown yard resumed its status as the Navy's only cordage manufacturing establishment. A new industrial facility did come into being in the mid-1850s at Mare Island, California, which remained the Navy's only yard on the West Coast until the 1890s.6

The Charlestown Navy Yard occupied a site at the confluence of the Charles and Mystic rivers. Originally the site consisted of approximately thirty-nine acres of hard land, together with adjacent flats to the low water line. Over the years, filling in parts of the flats had increased the area of dry land. By the early 1840s, the yard contained approximately fifty buildings of various sizes, materials, and conditions. They included quarters and residences for Navy officers; the Marine Corps barrack; and compound buildings for industrial activities and storage; and three shiphouses. Other significant parts of the physical plant were the granite dry dock, completed in 1833; two wharves; three timber storage docks; and parks for the storage of guns, shot, and anchors. The 1830s had witnessed important yard improvements. In addition to the dry dock, among the new structures then erected were the Ropewalk and several other buildings constituting the cordage manufacturing complex; two timber sheds; and quarters for warrant officers.7

Since its genesis in 1800, the Charlestown Navy Yard had repaired, outfitted or otherwise serviced approximately thirty-five different vessels. Several ships had been at the yard on two or more different occasions, and the number of repair "jobs" performed by the yard was roughly forty-five. Also the yard had constructed twelve vessels, half of them in the years from 1835 to 1841. Not included among the dozen new ships were three which remained unfinished. The keels for two 74-gun ships of the line, *Virginia* and *Vermont*, had been laid in 1818 and 1824 in Shiphouses I and G. However, the Navy Department suspended work on

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7 Information in this and subsequent paragraphs is largely drawn from Bearss, *Charlestown Navy Yard, 1800-1842*. 
both vessels, when roughly half completed. They would be finished when there occurred a national emergency which would justify the cost. The 44-gun frigate *Cumberland* had a similar history, her keel being put down in 1826 in Shiphouse H. As already noted, Secretary Usher gave orders in 1841 for completion of that vessel.

For the most part, the Charlestown Navy Yard in 1841 maintained its character as an installation for the repair and construction of wooden sailing ships. In 1839, the yard had docked *Fulton*, the first services it rendered a steam-powered vessel. However, apparently only the ship's wooden hull received attention. The yard did not yet possess the tools for performing significant work on metal hulls or machinery. For example, the machine shop had no engine lathe capable of turning pieces even less than twelve inches in diameter. Lacking such equipment, the yard had to arrange for such work to be done by commercial establishments in the vicinity.

The personnel at the Charlestown Navy Yard in the early 1840s can be divided into several different categories. The 1841 report of the Secretary of the Navy included estimates of the funds required to meet the staffing needs of the several yards in the forthcoming year. Probably those estimates were based on the staffs then actually assigned to the various stations. The estimate for the yard at Charlestown for "naval" personnel listed twenty-three positions, the most important being commissioned line officers, namely one captain, one commander, two lieutenants, and two masters. The other positions included one of each of the following ranks and grades: surgeon, chaplain, boatswain, gunner, carpenter, sailmaker, purser, steward, and another steward to serve as assistant to the purser. The remaining "naval" positions at the yard consisted of two assistant surgeons, two professors, and four midshipmen. Separate listings covered the Naval Hospital at Chelsea and the receiving ship, and it appears the three medical officers in the "naval" category were assigned to the yard itself. The Navy continued to maintain the position of "professor," the rank assigned to those teachers charged with shipboard instruction of midshipmen. In the mid-1840s, with the establishment of the Naval Academy at Annapolis, that position disappeared from navy yards.8

A separate category existed for the personnel of the yard's "Ordinary," that contingent responsible for the care and security of ships out of commission and "in ordinary." Sixty-seven individuals composed the yard's ordinary, fifty seamen and ordinary seamen and the remainder commissioned, warrant, and petty officers. A government hospital existed at the Charlestown Navy Yard until the mid-1820s. A replacement in nearby Chelsea had been completed and staffed by 1837. For certain administrative purposes, the Chelsea hospital still was included as part of the Charlestown yard. Its staff in the early 1840s consisted of a surgeon, an assistant surgeon, a steward, a cook, one or two nurses, and one or two washers as required by the number of patients.

The Secretary of the Navy's yearly report for December 1841 listed eleven "civil" positions at the yard at Charlestown. An individual filling one of these positions received an annual salary, as distinct from a daily wage paid to mechanics and laborers. The "civil" list was composed of a storekeeper, naval constructor, measurer and inspector of timber, clerk of the yard, two clerks for the commandant, two storekeeper's clerks, clerk to the naval constructor, keeper of magazine, and porter. The naval constructor received a salary of $2300, which probably made him the highest paid salaried civilian in the yard. By an act of Congress in 1866, naval constructors became commissioned naval officers. The 1841 "civil" list included only a small number of the yard's civilian employees and excluded some important positions. For example, each navy yard had a navy agent, who owed his appointment to the president. As such, the occupant of the navy agency shifted with changes in presidential administrations. The navy agent negotiated the purchase of goods and services required by the yard from local businesses. Another important civilian position at the Charlestown facility was the superintendent of the Ropewalk.

The vast bulk of civilians workers at the Charlestown Navy Yard were mechanics and laborers, employed at a daily wage. Employment statistics for the late 1830s and early 1840s are incomplete. In his history of the Boston Navy Yard, George Preble included a chart of the number of civilians employed on the first day of each month. During the calendar year of 1839, the greatest number of workers at the yard was 512, employed on February 1, and the lowest was 183, at work on December 1. In the next twelve months, the range extended from 287 to 541. Workers at the Boston yard received an average daily wage of $1.72, the

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8 Information in this and the next several paragraphs is found in *Annual Report*, Secretary of Navy, 1841, p. 380.
highest of all the six functioning yards. The best paid and most important workmen were the master mechanics. In November 1840, the yard had thirteen of these civilian supervisors.9

In the early 1840s, the Charlestown Navy Yard included two other categories of personnel, the Marine Corps detachment and the men of the receiving ship. As of November 1842, four commissioned officers, ten non-commissioned officers, two drummers, one fifer, and fifty-one privates composed the Marine Corps unit at Charlestown. As one of their duties, the Marines provided security for the installation and manned approximately nine sentry posts at the yard. The largest single collection of military personnel at the Charlestown yard was aboard the receiving ship Columbus. An estimate submitted for 1843 totaled 254 men, the vast bulk being landsmen, apprentices, ordinary seamen, and seamen.10

Some indication of the relative industrial importance of the separate yards is provided in that part of the annual reports of the Secretary which listed the total number of man-days worked by "mechanics and laborers employed in building, repairing, or equipping vessels of the navy, or in receiving and securing stores and materials for such purposes." The totals for the year ending September 30, 1841, were: Norfolk, 101,873; New York, 73,272; Charlestown, 70,678; Washington, 45,176; Philadelphia, 38,787; and Portsmouth, 23,149. During the following twelve-month period, the yard at Charlestown was the second most active, registering 110,400 man-days, with Norfolk again in the lead, with 180,372. On the basis of these figures, it appears that in the early 1840s, Charlestown ranked among the Navy's three most important yards.11

9 Annual Report, Secretary of Navy, 1841, p. 380; Bearss, p. 762; George Henry Preble, "History of the Boston Navy Yard, 1787-1875" (National Archives Microfilm Publications, Microcopy M-118), pp. 430-31. The Preble history in a three-volume, unpublished work. The original is in National Archives, Record Group 45, Naval Records Collection of the Office of Naval Records and Library. For more about Preble and his history, see below, Appendix.

10 Annual Report, Secretary of Navy, 1842, pp. 522, 630-33.

11 Annual Report, Secretary of Navy, 1841, p. 403; Annual Report, Secretary of Navy, 1842, p. 608.
Chapter I

CAPTAIN NICOLSON’S COMMANDANCY: 1842-1845

Throughout most of the period from mid-1842 to late 1845, the mood and activity at the Charlestown Navy Yard appear as routine. The principal plant improvement consisted of the building of two new wharves. The yard's contributions to the operations of the fleet included construction of one new vessel and repair, outfitting, or servicing of approximately sixteen ships, not counting the yard anchor hoy. With the annexation of Texas by the United States and the installation of the expansionistic administration of James K. Polk, war with Mexico became a possibility. That prospect may explain a modest quickening of the tempo at the Boston yard in the spring of 1845.

ADMINISTERING THE YARD

On June 1, 1842, the Charlestown Navy Yard received a new commandant, Capt. John B. Nicolson. Born in Richmond, Virginia, in 1783, Nicolson had entered the Navy on July 4, 1805, as a midshipman, and was assigned to Hornet. He was promoted lieutenant on May 20, 1812, and was aboard United States when she defeated and captured Macedonian. He served as executive officer on Peacock in her fight with Epevier, bringing the latter vessel into port as a prize. Nicolson was promoted captain in April 1828, and commanded United States in 1833 and Delaware in 1835. Washington Irving, a friend of Nicolson, referred to him as "Jovial Jack."  

On August 31, 1842, three months after Captain Nicolson became commandant, President John Tyler signed a measure which repealed the act of February 7, 1815, establishing the Board of Navy Commissioners. To promote efficiency, the board was replaced by five bureaus—Navy Yards and Docks; Construction, Equipment and Repairs; Provisions and Clothing; Ordnance and Hydrography; and Medicine and Surgery. From the captains in the naval service, the President, with the advice and consent of the Senate, was to appoint chiefs for the Bureaus of Yards and Docks, Ordnance and Hydrography, and Provisions and Clothing. In like manner, he was to name a skillful naval constructor as chief of the Bureau of Construction, Equipment and Repairs, and a naval surgeon as head of the Bureau of Medicine and Surgery.  

To secure a firm grip on appointments to and promotions within the work force at the Charlestown Navy Yard, Commo. Lewis Warrington, Chief of the Bureau of Yards and Docks, notified Captain Nicolson that, hereafter, in filling master workman positions, he was to submit a list of candidates with recommendations as to the man best fitted for the slot. The Bureau of Yards and Docks would then make the appointment.  

In June 1842, when Captain Nicolson reported for duty, all the "outfits" for Cumberland and the other vessels under construction had been dispersed to the various departments—Boatswain's, Gunner's, Sailmaker's,

1 Nicolson to Board of Navy Commissioners, June 1, 1842, Letters Received (Ltrs. Rec'd.), Records of the Board of Navy Commissioners, 1794-1842, Naval Records Collection of the Office of Naval Records and Library, Record Group 45 (RG 45), National Archives (NA); Niles' National Register, Nov. 21, 1846.


3 Warrington to Nicolson, Sep. 16, 1842, General Correspondence, Letters Sent (Ltrs. Sent), Records of the Bureau of Yards and Docks (Y&D), Record Group 71 (RG 71), National Archives (NA).
and Carpenter's—each of which had receipted to the Storekeeper for them. These departments had control of the outfits, "to go to and use as they should require." The Sailmaker's, alone, was responsible for more than $25,000 worth of canvas. Nicolson did not approve of this system. Orders were accordingly issued for everything to be "redelivered to the Storekeeper and a credit given to the several officers who required them." The departments, hereafter, were required to draw from the Storekeeper by requisition for items needed for immediate use. This threw a "vast accumulation of labor and responsibility" upon Storekeeper Paul Willard and his five-man staff. To complicate the situation, four warships were being outfitted at the yard. A measure of relief was provided by authorizing hire of two clerks and the detail of four men from ordinary to pack slop clothing for shipment.

Several changes in personnel occurred in 1843. On May 1, Naval Constructor Josiah Barker, after holding his position for more than thirty years, was reassigned to the Portsmouth yard. His replacement was Samuel M. Pook. Born in Boston on August 15, 1804, Pook had been educated in the local public schools. Pook was intelligent and hard working. In late December, the Department sought to cut costs by laying off Pook's draftsman. To demonstrate Pook's value and justify the draftsman's position, Commandant Nicolson reported that in the seven months since Pook had entered on duty, he had prepared eighty-five drafts, of which twenty-two had been forwarded to the Bureau of Construction and twenty had been drawn for use by yard sailmakers, riggers, boatbuilders, and others. Nicolson doubted whether "the same amount of labor has ever been done at so small an expense to the government." Pook could not have accomplished this heavy workload, in addition to superintending the repair of vessels being outfitted and construction of Plymouth, without the assistance of a draftsman. Satisfied by what he had read, Commodore Warrington agreed to let the yard retain the position.

In late February 1843, Master Painter Tolman resigned. Commandant Nicolson recommended as a replacement Cyrus Cobb, who was familiar with Tolman's formulas and mode of mixing and who had prepared several sets of hammock cloths for British warships. The bureau went along with Nicolson's recommendation, and Cobb was named the yard's master painter. Like other master craftsmen, he was to be paid a daily wage for the time actually employed. No certificate as to Cobb's political affiliations would be required. Tolman, having imparted to Cobb his secret for painting hammock cloths, tarpaulins, and other canvas items, applied to the Secretary of the Navy for compensation.

In the autumn of 1843, Master Joiner Caleb Pierce was fired and replaced by Alexander McFalland, and the master mason position was abolished. Thereafter, whenever a masonry building was programmed, a skilled mason was to be hired as supervisor at $2.00 per diem. The master boatbuilder position was also eliminated, and when boats were to be built or repaired, a suitable man would be employed under the supervision of the naval constructor. Alexander Parris, who had designed and overseen construction of many of the yard's buildings, was discharged, as was his clerk, since their services were no longer needed. Seamen, where there was a necessity, were to be detailed to the riggers' loft. Henceforth, master workmen were expected to be in the yard at all hours of the workday, to be available to put the men to work after muster, and to provide close supervision.

On October 19, 1843, the Bureau of Yards and Docks notified Commandant Nicolson of the daily wage rates for yard workmen. The schedule has value in understanding the yard, since it indicates the various skills needed in a pre-Civil War shipyard, the wages received by the different categories of employees, and the

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4 Nicolson to Warrington, Feb. 18, 1843, NA, RG 71, Letters Received (Ltrs. Recd.), Y&D.

5 Willard to Nicolson, Jan. 4 & Feb. 18, 1843, NA, RG 71, Ltrs. Recd., Y&D.

6 Niles' National Register, June 26, 1843; Warrington to Nicolson, Dec. 27, 1843, NA, RG 71, Ltrs. Sent, Y&D; Nicolson to Warrington, Jan 1. 1844, NA, RG 71, Ltrs. Recd., Y&D.

7 Nicolson to Warrington, Mar. 2, 1843, NA, RG 71, Ltrs. Recd, Y&D; Warrington to Nicolson, Mar. 6, 1843, NA, RG 71, Ltrs Sent, Y&D.

8 Warrington to Nicolson, Oct. 19, 1843, NA, RG 71, Ltrs Sent, Y&D.
organization of particular groups of workers or shops, such as sailmakers and the Ropewalk.9

The October 1843 schedule established the wages for twenty different shipyard trades, such as boatbuilders, riggers, machinists, and carpenters. Most trades were divided into four or five classifications, based on level of skill. For example, the section of the wage scale dealing with joiners fixed the rates for master, foreman, first class, second class, and third class. In addition to the master joiner, the schedule listed masters in five other trades—blacksmiths, blockmakers, cooperers, painters, and ropemakers. Master workmen were assigned a daily wage of $3.00, except for the master ropemaker, who received $4.00 and was the highest paid mechanic in the yard. Some "shops" or groups of workmen, such as the joiners, included both a master and a foreman. However, foremen apparently were the only or the chief supervisors for the yard’s mastmakers; sailmakers; plumbers, coppersmiths and tinniers; boatbuilders; and riggers. All but two of the yard’s foremen were paid at the daily rate of $2.00. Again, the Ropewalk constitutes an exception, and that establishment’s "machinist, foreman" received $2.52. The per diem pay of the foreman cooper was $1.83. The wage schedule listed positions for two "quartermen," one in the Ropewalk and the other for carpenters. The two quartermen received $2.00 per day, and the quartermaster carpenter in his shop may have been the equivalent of foreman in most other shops.

The bulk of the Charlestown yard’s civilian employees were mechanics and laborers. Skilled workers were rated as first-, second-, or third-class mechanics. However, wages also varied according to trade. Most first-class workmen received $1.76 or $1.68 per day; most second-class mechanics $1.60 or $1.52; and most third-class workers $1.52 or $1.32. Caulkers were the best paid mechanics, first-class caulkers receiving $2.24, second-class $2.00, and third-class $1.76. The lowest paid were riggers, a first-class rigger earning $1.51 and a second-class worker $1.20. Common laborers employed at the Navy Stores had daily wage rates of $1.16 to $1.24. Elsewhere in the yard, simple laborers received $1.10.

The yard included a number of per diem positions that did not fall into the categories of master, foreman, mechanic, or laborer. Among those miscellaneous positions were the following: draftsman carpenter ($2.50); triphammer operator ($2.76); assistant triphammer operator ($2.00); chief engineer ($3.25); assistant engineer ($3.00); teamsters ($1.12); and messengers ($1.25).

Prior to the autumn of 1845, Captain Nicolson filled the sole billet of yard commandant, and Nicolson’s predecessor, Commo. John Downes, held the position of Port Captain, the head of the Boston Station. On October 1, 1845, Downes was detached, and Captain Nicolson assumed command of the Boston Station, as well as the yard. One month later, the position of Port Captain was abolished. Nicolson served as yard commandant for nearly forty-two months. On November 21, 1845, he turned over command of the yard to Commo. Foxhall A. Parker. Nicolson was still awaiting a new assignment when he died on November 9, 1846.10

CEREMONIES, FORMALITIES AND OTHER EVENTS, 1843-1845

As a unit of the United States Navy, the Charlestown yard engaged in ceremonial observances of patriotic holidays, visitations by parties of note, and the deaths of important governmental and naval figures. All of these instances were duly entered in the yard’s daily journal. For example, annually the birthday of President Washington was observed with salutes and flag displays, proceedings noted in the journal.11 In addition, the journal recorded other exceptional events.

In the period 1842-1845, several significant visitors came to the yard. On June 17, 1843, Caleb

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9 Warrington to Nicolson, Oct. 19, 1843, NA, RG 71, Ltrs Sent, Y&D.

10 Charlestown Navy Yard Journal, Nov. 1-30, 1845, National Archives, Record Group 181, Records of Naval Districts and Shore Establishments, Boston Naval Shipyard, Entry 56 (hereafter referred to as 181-56). That part of Record Group 181 containing the records of the Boston Navy Yard is now housed in the National Archives-New England Region, Waltham, Massachusetts.

Cushing, recently nominated to be Secretary of the Treasury, made a visit and was received by a 17-gun salute. Two days later, President John Tyler and his "executive family" arrived. He was honored by a Marine guard and a national salute. During the years under study, two different Secretaries of the Navy came to the Charlestown yard, namely David Henshaw on September 13, 1843, and George Bancroft on March 27, 1845. Both received 13-gun salutes.2

On Sunday, February 19, 1843, minute guns were fired from the saluting battery in memory of Commo Isaac Hull, naval hero and former yard commandant, who had died in Philadelphia on Monday, the 13th, after a lengthy illness. Then, on March 4, a 17-gun salute was fired from the battery to honor Secretary of the Navy Thomas W. Gilmer, killed aboard Princeton by the bursting of the big experimental gun "Peacemaker." The next day there was a 17-gun salute in memory of Commo Beverly Kennon, who had died on February 28 of injuries suffered in the same explosion. On the last day of March, a salute of 13-minute guns was fired in honor of Commo. Edmund P. Kennedy, who had died on March 28 at Norfolk, and on August 30, the same honor was paid the memory of Commo Alexander J. Dallas, who had died at Callao, Peru, on June 3, 1844.3 On December 18, 1845, minute guns were fired from the battery in memory of Commo. Jesse D. Elliott, one of the yard's former commandants (1833-35), who had died in Philadelphia on the 10th, after a six-month illness.4

In mid-October 1843, the ship Raajah reached the yard from Gibraltar. Aboard were survivors from the crew of the U.S. Steamship Missouri, destroyed by fire while anchored near the "Rock" on the night of September 3. Upon going ashore at Charlestown, the survivors were sent aboard the receiving ship Franklin for processing.5 The schooner Spitfire, captured by the brig Truxton of the African Squadron, reached the yard on May 14, 1844. She was suspected of being a slaver. On June 3, 1845, the Neapolitan frigate Urania arrived from New York City. Salutes and visits were exchanged. In saluting by accident, Urania ran up the United States flag with the Union inverted. Apologies were made and accepted. The foreign warship sailed for Gibraltar on the 12th.6

Calvin Woodworth of Taunton, while visiting the yard on September 15, 1845, fell to his death from the scaffolding around Virginia. This was the fourth or fifth accidental death to occur on or around the evil-omened ship in the twenty-three years since her keel had been laid.

THE YARD BUILDS AND OUTFITS PLYMOUTH

Congress had authorized and funded construction of two big corvettes—one to be built at Charlestown and the other at Portsmouth. Samuel Pook, the naval constructor at Charlestown, in preparing the design of that yard's vessel, had a second opportunity to work on a plan for a large craft. This time, however, unlike his experience with Saratoga, he was permitted to follow his own ideas in model and dimensions necessary to carry the heavy shell guns developed by Henri Joseph Paixhan. Consequently, the vessel would be quite different in design from the earlier sloop. Pook's new lines called for a corvette 147' between perpendiculars, 37'3" moulded beam, and 16' 2 1/2" depth of hold. She was to be the first of her class to be designed with a

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12 Ibid., June 1-Sep. 30, 1843.

13 Ibid., Jan. 1-Aug. 31, 1844; Niles' National Register, Mar. 2, 1844, p. 2. Also killed in the bursting of the giant gun on Princeton were: Secretary of State Abel Upshur; Virgil Maxey, late minister to the Hague; and David Gardner, father of President Tyler's fiancee.


Upon reviewing Pook's draft of the vessel, Capt. Beverly Kennon, Bureau of Construction and Repair, notified Commandant Nicolson that Secretary of the Navy Abel P. Upshur desired each constructor to "build after his own draft." This privilege was given on the understanding that "each ship is to be built of the frames for sloops of wars of the 1st class already provided, and on hand in the different yards." If the vessel could be built of such dimensions as the subject draft and of timber already stockpiled, Nicolson was to proceed. If not, the dimensions of the corvette must be reduced to the size of the frames on hand. This need not interfere with Pook's model. The masts, spars, inboard construction, and arrangement of cabins, as well as the size of her boats and other features, were still under study. To assist with the project, the bureau forwarded extracts from a report made on Saratoga.18

On June 17, as soon as the necessary paperwork was completed, the corvette's keel was laid. Some three weeks later, the Department notified Nicolson that she was to be called Plymouth. By early October, the hull was nearing completion. She had been painted and coopered on the stocks. Apprised of this, the bureau ordered her launched and readied for sea.19

At 11 a.m., on October 11, 1843, Plymouth was launched. The day was warm and pleasant and a large crowd gathered. A band posted in the shiphouse provided entertainment. As the connecting planks were cut, the musicians struck up "Yankee Doodle," and the corvette glided gracefully down the inclined plane, "saluted by the Huzzahs and cheers of the spectators." A correspondent for one of the local newspapers wrote that "never was a launch more beautiful or conducted with superior skill."20

In accordance with the bureau's orders, several innovations recently introduced into the Navy were incorporated into the vessel. She was equipped with force pumps, requisitioned from the Washington Navy Yard, and with iron cables, except for stream cables and hawsers. No hemp lines, other than these two types, were to be henceforth manufactured at the Ropewalk.21

On February 12, 1844, Captain Nicolson notified the Department that Plymouth was ready to proceed to sea, so far as the yard was concerned. He was prepared to discharge all workmen, except a few blockmakers finishing a requisition for the African Squadron. This was being done in accordance with orders from the bureau that the appropriation for "Increase, Repairs, etc." was nearly exhausted. During the next six weeks, the officers reported, a crew was shipped, and the sea stores stowed. On April 3, Plymouth, having been hauled into the channel, sailed for the Mediterranean.22

Plymouth was an exceptional ship, stiff and dry in rough water, fast in both light and strong winds, and also "very handy." In appearance she was much like a packet ship, but was sharper-ended than most of this class. Plymouth was much admired abroad, deemed by many officers to be the "finest vessel in her class in any navy."23

Commandant Nicolson informed the Department that, in building the corvette, several thousand

18 Kennon to Nicolson, May 26, 1843, Letters Sent, Bureau of Construction and Repair (C&R), Records of the Bureau of Ships, National Archives, Record Group 19 (RG 19). Captain Kennon had replaced Commodore Connor as Chief of the Bureau of Construction and Repair in February 1843.
19 Kennon to Nicolson, July 11 & Sep. 29, 1843, NA, RG 19, Ltrs. Sent, C&R.
20 Preble, p. 281; Niles' National Register, Oct. 14, 1843, p. 102.
21 Kennon to Nicolson, July 3 & Sep. 2, 1843, NA, RG 19, Ltrs. Sent, C&R.
23 Chapelle, p. 440.
pounds of iron, melted down from scrap in the yard's furnace, had been utilized. This iron was far superior to the bar iron theretofore employed. The bureau was delighted with this information, and orders were issued that, thereafter, all scrap iron was to be reduced and recycled in the air furnace. Nicolson, after discussions with Naval Constructor Pook, would establish the sizes and dimensions best adapted to yard uses. It was ascertained by workmen that the scrap iron being melted in the blooms, at first heat, usually weighed from 120 to 110 pounds, according to its amalgamation. It was drawn out as long as the heat would allow, after which it was reheated and hammered into a "more lengthy form, preparatory to its being manufactured." Whenever funds were allotted for a roller for plate and bolt iron, the bars could be worked into any desired shape without difficulty. Sidney coal was employed in the recycling operation.24

DAY-TO-DAY OPERATIONS: MOVEMENTS, REPAIRS, MAINTENANCE OF PUBLIC VESSELS, 1842-1845

Upon taking command and reviewing the files, Commandant Nicolson found that on January 1, 1842, there had been employed in the several departments 447 mechanics and laborers. By May 1, the number had been increased to 560, but since then, with work on Cumberland suspended and that on Bainbridge and Columbus completed, 216 had been laid-off.25

On June 1, several hours before Captain Nicolson assumed command of the yard, Independence entered the dry dock, where she had been razeed six years before. The Board on learning of this notified Nicolson that her copper was to be repaired. To provide the new commandant with guidance on this facet of the yard's operation, he was informed that it cost about $360 to dock a ship. Any public vessel arriving at the yard, in need of docking, could be taken in without first securing the Department's concurrence.26

Independence was hauled out of the dock on June 14, her copper having been repaired and cleaned. Ten sheets of copper had been put on her keel, ninety on the shoe, twenty-two on the starboard side, fifteen on the larboard beam, and four to box the head pumps. Before being taken in, these stores had been sent ashore: two hemp cables and two chains, 150 fathoms each; two bower anchors; the kedges; the round shot; the water, excepting 10,000 gallons; and the small boats. The big razee had been repaired, outfitted, and manned by early November. On the 15th she weighed anchor, hoisted sail, and cast off for New York.27

On July 21, the Board called for Cumberland to be given another coat of paint to consist of yellow ochre and white lead, the former to be employed in such quantities as to produce a light yellow. Thereafter, this color was to be used for all ships building at the yard.28

In June, the cruising grounds of the brig Apprentice were extended beyond the waters of Boston Harbor to the coasts of Rhode Island and Long Island Sound to the southwest and to the northeast to Eastport, Maine. Authority was also given for these cruises to last up to thirty days.29 Heretofore, Apprentice had been under orders to return to the receiving ship on Saturdays to enable the apprentices to attend Sunday school. Commandant Nicolson recommended to the Department that the brig's bottom be coppered, because


25 Nicolson to Board, June 6, 1842, NA, RG 45, Ltrs. Recd., BNC.

26 Nicolson to Board, June 1, 1842, NA, RG 45, Ltrs. Recd., BNC; Warrington to Nicolson, June 6, 1842, NA, RG 45, Ltrs. Sent, BNC.


28 Warrington to Nicolson, July 21, 1842, NA, RG 45, Ltrs. Sent, BNC.

29 Preble, p. 277.
it became "grass" encrusted within two months. Apprentice would not be coppered, the Commissioners replied, because she was not deemed on "active service." In May 1843, yard workmen repaired and made minor alterations to the brig, as suggested by Commandant Nicolson and approved by the Bureau of Construction and Repair.30

On July 31, 1842, the frigate Potomac reached the yard from the Brazilian station, and the Board issued orders to have her examined and placed in ordinary. To facilitate the former, she was hauled into dry dock.31 Coincident with arrival of Potomac, the ship-of-the-line Columbus was placed in commission, and seven days later she was hauled out into the stream. Then, on August 14, the Board informed Commandant Nicolson that, as the big 74 was to fly the squadron commandant's broad pennant, her cabins were to be outfitted as customary for a flagship. Three days later, on August 29, Columbus weighed anchor, hoisted her sails, beat her way down the channel, and put out to sea, en route to the Mediterranean.32

The following day, the brig Consort arrived at the yard from Portland, Maine, where she had been stationed as a receiving ship, and was placed in ordinary. Some six weeks later, on October 18, H.B.M. frigate Spartan anchored in the Charles off the yard and exchanged salutes with Ohio. Spartan remained until the 30th, when she sailed. Several weeks before, Ohio had been hauled from her moorings off Long Wharf and had been laid alongside the navy yard for the winter.

Thus, by mid-October, there were at the yard these vessels: on stocks, the liners Vermont and Virginia, both of which could be launched and outfitted for sea in 120 days; Cumberland, a 44-gun frigate, which could be outfitted for sea in sixty days; the frigate Potomac (44 guns), which could be readied for sea in twenty days; the storeship Erie (6 guns), ready for sea; the brig Bainbridge (10 guns), ready for sea; the brig Consort; the raze Independence, attached to the Home Squadron; and the receiving ship Ohio. At one time during the past twelve months, Ohio had more than 1200 hands aboard. Currently, there were 195 apprentices on the big liner.33

On November 10, the steam frigate Mississippi arrived from New York and was examined and placed in ordinary. Orders having been received from the Department to ready the brig Bainbridge for sea, she was placed in commission on December 16.34

Meanwhile, instructions had been issued by the Bureau of Construction and Repairs to ready a shipment of stores and provisions for the Brazilian Squadron. They were to be sent aboard the storeship Erie. To prepare the vessel for their reception, the berthdeck was to be removed from the "fore and fo'c'sle deck of beam forming the fo'c'sle of the spirit-room hatchway." On the remainder of this deck, the various storerooms, including a spirit room, were to be built. Erie was hauled alongside the shear wharf, the necessary alterations made, and the stores and provisions loaded.35

As of December 31, 1842, there were six vessels laid-up in ordinary at the yard. The frigate

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31 Warrington to Nicolson, Aug. 5 and 20, 1842, NA, RG 45, Ltrs. Sent, BNC; Niles' National Register, Aug. 6, 1842, p. 335.

32 Warrington to Nicolson, Aug. 14, 1842, NA, RG 45, Ltrs. Sent, BNC. Besides her commissioned officers, Columbus' crew numbered 774 souls—sixty-three petty officers, 250 seamen, 165 ordinary seamen, 128 landsmen, forty-eight first-class boys, fifty-eight apprentices, and sixty-two Marines. Columbus was deemed to be a poor sailor: Niles' National Register, Sep. 10, 1842, p. 21.


34 Charlestown Navy Yard Journal, Aug. 30-Dec 31, 1842, 181-56; Niles' National Register, Sep. 10, 1842, p. 21; Nov. 12, 1842, p. 163.

Cumberland was moored in the same position as twelve months before. Her bowsprit was in, but not the masts. She was moored with chain cables from each bow and quarter and also with stream hemp cables and hawsers. The spardeck needed caulking. The hatches were covered and ports closed. She had on board 300 tons of ballast and drew eighteen feet aft and fourteen feet, three inches forward. There was no leakage. 36

The steamer Mississippi was moored outside Cumberland with anchors and chain cables from each bow and quarter, springs from Cumberland, and a chain and anchor from her larboard beam. Her topmast was on end, yards across, and topgallantmasts down. Her powder and stores had been landed. She drew eighteen feet, two inches aft and fifteen feet forward, with no leakage. Potomac, a frigate, was moored at the end of the shear wharf. Her ballast, water tanks, and guns were aboard. The guns were mounted, long hatches covered, with caulkers at work on her decks. She drew nineteen feet, two inches aft and fifteen feet two inches forward. There was no leakage. The brig Consort had been stripped of her rigging, bowsprit, masts, and tanks. Her anchors and cables were aboard. She needed repairs and drew ten feet, two inches forward and ten feet, three inches aft. The two remaining vessels in ordinary were the brig Apprentice, stripped and laid-up for winter, and the anchor hoy, ready for service.

On Thursday, February 9, 1843, a crew had been recruited and was aboard Erie. At flood tide, she was hauled into the harbor and sailed for Rio de Janeiro. The storeship was not the first vessel to depart from the yard in the new year. That distinction belonged to Bainbridge, which on January 26 made sail for Puerto Rico. 37

On Wednesday, January 4, the Department alerted Commandant Nicolson to see that the frigates Cumberland and Potomac were readied for sea as soon as practicable. Some nine months later, on September 2, the yard was instructed to prepare Cumberland for a cruise as flagship of the Mediterranean Squadron. This move was dictated by a decision by Secretary of the Navy Upshur, in the interest of economy, to withdraw three ships-of-the-line from active service, replacing them with three frigates—Cumberland, then at Charlestown; Savannah at New York; and Raritan from Philadelphia. Cumberland would be substituted for Delaware. Then, on October 19, orders were issued to place Potomac in commission, preparatory to her joining the Home Squadron. 38

On Thursday, November 9, Cumberland was hauled off from the yard and anchored in the stream. Whereupon, the Boston Mercantile reported, there she sits elegantly on the water—and her model is excellent, perhaps faultless, with one exception—she is too full under the counter at the load water line—a fault which is common to nearly all the frigates, and particularly sloops of war, whose models have been draughted at Washington. This ship has great capacity, and will throw an effective broadside. The guns on her maindeck being long thirty-two pounders, with four eight-inch Paixhan guns. She has a fine crew on board, and is in admirable order. We are happy to learn that intoxicating drinks are to be excluded from the ward-room and steerage during the cruise—and also that between two and three hundreds of the men refuse any grog. 39

On November 20, Cumberland sailed for Gibraltar. Potomac made sail on January 19, 1844, for Chesapeake

36 Warrington to Nicolson, Jan. 11, 1843, NA, RG 71, Ltrs. Sent, Y&D.


39 Niles' National Register, Nov. 11, 1843, p. 198; Nov. 25, 1843, p. 197. In February 1843, the Department ordered that, thereafter, all first-class liners were to be armed with sixty-three hundred-weight 8-inch Paixhan shell guns, and frigates with four guns of the same caliber and weight; ibid., Feb. 18, 1843, p. 387.
Bay and the Washington Navy Yard.40

On May 8, 1843, the season for winter storms having passed, Ohio was hauled out into the stream and took up her moorings off Long Wharf. Thirteen days later, on the 21st, the steam tug Union, propelled by submerged horizontal wheels and towing Franklin, arrived from the New York Navy Yard. The big 74 was laid-to off the yard and designated the receiving ship for the Boston Station. Union returned to New York on the 30th.41

On August 4, 1843, the sloop-of-war Boston put in at Charlestown after a nearly three-year absence from the States. Since sailing from the New York yard in November 1840, she had logged more than 50,000 miles. Upon being notified of the sloop’s arrival, the Department ordered Commandant Nicolson to see that the usual examinations and surveys were held to determine her condition and to provide an estimate of the cost of outfitting her.42

Orders were also received during the summer to alter into a bark the sloop Marion, which had arrived at the yard on June 19 from Norfolk. This was to be "done on as favorable terms as it can be done by private individuals." Then, on September 23, came instructions to outfit Consort as a storeship. Meanwhile, the sloop Preble had arrived at the yard from the Mediterranean Sea, along with instructions from the bureau "to ready her for a cruise." Since it had seemingly become customary to find all vessels so defective, upon which surveys were ordered, the bureau was determined to call for "no more general surveys, except at the suggestion of the commandant of the yard."43

At the end of October, Nicolson notified the bureau of the progress of work on ships at the yard. Boston received her crew and was taking aboard provisions. She had been outfitted, except for a few trifles. Marion’s repair was nearly finished, and she would be ready to receive her crew whenever the word was given. Preble was being outfitted and required her running rigging and her blocks to be strapped; and Consort was nearly ready to embark her cargo.44

Preparations continued apace, as the hours of daylight shortened the workday. By Sunday, November 19, Boston had received the last of her stores and had cast off for the coast of Brazil, and on December 30, Consort weighed anchor and departed the yard en route to the west coast of Africa. She was followed to sea on January 19, 1844, by Preble, bound for the West Indies. The latter vessel would have sailed earlier had a new set of sails been ready. To enable Preble to get underway by mid-January, it had been necessary to temporarily increase the number of sailmakers on the rolls to thirty-eight.45

Independence arrived at the yard in early November and was placed in ordinary. Her officers and crew were transferred to Potomac, then being outfitted for sea.46

On Wednesday, January 3, 1844, the brig Boxer arrived from Norfolk. She thus became the first vessel to put in at the yard in the new year. After her crew and stores were transferred to Preble, she was placed

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42 Niles’ National Register, Aug. 12, 1843, p. 370; Kennon to Nicolson, Aug. 8, 1843, NA, RG 19, Ltrs. Sent, C&R.


44 Nicolson to Kennon, Oct. 27, 1843, NA, RG 19, Ltrs. Recd., C&R.


in ordinary.\textsuperscript{47}

During the last week of February, Commandant Nicolson was directed to have the stores left by Consort, along with those since ordered for the African Squadron, shipped to the storekeeper at Porto Praya by the chartered bark Kensington.\textsuperscript{48}

The schooner Enterprise arrived from Bahia on June 19, and dropped anchor off the yard. Orders were soon forthcoming from Washington for Captain Nicolson to have her examined and to advise the Bureau of Construction and Repair of the nature and extent of necessary repairs to ready her for sea service. It was ascertained that she was not worth repairing. Upon being notified that Enterprise had been condemned, President Tyler authorized her sale. Navy Agent J. Vincent Browne accordingly published the requisite announcements that the schooner would be disposed of at public auction. The sale took place October 30.\textsuperscript{49}

On June 3, Commandant Nicolson suggested that to protect Independence, Mississippi and Boxer from the elements they be "covered with a coarse coat of paint of the prescribed color." The estimated cost of the project was $1,203. The bureau approved the project. However, Commodore Warrington deemed the estimate excessive, in comparison to the painting of Fulton by the New York yard. Although Mississippi and Independence were larger than Fulton, the cost difference was so great as to mandate his calling it to Nicolson's attention.\textsuperscript{50}

As of September 30, 1844, there were five ships in ordinary or under repair at the yard: Franklin, Mississippi, Independence, Marion, and Boxer. The hull of Franklin, the receiving ship, required extensive repairs. The masts, spars, rigging, sails, boats, gun carriages, tanks, and water casks were deficient or unfit for use. If she were to be readied for a cruise, there had to be procured all her sea stores, thirty guns, twenty-two carronades, and a set of tanks. This could be accomplished at the yard in not less than thirty-five weeks at a cost of $312,232.14.\textsuperscript{51}

Mississippi's hull was sound, while her masts, spars, water tanks, boats, and sails required minor repairs. Her machinery was in "good working order." In event of a national emergency, she could be outfitted for sea in four weeks at a cost of $57,742, most of which was for sea stores. The hull of Independence required considerable repairs, as did her masts, spars, water casks, boats, sails, gun carriages, and breechings. Rigging, blocks, and sea stores had to be procured. She could be readied for sea in eight weeks at a cost of $105,247 for labor and materials.

Marion appeared in reasonably good condition. Her hull, masts, spars, boats, rigging, sails, and gun carriages had been repaired. To prepare her for sea required minor repairs and the procurement of sea stores. These preparations would take two weeks and cost $12,964. Boxer could be readied for sea in four weeks. Her hull, masts, spars, gun carriages, and blocks needed slight repairs. New water casks, and breakers were needed, along with the sea stores. Some sails required replacements.

On Wednesday, October 3, the frigate United States entered Boston harbor and tied up at the shear wharf. After her stores were landed and her crew discharged, she was examined by a board of survey. Her hull and decks were then caulked, and she was laid up in ordinary.\textsuperscript{52}


\textsuperscript{48} Kennon to Nicolson, Feb. 26, 1844, NA, RG 19, Ltrs. Sent, C&R.


\textsuperscript{50} Nicolson to Warrington, June 3, 1844, NA, RG 19, Ltrs. Recd., C&R; Warrington to Nicolson, June 6 & 14, 1844, NA, RG 19, Ltrs. Sent, C&R.


Orders reached the yard in the second week of November to take Marion out of ordinary and prepare her for sea. It was not believed that it would be necessary to replace any of her standing rigging, as it had been in use only a short time. Several days later, these orders were countermanded.\textsuperscript{53}

On Wednesday, February 19, 1845, the Department issued orders to take Mississippi out of ordinary and to proceed with her repairs and outfitting for a twelve-month cruise. Among the repairs required were replacement of the brass bearings under the center shaft, fixing her smokestack so it could be raised and lowered, and placing slide valves within the reservoirs. Her rigging and sails would be prepared, the main sails being of No. 3 canvas. One set of hammock cloths would be sufficient.\textsuperscript{54}

In mid-April, Commo. Charles Morris, who had succeeded Commodore Kennon as Chief of the Bureau of Construction and Repair, notified Commandant Nicolson that, because of reduced appropriations, expenditures for the remainder of the fiscal year were to be slashed. The only vessel on which money was to be spent for equipment was Mississippi. No obligations were to be made for ships in ordinary or for yard purposes. No funds were to be disbursed, except those indispensable for ship preservation. Operations of the Ropewalk were to be limited to receipt of hemp, filling requisitions, and complying with orders from the bureau. No labor was to be expended on any objects "not specially wanted or ordered."\textsuperscript{55}

Early in June, orders were received directing that Mississippi, on being outfitted, was to be turned over to Capt. Andrew Fitzhugh. By late July, her stores and complement were aboard, and on August 6, she sailed for the Gulf of Mexico to reinforce the Home Squadron.\textsuperscript{56}

On June 19, the Department for the second time in seven months ordered Marion taken out of ordinary and prepared for a cruise off the west coast of Africa. Her destination was soon changed, and, on September 4, she sailed for Norfolk, the first stop on her run down to the Gulf of Mexico.\textsuperscript{57}

The brig Washington, on surveying duty, put in at the yard on August 26, 1845, departed two days later, came again to the yard on October 11, sailed on the 18th, and returned and was laid up for the winter on November 4.

Because of the deteriorating relations with Mexico, there came a rapid-fire series of orders to repair and outfit ships for sea. On August 8, 1845, two days after Mississippi had passed out the Narrows, instructions were issued for Independence to be repaired in conformity with the report submitted by the Board of Survey on September 14, 1844, "employing just such number of mechanics as can work with the best economy." Then, on the 11th, Commandant Nicolson was directed to hasten the repair of Boxer, without "materially increasing the force in the yard." Within seventy-two hours, on August 14, Secretary of the Navy Bancroft ordered United States readied for "immediate service." Any work on Independence, which might interfere with that on United States, was to be suspended until the latter was ready for sea.\textsuperscript{58}

On October 27, orders were issued that repair of Independence be suspended. No further labor was to be expended on the big razee, until otherwise instructed, beyond the hurdles needed to protect her from weathering.\textsuperscript{59}

On November 8, the frigate Cumberland, flying Commo. Joseph Smith's broad pennant, arrived after

\textsuperscript{53} Morris to Nicolson, Nov. 6, 1844, NA, RG 19, Ltrs. Sent, C&R.
\textsuperscript{54} Morris to Nicolson, Feb. 19 & Mar. 8, 1845, NA, RG 19, Ltrs. Sent, C&R.
\textsuperscript{55} Morris to Nicolson, Apr. 14, 1845, NA, RG 19, Ltrs. Sent, C&R.
\textsuperscript{56} Shubrick to Nicolson, June 9, 1845, NA, RG 19, Ltrs. Sent, C&R; Charlestown Navy Yard Journal, June 1-Aug. 15, 1845, 181-56.
\textsuperscript{57} Shubrick to Nicolson, June 19, 1845, NA, RG 19, Ltrs. Sent, C&R; Charlestown Navy Yard Journal, June 1-Sep. 15, 1845, 181-56; Niles' National Review, Sep. 6, 1845, p. 6.
\textsuperscript{58} Shubrick to Nicolson, Aug. 8, Aug. 11, Aug. 14, 1845, NA, RG 19, Ltrs. Sent, C&R.
\textsuperscript{59} Morris to Nicolson, Oct. 27, 1845, NA, RG 19, Ltrs. Sent, C&R.
two years' service in the Mediterranean. Orders soon came to prepare the frigate for "further service, with as little expense as practicable." Her hold was to be broken out and thoroughly cleaned. She would then be docked, her hull examined, and, if necessary, her copper cleaned and repaired. Her master's and warrant officers' stores were to remain aboard. Coincidentally, orders were received to have Boxer readied for service with the African Squadron. In late November, it became necessary to reinforce the workmen assigned to repair of Cumberland. This was dictated by receipt of instructions to have her ready for sea by December 20.60

The frigate Princeton reached the yard on December 19 to be docked. A fire soon broke out aboard the ill-fated vessel, and yard personnel, joined by Commodore Downes, conducted an investigation to determine the origin of the fire and extent of necessary repairs. After reviewing the report, which is missing from the files, Commodore Morris directed that Princeton's boilers be repaired "in a manner to secure as far as practicable uniform strength and durability." Necessary repairs were to be made to the engines within eight weeks.61

During 1845 there were docked for repair or inspection these vessels: Boxer, United States, Marion, Independence, Cumberland, and Princeton.62

FUNDING YARD IMPROVEMENTS IN THE NICOLSON YEARS

The Board of Navy Commissioners sought from Congress $85,500 for improvements and repairs in 1842 in the plant of the Charlestown Navy Yard. The Commissioners recommended six projects, two of which were substantial. It was proposed that $22,500 be allocated to a pier wharf and $35,000 for a facility to house the rigging loft and provide for cordage stores. Each of the other projects cost less than $10,000. In its appropriations bill of August 1842, Congress rejected the two costly proposals and provided funds only for the smaller undertakings. Those undertakings consisted of extending the smithy ($9500); dredging the entrance to the dry dock ($2500); providing a steam engine for the Ropewalk ($8000); and improvements in the floating gate at the dry dock ($4500). In addition, the yard received $4500 for repairs of all kinds.60

The pattern whereby Congress appropriated only one-third of the funds sought for plant improvement and repair at the Charlestown yard was duplicated in 1843. Commandant Nicolson submitted a program which called for the expenditure of $161,522. The federal legislature saw fit to provide for projects with a combined cost of $55,371.70. Rejected were proposals for substantial improvements, such as Nicolson's recommendation of the rigging loft and cordage store building and an additional wing for Storehouse No. 15. The congressional package for the yard included monies for raising the boundary wall at the northwest side of the yard ($10,014); construction of 240 feet of a boundary wall east of Masting House M ($10,650); repair to the rain pipes of the dry dock ($5,342.70); tools and machinery for the smithery ($11,365); and repairs of all kinds ($18,000)64

In the early 1840s, Congress changed the bookkeeping and reporting calendar for federal agencies, which, as of July 1, 1843, were to operate on a fiscal year extending from July 1 through the ensuing June 30. For Fiscal Year 1845, Nicolson recommended these "Improvements and Repairs" for the yard under his command: north wing to Building No. 15 ($30,564.74); additional story to the Ropewalk ($49,413.24); wharf between Shiphouses H and I ($16,676.55); raising the boundary wall west of Shiphouse G ($2,550); machinery

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60 Morris to Nicolson, Nov. 13, 1845; Morris to Parker, Nov. 28, 1845, NA, RG 19, Ltrs. Sent, C&R.


63 Warrington to Nicolson, Aug. 10, 1842, NA, RG 45, Ltrs. Sent, BNC.

64 Annual Report for Charlestown Navy Yard for Year Ending Oct. 1, 1842, NA, RG 71, Y&D; Warrington to Nicolson, Mar. 16, 1843, NA, RG 71, Ltrs. Sent, Y&D.
and tools for smithery and blockmakers' shop ($8000); and repairs ($14,000). Congress pared this program to the bone. The Navy appropriations bill of June 1844 met fully only one of Nicolson's requests, the $2,550 for raising the boundary wall. Reduced funds were provided for three other projects: a wharf (No. 65) between Shiphouses H and I ($7000); machinery and tools for the smithery and blockmakers' shop ($5000); and repairs ($10,000).65

The Navy Department called on Congress to fund plant improvements in the Charlestown yard for Fiscal Year 1846 amounting to almost $134,000. Several of the proposals had been previously recommended, such as the wing for Storehouse No. 15 and the rigging loft and cordage store structure. Other recommendations were new ones, such as completion of three piers and construction of a coal house. Congress appropriated less than one-third of the sum requested. The projects receiving congressional authorization were a reservoir ($2500); coal house ($8000); pier wharf No. 66 ($10,000); completion of Wharf No. 65 ($7000); and repairs of all kinds ($12,000).66

IMPROVEMENTS AND REPAIRS TO YARDS AND DOCKS FACILITIES

THE DRY DOCK

In the autumn of 1842, Commandant Nicolson used the $2500 appropriated by Congress to hire a "mud machine" to dredge out the slips and clear the dry dock entrance of sand bars. Improvements were also made in the dry dock's caisson or floating gate.67

EXTENSION OF THE BOUNDARY WALL

Some six months after his arrival at the yard, Commandant Nicolson called for an extension of the stone boundary wall and proposed to continue the wall "in the same style of masonry round to the gateway" at the northwest side of the yard, and from the boundary wall at the mast house to the gate on the east quay wall. Wherever possible, the seawall would constitute a foundation for the proposed boundary wall. To justify to Congress the expenditure of more than $20,000 on the wall in the eighteen months ending June 30, 1844, Commandant Nicolson noted that "the continuance of the boundary wall, for the security of the Yard, has become an object of importance to preserve it from depredation, and to render it less accessible. . . ." Respecting the yard's walls, Nicolson made another proposal. He observed that the Navy was "much dependent" on the city of Charlestown for permission to receive or take powder from the magazine, whenever low tide precluded a boat from ascending the Mystic. In winter, when the harbor was frozen over, all communications between the yard and magazine were via the Chelsea Bridge. To alleviate this situation, Nicolson asked authority to open a passage through the wall at the lower quarters. The present route was both inadequate and inconvenient, as naval personnel were compelled to travel at least a mile out-of-the-way to communicate with the magazine and hospital during the winter.68

The bureau approved the proposal, noting that the opening in the wall was to be of sufficient width to permit passage of fire engines. In mid-July, the bureau inquired: "Have any materials for construction of


68 Warrington to Nicolson, Nov. 7, 1842, NA, RG 71, Ltrs. Sent, Y&D; Nicolson to Warrington, Nov. 11, 1842, June 26, 1843, NA, RG 71, Ltrs. Recd, Y&D.
the walls been collected, and when will work begin?” Nicolson assured Commodore Warrington that the stone was under contract, and work had commenced on July 24 on the wall east of the mast house. The wall west of Shiphouse G, extending from Water Street to tidewater, was not completed until 1845.69

CONSTRUCTION OF WHARVES 65 AND 66

The winter of 1843-44 was bitterly cold, and from late January until mid-February, Boston Harbor was frozen over. Early in the latter month, Messrs. Gage and Hittinger were engaged to cut a channel through the ice from Boston to the Narrows, a distance of ten miles.70 After the weather moderated, it was necessary to hire men to fasten down timbers which had been "torn and loose" from the wharves by winter ice floes. Nativistic stereotyping governed the composition of the labor force assembled to repair this damage. Because the Irish were believed to be better able to work in mud and water than native-born Americans, Captain Nicolson asked for and secured permission to hire recent immigrants for this back-breaking toil.71

In January 1844, to justify construction of additional piers at the yard, Captain Nicolson informed the Department that there was only one wharf at which large ships could be berthed. This was the shear wharf, where they had to haul vessels for getting their masts in and out. The depth of the water, at a distance of fifteen feet from the end of the pier at extreme ebb tides, was twenty-two feet, and at ordinary low water twenty-three feet. This caused problems, because the draft of Ohio, with all her stores aboard and ready for sea, would be between twenty-five feet, eight inches and twenty-six feet, and when coming to be "hauled up" from twenty-four to twenty-five feet. Any vessel more than twenty-three feet touched bottom at the end of the shear wharf.72

Taking cognizance of this situation, Congress in 1844 appropriated $7000 for building a wharf in the lower yard. On February 28, 1845, Captain Nicolson notified the Bureau of Yards and Docks that the one wharf in the lower yard, near Shiphouse H, was so rotten that the piles could no longer support the decking. When the frost left the ground, a "great part of the outer end fell in," and was then in a heap of ruins. This left the yard with only the small jetty wharf east of the dry dock for landing and shipping stores and supplies. Pending construction of the authorized wharf, Nicolson sought permission to remove the earth from the old structure and stockpile it for use in the new.73

Consequently, the Department directed Nicolson to procure materials for rebuilding the wharf near Shiphouse H and for completing a second between Shiphouses H and I, provided the contractors realized that they would not receive their money until after July 1, 1845. To insure that there would be no errors in identification, the wharves would be assigned these numbers: the "old broken down wharf," No. 64; that next to it, between Shiphouses H and I, No. 65; and the one to be built near Shiphouse 39, No. 66. Simultaneously, the bureau cautioned that the monies appropriated for "improvements" in Fiscal Year 1845 were nearly exhausted. Accordingly, Nicolson was not to allow any more expenditures from these accounts beyond those connected with the wharves.74

In mid-August, Chief of the Bureau of Yards and Docks Warrington was dismayed to learn that, without his authority, the monies appropriated by Congress for construction of Wharf No. 66 were being used

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69 Warrington to Nicolson, June 29, July 19, 1843, NA, RG 71, Ltrs. Sent, Y&D; Nicolson to Warrington, July 24, 1843, NA, RG 71, Ltrs. Rec'd., Y&D; Smith to Secretary of Navy, Nov. 22, 1845, NA, RG 71, Ltrs. Sent, Y&D.


71 Nicolson to Warrington, July 1, 1844, NA, RG 71, Ltrs. Rec'd., Y&D.

72 Nicolson to Kennon, undated, NA, RG 71, Ltrs. Rec'd., Y&D.

73 Nicolson to Warrington, Feb. 28, 1845, NA, RG 71, Ltrs. Rec'd., Y&D.

74 Warrington to Nicolson, Apr. 14, 1845, NA, RG 71, Ltrs. Sent, Y&D.
for rebuilding Wharf No. 64. As Congress had declined to fund reconstruction of the latter wharf, Warrington did not feel at liberty to sanction its construction from means designated for a specific program. No monies could be diverted from that object, he warned Nicolson, unless agreed to by the Department. All work was to immediately cease on Wharf No. 64, and the men and materials diverted to Wharf No. 66.  

Nicolson sought to explain what had happened. He stated that in the autumn of 1844, he had been in Washington and had then given warning to the bureau that Wharf No. 64 was unfit for use. Because it was over a better depth of water than the pier proposed for site No. 66, he had urged that it be rebuilt with funds programmed for construction of Wharf No. 66. At that time, Commodore Warrington had indicated that that arrangement was satisfactory, that Nicolson could proceed to repair No. 64, and that the bureau would secure money for No. 66 from a future Congress. Nicolson had acted upon these understandings. The commandant regretted that he had misunderstood Warrington's wishes. So far, seventy piles had been driven, which would be expensive to pull. Nicolson reported that construction had begun on Wharf No. 66 and that Wharf No. 65 had been so far completed that Independence had been moored alongside. When finished, Franklin would be laid up to this wharf.  

The bureau now realized that part of the problem could be traced to its failure to formally assign numbers to structures constructed during the past several years. On August 21, Nicolson was notified that the number of the reservoir, near the dry dock, to be constructed with the $2500 appropriated by Congress in 1845, was being changed from 65 to 68 and the steam box, south of Building No. 55, from 64 to 67. The old broken down wharf would henceforth be referred to as structure No. 64, and the wharf between Shiphouses H and I as No. 65.  

THE YARD GETS TWO TEMPORARY COAL SHEDS  

During the early 1840s, coal became of increasing importance to the Navy, both in operation of its yards and as an auxiliary source of power for ships. On March 4, 1842, the Commissioners inquired was a roof over the coal storage area necessary? To indicate to the Board methods adopted by big commercial shippers to cope with this situation, Commandant Downes explained that coal for the Cunard line of steamships was stored in Charlestown, near the yard. The 7000 tons of coal on hand was stored in seven or eight buildings. A single forty-five-by-eighty-eight-by-twelve-foot structure housed 1000 caldrons of coal.  

The Department determined to act. Downes was to locate a site for a coal house for steam shipping. As it would be covered, plans and estimates were to be prepared, submitted, and reviewed. A sixty-by-one-hundred-by-twelve-foot coal house, Downes replied, could be conveniently erected near Angle No. 59 on the yard plan, southeast of the dry dock.  

Nothing was accomplished in implementing this proposal until the autumn of 1843. By then, increased mechanization of the yard had boosted consumption of coal to 1200 long tons of anthracite annually for firing the engines, while the smithery burned 3600 bushels of bituminous coal during a year, and the engineers 5400 bushels of Pictou or Sidney coal for kindling fires under their engines. Late in September, Commandant Nicolson, fearful of spontaneous combustion, requested authority to build a shed for the smithery coal. It would be constructed of slabs from stock sawed by yard carpenters, and as such would cost about $290. The sixty-by-thirty-foot structure would be located about seventy feet east of the smithery's ell. The bureau, in
approving the project, directed that the shed be erected by the ordinary men. This was done, and the coal was under cover before winter.80

This, however, did not address the problem of providing coal to fire the boilers of vessels at the yard. During the autumn of 1844, the Bureau of Construction and Repairs contracted for delivery of 600 tons of bituminous coal at the yard. Apprising Commandant Nicolson of this, Commodore Warrington directed that arrangements be made for its storage. One-half the coal was delivered before December 31, and the remainder by April 1, 1845. Nicolson was to submit plans for two coal houses, one to hold 1000 tons and the other 500 tons. Cdr. Samuel Mercer placed the cost of building a coal house to hold 1000 tons at $2,566 and one with a capacity of 500 tons at $1,283.81

The bureau then changed its mind. Only one coal house was to be erected, a temporary structure, about 200 feet long, fifty wide and fifteen feet to the gable, with a partition dividing the interior. It was to be built on the northwest quadrant of Square No. 15, in line with proposed Building No. 50. Nicolson was to forward the necessary estimates. Such a structure, Commander Mercer reported, could be erected for $5,094.50. Whereupon, the bureau replied, it was not planned to remove that part of the structure currently at that site, which was being used as a coal house, but "to add to it on both sides, so as to give it a length of 200 feet."82

Naval Constructor Pook estimated the cost of such a structure with eight doors and an inside ceiling at $2,851.50. The bureau gave approval, and funds for construction of the coal house were transferred from the unexpended balance for the "wall NW. side of the yard." The 200-foot temporary coal house, located on the lot east of the cooper's and carpenters' shop, was built during the winter of 1844-45 at a cost of $1,279.99.83

RELOCATION AND RECONSTRUCTION OF THE PITCH HOUSE

In mid-September 1842, Nicolson informed the bureau that the shed used for boiling oil was within sixty feet of Shiphouse G, sheltering Vermont. This was too close, and he suggested that it be relocated alongside the enlarged smithery. Steam from the smithery could be employed for boiling the oil. Before the bureau could act on this request, it had to be apprised of the whereabouts of the proposed site. Because of the pitch house's hazardous location, it would have to be moved. On being informed that the site was on the pier northeast of the dry dock, the bureau approved the project. No time was lost in relocating the pitch house onto the pier east of the dry dock.84

The bureau, in a letter of January 14, 1843, chided Nicolson that expenditures for repair of docks, wharves and other structures had exceeded the appropriations by $6,185, and those for extending the smithery by $1,672.70. All work on these projects would be suspended. In reference to the arrears of $6,185 in the "Docks, Wharves, etc." account, Nicolson explained, there had been an unforeseen expense for furniture for officers' quarters. Then, in accordance with a ruling by the Comptroller, repairs of machinery formerly charged to "Contingencies" were now billed against "Docks, Wharves, etc." The excess of $1,672 for "extension

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83 Pook to Mercer, Nov. 5, 1844, NA, RG 71, Ltrs. Recd., Y&D; Warrington to Nicolson, Nov. 8, 1844; June 28, 1845, NA, RG 71, Ltrs. Sent, Y&D.

of Smithery" had resulted from relocation and reconstruction of the pitch house, which the bureau had approved in September. Commodore Warrington accepted Nicolson's explanation. But, thereafter, he would not permit any portion of a sum allotted for one object to be diverted to another. The suspension imposed on the 14th was lifted.85

BUILDING NO. 55 GETS A BOILER ROOM ELL

In September 1842, Nicolson recommended that, as a safety measure, a forty-one-by-twenty-three-foot brick boiler room be erected outside Building No. 55 to house the new dry dock boilers, the purchase of which had been authorized on the last day of August. The bureau rejected the proposal and directed that the boilers be installed in the engine house. With proper maintenance, there was little likelihood of an explosion. Where such had occurred, it had been caused by either ignorance or negligence, neither of which was anticipated at a naval facility. Nicolson would not be rebuffed. On November 26, he forwarded a report to the bureau, prepared by Superintendent Parris and Engineer Noah Butts, urging that a boiler house be erected. The report included various arguments. The pipes conducting steam to the engines, especially the sawmill, would be shortened, thus economizing on consumption of fuel. Steam vapor, which was injurious to woodwork, would be eliminated from Building No. 55. No longer would steam ascend into the second-story workshops and damage tools. The present boiler room could be converted into a plumbers and coppersmiths' shop. Boiler fuel could be stored more conveniently. The new boiler room could be provided with better ventilation, and the boilers more conveniently placed for cleaning flues.86

The bureau's Chief Engineer, William Sanger, was at the Charlestown yard in early December 1842, and Nicolson secured his support for the project. Notifying the bureau of this, Nicolson reminded Commodore Warrington that, if undertaken now, much money would be saved. He was satisfied that the necessity of removing the boilers from Building No. 55 must "ultimately be determined upon." This failed to sway Warrington, because he could not "change any part of the plan of the Yard without the approbation of the President and the Hon. Secretary of the Navy."87

In October 1843, Nicolson again took up the subject. He reminded the Department that heavy use of the dock had compelled him to keep the engine in operation throughout the summer. Now, however, he hoped to have the new boilers set before cold weather. In the interest of economy and safety, he trusted the Department might approve his proposal for a separate boiler house. This time the bureau gave its assent and requested plans and a detailed estimate. Nicolson placed the cost of the building at $802. The boiler house, to be built as a second ell to Building No. 55, was to be forty-one feet in length, twenty-three in width, and thirteen in height. It was to have a corrugated iron roof.88

On the morning of December 21, before construction of the boiler house began, one of the boilers burst. Engineer Butts, familiar with the boilers' age and weaknesses, had developed the practice of maintaining a low pressure. Consequently damage was limited to "tearing up" part of the firebox and filling the room with steam and ashes. Commodore Warrington was shocked by this news, because he had assumed that the authorized new boilers had been installed. Since they had not, they were to be positioned in "the old place," until the new room could be readied for them. Replying, Nicolson announced that the boiler house would

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87 Nicolson to Warrington, Dec. 7, 1842; Nicolson to Upshur, Mar. 29, 1843, NA, RG 71, Ltrs. Recd., Y&D.

be commenced immediately, thus saving the expense of removing the ruptured boiler. The bureau was agreeable and directed that construction costs be charged against the appropriation "Repairs." By late winter of 1844, the boiler house had been completed and the new boilers installed.  

YARD ENGINES IN 1843

In the late winter of 1842-43, a new Tufts engine was purchased for installation in the Ropewalk's head house. It was proposed to transfer the engine being replaced to the smithery. But, when he examined the old 25-horsepower engine, Engineer Butts observed that "great repairs and alterations" would be required to adapt it to its new mission. He saw that all the brass parts would have to be replaced; the flywheel was too light; the force pumps of inferior construction and much worn; and the steam chests, valves, eccentrics, and rods would have to be altered. A new engine, better suited to the smithery, could be built for $1700. Commandant Nicolson agreed with Butts and informed the Bureau of Yards and Docks that Ropewalk personnel had been compelled to "put up" with the engine at a considerable loss to the United States in fuel and repairs. It would, in his opinion, be poor economy to repair and relocate the engine. The bureau, however, refused to sanction purchase of a new Tufts engine for the smithery.  

By May 1, the new engine had been delivered and positioned in the head house, and Superintendent of Buildings Parris informed the commandant that the boilers for the smithery engine had been installed and estimates submitted for repair of the 25-horsepower engine. The engine, in his opinion, would not suffice to drive all the machinery. He had, therefore, secured a proposal from Otis Tufts for construction and installation of a horizontal steam engine, similar to the one built for the Ropewalk. Tufts was agreeable to manufacturing a 20-horsepower engine for $1400 and a trade-in of the lever beam engine. The bureau refused to change its position, and the old lever beam engine was repaired and installed in the smithery. To secure an engineer to oversee the operation, Commandant Nicolson called for applicants for the position. Joshua Follansbee, Mississippi's engineer, was given the task of evaluating their credentials. On doing so, he recommended John Crocker, a machinist, for the job, and Crocker was hired at a wage of $2.00 per day.  

In October 1843, the Bureau of Yards and Docks called on navy yard commandants to provide the Department with information on the number and horsepower of steam engines at their facilities and a roster of men assigned to each. Captain Nicolson replied that there were at the Charlestown yard in Building No. 55 two engines, one of 60-horsepower for driving the dry dock pump and block machinery and a 10-horsepower sawmill engine. Both were powered by the same set of boilers. In the Ropewalk were two engines, both employed when there was a large workload in driving the spinning machines, laying-up ground, and tarring machinery. The new Tufts engine purchased in May 1843 was double cylindered and rated at 50-horsepower, while the older engine was 30-horsepower. The smithery housed the 25-horsepower engine formerly in the Ropewalk. It was used to drive the triphammer, blowing machine, and lathes. Two men were employed to attend the engines in Building No. 55, four for the Ropewalk engines, and two in the smithery. In addition, there was a chief engineer, Noah Butts.  

SHIPHOUSES

By mid-July 1842, the stone foundations for the launching ways of Shiphouse No. 39 were nearly
completed. The house itself required a few small jobs, such as spouts for gutters, locks on storerooms, and another coat of paint. By October 1, only $300 remained in the appropriation, and it was being employed to finish the slating. When he filed his report for Fiscal Year 1843, Nicolson reported that the structure had been completed at a cost of $49,520. During the late summer of 1842, workmen repaired Shiphouse I. Rotted sills, window sash and frames were replaced, along with some slating around the windows.93

PAINTING FRAME STRUCTURES AND MISSISSIPPI’S MACHINERY

In August 1843, the bureau informed Commandant Nicolson that, when painting yard structures, excepting the quarters, a particular mixture should be employed, consisting of 100 pounds of white lead, one-half pound yellow ocher, and one-quarter pound chrome yellow. Upon receipt of this data, Master Painter Cobb estimated the cost of painting these structures: spar shed, $350; three timber sheds, $780; tank shed, $200; and Shiphouse No. 39, $700. Mississippi’s engines should also be painted and varnished to prevent rust, while her paddlewheels should be given a coat of red lead. The bureau approved these expenditures, and the work was implemented during the autumn of 1843.94

THE QUARTERS

On April 6, 1844, Captain Nicolson notified the Department that there were eleven quarters within the yard. Five dwellings were in the upper block. No. 1 was occupied by the boatswain; No. 2, gunner; No. 3, carpenter; No. 4, sailmaker; and No. 5, 1st lieutenant. The lower block contained four units. No. 1 was home to the executive officer; No. 2, master of the ordinary; No. 3, surgeon of the yard; and No. 4, master of the yard. Three of the quarters, in addition to the commandant’s, were allowed furnishings in these sums: executive officer, $504; 1st lieutenant, $501.59; and surgeon, $424.75.95

In September 1844, six or seven years having passed since the lower quarters had been painted and their exteriors being badly worn by exposure to the weather, it was proposed to have them repainted. Master Painter Cobb estimated that to apply two coats of paint to the exteriors would cost $445 for materials and labor. All materials were on hand, except green paint for the blinds. Commodore Warrington approved the project, and Cobb and his painters were turned to.96

YARD FIRE-FIGHTING EQUIPMENT IN 1843

The yard, in the summer of 1843, had four fire engines, all constructed by William C. Hunneman of Boston. No. 1, built in 1826, and No. 2, in 1836, were tested fortnightly and were efficient machines. No. 3, thirty-years-old, was a small mechanism of inferior workmanship and power, upon which no reliance could be placed. No. 4, built in 1816, also a small engine, was stationed at the mustering house. Thirteen hundred and thirty-five feet of hose, coiled on two hose carriages, were ready for immediate action.97

93 Nicolson to Warrington, July 19, 1842, NA, RG 45, Ltrs. Recd., BNC; Annual Reports for Charlestown Navy Yard for Improvements & Repairs for 1842-43, NA, RG 71, Records, Y&D.

94 Warrington to Nicolson, Aug. 10, Aug. 18, 1843, NA, RG 71, Ltrs. Sent, Y&D; Cobb and Follansbee to Nicolson, Aug. 15, 1843, NA, RG 71, Ltrs. Recd., Y&D.

95 Nicolson to Warrington, Apr. 6, 1844, NA, RG 71, Ltrs. Recd., Y&D.


97 Nicolson to Warrington, Sep. 1, 1843, NA, RG 71, Ltrs. Recd., Y&D.
AN EARLY PROPOSAL TO BRING THE IRON HORSE TO THE YARD

In 1845, the bureau, hoping to introduce the latest means of transportation into the yard, called on Commandant Nicolson for figures on the cost of extending railroad tracks into the facility, from the steamer coal house to the nearest wharf at which vessels could tie up while being coaled. A representative of the Fitchburg Railroad estimated the cost of constructing 1800 feet of track from the coal house to the end of Pier No. 65 at $3,840.98

THE ROPEWALK

PUSHING AND IMPROVING HOME-GROWN HEMP

Efforts to increase the use of and to improve the quality of domestic hemp continued. Early in June 1842, John D. Breckinridge of Kentucky shipped to Naval Agent Browne "a quantity of American water-rotted hemp." It was to be examined at the yard, and if found satisfactory to be purchased at $280 per long ton. The Breckinridge hemp proved to be substandard, and the Board informed its new commandant that no hemp was to be received and paid for that was unsuited for naval purposes. In July, the Department wrote Commandant Nicolson that Charles Buford of Georgetown, Kentucky, had shipped to the yard three or four tons of water-rotted hemp. It was "neatly covered with bagging, & on passing" inspection it was to be paid for. The bagging in this instance was to be weighed as hemp.99

Using domestic hemp, the Ropewalk manufactured several samples of cordage which were forwarded to Washington. In late August, the Board announced that finally rope spun from No. 1 American water-rotted hemp proved equal to that made from Riga Rein.100 Hemp cultivation had been introduced into the Missouri Valley. Consequently, in July 1844, Dr. Henry King was named resident agent in Missouri for inspecting, testing, and purchasing American water-rotted hemp for the Navy. The object of King's appointment was to secure American hemp equal in all respects to Riga Rein. King was to report to Commandant Nicolson for instructions. Nicolson was to provide Dr. King with about 200 pounds of hemp adapted to naval use for comparison with such as was offered for sale. He would also be given drawings of machines for testing the hemp's strength.101

In the autumn of 1845, to protect the United States hemp growers, Secretary of the Navy Bancroft ordered that in the future no foreign hemp would be received at the Ropewalk, except when there was no domestic hemp on the market. To insure this directive was honored, the bureau had to certify that no domestic hemp of suitable quality was being offered for sale.102

PRODUCTION GOALS AND QUOTAS

On January 3, 1844, the bureau ordered sixty tons of cordage for general purposes and to supply vessels in commission during the forthcoming calendar year. As soon as this sixty tons, along with eleven tons of cordage for Plymouth, had been manufactured, the Ropewalk would be closed for the season. At the time the walk was shut down, on hand were 35,000 pounds of Riga Rein tow; 1900 pounds of common hemp tow;

98 Warrington to Nicolson, Nov. 13, 1845, NA, RG 71, Ltrs. Sent, Y&D; Nicolson to Warrington, Nov. 19, 1845, NA, RG 71, Ltrs. Recd., Y&D.
99 Warrington to Nicolson, June 4, June 20, July 11, 1842, NA, RG 45, Ltrs. Sent, BNC.
100 Warrington to Nicolson, Aug. 26, 1842, NA, RG 45, Ltrs. Sent, BNC.
101 Morris to Nicolson, July 9, July 20, 1844, NA, RG 19, Ltrs. Sent, C&R.
102 Bancroft to Morris, Nov. 1, 1845, NA, RG 19, Ltrs. Sent, C&R.
2800 pounds of tiers; 1,140 pounds of shakings; and 1100 pounds of hide straps. Some of the workmen were reprieved on March 28, when Secretary of the Navy John Y. Mason authorized Nicolson to employ the necessary number of ropemakers to meet current requisitions for rigging. Additional hands were employed in late June.

Before the summer was over, the commandants at Portsmouth, New York, Philadelphia, and Norfolk were instructed to call upon the Charlestown yard for 16-inch hemp cables for the new sloops building or being equipped at their facilities. On August 22, orders were issued for Commandant Nicolson to ship to Norfolk, without waiting for the running rigging, the standing rigging for Jamestown. In mid-November 1844, Acting Commandant Mercer notified the Department that outstanding orders for cordage had been met and that by the end of the month all bobbins would be filled. Production would then be suspended unless it was deemed expedient to continue to lay up various types of cordage.

The Department, after evaluating its commitments, directed Commandant Nicolson to maintain stockpiles at the yard of these quantities of tarred yarns: fifty tons for standing rigging, twenty-five tons for cables and hawser, seventy tons for running rigging, and five tons for bolt rope. He would also keep on hand, to meet requisitions from other yards and vessels in commission, sufficient quantities of standing rigging for the topmast, topgallantmast, and jibboom of a 32-gun frigate, a sloop of war of each class, and the running rigging, bolt rope, ratting stuff, and other small stuff for the stores of the same number and class of vessels. He was to maintain a supply of blocks by requisition on the Washington Navy Yard for the stores of two vessels of each class, up to and including frigates.

THE LUCAN EXPERIMENTS WITH TAR

At Superintendent William Caban’s suggestion, James G. Lucan had experimented to improve the quality of tar used for rigging. This promised to be of such benefit that further tests were called for. Commandant Nicolson was to authorize an experiment to be made on enough yarns from American and Riga Rein hemp to form a pair of maintopmast backstays and set of main and maintopsail braces for first-class sloop, and two coils of 3-inch rope. The rope would be marked and tested, the strength of each sample being noted before and after tarring.

THE MARINE BARRACKS DURING THE NICOLSON YEARS

In mid-September 1842, the Navy Department decided to effect major changes of stations among the Marine Corps’ seven senior officers. The relative importance of the station was to determine the seniority of the commanding officer. Orders were drafted directing Lt. Col. W. H. Freeman, commanding officer of the unit at the Charlestown Navy Yard, to be ready to leave for Pensacola on October 1 to assume command of the barracks of that yard. Prior to his departure, Freeman was to turn over responsibility for the public property to his designated successor, Maj. Levi Twiggs. On September 17, the Marine Corps Commandant, Brig. Gen. Archibald Henderson, postponed the effective date of the pending transfers until November 15.

106 Morris to Nicolson, Nov. 26, 1844, NA, RG 19, Ltrs. Sent, C&R.
107 Morris to Nicolson, Jan. 10, 1845, NA, RG 19, Ltrs. Sent, C&R.
Then on October 6, Henderson decided to send Lt. Col. Samuel Watson to Charlestown to be Freeman's relief instead of Major Twiggs. Freeman's assignment was changed to Norfolk. This change was dictated by realization that the Charlestown and Norfolk Barracks were, because of their importance, entitled to be commanded by the Corps' senior lieutenant colonels. Colonel Watson, as directed, reached Charlestown from Portsmouth in mid-November and relieved Colonel Freeman.  

LIMITED PERSONNEL PLAGUES THE CORPS

Upon assuming command of the yard in June 1842, Commandant Nicolson found that watchmen had replaced marines as guardians of the public property. In the months since the civilians had been hired, the number of marines attached to the barracks had increased to the point where they could resume sentry duty. Nicolson, therefore, called on Colonel Freeman to detail men for this purpose. The marines reported promptly, and the watchmen were discharged. There were five manned sentry posts in the yard: No. 2 at the main yard gate; No. 3 at the dry dock; No. 4 at Shiphouse H; No. 5 at Shiphouse No. 39; and No. 6 at the lower yard gate.

Commandant Nicolson hoped to increase the number of sentry posts, but the size of the Marine contingent at Charlestown contracted because of orders in July 1842 to send a detail to Portsmouth for duty upon Congress. Colonel Freemans advised General Henderson that unless his command was reinforced by enlistments or transfers, he would have to reduce the number of sentry posts. In addition, there were not enough officers at the barracks. Because captains and above were not required to pull officer-of-the-day duty, there was only one subaltern at the post to handle this activity. General Henderson ordered Lts. Edward S. West and H. W. Queen to report to Colonel Freeman. But unless Congress authorized an increase in the Corps' legal strength, it would be impossible to send any enlisted men to the Charlestown barracks or permit any enlistments. However, the Corps' manpower situation did improve. On August 16, Sgt. Maj. V. Pulizzi left the Washington Barracks accompanied by a 30-man draft to bring Freeman's detachment up to strength.

In late October 1842, Colonel Freeman was compelled to draw on his detachment to provide manpower for Ohio's Marine guard. This so reduced its strength that Freeman was unable to provide personnel to man three of the navy yard posts. Commandant Nicolson, who believed that eight manned posts were desirable, wrote Secretary Upshur, requesting that the guard be reinforced by twenty privates to allow six posts. He had no confidence in the honesty of the watchmen, who were not subject to naval rules and regulations, unless they were shipped as seamen.

Upshur referred the request to Henderson, who reported that the small portion of the Corps currently on shore duty was "nearly equally distributed at the several navy yards." It was, therefore, not in his power to send additional men to the Charlestown yard without withdrawing them from other stations. Moreover, he feared it would be necessary to further diminish these small detachments to provide marines for the squadron to be sent to the west coast of Africa. At Charlestown, Henderson continued, the latest muster roll listed seven privates on sick call, four on daily detail, and four on police call, leaving thirty-four to pull guard. To meet Commandant Nicolson's requisitions required sixty-six "effective privates," each marine being...


109 Nicolson to Warrington, July 15, 1842, NA, RG 45, Ltrs. Recd., BNC.


111 Henderson to Freeman, July 18, 1842; Henderson to Pulizzi, Aug. 16, 1842, NA, RG 127, Ltrs. Sent.

112 Nicolson to Upshur, Nov. 2, 1842, NA, Captains' Letters, Microcopy M-125.
compelled to stand eight hours on post out of the twenty-four-hour tour.\textsuperscript{113}

Since no additional marines were forthcoming, Commandant Nicolson enlisted a number of watchmen. Being "amenable to Naval Law," they "conducted themselves remarkably well." As they were paid $12 per month and their rations, they cost the government less than watchmen hired at $1.16 per diem. Since the strength of the Corps had fallen below the ceiling established by Congress, General Henderson authorized several of his barracks commanders to begin recruiting. Colonel Watson’s quota was twenty able-bodied privates.\textsuperscript{114}

THE SEA-GOING DETACHMENTS COME AND GO

On August 10, 1843, Colonel Watson went on furlough, leaving Capt. Ward Marston in command. At that time, the frigate \textit{Cumberland} was being outfitted for the Mediterranean. This confronted Marston with a number of problems, which he referred to Washington. As yet, clothing for the vessel's Marine guard had not arrived from the Philadelphia Quartermaster Depot. He trusted that it would not be delivered after she had sailed, as had happened the previous year with \textit{Columbia}. Several men scheduled for discharge had told Marston they would reenlist, if they were promised duty aboard the frigate. If Marston himself commanded the guard, Orderly Sergeant Williams of \textit{Ohio} wished to join him.\textsuperscript{115}

The clothing arrived in ample time, and the men were permitted to reenlist for service aboard the frigate under Captain Marston. Upon returning to duty and examining the muster roll of the men detailed for \textit{Cumberland}’s guard, Colonel Watson saw that fifteen men had more than two years to serve, eleven had from sixteen to twenty-four months, while the remaining twenty had from one month to a year. Most of the last group had recently returned to the States from cruises aboard \textit{Boston} and \textit{Preble}. Although some of these would reenlist, the rest planned to claim their discharge at the expiration of their time.\textsuperscript{116}

Meanwhile, in mid-October, the Marine detachment which had survived destruction of \textit{Missouri}, reached Charlestown from Gibraltar. These marines were destitute, having saved nothing beyond the clothing they were wearing. On his own responsibility, Colonel Watson ordered them given a new issue of clothing by the barracks quartermaster. His action was subsequently approved by Commandant Henderson.\textsuperscript{117}

On October 16, 1844, the frigate \textit{United States} was laid up in ordinary and her Marine guard transferred to the barracks. They immediately applied for leave, some requesting to report to other posts when their furloughs expired. Most of these men had less than a year to serve on their current enlistments. Upon being apprized of this situation, General Henderson directed Colonel Watson to grant to such men as he wished leaves of absence for periods not in excess of twenty days, with orders to report at other posts on their expiration. He was to retain at Charlestown "a fair portion of the guard."\textsuperscript{118}

ENLISTMENT PROBLEMS AND POLICIES

In June 1844, Francis Morris, a fifteen-year-old orphan, contacted Lt. F. B. McNeill, who was in temporary command of the barracks. He told McNeill that he wished to join the Corps and learn to be a fife

\begin{itemize}
  \item \textsuperscript{113} Henderson to Upshur, Nov. 8, Nov. 14, 1842, NA, RG 127, Ltrs. Sent.
  \item \textsuperscript{114} Nicolson to Warrington, Mar. 20, 1843, NA, RG 71, Ltrs. Recd, Y&D; Henderson to Watson, Mar. 30, 1843, NA, RG 127, Ltrs. Sent.
  \item \textsuperscript{115} Marston to Lindsay & Henderson, Sep. 7, Sep. 8, 1843, NA, RG 127, Ltrs. Sent, CMB.
  \item \textsuperscript{116} Watson to Henderson, Sep. 29, 1843, NA, RG 127, Ltrs. Sent, CMB.
  \item \textsuperscript{117} Watson to Henderson, Oct. 17, 1843, NA, RG 127, Ltrs, Sent, CMB.
\end{itemize}
or drummer. "Finding Morris a smart active lad," McNeill recommended that he be recruited. General Henderson was compelled to reject Morris' application, because instructions on the drum and fife could only "be given where there are proper persons to superintend what he may be learning."\(^{119}\)

A different situation confronted the Corps, when Drummer Cades, an eighteen-year-veteran of the Marine Corps and Army service, wished to reenlist. He had a problem, being blind in one eye and limited vision in the other, which prevented him from being sent to sea. Commandant Henderson was agreeable to Drummer Cades' reenlistment, provided he reported for duty at the Charlestown Barracks.\(^{120}\)

THE CORPS AND ITS DELINQUENTS

All too frequently, the Corps had to discharge men for disciplinary reasons before their enlistments expired. In June 1844, one private broke into the trunk of another marine and stole $109. All the money, except $9, was recovered, and the culprit was arrested, confined to the guardhouse, and, by direction of the Secretary of the Navy, given a dishonorable discharge. Another delinquent, Pvt. Samuel W. Cummings, considered a worthless drunk, was confined to the brig as a deserter. As he had only six months of his enlistment to serve, Colonel Watson recommended his immediate discharge, because "ordinary punishments have proved unavailing." Henderson concurred, and Private Cummings was discharged.\(^{121}\)

Fifer Smith availed himself of every opportunity to get drunk, overstay liberty, and smuggle liquor into the barracks, for which he was repeatedly punished. Accordingly, in January 1845, Smith was discharged as worthless. Six months later, Pvt. James Williamson was convicted of assaulting a Boston policeman and was sentenced by the police court to two months in the house of correction. Colonel Watson recommended he be separated from the service, and Williamson was given a "dishonorable discharge." On September 23, 1845, Pvt. Joshua Carlton deserted, taking with him items stolen from his comrades, namely a large silver watch, a trunk, and articles of clothing. Colonel Watson offered a $30 reward for his arrest and delivery to the barracks. There were no claimants because Carlton was not seen again in the Charlestown area.\(^{122}\)

Occasionally, the marines on guard duty had difficulties. On Tuesday evening, February 11, 1845, a naval officer, Midshipman C. S. Throckmorton, arrived at the Water Street gate and, not having the watchword, was at first refused permission to pass. However, the porter admitted Throckmorton, but warned him that he must secure the watchword or the Marine sentry on the wharf would stop him. He nevertheless continued his way. The sentry did challenge and stop Throckmorton, who soundly cursed the marine. Throckmorton hailed the receiving ship and ordered a boat to bring him the word. Just as the corporal of the guard dashed up, Throckmorton jumped into the boat and, as sailors pulled at the oars, continued to curse and threaten the marines.\(^{123}\)


\(^{120}\) Watson to Henderson, Mar. 21, 1845, NA, RG 127, Ltrs. Sent, CMB; Henderson to Watson, Mar. 25, 1845, NA, RG 127, Ltrs. Sent.


\(^{123}\) Watson to Nicolson, Feb. 13, 1845, NA, RG 127, Ltrs., CMB.
MAINTENANCE AND REPAIR OF THE BARRACKS

In July 1842, the detachment's junior officers raised questions regarding their quarters in the left wing of the Marine Corps barracks. Captain Marston had a kitchen and one room in both the second and third stories over the kitchen, each measuring 304 square feet. For the three lieutenants, there were three rooms on the "1st, 2d, and 3d stories, each measuring 204 feet, and a small room adjoining each." They wished to know whether the third story was deemed to be officers' quarters, or as attics for use by their servants. Colonel Freeman's letter concerning the quarters allowance was referred to the 4th auditor.124

At Colonel Freeman's request, repairs to the left wing having become necessary, navy yard Master Painter Cyrus Cobb and Master Joiner Caleb Pierce examined the structure. They found the piazza so far deteriorated that it could not be repaired. To replace it would cost $150. They also called for painting the "front upper chamber and the rooms in the second story--front entry--and the rooms on basement story, one coat of paint on standing work; back entry and kitchen one coat on standing work and floors." The "entry and four rooms" required coloring, and all the ceilings in the left wing needed whitewashing. There were three rooms to paper. The cost of the painting and papering was estimated at $85. In accordance with procedures, Commandant Henderson submitted these estimates to Secretary of the Navy Upshur. The Secretary gave his approval, and the project was funded and implemented before winter.125

In mid-September 1843, Colonel Watson purchased for his quarters a large number of items. They included two Brussels carpets, three ingrain carpets, two ingrain passage carpets, one tufted hearth rug, three Brussels hearth rugs, twelve chamber chairs, eighteen dining room chairs, twenty-four mahogany parlor chairs, two ottoman sofas, one extension dining table, a venetian stairs carpet, four bureaus, five bedsteads, three washstands, a cooking stove, and two looking glasses for the parlors.126

In the first week of October 1844, Colonel Watson called for an allotment to permit replacement of the deteriorating "platform of the left wing and the portico of the right wing"; reconstruction of the cellar; a new door and door frame; and two new pumps. Commandant Henderson recommended and Secretary of the Navy Mason sanctioned the expenditure of $381.25 for the repairs. Before this work was completed, a gale blew down twenty-six feet of the Marine compound fencing. When Colonel Watson relayed this news to Washington, he called for and received approval for expenditure of another $68 to repair the fence and paint the barracks.127

In mid-December 1844, Colonel Watson transmitted to headquarters the receipts received from Capt. Alvin Edson and Lts. F. B. McNeill and Nathaniel Waldron for furniture allowed by the government for their quarters.128

Colonel Watson in September 1845 submitted estimates of needed repairs to the barracks and grounds. Some of the more substantial repairs required were construction of three new bulhead, a new lobby floor, two new floors and flooring for the left wing, and a new privy roof. Total cost of repairs was estimated at $1,020.85. General Henderson and Secretary of the Navy Bancroft approved this expenditure. Approval

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126 Watson to Nicolson, Sep. 18, 1843, NA, RG 127, Ltrs. Sent, CMB.


128 Watson to Nicolson, Dec. 16, 1844, NA, RG 127, Ltrs. Sent, CMB.
also was given for the acquisition of new cooking ranges for both the right and left wings of the barracks.  

Within a few months, because of the crisis with Mexico, Henderson, Watson, Bancroft and other heads of the Navy and Marine Corps would have more serious matters to attend to.

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In the closing days of his administration, President Tyler pushed through Congress a joint resolution annexing Texas to the United States. The Mexican government held that Texas was still one of its provinces, and, upon news of the resolution of annexation, Mexico severed diplomatic ties with the United States. The new American president, James Polk, hoped that a show of military force combined with diplomatic maneuvers would persuade Mexico not only to accept the loss of Texas, but also to cooperate in satisfying American desires for New Mexico and California. Thus, there occurred a build-up of United States naval forces in the Gulf of Mexico and the deployment of an army led by Brig. Gen. Zackary Taylor on the Nueces River.

Although a crisis was in the making during 1845, some naval authorities did not anticipate hostilities. In connection with needed repairs on the Charlestown yard’s anchor hoy, Commo. Charles Morris, Chief, Bureau of Construction and Repair, wrote Commandant Nicolson on May 6 that he presumed there would be “no immediate war with Mexico, Brazil or England and that our national affairs at home and abroad will go on much as usual.” However, in August and September 1845, the yard assisted in the preparations for war and completed repairs and outfitting of two ships, Mississippi and Marion, which were assigned to the Home Squadron, then stationed in the Gulf.

The United States declared war against Mexico in mid-May 1846. During the previous winter and the early spring, there were periodic bursts of activity, as the United States slowly boosted its strength afloat. In March, General Taylor’s columns crossed the Nueces into territory claimed by Mexico and took position on the Rio Grande. The results were predictable. A clash occurred between Mexican and American forces, and the war was under way.

THE CHARLESTOWN YARD AND THE MEXICAN WAR

Of the various wars fought by the United States, the Mexican War apparently had the least temporary or permanent impact on the Charlestown Navy Yard. The war consisted principally of land engagements and, except for the amphibious assault on Veracruz, there was little naval activity. The Mexican government had virtually no navy, and efforts failed to stimulate action by privateers against American commerce. The serious fighting in the Mexican War began in April 1846 and ended in September 1847, making it a relatively brief struggle. Except for the Portsmouth facility, Charlestown was the navy yard most remote from the scenes of combat.

Between the summer of 1845 and spring of 1848, the Charlestown Navy Yard worked on ten ships that took part in the war by performing general duty in the Gulf, participating in the blockade of Veracruz, serving as support vessels in the Veracruz campaign, or, in one case, cruising in the Western Pacific. Employment statistics provide one index of activity at the yard. The number of workmen at Charlestown during the first half of the 1840s had generally increased. For example, the yard employed 541 men on April 1, 1842, and 623 on October 1, 1843. That trend persisted during the war years, the greatest body of

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1 Morris to Nicolson, May 6, May 12, 1845, NA, RG 19, Ltrs. Sent, C&R. The United States was involved in a dispute with Great Britain about ending joint occupation of the Oregon Country and with Argentina over its blockade of Montevideo.
mechanics and laborers, 818, being engaged on July 1, 1846.  
Because of the war, the Navy Department gave orders to the Charlestown Navy Yard to expedite repair of Princeton, United States, Independence, and Ohio. This led to unanticipated plant expenditures. A temporary shed was built to protect Princeton’s boilers. New forges were erected. Additional work space had to be provided in the plumbers’ shop, and “more than ordinary repairs” were made to the furnaces at the Ropewalk and engine shops. It appears that the volume of activity at the yard exceeded the yard’s useable wharfage, a deficiency that could not be immediately eliminated.

In the naval appropriations bills of 1847 and 1848, the Boston Navy Yard received increased funding for plant improvements. As a consequence of these wartime measures, six new structures were erected—a carpenters and joiners’ shop; blacksmithery and plumbers’ shop; a timber shed; two wharves; and a brick barn.

During the era of the Mexican War, the Marine Barracks at the Charlestown Navy Yard performed a number of functions. From its own personnel and contingents sent from Corps headquarters in Washington and elsewhere, it provided the Marine guard for a number of ships being readied for service at the yard. Officers attached to the barracks became involved with recruitment. The barracks also aided in the organization of two Marine battalions which participated in the land war against Mexico. Finally, the detachment continued to assist in providing security for the navy yard. The war years saw rapid changes in personnel, including the barracks’ commanding officer.

On November 21, 1845, Captain Nicolson, commandant of the Charlestown Navy Yard, was detached and instructed to stand by for further orders. He was replaced by Commo. Foxhall A. Parker, who formally assumed charge of the yard on the 28th. Parker had oversight of the facility until early December 1848, when he sailed for Europe. Still formally commandant of the yard, he was under orders from the Secretary of the Navy to assist the German Confederation in organizing a navy. Cdr. Josiah Tattnall, as senior officer, served as commandant during Parker’s three-month absence. Parker returned from Germany and arrived in Washington on March 4, 1849. Calling at the Navy Department, he learned that he was to be reassigned as commander of the Home Squadron. A few days later, he left the nation’s capital for Charlestown to close out his affairs and to relocate his family.

WORK ON SHIPS, 1845-1849

BOXER AND CUMBERLAND

In early 1846, while President James K. Polk and his administration were pressing the Mexican government to acquiesce in the annexation of Texas, two ships put to sea that had been repaired and refitted at the Charlestown yard the previous autumn. In the middle of January, the brig Boxer sailed for the west coast of Africa, and at the end of the month, the frigate Cumberland departed the yard for the Gulf of Mexico.

PRINCETON

In February 1846, the Bureau of Construction and Repair sent orders to have the steamer Princeton "repaired and fitted for sea with all possible dispatch." By early March, the patterns for her stern bearings were received from the Washington Navy Yard. The castings were to be made locally at Alger's foundry.

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2 Preble, p. 431.


4 Charlestown Navy Yard Journal, Nov. 1-30, 1845, 181-56; Preble, pp. 299, 552; Niles’ National Register, Mar. 7, 1849, p. 146.

Repair of her boilers was expected to be finished by mid-March, and Parker's hope was that the vessel would be ready for her officers and crew by April 10. However, Alger failed to meet his deadline. Moreover, when the bearings finally arrived, they were found to be honeycombed and had to be recast. This delayed the ship's outfitting until early May. On May 9, *Princeton* was reported ready for sea. Three days later, she was hauled into the Charles and soon sailed for the Gulf of Mexico. Two weeks after departing Boston, she was blockading Veracruz.

**UNITED STATES**

In compliance with instructions from Washington, Naval Constructor Pook prepared a report detailing repairs needed to outfit *United States* for a two-year cruise. On the basis of that report, the Department ordered the frigate made ready for sea. A large work force turned out, and, on March 28, Commandant Parker notified the Bureau of Construction and Repair that the frigate would be ready to receive her officers and men by April 10, provided her guns were proved. On May 11, the ship was docked, her copper inspected, and a few sheets of worn metal on her bilge were replaced. On June 2, she was hauled out into the harbor and sailed for the west coast of Africa.

**INDEPENDENCE and YORKTOWN**

Early in April 1846, the Secretary of the Navy ordered repair of *Independence* resumed in accordance with a recent survey made by Chief Naval Constructor Samuel Humphreys and Mr. Pook. The vessel was promptly docked, and a force of fifty carpenters, seventeen joiners, twelve caulkers, twelve painters, twelve smiths, ten plumbers, and thirteen carpenters' helpers turned out. The vessel required more work than anticipated, and in mid-June, the Department registered its disappointment upon learning that the earliest date the big razee could be ready for sea was August 1. In defense of himself and the yard, Parker assured Washington that every exertion had and would be made to prepare *Independence* for sea "in the shortest possible time." On August 29, four weeks after the date originally designated by Parker, *Independence* put to sea, bound for the western Pacific.

On May 29, the sloop of war *Yorktown* reached the yard from Puerto Praya, base of operations for the West African Squadron. *Yorktown* was placed in ordinary and was laying at Wharf No. 65 on October 13, when a gale struck. She suffered damage to her port quarter. Two years later, in September 1848, the Department ordered *Yorktown* prepared for service as flagship of the West African Squadron. She was taken out of ordinary, outfitted, and manned. On November 22, she beat her way out of Boston Harbor.

**FRANKLIN AND OHIO**

On June 1846, the Bureau of Construction and Repair ordered the 74-gun *Ohio*, which had been recently recaulked, examined by Chief Naval Constructor Humphreys. He was to ascertain the extent and cost of repairs necessary to prepare the receiving ship for foreign service. Commandant Parker was directed to

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determine whether Franklin or Yorktown would make a better replacement for Ohio as the yard's receiving ship. It was decided that Franklin, also a liner, could better discharge this mission. Commodore Morris ordered Franklin readied as the receiving ship, but only when that work would not interfere with repair and equipping Independence. By August 19, preparations had been completed, and the officers and crew assigned to the receiving ship transferred from Ohio to Franklin. In mid-October, the bureau notified the yard that Ohio was to be prepared for sea as soon as practicable. Another fourteen weeks passed before the liner was repaired, outfitted, and manned. On February 4, 1847, she sailed for the Gulf of Mexico.10

JAMESTOWN

On August 16, 1846, Jamestown arrived from the west coast of Africa. Upon being told of her presence, the bureau called for a report on the repairs and supplies needed to ready the sloop for an eighteen-month cruise. Naval Constructor Pook found that her upper works and decks would have to be caulked and painted. One suit of sails was badly worn and, in view of the projected lengthy cruise, needed to be renewed. The rigging had to be overhauled and the hold broken out. Some of the ship's officers complained to Commandant Parker that she was "crank."11

In the third week of October, the yard was alerted to begin repair and outfitting Jamestown, but priority was to be given Ohio. Several weeks passed before significant numbers of workmen became available, and not until late winter did Parker advise the bureau Jamestown was ready for sea. On March 28, 1847, the ship sailed for Cork, Ireland. Aboard were provisions being rushed across the Atlantic to help alleviate suffering caused by the potato famine. Jamestown returned to Boston on May 16. Within several days of her arrival, Parker was alerted to have the sloop outfitted for duty with the African Squadron, with as little delay as practicable. The task was completed by mid-July and on the 22d, Jamestown sailed from the yard.12

CONSTITUTION

Since departing the yard in March 1835, Constitution had served a three-year tour of duty as flagship of the Mediterranean Squadron; two years as flagship for the South Pacific Squadron; and three months with the Home Squadron. In March 1844, she had set sail on a thirty-month circumnavigation of the globe. On September 27, 1846, Constitution arrived home in Boston and was hauled to the yard the next day. Orders were soon forthcoming from the Navy Department to pay off the crew and place the frigate in ordinary. Such stores as had been condemned were sold by Naval Agent Joseph Hall at public auction.13

On August 11, 1847, the Bureau of Construction notified Parker work on the repair of Constitution was to begin immediately. If the gun- and berth decks were replaced, Parker should raise the decks eighteen inches, "giving them a corresponding height amidships, so that the shear of the deck should not exceed fourteen inches." The ports were to be enlarged to accommodate the heavier armament to be sent on board. Timber needed for repair of Constitution could be purchased on the open market whenever delay would cause loss to the public. All other purchases were to be through proposals solicited in published advertisements.14


12 Morris to Parker, Oct. 20, Oct. 21, 1846; Warrington to Parker, May 20, 1847, NA, RG 19, Ltrs. Sent, C&R; Preble, pp. 295-96.


14 Skinner to Parker, Nov. 6, 1846; Aug. 11, Aug. 25, 1847, NA, RG 19, Ltrs Sent, C&R
H. Jones & Co., of East Boston, offered for sale a lot of Maryland white oak plank of various sizes, along with a quantity of other types of Maryland timber. Naval Constructor Pook found this timber suitable for repairs on Constitution, and it was purchased.\(^5\)

The Andrew Jackson figurehead on Constitution continued to cause problems. In October 1847, the bureau directed that it be repaired and repositioned. Further consideration produced the recommendations of "divesting it of the hat, and inclining it forward." However, the figurehead proved to be so badly decayed as to merit a replacement. Parker received instructions that the replacement should be an exact likeness of the original and that it be mounted in a "more graceful position than the former." The new Jackson figurehead was produced by Boston woodcarvers, J. D. and W. H. Fowle. The Fowles' "Old Hickory" stood tall, with stern visage, and was dressed in well-fitting attire topped by a draped cloak. He carried a scroll in his right hand and his left was thrust into the front of his tailed coat. The Fowle brothers also carved new trail boards for the frigate. For their work, they received $330.\(^6\)

Constitution entered the dry dock in January 1848. The bureau ordered that no changes be made in the frigate's inboard arrangements, excepting the magazines, breadrooms, and forward storerooms. Plans of the berthdeck, orlop decks and magazines were mailed to Parker to provide guidance. These plans were to "be adapted to the dimensions of Constitution insofar as circumstances permitted." They were regarded as an improvement on the old magazines and had been introduced into several ships by the bureau.\(^7\)

Because of an increase in weight of the armament and the introduction of shell guns, the bureau had recently adopted new dimensions for gun ports and heights of the port sills. Gun carriages were to be in conformity thereto. All ports, both fore and aft, were to be forty-two inches, with a height of thirty-six inches. The height of the upper edge of the lower port sill on a frigate's gundeck was to be twenty-four inches, while those on the spardeck were to be eighteen inches. In mounting long guns on Constitution's spardeck, the port sills were to be raised by insertion of a chock of suitable height. When Constitution was rearmed, she would carry new, lightweight 32-pounder long guns on her spardeck, a heavier model 32-pounder long gun on the gundeck, and four 8-inch Paixhan guns. Her battery numbered forty-six 32-pounders and four shell guns.\(^8\)

In April, the bureau ordered twenty-five tons of ballast sent aboard the frigate. Several weeks later, Constitution was taken out of dry dock and hauled to the shear wharf, where her masts were stepped. Then, on June 27, Commandant Parker was instructed to prepare her for sea, because her services would be required as soon as a crew could be recruited.\(^9\)

In September 1848, Construction and Repair called for the vessel to be outfitted for two years' service in the Mediterranean. Shortly before Constitution was commissioned, the Navy agreed with her captain that he be provided with a light poopdeck. However, reconsideration resulted in the conclusion that a frigate should never have such an "incumbrance" as a poop deck. The ship went into commission on October 9, 1848. Her outfitting and manning required two months, and on December 9, she sailed for Gibraltar.\(^10\)

**FALMOUTH**

In November 1846, the sloop Falmouth reached the Charlestown Navy Yard from Pensacola. She had been on blockade duty off the Mexican coast since May. Her crew was paid off, and she went into ordinary, where she remained for more than fifteen months. In March 1848, the Bureau of Construction ordered that

\(^5\) Skinner to Parker, Feb. 15, Feb. 21, 1848, NA, RG 19, Ltrs. Sent, C&R.


\(^7\) Skinner to Parker, Dec. 13, 1847; Jan. 12, Jan. 18, 1848, NA, RG 19, Ltrs. Sent, C&R.

\(^8\) Skinner to Parker, Mar. 30, 1848, NA, RG 19, Ltrs. Sent, C&R; Martin, p. 235.

\(^9\) Skinner to Parker, Apr. 20, June 27, 1848, NA, RG 19, Ltrs. Sent, C&R.

she be repaired and outfitted with as little expense as practicable. In November, the Department directed the sloop be prepared for sea with "all convenient dispatch." However, it was not until mid-May that she was recommissioned and sailed for the Pacific.

COAST SURVEY VESSELS

In addition to vessels of the United States Navy, the yard at Charlestown also serviced ships of another federal agency, the Coast Survey. During the winter of 1845-46, the Navy's schooner *Apprentice* was taken out of ordinary, repaired, and transferred to the Coast Survey, which bore the repair cost of more than $500. Another vessel laid up at the yard during the same winter was the surveying brig *Washington*. In early June 1846, she put to sea. In October 1846, the brig *Casket* reached the yard from the west coast of Africa. In November, with the end of the season for surveying in northern latitudes, the Coast Survey's *Gallatin* arrived at the facility. *Gallatin* put to sea for a new surveying season in early June. *Bibb*, a U.S. Revenue Steamer, entered the yard in July to be refitted for service with the Coast Survey. During 1848, both *Bibb* and *Gallatin* visited the yard.

PURCHASING AND OUTFITTING STORESHIPS

On December 6, 1846, two privately owned ships, *Crusader* and *Fredonia*, put in at the yard. They were inspected by Commandant Parker and then purchased as naval storeships. *Crusader* was renamed *Supply*. Some alterations were made to *Fredonia*. Her ballast was landed and tanks sent aboard and positioned. Naval Constructor Pook took her lines, and workmen made for her two topsails and two foresails.

Orders were soon received to assemble all the small boats as could conveniently and safely be transported aboard *Fredonia*, *Supply*, and the ship-of-the-line *Ohio*. These small craft were needed to ferry ashore troops and supplies in the amphibious attack by American forces on Veracruz. The boats were aboard and other preparations completed by mid-January 1847. *Fredonia* sailed for the Gulf on the 9th, and *Supply* on the 21st. Meanwhile, the bark *Morgan Dix* had arrived and had taken aboard provisions and supplies for the West African Squadron.

ETNA, STROMBOLI AND VESUVIUS

In addition to the storeships, the Navy also purchased for service in the Mexican War three schooners to be outfitted at the Charlestown yard as "bombers" to support the attack on Veracruz. Commo. Lawrence Kearny was in charge of the project. After purchasing the three ships, Kearny conferred with Commandant Parker and Naval Constructor Pook to determine what alterations were necessary. Each vessel was to mount...
a 10-inch mortar, weighing 15,000 pounds, with a carriage capable of being elevated thirty-five degrees. The mortar would be positioned about seven feet above the deck. Two of the schooners, Walcott and Howard, were bought at Boston, and the third at New York City. Walcott and Howard were hauled to the Charlestown yard to be outfitted and armed. As the date for the Veracruz attack was fast approaching, Secretary of the Navy Bancroft urged that no time be wasted in preparing the bombers. Each vessel was to be manned by seven officers (including midshipmen and a clerk), twelve petty officers, and twenty seamen.26

Kearny recommended changing the rig of the schooners to hermaphrodite, which would enable the mortar to be manned to advantage. The bureau recognized the merit of his proposal and agreed. Because the bombers were to be outfitted with dispatch, Parker authorized Pook to employ as many mechanics as possible and to exceed the regular wage rate.27

In naming these craft, the Department opted for the volcanic terms that had been employed for bomb vessels since the Tripolitan War. Walcott and Howard became Etna and Stromboli; and the New York ship, Vesuvius. Etna sailed for the Gulf on March 13 and Stromboli six days later. However, the Mexican defenders had surrendered Veracruz before the bombers arrived.28

ALBANY

In mid-August 1847, the Department alerted the yard that the sloop Albany was en route from the coast of Tabasco to Charlestown. On her arrival, she was to be relieved of her ballast and docked. Special handling was required in the docking to pinpoint "inequities" in her keel. It was vital that the blocks in the floor of the dock be laid with great care. Albany arrived at the yard on August 28. She remained for five weeks, sailing for the Gulf on September 25.29

DECATURE

On November 12, 1847, the sloop Decatur reached the yard from the east coast of Mexico. Her crew was sent aboard the receiving ship Franklin, her stores and tanks landed, and her holds cleansed. Workmen turned to, outfitting her for a cruise off the west coast of Africa. That task was completed by February 2, 1848, when Decatur sailed for the Gulf of Guinea.30

SHIPS TIMBER FOR PORTSMOUTH

In late July 1847, the Bureau of Construction and Repair directed Commodore Parker to ship to the Portsmouth yard frames for a steamer and such promiscuous timber as requisitioned by the commandant of that yard.31 Those materials were to be used in shipbuilding.


28 Preble, p. 295; Chapelle, p. 600.


30 Skinner to Parker, Nov. 15, Nov. 16, 1847, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 298.

31 Skinner to Parker, July 30, 1847, NA, RG 19, Ltrs. Sent, C&R.
Table 1: NUMBER OF DRY DOCKINGS, BOSTON NAVY YARD, 1842-1853

(Does not include vessels docked in East Boston. Asterisk indicates private or foreign vessels.)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER</th>
<th>NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1842</td>
<td>4</td>
<td>Columbus, Bainbridge, Independence, Potomac</td>
</tr>
<tr>
<td>1843</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1844</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1845</td>
<td>6</td>
<td>Boxer, United States, Marion, Independence, Cumberland, Princeton</td>
</tr>
<tr>
<td>1846</td>
<td>4</td>
<td>Princeton, United States, Jamestown, Ohio</td>
</tr>
<tr>
<td>1847</td>
<td>5</td>
<td>Etna, Stromboli, Yorktown, Albany, Constitution</td>
</tr>
<tr>
<td>1848</td>
<td>7</td>
<td>Portsmouth, Falworth, Yorktown, John Adams, Vermont, Bay State*, Ocean Monarch*</td>
</tr>
<tr>
<td>1849</td>
<td>8</td>
<td>Savannah, Bibb, Marion (twice), Princeton, caisson, Helicon*, Uriel*</td>
</tr>
<tr>
<td>1850</td>
<td>9</td>
<td>Bibb, Ohio, Albany, Najardin*, Amazon*, Surprise*, John Bertram*, Witchcraft*, Gamecock*</td>
</tr>
<tr>
<td>1853</td>
<td>10</td>
<td>John Hancock (thrice), Gallatin, Dale, Germantown, John Adams, Arabia*, Sunbeam*, Diamond of the Deep*</td>
</tr>
</tbody>
</table>

SOURCE: George Henry Preble, "History of the Charlestown Navy Yard, 1797-1874"
POSTWAR ACTIVITIES

In the eight months following the Mexican War, the Charlestown Navy Yard worked on half a dozen naval vessels. On April 25, 1848, two months after the Treaty of Guadalupe Hidalgo ended hostilities with Mexico, the Bureau of Construction and Repair ordered Vermont to be readied for launching. The bureau did not intend to finish the ship, but sought to remove her from "the danger to which the ship and the yard are exposed from her contiguity to the wall." As a further housekeeping matter, Shiphouse G was ordered dismantled as soon as Vermont was off the ways. Whatever the intention, the launching of the liner was a major event, and Secretary of the Navy Bancroft expressed his desire to be in attendance. Arrangements were also made to provide the workmen the usual collation, charging the expense thereof to "Contingencies." Bancroft was unable to be in Charlestown on September 14, 1848 for the launching. A large number of people gathered at the yard. At 11 a.m., Vermont slid down the ways to the cheers "of a vast concourse of people and the firing of cannons from the battery." After the launch, she was made fast under the masting shears.32

Vermont's timbers were given an opportunity to swell before she was taken into dock to have her bottom coppered. To increase the draft, 300 tons of ballast were sent aboard. To shield them from the sun and rains, her decks were covered by a shed built of timbers salvaged from Shiphouse G. As protection against fire, the roof of the shed was sheeted with 16-ounce copper. Vermont was fated to be the last ship-of-the-line to be completed as such for the United States Navy. Though Alabama was finally launched as New Hampshire in 1864, she was completed as a storeship. The big 74s were suitable for no more than to "show the flag" on foreign stations, and even there they were gradually being replaced by smaller ships and steamers of greater utility in event of war.33

The steam frigate Mississippi arrived at the yard from the Gulf of Mexico on April 16, 1848. She had her holds broken and cleansed. Professor Grant assisted in the operation with his "disinfecting apparatus." On May 26, the bureau ordered Mississippi to be "restowed" and placed in readiness to get up steam. About 300 tons of coal were sent aboard, and on July 21, she departed the yard en route to the Mediterranean.34

On May 5, the sloop Portsmouth arrived at the yard from the Pacific. The bureau notified Commandant Parker that she was required for immediate service and was to be outfitted for two years' service. By mid-August, Portsmouth had her new outfit, and at the end of the month sailed for the African coast.35

Two days after the arrival of Portsmouth, the corvette John Adams dropped anchor in the Charles, having returned from duty with the Home Squadron in the Gulf of Mexico. Her crew was paid off, her holds broken open, and the necessary surveys made of her hull, spars, sails, and rigging. On the basis of those reports, the bureau ordered the ship repaired and equipped for duty with the West African Squadron.36

On September 13, Marion, a sloop, arrived at Boston from the Mediterranean. She was hauled into the yard, her stores sent ashore, and her crew transferred to the receiving ship. After examination by a board of survey, she was placed in ordinary. On January 15, 1849, the frigate Savannah reached Boston from the New York Navy Yard, where she had undergone extensive repairs. She was hauled into dry dock. By March 1, she had been recoppered, and she departed the yard bound for the Pacific.37

32 Skinner to Parker, Apr. 25, Aug. 12, Aug. 31, 1848, NA, RG 19, Ltrs. Sent, C&R.
34 Skinner to Parker, Apr. 20, May 26, July 8, 1848, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 298.
35 Skinner to Parker, May 8, 1848, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 298.
36 Skinner to Parker, Apr. 8, Sep. 29, 1848, NA, RG 19, Ltrs. Sent, C&R.
37 Skinner to Parker, Sep. 15, 1848; Skinner to Parker, Nov. 25, 1848, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 302.
NEW C&R POLICIES

In the spring of 1846, the Bureau of Construction and Repair inaugurated a new policy for preservation of vessels in ordinary. During the warm seasons, upper decks and sides were to be wet down in the mornings and evenings. After the spar, poop, and forecastle decks had been made "tight," they were to be "paid" with a mixture of turpentine and tallow.38

After the war, in an effort to reduce expenditures, the Bureau of Construction proclaimed rules to be observed by navy yards in shipbuilding. Only the facing and moulding side of timbers were to be dressed with an adz. All planking of five inches or less in thickness was to be hewed with the edges made "fair" with a fore plane, and all those of greater thickness were to be dressed with an adz. Beans, deck frames, clamps, and knees of the berth and orlop decks were to be planed, except for rounding off the corners of the beams, carlines, and ledges; and the beams and knees of the decks above the berth deck were to be dressed as heretofore. In coppering, no felt, tarred paper, or any similar material was to be placed between the vessel's bottom and the copper. Before being coppered, the bottom was to be "paid" with turpentine and tallow, and the copper laid on and "punched" on the bottom. Joiners' work was to be of pine, the cabin and wardroom of panel work. All other bulkheads, berths, and similar woodwork were to be "plain" and to be so put up that they could be removed "at pleasure without injury to the material."39

USE OF THE DRY DOCK

The dry dock saw heavy use during the Parker years. In 1846 four vessels were docked; in 1847, five; and in 1848, five naval vessels and two commercial ships, Bay State, a merchant steamer, and Ocean Monarch, a packet vessel.40

The Secretary of the Navy established a precedent in the late winter of 1848-49. When approached by owners of the steamship Uriel, he directed that she could be docked at the Charlestown Navy Yard, provided the dock was not occupied by a public vessel. The owners were to pay all costs and to see that their people conformed to the yard's rules and regulations. As soon as Savannah was clear of the dock, Uriel was taken in and her hull inspected and repaired. She was followed by the revenue steamer Bibb, which had her bottom cleansed preparatory to going to sea for the season.41

THE YARD LABOR FORCE

Although the United States and Mexico stood on the brink of war in the spring of 1846, the Navy Department was desirous of insuring that the number of mechanics and laborers at its yards was no greater than required to "secure the completion of the objects that may be ordered." A case in point was the work force on Independence, under repair at the Charlestown Navy Yard. The Department held that the force exceeded the number needed to have her ready for sea by October, and the excess workers were laid off in early May. Immediately following the declaration of war by the United States on May 13, the situation at the yard changed. The Secretary of the Navy authorized yard commandants to hire more workmen to meet the needs of the emergency.42

38 Morris to Parker, Apr. 18, 1846, NA, RG, Ltrs. Sent, C&R.
39 Skinner to Parker, Apr. 27, 1848, NA, RG 19, Ltrs. Sent, C&R.
40 Preble, pp. 292, 295, 298. See Table I, p. 42.
41 Smith to Parker, Feb. 22, Mar. 15, 1849, NA, RG 71, Ltrs. Sent, Y&D.
42 Morris to Parker, May 2, May 25, 1846, NA, RG 19, Ltrs. Sent, C&R.
WAGES AND HOURS

In February 1847, the Bureau of Yards and Docks announced a new method for fixing yard wages. By the best means in their power, commandants were to ascertain in private businesses in the vicinity of their respective yards the "current wages of such kinds and classes of mechanics as are employed" in their establishments. Also commandants were to determine local usages respecting the hours for beginning and stopping work and the time allowed for meals. Each commandant would then prepare "a well regulated scale of the working hours and wages for the yard . . .," to take effect April 1, 1847. Thereafter, wages and hours were to be adjusted quarterly, on the first day of January, April, July, and October. As soon as prepared by the commandants, the scales were to be submitted to the bureau for approval. Workmen in each class were to "be arranged for wages, at not more than three or less than two rates, exclusive of apprentices, and to be rated exclusively according to merit." The yard bell was to begin tolling and the muster to be held five minutes before the time men were to commence work. There was to be no Sunday work or overtime, except in emergencies. When such emergencies occurred, they were to be reported to the bureau.

In the case of the Charlestown yard, it appears that the new method for fixing wages had been anticipated. In order to obtain the manpower needed for wartime operations, Commandant Parker had been compelled to pay the prevailing wages in the region. He stated that were he to seek to reduce wages to the "old standard," all work in the yard would come to a standstill. Already, he reported, there was a shortage of caulkers, because they could not be hired for under $2.00 a day.

The wage scale promulgated for the Charlestown Navy Yard for the quarter beginning April 1, 1847, listed twenty-four categories of trades, including carpenters' helpers, blacksmiths' helpers, and writers. The scale recognized five levels within each trade: master, foreman, and first-class, second-class, and third-class mechanics. However, no wages were specified for masters in any trade, and it appears that the schedule was not intended to cover them. Wages were stipulated for foremen in eleven of the twenty-four categories. Highest paid foremen were those for carpenters and engineers, who received $3.00 per day; lowest paid were foremen boatbuilders, paid $2.00. First-class carpenters received $2.25, a half a dollar more than any other first-class workers. Except for the carpenters, first-class mechanics had daily wage rates of $2.00, $1.80, or $1.76. Second-class craftsmen were paid $2.00, $1.76, $1.68, or $1.52; and third-class $1.76, $1.52, $1.36, or $1.24. First-class laborers received $1.26. In special categories were the positions of superintendent of laborers ($1.76); writers ($1.76); firemen ($1.40); and armorers ($2.00).

The category "laborer" applied to men employed in the Navy Store and also to teamsters, keepers of the stables, messengers, and lamplighters, as well as common, unskilled workmen. When the size of a work force required it, a quartermaster could be appointed from among the first-class mechanics. Upon a written order by the commandant, a quartermaster was entitled to an additional twenty-five cents per day.

Throughout most of the Parker years, the workday at the yard commenced at sunrise in those months when the sun rose after 7:00 a.m., and it ceased at sunset, when the sun went down before 6:00 p.m. During the rest of the year, work began at 7:00 a.m. and ended at 6:00 p.m. In all seasons, one hour was allowed for dinner. No reduction in wages occurred when the workday fell below ten hours. In the autumn of 1848, the Department modified these regulations. Henceforth, between September 20 and March 20, the workday was to begin one hour after sunrise.

43 Smith to Parker, Feb. 26, 1847, NA, RG 71, Ltrs. Sent, Y&D.
44 Parker to Smith, Mar. 30, 1847, NA, RG 71, Ltrs. Recd., Y&D.
45 A copy of the wage scale for April 1, 1847 is found in Preble, opposite page 297.
46 Ibid.
47 Parker to Smith, Oct. 31, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Nov. 21, 1848, NA, RG 71, Ltrs. Sent, Y&D.
APPRENTICES

Navy yard work forces included apprentices. However, it appears that the Department had no uniform regulations for apprenticeships. In August 1847, Naval Constructor Samuel Pook suggested a system for apprentices at the Charlestown yard. The Department raised objections, and nothing was accomplished for the Charlestown facility or for the Navy's shore installations at large. Nevertheless, Pook's ideas offer some insight into the institution of apprenticeship at navy yards.

The Charlestown naval constructor recommended that apprentices be indentured to a master mechanic, who would be responsible to the government for the faithful performance of his young wards. The master was to give instruction in a trade "as far and as fast as the apprentice may show himself disposed, and capable of learning." Moreover, the master mechanic would provide the apprentice with all "things necessary in sickness and in health and teach him habits of industry and good morals." A master was to be responsible for the apprentice both inside and outside the yard. He was to sign the payroll on behalf of the apprentice and receive his pay, out of which he was to see that the boy was provided with the proper tools, clothing, and other necessities.

Each indenture of apprenticeship would be drawn up before the yard commandant and made a matter of record. During the first year of his indenture, an apprentice would be paid at four-tenths the wage rate of a first-class workman in the same trade, five-tenths for the second year, with similar subsequent increases. The number of apprentices allowed to a master was limited to two each for the naval constructor, master carpenter, master joiner, master smith, master mastmaker, master sailmaker, and master blockmaker; and one each for the master boatbuilder, master cooper, master painter, and master plumber.

When advised of Pook's recommendation, Commo. Joseph Smith, Chief of the Bureau of Yards and Docks, stated that the Department did not contemplate indenturing apprentices to the government unless a majority of all yard commandants recommended such action. Smith noted the great variety of apprenticeship arrangements that prevailed in the nation's navy yards. In certain instances, the apprentices were not indentured to any particular individual. Some apprentices were too young and others too old. Occasionally, masters took apprentices into their families and looked after their welfare both "on the job and at home." Some masters received all the apprentice's pay, while others took none. There was no "ordeal of examination as to moral or physical fitness of candidates for apprenticeship." Nor was there any guarantee to the United States that the boys would serve out the term of their indenture, despite the fact that "master workmen claim that their apprentices shall be kept under pay when they present themselves, whether there be work to do or not." Although both Pook at Charlestown and Smith in Washington recognized that navy yard apprenticeships needed regulation, the matter received no further attention.

THE PLUMBERS' STRIKE

On Saturday, August 8, 1846, there occurred what was probably the second strike in the history of the Charlestown Navy Yard. Twenty workmen in the plumbers' department walked off the job. At issue was the procedure whereby Master Plumber Samuel H. Allen kept a record of the time each man worked and on what project. That procedure apparently had the approval of the yard administration. Subsequent to their walkout, the plumbers presented to Commandant Parker a written complaint against Allen. Parker took the position that the employees had proceeded to strike without first seeking his intervention. He, therefore, refused to intercede, and the strikers were fired, replacements being hired. The Bureau of Yards and Docks supported the commandant and ordered that none of the men who had walked off the job should be reemployed. However, at Allen's request, two of the strikers were hired back, their reemployment being justified by their good reputation and the need to expedite work on Independence. The bureau then modified its stand. It now held that Parker was better informed as to the circumstances of individual workers and that the reemployment

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48 Pook to Parker, Aug. 16, 1847, NA, RG 71, Ltrs. Recd., Y&D.

49 Smith to Stewart, Aug. 25, 1847, NA, RG 71, Ltrs. Sent, Y&D.

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of insubordinate men would be left to his discretion.50

WORKERS' COMPLAINTS

During the first year of Parker's administration, charges had been brought against master mechanics and other supervisors by a number of employees who had been laid off for "want of work" or for "offenses committed." On orders from the Navy Department, these charges had been investigated. All had been "invariably found to be false and malicious." Parker believed it was a mistake to take notice of such complaints. The investigations had persuaded him that "all the master mechanics deservedly enjoyed his confidence." Parker regarded the authors of the complaints as troublemakers. Since they had been on the payroll when he assumed command, he disclaimed any responsibility for their hire. However, he promised that, while he was in command, they would never be reemployed, except by orders from the Department.51

In May 1846, a worker was fired for disrespect for a navy officer. When asked, Lt. Oliver H. Perry gave permission to a ten-year-old lad to use his pocket knife to cut a piece of wood from Constitution's old billethead, which had been lying in one of the shiphouses since being replaced by the Andrew Jackson figurehead in 1834. Watchman Thomas Murphy saw what the boy was about and ran him off, calling that Perry's permission meant nothing since there were two officers of higher rank in the yard. Learning what Murphy had said, Lieutenant Perry hastened to the watchman's beat and asked what was meant by such language. Murphy answered in a disrespectful manner. Whereupon, Perry reported him to Cdr. Stephen Wilson, and Murphy was fired.

Believing he had been wronged, Murphy wrote Secretary of the Navy Bancroft, who referred the problem to Commodore Smith, Chief of the Bureau of Yards and Docks. After studying the correspondence, Smith held that Murphy had no cause for complaint to the Secretary, because he had been ordered to apologize to Lieutenant Perry and to return to work. Smith also found improper Perry's "verbal leave to a strange boy, to cut wood as relics, or for any other purpose" from Constitution's billet, when a watchman had been detailed to prevent depredations.52

CHANGES IN "ORDINARY"

In December 1845, the Navy Department ordered the termination of that group of men in the navy yards who constituted the "ordinary" and the transfer of its functions to other yard units and personnel. Commandant Parker objected, holding that the ordinary was a necessary arrangement.

Parker explained to Washington that at that time, the ordinary at Charlestown mustered thirty-one seamen and ordinary seamen, who were constantly available for all necessary drudgery about the facility. They slept at the yard and were on call to meet all emergencies, such as gales and fires. In the past, their services had been timely and efficient. They constituted the yard's fire department and were drilled with the engines and hoses once a week. Should they be discharged, it would be necessary to hire day laborers to perform these tasks. In addition to the men belonging to the ordinary, there were a number of shipped men serving as watchmen. This arrangement began in 1843 under Parker's predecessor because the number of marines at the barracks was insufficient to man all the sentry posts. That situation still prevailed, and Parker recommended retention of the men shipped for this duty.53

50 Parker to Smith, Aug. 21, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Aug. 20, 1846, NA, RG 71, Ltrs. Sent, Y&D. Eleven years earlier, caulkers at the yard had conducted a brief and unsuccessful strike; Bearss, pp. 694-95.

51 Parker to Smith, Feb. 18, 1847, NA, RG 71, Ltrs. Recd., Y&D.

52 Perry to Parker, June 4, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, June 9, 1846, NA, RG 71, Ltrs. Sent, Y&D.

53 Warrington to Smith, Dec. 18, 1845, NA, RG 71, Ltrs, Recd., Y&D.
Initially, the Navy Department agreed to retain the ordinary men at the Charlestown yard, although it was noted they had been dispensed with at other yards without difficulty. However, on Christmas Eve, the Department reaffirmed its original order to discontinue the ordinary. It noted that:

The common drudgery of the yard should be performed by day laborers in preference to shipped men, who would have claims for pensions, etc. and whose employment in the yard diminishes the number available for sea service. The crew and recruits of the Receiving Ship, watchmen and marines can be organized to act as firemen, until other firemen arrive.

The Department had already given orders as to the care of ships in "ordinary." The commander of the receiving ship would henceforth have the vessels laid-up in ordinary visited daily and inspected by a lieutenant or master. He, himself, was to inspect these vessels once a week, reporting their condition to the yard commandant. The latter officer was to visit ships in ordinary monthly, reporting their situation to the Chief, Bureau of Construction, Equipment, and Repair.54

FUNDING YARD IMPROVEMENTS

In the summer of 1846, Congress appropriated almost $30,000 for Yards and Docks projects at the Charlestown Navy Yard during Fiscal Year 1847. Those projects included a drain and iron frame for the dry dock pumps and a set of keel blocks ($2,740); a pipe for the drain, rain water and waste steam ($3,000); completion of Wharf No. 66 ($9,000); finishing a reservoir ($1,000); and the wall on south side of Site No. 51 and filling in that area of the yard ($3,860). Congress also provided $10,000 for repairs of all kinds at the yard. Commodore Parker quickly advertised for the materials required for these projects. In addition, arrangements had been made for carrying on two undertakings previously funded by Congress, Wharf No. 65 and a new coal house.55

The shear wharf had been described as in "weak and dangerous condition," and in a special appropriations bill in August 1846, Congress allocated $12,000 for repair of that structure, a matter to which the Bureau of Yards and Docks urged the yard to give priority.56

In mid-July 1846, Pook recommended to Parker that funds be sought in Fiscal Year 1848 for a number of plant improvement and repair projects. One of these was repair of the shear wharf. Among Pook's other recommendations were a building to house a blacksmith shop and a plumbers' shop; a new joiners' shop; improvements in the machine shop, including removal of the armory; repair or removal of the bridge over the timber dock; filling in a section of the timber dock near Shiphouse H and erecting a coal house on that site; a larger, more substantial coal house for the Ropewalk; a shed to store gun carriages; a new stable; enlargement of the rigging loft; and a wharf at Site No. 64, complete with a pair of masting shears.57

Some of the naval constructor's recommendations were included in an appropriations measure enacted by Congress in March 1847 for Fiscal Year 1848. That bill assigned to the Charlestown Navy Yard nearly $100,000, the congressional generosity perhaps reflecting the state of war that then prevailed. The more sizeable projects consisted of a building to serve as a joiners' and carpenters' shop and rigging loft ($39,985); Wharf No. 64 ($16,500); and repair of the dry dock and the bridge across the timber dock ($11,000). Smaller items were a brick barn ($5,020); a smithery and plumbers' shop ($3,850); drains and pipes to the reservoir

54 Warrington to Parker, Dec. 24, 1845, NA, RG 71, Ltrs. Sent, Y&D.

55 Smith to Parker, Aug. 18, 1846, NA, RG 71, Ltrs. Sent, Y&D; Parker to Smith, Sep. 5, 1846, NA, RG 71, Ltrs. Recd., Y&D.

56 Pook to Parker, July 16, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Aug. 17, 1846, NA, RG 71, Ltrs. Sent, Y&D.

57 Pook to Parker, July 16, 1846.
In October 1847, doubtless encouraged by the largesse of the national legislature six months earlier, Parker submitted a program for yard improvements for Fiscal Year 1848 that exceeded $200,000. The most expensive item was a facility for a sail loft and cordage storage on Site No. 24 ($63,499.50). Other major projects included a new wing for Storehouse No. 15 ($30,561); timber shed ($32,857); wharf at Angle No. 59 ($18,923); mastmakers’ shop ($12,888); and three brick coal houses ($6,293.50 each). Lesser items on the commandant’s list were filling in Site No. 40 ($6,423.75); filling part of the timber dock ($8,964); pier wharf near the carpenters and joiners’ shop ($4,621.50); office for the commandant ($4500); and positioning six tracks for stowage of guns in the gun park ($7,085.85).

Upon reviewing this program, Commodore Smith, Chief, Yards and Docks, deleted the request for funds for construction of the sail loft-cordage store building and the mastmakers’ shop, but he increased the monies sought for the commandant’s office so that the building could house all yard administrative offices.

By the time Congress was ready to act on naval appropriations in June 1848, the war had ended, and Smith further pared the program for “Improvements & Repairs” at the Charlestown Navy Yard. Smith proved an accurate judge of the legislators’ temper. All the items on his revised list were funded, except the commandant’s office and the water tank. The congressional appropriation for 1849 provided monies for the timber shed ($32,857); pier wharf at Angle No. 59 ($18,923); coal house near the dry dock ($6200); pier wharf near the carpenters’ and joiners’ shop ($4,621); eight knee docks ($3000); completion of the brick barn ($3,750); tracks for stowage of guns in the gun park ($4000); and repairs of all kinds ($24,000).

IMPROVEMENTS TO YARDS AND DOCKS FACILITIES

PIER WHARF 66 COAL HOUSE

In June 1845, the Bureau of Yards and Docks decided that the $8000 appropriated by Congress for construction of a coal house was to be debited the cost of the temporary coal house, $1,279.99, and the balance credited to erecting a permanent structure. However, the yard received no further instruction on the subject. Fourteen months later, Commandant Parker, becoming impatient, sought to persuade the bureau to give the project a green light. He urged that the coal house be built of brick rather than frame construction, although it would be more expensive. The bureau still was not prepared to act. Commodore Smith, who replaced Warrington as bureau chief, discussed the subject with Parker during a visit to Charlestown. No minutes were kept of the discussion, but Smith agreed to building the structure of brick and slating the roof. Work was commenced in the autumn of 1846 and completed before October 1, 1847.

THE BRICK BARN

In November 1846, the bureau wrote Parker that, whenever Congress voted the necessary funds, a brick barn would be erected on Site No. 27, designated on the 1828 Master Plan as reserved for a hemp house. In March 1847, Congress appropriated $3,020 for construction of the barn, and Parker prepared and transmitted plans and estimates for the structure. The 100-by-fifty-foot barn was to be built of brick, with

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58 Smith to Parker, Mar. 24, 1847, NA, RG 71, Ltrs. Sent, Y&D.
59 Parker to Smith, Oct. 8, 1847, NA, RG 71, Ltrs. Recd., Y&D.
60 Smith to Parker, Nov. 6, 1847, NA, RG 71, Ltrs. Sent, Y&D.
61 Smith to Parker, Nov. 6, 1847; Apr. 26, 1848, NA, RG 71, Ltrs. Sent, Y&D.
62 Warrington to Nicolson, June 28, 1845, NA, RG 71, Ltrs. Sent, Y&D; Parker to Smith, Sep. 1, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Sep. 3, 1846, NA, RG 71, Ltrs. Sent, Y&D; Annual Reports for Yards and Docks for Fiscal Years 1847, 1848, NA, RG 71, Y&D.
granite foundation and a slate roof. The bureau decided that the sum allocated would not permit construction of the barn with the desired dimensions. Commodore Smith proposed erecting the walls according to the original plan and providing a temporary roof until such time as another appropriation was secured. Accordingly, construction was commenced on a "modest scale." In 1848, Congress appropriated $3,760 for "extending and completing the brick barn." The enlarged structure was finished in Fiscal Year 1849.63

THE CARPENTERS AND JOINERS' SHOP

When Commandant Parker submitted his Yards and Docks program for Fiscal Year 1848, he called for $39,985 for construction of a carpenters and joiners' shop, to be built near the dry dock. The structure was to be of "granite (edged with ashlar similar to the Ropewalk) to be 200 ft. long, 70 ft. wide." After Congress included this project in its funding bill of March 1847, Parker transmitted to the bureau plans and estimates prepared by Naval Constructor Pook. The bureau approved of the plans without comment, and work began in the summer of 1847. During construction, there was made a slight change in the building's design. The yard's muster bell was broken and its belfry in Shiphouse G was rotten. Parker asked for authority to incorporate a belfry addition in the north elevation of the carpenters and joiners' shop. The bureau approved this change and the purchase of a new bell. By late autumn of 1848, the structure was so far advanced as to permit its occupation by the carpenters, joiners, and riggers, and by June 30, 1849, the building had been completed, inspected, and accepted.64

THE BLACKSMITHERY AND PLUMBERS' SHOP

Congress having appropriated $3,850 for construction of a smithery and plumbers' shop, Commandant Parker in April 1847 mailed to the bureau plans and estimates for the structure prepared by Naval Constructor Pook. He described three sites that could be used. The bureau reviewed the plans and recommended either Site No. 2 or No. 3. However, the final say would rest with Parker. Parker opted for Site No. 1, on the pier between the dry and timber docks, because if placed at either of the other locations, it might interfere with coal and other materials slated for use in the dry dock engine house. Work on the blacksmithery and plumbers' shop started during the summer of 1847, and it was occupied by the end of Fiscal Year 1848.65

WHARVES NOS. 66 AND 64 AND REPAIR OF TIMBER DOCK BRIDGE

By the summer of 1847, workmen had finished Wharf No. 66, funded by Congress in 1845, and the dock and rain water pipes, for which appropriations had been made in 1846. By June 30, 1847, the frame coal house, funded two years before, had been constructed on Wharf No. 66. This would facilitate coaling the

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64 Parker to Smith, Oct. 10, 1846; Pook to Parker, Apr. 16, 1847; Downes to Chief, Bureau of Yards & Docks, Oct. 1, 1849, NA, RG 71, Annual Reports, Y&D; Parker to Smith, Oct. 30, 1847, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Nov. 1, 1847, NA, RG 71, Ltrs. Sent, Y&D. A copy of the "Proposed Plan for a Carpenters and Joiners Woodshop, Rigging Loft, etc., Navy Yard, Charlestown, Oct. 1846," is on file at BNSY.

65 Parker to Smith, Apr. 17, Apr. 22, 1847, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Apr. 19, 1847, NA, RG 71, Ltrs. Sent, Y&D; Preble, p. 300. A copy of the drawing "Proposed Plan for a Plumbers and Blacksmiths Shop" is on file at BNSY.
Navy's increasing number of steam vessels.66

A $16,500 appropriation was made in March 1847 for reconstruction of Wharf No. 64, and $11,000 allotted for repair of the bridge spanning the timber dock. On April 3, Commodore Parker forwarded to the bureau estimates and plans prepared by Naval Constructor Pook and requisitions for lumber for rebuilding the wharf and repair of the bridge. On giving approval to these documents, Commodore Smith authorized Parker to advertise in the Boston newspapers as well as one journal in Maine for proposals for furnishing needed building materials. Would-be contractors were to be made to understand that no payments could be made until after June 30. As soon as the materials were delivered construction could begin.67

To facilitate rebuilding the wharf, Pook recommend the yard acquire one or two small engines for driving piles. He believed the work load was such that the engines could be amortized in one year. After use in pier construction, they could be employed to haul timber out of the dock. The bureau agreed to the yard "manufacturing" an engine for driving piles. It directed that detailed records be kept by the yard engineer to enable him to submit a report of its cost and operations. Once the building materials were on hand and the engine was rigged as a pile driver, work was pushed, and by June 1849, the wharf and bridge had been rebuilt. The completed wharf proved to be the yard's most useful pier, because the average depth alongside it was deeper than at the other five wharves. To capitalize on this, a masting shears was positioned at its head.68

QUAY WALL

In Fiscal Year 1849, more than $3800 was spent to build a quay wall southwest of Site No. 51, and to partially fill in the area enclosed by the wall and the former high tide mark in this section of the yard.69

TIMBER SHED NO. 37

When he submitted his annual report in 1846, Commandant Parker recommended construction of a timber shed at Site No. 37. Such a structure "was much needed as the present timber sheds are all occupied." The plans, prepared by Pook, called for the shed to have a hip roof so that the "upper part may be used for a mould loft and carpenters shop and part of one end of the building to be used for a Boat builders shop." The cost of erecting a shed 450 feet long and sixty feet wide was originally placed at $38,591. A revised estimate prepared by Pook in October 1847 set the cost at $32,857.70

Seven months later, in May 1848, Commodore Smith questioned the plan submitted by the yard. He argued that uniformity should be preserved wherever practicable. Timber Shed No. 37, he believed, should be built to the same plan as No. 38, a one-story structure. In 1849, Parker could ask for an appropriation for Timber Shed No. 36, to be two stories in height and to correspond in appearance with Building No. 30. In accordance with the bureau's suggestion, Pook revised the plans and estimates for Timber Shed No. 37. Funds

66 Smith to Parker, July 19, 1847, NA, RG 71, Ltrs. Sent, Y&D; Parker to Smith, Oct. 8, 1847, NA, RG 71, Ltrs. Recd., Y&D; Preble, p. 300.

67 Parker to Smith, Apr. 3, 1847, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Apr. 19, 1847, NA, RG 71, Ltrs. Sent, Y&D.


69 Preble, p. 300.

70 Parker to Smith, Oct. 10, 1846; Oct. 8, 1847, NA, RG 71, Ltrs. Recd., Y&D. A copy of "Proposed plans for a timber shed, Mould Loft and Boat Shop..., Charlestown" is on file at BNSY.
for the project were included in an appropriations bill signed by the President on August 3, 1848.71

Before ground could be broken for the new timber shed, it was necessary to relocate or demolish the frame building then on the site. That structure had formerly served as a timber shed and currently was in use as a chapel. Parker believed that there was no suitable location in the yard to relocate the old structure. The bureau concurred and left it to the commandant to find another room, perhaps in the old rigging loft in the Navy Store, in which the chaplain could hold services. Other needs prevented inclusion of an estimate for a chapel in the program for Fiscal Year 1850. The old shed was razed, its materials salvaged, and construction of Timber Shed No. 37 proceeded. The building was completed and occupied in the summer of 1849.72

EIGHT KNEE DOCKS AND TRACKS FOR STOWAGE OF CANNON

To justify a request of $3000 for building eight knee docks, Parker pointed out that Naval Constructor Pook considered them to be very necessary. Four of the docks were to be eighty by eighty feet, two others eighty by fifty, and another pair eighty by thirty. They were to be built in double rows, four in each row, with a bridge over the center of sufficient width and strength for a loaded team. Also the bridge was to have two boom derricks for hoisting timbers out of the docks. Funds for the project were included in the appropriations bill of August 1848. Work began, and the knee docks were completed during the autumn of 1849.73

In October 1847, Commandant Parker submitted a request for funds for the laying of six railway tracks for stowage of heavy ordnance in the gun park. The project called for 4362 feet of iron rails secured to a granite base. Parker informed the bureau that the existing practice at the yard of stowing guns on wooden sleepers, besides being contrary to regulations, was bad for the guns. Congress appropriated $4000 for the undertaking, some $300 less than the sum requested. To cope with this situation, Parker made arrangements whereby the Chief of the Bureau of Ordnance supplied the rails and a project supervisor. Work on the rail system was commenced in August 1848 and was completed before the winter of 1849-50.74

PIER WHARF AT ANGLE NO. 59

In the years following construction of the dry dock, the eastern end of the yard became increasingly "cramped for wharf room." In the early months of the Mexican War, it was frequently necessary to use the dry dock slip and to have two vessels laid-up at the shear wharf. To correct this situation, Parker recommended construction of a pier wharf at Angle No. 59. Pook placed the cost of such a structure at $18,923. In August 1848, Congress appropriated the sum requested to underwrite the cost of the pier wharf. Construction commenced immediately and was completed without incident in November 1849.75

COAL HOUSE NO. 68

In the autumn of 1847, reflecting the yard's increased use of and dependence on coal, Commandant Parker called for an appropriation for construction of three brick coal houses. Each of these houses was to measure 100 by forty feet and to cost an estimated $6,293.50. One of the structures was to be near the dry

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71 Smith to Parker, May 1, June 28, 1848, NA, RG 71, Ltrs. Sent, Y&D.
73 Parker to Smith, Oct. 10, 1846; Oct. 8, 1847; Downes to Smith, Oct. 1, 1849, NA, RG 71, Ltrs. Recd., Y&D.
74 Parker to Smith, Oct. 8, 1847; July 3, 1848; Downes to Smith, Oct. 1, 1848, NA, RG 71, Ltrs. Recd., Y&D.
75 Parker to Smith, Oct. 8, 1847; Downes to Smith, Oct. 1, 1849, NA, RG 71, Ltrs. Recd., Y&D.
dock engine house; the second adjacent to the Ropewalk head house, on the site of the temporary coal shed; and the third near the blacksmithery. The Navy Department included the proposed dry dock engine coal house in its program for Fiscal Year 1849. Construction proceeded accordingly, and the building was completed and accepted in the late autumn of 1849.76

REPAIR, MAINTENANCE, DEMOLITION OF EXISTING FACILITIES

RECONSTRUCTION OF THE SHEAR WHARF

In April 1846, Commodore Parker warned the Navy Department that the shear wharf was in "very poor condition." What made this especially embarrassing, in view of the threat of war, was that it was the only yard wharf where ships could be outfitted. To effect repairs required the expenditure of $12,440 for materials and labor. The Secretary of the Navy sought additional information before submitting a request to Congress for emergency monies for reconstruction of the wharf. In response to questions from Bancroft, Parker reported that the wharf was discovered to be in bad condition on April 20, when the yard was preparing to unship the masts of Independence. The structure had last been examined in September 1845 and estimates submitted for its temporary repair. Since then many of the caps and much of the flooring had given way. It could be repaired to answer for another twelve months for $5000.77

Because of the high cost of temporary repairs, Bancroft asked Congress for $12,000 for the wharf. Congress complied. Upon receipt of this news, Commandant Parker directed recently appointed Naval Agent Joseph Hall to advertise for materials for the reconstruction of the shear wharf. Hall stated that such a procedure would result in considerable delay and that it would be November at the earliest before all necessary materials were stockpiled. With cold weather at hand, the project would be delayed until spring. Hall suggested that by making the purchases on the open market, work could be commenced by mid-September at the latest. The bureau agreed to acquisition of materials on the open market, but it was April 1847 before contractors began to remove earth and rotten timbers from the wharf preparatory to its reconstruction. Work progressed slowly, and the project was not completed until the summer of 1848.78

SHIPHOUSE G

The Chief of the Bureau of Construction, Equipment, and Repair was of the opinion that Shiphouse G constituted a fire hazard to Vermont and should be razed. Commandant Parker believed that the structure could be more economically removed while the liner was still on the ways, because workmen would not have to put up staging. He stated that, if there were no objections, a crew would be turned out in mid-August 1848 to dismantle the house and salvage the lumber and ironwork. Secretary of the Navy Bancroft agreed, and on August 14 approved demolition. The shiphouse was to be advertised for sale at public auction, with the successful bidder agreeing to the removal of the structure within twenty working days. Proceeds of the sale were to be deposited with the U.S. Treasury and credited to yard "Repairs of all Kinds." This procedure was followed. Work commenced on August 17 and was completed on the 28th, care being taken not to damage Vermont or the ways.79

76 Parker to Smith, Oct. 7, 1847; Downes to Smith, Oct. 1, 1849, NA, RG 71, Ltrs. Recd., Y&D.

77 Parker to Warrington, Apr. 28, May 12, 1846, NA, RG 71, Ltrs. Recd., Y&D; Warrington to Parker, May 8, 1846, NA, RG 71, Ltrs. Sent, Y&D.


THE NAVY STORE

The rigging loft was relocated in 1848-49 from the second story of the Navy Store to the new carpenters and joiners’ shop. To ready the area formerly used as the loft for the reception of stores, Commandant Parker called for and was allotted several hundred dollars for putting in a new floor.80

STOREHOUSE NO. 15

In October 1847, Commandant Parker complained to the Navy Department that Storehouse No. 15 was "badly built," the beams and floor joists being too small to support great weights. Indeed, they had settled so much as to crush the brick support pillars. He also feared that insufficient piles had been driven to provide a stable foundation. Considerable expense had been incurred in repairing the floor timbers, and, as an emergency measure, he had been compelled to position "granite pillars" under the main beams. To prevent the floors from giving way, he had a large quantity of copper removed and stowed elsewhere.81

The bureau demanded to know "by whose plan and under whose supervision" Storehouse No. 15 had been built. Because the floors had settled and crushed "the brick pillars," it was presumed that there must have been too much weight "deposited in the house." Alexander Parris, then employed at the Portsmouth Navy Yard, was ordered to Charlestown to reconnoiter and report on the condition of the building and the "best method to remedy the defects."82

Parris found that the floor had collapsed as a result of being loaded with 150 tons of copper and steel distributed over a small, twenty-by-fifteen foot, area supported on 16-inch brick piers. The giving way of the piers had caused no apparent damage to the walls. Storehouses with cellars built on marshlands, Parris cautioned, were not designed for stowage of items such as copper and steel. He recommended that, henceforth, heavy items be stored in structures without cellars.83

THE COMMANDANT’S HOUSE

In April 1846, Commandant Parker complained to the bureau that it had been eight years since his quarters had been painted. To keep it in tolerable state of preservation," the building also required new gutters and window blinds and repair of window shutters and sashes. The estimated cost of this work was $1,095. The bureau approved of the repairs, although it noted that the costs would have to be charged against "Improvements and Repairs" for the next fiscal year.84

In late November and early December 1845, immediately after Captain Parker had relieved Captain Nicolson, a board surveyed and reported on the condition of the furnishings in the commandant’s quarters. The survey divided the items into four categories: good order, requiring repair, much worn, and worthless. Most of the actual furniture was judged as in good order. Apparently, all of the house’s carpeting fell into the much worn or worthless categories. When the survey was sent to Washington, it was rejected by Secretary of the Navy Bancroft as a device to change Navy regulations. A year later, Commandant Parker complained that the chairs and sofas reported in good order by the board of survey needed to be recovered and restuffed.

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80 Parker to Smith, Mar. 30, 1848, NA, RG 71, Ltrs. Recd., Y&D.
81 Parker to Smith, Oct. 16, 1847, NA, RG 71, Ltrs. Recd., Y&D.
82 Smith to Parker, Oct. 18, 1847, NA, RG 71, Ltrs. Sent, Y&D.
83 Parris to Parker, Oct. 30, 1847, NA, RG 71, Ltrs. Recd., Y&D.
84 Parker to Warrington, Apr. 3, 1846; Wilson to Parker, Apr. 13, 1846, NA, RG 71, Ltrs. Recd., Y&D; Warrington to Parker, Apr. 18, 1846, NA, RG 71, Ltrs. Sent, Y&D.
He also noted that the washstands and wardrobes were painted blue and that they as well as the bookcases had been made in the yard. The furnishings listed in the survey of 1845 as "much worn or worthless" were now "entirely worn out." The house had no closets, wardrobes being used as a substitute.\(^5\)

In September 1846, Parker requisitioned carpeting for the parlors, dining room, three bedrooms, and stairs; two hearth rugs for parlors; oil cloth for the hall; mantel glasses for parlors; fenders and irons for parlors; window curtains and fixtures for parlors; a table for one parlor; a dressing table; and sofas and chairs. The Navy Department approved the requisition, noting it should be charged against the appropriation for "Improvements & Repairs," not "contingencies." The following year, the quarters' kitchen stove was condemned as a fire hazard and replaced.\(^6\)

To reconcile certain of its records, the bureau in November 1848 returned to the yard the furnishings inventories for inclusion of room dimensions in square feet thereon, with the number of square yards of carpeting on the floors. The Bureau of Yards and Docks also found the value placed on the furniture too low. Furniture purchased in 1846 for the commandant's quarters was a prime example. A rug costing $12 was now condemned; two sets of shovels, tongs, and pokers, purchased for $20, were valued at $6. The bills for carpeting purchased since 1842 totaled $1,210.49. Although cooking utensils were presumably on hand, none were listed in the surveys.\(^7\)

THE UPPER AND LOWER QUARTERS

Early in 1846, Commandant Parker called for approval of a project for rehabilitation of the upper and lower yard quarters. The former needed flooring in the basements, as the original planking had rotted. The estimated cost of replacing the floors was $1,250. Four hundred dollars was called for to repaint and repair the interiors of the lower quarters. The bureau approved these expenditures, provided they were charged against the Fiscal Year 1847 appropriations for "Improvements & Repairs." Sufficient monies were available, and this work was carried out. In Fiscal Year 1849, $3,550 of the appropriation for "Repairs" was budgeted for improvements to the lower quarters, namely reshingling, "new covering & gutters, trunks, floors in the basement rooms," repairs of sashes and blinds, and new gutters and reshingling of the wood houses. During the course of these repairs, materials salvaged from Shiphouse G were used to improve the frame ells at the rear of the quarters.\(^8\)

Late in the summer of 1847, Commandant Parker recommended to the bureau that all yard quarters, not only those occupied by commissioned officers, should be provided by the United States with such furnishings as carpets, sofas, chairs, tables, mirrors, washstands, window curtains, and kitchen utensils. He deemed ranges, furnaces, stoves, and grates as much a part of the quarters as chimneys. When worn out, they should be replaced by the Navy. The bureau disagreed, but Parker raised the question again in November 1848. At that time, he informed the bureau that there was no furniture in the upper quarters belonging to the government. A boatswain had recently reported for duty and was "awkwardly placed," because he was anxious to move into his quarters. As furniture was allowed, he did not wish to purchase any out of his own pocket. The bureau informed Parker that wardrobes, one kitchen table, and a wash bench, whether attached

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\(^5\) Parker to Warrington, Dec. 4, 1845, NA, RG 71, Ltrs. Recd., Y&D; Warrington to Parker, Dec. 10, 1845, NA, RG 71, Ltrs. Sent, Y&D.

\(^6\) Parker to Smith, Nov. 24, Nov. 25, 1846; Seth Thomas to Parker, Nov. 27, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Nov. 24, 1846; Foote to Parker, Sep. 6, 1847, NA, RG 71, Ltrs. Sent, Y&D.

\(^7\) Smith to Parker, Nov. 1848, NA, RG 71, Ltrs. Sent, Y&D. The returns and inventories cited by the bureau and Parker's response are missing from RG 71.

\(^8\) Parker to Warrington, Apr. 3, 1846; Wilson to Parker, Apr. 12, 1846, NA, RG 71, Ltrs. Recd., Y&D; Warrington to Parker, Apr. 18, 1846, NA, RG 71, Ltrs. Sent, Y&D; Parker to Smith, Oct. 8, 1847, NA, RG 71, Annual Reports, Y&D; Preble, p. 299.
to the walls or not, were deemed to be fixtures and were to be provided by the United States in each of the upper quarters.99

FIRE-FIGHTING RESOURCES

A fire in Charlestown, near the Water Street gate, alerted Commandant Parker of the need to take every precaution to provide for the safety of the yard. Early in January 1846, he suggested the creation of a small fire station in which one of the yard’s fire engines would be parked. Parker’s scheme had certain novel features, and it required several exchanges of letters before the Bureau of Yards and Docks in Washington understood and agreed to it. Essentially, the commandant conceived of a fire station that could serve both the yard under his command and the neighboring civilian community. As such, that station should be so located and constructed as to have egress to yard and town. Moreover, the station’s personnel could include yard employees and townsmen. It was this second feature that caused doubts in the bureau, since it seemed to require some control by outside civilians of government property. Nevertheless, the bureau permitted Parker to pursue the project. Something of a compromise resulted, a new station located according to the commandant’s proposal but staffed only by yard personnel.

Parker had Naval Constructor Pook prepare a plan detailing how a fire station could be easily created and at low cost in the vicinity of the Navy Store. Three of the walls for the station already existed, the south wall of the Navy Store, the north wall of the old hospital, and the yard wall. All that was required were doorways and a roof. Pook’s plan called for a double doorway to be cut through the wall. Sheet iron doors, to be secured by lock and key, would control ingress and egress from the fire station into Charlestown. Opposite would be a doorway into the yard. The cost of the project would not exceed $100. It was this plan and estimate that the bureau accepted.100

Parker’s concern with fire fighting led him to seek other changes in the yard’s fire department. Volunteers from among the yard’s civilian employees were to be paid for their services, if called out at night to man the engines and hoses. Master Sailmaker Boyd was placed in charge of the yard company, which he soon brought to a high degree of efficiency. However, after several years, Boyd asked to be relieved because of the extra work on his part. Parker sought another master mechanic to head the fire-fighting unit and recommended that for the duty he be paid fifty cents per day in addition to his regular wages. The bureau ruled that no extra pay could be allowed the fire company chief, except on extraordinary occasions. It noted that it was not intended that the fire company spend much extra time practicing with the engines. An hour’s drill once or twice a month before quitting work would be sufficient.91

The commandant’s interest in the yard’s fire-fighting arrangements was not based on series of major conflagrations in the yard. There was only one fire on record. On September 4, 1847, a fire slightly damaged the temporary plumbers’ shop at the west end of the dock. In addition to the yard company, the Boston, Cambridge and Charlestown fire departments also responded to the alarm.102

PURCHASE AND MAINTENANCE OF TOOLS AND MACHINERY

In August 1847, Commandant Parker recommended a Fairbanks scale be purchased and positioned near the coal shed. The objective was to economize in drayage costs. The bureau was agreeable, and a scale

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99 Parker to Smith, Sep. 7, 1847; Nov. 20, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Nov. 28, 1848, NA, RG 71, Ltrs. Sent, Y&D.


91 Parker to Smith, May 10, 1846; Dec. 23, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, Dec. 28, 1848, NA, RG 71, Ltrs. Sent, Y&D.

92 Parker to Smith, Sep. 4, 1847, NA, RG 71, Ltrs. Recd., Y&D.
was bought and installed.  

Also during 1847, machinery and tools valued at more than $5000 were purchased from Gay, Silvor & Co. of North Chelmsford, Massachusetts. The master mechanics found these tools to be of uniformly high quality. Another quality piece of equipment was the yard's planing machine, the largest in the entire nation. It had been manufactured by Daniels' Planing Machine Co. and was sixty-eight feet in length and could plane timbers up to thirty-six feet in length.

In January 1848, the yard called for a $600 allotment to rebuild ten forges in the smithery. The bureau chided Commandant Parker for this sudden notice of a circumstance that must have been apparent to the master blacksmith for months. If the forges were rebuilt, the cost must be charged against "Repairs of all Kinds.

PAVING AND WALKS ON WATER STREET

In the spring of 1848, Charlestown city authorities called on Commandant Parker to take measures to have the sidewalks alongside the yard wall "properly paved." Although he recognized that the city lacked the power to compel the Navy to take action, Parker suggested to the bureau that the yard cooperate and pave the walk from his quarters to the west end of the wall. A paved walk would be a convenience to yard personnel as much as the townspeople. The bureau in Washington raised some doubts about the proposal. No funds then existed for the sidewalk. If, after the next appropriation bill, funds could be spared from "Repairs of all Kinds," the project would be referred to the Secretary of the Navy for a decision as to the propriety of the government paving public streets and walks contiguous to the yard.

To assist the Department in its determination, Parker made estimates of the cost. To continue the sidewalk fronting the wall from his quarters along Chelsea Street to the corner, a distance of 220 feet, would cost $260 for cut stone, paving brick, and labor. Should the bureau decide to pave the walkway from the Marine Barracks to the east end of the yard, 1,870 feet, it would cost about $1,632. Upon receipt of these figures for the 2,090 feet of sidewalk, Commodore Smith promised to submit the question to the Secretary. In the meantime, the bureau wished to know whether the city intended to pave and flag the opposite side of Chelsea Street. If not, Smith would recommend against the Navy's paving the side next to the yard.

Parker responded that the sidewalk opposite the wall at the west end of the yard was already paved. The mayor had told him it was proposed to continue the paving to the Chelsea Street Bridge, if the government paved the front of the yard wall between the barracks and the river. In view of the mayor's remarks, the bureau, never enthusiastic over the project, lost interest in the proposal for paving the walkway. It now called for an estimate for "paving in front of the gate to the width of Water Street" for a distance of 300 to 400 feet.

Subsequently, the bureau informed Parker that he could proceed with the paving if, after the appropriation had passed, Water Street could be paved for $1500 and that sum spared from "Repairs of all Kinds.

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93 Parker to Smith, Aug. 24, 1847, NA, RG 71, Ltrs Recd., Y&D; Smith to Parker, Aug. 26, 1847, NA, RG 71, Ltrs. Sent, Y&D.

94 Parker to Smith, Dec. 13, 1847; Jan. 10, 1848, NA, RG 71, Ltrs. Recd., Y&D.

95 Smith to Parker, Jan. 24, 1848, RG 71, Ltrs. Sent, Y&D.

96 Parker to Smith, Apr. 24, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, May 1, 1848, NA, RG 71, Ltrs. Sent, Y&D.

97 Parker to Smith, May 9, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, May 16, 1848, NA, RG 71, Ltrs. Sent.

98 Parker to Smith, May 20, 1848, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, May 27, 1848, NA, RG 71, Ltrs. Sent, Y&D.
Kinds.” In late July, the city authorities notified the Navy that they would pave all of Water Street, provided the United States paved the section adjacent to the gate. Parker believed that “the best and cheapest” way to accomplish this was to have the city pave the entire street and the Navy pay $1500 into the Charlestown treasury. This would be less expensive than the United States seeking to accomplish its share of the project by either day labor or under contract. Parker also requested permission to begin paving the 220 feet of sidewalk between the commandant’s quarters and the corner of the yard and Chelsea Street at the stables. Secretary of the Navy Bancroft sanctioned these actions, provided the costs did not exceed the figures cited. Within a few weeks, the sidewalk had been laid and Water Street paved. 99

CONTRACTS AND CONTRACTORS

When purchasing most large items from commercial firms, the law required the commandant to have the navy agent place advertisements soliciting proposals in two Boston newspaper twice a week for four weeks. Proposals had to be submitted in duplicate for each class. For such purposes, articles were divided into six categories: ships chandlery and hardware; lumber and building materials; provender; paints, oils, and other such items; coal; and stationery. 100

One contractor presented the yard with difficulties. William Lang contracted with Navy Agent Hall to supply lumber for Timber Shed No. 37, Coal House No. 62, and the stables. Lang also agreed to provide slate for roofing the coal house and stables. However, he failed to meet his obligations. Writing to the bureau in late December 1848, Acting Commandant Josiah Tattnall complained that lumber for the timber shed, to be delivered by November 1, had not been received. Lang had been warned that unless the lumber was delivered by January 1, it would be purchased on the open market at his expense. In the meantime, it had been necessary to use timber secured for other purposes to enable yard workmen to enclose the stable and coal house. Lang also failed to supply slate, compelling the government to employ slate salvaged from Shiphouse G for the stable and the coal house. 101

The bureau ruled that Lang was to be permitted to deliver materials under his contract until March 1, but no later. After that date, the lumber and slate would be purchased in the open market. In late February, the bureau gave Lang another extension, which enabled him to meet his contractual obligations. 102

VIP VISITORS, HONORS, SALUTES

During the Parker years, a number of high-ranking dignitaries visited the yard. On June 29, 1847, President Polk arrived at the yard and was received by the commandant and a Marine honor guard, while a national salute was fired from the battery. Subsequent visitors were Secretary of the Navy John Y. Mason, August 16, 1847, and October 11, 1848; and Commodore Smith, Chief, Bureau of Yards and Docks, September 13 and October 23, 1848. The arrival of Mason and Smith at the yard occasioned 13-gun salutes. The yard battery was employed on national holidays, such as Independence Day and Washington’s Birthday, and to commemorate the deaths of celebrated Navy figures, such as Commo. Charles J. Ridgely and Commo. James Biddle. On February 28, 1848, twenty-one minute guns were discharged in memory of former President John Quincy Adams, who had died in the capital on February 23. Also to observe Adams’ death, the colors were half-masted for a week. 103

99 Smith to Parker, Apr. 24, July 31, 1848, NA, RG 71, Ltrs. Sent, Y&D; Parker to Smith, July 26, 1848, NA, RG 71, Ltrs. Recd., Y&D.
100 Smith to Parker, Sep. 17, 1846, NA, RG 71, Ltrs. Sent, Y&D.
101 Tattnall to Smith, Dec. 27, 1848, NA, RG 71, Ltrs. Recd., Y&D.
102 Smith to Parker, Dec. 30, 1848; Feb. 26, 1849, NA, RG 71, Ltrs. Sent, Y&D.
103 Preble, pp. 295-96, 298.
THE ROPEWALK IN THE ERA OF THE MEXICAN WAR

The outbreak of the Mexican War required increased production of cordage. In May 1846, Commandant Parker advised the Bureau of Construction, Equipment and Repair that, adhering to the usual work schedule, it would take about four weeks to fill requisitions for cordage then on hand. If more requisitions were received for large quantities, it would be necessary to keep the Ropewalk in operation around the clock. Such a schedule required the Secretary's authority. Within several days, the backlog of cordage orders zoomed when requisitions were received from the Gosport Navy Yard for complete sets of standing and running rigging and outfits for Germantown and outfits for Boston. On May 15, Secretary of the Navy Bancroft authorized overtime for workers in the Ropewalk. However, no "artificial" lighting would be permitted in the building, so that the extra work would have to be done during daylight hours, which at that time of year stretched from 4:00 a.m. to 8:00 p.m.104

By early July, heavy calls for cordage had exhausted the Manila hemp stockpiles. As an emergency measure, 100 bales, weighing 27,000 pounds, were purchased from Francis Cox. Arrangements for more substantial supplies were also made. A contract was signed in mid-July with the American Hemp Co., of Springfield, Illinois, for 750 tons of American hemp. The hemp would be delivered at St. Louis or Louisville, where it would be inspected by Navy hemp agents. On approval by those agents, payments would be made and the hemp shipped by steamboat to New Orleans, where it would be transshipped by ocean-going vessels to Boston. Emergency purchases continued to be necessary. On August 21, the bureau directed Parker to purchase as much Manila hemp as required to supply the needs of the walk during the next sixty days. Meanwhile he was to advertise for a year's supply.105

By the following summer, a critical shortage of hemp no longer existed. On July 1, 1847, Parker informed the bureau that there was stored in the hemp house 105,055 pounds of foreign and domestic hemp. Invoices had been received for another 108,290 pounds, scheduled to arrive in the near future.106

During the war, Commo. David Connor of the Home Squadron complained to the Department about the lack of durability of the Ropewalk cordage in comparison to that supplied to the Navy in the 1820s and 1830s, before production began in the Charlestown yard. The bureau brought this complaint to the attention of Commandant Parker and called for a report.107

Peace returned to the nation in the late winter of 1847-48. Although the emergency was over, the Ropewalk continued laying up cordage of the sizes most frequently required. To assist in long-range planning, the commandants of the various navy yards transmitted requisitions for such quantities and sizes as they would probably need during the next twelve months.108

In 1849, the Bureau of Yards and Docks sought to determine the effectiveness of the Kyanizing system of wood preservation. It directed Parker to have a small section of the Kyanized Ropewalk flooring taken up and compared to other sections not subjected to that process. An examination of the flooring revealed that the first 690 lineal feet from the southwest elevation, reported to be Kyanized, was sound. The next 120 feet, probably not Kyanized, was not in good condition; about one-fourth of the planks and sleepers were defective.


105 Parker to Morris, July 9, 1846, NA, RG 19, Ltrs. Recd., C&R; Morris to Parker, July 16, Aug. 21, 1846, NA, RG 19, Ltrs. Sent, C&R.

106 Parker to Skinner, July 1, 1847, NA, RG 19, Ltrs. Recd., C&R.

107 Connor to Morris, July 16, 1846; Morris to Parker, Aug. 3, 1846, NA, RG 19, Ltrs. Sent, C&R.

108 Skinner to Parker, Mar. 16, 1848, NA, RG 19, Ltrs. Sent, C&R.
The remaining 270 feet, not Kyanized, extending to the yellow pine flooring, was badly decayed.109

THE MARINE BARRACKS AND DETACHMENT

On May 29, 1846, two weeks after the nation declared war on Mexico, General Henderson, Marine Corps Commandant, authorized Colonel Watson of the Charlestown barracks and other barracks commanders to recruit "as many good men as you can without delay." Recruits were to be told that the pay of a private was $7.00 per month, with clothing and rations; the term of enlistment was four years; the "usage is good if the conduct is good; and their duty alternately at sea and ashore, but principally at sea." Barracks commanders were to advise headquarters whether men could be recruited more readily by "opening a Rendezvous in any part of the city or the vicinity."110

Watson informed Washington that a recruiting rendezvous in Lowell would be very successful, but one in Boston would not. Interested local volunteers, he noted, were in the habit of applying at the barracks. By early August 1846, the Corps reached its full authorized strength of 1277 officers and men. Henderson directed his barracks commanders to close the recruiting rendezvous, but they could continue to reenlist "good men whose service may expire."111 The termination of recruitment was only temporary. On March 2, 1847, President Polk signed legislation authorizing an increase in the strength of the Marine Corps, doubling the number of enlisted personnel. The legislation required the President to reduce the Corps' strength at the end of the war to a number not exceeding that stipulated in the act of March 1834.112

Henderson instructed barracks commanders to resume recruiting. In notifying Colonel Watson, Henderson inquired into the possibility of securing recruits in Boston or in other towns in Massachusetts. "Watson offered no encouragement. Local sentiment against the war and competition by army recruiters would, in his opinion, hamstring the Corps' efforts. The army had rendezvous in all the larger cities and towns, and unless the Marines could give bounties, there would be no sense in recruiting. Watson stated that not a man had enlisted locally since passage of the bill boosting the Corps' strength. Undaunted, Henderson ordered Lt. Benjamin E. Brooke from Washington to Boston to open a recruiting rendezvous.113

Henderson's confidence proved warranted. Within four weeks of opening the Boston rendezvous, Brooke enlisted forty men. By that time, because Watson had been transferred, Brooke had assumed command at the barracks and, as officer in charge of the Boston rendezvous, wore two hats. He complained that he was in need of a drummer and fifer. His only drummer was old and on sick call most of the time, and his post was without music. If headquarters could provide several musics, they could also be employed by the recruiters to attract attention of potential enlistees. Henderson informed Brooke that he would send drummers and fifers "as soon as practicable" and that he was gratified by the success of the Boston recruiting campaign, because it demonstrated that the Corps "maintains its hold on the popular favour under discouragement and disadvantage."114 In June 1848, three months after the end of the war, Henderson ordered the closing of the Boston rendezvous. Recruiting at the barracks also ceased. If any "old . . . soldiers" desired to reenlist,
the matter should be referred to headquarters.115

A principal function of the Marine barracks was supplying the guard for ships being serviced at the navy yard. In November 1845, *Cumberland* returned from her two-year cruise in Mediterranean waters. The Marine guard was transferred from the frigate to the barracks, and the noncommissioned officers and privates granted ten- to fifteen-day furloughs. *Cumberland* was to be promptly outfitted for duty in the Gulf of Mexico, where war threatened with Mexico. Consequently, on December 20, Commandant Henderson alerted Colonel Watson that Lieutenant Brooke was en route to the yard from Norfolk with thirty-five men detailed for duty on the frigate. This detachment was to be reinforced by twelve men from the Charlestown barracks. By January 10 of the new year, the full detachment of forty-eight men had been transferred from the barracks to *Cumberland*.116

In mid-July 1846, two months after the nation had gone to war, navy yard commandant Parker notified Colonel Watson that the guard for *Independence* would be required by August 1. Because Watson's command was under strength, it would be impossible for him to provide more than a small portion of the needed marines. Responding to this news, Henderson ordered Lt. William W. Russell from the Washington barracks with nineteen men for *Independence*. Watson was to detach eighteen men from the Charlestown barracks to bring the ship's detachment to authorized strength. On August 1, one week behind schedule but three weeks before she was able to put to sea, Watson sent the Marine guard aboard the razee.117

A third ship provided a Marine guard by the Charlestown barracks was *Ohio*. Henderson ordered one sergeant and twenty-five privates from New York and twenty-two men from other stations to Charlestown, where they would be joined by twelve others to bring the guard up to strength. The contingent boarded the big liner on December 7, 1846.118

At the end of September 1847, Lieutenant Brooke, as commander of the barracks, was ordered to provide a Marine guard for the sloop *Albany* from some of his recent recruits then on hand. There were insufficient muskets at the barracks, and the recruits went aboard *Albany* without their small arms. To rectify this situation, the New York barracks rushed a box of muskets to Charlestown.119

The manpower situation of the Marine Corps became acute because of the decision to send two battalions to Mexico to reinforce Maj. Gen. Winfield Scott's army on its march inland from Veracruz to Mexico City. In mid-May, General Henderson secured permission from the Secretary of the Navy to organize the first of these battalions. To obtain personnel, Henderson again, as he had a decade before, stripped barracks and stations of all available personnel. Recruits enlisted under the act of March 2, 1847, were included. Most of these recruits were only half trained, and there would be little opportunity for further training before they landed in Mexico.120

On May 18, Henderson wrote Colonel Watson, advising that he had been named to command the battalion. Accompanied by all his effective officers, two sergeants, two corporals, and privates, Watson was

115 Henderson to Marston, June 10, 1848; Henderson to English, June 19, 1848, NA, RG 127, Ltrs. Sent; English to Henderson, June 16, June 17, 1848, NA, RG 127, Ltrs. Sent, CMB.


to proceed to Fort Hamilton, New York. There he was to await arrival of the other officers and men assigned to the battalion. The unit was to be embarked for Mexico on May 25, or as soon thereafter as practicable.\textsuperscript{121}

The transfer of Colonel Watson was the first in a series of changes in the commanding officer of the Marine Corps Barracks at Charlestown. Subsequently, command fell in sequence to Lieutenant Brooke, Capt. A. N. Brevoort, back to Lieutenant Brooke, Capt. Frank Waldron, and again to Captain Brevoort. The tour of Captain Waldron was brief, December 11, 1847, to February 23, 1848. Henderson designated Waldron as a member of the second Marine battalion to go to Mexico. He was accompanied by four of his sergeants at the barracks and all of the privates having at least twelve month's service.\textsuperscript{122}

The constant demand on the Charlestown barracks for personnel for Marine guards on ship and for duty in Mexico compelled the navy yard commandant to make increasing use of civilian watchmen to provide for yard security. Taking advantage of the situation, the watchmen petitioned for an increase in pay in the spring of 1846. They pointed out that their wages were $12 per month and rations, while watchmen at Portsmouth were paid $28 per month and those at New York $1.25 per day. Commandant Parker forwarded the petition and urged that it be granted because it was impossible to obtain good men at the wages allowed. The bureau concurred and authorized the watchmen to be paid $1.00 per day.\textsuperscript{123}

To strengthen yard security, Parker also suggested adding two men to be designated captains of the watch, one of whom would always be on call. Their tasks were to pass the watchmen out of the yard when they went off duty, to visit the various beats during the night, to be responsible for lights and fires in the watch houses, and to report any misconduct. Captains of the watch should be paid $1.50 per day. The bureau accepted this recommendation, but set the wages of the watch captains at $1.25.\textsuperscript{124}

The size of the civilian watch increased because of the reduction of marines at the barracks. For example, the detail of Marine guard to Independence so reduced the detachment assigned to the barracks that Colonel Watson was unable to send any men to the posts at the Chelsea Naval Hospital. Accordingly, the bureau agreed to the employment of civilian watchmen at the hospital. The growth of the civilian watch caused Commodore Smith, Chief, Yards and Docks, to become concerned over the additional expense for his bureau. In October 1846, he inquired of Commandant Parker whether there were sufficient marines at the barracks to provide sentries for some of the posts then manned by civilians. Parker replied in the negative. He noted that the continuing call for marines for sea duty had caused them to be withdrawn from all navy yard posts but one, the main gate.\textsuperscript{125}

During the war, the Marine Corps Barracks at the Charlestown Navy Yard had some difficulty in obtaining sufficient supplies, perhaps because of the enlarged size of the Corps. It also appears that some wartime contractors furnished the Corps with defective goods. In December 1847, with the approach of winter, the barracks commander requisitioned from the quartermaster depot fairly large numbers of a variety of articles of clothing, including 150 fatigue overalls, 100 pairs of socks, fifty uniform coats, and two hundred shirts. The depot was slow in supplying some of the gear called for, and Captain Waldron complained that several of the recruits were without military clothing. Moreover, some of the items that were sent proved unacceptable. The shirts were too small and made of very thin material. Those men who would serve in

\textsuperscript{121} Henderson to Watson, May 18, 1847, NA, RG 127, Ltrs. Sent.

\textsuperscript{122} Henderson to Waldron, Feb. 23, Feb. 28, 1848, NA, RG 127, Ltrs. Sent.

\textsuperscript{123} Parker to Warrington, June 1, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, June 9, 1846, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{124} Parker to Smith, June 17, 1846, NA, RG 71, Ltrs. Recd., Y&D; Smith to Parker, June 19, June 26, 1846, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{125} Parker to Smith, Aug. 6, Oct. 30, 1846, NA, RG 71, Ltrs. Recd, Y&D; Smith to Parker, Aug. 8, Oct. 26, 1846, NA, RG 71, Ltrs. Sent, Y&D.
northern latitudes required shirts of "the thickest and best fabric."\textsuperscript{126}

In the spring of 1848, the barracks commander found large quantities of articles of clothing and other equipment unfit for issue because of inappropriate sizes or substandard quality. These included 150 linen overalls, 400 linen jackets, forty cartridge boxes, fifty-eight bayonet belts, and eight swords. Some blankets were so weak that they tore easily, and the warp seemingly was cotton. The leather visors of some caps, after exposure to the sun, "burnt on the inside as to destroy the strength of the leather, which pealed and crumbled." Some of the substandard clothing was ordered to be sold at public auction, but for a period the men of the barracks had to "make do" with shoddy items.\textsuperscript{127}

With the end of the hostilities, the Marine Corps and its detachment in Charlestown returned to prewar conditions. The two battalions organized for service in Mexico were brought back to the United States and disbanded. The Corps' strength was slashed to the numbers prevailing before the legislation of March 1847. At Charlestown, the musical chairs that had seemingly been played with the post of barracks commander terminated. On May 10, 1848, Captain Brevoort was relieved as commanding officer by Capt. Thomas T. English. English held that billet for the next five and a half years.

The barracks became involved in the disbanding of Marine units returning from the war. For example, on September 8, the brig \textit{Fabius} arrived at the yard with one of the battalions sent to the Gulf of Mexico. The men were landed and directed to the barracks for processing. A number were discharged and the remainder soon transferred to other stations.\textsuperscript{128}

The traditional task persisted of providing Marine guards for ships being outfitted at the yard. \textit{Constitution} was being readied for sea at the yard in the autumn of 1848. The barracks was ordered to send the forty-seven-man guard aboard on October 1. When he checked his ordnance stores, Captain English found that there were insufficient flintlocks on hand to supply the guard, and sixty muskets were shipped from Washington. At the same time, the commander of the receiving ship \textit{Franklin} called on Captain English for more marines. There were then seventeen privates pulling duty on the vessel, but her captain wanted more to "keep up discipline" among his many naval recruits.\textsuperscript{129}

The calls for detail to duty afloat and the freeze on enlistments significantly reduced the number of privates at the barracks. In addition, several of the barracks' Mexican War veterans were desirous of securing discharges to enable them to take advantage of their land bounties. By the beginning of the fourth week of October 1848, there were only nine men fit for navy yard duty, enough to man merely two yard posts. Consequently, Captain English requested authority to resume recruiting at the barracks. Commander Henderson sanctioned the enlistment of ten "first rate men—old soldiers to have preference."\textsuperscript{130}

By the end of 1848, reenlistments had enabled English to increase the strength of the detachment to eight sergeants, two corporals, one drummer, two fifers, and twenty-seven privates. Of this number, six were on sick call and three were recruits. The situation improved even more markedly during the first seventeen days of 1849, when English enlisted fourteen men.\textsuperscript{131}

Discipline remained a problem among marines at the yard, both in wartime and peacetime. Drummer Peter Cades was known to drink to excess, be on sick call most of the time, and to smuggle rum into the

\textsuperscript{126} Brooke to Lindsay, Dec. 23, 1847; Waldrong to Nicholson, Jan. 15, 1848, NA, RG 127, Ltrs. Sent, CMB.

\textsuperscript{127} English to Quartermaster, May 31, 1848; English to Lindsay, June 5, 1848, NA, RG 127, Ltrs. Sent, CMB; Nicholson to English, June 5, 1848, NA, RG 127, Ltrs. Sent, MCQ.

\textsuperscript{128} English to Walker, Sep. 8, 1848; English to Howle, Sep. 12, 1848, NA, RG 127, Ltrs. Sent, CMB.

\textsuperscript{129} Henderson to English, Sep. 22, 1848; Nicholson to Henderson, Sep. 25, 1848, NA, RG 127, Ltrs. Sent; English to Nicholson, Sep. 20, Sep. 25, 1848, NA, RG 127, Ltrs. Sent, CMB.


\textsuperscript{131} English to Howle, Dec. 29, 1848; English to Henderson, Jan. 1, 1849, NA, RG 127, Ltrs. Sent, CMB.
hospital and barracks. When the usual punishment brought no reformation, Cades was discharged. A private from the Marine guard of the receiving ship was in the habit of returning from liberty late at night and very drunk. On passing through the barracks gate, he would ring the bell, awakening all hands. One private who transferred to the barracks from the Marine guard on Decatur was found to be of "bad character." When physically examined, he proved to have the letter "D" on his left arm pit, pricked in with India ink. Upon being questioned, he admitted to being a deserter from the British army. Late in April 1848, Pvt. Edward Coote refused to obey the orderly sergeant's instructions. When the order was repeated by Lieutenant Brooke, Coote remarked that "we could not work for him . . . and that there was not an officer in the Marine Corps who could compel him to work against his will." Since this was not the first occasion Coote behaved in this manner, he was discharged on the recommendation of Captain Brevoort, the concurrence of Commandant Henderson, and the authority of Secretary of the Navy Mason.

During the years 1847-1848, the building complex occupied by the Marine unit at Charlestown appeared to be in a chronic state of disrepair. That substantial work was required in parts of the barracks was the complaint of Colonel Watson in May 1847, Lieutenant Brooke in October 1847, Captain Brevoort in April 1848, and Captain English in October 1848. This is not to say that no repairs were made. After Captain Brevoort reported on conditions in the barracks in the spring of 1848, the Navy Department authorized repairs costing almost $800.

A visitor to the Charlestown Navy Yard in early July 1846 had reported that the facility:

presents quite a busy scene; and about 900 men were on the roll. The Independence will be ready for sea in 3 or 4 weeks. Her guns are being changed to a heavier caliber, with fewer of them. She is to be flagship of Commodore [William B.] Shubrick in the Pacific. Ohio will then take her place in the dock. Franklin is to be made the receiving ship. Ten to 12 ton of cordage are turned out daily by the Ropewalk.

"Quite a busy scene" probably captures the pace and volume of activity at the Charlestown installation during the Mexican War. The yard was more active than previously, but did not achieve the intensity of operations displayed in later wars of the nineteenth century or during twentieth-century hostilities.
In two of its issues in 1851, *Gleason's Pictorial Drawing-Room Companion* published pictures of and articles about the Charlestown Navy Yard. The text of the article in the first issue is primarily directed at explaining the panoramic sketch which it accompanied. The article of November 1851 is of greater interest. Generally, the author presented the Charlestown yard as a "great naval depot and workshop," and information was provided to justify that characterization. As a related emphasis, the article pictured the yard as an interesting place to visit, and it noted particular features worthy of a visitor's attention.

As to be expected, *Gleason's* emphasized the yard's physical plant. Structures of note were "three ship-houses and slips for building vessels under cover"; "two large store-houses 200 feet by 60 feet built of Quincy granite," "four timber sheds of 450 feet in length, in which are stowed... frames of live oak for sixteen ships of the various rates"; and "the blockmaker's shop with its improved and beautiful machinery." This last mentioned institution was "pronounced by the officers of several foreign nations... to be the most complete establishment of the kind to be found anywhere." Other notable features were the "magnificent park for heavy cannon," with its "seven or eight hundred pieces of the largest caliber," "the shot park, with many thousand balls piled in the neatest manner, and an anchor park, in which are the largest anchors for men-of-war." Despite its belligerent purposes, the facility was described as possessed of an idyllic character. "The whole yard is laid out into streets and avenues, which are either paved or graveled, and bordered with elms, maples, or ornamental trees, affording one of the most beautiful promenades in this part of the country."

What made the yard a "great naval depot and workshop" was not its pleasing appearance, but its industrial activity and capability. The article contended that at the yard "ships can be built and everything necessary for their equipment made in a little time, and to as great advantage as any dock yard in the world." Symbolic of the yard's eminence was the presence of "three great ships of the line, the Ohio, the Vermont and the Virginia--each remarkable for its model, its size, strength and fitness." The waters at the yard had such depth that "these immense... ships can lay at its wharves at low tide...; and indeed sail directly from the wharves... for any voyage, or place of destination over the sea."

One part of the article took a less impressionistic approach and offered figures and statistics to demonstrate the importance of the yard at Charlestown. Readers were informed that the value of the land and structures was estimated as $5,000,000; that the yard had on hand materials for naval purposes worth $2,503,000; and that the vessels on the stocks had an approximate value of $1,000,000. On the average, 500 men were employed daily, "sometimes as many as 900." The average daily total wages amounted to $768 and the annual wage expenditure, $240,000. Each year, the yard shipped to other stations manufactured goods averaging $600,000.1

**MANAGING THE YARD**

On March 19, 1849, Commo. John Downes, for the second time in his career, assumed command of the Charlestown Navy Yard. Commodore Parker had left the yard on the 15th, and the facility was transferred to Downes by Acting Commandant Tattnall.2

In December 1851, the Department announced that Downes and other yard commandants were to

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1 *Gleason's Pictorial Drawing-Room Companion*, Aug. 23, 1851, pp. 269, 273; Nov. 29, 1851, pp. 488-89.

2 Preble, p. 302.
be allowed a boat crew, not to exceed six men, whenever the performance of public duty made such a vessel necessary. The seamen were to be drawn from the receiving ship complement. When not required to man the commandant’s boat, the sailors were to be employed on other public work.

In March 1850, the Bureau of Yards and Docks notified yard commandants that they were to regulate the hours of work and wage rates in each department and class of workmen, so far as practicable, by those prevailing in local private shipyards. The new system produced an avalanche of complaints, and six months later Secretary of the Navy William A. Graham rescinded his March order insofar as it applied to the workday.

Commodore Parker had placed Francis Sisson in charge of Storehouse No. 15 because of his reputation for honesty. That building contained articles landed from vessels returning from cruises, as well as a “great variety of outfits which are placed there temporarily.” Sisson was also in charge of the sail loft and cordage storeroom being erected on Main Avenue opposite to Storehouse No. 15. Commandant Downes continued Sisson as yard storekeeper.

In July 1849, Commandant Downes recommended that to centralize control a master mechanic be made responsible for all yard construction. If this were done, problems such as encountered in building Timber Shed No. 37 could be avoided. With construction of “so great and important a building as Cordage Store, etc.,” this step could not be deferred. A suitable man for the position was Job Turner, the yard’s former master mason. Downes’s recommendation of this candidate was not accepted by the bureau because of Turner’s demand of $5.00 per day, and Henry Dana was hired as master mason.

CEREMONIES, DISTINGUISHED VISITORS, STORMS, FIRES

During the years from 1849 to 1852, the yard received several distinguished visitors. Among them were the minister to the United States from the Ottoman Empire, who visited the yard in October 1850; President Millard Fillmore, September 1851; and General Vorrea of the Mexican Army, March 1852. The honors accorded by the yard to these dignitaries included the appropriate salutes fired by the yard battery. The battery was also employed to mark the deaths of celebrated figures. The most important of these were former President James Knox Polk, who died in June 1849, and President Zachary Taylor, who died in office in July 1850. In the case of the death of Taylor, work was suspended at the yard during the day of July 13, and at noon 21-minute guns were fired. On the 31st, funeral services in honor of Taylor were held in Boston. The yard’s officers, mechanics and laborers were given time off to participate. At 3:00 p.m., 30-minute guns were fired from the battery. Again, on August 15, all work was suspended at the yard and the colors half-masted in honor of the late chief executive.

The yard participated in other ceremonial occasions. On August 3, 1849, all business was suspended by order of the Secretary of the Navy, the day having been set aside by President Taylor for fasting, humiliation, and prayer by the people of the nation because of the havoc made in many regions by Asiatic cholera. The Secretary of the Navy approved the application of the mayor of Charlestown for the townspeople to use Shiphouse No. 39 on June 17, 1850, for ceremonies commemorating the seventy-fifth anniversary of the battle of Bunker Hill. Yard officers and watchmen were alerted to be especially vigilant on that occasion to guard public property against injury. The guest speaker was Edward Everett, who addressed a large crowd.

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5 Smith to Downes, Dec. 13, 1851, NA, RG 71, Ltrs. Sent, Y&D.
4 Smith to Downes, Mar. 23, Sep. 23, 1850, NA, RG 71, Ltrs. Sent, Y&D.
3 Downes to Smith, Feb. 8, 1851, NA, RG 71, Ltrs. Recd., Y&D.
6 Downes to Smith, July 10, 1849, NA, RG 71, Ltrs Recd., Y&D; Smith to Downes, July 12, 1849, NA, RG 71, Ltrs. Sent, Y&D.
7 Preble, pp. 302, 305-7, 310-12, 315.

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gathered in the shiphouse. A national salute was fired from the battery as the throng entered the yard.8

During the Downes years, the yard experienced several major fires. At 9:00 a.m., November 5, 1849, smoke was seen issuing from around the doors and windows of the large wooden coal shed on Wharf No. 66. When a door was opened by a watchman, the partition holding up 300 tons of smithery coal was discovered to be afire. With smoke billowing from every part of the coal pile, it was obvious that the fire had been caused by spontaneous combustion. Within a few minutes of the alarm, the yard's fire engines, followed by the Charlestown fire department, were on the scene. While the fire fighters snuffed out the flames, a crew was turned to removing the 300 tons of coal.9

The yard fire department went to the aid of the Charlestown company one evening in October 1851. At 10:30 p.m., the yard alarm sounded when several houses on the high ground north of the yard caught fire. Engines Nos. 1 and 4 raced to the scene, and the yard fire fighters assisted the local company in extinguishing the blaze. Then, on November 13, the roof of the smithery caught fire from sparks. The fire fighters turned out and put out the flames before much damage was caused.10

A nor'easter on April 16, 1851, brought torrential rains, high winds, and a surging flood tide. Much of the yard was inundated. Water lapped against the Navy Store and surrounded the dry dock. Rising an inch or two above the dock's coping, water poured into the basin. John Hancock was lifted off the keel blocks, and it was necessary to take her out of dock to reposition them. Water edged up to Storehouses Nos. 15 and 16 and surrounded all the shiphouses, except the upper part of H, where the ground had been recently raised. It came up to the eastern walls of the timber shed. All the piers and wharves were submerged. A chimney at the smithery was blown down and three cellars flooded.11

THE YARD'S SHIPBUILDING PROGRAM

During the years following the Mexican War, the Navy retrenched. Congress and the nation were in an economy mood, and the question of expansion of slavery into the vast area wrestled from Mexico occupied much of the public's and lawmakers' time and energy. Consequently few new ships were built in these years, and only two at the Charlestown facility.

JOHN HANCOCK

In March 1849, Congress appropriated $20,000 for the Charlestown yard to build an anchor hoy and tank. The vessel was also intended to serve as a tug. This craft, unlike other vessels built at the yard and funded by the Bureau of Construction and Repair, would be the responsibility of the Bureau of Yards and Docks. Thus the yard received directions for the building of the vessel from Commodore Smith, Chief, Yards and Docks.

In early June 1849, Smith advised Commandant Downes the yard was to prepare and forward a description of the craft's machinery, since it would take longer to build the engine than the vessel herself. The bureau would have its chief engineer prepare drawings and specifications. Two sets of plans were prepared at the yard by Charles Copeland and sent to the bureau for review. Upon studying the drawings, Smith and his staff were disappointed to see that both called for powering the vessel by a propeller. One set of plans had a pair of oscillating cylinders and the other a pair of direct acting inverted engines. As the craft would frequently be called on to serve as a tug, Smith believed sidewheels preferable to a propeller, provided they

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8 Ibid., p. 305; Smith to Downes, May 24, 1850, NA, RG 71, Ltrs. Sent, Y&D.
9 Downes to Smith, Nov. 5, 1849, NA, RG 71, Ltrs. Recd., Y&D.
10 Preble, p. 312.
11 Downes to Smith, Apr. 17, 1851, NA, RG 71, Ltrs. Recd., Y&D.
would not interfere with the tank.12

After discussing the subject with Naval Constructor Pook and Copeland, Downes replied that Copeland favored the "oscillating cylinder," because it was more compact than any other and was less liable to derangement. As the vessel had originally been designed for a propeller, should sidewheels now be adopted, it would result in considerable addition to the cost. To strengthen his argument, Downes informed the bureau that the steamer Robert B. Forbes, driven by a propeller, had been operating in Boston harbor for several years with considerable success as both a towboat and an icebreaker. The bureau withdrew its objection to the propeller and directed that the engine be built at the yard under the supervision of Pook and Copeland.13

In part because the vessel was enlarged and modifications made in her design, construction of the hoy exceeded the sum appropriated. The greater cost in turn led to decisions to omit parts of the original design. The hoy's keel was laid during the autumn of 1849. Copper spikes were used in construction of the hull, because they deteriorated less rapidly than those fabricated of yellow metal and composition. In March 1850, Downes reported that the hoy would cost more than the funds allotted. The carpenters' work on the hull, which was nearly finished, would be about $12,000. To reduce expenses, "it was not contemplated to rig her, but merely to have boom derricks." Furthermore, the hoy would be launched without being coppered. Although, it would have been possible to launch her at the end of March 1850, little would have been accomplished since her machinery was not yet ready. By allowing the completed hull to remain on the stocks for several months and delaying the caulking, a more watertight hull would result.14

In early July 1850, the bureau ordered that the hoy be rigged and provided with sails, chain, and other equipment. She was to have two "light buoyant boats" to hang from davits well up abreast of the main rigging.15

Charles Copeland, who had designed the machinery for the anchor hoy, had been transferred from the yard at Charlestown to the one at New York. Consequently, it had been decided to manufacture the engines and boilers at the Washington Navy Yard. The private schooner Elizabeth Ann reached Charlestown on September 6, 1850 with the machinery. It was unloaded and placed alongside the hoy, ready to be set up on board. Installation of the machinery was supervised by Copeland, assisted by two workmen from Washington and a special mechanic employed by Downes.16

The machinery had been installed in the vessel by October 26, when she was christened John Hancock and launched. To cover the considerable arrearage incurred in construction, the bureau directed that the unexpended balances in the Charlestown yard's accounts for new plant be transferred to the anchor hoy. Involved was roughly $5000, originally appropriated for such projects as the knee docks, new wharf, the tracks for the gun park, brick stables, and the carpenters and joiners' shop.17

Commandant Downes scheduled the vessel's first trial for January 27, 1851. As directed by the

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12 Smith to Downes, June 4, July 30, 1849, NA, RG 71, Ltrs. Sent, Y&D.

13 Downes to Smith, Aug. 4, 1849, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Aug. 4, Aug. 17, 1849, NA, RG 71, Ltrs. Sent, Y&D. The yard became more familiar with Robert B. Forbes when she was purchased by the Navy during the Civil War.

14 Smith to Downes, Jan. 19, Mar. 9, 1850, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Mar. 6, Mar. 7, 1850, NA, RG 71, Ltrs. Recd., Y&D.

15 Smith to Downes, July 1, 1850, NA, RG 71, Ltrs. Sent, Y&D. For an exchange between Downes and the bureau regarding the sails and rigging, see Smith to Downes, Mar. 9, Mar. 26, May 7, May 29, 1850, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Mar. 20, Apr. 29, 1850, NA, RG 71, Ltrs. Recd., Y&D.


17 Smith to Downes, Nov. 2, 1850, NA, RG 71, Ltrs Sent, Y&D.
bureau, Copeland had been notified and was on hand. The yard hired a pilot and two firemen for the exercise. However, the trial had to be twice postponed, first because of defects in the ship and then because of ice floes. The defects consisted of leakage about the boiler. To correct this, Copeland recommended that the boiler and steam pipes be covered with felt and canvas. He also suggested that the yards be taken off the mainmast, as they could not be "braced up without coming up over the mouth of the pipe." Another recommendation was that "the upper end of the mainmast be covered with sheathing copper." The Bureau of Yards and Docks, while approving modification of the boiler and pipes, vetoed removal of the yards from the mainmast.18

Early in March, John Hancock made a test run. In his report of the trial, Copeland gave her speed under canvas as only five knots, whereas the bureau held that she should have logged nine knots with all sails set and wind enough to fill them. There were other problems. The boilers foamed, and the ship's trim was improper. Smith believed that the foaming in the boilers could be remedied by usage and the trim could be corrected by not filling the tank to capacity. The best working and sailing trim could be determined by experiments. The bureau proposed a lengthier test of John Hancock and directed she be employed to transfer the crew of Decatur from Charlestown to Portsmouth.19

With a draft of sailors aboard, John Hancock left the Charlestown yard on March 12 for Portsmouth. On the sixty-nine-mile run, she averaged five miles per hour, and on her return trip she logged seven and two-thirds miles per hour. Downes and his staff were disappointed by her performance. It was apparent that her boiler was too small for the machinery and that she carried too much ballast. To correct this situation, Downes recommended that the boiler and machinery be placed amidships. No ballast would then be needed, and whatever weight taken aboard could be positioned to keep her in trim. In addition, the water tank could be removed, and the vessel employed for transporting men and stores to the various stations, as well as a tug and anchor hoy. A separate water tank could be built at a small expense to be moved about by a tug. The bureau directed that Downes consult with Pook and Copeland as to measures to be taken to improve John Hancock's boilers and engine to provide more speed.20

Downes named a three-man board, consisting of S. M. Pook, Charles Copeland, and B. F. Shattuck, to study the craft. After its examination, the board recommended that, if John Hancock were to be employed for transporting men and stores, the tank and tank engine be removed and the boiler relocated six feet farther forward. For accommodation of the officers, a small cabin should be positioned on the deck aft. The wheel should be relocated forward of the chimney and mainmast to give the helmsman an unobstructed view. A steam drum was needed to connect with the steam chimney. After receiving the report, the bureau directed Downes to have the tug altered in accordance with the board's recommendations. It was noted that a trunk cabin could be built on deck, leaving a three-foot wide passage on each side. The top of the wheelhouse was to be built little, if any, above the rail. The existing boiler was to be exchanged for a new one.21

The tug was hauled onto the ways, and within two months the alterations had been completed and her bottom coppered. She was given a trial run on June 10 and two days later sailed for Annapolis, where she would serve as a training vessel for the midshipmen. Prior to her departure, she was supplied with "such hammocks and fixtures as her commanding officer required."22

At the end of the summer's midshipmen's cruise, John Hancock sailed for New York, where she was

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18 Pope to Smith, Jan. 20, Jan. 30, Feb. 1, 1851, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Feb. 6, 1851, NA, RG 71, Ltrs. Sent, Y&D.

19 Smith to Downes, Mar. 6, Mar 10, 1851, NA, RG 71, Ltrs. Sent, Y&D.

20 Downes to Smith, Mar. 18, 1851, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Mar. 21, Mar. 24, 1851, NA, RG 71, Ltrs. Sent, Y&D.

21 Pook, Copeland, and Shattuck to Downes, Mar. 29, 1851, NA, RG 71, Ltrs. Recd, Y&D; Smith to Downes, Apr. 2, Apr. 4, Apr. 5, 1851, NA, RG 71, Ltrs. Sent, Y&D.

22 Smith to Downes, Apr. 19, 1851, Skinner to Downes, June 2, 1851, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, May 30, June 11, 1851, NA, RG 71, Ltrs. Recd., Y&D.
commissioned on September 6. Three days later she departed for Cuba to assist in suppressing a filibustering expedition. Her duty there was limited to four days because foul weather damaged the vessel, causing her to return to Boston. She arrived at the Charlestown yard on November 9, after a five-month absence. The vessel was placed in yard service, and her crew transferred to the receiving ship. In 1853, the Charlestown Navy Yard reconstructed John Hancock.23

**PRINCETON NO. 2**

On July 17, 1849, the steamship Princeton reached the yard from the Mediterranean. Her stores and crew were sent ashore, and she was laid up in ordinary. Ten months later, the Navy ordered the ship broken up. Her armament, machinery, and all other items which could be used for naval purposes were to be salvaged and carefully preserved. The ten-dollar gold piece placed by Commo. Robert F. Stockton under her stern post at the time of her building was to be recovered and returned to him. Those tasks appear to have been accomplished by the end of 1849.24

In February 1851, Commandant Downes informed the Department that if it were planned to replace Princeton, there was on hand at his yard live oak frames for a harbor steamer, cut to Fulton's moulds, and about 50,000 cubic feet of promiscuous timber. In addition, there was stockpiled sufficient planks, beams and knees salvaged from Princeton No. 1 for building a new vessel. Labor costs for the project would probably not exceed $50,000. After reviewing the situation, the bureau wrote Downes that arrangements were to be perfected for building a steam frigate, Princeton No. 2. The bureau was to be notified whether the yard had on hand all the necessary materials. Naval Constructor Pook prepared the lines and specifications for the ship, which were promptly approved by the Department, and the steamer's keel was laid in June.25

While work progressed on the hull, attention was given to the yard's capacity to make the steamer's propeller and do other work on the machinery. Casting the propeller would require some preparations, including the construction of an air furnace with pit and an oven to dry the mould. Downes stated that all machinery could be provided by the yard, with the exception of the main shaft, for which a large lathe would be required. If the shaft were to be lengthened, it would be necessary to enlarge two forges. Some $5500 would be required for the air furnace, enlarging the forges, and the large lathe. Perhaps because of these costs, the bureau decided the boilers, propeller, and shaft would be manufactured under contract.26

In August, the bureau directed that the boilers and machinery removed from Princeton No. 1 were to be transferred to Murray & Hazelhurst, of Baltimore, contractors for these items in Princeton No. 2. The contractors brought into the yard their own gang to prepare the machinery for shipment to Baltimore. Downes allowed Murray & Hazelhurst to use the blacksmith shop at the upper end of the yard.27

The yard carpenters were finished with the hull sooner than anticipated, and on October 28, Princeton was launched and hauled under the shears of Wharf No. 64 to be masted. The launching allowed ample time to get her into the dock and coppered before winter closed in. Although her machinery had not been received, Commandant Downes urged that she be equipped as far as possible and her sailing qualities tested

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26 Skinner to Downes, June 4, June 11, 1851, NA, RG 19, Ltrs. Sent, C&R; Downes to Skinner, June 9, 1851, NA, RG 19, Ltrs. Recd., C&R.

with reference to building sloops-of-war of her class.28

On the last day of January 1852, the bureau ordered Princeton prepared for a voyage to Baltimore, where she would take on her boiler and propeller. By that time, she had been painted and rigged, and all work had been advanced as far as could be advantageously done until her machinery was installed. None of the machinery had been received, and even if it arrived, no part of it could be positioned until the bearings and shaft had been fitted. Unless the propeller was attached to the shaft before the vessel was undocked, it would be necessary to redock her. To ready the ship for sea, the propeller shaft should be promptly forwarded. Coal bunkers and iron bulkheads could be put up, provided they would not interfere with the "erection" of the machinery. Downes noted that if Princeton went to sea without her boilers and coal, she would require about 300 tons of ballast.29

In late March, John C. Fremont, reached the yard from Baltimore with the anxiously awaited machinery, the rebuilt engines of Ericsson’s semi-circular design. By early May, the machinery had been installed, and Commandant Downes wrote Washington that Princeton was ready to receive her crew. Accordingly, she was commissioned. On May 19, 1852, the day that Commodore Downes turned over command of the yard to his successor, Princeton left the yard under tow for Baltimore, where she was to receive her propeller and boilers.30

MAINTAINING AND SUPPORTING THE SQUADRONs

In addition to constructing two new vessels during the years 1849-1852, the Charlestown yard contributed to the operations of the Navy by repairing, outfitting, and laying up in ordinary its ships. The yard also serviced vessels of the Treasury Department and on one occasion allowed use of its dock to a foreign warship. The Bureau of Construction and Repair changed certain of its guidelines and procedures governing the repair and outfitting of vessels. In April 1850, Commo. Charles W. Skinner, Chief of the Bureau, directed that in the future the exteriors of the Navy’s ships were to be painted a light lead color. In June, Downes was instructed to see that every vessel outfitted in the yard was provided fifteen Gurin life preservers. Earlier, Downes had recommended that the Nautilus Life Preserver and Swimming Belt be adopted for service aboard the nation’s warships. They cost $5.00 each, were far superior to the life buoys then in use, and would easily "sustain some four or five men in the water." Another change was instituted in December 1851. The bureau directed that all vessels henceforth built or repaired at navy yards were to have a two-inch-wide black line painted on the hold clamps to correspond with the external load water line. On the black line on the inside would be marked the position of each gun port on the lower gundeck and its number. The object was to enable those below, during battle, to indicate to those on deck the point of penetration of shots entering the ship below the water line.31

During the Downes years, the yard repaired or outfitted a half dozen naval vessels. The sloop Falmouth, in ordinary since November 1846, was outfitted in the spring of 1849 for duty in the Pacific. She recommissioned on April 16, and on May 16, she sailed for the West Coast of the United States. Falmouth was the first vessel to put to sea from the yard in the two months since Commodore Downes had


become commandant.\footnote{32}

In April 1849, the bureau notified Downes that the corvette *John Adams*, under repair at the yard since her return from the Gulf seven months before, was needed for duty on the Brazilian station. The outfitting of the vessel was expedited, and on June 30, her crew aboard, she was hauled into the stream and made sail.\footnote{33}

A week before *John Adams* departed, the bureau ordered *Marion* taken out of ordinary and repaired. By early December, she was ready, and Downes was directed to have her outfitted for a two years' cruise in China seas. In mid-December, she was hauled into dry dock, and a large force turned to coppering her bottom. By the 29th, this work had been completed, and Downes alerted the bureau that *Marion* was ready to receive her officers and men. On January 29, 1850, her complement and stores aboard, she sailed for the Orient.\footnote{34}

The sloop *Albany* reached the yard from the West Indies in September 1850. Her repair and outfitting was expedited, and she put to sea on December 3, returning to her station.\footnote{35}

In June 1851, *Cumberland* arrived at President Roads from Spain. She was reportedly in "a state fit for a three years' cruise." Actually, it required almost a year to get her ready for sea again. The bureau ordered the frigate hauled into the yard to be surveyed and outfitted. She was docked in mid-August and rigged in the following month. Early in 1852, the bureau ordered *Cumberland* prepared for sea with all possible dispatch. Downes reported her ready to receive her complement by February 19, but when she would be ready for sea depended on receipt of supplies and stores from the Bureau of Ordnance and Bureau of Provisions and Clothing. Fifty thousand pounds of bread were required, which would take considerable time to bake. The yard had no bread at hand and was short 100 barrels of beef. Another four months passed before the yard turned over the frigate to her captain. On May 11, *Cumberland*, her crew and outfit aboard, sailed for the Mediterranean.\footnote{36}

The sloop *Portsmouth* sailed into Boston Harbor in June 1851 from the west coast of Africa. The Department ordered her repaired and outfitted for a three-year cruise in the Pacific. By mid-August, *Portsmouth* had been docked, repaired, coppered, and her rigging fitted. Her crew arrived in early December, and one week before Christmas, *Portsmouth* made sail and got underway.\footnote{37}

In April 1850, after an absence from the yard of thirty-nine months, the ship-of-the-line *Ohio* returned. As she approached Boston, she struck Nantasket Shoal. Prior to being laid up in ordinary, she was docked and examined. It was found that the big 74's false keel and shoe had been damaged. They were replaced and the vessel caulked before she was placed in ordinary. Early in November, measures were taken to strip and secure *Ohio*, preparatory to mooring her at anchorage. Before doing so, Downes desired to know whether it was the bureau’s intention to convert her into a receiving ship to replace *Franklin*.\footnote{38}

\footnote{32} DANFS, vol. II, p. 387; Preble, p. 302.

\footnote{33} Skinner to Downes, Apr. 26, 1849, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 302.


\footnote{38} Skinner to Downes, May 1, May 27, 1850, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 305; Downes to Skinner, Nov. 8, 1850, NA, RG 19, Ltrs. Recd., C&R.
In order to make a decision, the bureau called for a report on the amount of work and costs involved in converting Ohio into a receiving ship. Naval Constructor Pook reported that the vessel was well adapted for a receiving ship. To make the conversion, it would be necessary to fit sashes in the ports; build a new pantry; repair the cabin, sick bay, gratings, ladders, head boxes, quarter galleries, round houses, bread rooms, and pumps; clean the bulkheads; and scrape the ship's interior and paint it with two coats. The estimated cost of the work was $1800. Meanwhile, the Department had procured an estimate of the cost of razing Franklin.

When the bureau continued to procrastinate, Downes warned that if it were intended to retain Franklin as the station's receiving ship, she would require extensive repairs. It was doubtful whether her spardeck and bulwarks could be repaired to keep the weather out. When she had been converted into a receiving ship, she had been cladboarded on the outside from the water up. This had kept rain from "entering her side, but they had been unable to keep the deck and bulwarks from leaking." The ship was "quite flooded whenever it rains, and all on board made uncomfortable." Downes was satisfied that it would cost more to put Franklin in fit condition to comfortably accommodate officers and seamen than to convert Ohio into a receiving ship.

Galvanized into action by Downes's communication, the bureau ordered Ohio to be fitted out to replace Franklin as the receiving ship. In doing so, measures were to be taken to enjoin "strict economy." By mid-July 1851, Ohio had been modified into the station's receiving ship and preparations made for towing Franklin to Portsmouth, where she would be rebuilt. Those preparations included making certain that Franklin's pumps were operating and that any holes that might admit "sea wash" stopped. On July 22, Franklin left the yard, towed by steam tugs, bound for Portsmouth.

Occasionally, Navy vessels came to the Charlestown yard, not for repairs, but simply to make courtesy calls or in the course of other business. During the years 1849 to 1852, the yard had at least three such visits. The sloop Germantown put into the yard for less than forty-eight hours in August 1849. Another sloop, Preble, made a courtesy call at the yard in September 1851. At that time, Preble was assigned as a practice ship for midshipmen. In May 1852, the steam frigate Mississippi reached the yard from Norfolk. She had been sent to Boston to tow Princeton down the coast and up Chesapeake Bay to Baltimore.

The Charlestown Navy Yard continued to be base for Coast Survey vessels and also serviced other craft of the U.S. Treasury Department. The surveying steamer Bibb was generally berthed at the yard from October to June before resuming its summer survey duty. In October 1850, another survey vessel, Gallatin, arrived in the yard and remained for a month. In the spring of 1851, at the request of the Secretary of the Treasury, the Navy Department directed that henceforth vessels belonging to the Revenue Service and Coast Survey were to be repaired at navy yards. In May of that year, the revenue cutter Hamilton reached the yard. Orders were promptly received from the bureau that she was to be repaired with "dispatch and economy." In early July, Downes reported the cutter nearly ready to be returned to the Revenue Marine, and she departed the yard on the 22d. The Secretary of the Treasury was delighted with the workmanship and the comparative low cost involved in the cutter's repairs. The Navy had long maintained that cutters, lightships, and other government vessels could be built and repaired on more favorable terms at public rather than private yards.

On May 10, 1850, an unusual event occurred. The Swedish corvette Najardin sailed into Boston

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40 Downes to Skinner, Apr. 11, 1851, NA, RG 19, Ltrs. Recd., C&R.


Plate 1: "VIEW OF THE DRY DOCK AT THE U.S. NAVY YARD, CHARLESTOWN, MASS." From *Gleason's Pictorial Drawing Room Companion*, vol. I, No. 7, June 14, 1851. During 1851, the Charlestown yard docked nine private vessels. The ship in this illustration may be one of them, since she appears to have no gun ports.
Harbor with a damaged rudder and anchored off the navy yard. Salutes were exchanged between the ship and the battery. *Najardin* was docked on the 30th, the first foreign warship to be taken into a dock of the United States. While in the dock, the ship's rudder was repaired, and a spare spar positioned as a foreyard. She was hauled out on June 4 and proceeded to sea. Labor and material costs for this operation were assessed and collected from the Swedish government by the State Department.\(^{44}\)

**DRY DOCK AND MASTING SHEARS**

During the years 1849 to 1852, the dry dock at the Charlestown Navy Yard experienced greater usage, but much of the increase came from docking of ships other than those of the U.S. Navy. In 1849, there were eight dockings: five involved vessels of the Navy (*Savannah*, *Marion*-twice, *Princeton*, and the dry dock caisson). Also docked were the private steamer *Uriel*, the bark *Helicon*, and the surveying ship *Bibb*. Only two ships of the Navy, *Ohio* and *Albany*, went into the dock in 1850. The seven other dockings that year were of *Bibb*, the Swedish warship *Najardin*, and five merchant vessels. In 1851, of the sixteen vessels docked, nine were private craft and two belonged to the U.S. Treasury Department. Also entering the dock were *John Adams*, the caisson, *Princeton* No. 2, *Portsmouth*, and *Cumberland*.\(^{45}\)

In the mid-nineteenth century, private works in East Boston were building large clipper ships. During the second half of 1850 and the first seven months of 1851, considerable political pressure was brought on the Navy to permit docking at its Charlestown yard of these vessels so they could be coppered. However, opponents argued that such dockings were a "detriment to private enterprise," besides diverting the dry dock from its intended use. The subject was brought to a head by a request to employ the dock to copper *Nightingale*. Writing the bureau, Commandant Downes raised questions of how yard workmen employed in the docking were to be compensated. Were they to be paid on the yard roll or a separate roll charged to Davis & Co., and the balance credited to the Navy?\(^{46}\)

To discourage use of the dock by nonpublic vessels, the Bureau of Yards and Docks decided to boost the rates. Downes was informed that henceforth the charge for the first day would be twelve and a half cents per ton, and for every day thereafter twenty-five cents per ton. This fee was intended to cover the expenses for docking and shoring the vessel. Those expenses included the labor required in docking and the material belonging to the United States, such as staging planks, shoring spars, and the coal expended in pumping out the dock. The ship's owners were to provide the materials and the labor for actual repairs. The labor could be performed by workers brought by the owners into the yard or a gang of hands taken from the yard rolls on previously agreed upon terms. The monies collected as docking fees were to be deposited to the credit of the Charlestown Navy Yard.\(^{47}\)

In 1851, now that the yard had two masting shears, the Navy made available for private use one set of shears. During that year, five merchants ships were brought into the yard and masted.\(^{48}\)

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\(^{44}\) Pook to Downes, Dec. 12, 1852, NA, RG 19, Ltrs. Recd., Y&D; Smith to Downes, June 8, 1850, NA, RG 71, Ltrs. Sent, Y&D.

\(^{45}\) Preble, pp. 302, 305, 308; Downes to Smith, Oct. 19, 1849; Pook to Downes, Dec. 12, 1851, NA, RG 71, Ltrs. Recd., Y&D.

\(^{46}\) Downes to Smith, Aug. 6, 1851, NA, RG 71, Ltrs. Recd., Y&D.

\(^{47}\) Smith to Downes, Aug. 8, 1851; Jan. 13, 1852, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Dec. 23, 1851, NA, RG 71, Ltrs. Recd., Y&D.

\(^{48}\) Preble, p. 308.
FUNDING THE YARD'S PLANT

On March 3, 1849, President Polk signed a naval appropriations measure that assigned $132,221.50 for "Improvements & Repairs" at the Charlestown Navy Yard in Fiscal Year 1850. The bill provided for construction of a sail loft and cordage store ($50,000); a quay wall and filling in southwest of Shiphouse H ($17,918); a coal house near the blacksmith shop ($6,293.50); grading and paving Avenue No. 63 ($3000); an anchor hoy and water tank ($20,000); and "repairs of all kinds."  

During the calendar year of 1850, the yard experienced a financial crunch. The annual Navy appropriations measures provided not only for plant improvements at naval stations, but also for their operating expenses. Prolonged and acrimonious debate preceding passage of the series of bills known in history as the Compromise of 1850 resulted in the failure of Congress to take up and pass a Navy funding bill for Fiscal Year 1851. This caused the Navy serious monetary problems and required it to tighten its belt. In June 1850, the Bureau of Yards and Docks notified Commodore Downes that the "Contingencies" monies for Fiscal Year 1850 had been exhausted. Consequently, he was to permit no additional expenditures under this heading until Congress passed the appropriations bill for Fiscal Year 1851.

If strictly interpreted, this order would compel Downes to put a stop to nearly all business at the yard. Watchmen would have to be laid off; the engineers sent home, forcing the Ropewalk, dry dock, and smithery to shutdown; and the discharge of the teamsters would make the oxen and horses superfluous. When Downes sought advice, the bureau explained that watchmen and teamsters could be retained on the yard rolls, provided they agreed to wait for their pay until the President approved an appropriations bill. The engineers, if employed, must be paid from the appropriation against which the work was charged.

Congress finally moved, and on September 28, 1850, President Fillmore signed a Navy funding bill which appropriated $108,500 for "Improvements & Repairs" at the Charlestown yard in Fiscal Year 1851. Major projects in that program included Storehouse No. 36 ($50,000), completing the sail loft and cordage store ($10,000), mastmakers' shed ($11,700), and Pedrick's patent fliers for the Ropewalk ($8400).

After reviewing the program for Fiscal Year 1851, Downes complained that his recommendations for two new boilers and a heater for the smithery had been deleted from the allotments. He believed this to be an error, because the existing boilers had been in use for twelve years. Moreover, the engine in the north wing of the Ropewalk should be replaced. The bureau informed Downes that it had given the Pedrick fliers a higher priority than new engine for the Ropewalk and that the boilers and heater for the smithery could be purchased from "Contingencies."

In the winter of 1851-52, the Navy Department asked Congress for an appropriation to underwrite improvements at Charlestown amounting to $86,500. Congress provided $50,000. It eliminated certain projects, such as a coal house near the Ropewalk ($5,750), and it reduced funds for others. For example, the legislation provided $7000 for completing the sail loft and cordage store, not the $15,000 requested by the Navy. In addition to the sail loft-cordage store facility, Congress funded the completion of Storehouse No. 36 ($26,000); completion of John Hancock ($5000); and several smaller undertakings.

The first half of 1852 proved to be another time of belt tightening in the Charlestown Navy Yard.

49 Smith to Downes, Mar. 22, 1849, NA, RG 71, Ltrs. Sent, Y&D.
50 Smith to Downes, June 17, 1850, NA, RG 71, Ltrs. Sent, Y&D.
51 Downes to Smith, June 27, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, June 29, 1850, NA, RG 71, Ltrs. Sent, Y&D.
52 Smith to Downes, Oct. 4, 1850, NA, RG 71, Ltrs. Sent, Y&D.
54 Smith to Downes, Jan. 7, Mar. 12, 1851, NA, RG 71, Ltrs. Sent, Y&D.
In February, the bureau notified Downes that the reduced state of the appropriation for "Contingencies" mandated that expenditures at the yard charged to this account be limited to $1500 per month throughout the remainder of Fiscal Year 1852. Downes responded that since July 1, 1851, monthly contingent expenses at the yard had averaged $3,127 for labor and $2,594 for materials. Therefore, he could not perceive how it would be possible to reduce expenditures to $1500 a month and still operate the yard. Certain contingent expenses, he reminded the bureau, were fixed. The monthly charge for watchmen was $811.44; for steam engines, $519.44; for hauling, $242.47; and for incidental labor, $659.23. Then there were other charges that could not be avoided, such as tools, horses and oxen, and carts.55

NEW BUILDINGS AND OTHER STRUCTURES

During the years 1849-1852, six new buildings were constructed at the Charlestown yard. In March 1849, Congress voted $6,293.50 for a smithery coal house. A site was staked out adjacent and parallel to the east wall of the smithery, and construction began. By mid-March 1850, the structure was finished, except for painting. The single-story brick building measured forty feet by 100 feet and had a gabled roof. To combat spontaneous combustion, such as had caused the coal shed fire the previous November, Commandant Downes placed pipes in the mass of coal to detect a heat build-up. The building of the new coal house resulted in demolition of the coal shed formerly located on the site. In September, when he filed his annual report for Fiscal Year 1850, Downes wrote that the coal house was completed, although it was contemplated introducing "ventilating pipes" to secure the coal against spontaneous combustion.56

In late March 1849, Downes learned that Congress had appropriated $50,000 for construction of a structure to house a sail loft and cordage storage (Building No. 24). He immediately called upon the bureau for information whether the structure was to be built of ashlar or granite. If the former, about $6000 would be saved. The bureau, however, decided to use split granite, the beds and joints hammered and the face rough, similar to the Ropewalk. Expenditures for the sail loft-cordage storage structure were greater than anticipated because of unexpected difficulties in "getting a firm foundation." Instead of twenty-foot piles, forty footers had to be driven to penetrate the "peat marsh" which underlay the site.57

By late September 1850, expenditures on the structure exceeded the appropriation by about $10,000. If Downes stopped construction, the partially completed building would be damaged by the weather. Moreover, the commandant had received instructions that work was "to progress without a sudden check or suspension, when it can be done without injury to the Public Service." Finally, the bureau assured Downes that more funds had been requested and Congress had appropriated an additional $10,000 to complete the sail loft and cordage store. In mid-November 1850, Downes cautioned the Department that considerable work was still required before the loft could be turned over to the sailmakers. The cost of the ceiling for the loft was estimated at $1000, and an equal amount was needed for hoisting wheels, painting, and other items.58

The bureau replied that no further expenditures could be authorized for the sail loft and cordage store. Construction must, therefore, cease until Congress made the Navy appropriations for Fiscal Year 1852. The bureau noted that the sum needed, $2000, should have been embraced in Downes's annual report. To continue work on Building No. 24, Downes urged transfer of $1,672.55 in unexpended balances from accounts


56 Downes to Smith, Mar. 21, 1850, NA, RG 71, Ltrs. Recd., Y&D; Downes to Smith, Sep. 14, 1850, NA, RG 71, Annual Reports, Y&D. A copy of the plan for this structure is on file at BNSY.

57 Downes to Smith, Mar. 26, May 16, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Mar. 30, 1849; May 20, 1850, NA, RG 71, Ltrs. Sent, Y&D. Plans for Building No. 24 are on file at BNSY.

58 Downes to Smith, Sep. 27, Nov. 13, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Sep. 30, 1850, NA, RG 71, Ltrs. Sent, Y&D.
of three completed projects. Those funds would permit him to finish and outfit the loft. If the rooms in the
cordage store were to be provided with shelves and other fixtures for the storekeeper, another $4000 was
needed. The bureau sanctioned the proposed transfer of funds, and in mid-January 1852, Downes reported
the loft completed and ready for occupancy. Soon thereafter the sailmakers moved in.59

In November 1849, the Chief, Bureau of Ordnance requested that four rooms in one of the
storehouses at the Charlestown yard be reserved for stowage of ordnance stores landed from ships and for
repair and issuance of such items. Downes recognized that the existing rooms for ordnance stores at the yard
were not convenient to one another. However, for the time being, four contiguous rooms could not be set
apart, and the cost of outfitting them for ordnance stores would be considerable. Apparently there was an
expectation that storage space in the yard would become available upon completion of the sail loft and cordage
store. The Bureau of Ordnance agreed to wait until that time, and Downes promised to make new
arrangements for ordnance stores.60

It was Fiscal Year 1850 before Commandant Downes could report completion of Timber Shed No.
37, on which work had commenced two years before. The delay resulted from problems with contractors in
the spring of 1849. The agreement with the stone suppliers, Newcomb & Chapin, had specified that the stone
was to be delivered "at the Navy yard." The Bureau of Yards and Docks, to whom Downes referred the
matter, held that this meant delivery at such part of the facility as the commandant should direct, otherwise
the contractors would have the selection of the place of deposit, which could be "the most inconvenient spot
within the limits of the Yard." Newcomb & Chapin sought, unsuccessfully, to bill the United States for the
cost of transporting the stone from the place it had been unloaded to the construction site.61

The yard had similar problems with other contractors. When contracting for building materials in the
summer of 1849, Naval Agent Hall specified that the contractor for bricks was to deliver them on "the wharf
as usual." This caused difficulties because Downes had expected them to be unloaded on the ground where
the improvements were to be made. Soon there were 300,000 bricks piled on the wharf. They had to be
removed to the construction sites by yard personnel and teams at a cost of thirty-seven and a half cents per
thousand. Downes feared the Navy would be confronted by a similar situation when stone contractor Oliver
E. Sheldon began making deliveries. The Bureau of Yards and Docks had no solace for Downes. It held that
if the stone were delivered by water, the United States must absorb the cost of drayage. In the future,
Commodore Smith chided announcements and contracts must be more specific as to delivery sites. In May
1850, Sheldon asked that the twenty percent retained by the government on the value of the stone delivered
be paid for the period to April 1. So far, he had completed his deliveries for the coal house, the seawall
southwest of Shiphouse H, and a large quantity of that for the cordage store and sail loft. The bureau was
agreeable.62

On May 23, 1850, Downes reported the brick barn (No. 27) finished and occupied. However, an
"appendage" was required for the carts, trucks, and wagons then parked in the open, where they were exposed
to the weather. To correct this situation, the commandant asked for and was given an $800 allotment with
which a shed addition was made to the barn's south wall.63

Construction of Mastmakers' Shop N started in 1851 and was completed in the next year. In October

59 Smith to Downes, Nov. 15, Nov. 21, 1850; Jan. 15, 1851, NA, RG 71, Ltrs. Sent, Y&D; Downes to
Smith, Nov. 19, 1850; Pope to Smith, Jan. 13, 1851, NA, RG 71, Ltrs. Recd., Y&D.

60 Smith to Downes, Nov. 6, Dec. 13, 1849, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Nov. 23,
1849, NA, RG 71, Ltrs. Recd., Y&D.

61 Smith to Downes, May 14, May 19, 1849, NA, RG 71, Ltrs. Sent, Y&D.

62 Smith to Downes, Sep. 3, Sep. 8, 1849, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Sep. 5, 1849;
May 1, 1850, NA, RG 71, Ltrs. Recd., Y&D.

63 Downes to Smith, May 23, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, May 25, 1850, NA, RG
71, Ltrs. Sent, Y&D.
1849, Downes asked for an $11,717 appropriation to fund the building of a mast shed on Site N on the yard's master plan. The structure was to be 130 feet by 110 feet in size. To justify this expenditure, it was pointed out that the shed then in use was a "very slight, temporary building, not sufficiently large for that purpose, with shingled roof, leaks, and not worth repair. It was connected with the mast house in which much valuable property is stored, and endangered in case of fire." In September, Congress made funds available for a mastmakers' shed at site N. Ground was broken in the spring of 1851, and by June 30, the piling and ground work were completed and the superstructure was being raised. The project was completed by the end of Fiscal Year 1852.

Another structure erected during the Downes years was Building No. 36, Work Shops and Mould Loft. When he prepared his construction program for Fiscal Year 1850, Commandant Downes listed the building of a mould loft on Site No. 36 as highest in priority. The first story would be employed for building and storing gun carriages, boats, and other heavy work. The second story was wanted as a mould loft, there being no suitable place for such a facility in the yard. The structure was to be 450 feet long by sixty feet wide, two stories high, and to be built of ashlar granite. Its estimated cost was $76,000.

In June 1850, Congress appropriated $50,000 to begin construction of Building No. 36. Work commenced immediately, and by late winter most of the available monies had been obligated. On March 17, 1851, Downes wrote the bureau that he was disappointed by a rumor that Congress had slashed by one-third the Department's estimates for yard improvements in Fiscal Year 1852. To make it especially embarrassing, the cellar for Site No. 36 had been partially excavated, and the materials, which had been contracted for, were being delivered. These, with the work done by the joiners and coppersmiths, would nearly exhaust the current appropriation. If the reports from Washington were correct, the cellar would have to be shored up. The bureau apprised Downes that, while the appropriation had been pared from $86,000 to $50,000, the $26,000 estimated for completing Building No. 36 had been allowed to stand.

As Building No. 36 took shape, additional uses for it were suggested. Downes observed, to his disappointment, that no appropriation had been made for storage of copper and iron. He complained to the bureau that at that moment, May 1851, about 300 tons of copper were piled in the dry dock engine house. The racks had been crushed by the bolt copper, and it had been necessary to take them down, as the large bolts, such as needed for building Princeton, were on the bottom. If there was no intention to build a copper and iron storehouse, he urged part of Building No. 36 be used for such purposes. The bureau was agreeable and stated that care should be taken to distribute the weight so that it would bear equally on all sections of the flooring. By the summer of 1851, Building No. 36 was in a "state of great forwardness." The roof was partly on, and the doors, windows, and frames had been fabricated and were ready to be installed. The structure was completed and occupied in Fiscal Year 1852. Lightning conductors had been provided for this structure and also the mast house.

In addition to the six buildings, there were several other new construction projects in the years 1849 to 1852. Among these were gun tracks and shot beds. In July 1849, Downes notified the Chief, Bureau of

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64 Downes to Smith, Oct. 1, 1849; "Proposed Plan, Elevations and Sections for a Mast Shed, Navy Yard, Boston, Sep. 1849"; Downes to Smith, Aug. 25, 1851; Gregory to Smith, Sep. 24, 1852, NA, RG 71, Annual Reports, Y&D.  
65 Downes to Smith, Oct. 1, 1849, NA, RG 71, Annual Reports, Y&D. A copy of "Proposed Plan for Work Shops for Gun Carriages, Spars, and Boats, with Mould Loft above on Site 36" is on file at BNSY.  
66 Downes to Smith, Mar. 17, Apr. 29, 1851, NA, RG 71, Ltrs. Recd., Y&D  
67 Downes to Smith, May 24, 1851, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, May 26, 1851, NA, RG 71, Ltrs. Sent, Y&D.  
68 Downes to Smith, Aug. 25, 1851; Gregory to Smith, Sep. 24, 1852, NA, RG 71, Annual Reports, Y&D; Smith to Downes, Nov. 21, 1851; Feb. 25, 1852, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Feb. 24, 1852, NA, RG 71, Ltrs. Recd., Y&D.
Ordnance, that the beds designed for the shot park were to be positioned on a stone foundation of sufficient
depth to "be beyond the reach of frost." The aboveground parts were to be of brick, bordered with "a plate
of cast iron four inches wide and one and a half inch thick." The face of the bed was to be sloped to drain
off rain. Downes stated the existing shot beds were "merely pieces of oak plank laid on the ground," and as
the planks were pressed into the earth, not only the shot, but the lower tiers were often injured. In the new
arrangement, the shot was to be piled in stacks of 1000, and, as there would be about 40,000 projectiles to
accommodate, forty beds were required. If the shot were piled in stacks of 2000 instead of 1000, the cost
would be reduced. Before authorizing Downes to proceed, the Bureau of Yards and Docks asked for estimates
and was advised the cost of each bed, not including the iron ring, was $93.50.69

In approving the undertaking, the bureau directed Downes to employ the unexpended balance of the
allotment for "Tracks, etc. in Gun Park" for construction of the shot beds. Any additional monies required
would be embraced in the estimates for Fiscal Year 1851. In October 1849, the bureau cautioned Downes
that when the $1800 in reprogrammed funds were obligated, work on the thirty to forty shot beds must cease.
By the end of Fiscal Year 1850, Downes reported the "Tracks in the Gun Park & Shot Beds . . . finished, the
guns arranged, & the shot piled in security."70

Early in March 1852, Commandant Downes complained to the Bureau of Yards and Docks that it
was difficult to supply the Ropewalk boilers with water, but that seepage of brackish water into the nearby well
had compounded the problem. A recent drought had caused fresh water to become exceedingly scarce, and
fears were voiced that the walk might have to suspend operations at a critical time when large requisitions
from Norfolk and New York were on the books. To meet the emergency, Downes urged construction of a
150,000-gallon cistern. There were on hand more than enough bricks, originally purchased for Building No.
36. The cost of labor and cement for the projects was placed at $1700. The bureau approved the proposal,
and Downes soon had a number of bricklayers and their helpers at work, building the cistern at Site No. 30.
No construction problems were encountered, and the cistern was completed by June 30, 1852.71

In the summer of 1849, work began on the construction of a quay wall and filling in southwest of
Shiphouse H. As part of the preparations for this project, Downes submitted a sketch of a derrick needed
for laying up heavy stone for the quay wall, for building the cordage store, and for getting wood out of the
timber dock. Its estimated cost was $350. With the bureau's approval, the derrick was assembled, and
construction of the wall and filling in proceeded as scheduled. By the end of Fiscal Year 1850, Downes
reported this project was "so far done, that only a suitable covering of gravel is required to complete the
work." The gravel was put down in the next fiscal year.72

REPAIRS AND IMPROVEMENT OF EXISTING PLANT FACILITIES

In October 1849, Commandant Downes recommended raising the skids in Timber Shed No. 38 and
paving between them. He noted that at that time the lumber in many places was "level with ground." A
similar situation existed in Timber Shed No. 33. There were no stone skids in that shed, and the timber stored
within was piled upon condemned lumber and has now settled level with the ground." Downes proposed to
correct the situation by substituting stone for the condemned timbers and by paving this shed in the same
manner as Timber Shed No. 37. He estimated the cost of the work in Timber Sheds Nos. 38 and 33 at

69 Downes to Warrington, July 24, 1849; Downes to Smith, Aug. 14, 1849, NA, RG 71, Ltrs. Recd., Y&D.

16, 1849, NA, RG 71, Ltrs. Recd., Y&D; Downes to Smith, Sep. 14, 1850, NA, RG 71, Annual Reports, Y&D.

71 Downes to Smith, Mar. 8, 1852, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Mar. 10, 1852, NA,
RG 71, Ltrs. Sent, Y&D; Gregory to Smith, Sep. 24, 1852, NA, RG 71, Annual Reports, Y&D.

72 Downes to Smith, Aug. 22, 1849, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Sep. 3, 1849, NA,
RG 71, Ltrs. Sent, Y&D; Downes to Smith, Sep. 14, 1850; Aug. 25, 1851, NA, RG 71, Annual Reports, Y&D.
In September 1850, Congress funded these two projects, appropriating $3000 for the improvements to Timber Shed No. 38 and $5000 for No. 33. Work commenced immediately, and when Downes filed his annual report for Fiscal Year 1851, he noted that stone skids had been positioned in both sheds, the buildings paved, and the lumber in Building No. 38 restowed on a "safe and permanent foundation." The lumber in No. 33 was repiled early in Fiscal Year 1852.  

In June 1849, Naval Constructor Pook called attention to the poor condition of the wooden float fronting the timber dock and recommended it be replaced. The existing float measured ninety-eight by fourteen feet, and its great size made it "unhandy." Pook proposed to substitute four smaller, forty-eight-by-eight-foot floats. Floats of that size could also be employed in repairing ships. Pook estimated the cost of the four floats at $564. The Bureau of Yards and Docks approved Pook's proposal and the project was promptly implemented.  

At mid-century, the blockmakers' shop was in a temporary structure, south of the barn. In July 1849, the master blockmaker asked to have four three-by-five-foot skylights opened in the roof of the shop for ventilation and lighting. The bureau approved, the work being charged to "Repairs of all Kinds." Another project initiated in 1849 was increasing the space provided the Navy Storekeeper. A previous storekeeper had complained that his office was too small and had requested that part of the large room occupied by the master painter be partitioned off and added to his space. The storekeeper's office was also in need of repair, "nothing having been done to it for many years." Its floors and walls were worn and broken, and the walls and ceiling needed to be whitewashed and painted. Believing the project would cost little, Downes ordered it done. One of the objects in providing more space for the storekeeper was for reception of the books belonging to various warships transferred to Charlestown from other yards.  

The office facilities of another yard official were improved in early 1850. The vault of the purser's office had brick walls eight inches thick. A lock was secured to the door by four iron bolts, which could be easily broken. To enhance security, iron bars were placed above the arch and across the floor, and the door was reinforced.  

In February 1850, Surgeon Benjamin R. Tinslow made several requests. He recommended moving the dispensary from the yard to the Chelsea Naval Hospital. Such a move would allow other uses of the large room in the Navy Store then occupied as a dispensary. Additionally, the surgeon recommended acquisition of a covered ambulance to transport men on sick call from the yard to the hospital at Chelsea. The same vehicle could also be used to carry the purser and the payroll from Boston to the yard. The Bureau of Yards and Docks approved moving the dispensary, but rejected the purchase of a covered wagon, noting that one of the existing yard wagons could be provided with a cover for transporting the sick. The room in the Navy Store formerly occupied by the dispensary was rehabilitated at small cost. It was used for a number of purposes, among them courts martial.  

In December 1851, yard carpenters enlarged the chapel, which was housed in the steam room. This was accomplished by relocating the timber inspector's office, located in the same building, and by taking down

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73 Downes to Smith, Oct. 1, 1849; Aug. 25, 1851, NA, RG 71, Annual Reports, Y&D.  
74 Pook to Downes, June 30, 1849, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, July 5, 1849, NA, RG 71, Ltrs. Sent, Y&D.  
75 Downes to Smith, July 17, 1849, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, July 19, 1849, NA, RG 71, Ltrs. Sent, Y&D.  
76 Downes to Smith, July 30, 1849, NA, RG 71, Ltrs. Recd., Y&D.  
77 Downes to Smith, Jan. 3, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Jan. 5, 1850, NA, RG 71, Ltrs. Sent, Y&D.  
78 Downes to Smith, Feb. 13, 1850; Pope to Smith, Feb. 13, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Feb. 15, 1850, NA, RG 71, Ltrs. Sent, Y&D.
the partitions. Many of the windows in Shiphouse H were broken, and the structure leaked badly. Downes recommended the expenditure of $1100 for glass and for sash. The bureau gave approval in May 1850, and the repairs were made. A half dozen yard buildings were fitted with lightning conductors in September 1849. Downes recommended installation of these devices on the Navy Store, upper quarters, and barn. These improvements were funded by money remaining in the allotment for gun tracks and shot beds.79

Among the plant improvements made in the years 1849 to 1852 were improving drainage and surfacing roadways. In March 1849, Congress appropriated $3000 for grading and paving Avenue No. 63, also referred to as Main Avenue. Subsequently, this roadway was graded and graveled, and the gutters on each side were paved. Two years later, Downes informed the Department that a surfaced road was necessary, extending from the entrance gate to the lower end of the yard and passing between the timber sheds and shiphouses. Most of the heavy hauling was done along this line. After heavy rains and when the frost was coming out of the ground, the unsurfaced roadway was nearly impassable. Downes estimated the cost of paving at $3000. The bureau gave its approval. On May 27, 1851, Downes reported that the frontage roadway had been paved about three-quarters of its length. The results were so favorable that it was desirable that it should be paved for its entire route. The bureau agreed to diverting funds from "Repairs of All Kinds" to the project, and the entire frontage road was surfaced.80

In the following spring, Downes noted that $6000 had been appropriated for paving around the sail loft and cordage store. However, the area next to Main Avenue was already paved, and there was little drayage on the opposite end. Downes proposed using the funds to pave the roadway from Storehouse No. 15 to the frontage avenue. This area was very "clayey" and difficult to team over. The bureau gave its consent, and a work force was soon surfacing this section of the yard's road system.81

In September 1850, Congress appropriated $5000 for a drain between the timber sheds to connect with the "common sewer" and to discharge into Site No. 51. This project was dictated by previous filling and grading of this section of the yard, which had as its purpose draining this area into a canal. Here the yard was low and level for 1500 feet, and a drain was needed to carry off rain water left standing between the timber sheds. A force of laborers was turned to, and when Commandant Downes submitted his annual report for 1851, he noted that "the drains between the timber sheds have been made and the yard in that quarter is well drained."82

In the first half of the nineteenth century, the Charlestown Navy Yard relied on cisterns and wells to provide fresh water. In 1850, the Navy investigated the possibility of introducing into the yard water furnished by the neighboring communities. In response to an inquiry, Boston authorities announced they would supply Cochituate water to the yard for $3000 annually. In addition to this yearly fee, the Navy would have to provide and install the pipes, hydrants, and other such fixtures. The Bureau of Yards and Docks ruled the cost of municipal water was too great and directed Downes to have estimates prepared for additional cisterns. No further consideration was given municipal water until the 1860s.83

As the general Charlestown vicinity experienced greater development, troubles occurred between the navy yard and its neighbors. Once again local projects respecting the Mystic River threatened the yard. In


81 Downes to Smith, Apr. 15, 1852, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Apr. 17, 1852, RG 71, Ltrs. Sent, Y&D.

82 Downes to Smith, Oct. 1, 1849; Aug. 25, 1851, NA, RG 71, Annual Reports, Y&D.

83 Downes to Smith, Sep. 21, 1850, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Sep. 26, 1850, NA, RG 71, Ltrs. Sent, Y&D.
April 1851, Commandant Downes learned of a proposal to reclaim several hundred acres of Mystic River tidal flats above the yard. He feared that that reclamation would have an adverse effect on his facility by producing an accumulation of alluvium and causing shoals to form. The Bureau of Yards and Docks directed Downes to request that the Massachusetts General Assembly form a commission to examine and report on the effect on the harbor from filling in the Mystic flats. If Downes failed in that attempt, he was to appoint his own commission, to include a competent civil engineer. Downes advised the bureau that there already was such a commission, and he urged that the U.S. District Attorney be asked to study its report and then to submit arguments to the Massachusetts assembly. The state legislature assured the commandant that no hasty decision would be made. Following Downes's suggestions, the U.S. District Attorney was instructed to prepare a remonstrance against the proposal to fill the tidal flats.64

Within seventy-two hours of assuming command of the yard, Commodore Downes inquired of the Bureau of Yards and Docks whether it "contemplated to thoroughly repair" the commandant's quarters and, if so, what arrangements needed to be made. The bureau chief advised Downes that the estimate for repairs of the quarters had been pared to $6000 and that these monies could be spent as Downes thought proper. However, the bureau suggested that the best policy would be to erect a new structure rather than spend so much on repair of the 1804-5 building. Downes did not agree and argued that the walls were substantial, without cracks or defects. All that was required was a "brick partition across the entry, where there is now only lathing and plastering to render the house substantial." Everything except the walls should be new. He also recommended that the project be accomplished by contract instead of yard labor.65

The bureau gave Downes carte blanche to have his quarters repaired in the most expedient and best manner, either by contract or day labor, taking care not to exceed the allotment. Although work could begin immediately, no funds would be available until July 1, 1849. In May, Downes used the newspapers to solicit proposals from private contractors. After reviewing those proposals, Commodore Smith suggested there would be fewer problems if the project were carried out by yard workmen. Downes agreed because through that arrangement much of the original early nineteenth-century structure could be allowed to stand and "many of the old materials may be worked into the repair." Job Turner was engaged as project superintendent.66

Downes forwarded to the bureau a rough sketch of the quarters "as it is proposed to make it." By the end of September 1849, the $6000 earmarked for rehabilitation of the quarters had been spent, and another $3000 was required to complete the undertaking. The bureau allotted the extra funds from its "Repair" account, and the project was completed during the winter of 1849-50.67

The upper and lower officers' quarters did not need total rehabilitation. In May 1850, Downes called for an allotment to make certain repairs to the upper quarters. The gunner's dwelling required painting and the purser's residence either painting or papering. The bureau authorized the repairs, provided the cost did not exceed $250. However, it stated that it could not permit some of the units to be painted and others to be papered. A month later, Downes reported that repairs were also needed in the 1st lieutenant's unit of the lower quarters. A badly decayed basement floor had to be taken up and relaid and the interior painted. By direction of the bureau, these improvements were promptly undertaken. By the following spring, the exteriors of the lower quarters required repainting. The paint applied in 1844 had weathered and flaked off. Upon requesting authority to have them repainted, Downes noted that all needed materials were on hand,
SUPPLYING THE OVERSEAS SQUADRONS

During Downes's second commandancy, vessels continued to sail from the Charlestown Navy Yard with supplies for overseas squadrons and stations. In May 1849, the bark *Helicon*, en route from Boston to Macao with government stores, ran aground as she was clearing the harbor. Fearing her bottom might be damaged, her owners asked permission to have her docked at the yard. In view of the urgency and the Navy's interest, Downes consented, and the craft entered the dry dock. In October of the same year, Downes was directed to ready for shipment to Macao two years' stores for a first-class sloop and one year's for a brig. In addition to those items enumerated in the allowance books, twenty barrels of tar, four barrels of paint oil, four barrels of turpentine, and thirty-six coils of rope were to be shipped to the Orient. In March 1852, the yard loaded a vessel with supplies for the West African Squadron.

THE ROPEWALK

In March 1852, Commandant Downes sent a general report to the Chief, Construction and Repair, of the activity at and circumstances of the Ropewalk. During the years between 1842 and 1851, Downes reported, average annual consumption of hemp by the Ropewalk had been about 500 tons. The lowest yearly consumption had been 350 tons and the greatest nearly 900 tons. In the winter of 1851-52, there was heavy demand for rigging. In the six weeks since February 1, the Ropewalk had manufactured 150 tons of cordage for the Norfolk and New York yards, and another fifty tons was needed to meet requisitions yet unfulfilled.

The walk had on hand 174 tons of Russian, seventy-one tons of American, and seventeen tons of inferior quality Italian hemp. There were two sources of supply of hemp, foreign and domestic. The cost of American hemp varied so much that it was difficult to fix on a specific price to compare with the cost of foreign hemp. The Navy had paid $280 per ton for American hemp, when Riga reen was selling at $240 and even as low as $200 per ton. Recently, the Ropewalk had received from Louisville forty-two bales of clean water-rotted hemp at $210 per ton and another lot costing $215 per ton. Transit charges on the first lot were $105.40 from Louisville to New Orleans and $90 for shipping from New Orleans to Boston. This made the cost of the hemp in the yard storehouse about $245 per ton. At the same time, the Ropewalk had received 112 tons of St. Petersburg hemp delivered at the yard for $207 per ton.

Domestic hemp, besides being in uncertain supply, was manufactured at a disadvantage. Waste from dust and wood was one-third greater than in Russian hemp and increased the amount of labor required in preparing the material for spinning. For this reason alone, American hemp cost one cent more per pound. Despite the additional care and labor bestowed on American hemp, there still remained in it wood, shives, and tow bunches, which prevented the cordage from being as smooth as that made from Russian hemp. It was calculated that cordage made from American hemp cost from $50 to $60 more per ton than cordage manufactured from Russian hemp. If the hemp purchased in Louisville reached Boston damaged, the loss fell on the United States.

Downes stated that a prudent forecast required that there always be on hand in the hemp store from

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88 Downes to Smith, May 28, June 6, 1850; May 24, 1851, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, May 31, 1850; May 26, 1851, NA, RG 71, Ltrs. Sent, Y&D.


90 Downes to Shubrick, Mar. 17, 1852, NA, RG 19, Ltrs. Recd., C&R.
800 to 1,000 tons of quality hemp. The most there had ever been stockpiled was 1200 tons. The commandant observed that the demand for Manila cordage was at that time considerable. Fifty-two tons had been purchased since July 1, 1851, and eight more tons were required to meet current demands.

During the years 1849 to 1852, several improvements were made in the machinery and buildings of the Ropewalk. A Ropewalk employee, Joseph Pedrick, invented and patented an improved flier for the spinning machine. The Navy claimed the right to use the Pedrick flier without payment of royalties because of Pedrick's status. The inventor, however, challenged the government and was sustained by the courts. Commandant Downes sought to persuade Washington of the advantages of the innovation.

Downes noted that the Pedrick fliers, which had been adopted for the Memphis Ropewalk, were much superior to the ones in use in the Charlestown establishment. He explained that in the Pedrick machine, nothing was left to chance in the "entire action, as every movement is regulated by self acting mechanical devises." There was no wobbling of the fliers, and the speed of the machines consequently increased. It had been determined by experiment that the Pedrick flier "would bear without the least perceptible irregularity one-half as much again speed as the ones now in use." Superintendent Caban was of the opinion that even double speeds could be attained.

The fliers at the Ropewalk in October 1849 had been in use for eleven years and had become "much worn & rickety, and will require extensive repairs in the course of a year or two." Downes was confident that the Pedrick fliers would pay for themselves by the end of twelve months. The cost of eighty-four fliers, at $100 each, would be $8400. Congress made the necessary appropriation, and in August 1851, eighty-four Ropewalk fliers and frames were replaced with Pedrick fliers.91

Other changes in the Ropewalk plant included the delivery in November 1849 by W. E. Salisbury, Troy, New York, of his patented hatchling machines. It was discovered that the manner in which the exhaust pipes from the engines discharged steam damaged the chimney's brickwork. With a small appropriation, the exhaust pipes were turned in another direction.92

Several changes were made in the Ropewalk engines. By the winter of 1849-50, the water heaters attached to the engines were unsafe. They had been in use for more than six years and had never had sufficient heating surface to heat the water to a favorable temperature before it entered the boilers. The same situation prevailed at the smithy. Engineer Butts recommended that the heaters be replaced with Wadsworth & Nason heaters. The bureau agreed, and new heaters were installed. The original beam engine and boilers, built by Thomas Ashcroft and installed in 1836 in the north wing of the Ropewalk, had never been efficient. By 1851, the boilers were unsafe and leaking badly. Downes noted that two engines, one in each wing, were required to keep the walk operating at all hours. A Tufts engine, operating in the south wing of the Ropewalk had proved itself. Butts was satisfied that it was better to replace the Ashcroft engine and boilers with a set made by Otis Tufts. To secure a second Tufts engine with flue boilers would cost about $12,000. The Bureau of Yards and Docks directed that the Ashcroft engine and boilers be removed and sold at public auction. A new set of boilers was purchased and connected to the south engine. For the time being, the Ropewalk machinery was powered by a single engine.93

THE MARINE BARRACKS, 1849-1852

Capt. Thomas T. English had charge of the Marine Corps Barracks at the Charlestown Navy Yard during the years of Commodore Downes's second commandancy. Relations between English and Downes

91 Smith to Parker, Nov. 8, 1848, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Oct. 1, 1849, NA, RG 71, Annual Reports, Y&D; Downes to Smith, Aug. 14, 1851, NA, RG 71, Ltrs. Recd., Y&D.

92 Smith to Downes, Nov. 26, 1849; June 8, 1850, NA, RG 71, Ltrs. Sent, Y&D; Downes to Smith, June 6, 1850, NA, RG 71, Ltrs. Recd., Y&D.

93 Smith to Downes, Jan. 10, 1850; Oct. 27, 1851, RG 71, Ltrs. Sent, Y&D; Downes to Smith, Oct. 16, 1851; Butts to Downes, Jan. 9, 1850, NA, RG 71, Ltrs. Recd., Y&D.
were amicable, although tight manpower ceilings limited the number of yard posts manned by marines.

In April 1849, soon after relieving Commodore Parker, Downes contacted Washington in regard to
the pay of yard watchmen. Commodore Smith, Chief of the Bureau of Yards and Docks, while at Charlestown
in December 1849, authorized boosting the daily pay of the captains of the watch to $1.38 and the watchmen
to $1.13. However, subsequently the Department refused to sanction such a pay raise and held that $1.00 per
day was the maximum that could be allowed to watchmen. In March 1850, upon learning that the Marine
Corps had resumed recruiting, Downes called on Captain English for more sentries. The small number of
"drilled men" available compelled English to refuse additional sentries until the recruits were ready to be
assigned guard duty. At that time, the marines were manning two posts at the yard and one at the barracks.94

Downes pressed the issue. He wanted two more posts established and manned, provided this would
not be a temporary arrangement. Although there were then enough men at the barracks to fill this need, a
call for marines for sea duty could suddenly reduce the detachment to where it would be unable to meet this
responsibility. Marine Corps Commandant Henderson agreed with Captain English, and no more yard posts
were established and manned by marines. However, in May 1850, the detachment's strength was substantially
increased, when Ohio's guard of fifty-one men was transferred to the barracks.95

It appears that regardless of how many civilian watchmen he had, Downes wanted more marines. He
believed that the government property would be safer without the civilian watchmen because not all of them
were honest. To support his thesis, he referred to an incident in August 1851, when one of the watchmen
broke into the quarters of an officer and stole jewelry and other articles worth several hundred dollars.
Downes held the public property was more secure with six posts manned by marines. The Bureau of Yards
and Docks regretted to learn that the watchmen could not be trusted. It directed that they be mustered and
examined by the officers and captains of the watch. The latter should be more vigilant to prevent employment
of dishonest men. Untrustworthy individuals were to be discharged in disgrace.96

When there were questions regarding a waiver of regulations governing reenlistment of marines,
Captain English, like his predecessor, brought the subject to the attention of Corps headquarters in
Washington. William Smith was discharged in November 1848 and, in the following June, applied to reenlist.
Smith, forty-eight years old and still strong and healthy and of good moral character, had served three hitches
in the Corps. Because of Smith's age, Captain English referred the matter to Washington. Henderson
sanctioned Smith's reenlistment, since in the near future ten men were scheduled to be detached from the
barracks for sea duty. Other cases of men who were allowed to reenlist despite some liability included a
Mexican War veteran, who had broken his knee while a Marine guard aboard ship; a sergeant with thirty-eight
years in the Corps, too infirm for sea duty, but capable of drilling recruits; and a man, who had been wounded
twice and unable to perform heavy lifting.97

Grave breaches in discipline were also referred to Washington. Drinking appears as a frequent
problem. One marine, while corporal-of-the guard, permitted men on police to slip across the street for a
drink, and he himself had been known to accompany them for a nip. Another corporal had been reported
drunk twice within sixty days. Both these men were reduced to the ranks.98

94 Downes to Smith, Apr. 4, 1849, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Apr. 6, 1849, NA,
RG 71, Ltrs. Sent, Y&D; English to Henderson, Mar. 1, 1850, NA, RG 127, Ltrs. Sent, CMB.

4, 1850, NA, RG 127, Ltrs. Sent.

96 Downes to Smith, Oct. 22, 1851, NA, RG 71, Ltrs. Recd., Y&D; Smith to Downes, Oct. 27, 1851, NA,
RG 71, Ltrs. Sent, Y&D.

97 English to Henderson, June 7, 1849; May 20, June 19, Dec. 4, 1850, NA, RG 127, Ltrs. Sent, CMB;
Henderson to English, June 9, 1849; Dec. 11, 1850, NA, RG 127, Ltrs. Sent.

98 English to Henderson, Feb. 27, 1850; Jan. 29, 1851, NA, RG 127, Ltrs. Sent, CMB; Henderson to
English, Mar 2, 1850; Feb. 11, 1851, NA, RG 127, Ltrs. Sent.

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It appears the detachment at Charlestown, 1849-1852, was not the recipient of insufficient or shoddy supplies from the Corps quartermaster as had been the case a few years earlier. Upon approach of winter in 1849, the quartermaster shipped to the barracks thirty watch coats and thirty great coats. He was careful to see that they were first inspected, because the last issue of great coats received at Charlestown had been of poor quality, the wool being coarse and uncleaned and "the cloth hack wove, thin & light." Later the same winter, the Secretary of the Navy issued instructions to resume recruiting. This led to a requisition from Captain English of fifty fatigue caps, jackets and overalls; fifty uniform overalls; thirty blankets; 100 pairs of shoes; fifty pairs of socks; and fifty cotton shirts.99

In 1851, the Marine Corps began replacing the flintlock musket with percussion-fired weapons. A shipment of the new firearm and its standard accoutrements were received at the barracks in July and issued to the detachment. The obsolete weapons and related equipment, such as cartridge boxes and bayonet belts and scabbards, were boxed and shipped to the Corps quartermaster. Captain English soon found that he needed another score of percussion muskets, and, in mid-October, a box containing twenty of these weapons and an equal number of cap-pouches was shipped to Charlestown.100

From 1849 to 1852, only minor improvements and changes were made in the structure and grounds of the Marine Corps Barracks at Charlestown. Repairs were made to the stairs and ladders leading from the barracks to the parade. Ventilators were installed to conduct stale air out of the squadrooms. The pipes carrying drinking water from wells were replaced and new pumps attached. The office of the commanding officer of the barracks was rebuilt and provided with new curtains and chairs. Fatigue parties were put to work on the parade grounds to alter its slope so as to drain rain water away from buildings. When that failed, a paved gutter and cesspool were added.101

However the barracks was perceived by its officers and men, the facility had a pleasing appearance for a contributor to Gleason's magazine. Writing in the summer, he stated that a visitor to the Charlestown Navy Yard, on entering the main gate soon reached the Marines Corps parade ground. Pronting on the parade was the barracks, capable of accommodating a large body of marines, although at present the establishment is reduced to comparatively few. There are but thirty marines quartered there at present, sufficient for the duties of the well-regulated establishment. The place of the parade is the prettiest enclosures to be found anywhere, and in the shade of the beautiful elms, affords a very pleasant retreat for the leg-weary sentries during the relief from duty, on the hot days of summer.102

The reporter chose not to contemplate manning a navy yard sentry post in the middle of a New England winter.

99 English to Lindsay, Oct. 17, 1849; Feb. 11, 1850, NA, RG 127, Ltrs. Sent, CMB.

100 English to Henderson, July 22, 1851; English to Quartermaster, Oct. 8, 1851; Nicholson to English, Oct. 11, 1851, NA, RG 127, Ltrs. Sent, CMB.


In the mid-1850s, the United States Navy, including the Boston Navy Yard, benefitted from a change in the attitude of the Democratic Party toward the fleet. The opposition of Jefferson and Jackson to naval expansion gave way to a desire in the presidency of Franklin Pierce to provide the Navy with up-to-date vessels. In 1853, the Navy had available seventy ships. However, many of them, not worth the cost of repairing, languished at the navy yards. Because of their reliance on sail or paddlewheels, others were obsolete. Promoted by its desire to protect the country's coasts and to continue territorial expansion, the Pierce administration persuaded Congress to appropriate funds for the building of six large, steam-powered, screw-driven frigates. Construction was carried out in the yards at Charlestown, Brooklyn, Philadelphia, Washington, and Norfolk. Since only the Washington yard had the capacity to manufacture steam machinery, the Navy Department arranged with commercial machine shops for the construction of the propulsion plants for five of the vessels. The Charlestown Navy Yard received the assignment for building the frigate that became Merrimack. Congressional support for the Navy was also evident in increased appropriations for the plants of the nation's navy yards. For example, in 1855, the legislature voted a quarter of a million dollars for new structures and other improvements at the Charlestown facility. Consequently, in the mid-1850s, the yard experienced a dramatic program of plant expansion, which included work on the Machine Shop complex, the most sizeable building project since completion of the dry dock and the Ropewalk in the 1830s.

ADMINISTRATION

On May 19, 1852, the Charlestown Navy Yard received a new commandant. During the day, Capt. Francis H. Gregory arrived at the facility and relieved Commodore Downes. Gregory, a sixty-three-year-old veteran of two wars, had commanded ships in various American squadrons around the world. Prior to becoming commandant at Charlestown, he had commanded the West African Squadron. Gleason's Pictorial, which continued to give coverage to the yard, described the new commanding officer as:

an old and efficient officer of some sixty years of age. He has seen much service; has been a prisoner to Great Britain, and distinguished himself in the last war. He seems most happily situated in his present position. . . . and has found a large circle of friends since his residence here, by his urbanity of manner, and refined and gentlemanly conduct.

Gregory remained commandant at Charlestown until 1855. Among other personnel changes in the years 1852-1855 was the addition of a civil engineer. An act of Congress, passed in March 1853, made provision beginning on July for employment at each of the nation's navy yards of a civil engineer at an annual salary of $1500. To fill this position at the Charlestown yard, Gregory secured the services of Joseph E. Billings. At the end of Billings' first weeks on the job, Gregory commended his appointee for his energy and competence. With building plans being rapidly developed and construction of the Machine Shop and Foundry complex scheduled to commence in the near future, it became


necessary to define responsibilities. The Bureau of Yards and Docks announced that Billings was to have charge of all buildings, docks, wharves, and other structures. All machinery would be under the supervision of the master machinist and steam engineer.3

The appointment of a civil engineer, responsible to the Bureau of Yards and Docks, made the bureau system somewhat more visible at navy yards. No longer would the naval constructor be involved in designing buildings and drafting their plans. Also, in 1854, the Bureau of Provisions and Clothing obtained greater identity in the yards by directing that its stores and material be removed from the supervision of the Naval Storekeeper. There would be a separate and distinct Provisions and Clothing facility, with its own work force and in the charge of a naval officer under the direction of the bureau in Washington.4

In March 1854, Ropewalk Superintendent Caban was granted two months' leave of absence because of poor health. This was a favorable time for him to be off-duty, because of a light workload at the walk and the small force employed. Two months later, Naval Constructor Pook was detached and ordered to Washington. Edward H. Delano, his replacement, reported to Gregory on May 25.5

Requests from an increasing number of organizations for the use of flags, bunting, and similar Navy property plagued Commandant Gregory. When he referred the problem to Washington, the Department stated that an order of January 5, 1835, mandated the loan of flags for local celebrations. However, it was never contemplated that they be employed for "fairs, shows, etc."6

In June 1854, officers and warrant officers occupying yard housing lost one of their benefits. Henceforth, they were required to provide for their own fuel and lights.7

As had his predecessor, Gregory had to contend with demands from Washington that he curtail expenses. In September 1852, there were heavy charges against "Contingencies" for repair of machinery and tools, materials for tools, the pay of watchmen, oxen, and expenses in outfitting Vermont and rebuilding John Hancock. By the following January, this account had been so depleted that Gregory was instructed to limit expenditures charged to it to $1500 per month during the remainder of the fiscal year. Gregory protested to the Department that this would be difficult and that he had already pared his expenses to the bone. The Bureau of Yards and Docks replied that it had no desire to embarrass the commandant and merely wished to keep before him the "necessity of constant vigilance in regard to the expenditures" at the facility. The contingency account caused trouble again in early 1855. With those funds almost exhausted, the bureau announced that it would approve no bill for material under this heading, except for stationery. And it directed that all persons employed and paid from the appropriation were to be laid off.8

Also, as in the past, the yard had to protect itself against neighbors intent on changes that might hinder yard operations. In early 1853, word reached Washington that the new owners of Binney's Wharf, the Charlestown yard's neighbor on the west, planned to extend the pier farther into the Charles. Since this could interfere with the Navy's use of the yard's shear wharf and the Vermont building slip, the Bureau of Yards and Docks called on the commandant to investigate and submit a report. Gregory alerted the United States District Attorney for Massachusetts, who looked into the matter. He found that Binney's Wharf had been acquired by George W. White, Charles S. Damen, and John Tyler. The new owners had secured a franchise permitting them to extend their wharf into the Charles as far as the Commissioners' line. This grant did not

3 Smith to Gregory, Mar. 22, 1853; Sep. 2, 1854, NA, RG 71, Ltrs. Sent, Y&D; Gregory to Smith, July 19, Aug. 6, 1853, NA, RG 71, Ltrs. Recd., Y&D.

4 Preble, p. 325.


6 Shubrick to Gregory, Aug. 9, 1852, NA, RG 19, Ltrs. Sent, C&R.

7 Smith to Gregory, June 15, 1854, NA, RG 71, Ltrs. Sent, Y&D.

8 Gregory to Smith, Oct. 15, 1852; Jan. 25, 1853, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, Jan. 15, Jan. 27, Mar. 6, 1853, NA, RG 71, Ltrs. Sent, Y&D.
extend to "the flats of any other persons or which would be comprehended by the true lines of such flats continued to the Commissioners' line."

The issue raised by this circumstance was the location of the "true lines" of the navy yard extended to the Commissioners' line. Should it be an extension of the line of the navy yard wall or one "at right angles with the 'shear wharf' of the yard," starting from "the terminus of the wall"? The district attorney concluded that the extension of Binney's Wharf would "unquestionably destroy the value" of the Vermont slip and greatly injure the shear wharf's utility." Moreover, the owners of Binney's Wharf, by enlarging their pier, would "occupy flats in front of the flats of the Navy Yard," which their franchise prohibited them from doing. White, Damen, and Tyler had made no firm decision on the subject, and the U.S. attorney believed that the Massachusetts General Assembly should determine whether the United States held title to the flats not then occupied and extending to the Commissioners' line. When questioned about their plans, White and Tyler explained they did not intend to sell their property, but desired to purchase from the Charlestown municipal authorities the strip of land called "the old town way" for the purpose of keeping the slip between their wharf and the Navy yard open "as it now is."

In a somewhat similar development, the Department commended Gregory for his vigilance in bringing to the attention of the proper authorities the proposal of the Mystic Flat Co. to fill in the tidal flats between the bridge and the yard.

**FUNDING YARD IMPROVEMENTS AND REPAIRS**

The amount of funds voted by Congress for plant construction and repair at the Charlestown Navy Yard increased dramatically between 1852 and 1856. In August 1852, the President signed a Navy appropriations measure for Fiscal Year 1853 that allotted the Charlestown Navy Yard a mere $28,000. The three projects funded were a rain water cistern ($2800); a pitch house and oakum loft ($4500); and a muster office ($3000). The balance ($17,800) was for "Repairs of all Kinds." For the next fiscal year, the appropriation was $81,460. The more important projects were rebuilding the smithery ($18,000), a cooperage and packing house ($17,500), and a coal house for the Ropewalk ($6700). The appropriation bill for fiscal 1855 was an important one in the history of the Charlestown Navy Yard. Not only did the legislation assign the yard a fund of great size, $167,115, it also provided the initial funds for what became the Machine Shop complex, the largest building in the yard. The particular projects funded in that measure were the machine shop ($41,700); smithery ($28,900); foundry and forge shop ($23,300); boiler house and chimney ($15,300); extension of Shiphouse and slip ($14,500); and steam engine for the dry dock ($8000).

In March 1855, when voting monies for Fiscal Year 1856, Congress proved even more generous and granted the Charlestown Navy Yard more than a quarter of a million dollars for its plant. Large sums were assigned for finishing undertakings previously funded. Those included completing the foundry, boiler, and machine shop ($62,622); machinery for machine shop and smithery ($40,000); a wall north of the timber dock and filling area around machine shop and smithery ($27,000); and a cooperage and packing house ($33,000). Among other items were rebuilding the dock engine and boiler house ($10,000) and extension of the city sewer to the sea wall ($11,100). The appropriations of the years 1852 through 1855 resulted in an important period of plant expansion for the yard at Charlestown.

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9 Gregory to Smith, Feb. 23, 1853, NA, RG 71, Ltrs. Recd., Y&D.

10 Smith to Gregory, Mar. 18, 1854, NA, RG 71, Ltrs. Sent, Y&D.

11 Smith to Downes, May 20, 1852; Smith to Gregory, Mar. 18, 1853; Aug. 10, 1854, NA, RG 71, Ltrs. Sent, Y&D.

12 Smith to Gregory, Mar. 16, 1855, NA, RG 71, Ltrs. Sent, Y&D.
NEW BUILDINGS

The Machine Shop complex had its genesis in a proposal made in the early 1850s by Commandant Downes for funds for a new smithery. Downes noted that the existing shop was located "so much below the general level of the yard that, at the late high tide, the floor was covered with water to a depth of nearly three feet." The building had been erected more than thirty years ago and was both too small and too inconvenient for the other yard facilities. Recently erected commercial smitheries in the area, particularly one at Lowell, employed improvements in the construction and arrangements for ventilation, such as flues underground and tall chimneys. He argued that a smithery "adequate to the wants of the yard" was of first priority. Without such an establishment, "work upon steam vessels of war is nearly, if not quite impossible." Downes also began to press for construction of a machine shop, "where all the work on machinery of war steamers would be done to advantage, so as not to be dependent on contractors...and the consequent expense of transportation of heavy works to & fro with much delay, and the hazard of losing it in transit."

In March 1853, Congress allotted $18,000 for rebuilding the smithery. In July, before any construction occurred, Commodore Smith directed Commandant Gregory to confer with Civil Engineer Billings as to the best mode of rebuilding the smithery. The bureau did not know whether to build new smithery or to enlarge the existing one. A new shop would require an additional appropriation and also raised the question of where to locate it. The next month the bureau produced the idea of asking Congress for appropriations for the building of an "establishment furnished with all the means and facilities for the construction and repair of Steam Engines and other Machinery." This establishment was to consist of a machine shop, smithery, foundry, boiler shop, and pattern shop. It was desirable that the building be in a convenient and central part of the yard. The $18,000 for the smithery would be held in abeyance, while Civil Engineer Billings prepared the necessary plans and estimates for the various units of the multi-purpose complex.

Governed by bureau guidelines, Billings produced the plans and specifications, which were included in Gregory's annual report for Fiscal Year 1853. The commandant assigned the highest priority to securing monies for construction of the machine shop, smithery, foundry, forge shop, and boiler house "on such a scale, as to furnish all the necessary conveniences and facilities for the manufacture or repair of steam engines, and other machinery used in the service." These shops were to be sited in one area, to be powered by one engine, and could be constructed at the same time or separately, as might be found most expedient. Should the entire plan not be implemented, Gregory recommended the machine shop and smithery be deemed of first importance and be erected at an early date. The structures then housing these two activities were inconvenient and unequal to yard needs.

Congress accepted the proposal and in August 1854 appropriated $108,200 for construction of the several parts of the complex. The Department instructed that Billings refine his specifications preparatory to advertising for contractors to undertake construction. Subsequently, Commodore Smith described the aim as producing an "establishment" which could manufacture or repair any steam engine required by the Navy. Apparently, the original site plan prepared by Billings and submitted by Gregory was revised. Both the original and the revised scheme gave the complex a quadrangular shape. As redesigned, on the west side of the court fronting the timber dock was to be the foundry and boiler shop, the former being in the south end. The structures east of the court were to shelter the machine shop and smithery, the machine shop being identical in dimension and style to the foundry which it paralleled. The building at the north end of the quadrangle was to be occupied by the coal shed and an ell assigned to the smithery. The boiler house and

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13 Downes to Smith, Sep. 14, 1850; Aug. 31, 1851; Gregory to Smith, Sep. 24, 1852, NA, RG 71, Ltrs. Recd., Y&D.

14 Smith to Gregory, July 27, Aug. 8, 1853, NA, RG 71, Ltrs. Sent, Y&D.

15 Billings to Gregory, Aug. 27, 1853, NA, RG 71, Ltrs. Recd., Y&D; Gregory to Smith, Sep. 2, 1853, NA, RG 71, Annual Reports, Y&D.
chimney in both plans were located in the center of the court yard, while the quadrangle was open to the south. 16

THE PITCH HOUSE AND OAKUM LOFT

The first proposal for a pitch house and oakum loft at the Charlestown Navy Yard came from Commandant Downes is 1849. He sought a $4300 allotment for construction of a building for storing and heating pitch and preparing oakum. The structure, to be located on the pier west of the Vermont slip, was to be of brick, two stories high, and fifty feet by thirty-five feet. Downes’s recommendation was not accepted for several years, during which he continued to press the case for such a facility. In August 1851, he wrote to the bureau that "a suitable building is wanted for a Pitch and Oakum house." For the time being, he observed, "the only place for the accommodation of the Master Caulker, with his materials, is a narrow apartment, partitioned off from a part of a coal house; and the accommodation is not sufficient to carry on economically" the various activities of that department. 17

In August 1852, $4500 was allotted for construction of a pitch house and oakum loft. Gregory began to collect stone, brick and other building materials, and the bureau gave its approval to the site west of the Vermont slip. In the spring of 1853, a pile driver hammered piles into the muck, and soon twenty bricklayers were employed raising the walls. By mid-July, Navy Agent Isaac H. Wright was requisitioning sheet copper for the roof. The pitch house and oakum loft was completed and occupied in August 1853. Because of an increase in the wages of labor and the addition of a cellar for the pitch, the cost had significantly exceeded the allotment. 18

During the course of construction of the pitch house, the Bureau of Yards and Docks directed Gregory to ship the pile driver to the Washington Navy Yard on the first available vessel. A replacement would be subsequently sent to the Charlestown yard. If the pile driver was not in good condition or if it could not be spared, the Charlestown commandant was to forward patterns to the Washington yard. Gregory apprised the bureau that the driver was currently driving piles for the pitch house foundations and could not be spared unless there was an emergency. Accordingly, he transmitted plans to the Washington yard to facilitate building a driver. 19

THE COOPERAGE AND PACKING HOUSE

When preparing his recommendations for yard "Improvements & Repairs" for fiscal 1854, Commandant Downes called for an allotment of $17,437 to fund construction of a cooperage and packaging house for beef and pork. The structure was to be built of brick with granite trimmings. Naval Constructor Pook prepared a plan of the building. Both the Navy Department and Congress accepted the proposal, and it received the necessary funding. Commodore Smith, Chief, Bureau of Yards and Docks, made changes. He objected to the site selected by Pook because it would interfere with construction of Building No. 16. After studying the yard’s Master Plan, Smith found that Site No. 25 had been intended for the rigging loft and cordage store, but as these activities had been accommodated in other buildings, that site could be appropriated for the cooperage. However, if constructed at Site No. 25, the building should be of granite and be similar in style and size to its neighbor, No. 24, the sail loft. The change from brick walls with granite trim to granite, along with substantial increases in the structure’s dimensions, boosted its estimated cost from $17,500 to more than $50,000. Consequently, all that was accomplished in Fiscal Year 1854 was accumulation

16 Smith to Gregory, Aug. 14, Nov. 9, 1854, NA, RG 71, Ltrs. Sent, Y&D.

17 Downes to Smith, Oct. 1, 1849; Aug. 31, 1851, NA, RG 71, Ltrs. Recd., Y&D.


19 Smith to Gregory, May 2, May 5, 1853, NA, RG 71, Ltrs. Sent, Y&D.

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of a portion of the materials. Construction would require a further appropriation from Congress.20

THE MUSTER HOUSE

The proposal for a muster house at the Charlestown Navy Yard originated at least six years before construction began. In November 1846, Commandant Parker submitted estimates and plans prepared by Naval Constructor Pook for a single-story muster and pursers office located in one of the parks opposite the block shop. No funds were forthcoming until the Navy Department decided in August 1852 to draw upon the "Improvements & Repairs" allocation. The yard argued a muster house was needed because of the inappropriateness of places recently in use for mustering workers. In Parker's time, the men were mustered at the smithery. That site was inconvenient and also it was required for an extension of the planing machine. In his argument for a muster house, Downes stated that workmen were formerly mustered in the old shiphouse and recently in the Saw mill. Here the machinery & materials occupy nearly the whole area, and considerable delay is the consequence. Into this room the men are crowded, and at present with six or seven hundred mechanics at work in the yard, many are kept outside, sometimes in the rain delaying the muster, and wasting valuable time.

Since there might be as many as three musters a day, an inadequate muster site had a substantial impact.21

In the summer of 1852, the Department allocated $3000 for the muster house. Smith found fault with Pook's design and deemed the proposed roof "ill adapted to the Massachusetts climate," as it was liable to "retain large quantities of snow." He forwarded for consideration a plan of the New York yard's muster office, which the bureau believed better adapted. The yard also wished to study the proposed location, the corner of the park nearest the Navy Store. Commandant Gregory had his staff prepare a schedule of materials and plans for a muster house similar to the one in New York. In December, the bureau gave approval for a new site for the muster house, northeast of the Marine Barracks, and for constructing the building of brick.22

In March 1853, ground for the muster house was broken and construction began. By late April, the piles had been driven and the foundations partially laid. The yard and bureau agreed upon a cupola for the building and installation of a $225 clock. In mid-July, Gregory reported the muster house nearly completed. The second story had been designed for the office of Civil Engineer Billings and requisition was submitted for thawing table drafting instruments and other furnishings and supplies. The building was finished and occupied in the late summer. The cost of the structure exceeded the original allocation of $3000 by $3,072.23. The difference, explained Gregory, resulted from the decision to use brick and stone instead of wood and from increases in wages.23

THE ROPEWALK COAL HOUSE

As early as October 1849, when submitting his estimates for "Improvements & Repairs" for Fiscal Year 1851, Commandant Downes asked for funds to construct a coal house for the Ropewalk. Three years

20 Downes to Smith, Aug. 16, Sep. 24, 1852; Gregory to Smith, Sep. 16, 1854, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, July 29, 1853, NA, RG 71, Ltrs. Sent, Y&D. A copy of the revised "Plan for Cooperage and Packing House, Aug. 1853" is on file at BNSY.

21 Parker to Smith, Nov. 7, 1846; Downes to Smith, Oct. 1, 1849; Aug. 25, 1851, RG 71, Ltrs. Recd., Y&D.


later, he repeated his proposal. He recommended a two-story brick building, the upper floor to be used for cutting hide. Downes's estimate in 1852 was $6,743. The commandant argued that a new structure was needed, since the temporary shed then in use was in a "decayed and falling condition." Funds for the coal house were included in the appropriations for Fiscal Year 1854.24

Investigation of the proposed site east of the head house revealed the new structure would overlay part of the Ropewalk reservoir. To avoid the expense of securing a solid foundation at that location, it was proposed to shift the site to the north, with one side of the coal house on the very edge of the yard property. That would make necessary taking down and rebuilding with brick the section of the yard wall to which the building was to be attached. It was decided that the coal house be sited parallel rather than perpendicular to the wall. These decisions having been made, construction commenced in September 1853.25

By mid-November 1853, the coal house's brick walls were up, and consideration was being given to its roofing. However, before the second story could be completed, money was exhausted. Gregory sought an additional $2200 to finish the upper floor for cutting and preparing hide for rope and for braiding machinery. No monies were forthcoming for this purpose in Fiscal Year 1856.26

OTHER PLANT IMPROVEMENTS

During the years 1852 to 1855, a number of buildings at the Charlestown Navy Yard underwent repairs, improvements, or some other type change. At the request of the Bureau of Ordnance and Hydrography, Building No. 15, a general storehouse, was modified to serve the needs of the yard's Ordnance Department. Those modifications included cutting additional doors and windows; fitting the east rooms in the lower story with a bench, racks, shelves, and other furnishings for use as a gunner's loft; and equipping another room for the storage of 3300 charts, 400 books, and instruments.27

In July 1854, the Bureau of Yards and Docks directed that the porter's quarters be converted into a guardhouse and turned over to the Marine detachment. The marines assumed a number of responsibilities formerly assigned to the porter, who after the change in his quarters, found most of his time and attention engrossed by his activities associated with the commandant's office.28

Building No. 36 was used as a gun-carriage shop and mould loft. In 1852, its cellar was paved with brick, so that it could be employed for storage purposes. Several years later, Timber Shed No. 31 was graded and paved.29

On the night of December 15, 1852, a fire broke out in the recently completed sail loft. The yard fire department promptly extinguished the blaze. Investigation revealed that the fire had originated in one of two stoves placed in the loft to heat it during the winter. To prevent a recurrence of the fire, three new stoves

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26 Gregory to Smith, Nov. 13, 1853; Sep. 26, 1854; Aug. 30, 1855, NA, RG 71, Ltrs. Recd., Y&D.


28 Smith to Gregory, July 7, 1854, NA, RG 71, Ltrs. Sent, Y&D.

29 Gregory to Smith, June 9, Aug. 13, 1852; Sep. 16, 1854; Downes to Smith, Aug. 25, 1851; Aug. 16, Sep. 24, 1852, NA, RG 71, Ltrs. Recd., Y&D.
were installed.\textsuperscript{30}

In March 1853, funds were allocated for rebuilding the saluting battery and planking the shear wharf. Work began immediately and continued to September 1854, when it became apparent that completion of the two projects required additional funds.\textsuperscript{31}

Other work done on the yard's waterfront included building a stone wall on the west side of the timber dock to keep the dock from filling in; filling and covering places about the dock and upper part of the yard with three hundred tons of gravel; and rebuilding the seawall. The seawall needed attention because on December 19, 1854, a ship was launched from Jackson's East Boston shipyard. The vessel drifted across the Mystic River and crashed into the seawall east of Shiphouse No. 39. About one-third of her length protruded through the wall. At high tide the next day, the vessel was floated and repairs began on the wall. In early 1854, Commandant Gregory notified the bureau that the steam box at the head of the dry dock engine was rotten and needed replacement. Yards and Docks agreed, and ten months later a double steam box was erected near Shiphouse H to facilitate construction of \textit{Merrimack}.\textsuperscript{32}

Construction of the muster house triggered a request by yard workmen for a change in access to the facility. Early in September 1853, soon after daily musters were shifted to the new muster house, a number of employees petitioned to have a small gate opened in the yard wall on Chelsea Street near the muster house and between the Ropewalk and Marine Barracks. Gregory agreed that "a small iron gate, to be opened only at the times of passing to and from the daily muster, would be a great convenience." The Bureau of Yards and Docks resisted and believed that another gate "would be attended with no good results." However, the Secretary of the Navy visited the yard in October and gave approval to the new gate. After the new entry was opened, its keys were entrusted to the captains of the watch. Two years later, the Chelsea Street periphery required attention, when the foundation of one hundred feet of the yard's stone wall failed and the wall toppled. The accident occurred at the east end of the Ropewalk. The wall was rebuilt "in a more stable manner."\textsuperscript{33}

\textbf{SUPPLYING THE OVERSEAS SQUADRONS}

During the Gregory years, supply vessels and storeships bound for overseas stations continued to put in at the Charlestown yard to load stores and provisions. In January 1853, two such ships sailed from the yard, one for the Mediterranean and the other for the west coast of Africa, after taking aboard supplies for the squadrons operating in those waters. In the summer of the same year, the yard's naval constructor inspected a commercial brig, \textit{California}, to ascertain her suitability to transport 1000 barrels of provisions and stores to La Spezia for the Mediterranean Squadron. Two months later, provisions, slops, and stores for the African station were loaded on a storeship, which then sailed for Porto Praya and the Cape Verde Islands.\textsuperscript{34}

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{30}] Gregory to Smith, May 2, 1853, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, May 14, 1853, NA, RG 71, Ltrs. Sent, Y&D.
\item[\textsuperscript{31}] Downes to Smith, Aug. 16, Sep. 24, 1852; Gregory to Smith, Sep. 16, 1854, NA, RG 71, Ltrs. Recd., Y&D.
\item[\textsuperscript{32}] Downes to Smith, Sep. 14, 1850; Aug. 16, Sep. 24, 1852; Gregory to Smith, May 17, 1853; Jan. 23, May 1, 1854; Aug. 30, 1855; Selfridge to Smith, July 21, 1854, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, May 19, 1853; Jan. 25, Apr. 12, May 3, Nov. 7, 1854, NA, RG 71, Ltrs. Sent, Y&D; Preble, p. 326.
\item[\textsuperscript{33}] Gregory to Smith, Sep. 6, 1853, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, Sep. 8, Oct. 21, 1853, NA, RG 71, Ltrs. Sent, Y&D; Preble, pp. 322, 330.
\item[\textsuperscript{34}] Gregory to Pook, Aug. 9, 1853; Gregory to Lenthall, Oct. 16, 1855, NA, RG 19, Ltrs. Recd., Y&D.
\end{itemize}
\end{footnotesize}

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THE ROPEWALK

In June 1853, Ropewalk Superintendent Caban recommended that the establishment be shut down for four weeks, beginning July 1, to enable mechanics to realign the shafting, replace worn bearings and gearing, and clean and readjust the engines. The bureau understandably declined to make a decision until it had in its possession data to enable it to evaluate the extent of the needed repairs. After receiving further information, Commodore Smith directed the repairs be made and charged to contingencies. Consequently, in part of 1853 the Ropewalk was closed for repairs.35

Pedrick fliers had been installed in the Ropewalk in August 1851. The extra power needed to drive them and the heavy workload had taken their toll on the Ropewalk engines. It now required thirty pounds of pressure to drive the machinery without any work attached, and during much of the time the engines had to run at seventy pounds pressure. In January 1853, Chief Engineer Butts urged the purchase and installation of a more powerful engine, to be placed on the north side of the head house. He also recommended a Winchester steam pump to supply the boilers in the morning. Upon receiving Butts’s report, the bureau tartly observed that the Charlestown yard mechanics seemingly considered “it only necessary to make reports and requisitions,” and “all their wants would be met without regard to regulations and laws.” If new engines were needed for the Ropewalk and dry dock, the proper procedure was to prepare and submit estimates for Fiscal Year 1855. Commandant Gregory did just that and included in his proposals for plant improvement in fiscal 1855 a $10,000 appropriation for a new engine and steam pump for the Ropewalk. However, items of higher priority led the bureau to defer seeking funds for the improvements in the Ropewalk.36

The bureau did agree in late 1853 to the construction of new furnaces for the Ropewalk boilers. In the process, it proved necessary to remove all the old brickwork, along with a portion of the chimney. The old bricks were salvaged, cleaned, and used in the new furnaces.37

In January 1855, Commandant Gregory became concerned about the availability of suitable hemp for the Ropewalk. He was fearful that the Crimean War would disrupt the export of hemp from Russia. Accordingly, he urged the Department to authorize purchase of all Russian hemp then on the market. During the following summer, the price of hemp of all kinds steadily increased, and by September little hemp was available. American hemp, dressed and hackled, sold at from $230 to $260 per ton. The only Russian hemp on the market was thirty-four tons for which the owner was asking $300 per ton. Seventy tons of Italian hemp could be purchased for $320 per ton. Large quantities of Manila would soon be for sale. It made excellent running rigging and was universally used in the merchant marine. Commandant Gregory assured the Bureau of Construction, Equipment and Repair the Ropewalk’s stock of hemp in the store would be sufficient for ordinary purposes for nearly twelve months.38

In the mid-1850s, the Bureau of Construction, Equipment and Repair calculated that the Navy used almost 200,000 pounds of oakum annually. At the same time, large quantities of salvaged rigging suitable for making oakum were accumulating at the yards. These circumstances led the bureau to investigate the possibility of producing oakum at the Charlestown yard Ropewalk. Commandant Gregory questioned the feasibility of the proposal because the Ropewalk had been “tasked to its utmost capacity for the last eighteen


36 Butts to Gregory, Jan. 10, 1853; Gregory to Smith, Aug. 27, 1854, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, Jan. 12, 1853, NA, RG 71, Ltrs. Sent, Y&D.


38 Gregory to Lenthall, Jan. 16, Sep. 13, 1855, NA, RG 19, Ltrs. Recd., C&R.
months, with a great gang of working hands." The bureau, therefore, dropped the idea.39

The Gleason’s reporter included the Ropewalk in his description of the Charlestown Navy Yard. Referring to the walk as "the finest in the country," he informed his readers that all the cordage for the Navy was manufactured at this establishment. The Ropewalk, he explained,

contains four railways, but one of which is generally brought into use. The length of the walk is 1350 feet; there are eighty spinning jennies, seventy of which are in operation now; the daily manufacture amounts to about forty hundred weight; the quantity of hemp kept on hand for use is about eight hundred tons, and there are forty-five men employed in the establishment. The power is derived from one of Tufts's beautiful engines of sixty horsepower, which with the other machinery of the establishment is well worthy of inspection. The principal building . . . contains in the basement, the engine room and boilers; the second story contains the spinning machinery; and the "walks," being a quarter of a mile in length occupy the ground floor. The small building at the left is the tar-house, where all the yarns are tarred previous to spinning.

The writer noted that the Ropewalk operations were "very interesting," particularly the "laying up a large cable."40

CIVILIAN EMPLOYEES

In the spring of 1853, the Navy Department changed the procedure for fixing wages for its navy yard employees. Previously, each yard commandant produced a scale for his workers. For example, in August 1852, the Bureau of Yards and Docks directed Commandant Gregory to establish wages and hours based upon a "general scale" prevailing in private businesses in the local area. Pay of quartermen was to be twenty-five percent over and above the wages of first-class mechanics in their departments. No quartermen would be allowed in any department, where there were less than fifteen mechanics. In the following April, a procedure was instituted whereby the Navy Department would decide on common rates of pay for all of its yards. Gregory was directed to call on management at the area’s private shipyards and similar establishments for schedules of the number of men employed in each department, wage rates, and daily number of hours worked. On receipt of this data, he was to prepare a scale, listing this information, which would be forwarded to the bureau. The information would be used by the Navy Department to "establish a just and equitable scale of wages for the several navy yards."41

After evaluating the data collected by yard commandants, the bureau, on May 21, mailed to Gregory a schedule of wages, listing four classification in each trade. To the commandant’s discretion was left the proper classification of the workmen. The schedule listed wages for masters and mechanics, but did not include quartermen and apprentices, for whom pay had previously been fixed. The wages were predicated on a ten-hour day. According to the schedule, the highest paid master mechanic was the master ropemaker, who received $5.00 per day. The master carpenter had a daily wage of $4.00, and all other masters, $3.50, except the master laborer, paid $2.50. First-class carpenters and caulkers were assigned wages of $2.50 per day; all other first-class mechanics received either $2.26 or $2.00, except first-class ropemakers, paid only $1.76. The wage scale did not include entries for all second-class, third-class, and fourth-class mechanics. Generally, twenty-five cents separated one class from the next lower class. For example, the schedule for smiths was:


41 Smith to Gregory, Aug. 4, 1852; Apr. 14, 1853, NA, RG 71, Ltrs. Sent, Y&D.
first class, $2.00; second class, $1.75; third class, $1.50; and fourth class, $1.30.42

During the winter of 1854, the yard work force, including laborers and watchmen, was pared to two hundred men. To keep particular skilled mechanics occupied, Gregory employed them in work connected with certain machinery which was out of order, such as fabricating a new set of teeth for the driving wheel of the Ropewalk engine; making new belting for the smithery engine and new heads to the smithery heating drum; and cleaning boilers and refilling valves of the dry dock engine.43

Labor relations were not always harmonious at the Charlestown Navy Yard during the Gregory administration. In December 1852, the Bureau of Yards and Docks announced that the workday was to begin at sunrise and cease at sunset when there was less than eleven hours between these two times. The men would be allowed one hour for dinner. The muster bell was to be rung ten minutes before the hour to commence work, and muster was to begin at sunrise. This order was resisted, and yard workmen walked off the job. They won their point, and the order requiring the men to report for duty one hour earlier than theretofore was rescinded. Whereupon, the strikers returned to the yard.44

Another outbreak of labor troubles occurred in August 1854, when the ship carpenters struck, demanding more pay. They claimed that their wages were less than those paid men in their trade at local private yards. The reaction of the Bureau of Yards and Docks was to seek the names of the strikers so that a "black list" could be drawn up. Acting Commandant Thomas O. Selfridge met with strike leaders and learned that the men would be satisfied if the pay of first-class carpenters was raised from $2.50 to $2.75 per day. The bureau accepted this, although the rate paid carpenter quartermen would be based on the rate of $2.50. Some watchmen would also received an increase.45

In the following March, caulkers, at work on Merrimack, conducted a strike on behalf of higher wages. The Secretary of the Navy deemed the strike unwarranted and ordered the strikers fired, unless they returned to work immediately. The subject of the wage to be paid strikebreakers was left to Gregory's discretion.46

SERVICING VESSELS OTHER THAN THOSE OF THE NAVY

An increasing volume of activity at the Charlestown Navy Yard involved vessels belonging to the Coast Survey, Lighthouse Board, or private owners. This pattern was evident in shipbuilding, and two of the vessels constructed at the yard were for parties other than the Navy. In the years 1852-1855, significant numbers of vessels belonging to or under charter to the Coast Survey called at the yard, with less frequent visits by vessels of the Lighthouse Board and the Revenue Service. In 1853, for example, two Lighthouse schooners, one Revenue cutter, and six Coast Survey schooners came to the yard. In most instances, the visit consisted of tying up at a wharf or mooring for a few days, while supplies or personnel were transferred or other business transacted not involving the yard. Occasionally, the yard made repairs. In 1853, for example, the Coast Survey's Gallatin was docked and repaired, and repairs made to the Revenue cutter Morris. In August 1852, the cutter Alert put into the yard for repairs. She was sold at public auction and removed from the yard on

42 Smith to Gregory, May 21, 1853, NA, RG 71, Ltrs. Sent, Y&D.
43 Gregory to Smith, Mar. 1, Mar. 2, 1854, NA, RG 71, Ltrs. Recd., Y&D.
44 Smith to Gregory, Dec. 11, 1852, NA, RG 71, Ltrs. Sent, Y&D; Preble, p. 316.
45 Selfridge to Smith, Aug. 1, Aug. 5, 1854; Gregory to Smith, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, Aug. 3, Aug. 11, 1854, NA, RG 71, Ltrs. Sent, Y&D.
46 Smith to Gregory, Apr. 3, 1855, NA, RG 71, Ltrs. Sent, Y&D.
May 1853. As in the past, several vessels of federal agencies laid up at the yard for the winter.47

The Charlestown Navy Yard gave further assistance to the Lighthouse Service by constructing buoys for the First Lighthouse District. The buoys were completed and transferred to the Lighthouse Board in the winter of 1853-54.48

Private ships came to the yard for masting, mooring, or docking. The Bureau of Yards and Docks adopted a policy of permitting merchant shipping for a fee to be masted at the yard shears whenever the shears were not occupied in work on public vessels. In 1852, eighteen private ships were masted; in 1853, twenty-three; and in 1854, only three. The bureau set aside the policy of masting private vessels in 1855. However, in the winter of 1855-56, the bureau for the first time allowed private vessels to be laid up at the yard, and several yachts took advantage of this opportunity.49

During these years, the Bureau of Yards and Docks sought to reduce the number of nongovernment ships using the navy yard dry dock, and in July 1852, it directed that the Navy's docks would not receive a private vessel when that vessel could be "raised or docked" in a local commercial marine railway or dock. When a private vessel was docked in a navy yard, yard employees would make the repairs. Materials could be provided by the yard at costs established by the naval constructor. The new docking rates were, for steamers, thirty-five cents per ton for the first day and twelve and one-half cents per ton for each day thereafter; and for sailing ships, twenty-five cents per ton for the first day and twelve and one-half cents for each ensuing day. At the time the new rates went into effect at Charlestown, the British steamer Cherokee was in the dock. Her captain was assessed the old rate of twenty-five cents for the first day, and half that thereafter.50

When the increase in rates failed to curtail pressure by private companies to use the dock, the bureau in March 1853 again raised its fee for docking nongovernment vessels. Henceforth, for sailing ships, the fee would be thirty-one cents a ton for the first day and twelve cents a ton for lay days. For steamers, it would be sixty-two cents per ton for the first day and twenty cents per ton for lay days. Any vessel occupying the dock more than four days would be assessed a twenty-five percent surcharge. The larger fees caused a marked decrease in usage of the Charlestown yard dock by private vessels. In calendar year 1853, only three were hauled into the dock. However, this situation did not last, and in 1854, nine merchantmen were docked.51

REPAIR OF NAVY VESSELS

During the period Gregory served as its commandant, the Charlestown Navy Yard repaired ten vessels of the United States Navy. It also completed and outfitted the line-of-battle ship Vermont. The volume of repair activity at Charlestown was affected by changes at other Navy shore establishments. The Pensacola yard experienced an expansion of its facilities for repair and outfitting warships; additional dry docks were built at Portsmouth and New York; and because of its favorable geographic position, the Norfolk yard became increasingly more important. There would have been greater activity at Charlestown had these developments not occurred.

47 Shubrick to Gregory, Mar. 30, 1853; Lenthall to Gregory, Nov. 29, 1853, NA, RG 19, Ltrs. Sent, C&R. For lists of the arrivals and departures of these federal vessels during the period 1852-1856, see Preble, pp. 314, 318-20, 323-24, 328.


49 Preble, pp. 315, 319, 325, 328.

50 Smith to Gregory, July 28, 1852, NA, RG 71, Ltrs. Sent, Y&D; Gregory to Smith, Oct. 1, 1852, NA, RG 71, Ltrs. Recd., Y&D.

51 Smith to Gregory, Mar. 14, 1853, NA, RG 71, Ltrs. Sent, Y&D.
Plate 3: "VIEW IN THE CHARLESTOWN NAVY YARD." C. 1855, showing two unidentified warships at a yard wharf.
It was in July 1852, several months after Commodore Gregory took command, before a warship came to the yard for repair and outfitting. The sloop Albany arrived from duty with the Gulf Squadron, and Washington gave orders that she be docked, caulked, and readied for a prompt return to the Caribbean area. The ship went into dry dock in mid-August, and Gregory notified the Department that she would be ready to sail within several days. However, she remained in the yard until November. By the middle of the month, she had been ready for sea for some time, with everything aboard and stowed, except the purser's stores, provisions, and powder. The crew had been detailed and was ready for transfer from the receiving ship Ohio. The officers, except the purser and surgeon, were present. By the 27th, the last supplies and personnel had gone aboard, and Albany beat her way out of the harbor.52

Another sloop, Decatur, made two trips to the yard during the Gregory era. In the first, the ship remained for almost a year. She arrived in August 1852 from the West Indies. Having recently gone aground, the vessel went into the dock for an evaluation of damages. By mid-November, necessary repairs had been effected, her outfit and stores completed, and her crew, except twenty men, shipped. However, more than six months passed before the Department ordered Decatur to be readied for duty with the Home Squadron. Recommissioned on July 12, 1853, she rendezvoused with a flying squadron to guard American fishing interests in the North Atlantic. She returned to Boston in late September to be prepared for service in distant waters. In mid-October, Gregory reported Decatur would be ready to sail in four weeks. However, the yard was unable to meet that schedule. In early December, Gregory informed Washington that the hold had been stowed; salt provisions were aboard; the sails, spars, boats, and armament prepared; the rigging nearly completed; and the ship ready to sail in ten or twelve "good working days." This time the deadline was met. By December 21, her equipment was completed, the sails bent, and all stores and provision aboard. Decatur finally sailed January 10, 1854.53

Germantown spent much of the spring, summer, and early autumn of 1853 at the Charlestown Navy Yard. She arrived in late March. Her crew was paid off; her stores landed; she was examined and in April was laid up in ordinary. The cost of repairing and outfitting her was placed at $34,412. She was docked in mid-August and repairs begun. The outfitting included a new set of standing rigging. Supplies and provisions for a three-year cruise were placed aboard, and on December 2, she sailed for the Brazilian station.54

One week after the arrival of Germantown, another sloop of war, Dale, came to the yard. As soon as her stores were landed, her officers and crew went aboard the receiving ship. Before being placed in ordinary, she was examined, and Naval Constructor Pook estimated the cost of her repairs and outfitting at $32,727. Assigned a higher priority than Germantown, Dale went into the dock on May 6. By late August her repairs were complete, and the Department ordered the sloop outfitted for immediate service with the Brazilian Squadron. The officers and crew reported aboard Dale in late September, and she put to sea on October 17.55

A third warship in the Charlestown Navy Yard in the summer of 1853 was John Adams, a corvette. She returned to the United States from the west coast of Africa and anchored off the yard in July. As soon as her stores had been landed and crew sent to the receiving ship, she was demasted and docked, preparatory to being thoroughly examined. In August, with repair of Dale and Germantown nearly completed, Gregory

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suggested work begin on *John Adams*. Except for her sails, repair of the corvette had been completed by December 20. The sails proved expensive because of the limited hours of daylight at that season in the latitude of Boston and because of the high wages commanded by sailmakers, who were paid twenty-five cents an hour at private yards. On March 19, 1854, Gregory advised the bureau that whenever orders were received, about fifteen days would be required to rig and stow the ship. In August, the Department instructed the yard to have *John Adams* outfitted for a Pacific cruise. As soon as she had been caulked and painted, Gregory replied, she would be ready to receive her complement. Two more months were to slip by before *John Adams*, having been hauled into the Charles, hoisted anchor on October 25 and sailed for the Pacific.56

In August 1854, the corvette *Cyane* arrived at the yard from the Caribbean. Her crew was placed aboard the receiving ship, her stores were landed, she was examined, and a report of needed repairs sent to the Department. After reviewing the report, the bureau ordered *Cyane* repaired. Gregory received directions that the dry dock "be occupied for the shortest period" possible. Most of the work was completed by mid-November. By that time, her sails, spars, casks, tanks, and boats were ready; her rigging partly done; and the carpenters, joiners, and caulkers were finishing their tasks. Work remaining, including painting, would require twenty working days. In April 1855, the ship received her stores, officers, and crew, and the corvette sailed for the West Indies on the 25th.57

To test her new engines, *San Jacinto*, a screw steamer, underwent a shakedown cruise in August 1854 from Philadelphia to Boston. She hove to off the Charlestown Navy Yard and was soon docked in an effort to determine why she was leaking. Yard personnel could not explain the cause of the problem. Gregory speculated that the leakage was occasioned by malfunctioning of the sea cocks. In early September, after her machinery was adjusted and she was coaled, *San Jacinto* departed the yard for Great Britain. Because of the visit to the yard, her officers seemed to be "much better satisfied" and have more confidence in their ship.58

The day before the sailing of *San Jacinto*, *Saratoga* put in at the yard after long service with the East India Squadron. When informed of her arrival, the Department directed that she be examined and repaired. It was determined that the work would cost $65,000. It was mid-November before she had been partly stripped and was ready to be hauled into dry dock. Her timbers were pronounced sound, as seemed to be the case also with her bottom planking. The principal defects were in the parts fastened by iron. In mid-May 1855, Gregory reported *Saratoga* ready for service. He stated that the repairs had made her in "all respects equal to a new ship." Three months later the bureau ordered the vessel outfitted for service with the Home Squadron. *Saratoga* departed the yard on September 11, bound for Norfolk.59

In October 1855, the steam ship *Fulton*, plagued by boiler problems, put into the yard. Her boilers were overhauled, but as the dry dock was occupied by *Merrimack*, it was necessary to haul *Fulton* to a private dock for repair of her bottom. By mid-November, the repairs were nearly completed, and the bureau was notified that *Fulton* would be ready for sea in four days. Several delays then occurred, and it was December 3 before she departed the yard en route to rejoin the Home Squadron. However, she returned before nightfall because of malfunctioning machinery. Repairs were effected, and *Fulton* again put to sea on December 14, 1855.60

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During the summer of 1855, the yard’s anchor hoy was hauled up into the lower ways and "thoroughly repaired." She was launched on September 14 and returned to service.\(^{61}\)

Two other ships came to the yard in the period 1852-1855, but they did not receive repairs. *Cumberland* returned in June 1855, after serving as flagship of the Mediterranean Squadron for three years. On July 2, she was turned over to Gregory and her crew discharged. She was then surveyed and placed in ordinary. A board of survey estimated the costs of repairing and equipping her at $100,000. Later, the same summer, *Preble* arrived from the Chesapeake with the Annapolis midshipmen on their annual cruise. She remained one week and then sailed for Norfolk.\(^{62}\)

When Commodore Gregory reported for duty, two of the Navy’s big line-of-battle ships were at the Charlestown Navy Yard. One of them, *Ohio*, served as the station’s receiving ship, and the other, *Vermont*, had been launched, but much of her interior work and outfitting had not been accomplished. In July 1852, Gregory notified the Bureau of Construction and Repair that *Vermont* should be recaulked on the side last exposed to the sun, and "her seams generally outside hardened in and pitched." However, the Department responded that it was desirable to keep one of the 74s ready to be commissioned on short notice. Gregory received directions to have the two vessels examined and estimates prepared of the cost of the work to be done on each. He found *Ohio* in good condition for a receiving ship, and she would answer for that purpose for several more years without much expense. But to ready her for sea would necessitate extensive repairs. It being less costly to outfit *Vermont*, the bureau ordered her readied without delay for service in the China seas. Any outfits or stores belonging to *Ohio* which would answer for *Vermont* were to be transferred.\(^{63}\)

The Charlestown yard thus undertook to repair and outfit the liner. Included in the chores confronting the yard was drafting plans for much of the interior of the ship. By October 20, Naval Constructor Pook had completed and mailed to the bureau plans for the vessel’s interior arrangements. The bureau approved the layout of the orlop, but explained that an increase was required in the size of the shellrooms and shot lockers. These changes were necessary because the shellrooms were to have space for 880 boxed 8-inch shells; 260 boxed 32-pounder shells; fourteen boxes of 24-pounder shells; fourteen boxes of 12-pounder shells; 880 8-inch shell cases; 5200 32-pounder shot; and 356 stands of grape, as well as about fifty cubic feet for other purposes. The bureau also ordered the yard to build poop cabin on the liner’s spardeck. The front of the poopdeck should be “just clear of the mizzenmast, while the pantry for the poop cabin would be on the upper gundeck, the entrance to which would be a scuttle amidships, to be cut in the spardeck.”\(^{64}\)

On October 20, *Vermont* was hauled under the shears to be masted. By then, her channels, rudder, and ironwork were in a state of "forwardness." Most of *Ohio*s lower rigging, as well as that for her topmast, being sound, was transferred to *Vermont*. The ship was masted and rigged by the 25th when she was docked. By early December, *Vermont*s hold had been completed and partially stowed. The fixtures for her orlop and storerooms were nearly finished and partly painted. Her lower masts were rigging and topmasts painted. On January 1, 1853, *Vermont* and *John Hancock* were in "such a state of forwardness" that about two hundred mechanics and laborers were laid off. Considerable progress was made in January, despite the cold weather. By the end of the month, *Vermont* had been readied so far as her holds, magazines, breading rooms, and orlop deck were concerned. The bottom tier of the holds and spirit rooms had been stowed. Water casks had been fashioned and painted and were ready to be sent aboard. Her spars, sails, and boats were nearly ready. The cabins, staterooms, and pantries on the gundeck were up and primed. The lower gundeck carriages were aboard. The most difficult work remaining was changing the old-fashioned ring bolts for the gun fixtures.

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\(^{61}\) Preble, p. 330.


called for by new Bureau of Ordnance regulations.\textsuperscript{65}

In February, laborers painted Vermont's exterior; she left the dry dock on March 1; and late April found a small force of mechanics finishing the stern gallery. The liner's water tanks had been filled, and she now drew twenty-one feet of water.\textsuperscript{66}

In October 1852, it had been the Navy's intention to commission Vermont and send her to the Far East. In October 1853, after the Charlestown yard had worked on the ship for a year, the Department decided to hold in abeyance its original plans. That decision meant that, for the time being, the liner would remain out of commission at the yard. With the change in plans, the yard's activities respecting Vermont shifted to preservation of the ship. On the recommendation of Gregory, the bureau directed that the rigging and spars, already injured by exposure to the weather, be taken out and placed under cover.\textsuperscript{67}

By June 1854, as Gregory notified the bureau, Vermont needed to be recaulked, the ship having "laid unprotected" during the two years since she had been last caulked. He advised Washington that caulkers in the Boston area were demanding and being paid $3.00 per day. The bureau instructed Gregory to have all necessary work for preservation of Vermont executed in "the most economical manner." The commandant decided to have the liner recaulked without delay because her spardeck leaked in many places. However, no caulkers could be found willing to work for the $3.00 daily wage authorized by the Bureau of Yards and Docks. Consequently, the undertaking was postponed.\textsuperscript{68}

Sufficient monies were available in the autumn of 1854 to caulk and pay with turpentine the upperdeck and the poop. The remainder of the vessel was caulked in the following spring. Gregory urged that the caulking be done before the vessel had to be moved from the shear wharf. Vermont would have to be removed and anchored in the stream whenever Merrimack was launched.\textsuperscript{69}

SHIP CONSTRUCTION

Three new vessels were built at the Charlestown Navy Yard during Gregory's administration, 1852-1855, and one other entirely rebuilt. This represented a significant increase in new construction over and above that occurring during the late 1840s and early 1850s.

In October 1852, a year after the tug John Hancock had been placed in ordinary, Gregory notified the Bureau of Construction and Repair that her boiler had been removed and she was to be towed to the New York Navy Yard, where she was to be modified for an expedition in the northern Pacific. However, a change in plans occurred. The vessel remained at Charlestown, and she was rebuilt. Naval Constructor Pook prepared alternative plans for changing the lines of John Hancock to improve her efficiency. The first set of drawings called for lengthening her amidships and the others in the "forebody." Costs would be about the same. Having been built as a lighter and anchor hoy, she was very "full forward," and it would be difficult to improve her speed without altering that section. The plans, as exhibited, were similar to that of Sir John Harvey, a


\textsuperscript{66} Gregory to Shubrick, Feb. 16, Mar. 1, Apr. 28, 1853, NA, RG 19, Ltrs. Recd., C&R.


\textsuperscript{68} Gregory to Lenthall, June 28, July 24, 1854, NA, RG 19, Ltrs. Recd., C&R; Lenthall to Gregory, July 1, 1854, NA, RG 19, Ltrs. Sent, C&R.

\textsuperscript{69} Gregory to Lenthall, Mar. 21, 1855, NA, RG 19, Ltrs. Recd., C&R; Lenthall to Gregory, Mar. 22, 1855, NA, RG 19, Ltrs. Sent, C&R.
propeller-driven vessel running between Boston and New Brunswick.\textsuperscript{20}

The Bureau of Construction and Repair studied the plans for lengthening \textit{John Hancock} to 150 feet and reached a decision. In October, the head of the bureau authorized the Charlestown yard to separate the vessel amidships and to build a new "forebody," giving it "the degree of capacity relative to the after body." The tug was hauled onto the ways of Shiphouse H and cut in two as directed. After the forebody was removed, carpenters built a new bow, completed by early December. The modification increased her length from 113 to 151 feet and her weight from 230 to 382 tons, without affecting her beam or draft. During the next two and a half months, workmen prepared the ways for launching and installed three new boilers in \textit{John Hancock}. She was launched on February 24, 1853. On March 3, she made a trial of her engine on a short run down the harbor, attaining an average speed between eight and nine knots, a performance that satisfied her captain and chief engineer. The rebuilt tug was commissioned on March 19 and sailed to New York and then to Hampton Roads, where she joined Cdr. Cadwalader Ringgold's Northern Pacific Surveying Expedition.\textsuperscript{71}

The Bureau of Yards and Docks asked Commandant Gregory to provide a plan for building an anchor hoy out of \textit{John Hancock}'s forebody, since it was too valuable to be discarded. Nothing came of this proposal, and two years later the commandant recommended the forebody be either sold or broken up. The Department ordered the remains of the tug transferred to the Bureau of Yards and Docks for disposal, and they were hauled into the timber dock.\textsuperscript{72}

On February 24, 1853, immediately after the launching of the rebuilt \textit{John Hancock} from Shiphouse H, a contractor laid the keel for the new Revenue steamer \textit{Bibb}. The iron hull of her predecessor of the same name had been scrapped and sold, but the engines had been reserved for the new vessel. The second \textit{Bibb} was launched on May 12, was completed in the following months, and sailed from the yard on August 11 on a surveying cruise. Two years later, the yard built a lightship. According to directions from the Bureau of Construction and Repair, she was to be constructed "altogether under the control of the Navy Department." Records were maintained of all expenses, so the Department could be reimbursed by the Lighthouse Board. The lightship \textit{Brilliant} was built in and then launched from Shiphouse No. 39 on September 11, 1855, and was completed shortly thereafter.\textsuperscript{73}

The most important shipbuilding activity at the Charlestown Navy Yard during the period 1852-1855 was construction of \textit{Merrimack}. In 1854, Congress appropriated funds for several new steam frigates. In anticipation that one of the vessels might be built at his yard, Gregory notified the Bureau of Construction and Repair that the shiphouse best suited for building a steam frigate was then encumbered with "half of the old \textit{John Hancock}," which would take some time to remove or break up. The Department approved removal of the forepart of \textit{John Hancock} from Shiphouse H and storage of its ironwork in one of the other shiphouses.\textsuperscript{74}

In May 1854, the Bureau of Construction and Repair announced that it had been decided to build one of the frigates at Charlestown. The yard's carpenters were to take from the timber dock "the entire frame of a Frigate of the first class, with such additional timber as may be necessary from the promiscuous timber or parts of incomplete frames." As considerable skill would be required to shape it without waste, the timber

\footnotesize{\textsuperscript{20} Gregory to Shubrick, Oct. 9, Oct. 11, 1852, NA, RG 19, Ltrs. Recd., C&R.  


\textsuperscript{22} Preble, p. 322; Gregory to Lenthall, Aug. 4, 1855, NA, RG 19, Ltrs. Recd., C&R; Lenthall to Gregory, Aug. 7, 1855, NA, RG 19, Ltrs. Sent, C&R.  

\textsuperscript{23} Preble, p. 51; Lenthall to Gregory, Apr. 14, Oct. 13, 1855, NA, RG 19, Ltrs. Sent, C&R; Gregory to Lenthall, Sep. 21, 1855, NA, RG 19, Ltrs. Recd., C&R.  

\textsuperscript{24} Gregory to Lenthall, Mar. 8, 1854, NA, RG 19, Ltrs. Recd., C&R; Smith to Gregory, Mar. 8, 1854, NA, RG 71, Ltrs. Sent, Y&D.}
was to be hauled out of the dock and sorted. The keel was to be selected from those pieces stockpiled for frigates, and likewise for the knees’ 8- and 10-inch siding. The bureau also directed the yard select a shiphouse and slip. Gregory was reminded that the shiphouse would have to be about 280 feet in length, which might necessitate constructing a shed addition.**

It was determined that Shiphouse H would have to be extended to accommodate the proposed frigate. Also piling was required because fill underlay the area of ground on which the addition was to be placed. Gregory instructed Civil Engineer Billings to prepare plans and estimates for increasing the length of Shiphouse H to 280 feet in the clear. After reviewing these documents, the Bureau of Yards and Docks directed Gregory to see that Shiphouse H was extended by addition of two 11-foot, 9-inch sections to the upper end of the structure. The ways were also to be lengthened. Subsequent reflection indicated that the extension would have to be even longer. Naval Constructor Delano pointed out that, in building the frigate, it would be necessary to place the lower block under the stern-post, thirty-five feet inside the lower end of the house, leaving that much space from the end of the house to the stern-post. This would make the distance from the stern-post to the landward end of the house 245 feet. If the vessel, as anticipated, were longer than this, the excess must extend outside the structure. Delano accordingly recommended that the house be extended to a length ten feet greater than the distance from the stern-post to the knightshead at the height of the rails. The bureau agreed and ordered an increase in the length of Shiphouse H to 300 feet.**

In extending the shiphouse, it was necessary to detach some of the iron lightning conductors. Acting Commandant Selfridge recommended removing all of the iron conductors and replacing them with ones of copper, similar to those on Shiphouse I, the storehouses, joiners’ shop, and other yard buildings. By late October 1854, Shiphouse H had been extended by construction of four 11-foot, 9-inch additions. Congress made a $14,500 appropriation to fund this work.**

Meanwhile, Chief Naval Constructor John Lenthall prepared building instructions, dimensions, and a tracing of the auxiliary engine for a steam frigate. These documents were transmitted to the yard for the use of Naval Constructor Delano. On July 11, while work on the shiphouse was progressing, construction of the frigate began and her keel was laid. The building of Merrimack proceeded at a brisk pace. The ship claimed its first life on New Year’s Day 1855, when a laborer fell from the staging. In mid-February, Gregory reported to Washington that the gundeck beams were in place; three-quarters of the outside planking, from the sills of the spardeck ports to the keel, was on; and the inside work for the engine bed was likewise advanced. The commandant anticipated being able to lay off some carpenters by late March and launching the ship before June.**

In March, caulkers at the yard went on strike, demanding wages higher than those paid by private shipbuilders. This retarded all work on Merrimack, since it was impossible to position the spardeck knees without caulking the sides of the gundeck. The strike was soon over, and, by the fourth week in April, the yard was able to lay off 100 mechanics. All materials for inboard work were on hand, the paneling was done, and much of it put up in the orlop storerooms and wardrooms. Naval Constructor Delano was readying the launching ways.**

Other preparations included the arrival on May 18 of a dredging machine, which began clearing the

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75 Lenthall to Gregory, May 6, 1854, NA, RG 19, Ltrs. Sent, Y&D.

76 Gregory to Smith, May 12, May 30, 1854; Delano to Gregory, June 14, 1854, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, May 25, June 16, 1854, NA, RG 71, Ltrs. Sent, Y&D. A copy of "Plan of Ship House H showing proposed addition to length..." is on file in BNSY.

77 Selfridge to Smith, July 19, 1854, NA, RG 71, Ltrs. Recd., Y&D; Smith to Gregory, Aug. 1, 1854, NA, RG 71, Ltrs. Sent, Y&D.


79 Gregory to Lenthall, Apr. 3, Apr. 26, 1855, NA, RG 19, Ltrs. Recd., C&R.
mud from the end of the ways of Shiphouse and from the approaches to the dry dock slip. By the end of the month, the water had been deepened to thirty-three feet. Merrimack was launched on June 14. Thousands of spectators gathered to watch. Ohio and Vermont were anchored in the stream and were thronged with people, who welcomed the new frigate at her parting with the shore with loud huzzas. The National Lancers of Boston were present, and a 31-gun salute fired. Merrimack was towed to the upper shear wharf. Next day she was docked, and preparations made for coppering her and putting on the chain plate. On June 22, Gregory reported that the officers' quarters, storerooms, and other inboard work were nearly completed. The standing rigging and sails were well advanced, and the lower masts, bowsprit, and principal spars nearly finished.

Most of the ship's machinery arrived in the yard in the fourth week of July, and by the last day of that month mechanics were installing the bearings. In early August, Merrimack claimed another victim when an eighteen-year-old worker fell to his death. The ship was taken out of dry dock on August 13 and hauled under the masting shears. Within four days, the bed plates, boilers, and shaft parts were in place, the ship was masted, and she returned to the dock, where work continued by the contractor on the machinery installation. The progress on the vessel led the Navy Department to announce in late November that she was needed for a cruise along the Atlantic coast and in the Gulf of Mexico. Gregory advised Washington that three more weeks would be required to get the engines ready and two weeks after that to finish the necessary carpentry.

Merrimack was undocked in early December. By the end of January 1856, her engines had been installed and the machinery connected. Only a few carpentry chores remained in the work of Construction and Repair. However, Gregory believed there would be delays occasioned by the failure of the Bureau of Ordnance to have shipped from the Washington Navy Yard fixtures needed for mounting her guns. Those fixtures arrived shortly, 700 tons of coal were loaded aboard, and Merrimack pronounced ready for sea.

The editor of Ballou's Pictorial hailed the completion of Merrimack, or Merrimac as spelled in the periodical, as the first of "the fleet of steam frigates" then being built. She had been constructed, he informed his readers, "with extraordinary celerity, considering her vast size." Her model, he continued:

is a beautiful one, and reflects the highest credit in the ability of Mr. Lenthall, the chief of the bureau of construction. To Mr. Delano, naval constructor at the Charlestown navy-yard, and Mr. Melvin Simmons, master carpenter, the practical carrying out of the naval architect's design is to be credited. These gentlemen may well be proud in their share of this floating leviathan, for she is four thousand tons burthen. The huge cannon, which show their grim muzzles through the port-holes, were cast at Alger's foundry, South Boston. She is a propeller. . . . We regard the steam frigate Merrimac as a complete success, and cannot but rejoice at this commencement of a steam navy worthy of name. Herefore our steam vessels have been anything but creditable to the country. . . . and their performance was anything but satisfactory. The completion of the Merrimac commences, we hope, a new era.

Merrimack was commissioned on February 20, 1856, and a week later put to sea for a trial run with Naval Constructor Delano aboard. Soon thereafter she sailed from the yard on a shakedown cruise to the Caribbean.


83 Ballou's Pictorial, Jan. 28, 1856, vol. I, No. 4, p. 49.

Plate 4: "LAUNCH OF THE UNITED STATES STEAMER MERRIMAC, FROM THE NAVY YARD, CHARLESTOWN." The launching occurred on June 14, 1854. The illustration may have appeared in Ballou's Pictorial, which on other occasions spelled the name of the vessel as Merrimac instead of Merrimack.
In seeing in Merrimack "a new era," Ballou's Pictorial was indeed prophetic. The vessel became one of the best known in American history, when she was converted by the Confederacy into the armor-covered Virginia and met Monitor on March 9, 1862, in the first battle of ironclads. Of course, yard workmen and officers had no inkling of her future career as they labored upon her between July of 1854 and February 1856. At that time and to yard personnel, Merrimack was probably viewed as the chief manifestation of a moderate increase in activity at the yard. In addition to the steam frigate, the yard had also constructed a Revenue cutter and a lightship and reconstructed John Hancock. During the Gregory years, the dry dock saw heavier use than any previous comparable time span. The period also witnessed the beginnings of an important stage in plant expansion at the yard. Although, storm clouds generated by sectional antagonism may have been gathering for the nation in the first half of the 1850s, the Boston Navy Yard enjoyed good times.
Chapter V

THE YARD UNDER COMMANDANTS STRINGHAM AND HUDSON, 1856-1861

In his classic study of the administration of the Navy Department, Charles Oscar Paullin places the navy yards on the eve of the Civil War in two groups. The "principal establishments were those at Boston, New York, Norfolk, Pensacola, and Mare Island; and the secondary or auxiliary ones, those at Portsmouth, Philadelphia, and Washington." Paullin claims that the previous twenty years had been significant ones for navy yards, and that by 1861, they had acquired "a somewhat more modern appearance." That probably held true for the establishment at Charlestown. Especially because of new structures erected in the 1850s, many of which were completed or near completion in the second half of that decade, the Charlestown Navy Yard was acquiring the capability for the construction and repair of what were then, by American standards, modern vessels.

Chief among those structures was the Machine Shop complex, which, in addition to the machine shop itself, consisted of a chimney more than two hundred feet in height, the foundry, forge, and blacksmith, boiler, and pattern shops. The process of fitting the buildings with tools remained unfinished when the Civil War began. Modernity was visible at the Charlestown Navy Yard in other ways. Coal storage facilities became more numerous since more and more vessels at the yard were steamers. In the years 1856-1861, the yard repaired roughly twenty ships, many of them powered by steam. During those years, the yard itself constructed Hartford and Narragansett. It also altered the sailing vessel Cumberland, so that she could carry an armament consisting of the heavy guns recently developed by Cdr. John A. Dahlgren. In the late 1850s, the volume of activity at the yard exceeded any previous period, including times of war.

ADMINISTRATION

Capt. Silas H. Stringham became commandant of the Boston yard in November 1855, retaining that position for three and a half years. He was relieved in April 1859 by Capt. William L. Hudson, whose commandancy extended to June 1862. The present chapter covers the Stringham era as well as Hudson's pre-Sumter years.

In addition to the arrival of new commandants, other personnel changes occurred. Because of the expansion of the physical plant, several new positions were established. In May 1857, W. E. Babbitt was named assistant civil engineer, at a salary of $2.50 per day. This billet came into being because Civil Engineer Billings found all his time and energy engrossed by construction of the machine shop, smithy, and other new buildings. In the following month, Seth Wilmarth joined the yard staff as Superintendent of Machinery, responsible for installing machinery in the new shops. His pay was $4.00 per diem. In the spring of 1859, three weeks before Hudson assumed command, Naval Constructor Delano died. A temporary replacement

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held the position for one month, before a new naval constructor, William L. Hanscom, reported for duty. In the same year, death claimed another senior employee, Noah Butts, dry dock engineer, who had worked at the yard for more than three decades.²

Changes in the yard plant and administration reflected general changes in ship design and propulsion. The new Machine Shop complex was the most striking alteration required to enable the yard to build and service modern vessels of war. A related development was the Navy’s and the yard’s increasing dependence on coal. In August 1856, the coal contractor was instructed to ship to the yard 600 tons of the “best anthracite coal for steamers.” Coal was in short supply for several weeks during the following winter, because of the loss of the schooner Sophronia with 350 tons of coal. By Fiscal Year 1858, the amount of coal used annually at the yard had increased to 1,760 tons. Of this amount, 1,200 was white ash lump coal for the yard’s steam engines; 250 tons of Cumberland lump coal for the smithery; 150 tons of egg-size red ash coal for offices; and 150 tons egg-size white ash coal for furnaces and plumbers’ use. Not included was the Pennsylvania anthracite for the Navy’s steam-powered ships. In May 1858, Commandant Stringham informed the Bureau of Construction and Repair that there was then 2,372 tons of anthracite stockpiled at the yard. However, suitable storage did not exist for additional supplies, and Stringham urged that new coal sheds be given a high priority in the yard’s construction program.³

Coal was purchased and stockpiled at the yard for two types of activities, those for which the Bureau of Yards and Docks had responsibility and those overseen by the Bureau of Construction and Repair. The former bureau was charged with construction, maintenance, and repair of yard facilities for reception and storage of the coal. In August 1859, Commandant Hudson reminded the bureau that facilities for storage and transportation of coal were inadequate. He called for construction of a coal house and car tracks. Congress failed to make an appropriation for this purpose in either Fiscal Years 1861 or 1862. The special session of Congress convened by President Abraham Lincoln in July 1861 did vote $29,300 for repair of the coal wharf.⁴

In 1859, the Bureau of Yards and Docks contracted with Philander Ames for delivery of 1600 tons of steamboat-size White Ash Lehigh Coal. The first shipment arrived on the schooner E. N. Benton. It was accepted, but after about 100 tons had been unloaded, the appearance of the coal changed, and the inspectors found that the remainder of the cargo was not Lehigh Coal. Commandant Hudson ordered that no more be accepted. Whereupon Ames called on Hudson and asked if there were no appeal. Hudson said there was, provided three or four reputable coal dealers, on examining the cargo, certified that it was White Ash Lehigh Coal of the best quality. Certificates were obtained and the remainder of the cargo received. Four other schooners arrived with more Ames coal. Their cargoes were examined and rejected, as not in conformity with the contract.⁵

FUNDING YARD IMPROVEMENTS

In the years between 1856 and 1859, Congress took positive steps to accelerate modernization of the Navy. Appropriations for "Improvements & Repairs" at navy yards increased dramatically, including funds for the Charlestown yard. In August 1856, President Pierce signed a Navy appropriations bill for Fiscal Year 1857 that included $121,000 for projects at Charlestown. Among the larger expenditures were $19,500 for a

² Preble, pp. 344, 347, 577; Stringham to Smith, Apr. 9, 1859, NA, RG 71, Ltrs. Recd., Y&D. According to Preble, Butts kept a journal during much of his long career at the yard. Despite a diligent search, the Butts journal has not been located.

³ Lenthall to Stringham, Aug. 20, 1856, NA, RG 19, Ltrs. Sent, C&R; Stringham to Smith, Apr. 29, 1857; May 27, 1858, NA, RG 71, Ltrs. Recd., Y&D.

⁴ Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D.

⁵ Hudson to Smith, Aug. 12, 1859, NA, RG 71, Ltrs. Recd., Y&D.
stone wall and fill around the Machine Shop; $16,650 for a pile wharf; $9000 for paving between timber sheds; $8500 for cleaning out the timber dock; $7000 for a new saluting battery and ordnance quay; $7000 to cover a deficiency in the account for the dry dock engine; and $6200 for gas pipes and burners. The bill assigned the yard $41,500 for "Repairs of all Kinds." For the following fiscal year, Congress tripled the appropriation for the Charlestown Navy Yard. The largest item was $170,000 for extension of the dry dock. Other major projects included another $80,000 for completion of the Machine Shop complex; $27,800 for the embankment around the machine shop; $20,700 for a dredging boat and scows; and $16,070 for building an additional story to the cooperage and packing house.  

In July 1857, Commandant Stringham, to facilitate bookkeeping, recommended that all appropriations for "Improvements & Repairs" applicable to the Machine Shop complex be entered under one heading. According to an account drafted at that time, the funds then available for the machine shop, foundry, boiler house, chimney, and other parts of the complex amounted to $306,922.  

Appropriations by Congress for the Charlestown yard declined somewhat for Fiscal Year 1859. The total amount was slightly more than $200,000 and included an additional $80,000 for the dry dock extension; $35,000 for machinery for the Machine Shop and Foundry; $25,000 for the Ropewalk boiler house, chimney, and boilers; $9000 for machinery and bobbins for the Ropewalk; and $13,500 for reservoirs.  

March 1859 began a period of belt-tightening and austerity at the Charlestown Navy Yard with respect to expenditures for new facilities and improvements. On March 3, 1859, President James Buchanan signed a bill for Fiscal Year 1860 appropriating a mere $15,000 for "Improvements & Repairs" at the yard at Charlestown. That was supplemented by $56,000 transferred from the Yards and Docks contingencies fund. For the next year, the yard again received from Congress only $15,000, and it was to be used for "preservation of the works and buildings." In addition to the paltry funding by Congress, another problem was perceived by Commodore Smith, Chief, Yards and Docks. In reviewing the yard's reports on the status of monies appropriated and allotted for various improvements and repairs, he was disappointed to discover that Commandant Hudson had not spent more of the funds on hand while the season was "propitious." Hudson was cautioned that all appropriations made for the yards, not obligated within twenty-four months, reverted to the Treasury on July 1 of the year succeeding the expiration date.  

The Charlestown Navy Yard was allotted $137,450 in early 1861 to cover plant improvements in Fiscal Year 1862. Congress appropriated $20,000 for the Machine Shop; $19,456 for repair of the Marine Barracks; and $40,000 for repairs of all kinds. The balance of $60,000 came from the contingencies account of the Bureau of Yards and Docks.  

THE YARDS PLANT, 1856-1861  

UTILITIES  

On occasion during the late 1850s, the Charlestown Navy Yard was confronted by critical shortages of rain water for use in boilers and hot water radiators and for other purposes. To cope with this situation, additional reservoirs or cisterns were built and gutters hung on the Ropewalk. In July 1856, Commandant Stringham sought $200 from the appropriation for "Repairs of all Kinds" for construction of a cistern to replace the small and inconvenient one then in use. The Bureau of Yards and Docks replied that "a cistern

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6 Smith to Stringham, Sep. 12, 1856; July 20, 1857, NA, RG 71, Ltrs. Sent, Y&D.  
7 Stringham to Smith, July 20, 1857, NA, RG 71, Ltrs. Recd., Y&D.  
8 Preble, p. 345.  
9 Preble, pp. 343, 352; Smith to Hudson, June 22, 1860, NA, RG 71, Ltrs. Sent, Y&D.  
10 Preble, p. 357.
Chart 2: PLAN OF THE U.S. NAVY YARD, BOSTON, MASS., SHOWING THE LOCATIONS OF THE IMPROVEMENTS RECOMMENDED IN THE ANNUAL REPORT TO THE BUREAU OF YARDS AND DOCKS, AUGUST 1856. Significant additions to the yard's plant in the decades before the Civil War included the Machine Shop (Building No. 42), additional timber sheds, three wharves in the eastern half of the yard, and the muster house (No. 31). This chart accompanied the yard's annual report to the Bureau of Yards and Docks. Among the improvements recommended in that report were acquisition of White's Wharf, the westernmost pier in this plan; and development of a rail system within the yard.
PLAN OF
SHOWING THE
LOCATIONS OF THE IMPROVEMENTS RECOMMENDED
IN THE SOCIAL REPORT TO THE
SECRETARY OF NAVY'S OFFICE.
which answered many years, can be made to answer till an appropriation shall be made for another." Accordingly, when he submitted his program for the next fiscal year, Stringham asked for construction of a new reservoir at his quarters, "the extreme smallness of the present one" rendering the addition desirable. Congress included the funds in its bill for Fiscal Year 1858. Ground was broken in April 1857 and the reservoir completed before the advent of the dry season.11

In July 1857, the Bureau of Yards and Docks approved Stringham's request for construction of a reservoir near the upper limits of the gun park to cost not more than $400. It was funded from "Repairs of all Kinds" and replaced the reservoir dismantled to make room for extension of the dry dock.12

The shortage of "soft water," which at times "seriously interrupted the business of the yard," led Stringham to recommend in August 1857 hanging gutters on the Ropewalk to catch and carry into a reservoir the large quantity of rain falling onto that structure's extensive roof surfaces. Civil Engineer Billings placed the cost of the gutters at $2,540 and a reservoir for water storage at $5000. In March 1857, Congress voted the requested sum for the Ropewalk gutters. The project was not undertaken because of the proposal to add a second story to the laying-up grounds of the Ropewalk.13

In September 1857, in submitting his program for needed yard improvements in Fiscal Year 1859, Stringham called for $13,500 for construction of two reservoirs, one between the cooperage-packing house and the Ropewalk and the second in the quadrangle of the new Machine Shop complex. The former was to draw water from the "large amount of Gutterage from the Ropewalk and Cooperage," while the latter would supply boilers in the area of the Machine Shop. In July 1858, learning that Congress had appropriated $13,500 for the two reservoirs, Stringham asked permission to break ground as the weather was favorable. The Bureau of Yards and Docks commended his initiative and urged that the work be pushed "forward with energy." This was done and the two big reservoirs were completed in the summer of 1859.14

When he submitted his estimates for needed improvements in Fiscal Year 1855, Commandant Gregory called attention to the sewer of the city of Charlestown, which emptied its filth into the yard's timber dock. This nuisance could be eliminated by extending the sewer out into the Charles River. Civil Engineer Billings originally estimated the cost of such an undertaking at $7,720 and later revised his estimate upward to $11,175.50. Congress appropriated $11,100 for this object. After less than $300 had been spent on extension of the sewer, naval and municipal authorities became embroiled in a jurisdictional dispute and construction was suspended. This situation prevailed until Fiscal Year 1859.15

In the early months of 1858, there was a severe water shortage at the yard. To cope, the commandant recommended that "a sufficient sum be taken from the appropriation for Extension of City Sewer" to build a reservoir near the cooperage and packing house. He also noted that the yard was much in need of an artisan well. The Department responded that it could not allow funds appropriated for one object to be used for another, unless there was likely to be a surplus over and above the amount necessary to complete the object for which the appropriation was made. It was, therefore, impossible to transfer money from the appropriation for extension of the city sewer to build a reservoir near the cooperage.16

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11 Stringham to Smith, July 24, Aug. 27, 1856; Apr. 13, 1857, NA, RG 71, Ltrs. Sent, Y&D; Smith to Stringham, July 26, 1856; Apr. 15, 1857, NA, RG 71, Ltrs. Recd., Y&D.

12 Preble, p. 338.

13 Stringham to Smith, Aug. 27, 1856; Hudson to Smith, Aug. 29, 1860, NA, RG 71, Ltrs. Recd., Y&D.

14 Stringham to Smith, Sep. 1, 1857; Jul. 6, 1858; Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, July 8, 1858, NA, RG 71, Ltrs. Sent, Y&D.

15 Gregory to Smith, Sep. 2, 1853; Sep. 16, 1854; Stringham to Smith, Aug. 27, 1856, NA, RG 71, Ltrs. Recd., Y&D.

16 Stringham to Smith, Mar. 27, 1858, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Mar. 29, 1858, NA, RG 71, Ltrs. Sent, Y&D.
However, the city council continued its refusal to avail itself of the sewer extension appropriation, because it deemed the sum insufficient. Stringham, accordingly, recommended that the balance of the $11,100 be used for enlargement of the yard sewers. The bureau was agreeable to employing the funds to the "best advantage for the health & convenience of the yard." This enabled Stringham to employ a force to enlarge the yard sewers, and by June 30, 1859, $8,901.79 had been spent for this purpose.17

In the early 1850s, the yard collected information about introducing a gas lighting system. Civil Engineer Billings produced a plan of proposed sites for the lamps and gas lines. At Commandant Gregory's invitation, the Charlestown Municipal Gas Company made a study and prepared figures of the probable cost "for furnishing and laying all the main line pipes and leaders for the yard lamps, and another for leading the gas into the officers' quarters." The company offered to provide gas for $3.25 per 1000 cubic feet and calculated the annual cost to light the yard, exclusive of the officers' quarters, at $1600, which was about the same as the charge theretofore incurred for lighting with oil. When he submitted his estimates for Fiscal Year 1855, the commandant called for $6000 to introduce a gas lighting system into the yard.18

It was Fiscal Year 1857 before money became available for that project. A bill approved by the President in August 1856 included $6200 for gas pipes and burners. The bureau immediately instructed Stringham to begin work on the introduction of gas into the yard. In early October, Stringham wrote the bureau that the Charlestown Gas Company's price for gas was now $3.30 per thousand cubic feet. As two or three of the yard oil lamps were ready for the change to gas, Stringham wished to know if gas were to be purchased from that company. The bureau replied that Stringham was to procure gas from the cheapest and best source. Meters would be installed, and the company notified to collect the fee from the occupants of the quarters with gas service.19

By late October 1856, "introduction of Gas" into the yard was nearly completed. Another $300, allotted to the project in December 1856, enabled workmen to install three more lights, one at the end of each shiphouse. In the late summer of 1857, 147 of Wheelock's improved gas burners were purchased at $.75 each and installed. The high cost of gas, $431.50 in the quarter ending October 1, 1857, led to a recommendation by Stringham that arrangements be made for the yard to manufacture its own gas. Commodore Smith concurred and asked yard authorities to prepare a proposal that could be used to secure an appropriation for construction of a gasworks. Superintendent of Machinery Wilmarth placed the cost of constructing a gas plant at $6300. The House Committee on Ways and Means, however, refused to include funds for a gasworks in the Fiscal Year 1859 naval appropriation bill. Indeed, their mood compelled Commodore Smith to "reduce very considerably the estimates for other objects at all yards."20

NEW BUILDINGS

In Fiscal Year 1856, the yard took action to obligate the $8000 for construction of a "House for Unloaded Shells and Workshop," for which Congress had voted funds. Civil Engineer Billings prepared plans in accordance with a scheme outlined by the late Chief of the Ordnance Bureau, Charles Morris. Morris had sought "a second story, as a storeroom for shell boxes and other purposes connected with stowage of shells."

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17 Stringham to Smith, July 3, 1858; Connor to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D.

18 Gregory to Smith, Sep. 3, 1853, NA, RG 71, Ltrs. Recd., Y&D.


Commandant Stringham forwarded the plans to the Bureau of Yards and Docks in March 1856 and recommended the structure be located at the "lower end of the Anchor park," as there it would be contiguous to the ordnance office and the gunner's loft. The bureau gave its approval to the plans and the location. Ground was broken immediately, and the storehouse for unloaded shells was finished and occupied long before winter.21

After November 1855, when Stringham took command of the yard, construction of the cooperage and packing house proceeded as scheduled. In June 1856, the commandant submitted a status report. The walls of the first story had been raised about one-half of their proposed height, and the stone work was being pushed. All the joiners' work, including the roof, was "in hand." The window frames and sash had been made and glazed and were ready to be positioned. Only since April, he explained, had sufficient stone been delivered by the contractors to warrant employment of a large force of masons to lay it up.22

The bureau instructed Stringham to notify the stone contractors the United States would claim damages if the work was further impeded by their failure to make deliveries in a timely fashion. In early July, the bureau agreed that if sufficient materials had been stockpiled, another story was to be added. Stringham was delighted because the second story would contribute to the "appearance and convenience" of the structure and provide a suitable place for storage of bread. By the last day of October 1856, the building had been closed in, and workmen were putting in the windows. During the winter of 1856-57, the cooperage and packing house was completed and occupied. The three-story building had a cost of $63,760.23

In the years before the Civil War, the most important plant expansion at the Charlestown Navy Yard continued to be construction of the Machine Shop complex. In terms of cost, it would become, next to the dry dock, the yard's most expensive facility, a distinction it would retain until the late 1890s. More important, it represented the technological revolution at sea, where the Navy had embarked on a program to build a force of steam-powered warships.

In August 1855, Commandant Gregory had called for a $19,500 appropriation in Fiscal Year 1857 for the filling in of a large area at and near the site of the building. This would permit the securing of a proper foundation for the huge masonry structure. These funds would be in addition to the $27,000 granted in Fiscal Year 1856 for extension of the wall on the north side of the timber dock. In August 1856, Congress appropriated the $19,500 for a stone wall and fill around the Machine Shop. Meanwhile, it had become apparent that the filling project would be more expensive than anticipated, and Stringham sought another $27,800 to be used in Fiscal Year 1858 "to complete the filling in about the machine complex." Congress included the desired sum in its appropriation of March 1857.24

The initial appropriation for the Machine Shop had been made in 1853. Changes in plans and philosophy delayed the breaking of ground for the huge U-shaped complex, and then work seemed to drag. In August 1856, Civil Engineer Billings could only report "one half of piles driven; one third foundation laid." This information upset the Navy's Bureau of Yards and Docks. Its chief, Commodore Smith, chided Stringham for the "tardy progress" reported on the Machine Shop-Foundry complex for which Congress had voted funds several years ago. Smith feared the bureau would find it difficult to explain to Congress the lack of progress, and he directed Stringham to enlarge the construction labor force while the weather was still favorable. Smith also instructed that Civil Engineer Billings should closely supervise the laying of the

21 Stringham to Smith, Mar. 25, Aug. 27, Sep. 1, 1856, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Mar. 27, 1856, NA, RG 71, Ltrs. Sent, Y&D.

22 Smith to Stringham, Mar. 20, 1856, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, June 3, 1856, NA, RG 71, Ltrs. Recd., Y&D.

23 Smith to Stringham, June 6, July 10, 1856, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, July 14, Oct. 31, 1856; Sep. 1, 1857, NA, RG 71, Ltrs. Recd., Y&D.

24 Gregory to Smith, Aug. 30, 1855; Stringham to Smith, Aug. 27, 1856, NA, RG 71, Ltrs. Recd., Y&D.
foundations, because the bureau chief feared that "the money for these important objects, instead of being used for them will be frittered away for various other things."25

In reply, Stringham stated that since his arrival at the yard in November 1855, construction had "progressed quite favorably, considering the extreme severity of the past winter and other unavoidable obstacles." He reported that if the contractors continued as at present, the foundations would be finished by spring, when the brickwork would be commenced. The labor force would then be reinforced. Smith ordered the work to be pushed during October, because there would be slight profit in employing a large force during the months of limited daylight in the Boston latitude. Smith also observed that he had not been impressed with the bricks seen on his recent visit to the yard. They were seemingly undersized, and he feared the structure would have as much mortar as brick.26

Stringham promised to proceed as directed and to keep a close watch on the quality and size of bricks supplied by the contractors. Later, Stringham wrote Washington that the bricks delivered by the contractors in the weeks since Commodore Smith's visit, while of excellent quality, were no larger than those theretofore received. On inquiry, Stringham learned they were of the dimensions usually supplied in Massachusetts.27

As the weeks went by, the bureau still had reservations about the efficiency of the pile driving. Commodore Smith trusted that a record was being kept of the length of each pile driven. In November 1856, Smith reminded Stringham that eighteen months had passed since Congress had made major appropriations for the Machine Shop project and that the foundation had not yet been completed. The head of Yards and Docks directed the commandant to rush the work, although he observed that no men would be employed on the undertaking during the two and one-half winter months. By mid-November 1856, more than one half of the foundation piles had been driven, and about one-third of the stone foundation walls laid.28

Construction was slowed in March 1857, when the yard's horses and one of its oxen sickened. In early April, Stringham recommended that the sick draft animals be sold and replacements purchased. To expedite construction, he urged purchase of another yoke of oxen and the rent of three teams of horses. The Department gave its approval, and additional draft animals were acquired. In mid-April, Naval Agent Smith advertised for and purchased 60,000 board feet of yellow pine for the construction of the Machine Shop-Smithery complex and the floating dredge.29

In the summer of 1857, Oakman and Eldridge, the brick contractors, fell behind schedule. To goad them into speeding up deliveries, the bureau warned them if the situation continued, Naval Agent Smith would be directed to purchase all arrearage in the open market "on account of & at the expense of the contractors, deducting the amount so purchased from the amount of the contract."30 Use of the stick, rather than the carrot, had the desired results, and Oakman and Eldridge expedited their brick deliveries during the remainder of the construction season.

25 Billings to Stringham, undated enclosure, Annual Report for Fiscal Year 1856, NA, RG 71, Annual Reports, Y&D; Smith to Stringham, Sep. 28, 1856, NA, RG 71, Ltrs. Sent, Y&D.


28 Smith to Stringham, Nov. 15, 1856, NA, RG 71, Ltrs. Sent, Y&D.


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In August 1857, construction commenced on the foundation for the 239-foot chimney. Work was suspended for the season in early October and resumed on May 20, 1858, when a large force of bricklayers was turned out. The last brick for the chimney was laid on October 7.\textsuperscript{31}

In mid-December 1857, Alger & Co. notified Stringham that they were prepared to deliver the smithery's casting pit and flues, which had already passed inspection. The excavation, however, was not yet ready to receive them. Alger & Co. were paid for their work, but the government retained a sufficient percentage to guarantee that the firm's workmen returned to position the pit and flues whenever the rest of the construction had proceeded that far. Care, however, was to be taken in laying the pipes during the long Boston winters.\textsuperscript{32}

In November 1856, the Bureau of Yards and Docks called on Stringham to prepare and submit a list of the machinery needed for the Machine Shop-Foundry complex. To assist in the planning process, Chief Engineer Jesse Gay went to Charlestown to consult with Civil Engineer Billings and Superintendent of Machinery Wilmarth and decide a scheme for the proper "internal arrangements" for the complex. That consultation produced a plan, which was sent to Washington for review. In June 1857, the bureau directed Stringham to provide it with plans and specifications for the foundry castings along with estimates of the weight of the curb and of the blast and smoke pipes. Stringham transmitted a plan of the foundry. The bureau gave its approval and authorized purchase and installation of air furnaces. At that time, instructions were given to Stringham to have Wilmarth prepare an arrangement plan of the machines and tools required for the Machine Shop-Foundry complex, including their cost.\textsuperscript{33}

Wilmarth produced lists of the machinery and tools required for each of the eight shops or units in the complex. Those units and the cost of tools recommended are as follows: machine shop ($35,000); forge shop for heavy forging ($4300); blacksmith shop ($1600); iron foundry ($3100); brass foundry ($300); boiler shop ($3300); pattern shop ($500); and machinery for boiler house ($4000). In addition, Wilmarth included engines and fixtures for the engine rooms ($6000) and shafting for the various shops, with hangers, pulleys, balls, and other such items ($5,464). The grand total for the entire complex was $63,584. Obviously, the machine shop required the greatest number of machines and the largest and most costly. Among the prominent items recommended for that shop were a planing machine with fifty-foot ways capable of planing ten feet square ($8000); a planing machine with thirty-foot ways to plane five feet square ($3000); and a large turning, boring, surfacing, and planing lathe, with ways thirty-five feet long and a swing of ten feet ($6500). Among the smaller items for the Machine Shop were a bolt-cutting machine with taps and dies ($275); two hand lathes ($200); and fifty vices ($1000).\textsuperscript{34}

The needs of the other units were much more modest than the machine shop. For example, Wilmarth listed for the forge shop one large Watts hammer, one small Watts hammer, and four hoisting cranes; for the iron foundry, five cranes and three blowers; and for the boiler shop, one rotary shears, a large bending machine, a large punching machine, a small punching machine, and two drilling machines. Not all the machines in the complex would be new, and Wilmarth prepared an inventory of fourteen planing machines, lathes, and other tools already on hand at the yard and which would be transferred to the complex.\textsuperscript{35}

After reviewing Wilmarth's list, the Bureau of Yards and Docks authorized immediate purchase of seven machine tools, all intended for the machine shop. The items consisted of a planing machine with thirty-foot ways; the large turning, boring, surfacing and planing lathe with thirty-five foot ways; one lathe with twenty-foot ways; two lathes with sixteen-foot ways; a small drilling machine with table; and a large slotting

\textsuperscript{31}Preble, p. 344.

\textsuperscript{32}Smith to Stringham, Dec. 19, 1857, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{33}Smith to Stringham, Nov. 18, Dec. 10, 1856; Feb. 24, June 5, June 8, July 17, 1857, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{34}Wilmarth to Stringham, July 30, 1857, NA, RG 71, Ltrs. Recd., Y&D.

\textsuperscript{35}Ibid.
machine. In addition, the bureau sanctioned acquisition of one hundred feet of main shafting. The monies for these tools and equipment would come from a $35,000 appropriation. More tools on Wilmarth's list could not be acquired with this appropriation since much of it had to be reprogrammed to pay for completion of structural parts of the Machine Shop complex.36

By the end of December 1857, funds for completing construction of the Machine Shop complex were becoming tight, and Stringham advised the bureau that he was compelled to lay off upwards of one hundred masons. Commodore Smith assured Stringham that Congress would undoubtedly include in the annual naval appropriations bill monies to continue the project at the Charlestown yard. However, Smith proved mistaken. In March 1858, Stringham warned the Department that the appropriation for the Machine Shop complex was so "nearly exhausted that the balance would be consumed in covering one of the wings." Construction would then be suspended, unless an additional $25,000 was voted by the current session of Congress. Commodore Smith now sang a different tune. He explained to Stringham that a total of $307,000 had been appropriated by Congress. Since Stringham had failed to call for additional money for the Machine Shop for Fiscal Year 1859, none had been requested by the Department. Consequently, the bureau saw no prospect of obtaining a further appropriation for the project from the current session of Congress. Thus, when existing funds were exhausted, work would be suspended.37

Stringham sought to avoid cessation of construction of the Machine Shop complex by suggesting that the sum asked for under "machinery for machine shop" be amended to read "machine shop and machinery for machine shop." This would provide sufficient monies to complete the structure, with the excess to be expended for machinery. The commandant pointed out that if the building remained unfinished, there would be no need for tools. Smith sought to have the Navy bill amended so that the appropriation for machinery for the Machine Shop-Foundry complex could be disbursed for both the structure and the machinery.38

In May, the bureau directed Stringham to resume work on the huge Machine Shop chimney. That work would be funded from the appropriation for "Repairs of all Kinds," and a separate account kept. Smith feared that if monies were allotted for the engines and the boilers, they would be ready for use before the foundry and boiler shop. If additional funds were granted for Fiscal Year 1859, they would be insufficient to complete the "building & procure, & set up all the machinery required for such important works." Smith instructed Stringham to forward estimates of the sums needed to complete the structure and furnish all machinery necessary to build the engines and boilers.39

When transmitting to the bureau a schedule of materials needed for the boiler house and chimney, Stringham explained that the former was to have a wooden roof, rather than slate. In September 1858, funds were required for the purchase of additional machinery, for completing the pattern shop, and for draining, grading and paving the area from Main Avenue to the sea wall east and north of the timber dock. The commandant sought an appropriation for these purposes in Fiscal Year 1860. However, even if granted, those funds would be of no help in meeting the desire to fire the forges and boilers and get the shops into production in Fiscal Year 1859.40

By early November 1858, appropriated funds for the Machine Shop complex and its machinery and tools were nearly exhausted. When he advised the Department of this, Stringham announced that he would

36 Smith to Stringham, Aug. 5, 1857, NA, RG 71, Ltrs. Sent, Y&D.

37 Smith to Stringham, Dec. 30, 1857; Mar. 24, 1858, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, Mar. 22, 1858, NA, RG 71, Ltrs. Recd., Y&D.

38 Stringham to Smith, Mar. 26, 1858, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Mar. 29, 1858, NA, RG 71, Ltrs. Sent, Y&D.

39 Stringham to Smith, June 18, 1858, NA, RG 71, Ltrs. Recd., Y&D.

40 Stringham to Smith, June 18, Sep. 18, 1858, NA, RG 71, Ltrs. Recd., Y&D.
"complete such of the works appertaining thereto as previously outlined" and approved, to be paid from the
money voted for extension of the dry dock.41

This juggling of funds enabled work to proceed, and in December Stringham notified Washington that
the smithy was completed and occupied. Superintendent Wilmarth reported that the draft of the new
chimney and the blast from the blowers were satisfactory and that the new steam engine, boilers, pumps, pipes,
shafts, and other tools and equipment were in working order. Tools from the old smithy were being
transferred. In January 1859, the new smithy received its first major order, when it was called upon to
fabricate machinery for the navy yard then under construction at California's Mare Island.42

When he filed his annual report in August 1859, Commandant Hudson noted:

Of the appropriations for the machinery for Machine Shop and completing the Buildings
there is now on hand a small balance. The stone, bricks, slabs, etc., for the completion of the
buildings are also on hand and the windows are finished ready to be placed in the walls. As
the balance of the appropriation is not sufficient to complete the work nothing has been done
upon it this season.43

Thus at the time Hudson replaced Stringham as commandant of the yard, a lull prevailed in the work on the
Machine Shop complex.

In late August 1859, Hudson called the Department’s attention to the need for an allotment to fund
completion of the pattern shop and paving and draining the area adjacent to the shops. The Department
failed to respond and simply filed Hudson’s letter. In November, Commodore Smith directed the yard to
submit a list of those improvements most needed and a breakdown on how Captain Hudson proposed to
expend the balances then available. There was in the Treasury credited to the yard $16,129, one-half the cost
of the anchor hoy John Hancock, made available in 1855 by the Bureau of Construction and Repair.44

From Wilmarth, Hudson learned of the tools and machines and further work required by the yard if
it were to fabricate marine engines. The iron foundry needed three cupolas and fixtures, three large cranes,
one drying oven and fixtures, flasks and ladles, and moulding sand. In addition, the pipes for blasts had to
be put up. The brass foundry required fourteen pet furnaces, a crane, two drying ovens, one air furnace, ladles
and flasks, moulding sand, and a moulding trough. To make it complete, the boiler shop needed ten lengths
of shafting, a flange furnace, a bending machine, a punching machine, one pair of shears, and two forges.
Finally, the engine room required shafting and pulleys as well as completion of the engine and putting-up
blowers. When transmitting Wilmarth’s report to Washington, Hudson noted that highest priority should be
given to the iron and brass foundries, boiler and blacksmith shops, and engine room. Properly outfitting these
units would enable the yard to repair and, if required, build first-class marine engines.45

Yards and Docks authorized expenditure of $39,250 in surplus funds for tools and fixtures for some
of the components of the Machine Shop-Foundry complex. Twelve thousand dollars was assigned to the iron
foundry, a like amount to the machine shop, and lesser sums to the brass foundry, engine room, boiler shop,
and blacksmith shop. There remained $32,000 in surplus funds. Smith believed that the area currently

41 Stringham to Smith, Nov. 4, 1858, NA, RG 71, Ltrs. Recd., Y&D.

Smith to Stringham, Dec. 22, Dec. 29, 1858; Jan. 10, 1859, NA, RG 71, Ltrs. Sent, Y&D.

43 Hudson to Smith, Aug. 24, 1859, NA, RG 71, Annual Reports, Y&D.

44 Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Nov. 14, 1859, NA,
RG 71, Ltrs. Sent, Y&D.

45 Wilmarth to Hudson, Nov. 17, 1859; Hudson to Smith, Nov. 18, 1859, NA, RG 71, Ltrs. Recd., Y&D.
occupied as a pattern shop would suffice for the time being and that the $32,000 should be used for repair of the dry dock caisson.\textsuperscript{46}

Construction of the Machine Shop-Foundry complex was accompanied by changes in buildings formerly housing activities now carried on in the new structure. For example, in November 1860, the Bureau of Yards and Docks gave approval to remove a section of the old blacksmith shop.\textsuperscript{47}

CHANGES IN EXISTING BUILDINGS AND FACILITIES

During the period 1856-1860, improvements and other changes were made in existing buildings of the yard. The carpenters’ and joiners’ shop was altered to provide room for the storage of tools and items used in connection with the dry dock. That shop also received a new turning lathe. An improvement in the blockmakers’ shop was the purchase and installation of a strap-gauging machine. In September 1857, Commandant Stringham informed the Bureau of Yards and Docks that boiling tar within the pitch house generated so much heat and smoke in a "confined space that men are found with difficulty able or willing to attend to their duties." He recommended an appropriation of $2000 to relocate the tar kettles outside the building. The Navy and Congress concurred, and the project was completed in Fiscal Year 1859.\textsuperscript{48}

For some reason, the yard had failed to implement the decision to convert the porter’s lodge into a guardhouse. Consequently, in September 1856, the Bureau of Yards and Docks ordered the porter to be immediately evicted from his quarters. The marine guard would thereafter occupy the building. As soon as the porter left, the part of the structure fronting on the main gate was altered and rehabilitated as a guardhouse for the sergeant of the guard and his watch. It was fitted with the necessary bedsteads and other fixtures required by the marine guard. The removal of the porter from the main gate house, Commodore Smith agreed, should not result in his discharge or the distress of his family. He was to be given employment elsewhere in the yard. However, the former porter left the government service, and that part of the building formerly occupied by him and not required for a guardhouse was vacant. Stringham suggested that the new porter be permitted to occupy this apartment. The bureau consented with the understanding that only the porter and his family reside in the premises.\textsuperscript{49}

In August 1859, Commandant Hudson complained to the Bureau of Yards and Docks that the building housing his office was "very dilapidated." As it was a frame structure and connected with others of similar construction, there was constant danger of fire which might result in the loss of invaluable records. He recommended that a small fireproof building be erected to provide a safe depository for the yard’s files. The bureau called on the yard to provide a plan and an estimate of the proposed office. The yard did so, but no further action was forthcoming from Washington. Hudson convened a board of survey. It found that the commandant’s office required painting and whitewashing and a new set of blinds. The bureau approved the expenditure of funds for the maintenance recommended by the board of survey.\textsuperscript{50}

The location of the yard commandant’s office changed in the spring of 1861. In connection with repair of the Marine Barracks, the Corps commandant asked the Navy to remove the office of Captain Hudson

\textsuperscript{46} Smith to Hudson, Dec. 5, 1859, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{47} Hudson to Smith, Oct. 30, 1860, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Nov. 1, Nov. 5, 1860, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{48} Gregory to Smith, Aug. 30, 1855; Stringham to Smith, Mar. 4, Oct. 13, 1856; Sep. 1, 1857; Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Dec. 10, 1855; Mar. 6, 1856, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{49} Smith to Stringham, Sep. 11, Sep. 17, Oct. 8, 1856, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, Oct. 6, 1856, NA, RG 71, Ltrs. Recd., Y&D.

\textsuperscript{50} Hudson to Smith, Aug. 19, 1859; Billings to Hudson, Dec. 6, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Oct. 5, Dec. 9, 1859, NA, RG 71, Ltrs. Sent, Y&D.
from the Marine unit's parade grounds. After determining that the building housing the office was worth saving, the Bureau of Yards and Docks authorized its removal. The structure was taken across Main Avenue and relocated in the shot park.\textsuperscript{51}

The Fairbanks scales near the head of the dry dock and on which were weighed all heavy items received at the yard was repaired in October 1860. However, those repairs were no permanent remedy, and by September 1861, the bearings were worn out. It was also determined that the platform was not long enough for many wagons in general use. The Bureau of Yards and Docks calculated that it made more sense to purchase a new fifteen-ton scale for $300 than repair the old one for $250. Accordingly, Fairbanks & Brown installed the new scale in the autumn of 1861.\textsuperscript{52}

**IMPROVEMENTS IN THE YARD'S WATERFRONT**

In addition to construction of the Machine Shop complex, more modest changes occurred in the facilities along the waterfront of the Charlestown Navy Yard. Maintaining a sufficient depth of water at the piers and off the yard proved a constant problem and resulted in the acquisition of a floating dredge. In 1856, Commandant Stringham advised the Bureau of Yards and Docks that the depth of water in the Charles was such as at ebb tide \textit{Vermont}'s keel slightly touched bottom. He explained she could not be moved farther into the stream because she would interfere with navigation. Stringham urged that either a dredging machine be brought down from Portsmouth or one be hired locally to deepen the water fronting the yard. The bureau did not believe \textit{Vermont} would be injured by "the slight touch of the keel to the bottom," but agreed it would be judicious to assign a dredge to the yard. However, Smith continued, none had been estimated for, and the Portsmouth dredge was in almost constant use.\textsuperscript{53}

When Stringham submitted his estimates for needed yard improvements in Fiscal Year 1858, he called for an appropriation of $19,000 to fund construction of a floating dredge and $1700 for building two large scows for transporting heavy materials. To justify these appropriations, Stringham reminded the bureau that silting near the shoreline had become increasingly acute as reclamation of the tidal flats extended the yard into the Charles and Mystic rivers. In March 1857, Congress appropriated the requested monies. By direction of the Department, the yard built the hull for the dredge, following plans and specifications furnished by the bureau. Osgood & Co., of Troy, New York, provided the machinery. The dredge was completed in June 1857, a crew was hired, and the Charles and Mystic rivers were deepened where they fronted the yard.\textsuperscript{54}

In the spring of 1858, H. A. Oatman, of North Marshfield, requested loan of the dredge boat, then laid up, to improve navigation in the North River of Plymouth County. The Secretary of the Navy, after considering the nature of the project and the character of the party making the request, gave approval for the loan of the dredge for a three-week period, provided that it would not have an adverse effect on yard projects and that yard personnel, paid by Oatman and his associates, would operate the dredge. It was soon discovered that the dredging project in the North River would require greater time than originally anticipated, and the dredge remained in the custody of Oatman until the last week in July. The yard had requested the immediate return of the dredge early in July, but unfavorable weather delayed its arrival back in the yard.\textsuperscript{55}

\begin{itemize}
\item \textsuperscript{51} Smith to Hudson, May 2, May 11, 1861, NA, RG 71, Ltrs. Sent, Y&D; Preble, p. 354.
\item \textsuperscript{52} Hudson to Smith, Oct. 5, 1860; Sep. 16, 1861; Billings to Hudson, Sep. 1, 1861, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Oct. 8, 1860; Sep. 18, 1861, NA, RG 71, Ltrs. Sent, Y&D.
\item \textsuperscript{53} Stringham to Smith, Mar. 21, 1856, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Mar. 24, 1856, NA, RG 71, Ltrs. Sent, Y&D.
\item \textsuperscript{54} Stringham to Smith, Aug. 27, 1856; June 22, 1857, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Mar. 21, Apr. 18, 1857, NA, RG 71, Ltrs. Sent, Y&D.
\item \textsuperscript{55} Smith to Stringham, Apr. 7, Apr. 18, May 21, 1858, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, May 19, July 14, July 23, 1858, NA, RG 71, Ltrs. Recd., Y&D.
\end{itemize}
Some smaller improvements in the waterfront of the Charlestown Navy Yard in the second half of the 1850s included building two new landing stages and two floating stages in the timber dock, completion of the stone wall west of the timber dock, and paving the area between the timber sheds and the dry dock.\(^56\)

For Fiscal Year 1855, Congress appropriated $27,000 for construction of a stone wall on the north side of the timber dock and filling in the area behind the wall. The filling was done under contract with Daniel Crowley. Crowley and his men made good progress, and by August 1856, the wall had been laid up and much of the filling done. An inspection in November, however, revealed that the fill was not up to grade at all points. As an offset to this, Crowley had filled a portion of the "space which was occupied by the dock walls" at the time the contract was drawn. Removal of these walls had not been contemplated when the contract was signed and caused a "great addition to the cost of filling," as Crowley, at the beginning, was compelled to confine his work to the center of the dock. Consequently, he had been obliged to fill the west and north sections with "upland earth instead of mud as required by the contract." In addition to the increased amount of fill required by removal of the walls, Crowley had been delayed by failure of the new walls to be completed by the time the proposals were submitted.\(^57\)

When yard authorities sought to explain the situation to Washington, Commodore Smith, Bureau of Yards and Docks, indicated his confusion and dismay, particularly with Billings, who should have known, when he made his estimate, whether the wall was to be dismantled. Smith stated he did not have "much confidence in the foundations" for the Machine Shop complex if the "specimen of fill" he saw was a sample. At other yards, there had been frequent complaints of walls cracking for want of proper pilings. If these "expensive structures shall prove faulty in that respect," he would hold Billings and his staff to blame. As for Crowley, he was to be paid, directed Smith, if he had done the work.\(^58\)

Improvements were made in the mechanisms for docking timber. In June 1857, Naval Constructor Delano reported that the crane used for unloading timber from vessels was unsafe and required repair. He also recommended a second derrick be constructed at the knee pens to facilitate work. The bureau sanctioned repair of the crane and authorized construction of a derrick for use at the knee pens.\(^59\)

Congress, in August 1856, voted funds for cleaning out the timber dock at the Charlestown yard, but work on this project was deferred until Fiscal Year 1858. When finally begun, the undertaking progressed slowly. Besides being "tide-work," continued use of the dock for reception of timber made it impossible to employ more than three scows at a time. Consequently the project was not completed until Fiscal Year 1859.\(^60\)

In Fiscal Year 1857, the area at the southeast corner of the timber dock was walled and filled in for use as a saluting battery and ordnance quay. The new battery replaced the badly decayed wooden platform previously employed. However, by the summer of 1859, the new battery had deteriorated. Some of the carriages and platforms were in such bad repair that whenever a salute was fired, several of the guns were dismounted. At the request of Commandant Hudson, the battery was turned over to the Bureau of Ordnance for repair of the carriages. Hudson did not succeed in persuading Washington that a small magazine was needed for storage of powder as a replacement for an old arms chest. The bureau referred to a general

\(^{56}\) Stringham to Smith, Aug. 27, 1856; Aug. 27, 1857, Sep. 18, 1858, NA, RG 71, Ltrs. Recd., Y&D.

\(^{57}\) Green, Billings & Little to Stringham, Nov. 5, 1856, NA, RG 71, Ltrs. Recd., Y&D.

\(^{58}\) Smith to Stringham, Nov. 10, 1856, NA, RG 71, Ltrs. Sent, Y&D.

\(^{59}\) Delano to Stringham, June 24, 1857, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, June 27, 1857, NA, RG 71, Ltrs. Sent, Y&D.

\(^{60}\) Gregory to Smith, Aug. 30, 1855; Stringham to Smith, Sep. 18, 1858; Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D.

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recommendation to the Navy Department that no new buildings be erected at the yards and suggested that the small quantities of powder used for salutes be kept in canisters aboard the receiving ship Ohio.  

Piers and wharves had greater importance in the function of the yard than the saluting battery. Commandant Gregory called for an appropriation in Fiscal Year 1855 for construction of a pile wharf west of the slip of Shiphouse H. He urged a facility where "ships of the largest class can lay afloat at all times." In August 1856, Congress voted $16,650 for "building a pile wharf on the River line, which will be indispensably necessary for landing and shipping heavy articles." The yard purchased and stockpiled materials for the wharf, but construction was held in abeyance for several years.

Enlarging pier facilities raised the issue of how far the yard extended seaward. In July 1857, Commandant Stringham suggested that before the Navy took steps to obligate any funds for extension of its wharves, it ascertain what rights, if any, the United States had to the Charles River flats. The bureau agreed and directed Stringham to consult with the U.S. District Attorney for Eastern Massachusetts.

That official, Charles Woodbury, held that the title of the United States to "the central thread of the river along the front of the Navy Yard are paramount and cannot be questioned." However, he observed that the use of navigable waters was "public and common" and that the Charles River could not be obstructed by the United States without a grant from the state. Consequently, if extension of yard wharves obstructed the channel, a claim for damages could arise. Woodbury observed that several states appointed harbor commissioners and delineated a line beyond which no "private buildings or wharves shall be permitted to extend." The United States had never sanctioned any survey in front of the yard to determine the point where obstructions would be detrimental to the public interest. The District Attorney recommended that the yard engineer make such a survey before the wharves were extended beyond the contiguous flats. Civil Engineer Billings made the survey, but no request for funds for extension of the wharves was submitted at that time.

Of more immediate concern were continuing problems with the owners of White's Wharf, the property adjoining the yard to the west. In February 1858, Charles Damen and George White notified Commandant Stringham that they planned to "make such use of our wharf property ... as will utterly preclude our sparing space for the accommodation of the public ships as we have heretofore done." As Stringham advised the Bureau of Yards and Docks, Merrimack, then moored at the shear wharf, "protruded slightly beyond the limit of government property." That arrangement had had the consent of Damen and White. The latest announcement by the owners of White's Wharf required a shift in the anchorage of Merrimack, which was carried out.

ROADS AND GROUNDS

In July 1856, Mayor Timothy Sawyer and the city council of Charlestown asked that the United States assist the community in paving Wapping Street. At that time, according to its head, the Bureau of Yards and Docks had no funds available for such a purpose. Should the bureau decide to assist the city fathers in this project, it would first need a "definite proposition" from the mayor and council with an estimate of the cost of the government's share. Mayor Sawyer placed the cost of the undertaking at $1,830. The bureau apparently

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61 Gregory to Smith, Aug. 16, 1856; Stringham to Smith, Sep. 1, 1857; Hudson to Smith, July 6, 1859; Van Brunt to Ingraham, July 30, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, July 11, Aug. 3, 1859, NA, RG 71, Ltrs. Sent, Y&D.

62 Gregory to Smith, Sep. 24, 1852; Sep. 16, 1854; Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D.

63 Woodbury to Stringham, Oct. 20, 1857, NA, RG 71, Ltrs. Recd., Y&D.

64 Damen and White to Stringham, Feb. (n.d.) 1858; Stringham to Smith, Feb. 8, 1858, NA, RG 71, Ltrs. Recd., Y&D.

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regarded this as a reasonable figure and directed Commandant Stringham to include in his estimate for Fiscal Year 1858 a sum sufficient to pave one-half of Wapping Street, from the yard to Henley Street.  

Stringham did as instructed, calling for $950 for "a side walk on the public street on the westerly side of the yard, as such a walk would be a great convenience to the yard, more even than to the city."

When no appropriation was forthcoming, Stringham repeated his request several years later and again observed that the walk was "very much used by Residents in Yard and the Employees in general passing into the yard" at the upper entrance. The walk then in use was narrow and inconvenient.

A paving project within the yard consisted of improvements to Main Avenue and paving the area between the timber sheds. Congress appropriated $9000 for this undertaking, which was carried out in Fiscal Year 1858. An aesthetic improvement came with the elimination of twenty-four trees that had died during the winter of 1859-60. The bureau gave approval to the replacement of those trees, but not to a request for sixteen additional trees to be planted in front of the lower quarters.

QUARTERS

During the years 1856 to 1860, the officers' quarters required frequent repairs. No major renovations were undertaken, and most of the work involved repainting or repapering of rooms; repainting of exteriors; relaying floors, especially in cellars; and other modest repairs. A common procedure was for the commandant to convene a board of survey, whose report was forwarded to the Bureau of Yards and Docks. Generally, the bureau gave its approval for repairs. Occasionally, inhabitants of particular quarters initiated action, using the argument that their units should have the same features and conveniences as other quarters. For example, in April 1857, the yard surgeon and the first lieutenant called for marble mantles, similar to those in the other houses in the lower block of quarters. As winter approached in November 1858, three of the warrant officers living in the upper quarters requested their houses be provided with storm windows like those employed to winterize the lower quarters. They regarded the windows as "necessary for the comfort of our families." It does not appear that repair and maintenance of the upper and lower quarters during these years required large outlays of funds. However, the frequency of repairs, particularly repainting and repapering, suggests major problems, such as poor drainage.

There seemed to be a rule that shortly after a new commandant reported, he would complain about the condition of the commandant's house and request repairs. Perhaps Silas Stringham was the exception, and five months passed before his first request for work. His successor, William L. Hudson, probably was more typical, and within two weeks of taking command of the yard complained to the Bureau of Yards and Docks about the state of his quarters. This is not to suggest that Stringham, Hudson or any of the other yard commanders were unreasonable, but rather that, like most older structures in the Charlestown facility, the commandant's residence was more or less in chronic state of disrepair.

As with the officers' quarters, the commandant's house received no rebuilding or major renovations in the Stringham and Hudson years. Generally the work involved painting, whitewashing, repapering, and modest repairs. For example, in May 1856, Stringham advised the Bureau of Yards and Docks that seven years had passed since the house had been last painted, as particularly evident in the woodwork and sash. The

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65 Stringham to Smith, July 14, 1856; Sawyer to Stringham, July 22, 1856, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, July 16, July 25, 1856, NA, RG 71, Ltrs. Sent, Y&D.

66 Stringham to Smith, Aug. 27, 1856; Sep. 18, 1858, NA, RG 71, Ltrs. Recd., Y&D.

67 Gregory to Smith, Aug. 30, 1855; Stringham to Smith, Sep. 18, 1858; Billings to Hudson, Mar. 16, 1860, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Mar. 21, 1860, NA, RG 71, Ltrs. Sent, Y&D.

68 For examples of correspondence dealing with the quarters, see Stringham to Smith, June 7, 1856; Apr. 9, Apr. 17, 1857; Walker, Peake, & Lee to Stringham, Nov. 20, 1858; Billings to Hudson, Sep. 18, 1860; Hudson to Smith, June 2, 1860, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, June 9, 1856; Smith to Hudson, Sep. 22, Sep. 26, 1860, NA, RG 71, Ltrs. Sent, Y&D.
Plate 5: "VIEW OF THE INTERIOR OF THE UNITED STATES NAVY YARD, CHARLESTOWN, MASS." From Gleason’s Pictorial Drawing Room Companion, Nov. 29, 1857.
bureau approved the expenditure of the $487 needed to paint the house and outbuildings. Other work on the
house in the five years before the Civil War included introduction of gas lighting, construction of a new privy
on the west side of the quarters, repapering the dining room, installation of a new furnace, and small repairs
on furniture.  

CIVILIAN EMPLOYEES

In early May 1857, Commandant Stringham wrote the Department that there were then on the yard's
payroll more than 900 mechanics and laborers. To handle this number, he complained, three separate musters
were required. The Bureau of Yards and Docks had little sympathy. Commodore Smith explained to
Stringham that an assistant to the clerk of the yard was allowed only when there were more than 500 men
employed. For more than 1,000 men, two clerks were permitted. One master workman and occasionally the
yard's executive officer should be present when the men were mustered. By mid-January 1858, the workload
had increased and the number of employees had zoomed to 1300. One year later, there were 1,409 people
on the yard rolls.

In the summer of 1857, the Secretary of the Navy approved several pay raises for Ropewalk employees. The foreman's daily wage was boosted to $2.75, first-class ropemakers to $2.00, and second-class ropemakers to $1.75. The use of child labor decreased at the yard, and in the summer of 1858, the only minors employed were eight striplings in the Ropewalk.

THE ROPEWALK

In November 1855, Ropewalk Superintendent Robert Gardner reported that the spinning machinery
required a thorough overhaul. Several mechanics "accustomed to regulating and adjusting its complicated
parts" could be employed with advantage. Most of the bobbins, large and small, had been expended, and a new
supply was indispensable. Some of the "minor details" in the laying-up department were out of order, especially the tubes. In the tarring house, the vat leaked, while some of the machinery needed repairs. At the same time, Civil Engineer Billings submitted plans and estimates for needed improvements to the Ropewalk. Most of the Billings recommendations were small, inexpensive projects, such as installing additional windows and doors and building an inclined plane between the laying-up room and the tarring house. The largest improvement was construction of water closets for the Ropewalk employees, estimated as costing $400. The Bureau of Yards and Docks, upon being apprised of the needs of the Ropewalk, gave approval for purchase of new bobbins. It also authorized the other repairs and improvements, if monies were available in the account "Repairs of all Kinds." Funds did exist and the repairs and changes were made, except for the water

69 Smith to Stringham, Nov. 26, 1855; May 5, May 26, 1856; June 1, Aug. 13, 1857; Smith to Hudson,
Nov. 23, 1859, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, May 1, May 22, 1856; May 29, Aug. 11,
1857; Hudson to Smith, May 11, 1859; Billings to Hudson, Nov. 23, 1859, NA, RG 71, Ltrs. Recd., Y&D.

70 Stringham to Smith, May 7, 1857; Jan. 16, 1858; Jan. 7, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to
Stringham, May 9, 1857, NA, RG 71, Ltrs. Sent, Y&D.

71 Smith to Stringham, July 6, Aug. 6, Aug. 29, 1857, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith,
July 13, 1858, NA, RG 71, Ltrs. Recd., Y&D.
closets. Water closets for ropemakers and other employees in the lower end of the yard were constructed in Fiscal Year 1858, utilizing funds appropriated by Congress for that purpose.\textsuperscript{72}

Because of the Crimean War, the price of hemp escalated. Large quantities had been purchased by the United States, its agents selecting the best quality. With the war about to end, it was presumed that the price would drop, and the agents governed themselves accordingly. By the autumn of 1857, the price of Russian hemp had fallen to $215 per ton on the New York City market. To take advantage of this situation, large purchases were made, and in mid-November there was stockpiled in the hemp storehouse 560 tons of Russian hemp, nine tons of American, and 145 tons of Manila.\textsuperscript{73}

In the summer of 1855, Commandant Gregory had anticipated a shortage of bobbins and had called for an appropriation of $1500 in Fiscal Year 1857 to meet that need. In March 1856, a critical want of bobbins slowed manufacture of rigging for Niagara, then being outfitted at the New York Navy Yard. As an emergency measure, Stringham purchased a number of bobbins, employing money appropriated for "Repairs of all Kinds." This tided the yard through the crisis until the $1500 appropriation became available in Fiscal Year 1857.\textsuperscript{74}

In the autumn of 1856, the Ropewalk had sixty-one employees. That force consisted of one superintendent; one writer; fifteen spinners; eighteen layers; four tar men; fifteen hecklers; four machinists; and three engine tenders. It would take two months for this force to fill back orders.\textsuperscript{75}

Congress had authorized the expenditure in Fiscal Year 1854 of $10,000 for a new steam engine and pump for the Ropewalk. That machinery began operations in November 1856.\textsuperscript{76}

During Fiscal Year 1857, work commenced on fitting the second story of the Ropewalk coal house for cutting and preparing hide for rope. Congress had appropriated funds for that purpose in August 1856. The appropriation included $500 for a braiding machine. In mid-October 1856, Civil Engineer Billings recommended that a small engine for cutting hides be positioned on the second floor of the coal house. Steam for that engine was to be piped from the Ropewalk's boilers. The Bureau of Yards and Docks gave its approval for the purchase and installation of an engine to drive the hide-cutting machine.\textsuperscript{77}

In addition to manufacturing cordage made of fiber and hide, the Charlestown Ropewalk also produced copper-wire rope. Early in 1857, the Bureau of Construction and Repair inquired of the yard whether it could produce copper wire of seven strands. Superintendent Gardner responded in the affirmative so long as a small quantity was required. Acting Commandant Henry French reported the cost of wire rope one and one-half inches in circumference would be forty-four cents per pound. Upon being provided this

\textsuperscript{72} Gardner to Stringham, Nov. 24, 1855; Billings to Stringham, Nov. 19, 1855; Stringham to Smith, Sep. 18, 1858, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Nov. 28, Dec. 4, 1855, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{73} Lenthall to Stringham, Feb. 23, 1856, NA, RG 19, Ltrs. Sent, C&R; Stringham to Lenthall, Nov. 8, 1857, NA, RG 19, Ltrs. Recd., C&R.

\textsuperscript{74} Stringham to Lenthall, Mar. 8, 1856, NA, RG 19, Ltrs. Recd., C&R; Gregory to Smith, Aug. 30, 1855, NA, RG 71, Ltrs. Recd., Y&D.

\textsuperscript{75} Stringham to Lenthall, Nov. 8, 1856, NA, RG 19, Ltrs. Recd., C&R.

\textsuperscript{76} Preble, p. 333.

\textsuperscript{77} Gregory to Smith, Aug. 30, 1855; Stringham to Smith, Oct. 14, 1856, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Oct. 15, 1856, NA, RG 71, Ltrs. Sent, Y&D.
information, the bureau directed the yard to manufacture and ship to New York 450 feet of copper-wire rope for Mississippi.78

A major improvement in the plant of the Ropewalk was construction of a boiler house. In September 1857, Commandant Stringham recommended a $25,000 appropriation for a boiler house separate from the head house. He further suggested the structure have a set of boilers "of sufficient capacity for driving the machinery, heating the tar, and warming the spinning and preparatory rooms." The existing boilers, Stringham noted, were old and inadequate, and the rooms in which they were located were poorly ventilated "so small that men object to working there." The rooms in the head house containing the old boilers could be better employed for manufacturing and stowing yards and cordage. Heating the laying room would enable the Ropewalk to spin much better cordage in the winter months.79

In June 1858, Congress appropriated $25,000 for a boiler house, chimney, and new boilers at the Ropewalk. Before ground was broken, Stringham proposed a change in the site plan, urging that the new structure be built as an addition to the coal house. Such a location would remove the boiler house further from the hemp house, add to the "uniformity of the line of buildings," and facilitate access between the coal and boiler houses. The Bureau of Yards and Docks approved Stringham's proposal.80

Increased demand for cordage in October 1858 led Superintendent Gardner to recommend that a gang of hand spinners be employed. One or more of the galleries in Shiphouse H could be altered to provide facilities for a spinning loft. Gardner estimated that the cost of spinning wheels, reels and other equipment would be $800. The Bureau of Yards and Docks rejected the proposal, because it did not "wish to make any temporary spinning room to be presently taken down again." Any cordage the walk could not supply should be bought from private ropewalks or wholesalers.81

Six months later, Stringham again broached the need to put spinning machines in a shiphouse. Meanwhile, to meet heavy demands for rigging, the hours of work in the Ropewalk had been extended from 6 a.m. to dusk. The bureau continued to resist the proposal to install spinning machines in one of the shiphouses. It believed that there would be a "lull" and the demand for cordage would soon subside. Until that happened, the workday at the Ropewalk could be extended from ten to twelve hours.82

That the Ropewalk had difficulty in meeting the demands of the Navy was not attributed by Commandant Stringham to any fault in Superintendent Gardner. Stringham found Gardner an able and efficient manager, "prompt to receive and execute all orders intrusted to his charge," and faithful in the performance of each and every duty connected with the Ropewalk.83

In September 1857, Stringham explained to the Bureau of Yards and Docks that the plan to perform tarring operations on the upper floor of the tarring house had not been implemented because of the "constant operation of machinery in complying with orders for cordage." But whenever this reorganization could be


80 Stringham to Smith, July 9, 1858, NA, RG 71, Ltrs. Rec'd., Y&D; Smith to Stringham, July 12, 1858, NA, RG 71, Ltrs. Sent, Y&D.

81 Gardner to Stringham, Oct. 9, 1858, NA, RG 71, Ltrs. Rec'd., Y&D; Smith to Stringham, Oct. 11, 1858, NA, RG 71, Ltrs. Sent, Y&D.

82 Stringham to Smith, Apr. 8, Apr. 9, 1859, NA, RG 71, Ltrs. Rec'd., Y&D; Smith to Stringham, Apr. 11, 1859, NA, RG 71, Ltrs. Sent, Y&D.

83 Stringham to Smith, Feb. 17, 1859, NA, RG 71, Ltrs. Rec'd., Y&D.
implemented, it would save wear and tear on bobbins, dispense with reeling yarns—which constituted one half the work performed in the tarring house—and allow a better room for storing tarred yarns. He also noted that the greatly increased quantity of Manila cordage required by the Navy made additional preparatory machinery mandatory. This would eliminate much of the heckling by hand. Stringham recommended the expenditure of $9000 for equipment, machines, and improvements, including new regulators and belts for the eighty spinning machines; bobbins and repair of bobbins; heating pipes; and two new hemp lap machines. In its appropriation for Fiscal Year 1859, Congress included almost $9000 for machinery and bobbins for the Ropewalk. In addition, the Bureau of Yards and Docks approved purchase and installation of a new line of shafting in the Ropewalk.84

In October 1859, it was found that the planking in the hemp house cellar floor, where rope was stored, had rotted and required replacing. The bureau complained that the person with the responsibility to examine the hemp house and keep it in order had been delinquent in failing to discover sooner the dilapidated condition of the flooring. The bureau recommended that repairs be made when "actually required," utilizing slabs on hand in the yard and charging labor costs to "Improvements and Repairs."85

A May 1860 inspection by Civil Engineer Billings documented that repairs to the floor in the walk's laying ground would be more extensive than planned. For some distance, the flooring was so rotten that it provided scant support for the rails. It would be necessary to place blocking at a number of points. This project should be attended to immediately, Captain Hudson urged, because this was the first time in more than two years that the walk had no orders pending. At present, the hands were overhauling the machinery. In the near future, it would be necessary to refloor the entire walk. The Bureau of Yards and Docks directed that the necessary repairs be made, and yard workmen proceeded as directed.86

During the period between July 1858 and July 1861, the $9000 appropriated for machinery and bobbins for the Ropewalk was expended. Extensive repairs and improvements were made in the machinery and other parts of the establishment, and $3000 paid to F. B. Holmes and William Pedrick for the license to employ their hide-cutting machine.87

In March 1860, the Navy Department named Henry Evans of Plymouth, Massachusetts, to replace Gardner as Ropewalk Superintendent. Evans reported for duty on April but subject to the approval of all concerned, he did not relieve Gardner until nine days later. Evans held the position for one year. As a Democrat, he became a victim of the spoils system, and in the spring of 1861, James Mahoney replaced him as superintendent.88

84 Stringham to Smith, Sep. 1, 1857, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, Feb. 12, 1859, NA, RG 71, Ltrs. Sent, Y&D.

85 Hudson to Smith, Oct. 4, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Oct. 8, 1859, NA, RG 71, Ltrs. Sent, Y&D.


87 Hudson to Smith, Aug. 29, 1859, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, July 13, July 14, 1860, NA, RG 71, Ltrs. Sent, Y&D.

INDUSTRIAL ACTIVITY: SHIP REPAIR

During the years 1856-1861, there was an increase in yard activities associated with repair and outfitting of Navy Department vessels. A few naval ships came and departed the yard without requiring any work. For example, in the summer of 1856, the sloop of war Plymouth arrived and anchored off the yard. Aboard were Annapolis midshipmen on their annual summer cruise. She remained eight days before sailing for Norfolk. Several vessels of the Coast Survey and the Lighthouse Board had short stays at the Charlestown Navy Yard. It does not appear that the ships were repaired or any way serviced by the Navy.89

Twice in the late 1850s, Merrimack returned to the yard where she was built. The first time was in July 1856, after completing her shakedown cruise to the Caribbean, where she had gone aground. By direction of the Bureau of Construction and Repair, she was to be docked and her hull examined. Accordingly, she was hauled alongside the angle wharf, and her guns, powder, and coal transferred ashore. When she was docked, it was discovered that about six feet of her shoe had been carried away and the copper along the keel chaffed. Included among repairs was work on her propeller. On August 4, after sixteen days, the ship left the dock. Her armament, coal and supplies were reloaded. Because of the small quantity of water in the yard cisterns, it was necessary to purchase water to refill Merrimack's tanks. On August 14, the ship weighed anchor and put to sea, en route to western European waters.90

Merrimack reappeared at the yard in the following spring for a stay of five months. Her engines had proved to be a headache. Consequently, the Bureau of Construction and Repair called for an overhaul of machinery. Those parts the yard could not repair were to be removed and returned to R. P. Parrott's Foundry, Cold Spring, New York. The ship arrived at Charlestown on April 6, 1857, was decommissioned on April 22, and was docked on June 18. Some of her machinery was taken out and sent to the contractor. The Navy Department notified Commandant Stringham that Merrimack was to be prepared for service as flagship of the Pacific Squadron. Because she would not have a poop, yard workmen divided her cabin into fore and aft cabins. In early July, Stringham informed Washington that if the machinery arrived from Cold Spring as scheduled, the engines would be ready for trial in six to eight weeks. Merrimack was hauled out of the dock in mid-July, but more than three months were to pass before her engines were performing with satisfaction and her outfits and complement were aboard. On October 17, she built up head of steam, weighed anchor, and put to sea, proceeding to the Pacific by way of Cape Horn.91

In mid-May 1856, the Navy Department notified Commandant Stringham that the frigate Cumberland was to be taken out of ordinary, razed, repaired, and "fitted for a heavy battery." Stringham promised to see that this project was "carefully carried out into execution," and, on May 23, he transmitted to the Bureau of Construction and Repair Delano's plan of that part of the spardeck before the fore- and abaft the mizenmast. To provide more room for the pivot guns, the naval constructor recommended that the foremost be shifted aft one beam. To give three feet more space on the spardeck, the bowsprit should be lowered one foot. The mainstay bits could then be arranged abreast the foremost. Upon receipt of the bureau's approval of Delano's plan, Stringham proposed that the waist and hammock rails be raised at least four feet above the deck.92

On August 9, five days after Merrimack was floated out, Cumberland was hauled into the dry dock to be razed. Within three months, Stringham wrote the bureau that work had progressed to the point where she could be taken out of the dock. Since there was no immediate need for the dock, she was allowed to remain until February 23, 1857. On March 14, the Department wrote Stringham that Cumberland had been
<table>
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<tr>
<th>YEAR</th>
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<tr>
<td>1850</td>
<td>9</td>
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<td>10</td>
<td>John Hancock (thrice), Gallatin, Dale, Germantown, John Adams, Arabia*, Sunbeam*, Diamond of the Deep*</td>
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<tr>
<td>1855</td>
<td>10</td>
<td>Saratoga, Lightship Brandywine, Merrimack (twice), Lightship Brilliant, anchor hoy, caisson (twice), W.A. Cooper*, City of Boston*</td>
</tr>
<tr>
<td>1856</td>
<td>2</td>
<td>Merrimack, Cumberland</td>
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<tr>
<td>1857</td>
<td>7</td>
<td>Macedonian, Merrimack, Cyane, Roanoke (twice), Dolphin, Release</td>
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<tr>
<td>1858</td>
<td>4</td>
<td>Roanoke, Levant, Release, Constellation</td>
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<tr>
<td>1859</td>
<td>5</td>
<td>Hartford, Narragansett, Colorado, Minnesota, Canada*</td>
</tr>
<tr>
<td>1860</td>
<td>2</td>
<td>Relief, Mississippi</td>
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<tr>
<td>1861</td>
<td>14</td>
<td>Bainbridge, Vincennes, Preble, Cumberland, Fearnot, Cambridge, Gemsbok, Young Rover, William G. Anderson, Ethan Allen, Curlew, Washusett, San Jacinto, Maratana</td>
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SOURCE: Preble
designated flagship of the African Squadron. She would be forthwith readied for sea. As a result of removal of the spardeck battery and a reduction in the number of guns from forty to twenty-four, it was found that Cumberland would require another thirty tons of ballast in addition to the sixty already aboard. Stringham believed that the yard could have her ready to receive her complement by May 1.93

Foul weather and trouble in securing water tanks delayed the outfitting of Cumberland. But by May 7, all the armament, except the pivot guns, was aboard, and the spirit rooms were ready. About this time, Ballou's Pictorial featured a drawing of the Charlestown Navy Yard. The editor identified one of the ships in the picture as Cumberland, "now flag ship of the African squadron, late a frigate, but now razeed to a sloop-of-war." She had never been "a thing of beauty," but the editor allowed that her "appearance has been improved by the recent alteration. She retains her frigate rig, but her accommodations are much better." In mid-June, Commandant Stringham alerted the bureau that Cumberland could put to sea. On June 23, 1857, Cumberland made sail and got underway. When he returned to the yard, the pilot, who had taken her down the harbor, stated that she sailed and steered well and the new capstan functioned perfectly.94

The corvette Macedonian, having served for more than three years in the far Pacific, entered Boston harbor and anchored in the Charles River in August 1856. Her crew went aboard the receiving ship Ohio, the stores were landed, and she was laid up in ordinary. Stringham soon advised the Bureau of Construction and Repair that, as nothing was to be done to the vessel before spring, her spardeck would be hardened and a temporary shed erected over the opening.95

In mid-February 1857, the bureau, upon being notified that the Boston weather had moderated, directed that repair of Macedonian be commenced immediately. Consequently, she was docked on the 25th. Undocked on June 12, the ship returned to ordinary, where she remained for one year. On February 12, 1858, the Secretary of the Navy ordered the corvette taken out of ordinary and outfitted for service on the Mediterranean station. Responding to these instructions, Stringham assured the Bureau that she would be ready for sea in four weeks.96 Storms during the third week of February hindered outfitting Macedonian, and there was a ten-day delay in preparing her for receipt of her officers and crew. Her masts, however, had been put in and her ballast stored. By March 20, stores to last for five months had been sent aboard the corvette, and the yard reported that she would be ready to receive her complement on the 25th. More than two months passed, however, before all hands were aboard. On June 5, Macedonian finally put to sea.97

During a thirteen-month period, a unit in the Home Squadron, the sloop of war Cyane, made three visits to the Charlestown Navy Yard. In August 1856, she came to the yard for emergency repairs. Within two weeks, her sails had been surveyed and those condemned replaced. She then put to sea to rendezvous with the squadron. She returned on October 17 and made sail on November 5. Cyane was back in the yard on July 27, 1857. She was docked two weeks later and her copper repaired. She was undocked on August 12, and in the second half of the month a number of sails were replaced and stores sent aboard. She departed the harbor on September 2, 1857, bound for the coast of Nova Scotia to protect American fishing rights.98

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95 Stringham to Lenthall, Aug. 8, Oct. 15, 1856, NA, RG 19, Ltrs. Recd., C&R.


Plate 6: "UNITED STATES SHIP OF WAR ROANOKE, BRIG OF WAR DOLPHIN, AND NEW BUILDINGS, CHARLESTOWN NAVY YARD."

Roanoke was undocked on May 13, 1858, and Dolphin sailed from the yard on June 7, 1858. This sketch was probably made between those two dates.
Occasionally, the yard gave attention to Virginia and Vermont. In December 1856, an inspection of the uncompleted Virginia and her ways revealed that the big 74's blocking and shoring had loosened. They were "set up and properly secured." Vermont, in ordinary, was the recipient of several maintenance projects in the spring and summer of 1857. First her water tanks were landed, drained, cleaned, and repaired. Next, her exterior was recaulked.

On July 21, 1857, the brig Dolphin arrived at the Charlestown Navy Yard from the West African coast and was taken out of commission six days later. Upon being surveyed, her wales were removed, and it was found that her top timbers were "so much cut by former repairs" and so split and rotten as to require a new set fore and aft. The Bureau of Construction and Repair directed Commandant Stringham to proceed with the repairs whenever the yard found it to be advantageous, it being the intention to place the ship out of commission. Dolphin was taken into dock in September and hauled out in November. Then she was placed in ordinary. In the spring of 1858, the Department ordered the bark outfitted for duty with the Home Squadron. Dolphin put to sea on June 7 for the West Indies, with the mission of intercepting slavers. She captured one such vessel, before returning to Charlestown in September. The yard prepared Dolphin for participation in a naval force ordered by President James Buchanan to Paraguay to resolve diplomatic difficulties with that nation. Dolphin was readied for sea and sailed on October 15, 1858.

The steam frigate Roanoke, having gone aground, was ordered to the Charlestown Navy Yard in the summer of 1857. She was docked on August 25. Naval Constructor Delano discovered she had suffered extensive damage, being so badly hogged that her back had been broken. Many of the nails securing her copper were loose. She was taken out of the dock on September 3. Since the vessel required substantial repairs, she was placed out of commission. Roanoke returned to the dock in late November and remained there until the following May. While docked, her broken back was repaired, and the bread rooms and water closets were enlarged. Machinists overhauled the frigate's engines. By May 13, when Roanoke was hauled out of the dock, the cost of repairs had reached $160,000. The Navy Department ordered the ship outfitted as a replacement for the Home Squadron's flagship Colorado, under orders to proceed to the Charlestown yard for an overhaul. Colorado arrived at the yard on August 7, and Roanoke was recommissioned on the 18th. By September 1, the necessary transfers of personnel and equipment had been effected, and Roanoke put to sea, bound for the West Indies.

A frequent visitor to the Charlestown Navy Yard in the late 1850s was the storeship Release. She was at the yard from August 1857 to January 1858. During that stay, she was docked, and a portion of her missing forefoot was replaced. Prior to departing, she was loaded with supplies and provisions for the Mediterranean Squadron. On January 30, she sailed for La Spezia, Sardinia. Release returned from the Mediterranean in May and hove to off the yard. Her captain explained to Commandant Stringham that the storeship had gone ashore off Leghorn and that a docking was required. Levant then occupied the dock. The dock was flooded, Levant moved forward, Release hauled into the dock, and the dock then pumped dry. For several days, the two vessels occupied the dock at the same time. Inspection disclosed that part of the storeship's shoe had been knocked off by the stranding. After repairs, the dock was flooded and Release floated out into the Charles on June 2. Sixteen days later, she sailed for the Cape Verde Islands with provisions for the African Squadron. Release was back at the yard on September 22. Within eight days, she was outfitted as a storeship.

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Plate 7. *Constellation* arrived at the Charlestown Navy Yard in August 1858 and entered the dry dock in the following October, where she remained until January 1859. This engraving, which probably appeared in *Gleason's Pictorial*, shows how the staging in the dock was arranged to enable yard employees to work on the exterior of the hull at two levels above the floor of the dock.
for the Paraguayan Expedition and her holds loaded with provisions and supplies. She put to sea on the last day of September.\footnote{102}

Another Navy storeship, \textit{Water Witch}, spent two days at the Charlestown Navy Yard in November 1857. She returned on April 23, 1858, and spent the day taking stores aboard. A third short visit came in the following May. This time \textit{Water Witch} remained forty-eight hours.\footnote{103}

In April 1858, the sloop of war \textit{Levant} began a fourteen-month stay at the yard. After her stores were landed and her crew sent aboard the receiving ship, she was laid up in ordinary. The ship was hauled into the dock and her bottom examined. She remained in the dock undergoing repairs during the summer and early autumn of 1858. In April 1859, the Department ordered \textit{Levant} taken out of ordinary and outfitted for duty in the Pacific. The sloop sailed for Cape Horn in June.\footnote{104}

\textit{Constellation} had been rebuilt as a corvette at Norfolk in the mid-1850s. In August 1858, she dropped anchor in the Charles River. Preliminary to placing her in ordinary, her stores were taken ashore and her crew transferred to the receiving ship. \textit{Constellation} remained in the dock from the middle of October until the middle of January. In April 1859, the Navy Department directed Commandant Stringham to take the corvette out of ordinary and ready her for service as flagship of the African Squadron. She was recommissioned in June and sailed for the Gulf of Guinea in July.\footnote{105}

During the two years before Fort Sumter, repair activities at the Charlestown Navy Yard were monotonously routine. \textit{Colorado}, \textit{Minnesota}, \textit{Mississippi}, \textit{Vincennes}, \textit{Preble}, and \textit{Bainbridge} came to the yard during this period and were in ordinary or under repair when the Civil War began. They will be discussed in the following chapter. Three other vessels were at Charlestown only briefly. In May 1859, the frigate \textit{St. Lawrence} hove to off the yard after two and a half years as flagship of the Brazilian Squadron. Two days later she sailed for the Philadelphia Navy Yard, where she was decommissioned. During 1859, the surveying steamer \textit{Bibb} visited the yard twice, on one occasion remaining for one week and on the other three weeks. \textit{Savannah}, flagship of the Home Squadron, put in at the yard on July 9, 1859, for emergency repairs. She stayed for nearly six weeks, sailing for the Gulf of Mexico on August 21.\footnote{106}

In the period 1856 to 1860, except for a British mail steamer, no private ships were docked at the Charlestown Navy Yard. This was not because the dock saw heavy usage by ships of the U.S. Navy. In each of the years 1856 and 1860 there were only two dockings. In 1858, there were four and 1859 five. Only in 1857 was there a significant volume of activity, and in that year seven dockings occurred. Because of work involved in extension of the navy yard dry dock in 1858, two vessels, \textit{Dolphin} and \textit{Release}, were hauled to East Boston, where their bottoms were examined and repaired in a sectional dock. \textit{Release} was serviced in the same facility again in 1860.\footnote{107}

\footnote{102} Preble, p. 336; DANFS, vol. VI, p. 66; Stringham to Lenthall, Nov. 21, 1857; Jan. 18, May 24, June 1, Sep. 20, Sep. 27, Sep. 30, 1858, RG 19, Ltrs. Recd., C&R; Lenthall to Stringham, Sep. 24, 1858, NA, RG 19, Ltrs. Sent, C&R.

\footnote{103} Preble, pp. 336, 340-41.

\footnote{104} Stringham to Lenthall, Apr. 6, May 15, Oct. 16, 1858, NA, RG 19, Ltrs. Recd., C&R; DANFS, vol. IV, p. 96; Lenthall to Stringham, June 7, 1858; Apr. 4, 1859, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 346.


\footnote{107} Preble, pp. 332, 336, 341, 346, 350.
INDUSTRIAL ACTIVITY: SHIP CONSTRUCTION

During the four years before the Civil War, the Charlestown Navy Yard constructed two ships, Hartford and Narragansett. A minor project was building several scows for the Light House Board. With the approval of the Secretary of the Navy, the district engineer of the Lighthouse Board supervised construction of the scows in the carpenters' shop. The labor came from yard workmen, whose wages were charged to the Treasury Department. By the time the scows were finished, the Lighthouse Board found that it had no use for them and proposed their sale to the Navy. After negotiations, Stringham was authorized to offer the Lighthouse Board $1,000 for each of the scows. The offer was accepted.108

In January 1856, Captain Stringham recognized that upon completion of Merrimack, there would be "no work of any importance remaining to be done in the yard." Accordingly, he suggested to the Bureau of Construction and Repair the propriety of authorizing additional shipbuilding operations. To be prepared, should Congress provide funds for construction of new steamers, the Department contracted with J. Bigler for delivery at the Charlestown yard of live oak frames for a second steam sloop of war. More than a year passed before Congress did include new ship construction in a Navy appropriations bill. Stringham called upon the bureau to assign one or two of the authorized sloops to his yard. He pointed out that there were two shiphouses ready for use, and he had no hesitation in stating that "facilities for the thorough and speedy execution of the proposed work are unsurpassed in the United States."109

The announcement that the Charlestown yard had been selected to build one of the "steam propeller sloops of war" was made in October 1857. When informing Stringham, Chief Naval Constructor Lenthall, head of the Bureau of Construction and Repair, described the ship. She was to have twenty-four heavy guns; a draft, when loaded, of not more than sixteen feet; a complement of 266; and the capacity to carry provisions for seventy-five to eighty days, fuel for thirteen days steaming, and apparatus for distilling fresh drinking water. The principal sails would have a surface of 17,000 square feet. The weight of her equipment, provisions and stores was estimated at 510 tons, to which would be added her armament and ordnance stores of 132 tons; 325 tons of coal; and her machinery, estimated at between 300 and 320 tons, making a total of 1,287 tons. Stringham received instructions to implement whatever measures were required to get the project under way, and Naval Constructor Delano was to prepare and forward plans. A side view and midships section were required at an early date to enable the Chief Engineer to make proper arrangements for machinery. The framing then being delivered to the yard would not be used for the sloop.110

Delano drew up the plans for the vessel, working within guidelines and requirements imposed by the Bureau of Construction and Repair. Those plans then went to the yard commandant, who sometimes made recommendations before forwarding them to Washington, where they were reviewed by the bureau. Within one month, Delano's first plans, a profile and cross section, were mailed to the bureau. It was proposed to make the ship 220 feet, six inches in length and forty-four feet in width, with a draft of sixteen feet from the aft side of the forward stern post to the forward perpendicular. She was designed to have a capacity of 2700 tons. In forwarding the plans and specifications of his naval constructor, Commandant Stringham included suggestions for modifications, such as making the hold larger and moving the forecastle farther forward. He stated it was mandatory for Delano to know, as soon as practicable, the size of the propeller as this would govern the height and diameter of the shaft and bushings and also the distance between the two stern posts.111

108 Stringham to Smith, May 7, Oct. 13, 1856; Feb. 10, 1858, NA, RG 71, Ltrs. Recd., Y&D; Smith to Stringham, May 1, 1856; Feb. 4, 1858, NA, RG 71, Ltrs. Sent, Y&D.


111 Stringham to Lenthall, Nov. 19, 1857, NA, RG 19, Ltrs. Recd., C&R.
The bureau provided Delano with some of the information concerning the stern posts and shaft and supplied other details. It rejected parts of the naval constructor's design and gave him directions for changes. For example, the bureau held that, in Delano's plan, the distance between the ports was too great, recommending fifteen feet as ample. Delano submitted two more sets of plans by mid-December. Chief Engineer Gay worked on a determination of the spaces required and the locations for the engine, boilers, and coal bunkers. Questions still remained, especially concerning the ship's machinery, but planning had progressed sufficiently for the bureau to inform the commandant on December 12, 1857, that he could proceed with building the ship whenever he was ready.112

On January 1, 1858, the vessel's keel was laid on the ways of Shiphouse. To celebrate the occasion, the mechanics and laborers were given the rest of the day off following the noon muster. Some six weeks later, the ship beginning to take shape, the Department selected her name, Hartford. In late March, the bureau finally notified the yard of the dimensions of the propeller space, although yet to be decided were the locations of the boilers and smoke stack. Delano produced inboard plans and also those for spars and sails. These plans were approved, except for one change respecting the armory. The bureau advised Stringham that work on Hartford's sails could be commenced whenever the season was advantageous.113

The Navy Department contracted with Harrison Loring & Co. of Boston, for manufacture and installation of Hartford's machinery. The selection of the Loring company proved somewhat unfortunate. Chief Engineer Gay was given the responsibility of monitoring the contract. After visiting the establishment and discovering that the work was dragging, Gay complained that the Charlestown Navy Yard was better prepared to build Hartford's engines, "which is not saying much." Perhaps because the yard had played a role in deciding upon the contractor, Stringham responded by commenting that a presumption prevailed that Harrison Loring & Co. was competent.114

The absence of progress in making the ship's machinery had an impact on decisions respecting the hull. In July, Stringham alerted the Bureau of Construction and Repair that Hartford would be set for launching in about eight weeks. He believed it would be best to defer caulking until the engines were nearly ready for installation. The bureau directed that construction was to be advanced as far as possible, except for caulking, and that there should be no holding back because of delays by Harrison Loring & Co. In the late summer of 1858, the contractor notified Stringham that it would be August 1859 before Hartford's engines could be installed and her boilers ready to fire. When relaying this information to the bureau, Stringham inquired: "Can nothing be done to facilitate the work?" Disconcerted by this news and disenchanted with the contract, the bureau directed Chief Engineer Gay to prepare a status report on the steam machinery. Upon reviewing that report and learning from the Charlestown yard that the ship could be launched in seven weeks, the bureau directed that the launching be as early as feasible.115

Among Construction and Repair work yet to be decided and completed were building Hartford's boats, fixing on the armament for the launch and first cutter, and the location of the capstan. On October 21, Stringham notified the Department that the ship would be ready to be launched on November 1. He inquired whether "the customary collation be given." The bureau refused the funds. This was a keen disappointment, because such an expenditure had been allowed when Merrimack was launched. On November 15, Stringham


114 Smith to Stringham, May 31, 1858, NA, RG 71, Ltrs. Sent, Y&D; Stringham to Smith, June 2, 1858, NA, RG 19, Ltrs. Rec’d., C&R.

alerted the Bureau of Construction and Repair that Hartford would be launched on Monday, the 22d or, if the weather was unfavorable, upon the next fair day.116

November 22, 1858, dawned bright and clear, and the tide promised to be unusually high. As the hour for launching approached, large numbers of people thronged into the yard. According to a journalist, hundreds crowded into the "long galleries of the great ship house, many betook themselves to the pier on the East side of it, and hundreds more took up positions along the Sea Wall to the West of the slip." A sizeable number of men and women and many naval officers boarded the ship to ride her down the ways. A large temporary platform had been erected on the west side of the shiphouse and was jammed with humanity, as were the roofs of all small buildings with a view of the scene. A bridge of scows was placed from the wharf to Vermont, "which was converted into a reception room for the guests of her distinguished rival." The yard band was posted on Vermont, while the receiving shop Ohio was decorated fore and aft.

At 9:30, several hundred workmen were deployed along the ways, and with battering rams, each manned by four men, the task of setting up the wedges was begun. "The dull and irregular sound of wood meeting wood, was succeeded by the busy clinking of the top mauls against iron wedges, splitting out the blocks upon which the keel rested, the wale and bilge shores having been previously removed." After the blocks were cut out, the ship was held stationary on the inclined plane by a thick oak plank on either side, one end of which was secured to the bilge ways, while the other was secured to the launching ways. A double jackscrew was positioned under Hartford's bow, by which she was to be given the start that would send her into the water.

At length the thud of the hammers ceased. Naval Constructor Delano appeared at the forward part of the ship and ordered the planks sawed off that now restrained her. "The plates of the saws had gone nearly through the planks," when Hartford shuddered. Breaking free of these last restraints, she slowly glided down the ways, her speed controlled by two stern hawsers and one at her head. Shouts of onlookers, who had at first exclaimed cautiously "she moves," changed to confident outbursts of "There she goes!"

Workmen cheered the ship, and those on board did likewise. The band blared out "Hail Columbia," as the battery fired a 32-gun salute. As she entered the water, Miss Lizzie Stringham, daughter of the commandant, broke a bottle of Connecticut water across her figurehead; Miss Carrie Downes, daughter of the late Commodore Downes, shattered a bottle of Hartford spring water; and Lt. George H. Preble, a bottle of saltwater. She was thus christened Hartford. Hartford floated out into the harbor about three times her length from the nearby wharf, before she was checked by the hawsers, and her stern swung toward the Chelsea side. Two steam tugs--Huron and Wide Awake--came alongside and eased her up against the wharf.117

The next day, Commandant Stringham mailed to the bureau a drawing depicting Hartford's draft of water, depth of keel, height of ports, straightening of sheer, extra weight on board, and other measurements. The ship was hauled into dry dock in the third week of January 1859, where she remained until March 9, while being caulked and her machinery sent aboard. She was then taken alongside the shear wharf. In the meantime, the Department had ordered the steam sloop rigged and outfitted so she would be ready for sea trials as early as possible.118

In March, yard mechanics worked on the vessel's coal bunkers; lights were installed in the engine room, firerooms, and propeller alley; and Harrison Loring workmen finished installing the machinery. By April 2, her two vertical tubular boilers had been fired. Steam was admitted to the two 62-inch cylinders, and the machinery passed its first test.119


117 Boston Journal, Nov. 22, 1858; Stringham to Lenthall, Nov. 23, 1858, NA, RG 19, Ltrs. Recd., C&R.


143
The Department at this time issued orders to the yard to prepare the ship for a cruise in the East Indies. Because she was to be the squadron flagship, Hartford was to be given a light poop cabin, provided that addition did not delay her departure. The poopdeck occasioned an exchange of views between the bureau and the yard. With that problem resolved, Hartford was commissioned on May 27, 1859. One week later, she put to sea for a shakedown cruise lasting seven days. When she returned to the yard, the bridge across the after part of the ship was removed at the request of the flag officer, and other changes and adjustments were made. Hartford sailed from Boston Harbor on June 28, bound for the Cape of Good Hope and the Far East.120

In July 1858, when the Charlestown yard first began to consider a date for launching Hartford, the Navy Department notified the yard that it would construct one of the screw sloops of war authorized by an act of Congress passed in June. Commandant Stringham suggested that the engines of the new sloop also be built at the yard. He was satisfied that the yard’s new Machine Shop and Foundry complex possessed facilities for accomplishing this project superior to those found in private shops and that it could be done more expeditiously than Harrison Lorings work on Hartford.121 However, the Navy elected to have a contractor construct the machinery.

With Hartford occupying Shiphouse H, the new sloop was built in Shiphouse No. 39. Preparations included removal of the forepart of John Hancock, which had been hauled into Shiphouse No. 39 in September 1856. It had been hoped that some use could be made of the remains of John Hancock. However, Stringham now requested and was granted authority to break it up. On August 3, 1858, as soon as the ways of Shiphouse No. 39 were clear, the sloop’s keel was laid, and a large work force was employed.122

In early January 1859, Stringham wrote to the Bureau of Construction and Repair that the sloop would be ready to be launched in another ten days. However, he also noted there was no need for haste, because the contractor for the steam machinery needed about seven weeks to position the bearings and other fixtures for the propeller shaft. The sloop was launched on February 15, and docked on March 9.123

In early April, the Department selected a name for the vessel, Narragansett, and also ordered her outfitted for duty in the Pacific. However, no urgency surrounded the preparation of the ship, and it was October before the yard commandant reported her ready for sea. Commissioned on November 6, 1859, she left the yard nine days later and operated along the Atlantic coast until March 1860, when she departed Norfolk en route to the Pacific.124

Completion of Narragansett in the autumn of 1859 marked the end of a period of unprecedented activity at the Boston Navy Yard, as measured in terms of employment statistics and by other criteria. In the spring of 1857, the labor force began to grow in dramatic fashion. The greatest number employed in March of that year was 387. During the next month, the number of workers doubled. In May, the yard employed 877 men, surpassing the previous high attained during the Mexican War. And the employment rolls continued to swell, reaching 1574 in October 1858. Thereafter, the labor force contracted until the spring of 1861 and the outbreak of fighting in the Civil War.125 The construction of Hartford and Narragansett largely caused the growth of the yard’s work force. However, repair activity also remained constant, and the yard was rarely

120 Lenthall to Stringham, Apr. 4, Apr. 28, 1859; Lenthall to Hudson, May 4, May 16, June 18, 1859, NA, RG 19, Ltrs. Sent, C&R; Preble, p. 346.

121 Lenthall to Stringham, July 3, 1858, NA, RG 19, Ltrs. Sent, C&R; Stringham to Lenthall, July 9, 1858, NA, RG 19, Ltrs. Recd., C&R.

122 Smith to Stringham, July 3, 1858, NA, RG 71, Ltrs. Sent, Y&D; Preble, p. 333.


125 Information about the number of workers is provided in a table in Preble, pp. 430-32.
Plate 8: "GUNBOAT NARRAGANSETT, AT CHARLESTOWN NAVY YARD" (c. 1859). The Charlestown Navy Yard constructed Narragansett. She was launched on Feb. 15, 1859, entered commission on November 15, 1859, and sailed from the yard a week later.
without one or two ships undergoing substantial repair or, in the case of Cumberland, rebuilding. In addition to the volume of work on ships, the late 1850s were also conspicuous because of the character of the vessels at the yard. Among the approximately twenty ships repaired at Boston during the five years before secession were some of the Navy’s largest and latest, such as Merrimack, Roanoke, Colorado, Minnesota, and Mississippi, all steam powered.

In several different respects, the period 1856-1860 appears as an unusual one in the history of the Boston Navy Yard. Important improvements occurred in the yard’s physical plant, especially in its capabilities to service and build the Navy’s most up-to-date warships. And the yard, indeed, did build two steam sloops of war and repaired a half dozen other ships of recent construction. Certainly, no previous period of comparable length witnessed as much in the way of growth and accomplishment. That this period of the yard’s history has not been recognized as important is doubtless a result of the truly momentous developments associated with the Civil War.
Chapter VI

THE CHARLESTOWN NAVY YARD AND THE CIVIL WAR, 1861-1865

The Civil War was the high point in the history of the Charlestown Navy Yard during the nineteen century. In the years 1861 to 1865, the yard easily outdistanced all previous periods in terms of basic functions—the construction, outfitting, and repair of ships of the United States Navy. Subsequent to Appomattox, the Navy and its shore facilities suffered a long decline, and not until 1917 did the Charlestown yard achieve a volume of activity surpassing that of the Civil War.

In the spring of 1861, the principal challenge to the Navy was the acquisition of sufficient vessels to prosecute a vigorous maritime war against the Confederacy. The Union accomplished rapid expansion of its fleet principally through new construction in its own yards and under contract with commercial shipyards and through purchasing privately owned vessels. The Charlestown Navy Yard participated in these programs. In addition, the yard made a valuable contribution to the war effort through another basic shipyard function, the repair of ships in the Navy's vastly enlarged fleet. A sizeable part of the current chapter covers these essential wartime activities of the Charlestown Navy Yard. However, the sheer magnitude of the yard's effort, especially in the repair of ships, makes complete coverage virtually impossible. Accordingly, the ship repair activities of the yard is covered in detail only for the first twenty months of the conflict.

ADMINISTRATION

At the urging of Gideon Welles, President Abraham Lincoln's Secretary of the Navy, Congress enacted several bills changing the structure of the Navy Department. The first created the office of Assistant Secretary of the Navy. Of greatest importance was an act of Congress of August 1862, which reorganized the bureau system. Since 1842, there had been five bureaus: Construction, Equipment and Repair; Ordnance and Hydrography; Medicine and Surgery; Provisions and Clothing; and Yards and Docks. The new organization consisted of eight bureaus: Construction and Repair; Equipment and Recruiting; Steam Engineering; Navigation; Ordnance; Provisions and Clothing; Yards and Docks; and Medicine and Surgery. The legislation provided that the Secretary of the Navy appoint the bureau chiefs and that the chiefs of the Bureaus of Navigation, Ordnance, Yards and Docks, and Equipment and Recruiting be line officers. The head of Construction and Repair would be a naval constructor; Steam Engineering, a chief engineer; Medicine and Surgery, a naval surgeon; and Provisions and Clothing, a naval paymaster.1

The reorganization had an impact on navy yards. It increased the number of authorities in Washington to whom yard commandants were answerable. Previously, the Bureau of Yards and Docks had formal oversight of much of the activity at navy yards. The multiplication of bureaus, especially the establishment of separate Bureaus of Steam Engineering and of Equipment, eroded the authority of Yards and Docks. Making steam engineering independent of the Bureau of Construction constituted an administrative recognition of the emergence of steam for propulsion of ships, and it made the yard's chief engineer the equal of the naval constructor. However, it fragmented responsibility for the construction and repair of ships. Shortly after the war, the yards would achieve an organization even more reflective of that in Washington, there being a yard department for each of the bureaus. Another change was taking place without Congressional legislation. Secretary Welles pursued policies which had the effect of reducing the activity of navy yard agents and by the end of the war, those officials were eliminated from yard organizations.

The Charlestown Navy Yard had three commandants during the years of the Civil War. William

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Hudson had assumed command in April 1859 and remained as commandant until June 1862. Then Hudson, in poor health for some time, became Inspector of the 3d Lighthouse District. John B. Montgomery, officially retired in December 1861, resumed active duty and replaced Hudson. Two years later, Montgomery was ordered to the commandancy of the Washington Navy Yard, and Silas Stringham returned to Charlestown as commandant. After his first tour as commandant of the Charlestown Navy Yard, 1855-1859, Stringham had spent most of his time ashore. In May 1861, he was ordered to sea as commander of the Atlantic Blockading Squadron. Newspapers and the heads of the Navy in Washington criticized Stringham for inactivity. At his request, the Navy relieved him of his command and placed him on the retired list. Stringham served on various boards until December 1863, when he was ordered to Charlestown, where he remained as commandant until December 1866.

Doubtless the war caused some discontinuity and turnover in the personnel responsible for the administration and supervision of the Charlestown Navy Yard. For example, responding to Lincoln's call for volunteers in late April 1861, Civil Engineer Billings reported for duty with the Massachusetts militia. He returned to the yard by the following January, if not before. During Billings' absence, Assistant Civil Engineer W. E. Babbitt filled his position.

War also meant activities at the yard unknown in peacetime. In mid-July 1863, marines from the barracks and a number of sailors turned out under arms and were kept on stand-by for duty in the event the draft riots, then raging in New York City, spread to Boston. In the following January, there were brought to the yard about 300 Confederate prisoners. They were sent to the receiving ship, pending transfer to Union prison camp. Later that year, four Confederate officers and their servants arrived and were confined at the Marine Barracks, until arrangements were made for their transfer to Fort Warren.

THE YARD AND THE EXPANSION OF THE UNION NAVY

The United States Navy was as unprepared for war as the Army. When Lincoln was inaugurated on March 4, 1861, vessels of all kinds on the Navy List numbered only ninety. Fifty were sailing line-of-battle ships, frigates, sloops, and brigs, "which, splendid vessels as they had been in their day, were now as obsolete as the galleys of Themistoles." More than half of the ninety vessels were in ordinary, leaving only forty-two vessels in commission at the opening of the Lincoln administration. Many were on foreign station, with no cable in existence to recall them promptly. In response to the attack on Fort Sumter, Lincoln issued two proclamations of blockade. The first, dated April 19, 1861, applied to the coasts of the Lower South from the northern border of South Carolina to the Rio Grande. The second proclamation, issued on April 27, covered the coasts of Virginia and North Carolina. Maintaining an effective blockade of almost 3000 miles of coasts of the Confederacy constituted a monumental task.

The Navy also needed other ships and other kinds of ships for other purposes. Not all of those needs were clearly visible at the very beginning of the war. For the heavy demands of maintaining the blockade, supporting amphibious operations against the Southern coasts, combatting Confederate cruisers and privateers, and protecting ocean commerce, a navy had almost to be constructed de novo.

By the end of the Civil War, the Union had acquired a naval force remarkable in several of its
Plate 9: A photograph of the shot park, Charlestown Navy Yard, c. 1865. The Marine Corps Barracks can be seen in the background.
features, not least of which was its vast size, more than 600 vessels, making it one of the largest if not the largest navy in the world. That great naval expansion had been accomplished in several ways. New ships were constructed both in the Navy's own yards and through contracts with private shipbuilders. Another source was privately owned vessels which the Navy purchased and converted for military use. Somewhat in the same category were Confederate or foreign vessels seized as prizes and acquired through proceedings of prize courts, such as the one in the city of Boston. The Charlestown Navy Yard contributed to the expansion of the Union fleet by itself building ships, by outfitting and commissioning vessels built by contractors, by purchasing and readying for sea ships previously owned by private parties, and by preparing for the Union's use ships acquired through the prize courts.

Of the various new construction programs undertaken by the Navy Department, the Charlestown Navy Yard participated in five, by either itself building ships or by outfitting those built by contractors. Those five programs were: the steam sloops of war, authorized by legislation enacted prior to the secession crisis; small gunboats, the so-called "90-day gunboats"; the double-ender gunboats; the ironclad monitors of various classes; and the cruiser program.

When the war began in April 1861, the Charlestown yard had no ships under construction. But before the end of June, two keels had been laid. The Union's first building program resulted from legislation enacted late in Buchanan's administration, which authorized the construction of seven steam sloops of war. On May 10, 1861, the Bureau of Construction and Repair notified Commandant Hudson that one of the vessels was to be built at the Charlestown yard. The keel of what became Housatonic was laid on May 30 in Shiphouse H. Four days later, the Department ordered the yard to construct a second steam-screw sloop. Directions were received to begin without delay. Plans and building instructions were ordered sent from the New York Navy Yard, which had built Iroquois. The second keel, for Wachusett, was laid on June 26, in Shiphouse No. 3.

Construction of the hulls proceeded rapidly. Wachusett was launched on October 10 and Housatonic on November 20. Jabez Coney of Boston had the contract for Housatonic's machinery, which was to be delivered on or before September 30, ninety-five days from the date of the signing of the contract. Considerable time passed before the machinery for both vessels was delivered and installed. In mid-February 1862, Wachusett's engines, boilers, and other machinery had been placed in position. The Bureau of Construction and Repair directed she be sent to sea with no further trial than a seventy-two-hour test at the wharf. During the final twelve hours of the wharf trial, it was determined that pressure could be maintained at twenty pounds with a wide open throttle. Having passed her tests, Wachusett departed the yard on March 12, for assignment with the North Blockading Squadron.

Installing machinery in Housatonic and outfitting her dragged, and it was late August 1862 before she was commissioned. On September 3, she was hauled out into the stream and taken on a trial run down the harbor. She was back at the yard the next day and received adjustments to her machinery. On September 11, Housatonic departed the yard, arriving off Charleston, South Carolina, eight days later.

In October 30, 1861, the Department decided the Charlestown yard should build a third Housatonic-class steam-screw sloop. The bureau wrote that the objective was "to have an exceedingly fast vessel." As she would employ steam most of the time, the vessel was to carry about 450 tons of coal. Her steam machinery would be built under contract. The keel of the new ship, to be called Canandaigua, was laid in Shiphouse H on November 27. The hull was launched in late March 1862 and was immediately docked. Work on Canandaigua proceeded more rapidly than on Housatonic, launched two weeks earlier. Canandaigua was commissioned on August 1, 1862, made her trial run on August 5 and 6, and sailed from the yard on August

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6 Lenthall to Hudson, Apr. 17, May 10, June 3, June 4, 1861, NA, RG 19, Ltrs. Recd., C&R.
7 Lenthall to Hudson, Feb. 27, 1862, NA, RG 19, Ltrs. Sent, C&R.
18 to join the South Atlantic Blockading Squadron off Charleston.9

For service on rivers and in narrow sounds and channels, the Navy turned to the design and construction of twelve sidewheel steamers, 300 to 400 tons heavier than the 90-day gunboats, but still of very shallow draft. To avoid the necessity of turning, they were provided with a double bow and with a rudder at each end. These became the famous "double-enders." The first twelve were designated the Octorara class. Twenty-seven longer vessels of a similar design followed, known as the Sassacus class.10

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Date Keel Laid</th>
<th>Date Launched</th>
<th>Date Commissioned</th>
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<tr>
<td>Wachusett</td>
<td>Steam sloop</td>
<td>6/26/61</td>
<td>10/10/61</td>
<td>3/2/62</td>
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<td>Steam sloop</td>
<td>5/30/61</td>
<td>11/10/61</td>
<td>8/29/62</td>
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<td>Double-ender</td>
<td>8/31/61</td>
<td>11/26/61</td>
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<td>Double-ender</td>
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<td>12/7/61</td>
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<td>8/8/62</td>
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<td>7/30/63</td>
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<td>6/4/63</td>
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<td>1/15/63</td>
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<td>Monitor</td>
<td>8/7/62</td>
<td>3/23/64</td>
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<td>Monitor</td>
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<td>Cruiser</td>
<td>8/22/63</td>
<td>7/21/64</td>
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<td>1/2/64</td>
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<td>Cruiser</td>
<td>8/8/64</td>
<td>9/9/65</td>
<td>5/21/67</td>
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<td>11/30/64</td>
<td>8/25/66</td>
<td>2/27/71</td>
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<tr>
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<td>Screw steamer</td>
<td>9/14/65</td>
<td>8/15/67</td>
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SOURCES: Records of Bureau of Ships (RG 19), National Archives; Dictionary of American Naval Fighting Ships

In mid-August 1861, the Bureau of Construction and Repair notified Commandant Hudson that it had been decided to build a sidewheel steamer at the yard. Hudson was to have the yard's naval constructor prepare plans for a vessel with a draft not to exceed six feet, nine inches. The armament was to be two 80-pounder rifled pivot guns, each of which would weigh from 6500 to 7000 pounds, one at each end of the vessel. She would also have two 12-pounder howitzers to be emplaced in the broadside ports. The ship would have a complement of about 100 officers and men and stowage for sixty days' provision and 2000 gallons of water in tanks. The bureau directed that the vessel be schooner rigged, have a rudder at both ends, be of high speed, and carry coal for at least eight days. Harrison Loring of Boston was awarded the contract for the machinery, which was to be completed and installed ready for service in ninety days from August 21, provided


the craft was launched by October 31. In subsequent directions, the bureau notified the yard that the vessel was to be named Maratanza.\textsuperscript{11}

On August 31, yard workmen laid the double-enders keel on the ways located between Shiphouses H and I. Maratanza slid down the ways on November 26, 1861. Nearly five months passed before the ship's machinery was installed and her outfitting completed. Commissioned on April 20, 1862, she sailed from the yard six days later for Hampton Roads.\textsuperscript{12}

Five months before the commissioning of Maratanza, the Department called for the building at the Charlestown yard of two more double-enders of the same size. The contractors for the steam machinery were Morgan Iron Works and Neptune Iron Works, both of New York City. Orders were given that the vessels be launched in "85 consecutive days from November 25." The keel of Genesee was laid on the ways between Shiphouses H and I on December 6, 1861, and that of Tioga in Shiphouse No. 39 the next day. The yard launched Genesee on April 2, 1862, and Tioga sixteen days later. Genesee entered commission in early July 1862 and sailed from the yard on the 5th of that month for service with the North Atlantic Blockading Squadron. Tioga was commissioned in late June and soon put to sea.\textsuperscript{13}

The Union Navy's double-enders proved themselves on the North Carolina sounds and in the riverine warfare of the sea island coasts of South Carolina and Georgia. Their success led the Navy to build twenty-seven larger vessels of this type, the Sassacus class, which were of 474 tons and mounted eight guns. Two of the Sassacus-class double-enders were constructed at the Charlestown Navy Yard. On August 8, 1862, the keel of Tallapoosa was laid in Shiphouse No. 39. The Neptune Iron Company had the contract for her machinery. The original intention was to launch her within eighteen weeks. The yard was unable to meet that schedule, and not until mid-February 1863 did she slide down the ways. Tallapoosa was towed to the New York Navy Yard, where her machinery was installed, and she was commissioned in September. Seventy-two hours after the launching of the first large double-ender, her sister ship's keel was laid in Shiphouse No. 39. A Providence firm built the machinery. Christened Winooski, she was launched on July 30.\textsuperscript{14}

In the autumn of 1862, the Navy undertook to construct in its own yards screw gunboats similar to the Unadilla-class vessels built under contract during the first year of the war. The Charlestown Navy Yard constructed two of these gunboats. On October 18, 1862, yard workmen laid a keel on the ways in Shiphouse H for what became Pequot. The yard received instructions to built the vessel with a length of 190 feet, a twenty-nine-foot beam, and a twelve-foot hold. She was to displace 593 tons and mount twelve guns. Pequot's machinery was contracted to Woodruff and Beach of Hartford. The ship was launched on June 4, 1863, and was commissioned on January 15, 1864. She sailed in early February to join the North Atlantic Squadron off the North Carolina coast. The keel of the second gunboat, Saco, was laid on the Vermont ways at the yard's upper end. A contract for the machinery was awarded to Corliss Steam Engine Co., of Providence. She was launched in August 1863. Commissioned in July 1864, Saco soon thereafter put to sea for duty with the North Atlantic Squadron.\textsuperscript{15}

Early in the war, the Navy embarked on a program of constructing ironclads. In August 1861, a special session of Congress passed an appropriation of $1,500,00 for armored ocean-going vessels, to be built upon plans approved by a board composed of the ablest captains in the service. From the large number of

\textsuperscript{11} Lenthall to Hudson, Aug. 13, Aug. 21, Oct. 5, 1861, NA, RG 19, Ltrs. Sent, C&R.

\textsuperscript{12} DANFS, vol. IV, p. 228.


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Plate 10: USS TALLAPOOSA. One of five double-enders constructed and launched by the Charlestown Navy Yard during the Civil War, Tallapoosa remained in service for the next twenty-five years. In 1874-75, she was rebuilt as a single-ender.
designs proposed, three were selected by the board. Upon these plans were built Monitor, Galena, and New Ironsides. The epochal battle between the ironclad Monitor and Virginia (the former Merrimack) had worldwide repercussions for naval architecture. The day before the engagement, Virginia had sunk Cumberland and Congress. Monitor’s success in checkmating and neutralizing Virginia led the Navy to embark on an expensive and ambitious construction program featuring Monitor-type ironclads. The Charlestown Navy yard started construction of two of these vessels.6

In the summer of 1862, the Department directed Commandant Montgomery to have the yard’s naval constructor prepare and forward plans of the first of the ships, a double-turreted monitor, for review by the Bureau of Construction and Repair. However, a hitch developed when the Bureau of Ordnance failed to promptly provide details of the kind and caliber of armament to be carried by the vessel. By early September, the keel had been laid for the ironclad, which was to be called Monadnock. The bureau invited proposals from private ironworks for supplying the yard with iron plates and turrets for the ship. The Navy selected the bid of the Atlantic Works of nearby East Boston. The contract stipulated that the company deliver the side armor and deck plating at the yard, “sheared to shape” and “not to exceed 1,200 lbs each in weight.” The Navy would bend and drill the iron plate, and for that purpose a powerful machine was requisitioned. A Philadelphia firm, I. P. Morris, had the contract for the ship’s machinery.7

After construction had been underway for four months, the Bureau of Construction and Repair ordered changes in the hull, reducing the size of the deck’s overhang and making other modifications so that “it may not be struck heavily by the sea.” The alterations resulted from an incident in late December 1862, when Monitor foundered off Cape Hatteras. Another ironclad, Passaic, also had had difficulties. Despite these changes, work on the hull of Monadnock progressed satisfactorily, and she was launched on March 23, 1863. Her fitting out, however, proceeded slowly. It was autumn of 1864 before her steam machinery was installed and her armor and double turrets positioned. The ship entered commission on October 4 and sailed from the yard three days later. Monadnock proved her usefulness during the war and demonstrated her seaworthiness in late 1865, when she made a voyage through the Straits of Magellan to the Pacific.8

The Charlestown Navy Yard started construction of a second twin-screw, double-turreted monitor, named Quinsigamond. Her keel was laid on April 15, 1864, and the Navy made contracts with five different firms for her machinery, turrets, wrought iron stringers, iron plating, and truss frames and ventilating system. The end of the war and a dramatic cutback in funds for ship construction resulted in orders from the Department in November 1865 for the yard to cease work on the monitor’s hull and for the contractors to suspend work on the components. The ship remained unfinished on the stocks.9

During the war, the Navy did not build additional screw-frigates of the 1855 class. Except in a few instances, vessels of that type proved ineffective. Colorado could not be taken over the bar at the mouth of the Mississippi in the attack on New Orleans, and Roanoke and Minnesota were helpless at Hampton Roads against Virginia. However, in the latter half of the war, the Navy undertook construction of a class of vessels of considerable size, but very different in character. These were large, wooden steamers, with handsome lines, “excessively long and sharp and narrow, of light draft for their size, in which every quality was sacrificed for speed.” Seagoing cruisers, their principal mission was to hunt down and destroy Rebel commerce raiders. They carried heavy armament, but the chief objective of the Navy was to secure speed. And in those cruisers that were built and put to sea, that objective was realized. Wampanoag, largely designed by the Navy’s Chief Engineer, Benjamin Isherwood, attained the record speed of seventeen and three-quarter knots, which made

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her the fastest vessel in the world.

The Navy planned to construct twenty-eight of these ships, divided into three main classes, designated Ammonoosuc, Java, and Contoocook. Keels were laid for most of the cruisers, but only a few were launched, and those only after the end of the war. Under the pressure of necessity, they were built of unseasoned white oak, instead of the live oak hitherto used for the framing and structural timbers for ships of war. Consequently, the cruisers in the program that were built were no sooner in the water than they began to decay.20

The Charlestown Navy Yard laid the keels for four cruisers in this program. The first was for Ammonoosuc, and the second for a vessel in the same class named Pompanoosuc. Ammonoosuc was started on the ways in Shiphouse No. 39 on August 22, 1863. Morgan Iron Works of New York City had the contract for her engines and machinery. The yard launched the hull in July 1864, but the end of hostilities delayed her completion. Not until June 1868 was the 335-foot long, 2,190-ton cruiser ready for her trials. Work began on Pompanoosuc in January 1864, her keel being laid on the ways between Shiphouses H and I. The Navy entered into a contract for her engines and machinery. Although never launched, the ship was renamed Connecticut in 1869.21

The navy yard at Charlestown did complete two other ships in the Navy's Civil War cruiser program. One was the Java-class Guerriere, whose keel was laid on the ways in Shiphouse No. 39 in August 1864. The Globe Works of Boston secured the contract for her engines and boilers. The yard launched the 2100-ton, 319-foot vessel in early September 1865. Eighteen months later, she was commissioned, and in June 1867, sailed for New York. The keel of Manitou, a Contoocook-class vessel, was laid on the Vermont ways in November 1864. The launching occurred in August 1867, and the commissioning in February 1871.22

In addition to ships for the blockade of coasts of the Confederacy and for contending with Rebel commerce raiders on the high seas, the Union navy also had to provide craft for warfare on the rivers of North America. Especially during the early months of the conflict, small craft were pressed into service to meet the emergency. In July 1861, recognizing the need to provide armed patrol boats for warfare on the Potomac, the Bureau of Construction and Repair asked navy yard commandants about the availability of sloop launches or frigate cutters mounting guns. Commandant Hudson replied that available in his yard were Vermont's four cutters, all of which could be armed. The Department directed that each of the four cutters be mounted with a 12-pounder boat howitzer and that they be sent to Washington or Fort Monroe. Two months later, the Department made a similar inquiry concerning the number of whale boats or surf boats at the yard. Preparations were made to rush the three available whaleboats southward for service on the Potomac.23

To achieve a rapid expansion of its fighting power afloat, the Navy Department, without waiting for Congressional action, contracted with private ship works to construct small, heavily armed screw-gunboats. Twenty-three of these were built. They were of 507 tons and mounted from four to seven guns. Within four months of the date of the contract, some of them were afloat, armed, and manned. Their rapid construction won them the name "90-day gunboats."

Contractors delivered nine of these vessels to the Navy at the Charlestown yard. The yard armed, outfitted, manned, and commissioned the vessels. Sagamore arrived first, having been built by A. & G. T. Sampson and the Atlantic Works of East Boston. Launched on September 1, 1861, she came to the yard on November 7, and was commissioned one month later. Sagamore sailed from the yard on December 19 to join the East Gulf Blockading Squadron. Thus, the vessel spent six weeks in the yard. That may have been something of a record, both for the yard and the builder. On November 20, Huron, the second of the 90-day

gunboats, arrived at the yard. She departed ready for duty on February 8, having been in the yard for more
than eleven weeks. Still, the gunboat program succeeded and contributed to the rapid enlargement of the
Union fleet, and on April 1862, the last of the nine vessels delivered to it had been outfitted, armed and
readied by the Charlestown Navy Yard.24

Subsequent to the completion of the 90-day gunboat program, fourteen other vessels built under
contract with the Navy were delivered to the yard. There, they were inspected, outfitted, manned, and
commissioned. Of these vessels, five were double-ender gunboats. Curtis and Tilden of Boston built the hulls
of two 974-ton Sassacus-class double-enders. Globe Works made the engines, boilers, and other machinery
for the first of them, Massasoit, and the Atlantic Works produced those components for the other, Osceola.
Launched in March 1863, Massasoit came to the yard on January 23, 1864. She was commissioned in the
following March, but remained in the yard and went into ordinary in late July. Recommissioned on short
notice on August 25, 1864, Massasoit sailed under orders to patrol the New England coast against Confederate
raiders. Osceola, although launched after Massasoit, had been the first in the yard and had sailed on April 22,
1864, towing a monitor to Hampton Roads. It does not appear that the other three double-enders received
from contractors in the second half of the war saw action during the Civil War. Indeed, the last of them,
Ashuelot, did not arrive at the yard until November 1865.25

Ironclad monitors constituted nine of the vessels received at the Charlestown Navy Yard from private
contractors. Two were single-turreted, 1,875-ton ships of the Passaic class. On October 7, 1862, Harrison
Loring’s City Point Works, South Boston, launched Nahant. Subsequently delivered to the navy yard, she was
commissioned in late December and joined the Union naval forces off South Carolina on February 20, 1863.
The Atlantic Iron Works of East Boston launched the second Passaic-class monitor, which had the name
Nantucket. Arriving at the Charlestown Navy Yard on February 23, 1863, she was commissioned and sailed
south in time to participate in an attack on Confederate forts in Charleston Harbor on April 7. In addition
to Nahant, Harrison Loring also constructed Canonicus, a single-turreted coastal monitor, which gave her
name to her class. She came to the Charlestown Navy Yard in March 1864 and was commissioned in April.
She sailed on April 22, under the command of Enoch G. Parrott, a future commandant of the yard.26

The Charlestown yard received from contractors six Casco-class monitors, single-turreted, light draft
vessels of 614 tons, intended for use in rivers, bays, and shallow coastal waters. A design flaw, not discovered
until many of the ships had been constructed, produced one of the least successful classes of Civil War ships.
The launching of Chimo in early May 1864 revealed a miscalculation in the displacement of Casco-class
monitors, which resulted in insufficient freeboard to be seaworthy. The Bureau of Construction and Repair
sought to correct this defect in others of the Casco class not yet in an advanced stage of construction.
However, several of the monitors, including some produced in the Boston area, proved incapable of
performing their original purpose.

Chimo was built by Aquila Adams at his South Boston yard from plans prepared by John Ericsson.
It was her launching on May 5, 1864, that indicated defects in the Casco class. Even without her turret and
stores, Chimo had only three inches of freeboard, instead of the designed fifteen inches with the ship ready
for sea. The contractor delivered the vessel to the navy yard on November 28, and she was outfitted and
commissioned in January 1865. However, Chimo then proceeded to the yard at New York, where she was
fitted with torpedo gear and an XI-inch Dahlgren smoothbore. The particular ship whose name was used for
the class was built by the Atlantic Works. Launched in May 1864 and delivered to the Charlestown yard in
September of the same year, Casco was pronounced unsweaworthy when nearly completed. She was ordered
to be converted to a torpedo vessel, without turret or heavy gun. Casco was commissioned in early December


1864 and was towed to Hampton Roads the following March. 27

Five of the light draft Casco-class monitors did not arrive in the Charlestown Navy Yard until after the fighting ceased. These were Squando, Shawnee, Nausett, Suncook, and Wassuc.

Table 4: VESSELS BUILT UNDER CONTRACT AND OUTFITTED AND COMMISSIONED AT CHARLESTOWN NAVY YARD, 1861-1865

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Builder</th>
<th>Launched</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huron</td>
<td>Screw gunboat</td>
<td>Paul Curtis, South Boston</td>
<td>9/21/61</td>
</tr>
<tr>
<td>Chocura</td>
<td>Screw gunboat</td>
<td>Curtis &amp; Tilden, East Boston</td>
<td>10/5/61</td>
</tr>
<tr>
<td>Marblehead</td>
<td>Screw gunboat</td>
<td>Geo. Jackson, Newburyport</td>
<td>10/16/61</td>
</tr>
<tr>
<td>Sagamore</td>
<td>Screw gunboat</td>
<td>A. &amp; G. Sampson, East Boston</td>
<td>9/1/61</td>
</tr>
<tr>
<td>Katahdin</td>
<td>Screw gunboat</td>
<td>Larrabee &amp; Allen, Bath</td>
<td>10/12/61</td>
</tr>
<tr>
<td>Kennebec</td>
<td>Screw gunboat</td>
<td>G.W. Lawrence, Thomaston</td>
<td>10/5/61</td>
</tr>
<tr>
<td>Kino</td>
<td>Screw gunboat</td>
<td>J.W. Dyer, Portland</td>
<td>10/9/61</td>
</tr>
<tr>
<td>Penobscot</td>
<td>Screw gunboat</td>
<td>G.P. Carter, Belfast</td>
<td>11/19/61</td>
</tr>
<tr>
<td>Aroostook</td>
<td>Screw gunboat</td>
<td>N.W. Thompson, Kennebunk (1861)</td>
<td></td>
</tr>
<tr>
<td>Massasoit</td>
<td>Double-ender</td>
<td>Curtis &amp; Tilden, East Boston</td>
<td>3/8/63</td>
</tr>
<tr>
<td>Osceola</td>
<td>Double-ender</td>
<td>Curtis &amp; Tilden, East Boston</td>
<td>1/9/64</td>
</tr>
<tr>
<td>Winniepec</td>
<td>Double-ender</td>
<td>H. Loring, Boston</td>
<td>8/20/64</td>
</tr>
<tr>
<td>Ashuelot</td>
<td>Double-ender</td>
<td>Donald McKay, East Boston</td>
<td>7/22/65</td>
</tr>
<tr>
<td>Iosco</td>
<td>Double-ender</td>
<td>Larrabee &amp; Allen, Bath</td>
<td>3/30/63</td>
</tr>
<tr>
<td>Nantucket</td>
<td>Monitor</td>
<td>Atlantic Works, East Boston</td>
<td>12/6/62</td>
</tr>
<tr>
<td>Nahant</td>
<td>Monitor</td>
<td>H. Loring, South Boston</td>
<td>10/7/62</td>
</tr>
<tr>
<td>Caninicus</td>
<td>Monitor</td>
<td>H. Loring, South Boston</td>
<td>8/1/63</td>
</tr>
<tr>
<td>Chimo</td>
<td>Monitor</td>
<td>Aquila Adams, South Boston</td>
<td>5/5/64</td>
</tr>
<tr>
<td>Casco</td>
<td>Monitor</td>
<td>Atlantic Works, East Boston</td>
<td>5/7/64</td>
</tr>
<tr>
<td>Shawnee</td>
<td>Monitor</td>
<td>Curtis &amp; Tilden, East Boston</td>
<td>3/13/65</td>
</tr>
<tr>
<td>Nausett</td>
<td>Monitor</td>
<td>Donald McKay, East Boston</td>
<td>4/26/65</td>
</tr>
<tr>
<td>Squando</td>
<td>Monitor</td>
<td>McKay &amp; Aldus, East Boston</td>
<td>1/6/65</td>
</tr>
<tr>
<td>Suncook</td>
<td>Monitor</td>
<td>Globe Works, South Boston</td>
<td>2/1/65</td>
</tr>
</tbody>
</table>

SOURCES: Records of Bureau of Ships (RG 19), National Archives; Dictionary of American Naval Fighting Ships

The only way the Navy could acquire additional bona fide warships was by having them built in its own yards or through contracts with private shipbuilders. However, a readiness to make do with whatever was available allowed use of another source in the expansion of the fleet. Among the measures adopted by the North for increasing its naval forces was the purchase from shipowners of anything afloat that could be made of service. Indeed, it was said that the vessels bought by the government included every kind of ship "from Captain Noah to Captain Cook." Purchases were made directly by the Department or by officers acting under its direction.

This program went into effect almost immediately, and by the end of June 1861, twelve steamers had been purchased and nine others engaged under charter. It was decided that the purchase of vessels from private parties was a "mercantile matter" and as such should be placed in the hands of businessmen who would conduct transactions as agents of the Navy Department. Each purchase was inspected by a board of officers,

and in this way the Department hoped to secure, as far as any were to be found, vessels at fair prices. Vessels purchased were of all sizes and descriptions, from clipper ships and tugs to screw-steamers and sidewheelers of 2,000 tons. By December 31, 1864, the Navy had purchased seventy-nine steamers and fifty-eight sailing vessels, 137 in all.28

Of the first twelve ships purchased by the government, two were acquired in the Boston area and outfitted and commissioned at the Charlestown Navy Yard. On May 3, 1861, Commandant Hudson purchased from the Boston & Southern Steamship Co. two screw-propeller steamers, Massachusetts and South Carolina. The yard rushed work in converting these vessels into auxiliary cruisers, and South Carolina was commissioned on May 22. Two days later she sailed for the Gulf of Mexico, with ordnance and ammunition for the Union forces holding Fort Pickens and blockading Pensacola. Commissioned on May 24, Massachusetts put to sea on the 27th, bound for duty with the West Gulf Blockading Squadron.29

Subsequently, at least forty-one other vessels, purchased by the government, arrived at the Charlestown Navy Yard to be prepared for service with the Union naval forces.30 Those ships were of a variety of types and included, for example, the 1,012 ton sailing ship Fearnot; the steam ferryboat John Adams; the clipper ship Ino; and the screw tug Sunflower. Most of the vessels previously had belonged to private individuals or companies. However, the steamer Cambridge had been owned by the Commonwealth of Massachusetts, and in the first weeks of the war, the yard had cooperated with state officials in getting her outfitted. The yard provided two 8-inch guns, carriages, breechings, ammunition, and other ordnance implements; two water tanks; and copper for the magazines. In July, the local purchasing board negotiated for the sale of the ship to the United States government.31

Throughout the war, Confederate and British vessels sought to run the Union blockade. When caught, such vessels became prizes, to be processed through prize courts. Such a court existed at Boston, and fifteen of the forty-two vessels purchased by the Navy and delivered at the Charlestown Navy Yard during the Civil War were acquired through the Boston Prize Court. Aries appears as the first such vessel. An iron screw steamer built in England, she attempted to run the blockade in Bulls Bay, South Carolina, in late March 1863, and was captured by a Union gunboat. Brought to the Charlestown yard by a prize crew, she dropped anchor in the Charles on April 21. The Navy purchased Aries one month later, paying the prize court $100,000. Refitted at the yard, she was commissioned on July 25 and the following day sailed for North Carolina and service with the North Atlantic Blockading Squadron.32

The Navy had no interest in purchasing vessels needing extensive repairs. Of the ships acquired in the Boston area, one appears to have been a conditional purchase. In September 1861, Curlew arrived in the yard, her purchase by the Navy being contingent on her performance during a trial period of sixty days. A large number of the ships acquired by purchase at Boston were of recent construction. The screw steamer Iron Age had been built in Kennebunk, Maine, in 1862 and was purchased by the Navy in late April 1863. Several others were even newer and apparently were acquired by the Navy immediately upon their completion. R. B. Forbes, built Niphon, a wooden and iron screw steamer, at his yard in East Boston, the vessel being launched in February 1863. She was hauled to the Charlestown Navy Yard on April 15 and entered commission April 24. In this transaction, the purchase was consummated after the vessel had been processed and put to sea, Niphon becoming the property of the United States on May 9. The shipbuilding firm of


30 See Table 5, p. 159. Lists of vessels purchased by the government and made ready at the yard are in Preble, pp. 614-17; and Stephen P. Carlson, Ships Built by the Charlestown Navy Yard [Draft](1992), pp. 85-89.

31 Hudson to Green, Apr. 30, 1861; Hudson to Lenthall, July 26, 1861 NA, RG 19, Ltrs. Recd., C&R; Lenthall to Hudson, July 29, 1861, NA, RG 19, Ltrs. Sent, C&R.

<table>
<thead>
<tr>
<th>Name</th>
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<th>Cost</th>
<th>From</th>
<th>Date Commissioned</th>
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<td>$172,500</td>
<td>Boston &amp; Southern</td>
<td>5/22/61</td>
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<td>Massachusetts</td>
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<td>Boston &amp; Southern</td>
<td>5/24/61</td>
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<td>Fearnot</td>
<td>7/20/61</td>
<td>40,000</td>
<td>G.W. Jackman</td>
<td>8/28/61</td>
</tr>
<tr>
<td>Young Rover</td>
<td>7/27/61</td>
<td>27,500</td>
<td></td>
<td>9/10/61</td>
</tr>
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<td>Cambridge</td>
<td>7/30/61</td>
<td>75,000</td>
<td>State of Mass.</td>
<td>8/29/61</td>
</tr>
<tr>
<td>Kingfisher</td>
<td>8/2/61</td>
<td>17,000</td>
<td></td>
<td>10/3/61</td>
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<tr>
<td>William G. Anderson</td>
<td>8/23/61</td>
<td>27,500</td>
<td></td>
<td>10/2/61</td>
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<td>Ethan Allen</td>
<td>8/23/61</td>
<td>27,500</td>
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<td>Ino</td>
<td>8/30/61</td>
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<td></td>
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<td>Gemsbok</td>
<td>9/7/61</td>
<td>29,000</td>
<td></td>
<td>8/30/61</td>
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<td>Curlew</td>
<td>9/15/61</td>
<td>44,000</td>
<td>(to US Army)</td>
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<td>Kensington</td>
<td>1/27/62</td>
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<td>Commo. Patterson</td>
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<td>Iron Age</td>
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<td>Sunflower</td>
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<td>Niphon</td>
<td>5/9/63</td>
<td>75,000</td>
<td>R.B. Forbes</td>
<td>4/24/63</td>
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<td>Aries</td>
<td>5/20/63</td>
<td>100,000</td>
<td>Boston Prize Court</td>
<td>7/25/63</td>
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<tr>
<td>Howquah</td>
<td>6/17/63</td>
<td>49,000</td>
<td>G.W. Upton</td>
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<tr>
<td>Queen</td>
<td>9/29/63</td>
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<td>8/15/65</td>
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<tr>
<td>Britannia</td>
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<td>Boston Prize Court</td>
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<td>R.T. Renshaw</td>
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<tr>
<td>Acacia</td>
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<td>C. W. Wilder</td>
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<td>Cornubia</td>
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<td>Harvest Moon</td>
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<td>Charles Spear</td>
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<td>Young America</td>
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<td>13,500</td>
<td>Boston Prize Court</td>
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<td>Fort Donelson</td>
<td>1/64</td>
<td>73,000</td>
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<td>6/29/64</td>
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<td>Malvern</td>
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<td>2/9/64</td>
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<td>Cherokee</td>
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<tr>
<td>Philippi</td>
<td>2/23/64</td>
<td>30,000</td>
<td>Boston Prize Court</td>
<td>4/64</td>
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<tr>
<td>Azalea</td>
<td>3/31/64</td>
<td>47,000</td>
<td>McKay &amp; Aldus</td>
<td>6/7/64</td>
</tr>
<tr>
<td>Don</td>
<td>4/21/64</td>
<td>66,666</td>
<td>Boston Prize Court</td>
<td>5/15/64</td>
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<tr>
<td>Tristam Shandy</td>
<td>5/64</td>
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<tr>
<td>Belle</td>
<td>6/2/64</td>
<td>20,000</td>
<td></td>
<td>6/64</td>
</tr>
<tr>
<td>Glance</td>
<td>6/2/64</td>
<td>20,000</td>
<td></td>
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</tr>
<tr>
<td>Unit</td>
<td>6/2/64</td>
<td>20,000</td>
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<td>6/64</td>
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<tr>
<td>Dumbarton</td>
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<td>145,000</td>
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<tr>
<td>Phlox</td>
<td>8/2/64</td>
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<td>McKay &amp; Aldus</td>
<td>9/14/64</td>
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<tr>
<td>Little Ada</td>
<td>8/18/64</td>
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<tr>
<td>Bat</td>
<td>11/64</td>
<td>150,000</td>
<td>Boston Prize Court</td>
<td>12/13/64</td>
</tr>
<tr>
<td>Wando</td>
<td>11/5/64</td>
<td>121,000</td>
<td>Boston Prize Court</td>
<td>12/22/64</td>
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<tr>
<td>Trefoil</td>
<td>2/4/65</td>
<td>118,070</td>
<td>Donald McKay</td>
<td>3/1/65</td>
</tr>
<tr>
<td>Yucca</td>
<td>2/25/65</td>
<td>118,987</td>
<td>Donald McKay</td>
<td>4/3/65</td>
</tr>
</tbody>
</table>

**SOURCES:** Preble; DANFS; Carlson; NA RG 19.
McKay and Aldus, East Boston, sold the screw steamer *Azalea* to the Navy within weeks of her launching. The same pattern existed respecting another builder, Donald McKay, and *Trefoil* and *Yucca*. It is possible that R. B. Forbes, McKay and Aldus, and Donald McKay built these ships with the understanding they would be bought by the Navy.\(^3\)

As evident in the activities of the Charlestown Navy Yard, the Navy's purchase of ships contributed significantly to the rapid expansion of the fleet. Doubtless, many of the purchased vessels lacked characteristics desirable in ships of war. But in a quantitative sense the program succeeded. During the era of Civil War, the Charlestown Navy Yard itself constructed seventeen ships; it received from contractors twenty-three vessels, including the unsatisfactory *Casco*-class monitors; and it handled forty-three vessels obtained by the Navy through the purchase program.

**THE YARD AND SHIP REPAIRS, APRIL 1861-DECEMBER 1862**

One major function of the Charlestown Navy Yard was assisting in the expansion of the Union fleet. Another was ship repair. As the fleet rapidly enlarged, the demands on the yard as a repair facility increased.

In the two years prior to the spring of 1861, a half dozen ships sailed into the Charlestown Navy Yard, were placed under repair or in ordinary, were still there when the Confederacy fired on Fort Sumter, and then were made ready for participation in the war. In late May, 1859, the steam frigate *Minnesota* arrived from the Far East. She was decommissioned, her crew transferred, her hold broken out, and her coal landed, and she was surveyed and placed in ordinary. Repairs began in early October and were largely complete in the following spring. However, the Navy did not intend to send *Minnesota* to sea. To protect her from the elements while in ordinary, her deck was covered by hurdles. Nine days before the attack on Fort Sumter, the Navy Department ordered *Minnesota* taken out of ordinary and outfitted. Commandant Hudson notified Washington that she would be ready to receive her crew in twenty days. To expedite her outfitting, the yards and rigging belonging to *Colorado* were transferred to *Minnesota*. *Minnesota* was recommissioned on May 2, 1861, and put to sea, bound for Hampton Roads and duty as the flagship of the Atlantic Blockading Squadron.\(^4\)

In January 1860, the side-wheel steamer *Mississippi*, returning from the China seas, entered the yard. She was decommissioned, and the crew sent aboard the receiving ship, after which she was stripped, cleansed, and placed in ordinary. Some seven months later, in August, the Bureau of Construction and Repair ordered Hudson to begin repairing *Mississippi*. He was to bring the work to such a condition that "she may be taken from ordinary and fitted for sea within four weeks after an order is given." Less than one week before the Confederate cannonade of Fort Sumter, the Navy directed that *Mississippi* be "speedily prepared for sea, with special attention given to her steam machinery." Chief Engineer Quinn informed Hudson that to ready her engines and machinery would take forty working days. Quinn's forecast was correct. On May 23, 1861, *Mississippi*, her crew and supplies aboard, built up a head of steam and started down the harbor. Before she had proceeded far, an accident to her steam delivery pipe compelled her to return to the yard. Repairs were made, and on the 27th, she again cast off for the war zone, arriving off Key West on June 8.\(^5\)

On March 31, 1860, the sloop-of-war *Vincennes* reached the yard. She was decommissioned, her crew paid off, her stores landed, and the holds cleansed. After inspection by a board of survey, *Vincennes* was laid

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up in ordinary. To protect her spardeck from sun and rain, the deck was covered with hurdles. Seventy-two hours before Fort Sumter, the Department ordered *Vincennes* readied for service in the African Squadron. To outfit her for a two years' cruise, Commandant Hudson reported, would require forty-five days' work on her hull. Her rigging and other equipment would require far less time. *Vincennes* went into dock and was caulked and coppered. Undocked on May 22, the ship was hauled under the masting shears. Meanwhile her assignment had been changed to the recently constituted Gulf Blockading Squadron. She had been commissioned and outfitted by July 12, when she put to sea. *Vincennes* was back at the yard on July 20. She remained six days before sailing for the Gulf of Mexico, where she was to reinforce the naval contingent blockading the mouth of the Mississippi.36

Early in April 1860, it having been decided to retain the screw frigate *Colorado* in ordinary, her decks were protected from the weather by a covering of hurdles. News of the firing on Fort Sumter brought orders from the Department on April 20 to take the ship out of ordinary, where she had been since August 1858, and to prepare her for sea. Hudson announced that *Colorado* would be ready to receive her officers in fourteen days. Another six weeks passed, however, before *Colorado* was commissioned on June 3. Two weeks later, she hoisted anchor and put to sea to join the Gulf Blockading Squadron.37

In September 1860, the sloop of war *Preble* returned from the Paraguayan Expedition and was decommissioned. Some six weeks later, she was hauled alongside the sheer wharf and "dismantled." After the usual surveys, she was placed in ordinary. There she remained until April 20, 1861, when orders came from Washington to outfit her for sea duty. On May 22, *Preble* was docked and her copper patched. By that time, she was partially rigged, and Commandant Hudson reported that she would be ready for her crew in eight days, provided "we have weather for painting." Seven weeks later, on July 11, *Preble*, having been recommissioned, sailed for duty with the Gulf Blockading Squadron.38

On November 2, 1860, *Bainbridge*, a brig, arrived at the yard from Rio de Janeiro. She was surveyed, "dismantled," and placed in ordinary. On January 28, perhaps because of the secession of six states, the yard received orders to begin repair of *Bainbridge*. She was to be placed in "such a state of forwardness" that when called for she could be prepared for sea in eight to ten days. At the time of the Fort Sumter attack, Hudson reported the brig ready for her crew. Another five weeks passed, however, before all the billets aboard the brig were filled, and she made sail on May 24, bound for the Gulf of Mexico.39

In addition to these ships, all of them in the yard before the war began, the Charleston Navy Yard, between April 1861 and the end of the year, repaired, outfitted or otherwise made ready for sea five other vessels already in commission. The sidewheel steamer *Susquehanna* was on duty with the Mediterranean Squadron at Sardinia, when her captain learned of the firing on Fort Sumter and Lincoln's call for volunteers. She sailed for the United States on May 5, arriving off the Charlestown Navy Yard on June 6. An inspection disclosed that there was no need to haul her into dry dock, so her outfitting for sea was expedited. On July 3, having been assigned to the Atlantic Blockading Squadron, she left the yard bound for Hampton Roads.40

*Cumberland*, the corvette built at the Charlestown Navy Yard, returned on July 17, 1861, from duty as flagship of the Home Squadron. She was to be outfitted for service with the Atlantic Blockading Squadron, but not as flagship. Accordingly, her deck cabin was removed and replaced by a 100-pounder pivot gun.

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Cumberland was docked on July 20. An inspection revealed that her bottom was in good shape and the keel only slightly bruised from a recent stranding. By the end of the first week in August, the corvette was ready for sea. Cumberland never again returned to the yard and was sunk on March 8, 1862, by the Confederate ironclad Virginia.\footnote{Lenthall to Hudson, July 11, 1861, NA, RG 19, Ltrs. Sent, C&R; Hudson to Lenthall, July 17, July 21, 1861, NA, RG 19, Ltrs. Recd., C&R; DANFS, vol. II, pp. 214-15.}

On August 23, 1861, the frigate Congress reached the yard from the east coast of South America, where she had spent the last two years as flagship of the Brazilian Squadron. Workmen soon swarmed over the vessel, outfitting her for service with the Atlantic Blockading Squadron. On September 14, Congress put to sea. Like Cumberland, she was destroyed by Virginia.\footnote{DANFS, vol. II, p. 164.}

On November 24, 1861, the steam sloop of war San Jacinto arrived off the navy yard to a thunderous welcome. Two weeks earlier, in the Bahama Channel, she had stopped the British mail packet Trent and removed two passengers, John Slidell and James Mason, high ranking Confederates en route to Great Britain and France. Secretary of the Navy Welles directed the two prisoners be taken to Boston, where they were held at Fort Warren. An examination of San Jacinto's holds and bilges showed that she was leaking badly, shipping one inch of water each hour. She was, therefore, decommissioned and her crew sent aboard Ohio. The ship entered dry dock on December 4. The yard's engineer, William H. Green, found that repair of her engines and machinery would require thirty days of round-the-clock work, not counting four days to remove her propeller and pull the after section of the shaft. San Jacinto was undocked on December 10 to make room for Vermont. Because of additional problems with her engines, it was January 20, 1862, before the ship was ready for her officers. She was docked again on February 3 and remained there for seven days for further repairs. San Jacinto was recommissioned on March 1 and was outfitted for service as flagship of the East Gulf Blockading Squadron. On March 5, she went on a shakedown cruise to test her machinery, returning three days later. On March 10, the sloop of war sailed for Hampton Roads to reinforce Monitor and other ships then blockading Virginia.\footnote{Lenthall to Hudson, Dec. 2, 1861, NA, RG 19, Ltrs. Sent, C&R; Hudson to Lenthall, Dec. 2, Dec. 11, 1861; Jan. 2, Feb. 3, Feb. 11, 1862, NA, RG 19, Ltrs. Recd., C&R; DANFS, vol. VI, p. 296.}

Not all ships coming to the yard needed repair, and their presence at Charlestown was dictated by others purposes. During the first nine months of the war, two vessels came to Charlestown mainly for provisions and fuel. The screw gunboat Mohican reached the yard on September 27, 1861, from Monrovia, Liberia. Within two weeks, the ship had taken on coal, water, and provisions for six months. She put to sea on October 12 to rendezvous with the South Atlantic Blockading Squadron at Sandy Hook. The storeship Release reached the yard from the Gulf on December 1861. During the next three weeks, as she lay at one of the wharves, she took aboard provisions and supplies for the Atlantic Squadron. She put to sea two days before Christmas.\footnote{Hudson to Lenthall, Sep. 27, Oct. 5, Oct. 12, 1861, NA, RG 19, Ltrs. Recd., C&R; DANFS, vol. VI, p. 66.}

Late in 1861, the Navy Department decided that the big liner Vermont should be completed and sent to Port Royal, South Carolina, for use principally by the South Atlantic Blockading Squadron as a depot for ordnance stores and water and other purposes. The yard received directions to rig the ship with topmasts and jibboom. All her water tanks were to be sent aboard and stowed, and she was to be provided with four 500-gallon fresh water condensers, with which to keep them filled. She was to be equipped with a sick bay forward of the lower gundeck, extending to the forward hatch and fitted with sixty swinging cots. Gun ports in this area were to be fitted with sash. A bakery was to be set up. Late in December, Commandant Hudson received permission to employ Vermont's stump topgallant masts, as they afforded "greater facilities in elevating her lightning conductors and making signals from her masthead truck." Moreover, they would improve the ship's appearance when she was rigged. Vermont was commissioned on January 30, 1862, and
Table 6: NUMBER OF DRY DOCKINGS, BOSTON NAVY YARD, 1860-1871

(Does not include vessels docked in East Boston. Asterisk indicates private or foreign vessels.)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER</th>
<th>NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860</td>
<td>2</td>
<td>Relief, Mississippi</td>
</tr>
<tr>
<td>1861</td>
<td>14</td>
<td>Bainbridge, Vincennes, Preble, Cumberland, Fearnott, Cambridge, Gensbok, Young Rover, William G. Anderson, Ethan Allen, Curlew, Wachusett, San Jacinto, Marataza</td>
</tr>
<tr>
<td>1862</td>
<td>14</td>
<td>Kensington, San Jacinto, Housatonic, Canandaigua, South Carolina, Tioga, Genesee, Ino, Marion, Bibb, Niagara (twice), Rhode Island, Africa*</td>
</tr>
<tr>
<td>1863</td>
<td>24</td>
<td>Niagara (twice), Macedonian, Cambridge, Montgomery, Ethan Allen, Iron Age, Aries, Release, Circassian, Winnoski, Britannia, Onward, Sacramento, Pequot, Queen, Ticonderoga (twice), Hendrick Hudson, Acacia, Niphon, Flag, Ella and Anna, Vesuvius*</td>
</tr>
<tr>
<td>1864</td>
<td>19</td>
<td>Malvern, Cornubia, Flag, Relief, Santiago-de-Cuba, Cononicus, Cherokee, Fort Donebom, Sabine, Rhode Island (twice), Tristam and Shandy, Thistle, Connecticut, Massasoit, Casco, Supply, Dacatroh, caisson</td>
</tr>
<tr>
<td>1865</td>
<td>8</td>
<td>Circassian, Nipsic, Canandaigua, anchor hoy, Mohican, Guerriere, Ammonoosuc, Franklin</td>
</tr>
<tr>
<td>1866</td>
<td>7</td>
<td>Wassuc, Shawnee, Richmond, Sabine, Franklin, Seminole, DuChayle*</td>
</tr>
<tr>
<td>1867</td>
<td>7</td>
<td>Osceola, Monogahela, Kearsarge, Manitou, Richmond, Bienville, Magere*</td>
</tr>
<tr>
<td>1868</td>
<td>8</td>
<td>Wyoming, caisson, anchor hoy, Leyden, Palos, Supply, Ammonoosuc, Algoma</td>
</tr>
<tr>
<td>1869</td>
<td>10</td>
<td>Alaska (twice), Tallapoosa, Cohasset, Algoma, Agamencicus, Supply, Shenandoah, Worcester, Ticonderoga</td>
</tr>
<tr>
<td>1870</td>
<td>8</td>
<td>Palos, Worcester, Shawnee, caisson, Miantonomoh, California, Wabash, Erie*</td>
</tr>
<tr>
<td>1871</td>
<td>5</td>
<td>Ticonderoga, Wabash, Leyden, Wyoming, Severn</td>
</tr>
</tbody>
</table>

SOURCES: Preble; Docking Log, 181-60
sailed for Port Royal on February 18, the last American ship-of-the-line to be sent to sea.\(^{45}\)

During 1862, the tempo of the yard's repair activities increased. Early in the year, the frigate *Macedonian* arrived from St. Thomas and dropped anchor in President Roads. She entered Boston Harbor the next day and hove to off the navy yard. Upon being notified, the Department ordered her surveyed, repaired, and made ready for sea. *Macedonian* had been almost constantly on blockade and patrol duty since departing the Portsmouth Navy Yard in January 1861. The survey revealed that her hull was badly decayed. Taking cognizance of the ship's defective conditions, the Department ordered her stripped and placed in ordinary.\(^{46}\)

The armed clipper ship *Ino* returned to the yard on January 10, 1862, after a 105-day cruise in search of "rebel pirates." While she was at the yard, the Navy Department received word that the Confederate commerce raider *Sumter* was in European waters. *Ino* put to sea on February 5 and reached Cadiz in thirteen days and sixteen hours. Following a four-month cruise in the waters of western Europe, *Ino* returned to the yard on June 3. During the next ten weeks, the ship's crew took advantage of a liberal leave policy, and the yard refitted the vessel. In August, *Ino* sailed for Port Royal, South Carolina, and duty with the South Atlantic Blockading Squadron.\(^{47}\)

The armed steamer *South Carolina* returned to the yard in April 1862, after eleven months' arduous service in the Gulf. Her boilers and machinery were in bad condition, and she was shipping water so badly that her pumps had to be operated eight hours daily. Upon being apprised of this, the Department ordered her repaired. *South Carolina* was decommissioned and turned over to Commandant Hudson. By mid-June, the repairs were completed, and she was recommissioned. *South Carolina* went to sea on June 21, 1862, having been reassigned to the South Atlantic Blockading Squadron.\(^{48}\)

Two supply ships came to the yard in the spring of 1862. The bark *William G. Anderson* hove to off the yard on April 16. The Bureau of Construction and Repair ordered her prepared for sea. She was to proceed to Ship Island, Mississippi, with supplies, namely 2000 gallons of lubricating oil; 1500 pounds of tallow; 2000 pounds of wiping stuff; 500 pounds assorted gum packing; 5000 pounds of oakum; 1500 sheets of 22-ounce yellow metal; and assorted nails. By May 7, all the items called for were loaded, except some of the oil and lumber for repair of ships. When she sailed on May 8, she also carried 200 barrels of powder and a number of XII-inch mortar shells, sent aboard by the Bureau of Ordnance. Another vessel that loaded stores for the fleet was the armed storeship *Rhode Island*. She arrived at the Charlestown yard in late May 1862 from Hampton Roads. After taking aboard stores and supplies for the West Gulf Blockading Squadron, *Rhode Island* sailed on June 11.\(^{49}\)

On May 22, 1862, Commandant Hudson reported the receiving ship *Ohio* in foul condition. She required recaulking and repair of her planking, which was in a "rather bad state." Authority was soon forthcoming for her repairs, and a large force was turned to.\(^{50}\)

The armed steamer *R. R. Cuyler* reached the yard in early June 1862 from the Gulf Frontier. She was examined, repaired and equipped with a condenser for distilling drinking water for her crew. She departed

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\(^{50}\) Hudson to Lenthall, May 22, 1862, NA, RG 19, Ltrs. Recd., C&R.
the yard on July 25 for a trial run and returned the next morning. On August 1, *R. R. Cuyler* again got underway, but this time she proceeded to sea, en route to rejoin the West Gulf Blockading Squadron.21

On June 11, the sailing sloop *Marion* reached the yard from the Gulf of Mexico. Instead of laying her up in ordinary as planned, the Bureau of Construction and Repair decided to spend $5000 to have her outfitted as a school vessel to be attached to the Naval Academy. During the war, that institution had been transferred from Annapolis to Newport, Rhode Island. Repairs were made on *Marion*, and on July 22, she sailed for Narragansett Bay.22

In mid-June 1862, the steam frigate *Niagara* arrived from the Gulf of Mexico and dropped anchor in the Charles. She was stripped and then docked in mid-July. After she had been surveyed, the Bureau of Construction and Repair ordered her repaired. *Niagara*’s repair was a major undertaking. Much of her machinery had to be removed. It was impossible under the approved scope of work to take up and replace her deck planks, so pieces were fitted over the beams and ledges, and new plank laid where required. The maindeck beams over the wardroom and aft were raised to conform to the new decking. The big 5,540-ton vessel was finally recommissioned on October 14, 1863, and put to sea three days later.23

On June 21, 1862, the big screw frigate *Colorado* returned to the yard after twelve months’ hard service with the Gulf and West Gulf Blockading Squadrons. She remained less that forty-eight hours, sailing on the 23rd for the Portsmouth Navy Yard, where she was decommissioned before entering dry dock for extensive repairs to her hull.24

On July 9, 1862, the steam gunboat *Albatross*, which had been serving with the South Atlantic Blockading Squadron, put in at the Charlestown yard. She had been aground and needed to have her bottom examined. She was docked, repairs were made, and she sailed for duty with Adm. David G. Farragut’s squadron.25

*Bibb*, the surveying steamer, called at the yard on July 16, 1862. Three weeks later, Commandant Montgomery forwarded to the Department a report of the costs of her repairs, which were considerably greater than anticipated. The Bureau of Construction and Repair, after evaluating the costs, ordered *Bibb* to be outfitted for surveying purposes and returned to the United States Coast Survey. While the Coast Survey people debated the expense and necessity of the repairs, *Bibb* was in and out of the yard several times.26

On July 23, 1862, the steamer *Rhode Island* returned to the yard. She remained until September 23, 1862, being repaired and taking aboard coal and supplies for the South Atlantic Blockading Squadron. In mid-November, the Department notified Commandant Montgomery that *Rhode Island*, when she next arrived off the yard, was to be outfitted as a cruiser. *Circassian*, when ready, would replace *Rhode Island* as a fleet storeship. *Rhode Island* hove to off the yard on November 12. It was estimated it would require ten days to outfit her for sea, if altered to carry the armament called for by the Bureau of Ordnance. Her cabin was removed along with twenty-three feet of the forward deck cabin. Three gun ports were opened aft and four forward. She was repainted and her magazine enlarged. On December 12, *Rhode Island* departed the yard.

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for a trial run down the harbor. She returned the next day and sailed for Hampton Roads on the 14th.37

On August 16, San Jacinto returned to the yard after a five-month absence. She had served as flagship of the East Gulf Blockading Squadron since June 3. On August 1, Flag Officer James L. Lardner reported that yellow fever had broken out aboard. The next day he transferred his flag to another ship, and San Jacinto sailed north. She arrived at the quarantine area off Deer Island, near Boston, on the 9th. After being released by health authorities, San Jacinto proceeded to the yard. There she remained until October 14. The health of her crew restored, she then put to sea. Having been assigned to the North Atlantic Blockading Squadron, she joined the blockading force off Wilmington, North Carolina.38

The sailing frigate Santee arrived in the Charles from the Texas coast on August 12. She had been serving with the West Gulf Blockading Squadron. At the time she had been ordered north, the frigate's crew had been weakened by scurvy and the enlistments of many of her bluejackets had expired. Santee was recommissioned on September 4. The Bureau of Construction and Repair ordered that she be caulked and placed in ordinary. The Department then reversed this decision and directed that she be outfitted and sent to Newport, Rhode Island. There she would be employed as a school ship for the midshipmen. Before being recommissioned and sailing for Narragansett Bay on October 5, Santee was provided with stump topgallant masts. Her tanks were removed and she was given a thorough cleaning.39

After departing from the yard in September 1861, Gemsbok had been stationed off the Carolina coast as a unit of the South Atlantic Blockading Squadron. A year later, she returned to Charleston, having been ordered to Boston to fill up her complement. She remained at the yard until September 11, when she sailed for Port Royal, South Carolina.40

In October 1862, six vessels came to the Charlestown Navy yard for repairs. The sailing ship Onward arrived from the South Carolina coast. Repaired, provisioned and outfitted, she sailed for the South Atlantic on November 6, where she was employed as a cruiser on the high seas, hunting Confederate commerce raiders. The sidewheel steamer Alabama reached the yard from blockade duty off the South Carolina and Georgia coasts. She was examined and ordered repaired to enable an early return to her station. By the last day of the year, Alabama had been repaired, provisioned, and coaled. On New Year's Day, she sailed from President Roads en route to rejoin the South Atlantic Blockading squadron.41

On October 12, the gunboat Huron returned to the yard from blockade duty off the Georgia and South Carolina coasts. Within four weeks, she had been repaired and coaled and, on November 8, put to sea to resume her patrol and blockade duties. On October 18, the bark Gem-of-the-Sea arrived from Port Royal, South Carolina. She spent seven weeks at Charlestown undergoing repairs. Gem-of-the-Sea, having been assigned to the East Gulf Blockading Squadron, sailed on December 5 and arrived at Key West two weeks later.42

The bark Kingfisher, after nearly a year's service with the East Blockading Squadron, returned to the


38 DANFS, vol. VI, p. 296.


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yard on October 26. An outbreak of scurvy aboard had prompted her orders to Charlestown. The ship repaired and her crew reinvigorated, she sailed for Port Royal on December 11. *Kingfisher* had been detained at the yard for an extra day by an accident to her windlass. In mid-October, the steam frigate *Minnesota* was ordered to the yard from Hampton Roads. Upon arrival, she was to be examined and necessary repairs made. This was a problem, because *Niagara* was in dock and could not be removed for two or more months. Vessels requiring docking were being sent to East Boston yards, but none of these had facilities of sufficient size to take *Minnesota*. *Minnesota* reached the yard on October 29 and sailed immediately for Portsmouth. After being docked at Portsmouth, she returned to the Charlestown yard on November 28. Large numbers of workmen soon swarmed over her, and by the end of the year she was ready for sea. On January 2, 1863, *Minnesota* was hauled out into the stream and sailed for Hampton Roads to resume her mission as flagship for the North Atlantic Blockading Squadron.66

On November 18, 1862, the steamer *Western World* reached the yard. She was repaired and put to sea on March 4, 1863.64

From correspondence between the yard and Washington, the yard's docking log, and other scattered documentation, it appears that during 1862, the Charlestown yard had under repair at least twenty-two vessels, apart from those being constructed, delivered to the yard from contractors, or obtained through purchase or the prize court. No annual listing of ships under repair at the yard has been discovered, which means there is no ready way to determine the volume of repair activity. The yard did keep a daily log, in which were recorded the names of ships entering and departing the yard. Naval vessels stopped for a variety of reasons other than for repair, such as to take on supplies, fuel, water, personnel, or ammunition. In 1862, forty-seven ships entered the yard. In 1863, there were eighty-seven, and in 1864, sixty-four.65 Assuming that some relationship existed between the number of ships under repair and the number of ships arriving at and departing from the yard, one could hazard the guess that if the yard repaired twenty-two ships in 1862, it repaired approximately thirty-seven in 1863 and twenty-seven in 1864.

YARD LABOR IN WARTIME

The outbreak of the Civil War led to a rapid expansion of the work force of the Charlestown Navy Yard. In the two years before the war, civilian employees generally numbered less than one thousand, a low point, 468, being reached in June 1860. The yard labor rolls indicate the abrupt changes occurring in the spring of 1861. Employment rose from 837 in March to 2,072 in April. At the end of 1861, more than 3000 civilians were working at the yard. After a decline in the middle of 1862, yard employment again expanded. According to one source, the greatest number of workers at any time during the entire war was 4,955, reached in December 1864.66

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64 Lenthall to Montgomery, Nov. 19, 1862, NA, RG 19, Ltrs. Sent, C&R; Montgomery to Lenthall, Nov. 21, 1862, NA, RG 19, Ltr. Recd., C&R.


66 Bureau of Yards and Docks, "Statement showing the number of Mechanics, laborers, watchmen and others Employed at the U.S. Navy Yard Boston during the years 1858 to 1865 inclusive," Jan. 17, 1890, National Archives, Record Group 181, Entry 75, Miscellaneous Personnel Records (181-75). A second document contains figures that are between 100 and 1000 employees lower; "Greatest number of men employed during the year, Boston Navy Yard as Shown by the yard log book, 1858-1886 inclusive," 181-75. Probably the 1858-1865 statement includes workers at the Chelsea hospital, the ammunition depot at Chelsea, the
Doubtless, the rapid enlargement of the labor force caused problems, some of them a consequence of the relative inexperience of key personnel. In the 1840s and 1850s, the positions of master workmen increasingly became political plums to be awarded to the party faithful. Soon after taking office in March 1861, the nation's first Republican administration purged the supervisory ranks of Democrats. In early May, Secretary Welles named his appointments for ten positions in the Charlestown yard as supervisors and master mechanics. John H. Chapman replaced Seth Wilmarth as Superintendent of Machinery, and James P. Mahoney became Superintendent of the Ropewalk in the stead of Henry Evans. The other appointments were William Hichborn, master joiner; William Burkett, inspector of timber; James D. Wiggins, master blacksmith; J. C. Bradbury, master painter; William T. Norcross, master boatbuilder; Joseph Levell, master cooper; Alden Sampson, master caulker; and Eldridge Gardner, master laborer. In July, H. Merriman was made master machinist.

In the hire of mechanics and laborers, the Bureau of Yard and Docks cautioned Commandant Hudson against recruiting exclusively in Charlestown and Boston. In selecting workers, master mechanics were to see that there was a reasonable geographic distribution among the employees, with all sections of the state represented. Taking advantage of the many hours of daylight during the summer in the Boston latitude, Secretary Welles ordered that the outfitting of vessels for sea "be carried on during all the extra hours possible." 68

The Civil War years saw several protests by workers of the Charlestown Navy Yard. Four days before Christmas in 1861, Congress enacted legislation making working hours at navy yards the same as those in nearby private yards. Wages paid at government facilities were to be "as near as may be, the average price paid to employees of the same grade in private ship yards, or workshops, in or nearest to the same vicinity, to be determined by the Commandant of the Navy Yard." The Navy Department outlined the system in a circular letter sent to commanders of its shore stations. On the basis of that circular, Hudson announced new working hours for the Charlestown yard. Previously, during that part of the year between March 21 and September 19, the workday had been ten hours. For the remainder of the year, work began one hour after sunrise and ended at sunset. Hudson's directive in late December 1861 continued the ten-hour workday for the warmer part of the year, but stipulated that between September 20 and March 20, work would begin at sunrise, not one hour thereafter. 69

The labor force at the Charlestown yard was aroused by this legislation, and on Monday, December 31, the day before the new system was to take effect, workers met at Tremont Temple. The meeting named a committee to petition Congress to rescind that part of the legislation which, in effect, increased the number of hours in the workday. The employees decided to continue to work while protesting against the new arrangement. They held that a more emphatic remonstrance was warranted, but they would not embarrass the government by retarding its efforts to "crush out a foul rebellion." A committee presented the memorial to Hudson, who forwarded it to the Secretary of the Navy. The Department quickly responded. Commo. Joseph Smith, chief of Yards and Docks, wrote to Hudson on January 3 and described the new system as aimed at making the hours and wages at navy yards the same as those in nearby private ship works. The Department, Smith wrote, was unable to see how this constituted a hardship, since government employees were being required merely to work the same hours and receive the same wages as were paid to like classes of workmen in private industry. Until further orders, Smith directed that men refusing to work under these terms be purchasing office in Boston, the navy rendezvous, and other off-yard operations. The two statements are contained in the same parcel of papers, may have been produced at the same time, and, although containing different figures, may not be in conflict. Another set of employment statistics shows "the number of men employed in the Navy Yard, Boston, Massachusetts, on the first day of the Month in each year from 1816 to 1874, inclusive": Preble, pp. 430-32.

67 Smith to Hudson, May 10, July 5, 1861, NA, RG 71, Ltrs. Sent, Y&D.

68 Smith to Hudson, July 17, July 19, 1861, NA, RG 71, Ltrs. Sent, Y&D.

69 Preble, p. 160; Hudson to Smith, Jan. 6, 1862, NA, RG 71, Ltrs. Recd., Y&D.
reported and not mustered. Meanwhile, replacements could be recruited in Maine and New Hampshire.\textsuperscript{70} Commandant Hudson took the position that in the week following the protest meeting, none of the yard workers had walked off the job. He presumed that the remonstrance was all bluster. Perhaps he was correct. On January 8, the Bureau of Yards and Docks approved of Hudson’s procedures in determining hours and wages for his yard.\textsuperscript{71} Nothing further was heard from the protesters at this time about hours during the winter months. However, there were subsequent complaints and job actions respecting wages.

On January 16, 1862, ship carpenters’ caulkers and helpers, dissatisfied with the government’s position, struck and demanded more pay. The next day, “a portion” of them returned without having achieved any change in wages. Ten months later, on November 10, 1862, another protest occurred, and mechanics and laborers struck, “generally refusing to go to work at the required hour.” They returned to the job five days later.\textsuperscript{72}

In none of the three protests at Charlestown in late 1861 and in 1862 did the Navy make any concessions to workers. On the other hand, no workers were fired. Also, it appears that the authorities in Washington were prepared to be flexible. In December 1862, bureau chief Smith pointed out to Commandant Montgomery that the law made it mandatory that yard wages be governed by outside pay scales, but subject to “revision and approval of the Secretary of the Navy.” Accordingly, Secretary Welles could adjust wages upward if he believed the public service required an increase. Smith recognized another problem, perhaps less within the authority of the Secretary to rectify. Workers in any particular craft were placed in different classifications, and the higher the classification, the higher the wages. A difficulty had arisen in rating first-class workmen, since the rating was done by master craftsmen, some of whom may have discriminated against particular employees.\textsuperscript{73}

Wartime required an expansion of the number of mechanics and laborers at the Charlestown Navy Yard and also of the clerical force. In January 1863, the Department authorized the employment of nineteen writers, at rates of $2.00 or $2.50 per day. Their distribution throughout the yard gives some insight into the volume of paperwork in various offices. The clerk of the yard had two of the writers; inspector of ordnance, two; constructing or civil engineer, one; paymaster, one; commandant, one; naval storekeeper, two; inspector of clothing and provisions, two; inspector of timber, one; superintendent of machinery, one; superintendent of Ropewalk, one; and naval constructor, two.\textsuperscript{74}

The highest paid civilian in the Charlestown Navy Yard, according to a Yards and Docks directive in April 1863, was the Ropewalk superintendent, who received $5.50 per day. The master carpenter received $5.00; master blacksmith, joiner, caulk, and mason, $4.50; master sailmaker, boatmaker, cooper, sparmaker, painter, and blockmaker, $4.00; and the master laborer $3.50.\textsuperscript{75}

The wage hierarchy among master craftsmen more or less corresponded to the distribution among their mechanics. The wage scale promulgated in December 1864 recognized four classes of workers, from first to fourth. A wage rate was not assigned for all four classes in every trade. This apparently means that the yard did not employ workers in every class. For example, there was no wage rate assigned to the lowest or fourth-class of ship joiners, brass casters, patternmakers, or caulkers; no fourth- or third-class listed for boatbuilders, boilermakers, sparmakers, and several other trades. Wages were stated only for first-class workers

\textsuperscript{70} Walden to Smith, Dec. 31, 1861, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Jan. 3, 1862, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{71} Hudson to Smith, Jan. 6, 1862, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Jan. 8, 1862, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{72} Preble, pp. 365, 366.

\textsuperscript{73} Smith to Montgomery, Dec. 6, 1862, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{74} Smith to Montgomery, Jan. 19, 1863, NA, RG 71, Ltrs. Sent, Y&D.

\textsuperscript{75} Preble, p. 366.
in such trades as boiler-flange turners, sailmakers, and coopers. The highest paid mechanics were first-class
triphammer men, whose daily wages were $4.50. First-class ship carpenters, moulders, and caulkers received
$4.00; first-class ship joiners, boatbuilders, patternmakers, blacksmiths, and heavy hammer men $3.50. The
lowest rate for first-class workers was $2.00, assigned to boilermakers' helpers, blacksmiths' helpers, teamsters,
and laborers.76

THE ROPEWALK

When the Civil War began, the Ropewalk of the Charlestown Navy Yard was undergoing a program
of repair and improvement of its machinery. In July 1861, Congress appropriated another $20,000 for that
purpose. Some money was used in August to purchase a Worthington pump to supply water to the walk's
engines. Toward the end of the same year, Hudson requested and was granted authority to purchase two
Woodruth machines for making from six to fifteen threads of white rope. This class of cordage was currently
laid up on one of the laying grounds and occupied as much space and time as that devoted to laying up four-
inch cable. With two Woodruth machines positioned in the room above the breakroom in the headhouse, it
was possible to manufacture large quantities of "small stuff."77

The Ropewalk also had problems meeting the call for other types of cordage. In December 1861,
Hudson complained to the Bureau of Yards and Docks that it would be impossible to fill current demands
with the existing number of spinning machines. It was mandatory that there be at least a small increase in
their number. Hudson noted that Todd & Rafferty of Paterson, New Jersey, would sell the yard twenty Manila
spinning machines for $5200. To provide these machines with 1000 bobbins, connecting shafting, and other
needed equipment would cost another $1,380. The Bureau explained to Hudson that the appropriations for
Fiscal Year 1862 had already been made, and the Navy could not ask Congress for more monies for Ropewalk
machinery. Hudson was directed to purchase on the open market that rope being called for which the walk
could not manufacture.78

With the Union's access to Missouri and Kentucky hemp threatened by the possible secession of those
states and the enlarged wartime need for cordage, the Ropewalk's supply of raw material was soon depleted.
By June 30, 1861, there was only 300 tons of Russian hemp on hand, half of the quantity authorized. Within
the next two weeks, this stockpile was rapidly reduced by the demands for rigging. A large backlog of orders
made the situation even more critical. Commandant Hudson urged that the government purchase a shipment
of superior quality Riga rein then advertised, provided the owner would accept a fair market price. By late
autumn 1861, the Ropewalk was consuming about seventy-five tons of hemp per month, and by Christmas,
the stock of Riga rein was down to 200 tons.79

The shortage of hemp continued. At the end of October 1862, the quantity of hemp from which
standing rigging could be manufactured had been reduced to ten tons. The Navy failed to purchase 360 tons
of Marine Rhine hemp, offered for sale by William E. Forbes at $350 per ton in bond. On November 18,
Superintendent Mahoney recommended purchase of 150 tons of Manila hemp, as the stock on hand would
not last another three weeks. Commandant Montgomery informed Washington that it would be difficult or
impossible to supply future demands for standing rigging. Soon after the beginning of the new year, Mahoney
cautioned that the yard's supply of Russian hemp was nearly exhausted and that there was no other hemp on
the market suitable for naval use, except that belonging to Forbes. Since November, Forbes had marked up

76 Preble, pp. 373-74.

77 Smith to Hudson, Aug. 9, 1861, NA, RG 71, Ltrs. Sent, Y&D; Hudson to Smith, Nov. 2, 1861, NA, RG
71, Ltrs. Recd., Y&D.

78 Hudson to Smith, Dec. 13, 1861, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Dec. 16, 1861, NA,
RG 71, Ltrs. Sent, Y&D.

79 Hudson to Lenthall, July 18, 1861, NA, RG 19, Ltrs. Recd., C&R.
his price. He now asked $420 per ton for the first 100 tons or $400 per ton for the entire 340 tons. Because of the desperate need of the Ropewalk for hemp, Washington authorized purchase of the entire Forbes cargo.\textsuperscript{80}

Enlarged wartime consumption of cordage led Superintendent Mahoney to take measures to increase production. In January 1862, the walk put into operation two Todd and Rafferty Manila spinning machines in place of two other machines undergoing repair. The Todd & Rafferty devices were an improved model with double the production of the machines then in use. Between January and August, the Todd and Rafferty machines had spun nearly 50,000 pounds of Manila and within eight months had nearly paid for themselves. On August 8, one of the machines had spun 229 pounds of yarns, while a government machine had turned out only 118 pounds. For these reasons, Mahoney recommended purchase from Todd & Rafferty of two more Manila spinning machines. The bureau accepted Mahoney’s argument and approved the purchase.\textsuperscript{81}

The $20,000 voted by Congress in 1861 for repair of Ropewalk machinery was intended to fund replacing the boilers and related machinery. However, subsequent study led to the decision to suspend those changes until they could be accomplished with "the much needed extension of the laying ground." That extension did not occur until after the war. In Fiscal Year 1864, expenditures on Ropewalk machinery were confined principally to maintenance of the steam engines and spinning machinery, although it was still deemed essential to replace the boilers at an early date.\textsuperscript{82}

FUNDING YARD IMPROVEMENTS

In August 1859, when he submitted his estimates for Fiscal Year 1861, Commandant Hudson called for an appropriation for "finishing the Pattern Shop at the New Foundry, Machinery for the Machine Shop, Foundry, etc, and for Paving and Draining at the New Shops." His objective was to "complete and fit up in every particular, and in the most thorough manner, all the Departments connected" with the foundries, smithery, and boiler shop, "as well as the portion of the yard adjacent to the building extending from Main Avenue to the seawall." Congress, however, failed to include the requested monies in the appropriation for Fiscal Year 1861. Hudson repeated his request when submitting his program for Fiscal Year 1862.\textsuperscript{83}

Funds for those and other purposes became available in 1861. Shortly before leaving office, President Buchanan signed a naval appropriations bill that provided $79,456 for the plant of the Charlestown Navy Yard. Only two projects were specified, repair of the Marine Barracks ($19,456) and machinery for the machine shop ($20,000), with $40,000 assigned to "repairs of all kinds." The Bureau of Yards and Docks allotted to the Charlestown yard $60,000 from its contingencies account. The special session of Congress convened by Lincoln in July made an additional $154,000 available for improvements to the Charlestown yard in Fiscal Year 1862. The major items included in that appropriation were completing the Machine Shop complex ($25,000); machinery for the shops in that complex ($68,700); repair of Ropewalk machinery ($20,000); and repair of the coal shed wharf ($29,000).\textsuperscript{84}

During Fiscal Years 1863 to 1866, annual congressional appropriations for improvements and repairs at the Charlestown Navy Yard averaged $256,890. Also, the Bureau of Yards and Docks, in each of these years, allotted from the appropriation for "Contingencies" a sum averaging $151,500 for underwriting yard operating costs for which the bureau was responsible.

\begin{itemize}
\item \textsuperscript{80} Montgomery to Foote, Nov. 10, Nov. 18, 1862; Jan. 14, Jan. 21, 1863, NA, RG 19, Ltrs. Recd., C&R.
\item \textsuperscript{81} Mahoney to Montgomery, Aug. 8, 1862, NA, RG 71, Ltrs. Recd., Y&D; Smith to Montgomery, Aug. 9, 1862, NA, RG 71, Ltrs. Sent, Y&D.
\item \textsuperscript{82} Annual Reports & Estimates for FY 1863, 1864, NA, RG 71, Y&D.
\item \textsuperscript{83} Hudson to Smith, Aug. 27, 1859; Aug. 15, 1860, NA 71, Ltrs. Recd., Y&D.
\item \textsuperscript{84} Preble, p. 357.
\end{itemize}
On June 14, 1862, President Lincoln signed a bill making $325,000 available for "Improvements & Repairs" at the Charlestown yard in Fiscal Year 1863. The most significant projects were $30,000 for a coal house for the foundry and smithery; $40,000 for a reservoir, steam pump and pipes for using Cochituate water; $88,000 for repair and increase of ordnance machinery and shops; $62,000 for the forge shop, foundations, and heavy Nesmith hammer; and $10,000 for a futtock sawmill and building. In addition, Congress included $123,000 for the purchase of White’s Wharf. Admiral Smith, Chief, Bureau of Yards and Docks, was able to allot $86,000 to the yard from the appropriation for contingencies.  

By the terms of the naval appropriations bill passed in March 1863, the Charlestown yard received $278,566. The four expenditures specified in the legislation were $36,500 for the dry dock and relaxing surface water drains; $94,066 for completing the joiners’ shop and painters’ loft; $35,000 for extension of the shear wharf; and $48,000 for additional expenses for the forge shop. The bureau provided the yard with an additional $120,000. For Fiscal Year 1865, Congress voted the yard $184,500. Of that fund, $20,000 was to be used for the joiners’ shop and painters’ loft; $16,000 for the coal house; $35,000 for the shear wharf extension; $50,000 for railroad tracks; and $73,500 for "repairs of all kinds." To this sum, the Bureau of Yards and Docks added $190,000 from contingencies.  

CHANGES IN THE YARD’S PLANT  

INDUSTRIAL BUILDINGS AND TOOLS  

During the early years of the war, completion of the Machine Shop complex continued as the Charlestown yard’s most important plant improvement project. In the spring of 1861, workmen were promptly turned to completing the pattern shop, positioning a drainage system, and paving the area. Orders were placed for tools and machinery. Among the first of the machines purchased and installed were three lathes. At the same time, yard machinists made a number of tools for use in the shops. When installed, some of the equipment proved to be wanting and had to be replaced. For example, in December 1861, Commandant Hudson complained that the fan blowers in the foundry cupolas were inadequate. Although "urged to their utmost capacity," the fans failed to supply a sufficient blast. On Hudson’s recommendation, they were replaced with two Mackenzie blowers.  

In April 1862, Master Machinist Merriman submitted requisitions for two steam hammers, a rotary shears for cutting plate iron, and a Daniels wood planing machine. The hammers were needed to handle shafts up to fourteen inches in diameter, which was sufficient for all but the largest class of forgings for steamers. The hammers, with the furnaces and boilers, would complete the forge shop. Merriman held that the six-ton hammer previously called for would be better adapted to the work in a separate building. The Bureau of Yards and Docks replied that the hammers for heavy forgings should be at least ten tons and required a separate building. The cutting machine requested was similar to one at the Washington Navy Yard. It had cut one-and-one-half-inch iron and was very reasonable in comparison to the price of the one named in Merriman’s requisition.  

In June 1862, Congress appropriated $3500 for paving and draining at the new shops. During Fiscal Years 1863 and 1864, those funds were employed in "preparation of the area between the foundry and the machine shop." The balance of the appropriation was reserved until such time as the old smithery could be

85 Preble, pp. 360-61.  
88 Merriman to Hudson, Apr. 17, 1862, NA, RG 71, Ltrs. Recd., Y&D; Smith to Hudson, Apr. 21, 1862, NA, RG 71, Ltrs. Sent, Y&D.  

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razed and the area between the Machine Shop complex and hammer house graded. No work was accomplished on the project in Fiscal Year 1865 because of "occupation of the ground by coal and other materials belonging to the smithery and a portion of the old smithery which the work of that department had rendered it necessary to retain." It was Fiscal Year 1867 before the Bureau of Yards and Docks was able to report the project completed, with the brick and tile drains laid as planned.9

Funds for the construction of a coal house for the Machine Shop-Foundry complex had been allotted, a site selected, and plans approved in the mid-1850s. As a result of a major change in the design of the complex and escalating construction costs, the coal house had not been built when the Bureau of Yards and Docks submitted its estimates for Fiscal Year 1863. Because of the heavy use to which the proposed site was subject, it had been decided to select a new location nearer the foundry. For construction of the coal house between the machine shop and foundry, $30,000 was needed. This was $16,000 more than the estimate. Congress made the requested appropriation for Fiscal Year 1863. The monies were employed to provide coal storage and to enlarge and improve the Machine Shop-Foundry complex. The area between the foundry and machine shop was enclosed and roofed. This provided an additional 23,000 superficial feet for coal storage in the foundry, as well as an area for finishing and cleaning castings. Although this was more room in itself than the original area for the foundry, additional space was needed. Accordingly, it was decided to erect a "Wing of similar construction, upon the north side of the foundry to contain a large core oven" and the "cupola which now occupy so much of the much valuable portion of the main floor of the Foundry."90

Employing a further $16,000 appropriation, this project was completed in Fiscal Year 1865, "so far as enclosing of the area between the foundries." The balance of the appropriation was sufficient to floor a considerable area above the roof beams for stowage of "large patterns," and to enclose a portion of the space upon the north side of the foundry.91

Part of the $88,000 appropriated by Congress for new machinery for the Machine Shop complex was employed in Fiscal Year 1864 for purchase and installation in the shops of four 8-foot lathes; one vertical drill machine; one block-strapping machine; one air furnace for the iron foundry; a large modified planer; a 40-foot double-headed engine lathe; and a 20-foot engine lathe.92

In June 1862, Congress appropriated $62,000 for erecting a forge shop, foundations, and a heavy Nesmith steam hammer. The forge shop was to be sited north of the Machine Shop-Foundry complex. The Bureau of Yards and Docks decided that it was desirable for the yard to have the heaviest hammer that could be "practically and profitably employed." Of the two types available, the bureau preferred the Candee. Civil Engineer Billings and Master Machinist Merriman were to examine the heavy hammers in use at Nashua, New Hampshire; New York City; Philadelphia; and Reading, Pennsylvania, and submit a report as to which ten-ton hammer was preferable and its price. Subsequently, the bureau directed Montgomery to provide it with plans and estimates for a forge shop to house a Candee ten-ton hammer. Work proceeded slowly. By the end of Fiscal Year 1864, the shop's walls were up and the building enclosed and ready for installation of the Nesmith hammer. It was two years later, in Fiscal Year 1866, before the hammer was completed, installed, and tested. The project was finally finished in Fiscal Year 1867.93

Civil Engineer Billings included estimates for a futtock sawmill in the yard's program for Fiscal year 1862. It would be similar to the one in operation at the New York yard, and its cost was placed at $15,000. Congress, however, cut the request to $10,000. In Fiscal Year 1864, the patentee erected the building and installed the sawmill. The yard's carpenters were impressed by the mill's operations, expediting as it did the

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99 Annual Reports & Estimates for FY 1863, 1864, 1865, 1867, NA, RG 71, Y&D.
90 Annual Reports & Estimates for FY 1864, NA, RG 71, Y&D.
91 Annual Reports & Estimates for FY 1865, NA, RG 71, Y&D.
92 Annual Reports & Estimates for FY 1864, NA, RG 71, Y&D.
shaping of futtocks, the curved timbers scarfed together to form the lower part of the compound ribs of a ship.\footnote{Billings to Hudson, Jan. 4, 1862, NA, RG 71, Ltrs. Recd., Y&D; Smith to Montgomery, Feb. 16, 1863, NA, RG 71, Ltrs. Sent, Y&D; Annual Report, Secretary of Navy, Dec. 5, 1864, House Ex Doc. 1, 38-2, USSS No. 1221, p. 758.}

At least three sheds were erected in Fiscal Year 1863, their costs funded from contingencies. In September, a frame structure was built on one of the wharves for storage and repair of the small parts of Niagara's machinery. During the winter, a frame shed was erected for storage of grindstones, and a "light brick building for protection of the joiners' shop boilers."\footnote{Montgomery to Smith, Aug. 29, 1862, NA, RG 71, Ltrs. Recd., Y&D; Smith to Montgomery, Dec. 9, 1862, NA, RG 71, Ltrs. Sent, Y&D.}

On March 3, 1863, Congress appropriated $94,066 for additions to the joiners' shop and painters' loft. In May 1864, another $20,000 was voted for the project. Because of failure to award a contract for construction of the building in Fiscal Year 1864, the only money obligated from the appropriation was for purchase of piles. In Fiscal Year 1865, the contract was awarded to J. W. Colum, who completed the structure in the year ending June 30, 1866.\footnote{Annual Reports & Estimates for FYs 1864, 1865, 1866, NA, RG 71, Y&D.}

THE YARD'S WATERFRONT

During the war, plans were made for changing the yard's waterfront, particularly by extending the shear wharf and by adding to the number of building slips. However, these projects were not realized. Acquisition of White's Wharf constituted the most important wartime alteration in the yard's plant.

On March 3, 1863, Congress appropriated $35,000 for extension of the shear wharf. During the fiscal year ending June 30, 1864, materials for implementing the project were purchased and stockpiled. But as the Vermont slip was needed for shipbuilding, no work was done on the structure, excepting a modest amount of dredging. Although Congress appropriated another $35,000 for extending the wharf in Fiscal Year 1865, and $25,000 in the next year, the work was held in abeyance because of occupation of the Vermont ways by Manitou, not launched until August 1866, and because of problems raised by extension of the wharf farther out into the Charles River channel. To arrest deterioration, some of the stockpiled materials were used to repair the wharf in Fiscal Year 1866. With the end of the war, extension of the shear wharf no longer commanded priority. In Fiscal Year 1869, it was decided to use the balance of $95,000 not to extend the wharf, but to rebuild it above the low water mark.\footnote{Annual Reports & Estimates for FYs 1864, 1866, 1868, 1869, NA, RG 71, Y&D.}

To provide the Navy with greater capacity for shipbuilding, plans were made to increase the number of slips at the Charlestown Navy Yard. In October 1864, the Bureau of Yards and Docks alerted Commandant Stringham to ready the foundations for three additional building slips. No work, however, would be done until Congress had appropriated the necessary monies. Congress voted $58,000 in March 1865, but the end of the war apparently bought a cancellation of plans.\footnote{Preble, pp. 358-59, 371.}

In June 1859, White and Damen, owners of White's Wharf, began driving piles preparatory to extending their wharf out into the Charles River channel. By the following April, the wharf had been rebuilt. Some three months later, White & Co., as the firm was now known, leased the facility to the Galway Steamship Company. In July 1860, White & Co. compelled the United States to shift the mooring place of a steam frigate, as she was intruding into the company's territory. She was accordingly hauled ahead to bring
her stern square with the shear wharf. 99

Early in 1861, White & Co. sold its wharf property to Samuel Oakman and Benjamin Eldridge for $62,125. Commodore Smith of the Bureau of Yards and Docks asked Commandant Hudson in May to determine the "quantity of land" which Oakman and Eldridge wished to sell and its fair market price. The land in question was not needed, but the water frontage was highly desirable. Hudson informed the bureau that White's Wharf measured 115,210 and a half square feet and would be of value because of its frontage and coal house. He placed the fair market price at from $80,000 to $90,000. However, Colonel Allan, an agent for Oakman and Eldridge, was asking $2.00 per foot for the property, a figure Hudson termed a swindle. 100

In October 1861, Captain Hudson protested that Oakman and Eldridge were erecting on that part of their property adjoining the yard wall and dispensary a frame coal house which towered ten feet above the wall. Piling of coal against the wall had compelled yard workmen to brick up the windows in the side of the dispensary facing the wharf. 101

Oakman and Eldridge offered the United States "free use" of their wharf during the winter. They reported the water had sufficient depth on either side of the wharf for gunboats, while at the head of the structure the largest ships could be moored. They stated they made this offer because they were familiar with "the present press of business at the yard" and saw the delay and expense the government would be subject to on account of the many vessels for which space must be provided. With negotiations underway with Oakman and Eldridge for purchase of the tract and an appropriation pending in Congress to underwrite the cost, the bureau authorized Hudson to accept the proposition, presuming that Oakman and Eldridge were actuated solely by patriotism. 102

In June 1862, Congress appropriated $123,000 for purchase of the property, and on July 1, Oakman and Eldridge sold White's Wharf to the United States for that sum. The tract contained 2,319.8 acres. In the northwest, it was bounded by Water Street; in the northeast by the lands and flats of the navy yard; in the southeast by the Harbor Commissioners' line; and in the southwest by lands of William Casewell. The conveyance from Oakman and Eldridge was subject to "the rights and easements conveyed" by Damen and White to the city of Charlestown by deed dated July 1, 1858. 103

In November 1862, the bureau notified Commandant Montgomery that, when the tract was paid for, he was to take possession for the United States. Oakman and Eldridge were to be allowed to remove from the premises whatever the U.S District Attorney designated as not included in the sale. To protect the property from vandalism, the Navy posted a watchman. Six months later, on June 1, 1863, Oakman and Eldridge having received their money, the yard took possession of the wharf. 104

THE WATER SUPPLY

During the Civil War, a change occurred in the yard's utilities. Beginning in August 1859,

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100 Smith to Hudson, May, 13, 1861, NA, RG 71, Ltrs. Sent, Y&D; Hudson to Smith, June 4, 1861, NA, RG 71, Ltrs. Rec'd., Y&D.

101 Hudson to Smith, Oct. 26, 1861, NA, RG 71, Ltrs. Rec'd., Y&D.


103 Warranty Deed from Samuel Oakman & Benjamin W. Eldridge, July 1, 1862, Middlesex County Deed Book 871, p. 469.

104 Preble, p. 366; Smith to Montgomery, Nov. 21, 1862, NA, RG 71, Ltrs. Sent, Y&D.
Commandant Hudson submitted annual estimates calling for construction of a reservoir and purchase of a steam pump. These were "needed to avoid the great expense, as well as delay," occasioned by hand pumping. However, in September 1861, Hudson recommended the introduction of Cochituate water into the yard as preferable to the use of a reservoir and steam pump. Civil Engineer Billings estimated it would cost $36,000 to lay the pipes to bring water into the yard from the Cochituate Waterworks. His plan called for thirty-four hydrants, nine stop cocks, and connections with the Chelsea Street main at two points.  

The Bureau of Yards and Docks directed the yard to assemble information as to the price to be paid for Cochituate water for watering ships and what the city would charge per annum for Cochituate water for all yard purposes. The Cochituate board voted to furnish water to the yard at two cents per 100 gallons on certain conditions. The government was to bear the expense of purchasing and laying the pipe and installing meters. The pipe was to be approved by and laid under supervision of the superintendent of the board's Eastern Division. The meters were to be approved by the Cochituate board. Finally, the board reserved to itself the right to shut off the water when necessary to maintain a supply for domestic use in the city.  

In June 1862, the Navy Department accepted the proposal of the water board and directed Montgomery to have Billings prepare plans and estimates for procuring and laying pipe for the Cochituate water. The work would be accomplished under the superintendence of the Boston Waterworks. Upon reviewing the plans, the bureau held that it would cost less to lay the pipes in the yard rather than under the city streets. Proposals from private contractors were solicited. Albert Stanwood offered to lay cast iron pipe and install thirty-four hydrants, six 12-inch stop cocks, and three 8-inch stop cocks for $36,000. His price also included all necessary castings for connecting the pipes with the Chelsea Street main belonging to the Cochituate Waterworks.  

The Bureau of Yards and Docks deemed Stanwood's price exorbitant. Stanwood then pared his figure to $26,000, which was accepted. The bureau instructed the yard to exercise care that the contract was worded "to cover all the work necessary to be done, so that there shall be no possibility of any misunderstanding." The project was to be completed within three months, provided frost did not impede construction. The undertaking, involving Stanwood's contract and the reservoir and steam pump, was completed early in Fiscal Year 1864. Distribution pipes carried water to all parts of the yard. To guard against accidents, the water system was divided into five separate sections, any one of which could be shut off without interrupting the supply at the principal points.  

In early 1865, word reached Commandant Stringham that the city of Boston was about to raise the price of Cochituate water to two and a half or three cents per hundred gallons and that the city would be glad to be released from its agreement to provide the yard with water. In the meantime, the Charlestown Water Commissioners proposed to supply the yard with water from the Mystic River for two cents per hundred gallons. In April, Stringham informed the bureau that the cost of Cochituate water from July 13, 1863 to April 12, 1865 had been $5,054.24. After being apprised of this figure, Secretary Welles directed that henceforth the yard draw its water supply from the Charlestown Waterworks. Stringham recommended that a single connection be used to introduce Mystic water into the yard, leaving the one with the Cochituate system undisturbed. In case of emergency, the Navy could look to that source. The Bureau of Yards and Docks was agreeable, and $2000 was allotted from contingencies to connect the yard's pipes with the Charlestown water  

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105 Hudson to Smith, Aug. 29, Sep. 13, 1861; Billings to Hudson, Dec. 31, 1861, NA, RG 71, Ltrs. Rec'd., Y&D.  
107 Smith to Montgomery, June 20, June 23, June 27, 1862, NA, RG 71, Ltrs. Sent, Y&D; Stanwood to Billings, July 3, 1862, NA, RG 71, Ltrs. Rec'd., Y&D.  
108 Smith to Montgomery, Nov. 7, 1862, NA, RG 71, Ltrs. Sent, Y&D; Annual Reports & Estimates for FY 1863, 1864, NA, RG 71, Y&D.  

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Fires and the Shell House Explosion

During the Civil War, the Charleston Navy Yard experienced several fires, none of them serious. For example, in June 1862, a fire broke out in the joiners' shop, but was quickly extinguished. In January, a fire occurred in a small building connected with the old machine shop, then used for boiling oil. The yard fire company quickly responded before any appreciable damage was done. The yard suffered a major calamity on April 20, 1865, when there was a terrible accident in the shell house. Two large caliber Parrott shells exploded, killing four workmen and wounding six others. When reporting this tragedy, Commandant Stringham wrote:

This accident demonstrates the impropriety of having a building for such a purpose in the midst of the offices and buildings of a crowded Navy Yard. Had the other shells and powder in the shell house exploded, the destruction of life and property would have been very great. The shell house should be removed to some part of the magazine grounds.

Consequently, two days after the explosion, it was ordered by the Bureau of Yards and Docks that "no more loaded shells be tampered with in the yard, too many fatal accidents have been caused by such work, and perhaps for want of proper precautions." Secretary Welles was more blunt and stated "there seems to have been great carelessness in the matter and it should receive thorough investigation" in part to identify anyone "who has been negligent in this matter." Thereafter, no loaded shells were to be bored or drilled in the yard.\footnote{110}

The Charleston Navy Yard and the Civil War

Lt. Gen. Ulysses S. Grant accepted the surrender of Gen. Robert E. Lee at Appomattox Court House on April 9, 1865, and the final capitulation of Confederate forces came in late April and in late June. In the meantime occurred the death of the President. On Saturday, April 15, news reached the Charlestown Navy Yard that Lincoln had been killed by an assassin. Admiral Stringham ordered bells tolled and work suspended. On the 17th, flags were half-masted from sunrise to sunset, and thirty guns fired at half hour intervals. Officers wore crepe. Work was again suspended on the 18th and 19th, and on the latter day at noon, twenty-one minute guns were fired and the bells tolled. On the day of Lincoln's funeral, May 4, cannon were discharged at half-hour intervals. At sunset there was a national salute of twenty-one guns. Secretary Welles had ordered the yard colors half-masted for the entire period, from April 16 until after the funeral. June 1, 1865, was a national fast day in memory of the late president. At 9:30 in the morning, the Marine detachments from the barracks and ships at the Boston station, reinforced by 200 sailors, marched from the yard and participated in the day's ceremonies in the city of Boston.\footnote{111}

The Charlestown Navy Yard made impressive contributions to the Union victory, its efforts in certain areas during the war sometimes equalling, if not exceeding, the accomplishments during its entire previous history. For example, between 1800 and 1860, the yard launched nineteen vessels it had constructed during the Civil War seventeen. The yard had also received from contractors twenty-three ships, which had to be

\footnote{109} Preble, pp. 376-77.

\footnote{110} Montgomery to Smith, June 27, 1862, NA, RG 71, Ltrs. Recd., Y&D; Preble, pp. 365-66, 377; Welles to Stringham, Apr. 24, 1865, National Archives, Record Group 181, Entry 11, Letters and Telegrams Received from the Secretary of the Navy and Chiefs of Navy Department Bureaus (181-11), Box 7, 12/3/64-8/18/65, p. 148.

\footnote{111} Preble, pp. 375-76; Telegram, Welles to Stringham, Apr. 16, 1865, 181-11, Box 7, 12/3/64-8/18/65, p. 141.
outfitted and made ready for sea service. In addition, forty-three vessels purchased by the Navy were brought to the Charlestown yard for conversion, outfitting, or other preparations for military use.

The war saw maximum use of the dry dock at the Charlestown Navy Yard. Between 1861 and 1865, seventy-ships were docked at the yard. So intense was the work at the dry dock that forty ships requiring docking were sent to private facilities in East Boston, making for a combined total of 117 wartime dockings. Between its first use in the 1830s and 1860, the dock at the yard had performed approximately 130 dockings.

The repair record of the yard during the war is something of a matter of conjecture. But, not including vessels launched at the yard or delivered by contractors or those purchased by the government, the number of ships repaired at Charlestown during the Civil War was probably between 100 and 130. Another measure of activity is the number of workers employed. On one day in December 1864, the yard's work force consisted of 4,955 civilians. Prior to 1861 it is likely that the number of employees never came close to even half of that figure, and not until the United States entered World War I was it surpassed.

Probably, between 1861 and 1865, the appearance of the yard changed significantly. Many of the new structures in the yard had resulted from the building program of the 1850s, such as the Machine Shop complex. But it was during the war that a large part of the machine tools were acquired and placed in the various units of that complex. It seems likely that the yard in 1865 had a more cluttered appearance, caused by numerous, temporary buildings hastily assembled and without formal recognition of them being made in yard records. It also seems evident that the yard had accumulated large quantities of stores, supplies, and materials of various description, not all of which were neatly stowed. In the course of the war, the yard had grown in size with the acquisition of White's Wharf.

During and shortly after the great struggle, the Charlestown Navy Yard acquired an assortment of Civil War ships, unlaunched, unfinished, uncommissioned, or out of commission. They included the double-turreted monitor *Quinsigamond*, still on the stocks; *Ammenoosuc*, in ordinary, and *Pompanoosuc*, on the ways, both cruisers; and the light draft monitor *Shawnee*, in ordinary.

The Civil War also left memory of accomplishment, an image of great industry and activity, by which the subsequent decline of the yard was to be charted.
Chapter VII

POSTWAR YEARS, 1865-1869

The Civil War, the most traumatic domestic happening in all of the American experience, cast a long
shadow over the subsequent history of the nation. Of course that shadow was most evident in the immediate
postwar years. The circumstances and activities of the United States Navy 1865 to 1869 can best be
understood as postwar phenomena. And what was true for the Navy was also true for its shore establishments,
including the Charlestown Navy Yard.

In his annual report submitted at the end of 1866, Secretary of the Navy Gideon Welles described the
tasks of his Department in the immediate postwar years. Among them, he included "to reduce the immense
armament. . . , to discontinue the blockading squadrons, to dispose of the large number of captured and
purchased vessels. . . , to discharge and retire the volunteers from service, to suspend work which had been
commenced for increasing the navy, to contract within proper limits our naval force." He noted that "during
the past year the operations of the several navy yards have . . . been reduced to the lowest limit consistent with
the public interest." Welles's statement serves as a useful summary of the challenges confronting navy yards.1

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<th>Table 7: SIZE OF FLEET, UNITED STATES NAVY, 1860-1880</th>
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Source: *Annual Reports, Secretary of Navy*

The contraction of the fleet occurred not only in the years 1865 to 1869, but continued as a major
trend until the early 1880s. And in the light of the entire period, what has significance for the immediate
postwar years is not so much that the Navy became smaller—that was inevitable—but that Congress maintained
a fleet more than twice as large as that of 1860. In the navy yards of the late 1860s, although the volume of
work declined greatly from the war years, the level of activity was still considerably above the pre-Sumter
decade.

At the Charlestown Navy Yard, demobilization began in 1865 and was evident in a number of
activities, such as the return of ships from war service; the off-loading of coal, stores, and supplies from ships
and the accumulation of such items throughout the yard; the sale of many vessels; and placing others in
ordinary. The postwar contraction can be traced in the decline of new construction and ship repair, less

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frequent use of the dry dock, reduction in the funds available for yard improvements, and the decrease in the number of workers.

In the years 1865 to 1890, the official name of the government facility on the Charles River was "U.S. Navy Yard, Boston." A more common designation was "Boston Navy Yard." Occasionally, there were references to the "U.S. Navy Yard, Charlestown" or the "Charlestown Navy Yard." During most of this period, the United States Navy had eight functioning yards, several of which had two names. In addition to the facility at Charlestown (or Boston), there were yards at Portsmouth (or Kittery); New York (or Brooklyn); Philadelphia (or League Island); Washington; Norfolk (or Gosport); Pensacola; and Mare Island. Because of damage suffered during the Civil War, the yards at Norfolk and Pensacola had to be rebuilt. Lack of space led to the sale of the old yard at Philadelphia and construction of a facility at a new location, League Island. In 1868, the Navy acquired a site for another industrial establishment at New London, Connecticut, but it was never developed. Had a third New England yard come into being, work at Boston would have declined more than it did.

The United States Navy was a large, ponderous institution, responding to major military crises, but otherwise slow to change and generally impervious to the influence of single individuals. Yet, the years 1865 to 1869, the second administration of Gideon Welles as civilian head of the Navy, constitute a legitimate unit in the history of the Navy and of the Charlestown Navy Yard. In the management of a particular yard, the Secretary of the Navy looms as far more influential than the yard commandant. Welles encouraged the retrenchment of the fleet after Appomattox, but in a qualified fashion. He believed that the United States needed a modern, metal-hulled, steam-powered Navy, and shore establishments capable of building and maintaining such a fleet. It was not Gideon Welles who emphasized a return to reliance on sail or who called for the closing of navy yards.

The administration of President Andrew Johnson, 1865-1869, had a peculiar political dimension. The original Republican Party, which secured the presidency for Lincoln in 1860, was a hodgepodge of former Whigs, ex-Know-Nothings, and adherents of the Democratic Party. Johnson and Welles had both been Democrats. Johnson’s elevation to the presidency in 1865 probably created strange circumstances in the management of the patronage of the Navy Department. Those circumstances ended in 1869, with the installation of a bona fide Republican President and Secretary of the Navy. If Welles manipulated the navy yard patronage, he did so in a subtle, discreet fashion, whereas his successors openly declared war against employees opposed to the administration.

THE POSTWAR EMPHASIS ON ECONOMY

Shortly after Appomattox, Secretary Welles articulated one postwar aspiration of his administration of the Navy, “rigid economy.” In May 1865, in a letter to Adm. Silas H. Stringham, Commandant of the Boston Navy Yard, Welles stated that it was “important that the expenses of the Navy should be reduced.” To achieve that end, “there must be rigid economy in all matters concerned with Navy Yards.” He then ordered the discharge of “all superfluous writers and employees.” Welles further directed that the commandant “put no repairs on vessels of the Navy, except those of the Navy proper;” without authority from the Department. Subsequently, the Secretary reiterated the economy theme, which was also taken up by the heads of the bureaus in Washington. Yard officials displayed small enthusiasm for the emphasis on economy, but had little choice, and reduced appropriations forced them to become cost conscious. The demand for economic efficiency most directly affected the number of ships and men in the fleet, the cost of goods purchased for the navy, and the size of the civilian work force. In his annual reports, Secretary Welles qualified his comments about economy, noting the national interest required a capable and effective fleet.

Three days after receipt of the letter from Welles, Stringham notified his department heads of the need to reduce the number of employees. That message earned a mixed response. George Sewell, the yard’s chief engineer in May 1865, reported that he had investigated the matter and determined that “with the continuance of the present amount of work now in hand, the number of employees cannot be advantageously.
reduced. In October, a new chief engineer, William Shock, without comment, sent to the various parts of his department a copy of a letter from the head of the Bureau of Steam Engineering calling for "rigid economy" in both employment of workers and expenditures for materials. Only a few officials and officers in the yard identified positions or employees who could be eliminated. Paymaster George Harris, of the yard's Paymaster's Office, informed Stringham in September 1866 that a recent law had ended the wartime income tax on the earnings of yard employees. That change reduced the clerical duties of his office and enabled the paymaster to dispense with one writer. He recommended that the services of D. A. Edwards were no longer required. The yard's Executive Officer, Capt. John M. B. Clitz, determined that only one person in the Executive Department might be dispensed with, Master J. W. Moore. For the past year and a half, Moore had been signing passes for the movement of wood chips out of the yard, making out requisitions and reports of equipment surveys, and keeping the log yard. Clitz then equivocated and stated that with respect to those tasks, Moore's "services have been useful."

Apparently, even yard commandants dragged their feet in identifying men to be removed from government services. As instructed, Commandant John Rodgers reported to the Office of Detail, Bureau of Navigation, the duties of Ens. V. M. Jones and W. L. Gilley and Mates John Griffin and G. W. Sanborn. However, he did not fully comply with instructions to indicate if any of these officers could be dispensed with and master out of the service. In 1868, Congress directed that naval officers should not discharge the duties of master laborer and master sailmaker. Secretary Welles informed Rodgers that the officers at the Charlestown yard who had performed these services had been placed on waiting orders.

To reduce expenditures for materials and supplies, Welles gave an order to yard commandants that all requisitions for purchases made in the open market, as distinct from a competitive bidding process, had to be submitted to the bureau concerned, accompanied by an explanation of the necessity of the purchase. On the same day he issued that order, he sent another directive about stores. In it, Welles noted that the contraction of the fleet resulted in a large accumulation of stores taken from vessels no longer in commission. Because of that accumulation, he forbid requisitions for stores for vessels being outfitted so long as the goods on hand could fill the need. Another ruling, one month later, added a further impediment to open purchases and stipulated that such a requisition could not be considered approved without the endorsement of the yard's naval storekeeper that the item required was not in the public store or included in some existing contract.

THE ADMINISTRATION OF THE CHARLESTOWN NAVY YARD

During the war, Secretary Welles had been interested in implementing reforms in the administration of the Navy. However, he moved cautiously so as not to disrupt the prosecution of the war. The most

3 Sewell to Stringham, May 6, 1865, National Archives, Record Group 181, Entry 33, Letters Received from Yard Officials and Heads of Departments (181-33), Box 2, 7/20/64-8/16/65; William Shock, Chief Engineer, Oct. 6, 1865, 181-33, Box 2, 8/21/65-6/15/66.

4 Harris to Stringham, Sep. 5, 1866, National Archives, Record Group 181, Entry 5, Miscellaneous Letters Received (181-5), Box 17, 12/6/65-1/31/67; Clitz to Rodgers, Dec. 18, 1866, National Archives, Record Group 181, Entry 32, Letters and Telegrams Received from Commanders (181-32), Box 8, 6/1/66-6/15/67. Navy personnel with the title of "master" were low-ranking line officers. In 1883, Congress changed the designation from master to lieutenant junior grade.

5 Thornton Jenkins, Chief, Bureau of Navigation, to Rodgers, Oct. 22, 1867, National Archives, Record Group 181, Entry 21, Letters and Telegrams Received from the Bureau of Navigation (181-21), Box 1, 5/23/63-4/27/69; Welles to Rodgers, July 30, 1868, 181-11, Box 7, 7/18/67-9/13/69, p. 80.

6 See two circular letters from Welles to Stringham, both dated June 29, 1865, National Archives, Record Group 181, Entry 51, Navy Department Circulars (181-51), 4/19/36-1/1/72, pp. 85, 86; Robert Clark, Purchasing Agent, to Stringham, Aug. 2, 1865, 181-33, Box 2, 7/20/64-8/16/65.
important change of the war years was the reorganization of the bureaus, increasing their number from five to eight. In 1867, Welles extended the bureau system to the navy yards. As a result, yard organization came to resemble more closely the bureau structure of the Navy Department. In all of the major yards, there was a department corresponding to each of the bureaus in Washington. In the period 1846-1849, Welles had served as the civilian head of the Bureau of Provisions and Clothing, and he came to know first-hand the problems respecting the purchase of supplies. While he was Secretary of the Navy, he reduced the functions of and ultimately eliminated the navy yard positions of Navy Agent and Naval Storekeeper.

BUREAUS, COGNIZANCE, YARD DEPARTMENTS

Presiding over the Navy Department in Washington was the Secretary of the Navy, a civilian appointee of the president. From time to time in the second half of the nineteenth century, recommendations were made for the creation of a permanent board of senior naval officers to advise the Secretary, but nothing was accomplished until the early 1880s. In 1862, twenty years after its origins, the bureau system of the United States Navy was reorganized by act of Congress. That act, other legislation, and orders of the Secretary, established the cognizance of the bureaus and thus defined the scope of activity of the separate departments in the navy yards at Boston and elsewhere. A major element in the reorganization of 1862 was replacing the original Bureau of Construction, Equipment and Repair with three new bureaus: Construction and Repair, Equipment and Recruiting, and Steam Engineering. In the decades after the Civil War, the departments at the Boston Navy Yard associated with these three bureaus were often the largest and the most important.

The Bureau of Construction and Repair had charge of the design, construction, and repair of hulls of naval vessels and of equipment and apparatus associated with hulls. It also was responsible for timber, lumber, metal plates, and tools used in hull construction. In 1862, the cognizance of this bureau included the care of ships not in commission, vessels under repair, and the mooring and docking of vessels. The bureau in Washington and the departments in the navy yards were headed by staff officers holding the rank of naval constructors.

The manufacture and acquisition of cordage, anchors, cables, sails, riggings, fuel, furniture, cooking utensils, and other articles of equipment and the equipping and supplying of ships with such articles constituted the main charge of the Bureau of Equipment and Recruiting. The bureau also had responsibility for recruiting at naval rendezvous and receiving ships and the transporting of recruits. The chief of the bureau in Washington and the heads of the Equipment Departments in the yards were line officers. In the postwar years, the Equipment Officer at the Boston Navy Yard had nothing to do with recruitment, and apparently that aspect of his bureau's cognizance did not comprise one of his duties. One unique activity of the Equipment Department at Boston was the operation of the Navy's only ropewalk.

Under the reorganization of 1862, the Bureau of Steam Engineering took over the designing, building, fitting out, repairing, and engineering of engines, boilers, pumps, heaters, and other steam machinery and accessories used in naval vessels. The commissioned officers of the bureau held the staff ranks of chief engineers or assistant engineers and were found aboard ship as well as at shore establishments.

The Bureau of Ordnance had responsibility for the manufacture, issuance, and use of ordnance and ammunition; for magazines in ships and on land; and for the mounting of ordnance on board vessels. The cognizance of this bureau included armor, mines, shells, spar torpedoes, armor plate, and naval artillery. Line officers had charge of ordnance matters in navy yards. At Boston, the Ordnance Officer or the Inspector of Ordnance had supervision of ordnance activity at the yard and also at the magazine at Chelsea and the Nitre Depot at Malden.

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7 For an example of such a proposal, see New York Times, Mar. 12, 1869, p. 1.

8 The cognizance of the bureaus is indicated in annual appropriations bills. For example, see Act for making Appropriations for the naval Service for the Year ending June thirtieth, eighteen hundred and sixty nine, June 17, 1868, U.S. Statutes at Large, vol. XV, pp. 68-72; and similar act dated June 30, 1876, ibid., vol. XIX, pp. 65ff.
In the organization of the Navy Department, the Bureau of Navigation appears as an important agency with diverse responsibilities. It had supervision of the Naval Observatory and Hydrographical Office and the U.S. Naval Academy. It also administered the naval apprentice system, and its Office of Detail decided the assignment or detail for Navy officers. However, the Navigation Officer at Boston, a member of the line, had no responsibility for any of these matters, but was concerned with the procurement, storage, and issuance of navigation instruments, charts, nautical books, signal books, logbooks, library books, and flags. He also had authority over shipboard alarm and communication systems. Furthermore, Navigation funds paid for the towing by private tugs of naval vessels. A compass station, consisting of buoys and located near Boston Harbor, was also a concern of the yard's Navigation Officer. Except for the Surgeon's Office, the Department of Navigation was the smallest in the Boston Navy Yard.

The Bureau of Provisions and Clothing, originally established in 1842, retained its name and function under the reorganization of 1862. It provided the Navy with food provisions, clothing, small stores, water, and other items. This bureau was represented afloat and ashore by staff officers with the ranks of pay director, pay inspector, paymaster, and assistant paymaster. Another agency carried over from the original bureau system was the Bureau of Medicine and Surgery. Its cognizance extended to administering naval hospitals, dispensaries, and laboratories; furnishing ships with medicines, medical supplies, and medical instruments; preparation, inspection, storage, and transportation of these materials; and medical examinations of candidates for enlistment. Members of the medical staff corps had the ranks of medical director, medical inspector, surgeon, and assistant surgeon. At Boston, the Bureau of Medicine and Surgery had a presence in the yard itself in the form of a Surgeon's Office and also at the naval hospital at Chelsea.

Since its creation in 1842, the Bureau of Yards and Docks had responsibility for the design, construction, and maintenance of buildings, docks, wharves, hoisting mechanisms, storage facilities, grounds, and the other physical components of navy yards and stations. The chief of the bureau was a line officer, but Yards and Docks activities in the yards were under the direction of staff officers with the rank and title of civil or construction engineers. Prior to 1867 and the extension of the bureau system to navy yards, the Bureau of Yards and Docks had administrative cognizance transcending matters of physical plant. For example, it had responsibility for the wage scales for civilian employees. With the change in 1867, however, the role of Yards and Docks at navy yards contracted.

The cognizance of the bureaus could be changed by acts of Congress or by the Secretary of the Navy. In September 1867, Commandant Rodgers received a directive from the Chief, Bureau of Navigation, stating that certain articles, previously within the charge of his bureau, were being transferred to the Bureau of Equipment and Recruiting. The articles were "wheel ropes of hide, white rope, wheel chain, and wire rope for steering."

THE ORGANIZATION OF THE YARD

The United States Navy establishment at Charlestown, Massachusetts, consisted of several different entities, the most important being the shipyard. In addition, there were other units, some located in the yard and some elsewhere, the functions of which did not directly relate to shipyard industrial activities, but which constituted parts of the "station" or "command." Within the physical precincts of the yard were the receiving ship, the Marine Corps Barracks, and the naval rendezvous or recruitment office. Off-yard units consisted of the naval hospital at Chelsea; the magazine on the hospital grounds; the office of the Navy Paymaster in Boston; and the Nitre Depot at Malden.

Some confusion prevailed as to the Nitre Depot. In July 1866, the Bureau of Ordnance advised Commandant Stringham that it had placed Lt. Charles Hawley in charge of the Malden facility. The bureau directed that Hawley be under the general supervision of the yard's Inspector of Ordnance, through whom all of Hawley's reports were to be forwarded. Two years later, Commandant John Rodgers questioned that arrangement and sought clarification from Washington. Secretary Welles informed Rodgers that the depot "will be regarded as embraced in your command and the officer who is in immediate charge will make his report..."
Between 1862 and 1867, eleven departments and offices constituted the shipyard at Boston. Two of these centered on naval officers charged with general supervision of yard affairs, the office of the commandant and the Executive Department, directed by the executive officer. A third was the department of the naval storekeeper. In 1867, a reorganization of the yards eliminated that unit. Each of the remaining eight departments represented and performed tasks assigned to one of the eight bureaus which made up the Navy Department in Washington. Various designations were used for the different departments in the yard and did not always bear the same labels as the bureaus in Washington. The local units (and their parent organizations) were: Construction Department or Naval Constructor's Office or Department (Bureau of Construction and Repair); Chief Engineer's Office or Department (Bureau of Steam Engineering); Navigation Office (Bureau of Navigation); Surgeon's Office (Bureau of Medicine and Surgery); Inspection of Provisions, Clothing, Etc. (Bureau of Provisions and Clothing); Equipment Office (Bureau of Equipment and Recruiting); Civil Engineer's or Construction Engineer's Office or Department (Bureau of Yards and Docks); and Ordnance Office or Inspector of Ordnance (Bureau of Ordnance).

Except for the naval storekeeper's establishment, each of the yard's departments was headed by a naval officer. The commandant and executive were line officers, as were also the heads of the departments of Ordnance, Equipment, and Navigation. Staff officers had charge of the departments of Construction, Steam Engineering, Medicine, and Provisions and Clothing. Some controversy prevailed concerning the position of civil engineer. One school of thought held that these officials were not *bona fide* naval officers, but civilians in the employ of the navy.

From his service as Chief, Bureau of Provisions and Clothing in the 1840s, Gideon Welles had familiarity with defects in the administration of the Navy. Welles had sponsored the Congressional reorganization of the bureau system in 1862. He wanted to go further, but proceeded cautiously and indicated well in advance the nature of the alterations under contemplation. He sought to test one set of changes before general introduction and selected the Charlestown yard for a trial. In December 1864, he wrote Commandant Stringham of the Department's desire "to effect a reformation in the mode of conducting the business of the Navy Yards" and of its wish "to avoid sudden and violent changes." Toward that end, Welles sent Stringham a copy of portions of a report and a series of recommendations by a "special counsel." Welles wrote: "It is the purpose of the Department to test these suggestions by actual use and they are therefore submitted to you to be, if approved, applied to the business of the Charlestown Yard." The letter and the report were delivered to Stringham by J. B. Veeder, who apparently had conducted the study. According to Welles, Veeder "will act under your direction in aid of the objects the Department desire to obtain."11

The report referred to "various schemes of fraud recently brought to light" and attributed those schemes "as much to the want of proper business regulations and a well considered system as to the cunning of rogues." The recommendations had to do with purchasing supplies from contractors. None of the suggestions appear overtly radical, but they implied defects existed in the institutions of the naval storekeeper and the navy agent.

During the period 1865 to 1869, several important changes occurred in the administrative structure of navy yards, including that at Charlestown. An alteration took place in the distribution among the Washington bureaus of authority within navy yards. Also the elimination of the naval agent and the naval storekeeper removed two important civilian officials. The formal date of these changes was July 1, 1867, although it appears that the reorganization had been announced much earlier and steps taken toward its implementation.

The changes primarily involved the Bureaus of Construction and Repair, Steam Engineering, Equipment and Recruiting, and Yards and Docks. Prior to July 1, 1867, stores and supplies for these bureaus were received at the yard by a naval storekeeper, a civilian, and were inspected by a line officer designated

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10 Bureau of Ordnance to Stringham, July 12, 1866, National Archives, Record Group 181, Entry 24, Letters and Telegrams Received from the Bureau of Ordnance and the Bureau of Steam Engineering (181-24), Box 1, 4/7/65-3/19/67; Welles to Rodgers, June 16, 1868, 181-11, Box 7, 7/18/67-9/13/69.

11 Welles to Stringham, Dec. 28, 1864, 181-11, Box 7, 12/3/64-8/18/65, pp. 36-40.
as general inspector. The naval storekeeper stored those supplies in buildings under his custody and issued them upon requisition. Under the old system, the naval storekeeper kept accounts of the receipts and expenditures of all supplies. In explaining the position of the naval storekeeper in his yard, the chief accountant at Charlestown referred to "the four Bureaus heretofore under the supervision of the Storekeeper."12

Of all the bureaus involved in yard management, the Bureau of Yards and Docks had been the most prominent. That bureau had asked Congress for appropriations for tools and machinery for the whole yard and had charge of those items until delivered to the naval storekeeper. The clerk of the yard, a civilian "officer" of the Bureau of Yards and Docks, was responsible for the mustering of all yard workmen and kept and made out the payrolls. Yards and Docks counted among its yard employees all those in the so-called "civilian department," also sometimes referred to as the "Civil Establishment." That category included not only the civil engineer, and his assistants and clerks, but also the naval constructor; master machinist; naval storekeeper; clerk of the yard; clerks to the commandant, naval storekeeper, and naval constructor; the inspector of timber; the porter; writers; and second and third clerks.13 It seems clear that over the years, the real authority of Yards and Docks had decreased in navy yards and that the alteration in July 1867 marked no sudden departure. In the same fashion, the elimination of the naval storekeeper had been anticipated.

After July 1, 1867, each yard department became custodian of its own stores. Supplies arriving in a yard for a particular bureau were received and inspected by a yard officer representing that bureau. They were then stored under the jurisdiction of the bureau, to be issued on direction of the head of that department. Each bureau maintained accounts for its own supplies. Moreover, now each bureau sought a congressional appropriation for its own tools and machinery.14 The clerk of the yard was eliminated, and each department now mustered its own workmen, kept its own payrolls, and forwarded those rolls to the yard paymaster for payment. The naval constructor was henceforth paid by the Bureau of Construction and Repair.

Another change concerned work done by one yard department for another. For example, Equipment had charge of sailmaking and other canvas work. Wrapping pipes in a vessel's steam propulsion system came under Steam Engineering. Sailmakers, experts in working with canvas, thus did work for another department. Under the old system, the Bureau of Equipment would charge Steam Engineering solely for the materials used. Under the new arrangement, the bureau for whom the work was being done would be charged for the entire cost, both material and labor. This aspect of the reorganization in 1867 produced a good deal of maneuvering by departments in the Charlestown Navy Yard.

Responding to questions from the Senate Committee on Naval Affairs late in 1867, Commandant Rodgers explained the impact of the recent changes in navy yard organization. He observed that the Bureaus of Ordnance, Navigation, Medicine and Surgery, and Provision and Clothing, had already conducted business along the lines of the new procedures and therefore were unaffected. The new system required a greater number of employees, since each department needed its own inspectors, receivers, store clerks, and payroll clerks. Rodgers told the senators that the naval agent and naval storekeeper positions had emerged many years before, "when twenty men were employed in the yard, and when a wagon would hold the yard supplies."15

The changes were resisted by those whose positions appeared to be threatened, such as A. L. Fisher, the Boston yard's chief accountant under the old system. In the new organization, there were no yard-wide

12 A. L. Fisher to Stringham, Apr. 17, 1866, 181-5, Box 17, 12/6/65-1/31/67.

13 For a listing of the offices in the "civil department," see Annual Report, Boston Navy Yard, Sep. 1865, National Archives, Record Group 181, Entry 154, Annual Reports and Estimates (181-154).

14 For an example of separate solicitations to Congress for funds for particular plant improvement projects for each department at the Charlestown Navy Yard, see Annual Report, Secretary of Navy, Dec. 2, 1867, House Ex. Docs., vol. IV, 40-2, USSS No. 1327.

15 James Grimes, Chairman, Senate Naval Committee, to Rodgers, Dec. 12, 1867, 181-5, Box 17, 2/1/67-6/23/69; Rodgers to Grimes, Dec. 31, 1867, in Report, Committee on Naval Affairs, Feb. 12, 1868, Senate Reports, 40-2, USSS No. 1320, pp. 3-5.
accounts. Fisher felt that he had contributed to the reorganization by bringing "to light the great evils in the Storekeeper's manner of doing business" and that he had been "largely instrumental in abolishing an office which had been a by-word in the Department for years." Fisher vastly exaggerated his role in the origins of the reorganization. He also misjudged the future, and the position of chief accountant survived, continuing as part of the Yards and Docks establishment.16

At Charlestown, the civilian naval storekeeper retained a place in the yard until July 1867, but during the several preceding years his authority and freedom of action had gradually been eroded. A naval officer, Acting Volunteer Lt. Henry C. Keene, had orders from Secretary Welles to report on August 1, 1865, to Commandant Stringham, who had received instructions to place Keene in charge of the Naval Store and the Storekeeper's Office. By that time, the yard's last civilian storekeeper, Robert H. Clark, had the job title of "Paymaster and Purchasing Agent, Navy Agent's Office." It seems likely that some confusion resulted from the retention of Clark and the assignment of his function to Keene. Shortly after Keene's arrival, J. P. Veeder made an appearance for the purpose of examining the material, books, and papers in the possession of the civilian storekeeper.17 Anticipating becoming responsible for large quantities of stores and materials on July 1, 1867, several bureau chiefs and heads of departments sought to assert themselves prior to that date in the process of acquiring stores for their activities.18

RELATIONS BETWEEN YARD DEPARTMENTS

Postwar navy yards were generally regarded as inefficient and unnecessarily costly in their operations. Whatever substance these criticism had resulted from the decentralization that increasingly characterized yard administration. Each department was under a different bureau in Washington, and each of the bureaus sought to maintain exclusive control in areas of its cognizance, to protect its own turf, and to have complete authority over its own work force, supplies, and funds. Navy yards reflected this pattern.

Although they preferred to see themselves as largely autonomous units engaged in their duly prescribed tasks, yard departments were by no means isolated one from another geographically or functionally, and the activity or inactivity of one department might have important consequences for another. Departments confronted one another in a variety of circumstances. Two or more departments might use the same building; some departments were dependent on others for materials or services; the progress of work by one department governed the work of another. Indeed, different components of the yard were oftentimes dependent upon one another. However, the bureaucratic structure frequently prevented cooperation, which should have been the order of the day. Also the situation produced mutual finger-pointing when problems and delays arose.

Frequently at issue between two departments was the matter of costs. For example, the Bureau of Equipment had responsibility for moving vessels within the yard, but generally the Equipment Department in Boston lacked the manpower for such activity. On one occasion in June 1869, the naval constructor, without consulting the equipment officer, used Construction laborers to move several ships under repair and then billed Equipment for the labor. The equipment officer complained to the commandant that the procedures of his bureau had been violated.19

16 Fisher to Steedman, May 23, 1867, National Archives, Record Group 181, Entry 38, Commandant's Personal File (181-38), Box 1.

17 Telegram, Welles to Stringham, July 3, 1865; Welles to Stringham, July 26, 1865, 181-11, Box 7, 12/3/64-8/18/65, pp. 205, 223; Clark to Stringham, Aug. 2, 1865, 181-33, Box 2, 7/20/64-8/16/65.

18 Shock to Stringham, Mar. 3, 1866, 181-33, Box 2, 8/21/65-6/15/66; Welles to Stringham, July 17, 1865, 181-11, Box 7, 12/3/64-8/18/65; Henderson to Keene, Feb. 13, 1867, 181-5, Box 17, 2/1/67-6/23/69.

19 J. A. Williamson, Equipment Officer, to Rodgers, June 19, 1869, 181-33, Box 4, 2/17/69-6/30/69.
During the period 1865 to 1869, two men served as commandant of the Charleston Navy Yard. Silas H. Stringham began his second tour as head of the yard in 1863 and held the post until 1866, when he was relieved by John Rodgers. Rodgers filled the position of commandant from 1866 to 1869. For the period covered by this study, 1842-1890, the usual tour of duty as yard commandant was three years. The commandant at Charlestown was the ranking officer in the yard and, for the years 1865-1869, the larger Boston station. This made him the most eminent naval figure in the area between Portsmouth and New York. He received his orders and instructions from the Secretary of the Navy and from the chiefs of the various bureaus in Washington. Theoretically and in actual practice, all correspondence from the yard to the outside world went through the commandant. In similar fashion, all government and Navy correspondence to any and all yard departments, officials, and officers was directed to the commandant. One exception was the Marine Corps Barracks, whose commanding officer maintained direct contact with the Corps commandant in Washington.

A circular letter from Secretary Welles in September 1866 underscored the formal authority held by the commandant of a navy yard. It directed that in the future, "all property of every description, within the several navy yards or attached thereto, . . . will be under the control of the Commandant, and will not be used by either of the several Departments independent of his order." This directive is misleading and suggests that the yard commandant had vast control. Quite the opposite was true.

Navy officers coming into the Boston area, including ship commanders, reported to the yard commandant and, while at the yard or station, through him kept in touch with the Navy Department. As a consequence of his involvement in a vast correspondence, the yard commandant looms as a gigantic presence and powerful force, probably a deceptive image. Certainly the commandant was the most significant figure in the yard and station. However, most important decisions were not made by him, but by the authorities in Washington. Even in areas in which the commandant had discretion, such as wage schedules, the Secretary of the Navy or a bureau chief could override his decision. If anything, navy yard commandants probably came to exercise less and less genuine authority in the decades after the Civil War, as the bureaus more jealously guarded their own preserve.

It appears congressmen and senators recognized that commandants had limited power in such matters as patronage. Gideon Welles recorded in his diary an exchange in July 1868 with Nathaniel Banks, a member of the House of Representatives. Banks and Welles had clashed on the issue of appointment of master mechanics at the Boston yard. Also Welles resisted Banks's demand that the yard's naval constructor, Edward Hartt, be replaced, preferably by William Hanscom. During one of the exchanges, according to Welles, Banks said "the commodore who commanded the Charlestown Yard was of no account; that he merely opened and closed the gates, and lit the gas,—nothing else; that he was afraid of Hart, etc., etc." Welles explained that "John Rodgers had been esteemed a man of courage, physical and moral." Doubtless Banks unduly belittled the authority of Commandant Rodgers, but there was more than a political grain of truth in his sentiments. Perhaps the office of the commandant can be understood as something of a message center. Whatever the real powers of the yard commandant, it is by reading his mail that we gain an appreciation of the diverse activities of the yard.

Since 1842, commandants more or less fitting the three-year formula were: Nicolson, 1842-45; Parker, 1845-49; Downes, 1849-52; Gregory, 1852-55; Stringham, 1855-59; and Hudson, 1859-62. Besides, Stringham (1863-66) and Rodgers (1866-69), those in the remainder of the period to 1890, who served as commandant for three years were: Steedman, 1869-72; Nichols, 1873-76; Parker, 1876-78; Ransom, 1879-82; Badger, 1882-85; Kimberly, 1885-87; and McCann, 1887-90. The exceptions were: Montgomery, 1862-63; Parrott, 1872-73; Spicer, 1878; and Haxtun, 1878-79.

Circular Letter, Welles to Stringham, Sep. 26, 1866, 181-51, 4/19/36-1/1/72, p. 103.

As the most conspicuous Navy officer in the vicinity, the commandant of the Charlestown Navy Yard received queries from civilians on a wide variety of topics. In May 1865, a mother of a sailor wrote to Commandant Stringham, seeking information about that portion of her son’s pay which she understood was to be assigned to her, but which she had not received. The next month, a writer on behalf of another mother inquired as to the whereabouts of a son from whom she had not heard since February. According to a third letter, sent to the yard in August, an acting ensign had arrived on Penguin earlier that month. He had informed his mother that he would visit her within a few days, but she was still waiting.²³ Probably, the authors of these letters wrote to the Boston yard commandant because he was known to them as an important official in the Navy.

Civilians contacted the commandant on a host of other matters. With the collapse of the Confederacy, the Navy began to reduce its fleet, in part by selling ships, especially those that had been converted from civilian use. Commandant Stringham received numerous letters of inquiry about the sale of vessels. Navy paymasters who handled the sales kept the commandant informed of deposits and payments made by purchasers.²⁴

Civilians with complaints about the Navy or the navy yard brought their grievances to the attention of the commandant. A dispute existed between the Boston Navy Yard and a local pilots’ organization. The Navy objected to the fees charged by the pilots, and sometimes the civilian captain of a yard tug served as pilot aboard naval vessels. The local pilots insisted that only they should bring ships into the harbor and that the Navy should pay the same fees as everybody else.²⁵

The commandant served as the Navy’s legal representative for civilians and their lawyers with claims against the government. On October 11, 1865, Powhatan collided with several fishing schooners. The Navy referred the matter to Commandant Stringham for settlement of claims for damages. He played a similar role respecting an incident in June 1866, when Osceola ran into a British bark, causing considerable harm. In 1866, while towing vessels to the Nitre Depot, the Ordnance tug Blue Light damaged a commercial wharf. The owners of the wharf did not seek compensation until October 1868, but when they did, the matter ended up in the hands of the commandant.²⁶

Government officials other than those connected with the Navy contacted the commandant of the Charlestown yard about naval matters. In November 1865, the office of the U.S. Engineer, Boston, relayed to Commandant Stringham the complaint of George H. Rogers of Gloucester. In the summer of 1863, a congressman, whose district included Gloucester, became alarmed about the possibilities of a piratical raid. He prevailed upon the Navy, which placed ten old 32-pounder guns, a magazine and a storehouse on Rogers’

²³ Bridget Hawkes to Superintendent, Boston Navy Yard, May 22, 1865; Thomas Cowles to Commander, Navy Yard, Boston, June 26, 1865; Thomas Watson to Stringham, Aug. 31, 1865, all in 181-5, Box 16, 5/10/65-12/6/65.

²⁴ John Gillespie to Stringham, June 10, 1865; Edw. Waite to Stringham, Aug. 29, 1865; Paymaster George Harris, Receipt to Charles Miller, Nov. 3, 1865; Harris, Receipt to Hann’s & Co., Nov. 7, 1865, all in 181-5, Box 16, 5/10/65-12/6/65; T. P. Roole to Stringham, Jan. 31, 1866, 181-5, Box 17, 12/6/65-1/31/67.

²⁵ E. Chadwick, Pilot Commission Office, to Stringham, Sep. 27, 1866, 181-5, Box 17, 12/6/65-1/31/67. The relationship between local pilots and the Navy continued to be troubled. For a later stage, see Charles Stearn, Agent, Boston Pilots, to Secretary of Navy, Aug. 13, 1880; Assistant Secretary of Navy to Commandant, Aug. 17, 1880, 181-11, Box 9, 6/16/79-6/27/81, p. 55; J. H. Eldridge to Commandant, Aug. 18, 1880, 181-5, Box 20, 5/19/80-11/30/83, p. 35.

²⁶ John Tyler to Stringham, Nov. 2, Nov. 10, 1865, 181-5, Box 16, 5/10/65-12/6/65; Page Richardson & Co. to Commander, Osceola, June 20, 1866; F. W. Moore to Stringham, June 6, 1866, 181-5, Box 17, 12/6/65-1/31/67; D. M. Fairfax, Inspector, Ordnance, to Rodgers, Oct. 24, Oct. 30, 1868, 181-33, Box 4, 6/22/68-2/17/69.
wharf. Those items had remained, and Rogers sought their removal plus damages.27

Commanders of ships of the Navy at the yard or in the vicinity reported to the commandant at Charlestown. Those reports often included descriptions of problems, most of the time beyond the competence of the commandant to resolve.

*Powhatan*, in the yard for repairs in August and September of 1865, remained in commission and her crew remained on board. *Powhatan* suffered an alarming desertion rate while in the Boston vicinity. In early August, the commander reported to Stringham that sixty-three of his crew had deserted since the ship first came to the yard. Ten took off on August 7. Their technique was to mix in with civilian employees on board to make repairs. Apparently, yard workers provided crewmen with articles of civilian clothing. When the workmen left, sailors went with them. On August 21, the ship's commander reported two men absent without leave. They had received permission to go ashore to attend church and had not returned. Shortly thereafter, *Powhatan* was docked at Simpson's Dock in East Boston. Preventing desertion at night proved difficult in the civilian facility. During the first night in dock, five of the Marine guard "escaped." *Powhatan* needed only slight repairs and was ready for undocking on August 25. However, insufficient water prevented the ship from leaving the dock until early September. In the meantime, more sailors and marines deserted.28

Six months earlier, the captain of *Wachusett* reported the same problem on a smaller scale. Fifteen of his crew deserted on the day before his ship left the yard. The desertion again occurred in connection with yard workmen being aboard, in this case to load bags of coal, spare spars and other items. Precautions were taken, including stationing marines, officers, and yard watchmen aboard ship and on the wharf. The ship's commander himself "took general supervision . . . and kept a sharp lookout." He believed that the deserters "doubtless practiced and skilled Bounty Jumpers--only eluded our vigilance by exchanging garments with, and mingling among the Yard laborers."29

In the autumn of 1866, another ship commander in the Boston vicinity had problems which he passed on to the yard commandant. While in the West Indies, *Monongahela* suffered an outbreak of yellow fever. That epidemic resulted in her being sent north, where, hopefully, cooler weather would eliminate the infection. On October 6, her commander reported to Stringham that the vessel was detained at the Quarantine Station in Boston's outer harbor. By that time, forty-six men had come down with the disease, four of whom had died. Three more perished while at the quarantine ground. Some of the sick were removed to a tug. *Monongahela*’s captain wanted to shift to another vessel those officers and crewmen in good health, so as to better ventilate his ship. The yard sent *Osceola*, to which were transferred the healthy members of *Monongahela*’s crew. Medical authorities at the Quarantine Station were prepared to allow *Monongahela* to proceed to the navy yard as soon as one or two good frosts had occurred. In late November, surgeons from the Navy hospital at Chelsea wrote to the commandant protesting proposals either to place the crew back aboard *Monongahela* or to allow the ship into the yard. In their judgment, the temperature had not yet dropped sufficiently to warrant breaking out the hold or other measures to purify the infected vessel. *Monongahela* ultimately came to the yard and was repaired.30

Some ship commanders reported to the commandant, Charlestown Navy Yard, about small, routine

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matters. In July 1866, John Ross, commander of *Fearnot*, sent Stringham the results of a quarterly uniform muster of officers on his ship.\textsuperscript{31}

Within the navy yard, the commandant had a great many functions. One device in increasing use were inquiries and examinations by boards made up of yard officers. The commandant convened such a board, either on his own authority or when directed by the Navy Department. Boards made surveys to determine the condition of a broad range of items, including ships or parts thereof, buildings, and materials. Boards investigated fires to establish their causes and the extent of damage. Disputes between officers, complaints by workers against officers or other supervisory personnel, and charges against workers might be investigated by boards appointed by the commandant. For example, in June 1866, the Secretary of the Navy directed Commandant Rodgers to convene a board to hear a dispute between the commanding officer of the receiving ship and a Marine Corps lieutenant.\textsuperscript{32}

THE NAVY YARD AND NAVY PERSONNEL

Industrial activities constituted the principal mission of navy yards. However, as units of the United States Navy, the yards performed a variety of administrative services. Among them were matters involving naval personnel other than those men attached to the yards themselves. The functions of several of the bureaus of the Navy Department included personnel. The Bureau of Equipment and Recruiting had responsibility for enlisting men into the service, and the Bureau of Navigation was charged with detailing officers. However, other parts of the Navy Department were also concerned with personnel. The office at the Charlestown Navy Yard that handled practically all matters of Navy personnel was that of the commandant. Although their parent organizations in Washington had cognizance respecting officers or enlisted men, the yard's Equipment Officer and Navigation Officer were not concerned with such matters.

Involvement in the manning of ships was probably the commandant's most important function respecting Navy personnel. It does not appear that he was called upon to assemble entire crews, but rather to assist in filling out the complements of vessels which for one reason or another were at his yard. At Boston, the receiving ship *Ohio* constituted the most readily available collection of naval manpower. For example, in one instance the "Bureau of Navigation and Office of Detail" directed Stringham to order four mates from *Ohio* to *Tuscarrora*. In January 1865, the Portsmouth yard had no receiving ship, and its commandant called on Stringham to provide eight first-class and five second-class firemen for *Merrimack*. The yard sometimes received directions to transfer men from one ship to another. In May 1866, the Bureau of Equipment and Recruiting telegraphed orders to Stringham to transfer the crew of *Port Royal* to *Don*. Apparently, the yard's chief engineer had some responsibility for the proper manning of the engine room on steamers being outfitted or worked on at the yard. For example, in April 1866, Chief Engineer Henderson recommended that two first-class firemen, six second-class firemen, and fourteen coal heavers "be enlisted to make out the complement of men in the Engineer's Department of the U.S. Steamer 'Osceola.'\textsuperscript{33}

The apprehension and processing of deserters from the service concerned a number of offices in Washington, all of which sent instructions to navy yard commandants. Frequently, the cases of desertion brought before the Charlestown yard involved offenders who had residences in Massachusetts. In March 1865, Secretary Welles himself instructed Stringham to place an advertisement in the local newspapers respecting Acting Ensign C. R. Fleming, a deserter whose home was Newburyport. The Navy offered $30 reward for Fleming's arrest. If the deserter was apprehended, Stringham was to confine him aboard the receiving ship. Several months later, Stringham received similar instructions concerning a mate who deserted from *Dacotah*.

\textsuperscript{31} Ross to Stringham, July 2, 1866, 181-32, Box 8, 6/1/66-6/15/67.

\textsuperscript{32} Welles to Rodgers, June 15, 1868, 181-11, Box 7, 7/18/67-9/13/69, p. 66.

\textsuperscript{33} Thornton Jenkins to Stringham, Sep. 14, 1865, 181-21, Box 1, 5/23/63-4/27/69; T. Bailey to Stringham, Jan. 30, 1865, 181-32, Box 7, 1/25/65-8/7/65; A. Smith to Stringham, May 29, May 31, 1866, National Archives, Record Group 181, Entry 19, Letters and Telegrams Received from the Bureau of Equipment (181-19), Box 3, 5/17/66-12/15/66, pp. 21, 24; Henderson to Stringham, Apr. 7, 1866, 181-33, Box 2, 8/21/65-6/15/66.
However, the instructions in this instance came from the Chief, Bureau of Navigation. The commanding officers of ships at the yard reported instances of desertion to the commandant. Such was the case in September 1866, when a landsman deserted Tahoma. The vessel's commander had two purposes in notifying Stringham. He sought the apprehension of the deserter, whose physical description was included in the notice. Also, Tahoma's skipper was informing the commandant that the vessel's crew was one man short. The Bureau of Equipment and Recruiting had an interest in desertion. In September 1866, it sent Stringham directions as to the proper reporting of deserters, which the commandant was to convey to the commanding officers of "vessels under your command."

Another personnel function performed by the yard was examination of candidates for acceptance as volunteer officers and for promotion. In April 1865, with the victory of the Union in sight, the Bureau of Steam Engineering instructed Stringham to suspend examination of applicants for admission into the "Volunteer Engineer corps." The month following, the Bureau of Navigation called on Stringham to arrange for the examination of an acting master on Ohio to determine his qualification for promotion to the grade of acting volunteer lieutenant.

The only unit of the Boston Navy Yard entirely devoted to personnel matters was the rendezvous or recruitment office. At least some of its correspondence with the Bureau of Equipment and Recruiting went through the office of the commandant.

STORES AND SUPPLIES

As evident in the magnitude of the change involved in the elimination of the naval agent and naval storekeeper, the procurement, inspection, storage, management, and disposition of stores, supplies, goods, and material objects of all sorts constituted important activities at navy yards.

Consistent with the emphasis on rigid economy and also to ease the burden on storage facilities, the Charlestown yard sold unneeded, surplus goods at public auction. For example, in April 1865, the Ropewalk had one of its periodic auctions of left-overs from its ropemaking operations. Included in the sale were nearly 50,000 pounds of Russian tow; 2,325 pounds of Russian shakings; 5,800 pounds of Russian tiers; 10,000 pounds of Manila tiers; 6,330 pounds of Manila shakings; 2,808 pounds of hide scraps; and 755 pounds of "junk scraps." The same month, an auction of guns proved less successful, the price offered being unacceptable to the Bureau of Ordnance. In December 1865, the boatswain in charge of the yard coal supplies recommended the public sale of 100 tons of coal screenings on White's Wharf and ten tons of mixed coal from Sacramento, piled near the old blacksmith shop.

Navy yards procured supplies and materials from private businesses through two main types of procedures. Bureaus in Washington annually solicited from their yard departments lists of goods required in the forthcoming fiscal year. After reviewing those lists, each bureau published schedules giving the particular type and quantity of all the items needed. The bureau sent the schedules to the yards to be distributed to bidders. The Navy selected from among the bids and made contracts with the successful bidders. Some items,
such as coal, were handled separately. The other basic procedure was to make a contract or a purchase on the open market for items as the need for them arose.

The examination of stores and supplies was a full-time activity for some individuals at the Boston Navy Yard, such as the Inspector of Timber. Most of the yard officers participated in such examinations as members of boards of survey convened by the commandant. For example, in June 1865, the Bureau of Ordnance directed Stringham to arrange for a survey of 2,887 pounds of powder at the magazine at Chelsea alleged by the ordnance officer to be unusable. In the following month, the same bureau called for the ordnance officer, master machinist, and master brass founder to make a survey of fifteen 24-pounder and thirteen 12-pounder howitzers reported as being defective. Particularly, the survey was to determine whether the manufacturer had made any attempts to conceal flaws.

Of course, problems arose when the Navy rejected goods received from supplier. Such was the case involving a lot of oakum delivered to the yard in May 1865. The contract was negotiated for the Navy by E. L. Norton, the navy agent for the Charlestown yard, a position shortly to be eliminated. Since the quantity desired was large and since he had two offers at the same rate, Norton had divided the order, giving one-half to each bidder. When the two lots of oakum were delivered to the yard, one appeared to be of much higher quality. The yard rejected the inferior lot, which had been provided by D. F. Mossman. Mossman complained to Norton and claimed his oakum was "a satisfactory article certainly as good as is sold... in this city." To support this contention, Mossman sent a statement signed by three other businessmen who had examined the rejected oakum. They declared it "first quality Oakum as good as is sold for Best Navy Oakum in this market." Mossman argued that he had complied with the terms of the contract with the Navy. In notifying Stringham of the situation, Navy Agent Norton sided with Mossman.

Another cause of difficulties with suppliers was their failure to deliver the material in timely fashion. In July 1865, William Nichols, the master founder, requisitioned twenty-five tons of Scotch pig iron. A contract was negotiated by the navy agent, but despite repeated complaints from Nichols, delivery was never made. The following year, the master founder encountered a somewhat different problem with supplies. The foundry had almost completed the mould for the screw for Richmond and was getting ready to make the casting. It was discovered that the 1200 pounds of black lead in the store of Steam Engineering was of inferior quality and unfit for use. It had been furnished by Banker & Carpenter under a schedule for 1864. Chief Engineer Henderson took the proper steps, notifying the commandant and recommending a survey. He also argued that the mould for the screw could be damaged if any delay occurred, and he recommended purchasing the black lead needed from one of the private foundries in the area.

In another case, the Navy advertised in November 1865 for two Roots drilling engines and accepted the bid of William E. Spaulding, who offered to supply the machines at $450. The contract was negotiated by Robert Clark, naval agent, on behalf of the Navy. On December 28, Spaulding's agent delivered the machines at the yard, as evident in a receipt executed by Lt. Henry Keene, naval storekeeper. Bills for paying Spaulding were made out. However, the naval constructor refused to sign them, "the price being excessive." Thus in January, Spaulding received a letter from Clark that the price was considered "exorbitant" and that he should remove the machines from the yard at once. At the end of January, Spaulding was in Washington and spoke with the Chief, Bureau of Construction and Repair, who recommended Spaulding approach

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38 As an example see, A. Smith, Chief, Bureau, Equipment and Repair, to Stringham, May 24, 1866 (two letters), 181-19, Box 3, 5/17/66-12/15/66, pp. 9, 10.


40 Norton to Stringham, May 17, 1865; Mossman to Norton, May 17, 1865; Thomas Wheaton et al. to Mossman, May 11, 1865, 181-33, Box 2, 7/20/64-8/16/65. The resolution of this dispute is unknown.

41 Robert Clark, Paymaster, to Stringham, Sep. 6, 1865; Nichols to Clark, Sep. 5, 1865; Nichols to Shock, Oct. 6, 1865; 181-33, Box 2, 8/21/65-6/15/66; Henderson to Stringham, Apr. 27, 1866 (two letters), 181-33, Box 2, 8/21/65-6/15/66.
Commandant Stringham. It would appear that Clark contributed to the problem, by accepting a bid when he had no understanding of the proper cost of such machines.\(^4^2\)

S. P. Brown & Son, Commission Merchants, with its office in Washington, was a major supplier of coal and lumber to various navy yards. The company's letterhead indicates that S. P. Brown had formerly been a navy agent. In the 1870s, Democrats charged that Brown & Son, along with a handful of other firms, had a corrupt relationship with the Republican-managed Navy Department. In 1867, Brown & Son sought the intervention of Washington in a dispute with the Charlestown yard. In compliance with a contract negotiated in July 1866, Brown & Son began to make delivery to the yard of a large quantity of white oak plank. Robert L. Ellis, Inspector of Timber at the yard, rejected 70,000 feet in one shipment, because of heart pith. Brown & Son first appealed to Commandant Rodgers, arguing that the plank was cut from the best quality of sea coast timber and that "all good judges" saw nothing objectionable with the particular type of heart pith in this lumber. Part of another shipment also was rejected. Altogether, the yard refused to accept two-thirds of the Brown planks. The contractor next approached the Bureau of Construction and Repair in Washington, seeking to have it instruct the yard to accept the lumber.\(^4^3\)

Compiling inventories was a common activity at the Boston navy yard during the period, perhaps because of removal of the naval storekeeper and the transfer of goods from his custody into the control of the separate departments. In the spring of 1865 and in compliance with an act of Congress, inventories were made at each of the navy yards of the public property in the department of the naval storekeeper. Later, Commandant Stringham directed his department heads to make inventories of all materials in their departments as of July 1, 1865.\(^4^4\)

During the decades after the Civil War, navy yards were the subject of constant study by Congress and the Navy Department, with yard administration receiving considerable attention. In 1869, a newly created Naval Board on Yards and Docks examined East Coast yards and submitted a report in October of that year. That board included administrative matters in its report and also made recommendations for changes. The three line officers indicated their approval of the "department system" in the management of stores at navy yards, as distinct from the system prevailing "under the old way." As for future alterations, the board favored utilization of a line officer to represent the Bureau of Yards and Docks in each yard instead of the appointment of a civilian as civil engineer. That line officer should be next in rank after the Executive Officer. Similarly, the board held that, as "the army officers build their forts, . . . the navy officers should build their ships." No more appointments as naval constructors should be made, and as vacancies developed in the Bureau of Construction and Repair, they should be filled by officers of the line.\(^4^5\)

THE POSTWAR PLANT

The Civil War revealed inadequacies in the physical plant of the Charlestown Navy Yard. The yard had made routine use of private docks and marine railways in East Boston, a demonstration of the need of greater docking facilities at the yard in wartime. It also became clear that the yard required additional wharfage, another launching slip and shiphouse, and galvanizing, iron plating, and paint shops. However, the

\(^{4^2}\) Spaulding to Stringham, Jan. 29, 1866, 181-5, Box 17, 12/6/65-1/3/67; Clark to Stringham, Jan. 5, 1866, 181-33, Box 2, 8/21/65-6/15/66.

\(^{4^3}\) Brown & Co. to Rodgers, Mar. 23, Apr. 26, 1867; Brown & Son to Joseph Smith, Acting Chief, Bureau, Construction and Repair, May 2, 1867; Receipt, Robert Ellis to W. Shakespeare, May 14, 1867, all in 181-5, Box 17, 2/1/67-6/23/69.

\(^{4^4}\) Welles to Stringham, May 8, 1865, 181-11, Box 7, 12/3/64-8/18/65; Billings to Stringham, Aug. 14, 1865; G. Smith, Chief Engineer, to Stringham, Aug. 15, 1865, 181-33, Box 2, 7/20/64-8/16/65.

postwar demand for financial retrenchment scuttled plans for yard improvement. For example, the commandant recommended improvement projects for Fiscal Year 1867 that would require an appropriation of $1,883,753. But in an act of March 2, 1867, Congress provided no money whatsoever for new undertakings at the yard, and only $127,000 for repairs. Congress did not make the Charlestown facility a peculiar victim of the budgetary axe, and as a matter of policy granted no funds for improvements at any yard for three years.

Changes did occur in the plant of the Charlestown Navy Yard in the period 1865-1869 and resulted from projects already commenced and from funds previously appropriated or monies for contingencies. Among notable improvements at the yard's waterfront were continued filling in of portions of the timber dock; paving and draining at the dry dock; adding a second story to the dry dock engine house (No. 22); and repair of the coal wharf near Shiphouse No. 71. Work involving industrial buildings included paving and draining at the new shops; roofing the quadrangle of the Machine Shop complex; installation of a heavy hammer in a newly constructed hammer house; development of the foundry; continued installation of machinery and tools in the Machine Shop; the addition of a second story to the Ropewalk; and completion of the joiners' shop and paint loft. Other improvements were linking the yard to the Mystic Water supply and development of a railroad track system in the yard.

In connection with several plant improvement proposals, it was suggested that the Charleston yard acquire additional land. However, there was but one small increase. The main entrance to the Charlestown Navy Yard at Wapping Street was only half the width of the roadway. The Navy could not widen the gate because it would encroach on private property, the estate of Isaac Hull. A dilapidated building occupied that property. In 1867, the yard acquired from the Hull estate a small (2.75 rod) tract of land at Wapping Street so that the main gate could be broadened. The project also entailed constructing a new gate house. The sum of $12,000 was committed to the project. Negotiations with the attorney for the Hull estate resulted in a purchase price of $7000; a sum somewhat greater than anticipated. After acquiring the tract, the yard removed the building it contained. Insufficient funds remained in the account for the new gate house. A new appropriation of $23,353.22 had to be sought.

Beginning in 1865, the yard recommended the purchase of a "certain right of drainage" through the navy yard that was owned by the city of Charlestown. The 1801 deed from Ebenezer Breed to the United States for the navy yard contained the stipulation that "a certain sluice or drain, which leads the water from said Breed's land, shall be preserved and always kept in good repair by the said United States, and at their own proper expense." Apparently, the City of Charlestown acquired the right to that drain. On December 31, 1866, the mayor and city council resolved to accept the Navy's offer of $25,000 for that right. However, before the actual transaction, the Bureau of Yards and Docks decided that "under existing conditions there was no need to expend this money for annulling the right of drainage" through the yard enjoyed by the city.

Several other recommended acquisitions also did not materialize. The yard proposed construction of seven additional houses for officers at the site of an old timber shed and near the commandant's quarters. To enable those residences to front on a public street, it was proposed to purchase 16,000 square feet then occupied by "a livery stable, sheds and cheap dwelling places." No funds were authorized either for the

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46 Some of the developments in the years 1865-1869 have been discussed in the previous chapter, namely paving and draining in the vicinity of the new shops; rebuilding the shear wharf; connecting the yard to the Mystic Water system; and construction of the joiners' shop and paint loft. See above, pp. 172-77.


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additional tract or the new quarters.  

In August 1868, Charles Hastings, the new civil engineer, recommended the Navy purchase two tracts of land in the vicinity of the yard. A portion of flats on both sides of the Chelsea Bridge, near the yard, belonged to the Mystic Improvement Company. Hastings proposed acquiring those flats for a timber basin. Such a basin was needed because of the plan to fill in the timber dock then in use. He also recommended acquisition of that part of White's Wharf still in the hands of Oakman and Eldridge, a tract of less than two acres. The following August, the yard included in its estimates the purchase of a parcel of land belonging to the Oriental Coal Company. The tract was opposite and 150 feet distant from the lower quarters and consisted of 64,000 feet of uplands and a 350-foot waterfront. If purchased, the land could be used for the Marine Barracks and parade ground. The existing facilities for the Corps in the yard could then be committed to navy yard purposes. Nothing came of Hastings' various land acquisition proposals.

In the immediate postwar years, the Machine Shop complex at the Boston Navy Yard received much attention. By that time, the structure had been largely erected, although some tasks remained, such as completing the flooring in part of the second story. And with heavy machines being installed, there was ongoing concern with the capacity of the floors to sustain the weight. However, the main undertaking, a continuing one, was installation of tools and machinery. The complex then housed the machine shop, iron foundry, brass foundry, pattern shop, boiler shop, forge, and blacksmith shop. In the period after the Civil War, the Steam Engineering Department at the yard was producing machinery for ships of the Algoma class. That work often led the yard's chief engineer to press for the procurement of particular tools. Fabricating engines and other machinery for the Algoma class also created storage problems. In April 1866, Chief Engineer Henderson pointed out the his machine shop was so crowded "that we have not room for the Cylinders, Shafts, and other finished parts of the 'Algoma' & Class work, in this building." He proposed moving a section of the old temporary engine repair building and placing it near the new boiler shop for the purpose of housing the finished ship machinery parts. In October 1865, Chief Engineer Shock wrote of the necessity to procure and install several large lathes. The machine shop then had thirty-eight small lathes, the largest capable of swinging stock of about thirty-five inches in diameter and twelve feet in length. He described these machines as adequate for "small and light work." However, the shop had only one large lathe competent to take on the screw and line shafting for the Algoma class. That lathe also was the only one that could be employed for the pistons and cylinder heads of engines for those vessels. Utilizing that lathe, it had recently taken the shop four weeks to complete one section of the shafting. Twelve sections were needed. If restricted to the one lathe, a year would be required to complete the work, assuming there would be no interruptions in the use of that single machine. In view of the urgent need for additional lathes, Shock proposed that the yard itself construct two lathes, one with a sixty-foot bed and the other of thirty feet. The patterns for lathes of those sizes were already on hand, and Shock stated he could have the lathes completed and in operation in seventy-five days.

The Navy Department approved the proposal. Subsequently, the machine shop also undertook construction of a large planer for producing channel ways, condensers, and steam cylinders. The estimate for building the planer was $10,000. In addition to constructing the planer and lathes, the building had to be prepared for installation of such large tools. Shock recommended removal of the wood flooring in the area intended for the large lathe and its replacement with granite. Also required was a stone foundation for the


51 Shock to Stringham, Nov. 11, 1865, 181-33, Box 2, 8/21/65-6/15/66; Henderson to Rodgers, Sep. 13, 1867, 181-33, Box 3, 8/14/67-6/22/68.

52 Henderson to Stringham, Apr. 18, 1866, 181-33, Box 2, 8/21/65-6/15/66.

53 Shock to Stringham, Oct. 28, 1865, 181-33, Box 2, 8/21/65-6/15/66.
lathe. The foundry cast a set of shears for the lathe, which Shock regarded as "entitled to special notice." It was his understanding that "it is the largest single lathe shear of that dimension and weight (35 feet long by 48 1/2 inches wide, and weighing about ten tons) that is known to exist in this country."54

The large lathe was to occupy an area previously used for two small lathes. Completion of the foundation for the new lathe required moving the smaller machines to the shop's second story. However, part of the flooring in the upper story had yet to be installed, and the chief engineer, in October 1865 and again in January 1866, pressed to have the floor finished.55

The yard made some of the tools for the machine shop, and it obtained others through purchase of new equipment. One devise was acquired from a private machine shop in the area that had closed. Chief Engineer Henderson discovered that a "key cotter," needed to expedite work in the Machine Shop, was in the building formerly containing the shop of Agulia Adams. He further learned that it was a new tool, having been delivered by its manufacturer "just before the closing of Mr. Adams Shop." Henderson recommended purchasing the cotter. A board of survey consisting of Henderson, Naval Constructor Hartt, and Master Machinist Wilmarth examined the key cotter and found it of the most recent, improved design, almost entirely new, in good order, complete, and suitable for the needs of the yard. The board recommended purchase from Adams at the figure he offered, $1,450.56

The needs of the Algoma class also stimulated development of the foundry. That shop had been directed to cast four large screw propellers for those ships and one for Richmond. To do that work, the foundry needed a larger pit and also another crane. Since the other cranes had been built at the yard, the needed patterns were available, and Shock proposed the yard construct the additional crane. As an inducement for approving the proposals, Shock stated that the new pit and crane could "be made available for casting heavy guns, should the necessity arise, or any other work of magnitude." The Bureau of Yards and Docks approved building a new foundry pit and crane. The bottom and sides of the pit were constructed of cast iron plates, a large portion of the iron for them being salvaged from plates from boilers repaired in the yard. Some of the iron, as well as the other materials for the pit and crane, had to be requisitioned. Shock was unsuccessful in speeding up the procurement process, and a delay resulted.57

By January 1866, all but one portion of the bottom of the pit had been cast, and the iron plate for the sides had been received. Respecting the depth of the pit, a difference of opinion existed between Chief Engineer Shock and Civil Engineer Billings, the latter having "apprehensions in regard to carrying it so deep." Shock desired it as close to twenty feet as possible. The matter was referred to Washington, and the work temporarily suspended. A board, convened to examine the issue, sided with Billings. At first, Shock went along with that decision. Later he resisted, arguing that with the new heavy hammer, new lathes, and other improvements, the yard was acquiring a highly capable machine shop. "It only requires that this pit shall be put down as proposed, in order to complete an establishment worthy of the government, efficient in all its branches." The work went forward following a design of Billings, which included unneeded and expensive features, according to Shock.58

Work on the new pit was further delayed when the foundry produced castings for the bed of the large engine lathe. Completion of that task made the foundry available for resumption of work on the pit. However, Alexander Henderson replaced Shock as the yard's chief engineer, and Henderson sought to reopen the issue

54 Shock to Stringham, Nov. 9, 1865; Jan. 29, 1866; Wilmarth to Shock, Jan. 27, 1866, 181-33, Box 2, 8/21/65-6/15/66.

55 Shock to Stringham, Jan. 30, 1866, 181-33, Box 2, 8/21/65-6/15/66.

56 Henderson to Stringham, Apr. 16, 1866; Henderson, Hartt, Wilmarth to Stringham, Apr. 24, 1866, 181-33, Box 2, 8/21/65-6/15/66.

57 Shock to Stringham, Oct. 12, Oct. 28, Nov. 6, Dec. 11, 1865, 181-33, Box 2, 8/21/65-6/15/66.

58 Shock to Stringham, Jan. 11, Feb. 28, 1866; Henderson to Stringham, Apr. 12, 1866, 181-33, Box 2, 8/21/65-6/15/66.
of the design of the pit, claiming that the Billings modifications were unnecessary, were costly, and, most importantly, would take too much time. The pit was needed as soon as possible for Algoma-class condensers and other castings.\(^{39}\)

Another unit of the Machine Shop complex that received important tools during these years was the iron forge. The yard erected a hammer house, and the large steam hammer itself arrived in the fall of 1865. The contractor, using yard laborers and riggers, erected the hammer, and the civil engineer had oversight of completion of the anvil block. The hammer was installed in late January 1866. To test the machine, it was temporarily connected to the boilers of the old smith shop. The hammer performed satisfactorily, although the aged boilers could not produce as high pressure as desired. Nevertheless, Chief Engineer Shock pronounced the hammer ready for service. Subsequently, the Navy entered a contract for another hammer, which the contractor announced as completed at his works in February 1867.\(^{60}\)

Iron rails finally came to the Charlestown Navy Yard in the months immediately after Appomattox. Since the late 1850s, commandants had called for a rail system, to enter the facility via the main gate and proceed into the lower end of the yard. Spurs were proposed to service the timber sheds, the Machine Shop complex, and the dry dock. In 1862, Admiral Smith called attention to the extension to the yard gate of the Fitchburg Railroad. He urged an appropriation to connect the yard to the Fitchburg line, which would reduce the cost of delivery to the yard of "oak timber and possibly other materials." In 1864, Congress appropriated $50,000 for a rail system. During the following two years, rails and other materials were purchased and the laying of the track begun. A trunk line was completed, as well as a spur extending to the coal wharf at the upper end of the yard and to the dry dock and shear wharf.\(^{61}\)

On November 4, 1865, the first locomotive and cars ran over the yard railway. During Fiscal Year 1867, the tracks were extended through the Machine Shop complex to reduce the cost of moving iron and heavy machinery to and from that area. Savings also resulted from the ability to haul coal into the yard for deposit under cover without the costs of drayage.\(^{62}\)

The 1869 report of the Board on Yards and Docks included comments and statistical tables about the physical plant at each yard. The tables show that the Charlestown yard occupied 83.5 acres. Its waterfront measured 1,729 yards in length, not counting 216 yards in slips. There were 739 yards of stone wharves and 243 of wooden. The Charlestown dry dock, "for docking purposes," measured 341 feet in length, making it the longest of the Navy's three granite docks on the East Coast. Its 60-foot width matched the dock at Norfolk, but was ten feet narrower than that at New York. "For docking purposes," all three docks had draughts of twenty-five feet. The Charlestown yard had three shiphouses and three open launching slips. The report indicates the Charlestown yard possessed two iron cranes, each with a lifting capacity of five ton. Boston lagged behind all but one other yard in the number and capacity of its cranes. The yard possessed two sets of shears, one with a lift capacity of sixty tons and the other fifty ton. At the time of the report, the yard had 1,417 yard of rail trackage.\(^{63}\)

The tables of the 1869 report state the size of the areas assigned in the several yards to the different shops and also give the numbers of tools. By itself this information has little value, but it is useful for comparative purposes. Quite clearly, Charlestown had the largest Steam Engineering establishment, the square footage of each of its shops exceeding the counterparts in other yards. It also appears that Charlestown

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\(^{39}\) Henderson to Stringham, Apr. 28, 1866, 181-33, Box 2, 8/21/65-6/15/66.


\(^{61}\) Annual Reports & Estimates for FYs 1863, 1865, 1866, NA, RG 71.

\(^{62}\) Annual Reports & Estimates for FYs 1867, 1868, 1870, NA, RG 71; Preble, p. 366.

had a greater number and a greater variety of tools in the shops doing steam engineering work. Only Charlestown had a forge.

In the body or textual part of the report dealing with the Charlestown yard, the Board on Yards and Docks devoted half of its comments to the rope-making establishment, arguing that "the rope-walk occupies space . . . much needed for other purposes. . . ." It held that "the efficiency of this navy yard ought not to be impaired by a manufactory for the general service" and suggested a "good modern rope-walk" could be developed on the hospital grounds at Chelsea. The board described the existing Ropewalk as "old-fashioned and insufficient," with only ninety spindles, when 350 to 400 were held to be necessary. "In 1863, working day and night," according to the report, the Ropewalk produced 1400 tons of cordage, but during the war the Navy purchased twice as much cordage as it made. "It would be better to build and fit up a new rope walk of large capacity and with modern improvements than to enlarge this one." If the existing plant was to be kept, recommended the board, its second story should be extended the full length of the building.

The board held that "it is necessary to extend the navy yard at Boston," and recommended the hospital grounds as "useful for navy purposes. . . ." It also recommended acquisition of 120 acres of flats in the Mystic River between the navy yard and the hospital grounds, the owner of the flats being the Mystic River Railroad Corporation. The flats could be used for a "system of wet basins, wharves, store-houses, more building slips, and a depot for coal. . . ." In developing the flats and the hospital ground, the Navy might find it desirable to purchase Chelsea Bridge and restrict use of it to naval necessity. The report ended with the recommendation that Virginia, on the stocks since the 1820s, be launched and used as a receiving ship at Boston. None of the major recommendations of the board received implementation, doubtless because of the great cost entailed.

CIVILIAN EMPLOYEES

Next to the decrease in the size of its work force, the central theme in the history of the Charlestown Navy Yard in the years 1865 to 1869 respecting civilian labor is a large measure of administrative ambivalence. Economic efficiency in management of navy yards mandated the reduction of forces and the hiring of only those most qualified. However, at the same time, a belief prevailed that men who fought in the war should be rewarded with navy yard jobs, if the veterans desired them. Furthermore, Congress in 1862 directed that wages in navy yards be the same as those in private, commercial ship works and shops in the vicinity. Then in 1868, Congress established the eight-hour day for navy yards. How these two laws should be reconciled constituted a problem lasting many years.

THE SIZE OF THE WORK FORCE

In the first five months of 1865, roughly 3300 mechanics and laborers worked at the Charlestown Navy Yard. No precipitous decline occurred during the next six months, June through November, when the average was 2600. The end-of-war employment cut back becomes visible in December 1865, when only 1100 men were at the yard. The employment rolls remained between 900 and 1100 throughout 1866 and the first half of the following year. In July 1867, the work force doubled in size, rising from 918 to 1,877, and increased somewhat during the remainder of that year. In 1868, the rolls fluctuated between 1,022 and 1,627.64

Heads of departments and other supervisors at the yard resisted reductions in force, generally contending that the existing work load required maintaining, if not increasing, the number of employees. On May 5, 1865, Commandant Stringham issued an order for reducing the number of workmen and writers. Chief Engineer Sewell informed Stringham that "with the continuance of the present amount of work now in hand, the number of employees cannot be advantageously reduced." The chief engineer took a similar position in the following October, claiming that "so far from having an excess of men, that the Boiler Makers force is inadequate . . . while we are progressing with the repairs of 'Wabash' . . ." The next month, James Mahoney, Superintendent of the Ropewalk, announced he would have to cease running the spinning machinery "if we

64 Number of Men Employed at US Navy Yard Boston...1858-1886, 181-75.
have to discharge one third of the hands. . . ." That stoppage would quickly lead to the using up of all stocks of yarn and cordage on hand. Mahoney proposed keeping the existing force during the next week and then discharging fourteen workers, whose names he provided. In February 1867, the Sailmakers' Department reported it lacked the force necessary to complete orders already received for sails and other items for Guerriere, Franklin, and Kearsarge. 65

Table 8: NUMBERS OF CIVILIAN EMPLOYEES, BOSTON NAVY YARD, 1842-1889

(On June 30 or July 1 of each year)

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SOURCES: Preble, p. 431; Number of Employees at Navy Yard, Boston, 1872-89; Number of Men Employed at U.S. Navy Yard, Boston, Mass., as shown by the yard log book during the years 1858 to 1886 inclusive, both in 181-75

Although plans and directives to reduce forces encountered opposition from department heads and others, the number of employees did decrease. That decrease was achieved by the Navy Department and Congress, which assigned fewer funds for yard wages and salaries.

TYPES AND CATEGORIES OF CIVILIAN WORKERS

In the years 1865 to 1869, no significant changes occurred in the categories and types of civilian positions at the Charlestown Navy Yard. Mechanics, craftsmen or tradesmen of journeymen status constituted the largest and probably the most important group of civilians in any navy yard. It was they who performed the work on ship and in shop. Men of lesser skill were also employed, namely helpers, common laborers, and apprentices. In addition to those hired as laborers, there were other unskilled job categories, such as watchmen and shipkeepers. The yard also employed office personnel, namely clerks, writers, draftsmen, and messengers.

A civilian foreman or master mechanic headed most of the important shops. Until July 1868, a naval

65 Sewell to Stringham, May 6, 1865, 181-33, Box 2, 7/20/64-8/16/65; Sewell to Stringham, Oct. 24, 1865; Mahoney to B. F. James, Executive Officer, Nov. 23, 1865, 181-33, Box 2, 8/21/65-6/15/66; D. Brayton, Boatswain, to F. Bunce, Equipment Officer, Feb. 12, 1867, 181-5, Box 17, 2/1/67-6/23/69.
officer had charge of the Sailmaker's Department, and another officer filled the role of master laborer. By act of Congress, these officers were replaced with civilians. Shops with small work forces did not have a master mechanic. In a large shop, such as the 200-man machine shop, one man could not provide all oversight. In such shops, the master mechanic was aided by quartermen or leadingmen, who supervised smaller gangs of workers and helpers.

In November 1868, five of the bureau chiefs submitted to Secretary Welles a report with recommendations respecting civilian employees at navy yards. Welles accepted the report and, following his directions, Commandant Rodgers instituted the changes in the Charlestown Navy Yard as of March 1, 1869. There were to be two classes of mechanics, both to be covered by wage schedules based on the pay scales used in private establishments in the same locality. The directive also established two levels of foremen. Foremen of the first class would receive $1.40 more per day than first-class workers in their craft; foremen of the second class $1.10 more; quartermen $0.50 more; and leadingmen $0.24 more. Not all shops would be allowed foremen. Those gangs permitted foremen of the first class were shipwrights, joiners, shipsmiths, iron platers, painters, masons, sailmakers, riggers, machinists, boiler makers, moulders, coppersmiths, and pattern makers. Those entitled to second-class foremen were mastmakers, boatbuilders, and blockmakers. The number of quartermen varied according to the trade and the size of the work force in a shop. For example, joiners were allowed one quartermen for every thirty-five workmen and machinists one for every fourteen. Leadingmen were designated when the workers in a shop became so reduced that a quartermen was not required.

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On June 29, 1867, there were twenty-one apprentices at the Charlestown Navy Yard and eighteen other youths categorized as "minors under instruction." This second category may have referred to "boys" employed at the yard and not involved in the apprenticeship program. In January 1867, a board appointed by Rodgers to examine applicants for apprenticeship at the Boston Navy Yard recommended that "there be none but industrious apprentices hereafter admitted, as the decrease of work has rendered the present proportion of Boys too large." Apprenticeship constituted a legal arrangement, manifest in a contract or agreement signed by a yard commandant, the apprentice's parent or guardian, and the apprentice. It stipulated that the young man was bound by the agreement from the date of its signing until his twenty-first birthday.

According to Navy regulations of July 1868, to qualify for apprenticeship in navy yards, applicants had to be no younger nor older than sixteen years of age, have the ability to read and to write legibly, "be able to operate the first four rules of arithmetic," provide evidence of good moral character, and have certification from the yard medical officer that they were physical capable of performing the trade in which they would be apprenticed. Semi-annually, the commandant appointed a board to examine applicants. In the selection process, preference was given to "the children of master workmen, quartermen, and mechanics, who have faithfully served in Navy Yards, and seamen, in the order named." The board reported on the character and abilities of the candidates, including their "aptness for any particular trade." Apparently, each yard department had an assigned number of apprenticeships, and only enough applicants would be accepted into the program "to fill up the vacancies."

The examination of applicants was no mere formality. In September 1868, a board at the Charlestown yard rejected one candidate because of weakness in arithmetic and inability to write legibly. The board did

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66 Welles to Rodgers, July 30, 1868, 181-11, Box 7, 7/18/67-9/13/69, p. 80.
67 J. Smith et al. to Welles, Nov. 24, 1868, 181-51, 4/19/36-1/1/72, p. 111.
68 Board to Rodgers, Jan. 14, 1867, National Archives, Record Group 181, Entry 69, Semi-Annual Record of Apprentices (181-69).
69 For example, see the agreement signed by Rodgers, John A. Dixon, and Albert F. Dixon, Mar. 8, 1866, National Archives, Record Group 181, Entry 68, Indentures of Apprentices (181-68).
70 Regulations for the Admission of Apprentices to the Navy Yards of the United States, July 15, 1868, 181-48, 1/10/63-10/15/73.

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not consider another candidate because the surgeon indicated he was physically incapable of performing as a blacksmith.\(^71\)

The same board appointed to evaluate applicants also examined those already in the apprenticeship program to determine their progress and proficiency. Those who showed insufficient improvement would be recommended for dismissal. Master workmen or others in charge of apprentices reported monthly and in writing to the head of the department. No person in the government could receive any part of an apprentice's wages or a gratuity from him or on his behalf, but wages were to be paid to the parents or guardian as determined by the commandant. Parents or guardians would provide the required tools, and, if not, the head of the department would supply such implements, the cost thereof to be deducted from the apprentice's wages. Until the age of seventeen, an apprentice received 21/100 of the wages paid a first-class journeyman in his trade; in the next year 31/100; in the next 42/100; in the next 56/100; and in the final year 75/100. When work in a department was suspended, the apprentices were to be laid off, along with regular mechanics and laborers. Like them, they would return when work resumed.

At the end of his apprenticeship, the individual received a certificate, signed by the commandant and the head of the department and countersigned by the chief of the bureau. The document testified to the former apprentice's good conduct and proficiency. Holders of certificates of apprenticeship were entitled to preference over other applicants equally qualified for employment or promotion at navy yards.

YARD EMPLOYMENT AND THE CIVIL WAR CONNECTION

In the years after 1865, a connection existed between the Civil War and employment at the nation's navy yards. Officially and unofficially, it was held that men who had served in the Union military forces should have preference over others in gaining work at a yard. The unofficial view, prevalent among veterans and veterans' organizations, also maintained that men who had not served, who somehow had avoided service, should not be hired. According to another refinement, ex-soldiers or ex-sailors disabled because of injuries suffered during the war should merit special consideration.

Service with or support for the Confederacy constituted disqualification for employment at a navy yard. An appointee to a position such as master workman had to execute a notarized statement under oath that he had not engaged in disloyal acts. The signer swore that he had "never voluntarily borne arms against the United States" since having been a citizen; that he had "voluntarily given no aid, countenance, counsel, or encouragement to persons engaged in armed hostility thereto"; that he had "neither sought, nor accepted, nor attempted to exercise the functions of any office whatever, under any authority, or pretended authority, in hostility to the United States"; and that he had "not yielded a voluntary support to any pretended government authority, power, or constitution, within the United States, hostile or inimical thereto."\(^72\)

In a communication to Commandant Stringham in June 1865, Secretary of the Navy Welles recapitulated the Navy's hiring policies, stating that:

In the employment of workmen, persons who have served in the navy or army and been honorably discharged will be preferred. Such persons as relinquished their places in the yard to enter the naval or military service during the war will be permitted, if they wished, to resume their position.

Until 1868, department heads were obliged to report the number of veterans among recent hires and among those discharged. Welles directed that each yard keep a register of qualified applicants who had been in the military and ordered that that register be used when necessary to hire additional workers.\(^73\)

In June 1865, Eldridge Gardner, master laborer, reported that he accepted fifteen applicants for the

\(^71\) Board to Rodgers, Sep. 21, 1868, 181-33, Box 4, 6/22/68-2/17/69.

\(^72\) For example, see John Ellis to Stringham, Oct. 16, 1865, 181-5, Box 17, 12/6/65-1/31/67.

\(^73\) Welles to Stringham, June 22, 1865, 181-11, Box 7, 12/3/64-8/18/65, p. 197.
position of laborer, all of whom had "served in the Army or Navy in the late war." Other supervisors encountered difficulties. For example, in May 1866, Chief Engineer Alexander Henderson prepared a table indicating the number of veterans and "civilians" hired during the previous two months. Apparently, he felt obliged to explain himself at some length since half of the twenty-five men hired were civilians. The most frequent explanation for not hiring ex-servicemen was that none had applied.74

It may be that the Secretary of the Navy and other political officeholders felt under more pressure to employ veterans than naval officers of the yard. If so, exceptions were disabled veterans, and in several instances the Boston yard commandant and department heads made sustained efforts to give employment to such individuals. By the time of the Battle of Spotsylvania in May 1864, George Buchman had served more than two years with the Third Massachusetts Light Battery. "Premature discharge of his gun" during that engagement blew off his right arm and part of his left hand. Buchman obtained work in the Boston Navy Yard and in June 1867, was listed on the Equipment Department rolls as "in charge of tank shed." When the junk and other items in his care were auctioned off, there was no work for his position and he was discharged. He then sought employment in other departments without success.73

"Feeling great sympathy for his unfortunate maiming, and for his having a wife and three children," George Preble, Equipment Officer, conferred with Commandant Stringham. The decision was made in October 1867 for Buchman to be hired at the Ropewalk in the position of helper at $2.00 per day. His tasks were varied, serving as messenger and timekeeper, having charge of some items in storage, and, since "he can write a good hand" despite his injury, assisting the regular writer. In March 1868, Buchman was again discharged when, in compliance with a Navy Department order, the work force was cut from seventy-three to twenty-nine. The Superintendent of the Ropewalk reported that Buchman had proved himself "trustworthy, intelligent, industrious, and correct in the performance of the duties assigned him."

Subsequently, Buchman appealed to the former commanding officer of his artillery unit, who wrote to the Secretary of the Navy. A congressman also intervened on his behalf. From Welles, the matter went to John Rodgers, now commandant, and back to Preble, who now had to explain Buchman's discharge. Although Preble did not describe the problem as such, the Buchman case demonstrates a conflict in navy yard personnel policies, seeking to give jobs to veterans at the same time as reducing the number of employees.

It appears that in the postwar period, some veterans had a hostility toward those in the employ of navy yards. In part this may have resulted from the fact that during the war, navy yard workers had been exempted from the draft. According to a wartime ruling of the Provost Marshal General, "skilled mechanics and operatives employed in the . . . navy yards of the United States who shall be drafted and on examination, held to service, will not be required to report for duty under such draft so long as they remain in the aforesaid service."

From time to time, various parties complained that the Charlestown Navy Yard was failing to adhere to the Navy's policy of favoring veterans in employment. The commandant received a letter in June 1865 from an ex-soldier, who claimed he sought work in the yard, displaying his discharge to master workmen, but to no avail. The writer asserted that he knew of yard employees who had never been in the service, some of whom had left the country to avoid the draft.77

In August 1865, a local committee of former soldiers wrote Welles that master workmen at the Charlestown Navy Yard evaded the Navy Department order, with the result that jobs in the yard went to individuals who accommodated themselves to politicians. Also the committee held that the yard had in its

74 Gardaer to Stringham, June 18, 1865, 181-5, Box 16, 5/10/65-12/6/65; Henderson to Stringham, May 10, 1866, 181-33, Box 2, 8/21/65-6/15/66.

75 Information about Buchman in this and following paragraphs is found in: Preble to Ropewalk Superintendent, Oct. 2, 1867; Aaron F. Walcott to Welles, June 11, 1868; Ropewalk Superintendent to Preble, June 19, 1868; Preble to Rodgers, June 20, 1868, 181-33, Box 3, 8/14/67-6/22/68.

76 Welles to Stringham, Aug. 13, 1864, 181-51, 4/19/36-1/1/72, p. 78.

77 P. M. Devlin to Stringham, June 19, 1865, 181-5, Box 16, 5/10/65-12/6/65.
employ men who were aliens and thus who had not been subject to the draft. According to the committee, among the devices used at the yard to block hiring of soldiers was to ask whether they had received an enlistment bounty. If they answered in the affirmative, then the point was made that the former soldier was not entitled to a job since he already been rewarded for his services. The committee asked for some remedy and for the discharge of aliens.78

During the initial postwar years, Welles supported the policy of favoring ex-soldiers and ex-sailors in navy yard hiring. In January 1868, however, he enunciated a new understanding. Because of the vast reduction in the forces at the yards, it was now necessary to employ "only the most skilled workmen." Accordingly, he rescinded orders requiring preference be given to veterans. Reports on hiring and discharges would no longer include information about military service.79

HIRING, APPOINTMENT, REAPPOINTMENT

All mechanics, laborers, and helpers at navy yards were hired by a shop foreman or master workman, acting upon an order or requisition from the head of his department to engage a specified number of additional men. In 1865, Welles explained how he thought the system should work. In the hiring and discharging of workers, consultations should occur among the master workman, head of the department, and yard commandant. The occasion of Welles's observations were reports he had received of allegedly improper intervention by yard department chiefs into the employment and discharge of workers by master mechanics. What Welles found offensive was that the reports came not directly from the master workmen, but "from members of Congress and persons outside the service to whom the Masters have gone with their complaints." Such action by the masters Welles considered "improper and reprehensible." Welles did not describe what kind of interference the master workmen complained of. But it seems likely that these civilian heads of shops were resisting actions by others in the yard which might reduce their authority in the important area of hiring and firing workers. That congressmen would defend the masters is understandable, since masters were crucial in the distribution of political patronage. As compared with Gideon Welles, the subsequent administration displayed much greater appreciation of and support for the patronage system.

The records do not directly spell out why a foreman might choose to hire one man and not another. Politics, winning elections, and the patronage were doubtless important matters. In September, James Foss sought work as a helper in one of the shops of the Steam Engineering Department and offered the foreman $25.00 as a bribe. The maneuver did not work, and Foss's name was entered in the "Black List."80

Since the years of 1865 to 1869 constituted a time of contraction in the work force at navy yards, the issue of discharging employees appears as important a matter as hiring. Men were laid off at the Charlestown Navy Yard for one of two reasons—because of an impersonal reduction of forces necessitated by the contraction in work or the shortage of funds, or because the individual did something for which he was discharged. Loss of job because of reduction in forces carried with it the possibility of reemployment when additional work or funds appeared. Being fired for cause involved the likelihood of rejection for employment in the future.

As with the selection process whereby an individual gained employment at a navy yard, a subjective and personal bias might be evident when a particular worker was laid off either temporarily or permanently. As such, the firing of workers caused controversies.

In March and April 1866, the Chief Engineer's Department laid off twenty men and hired twenty-nine, so a general reduction in forces did not occur. The circumstances of the twenty men who were discharged

78 Committee of the Soldiers' Association, Charlestown, to Gideon Welles, Aug. 10, 1865, 181-5, Box 16, 5/10/65-12/6/65.
80 Welles to Stringham, June 22, 1865, 181-11, Box 7, 12/3/64-8/18/65, p. 197.
81 Black List, 1866-1882, 181-75.
cannot be regarded as typical, but are useful because they are documented. According to a report of the chief engineer, eleven stopped working "at his own request." In other words, they quit. One other, a helper, is listed as discharged "at request of father." The discharge of four others resulted since "services no longer required." Of the remaining four, three lost their jobs because of "inattention to duty"; the fourth because of theft. That roughly half of these men on their own volition chose to stop working is instructive. Most of the surviving documentation concerns workers who were fired for cause, but they may have been a minority. March and April 1866 appear as stable months with respect to the size of the work force. Reduction in force, not individual choice or discharge for cause, accounts for the significant decreases in workers, such as the loss of 1400 men in December 1866, 400 in April 1868, and 500 in February 1869.

One of those discharged in April 1868 was George Riley. Riley, who worked in the sail loft, became the victim of an order from the Bureau of Equipment reducing that shop from sixteen men to ten. Riley sought reinstatement. The "Hon. G. G. Walker" made a representation to N. P. Banks, member of Congress, who approached the Navy Department. Banks then informed Commandant Rodgers: "The Secretary of the Navy directs me to transmit his [Riley's] application to you, and this is written in accordance with his [the Secretary's] request." Rodgers passed the matter to George Preble, Equipment Officer. Preble consulted with the sailmaker in charge. Riley was not reinstated, and the only assurance that could be given his various champions was that if the shop should increase its force, Riley and the five others would be the first to be employed.82

Beginning in January 1866, the Boston Navy Yard maintained what is labeled on its cover as a "Black List." The list consists of names of workmen discharged for cause. Also recorded are the date, the nature of the offense, and who ordered the discharge. The purpose of the list was to prevent those named therein from gaining employment in the yard in the future.

During the years 1866, 1867, and 1868, ninety-one men were discharged from the yard for offenses and their names entered into the Black List. In eight instances, the list does not specify the reason for the discharge, but employs such language as "violation of yard regulations" or "see report." Among the offenses listed (and the number of times mentioned) are the following: inattention (9), neglect of duty (12), idleness (13), asleep (10), insolence (2), refusing orders (7), leaving work before the bell (3), drunkenness (2), stealing (9), and fighting or striking another worker (2). Four were fired for being inefficient and four others for being incompetent. Some cases seem a bit strange. In three different instances, men were discharged for breaking windows. Two were fired because they were aliens. One quit after a half day of work. As already noted, one is listed for having attempted to bribe a foreman. The Black List records discharges only of mechanics, helpers, and laborers, that is those per diem employees hired by shop masters. It does not list office workers. Only one supervisory figure is found on the list, a quarterman, who allowed his men to stop work and start washing up before the bell.83

THE YARD COOPERATES WITH THE STATE MILITIA

Failure to show up at the yard for work for reasons other than sickness could result in a decision by civilian or military supervisors not to reemploy a worker when he did reappear. As members of the Massachusetts Volunteer Militia, some workers were required by law to attend an annual encampment. The state adjutant general obtained permission from the yard commandant for such men to be "excused from roll call, and their places retained" while they were at camp. In 1866, the camp was held on September 13, 14, and 15. Three employees of the yard who had attended the camp did not appear at muster in the morning of September 16, but at 3:00 o'clock in the afternoon and were refused permission to return to work. The

82 Preble to Rodgers, Apr. 8, 1868; Banks to Rodgers, Apr. 2, 1868, 181-33, Box 3, 8/14/67-6/22/68.

83 Black List, 1866-1882, 181-75. This interesting and useful document is somewhat suspect. The entire list is written in the same handwriting. In the years 1869-1882, the yard received instructions from the various Secretaries of the Navy to remove certain names from the list. The Black List has only two names lined out or deleted in other ways, and the vast bulk of the names ordered removed are not in the list. The Black List that has survived may be an edited copy.
adjutant general sought to have them reinstated, explaining that a shortage of transportation prevented their
unit from returning from the field until mid-morning of the 16th and that not until noon were they discharged.
The navy yard generally cooperated with the militia, the commandant notifying the department heads they
should excuse militia members during the encampment.  

WAGES AND SALARIES

In July 1862, Congress enacted a law which has, up to the present day, governed the determination
of wages at navy yards. That legislation provided:

That the hours of labor and the rate of wages of the employees in the navy yards shall
conform, as nearly as is consistent with the public interest, with those of private
establishments in the immediate vicinity of the respective yards, to be determined by the
commandants of the navy yards, subject to the approval and revision of the Secretary of the
Navy.

Since 1847, the Navy Department had linked yard wages with those at local private ship works and shops. The
significance of the 1862 statutes is the formulation of roles for the Secretary of the Navy and the yard
commandant.

During the remainder of the Civil War, the Navy Department worked out a system for implementing
the 1862 law. In a circular letter sent by Welles in June 1863, commandants were directed to determine from
commercial establishments near their yards "by the best means in their power, the rates of pay and hours of
labor of classes similarly employed as those in the yards, with the number of men in each class." It was also
directed that "the number in each class in the yard should be in the same proportion to the whole number of
workmen employed that they do in private yards, and the compensation should be the same in each case." Finally, Welles instructed commandants that they should take "particular care . . . to see that the number of
workmen in classes receiving the highest pay is not relatively greater than in private yards."

The Secretary added a new element to the wage system in May 1864, when he ordered yard
commandants to create "a Board to be composed of one line officer, one head of Division and one master
workman to make diligent inquiry at the principal private mechanical establishments" respecting hours, wages,
and numbers employed in each class. The board was to report its findings to the commandant, who would
post the reported schedule of wages at the Muster House for two days so that "workmen may examine it and
state their views on its merits to the commandant." The scale decided upon would then be sent to the
Department and, if approved, would remain in effect for two months.

Welles continued to tinker with the system. The Navy Department provided yard wage boards with
a form letter to be sent to private establishments soliciting the data on wages, hours, and numbers of workers.
Such inquiries went forth signed by the yard commandant. Commandant Rodgers directed department heads
to "furnish a list of private establishments in this vicinity carrying the same trades as the men employed in this
Department." In one instance, this task was sent to a particular division within a department. In February
1867, the warrant officer in charge of the "Sailmakers Dept." made up a list of three private establishments
in Boston engaged in the same work as his shop. The system demanded more and more effort. One note
indicates that in preparing a schedule in October 1866 for the Boston yard, information about hours and rates

84 Adjutant General to Stringham, Sep. 7, Sep. 17, 1866, 181-5, Box 17, 12/6/65-1/31/67; Adjutant General
to Rodgers, Aug. 6, Sep. 3, 1867, 181-5, Box 17, 2/1/67-6/23/69.

85 A useful discussion of the wage-fixing system is in Guy McPherson and Mary Watts, Fixing Wages and
Salaries of Navy Civilian Employees in Shore Establishments, 1865-1945 (Navy Department, May 1945), pp.1-4.

86 McPherson and Watts, p. 2.

87 Welles to Stringham, May 20, 1864, 181-51, 4/19/36-1/1/72, p. 75.
for bricklayers was sought from fourteen private employers.88

The bureau system soon imposed itself on the procedures for fixing wages. From the information contained in a common or master schedule prepared by the yard wage board, each yard department created a separate scale listing trades in its line of work. Along with the master schedule, these department schedules were sent to Washington for the consideration of the bureau chiefs as well as approval by the Secretary. The composition of yard wage boards changed so as to include the heads of the major departments. For example, the board at the Charlestown Navy Yard in December 1867 consisted of Capt. J. F. Green, Inspector of Ordnance; Capt. George Preble, Equipment Officer; Chief Engineer Alexander Henderson; Naval Constructor Edward Hartt; and Civil Engineer Charles Hastings. Another alteration in the board was the elimination of a master mechanic. Probably members of the board welcomed a further change, preparation of a wage schedule four times a year, not six.89

The wage schedules for the Charlestown Navy Yard during the years 1865 to 1869 list the rate only for first-class workers. Those rates served as a base for determining the wages of employees in the lower classes and of foremen and quartermen. During the quarter ending March 31, 1868, generally a foreman received $1.00 more per day than first-class mechanics in that trade, and a quartermaster fifty cents more. The difference between one class and the next lower was twenty-five cents more. The wage board recommended that, when it was impossible to hire foremen at the rate based on the current wage schedule, a special rate be established and approved by the commandant.

As to the wages themselves, what is striking in the years 1865 to 1869 is stability. Except for a few trades, the wage rates remained the same. In the schedule for the first quarter of 1868, the range for first-class mechanics extended from $3.00 to $4.00 per day. Paid less than that were "boys," sixty cents to $1.50 according to age; coal passers, $2.00; firemen $2.26; laborers, $2.00; reamers $2.76; rivet heaters, $2.26; hodmen, $2.30; scrapers, $2.76; spinners, $2.26; hod carriers, $2.26; helpers, $2.00; shipkeepers, $2.26; teamsters, $2.50; and watchmen, $2.26.

The act of Congress of July 1862 and the wage board apparatus applied only to mechanics, laborers, and helpers, those who attended the daily muster. Different procedures were used for determining the wages and salaries of other civilians in the yards, such as clerks, draftsmen, messengers, superintendents, and inspectors.

Congressional naval appropriations bills listed and set the salary for certain positions in the Charlestown Navy Yard. Such positions were also specified in the annual reports submitted by the chiefs of the bureaus. For example, for Fiscal Year 1868-69, the Bureau of Yards and Docks sought funds to pay the salaries of fourteen positions at Boston. Among them were the civil engineer ($2500), draftsman to the civil engineer ($1400), clerk to the commandant ($1500), gatekeeper and detective ($1000), and messenger ($600). The Bureau of Equipment indicated its civil establishment at Charlestown included the Ropewalk superintendent ($1900), clerk to the equipment officer ($1500), time clerk ($1200), and two store clerks ($1200 and $1000). The Ordnance Bureau requested monies for three employees at Charlestown, a principal clerk ($1600), time clerk ($1400), and store clerk ($1400). The civil establishment at Charlestown of the Bureau of Steam Engineering consisted of a draftsman ($1600), clerk ($1400), store clerk ($1400), time clerk ($1200), and master machinist ($2000). The Bureau of Construction and Repair sought from Congress funds to pay seven people in its operation at Boston. They were an assistant naval construction ($2000), inspector of timber ($1500), draftsman ($1400), clerk of storehouse ($1500), two clerks to the naval constructor ($1500 and $1200), and a time clerk ($1250). The Bureau of Provision and Clothing employed six people in its civil establishment at Charlestown—a clerk to the P & C inspector ($1200), receiver of provisions ($939), receiver of clothing and small stores ($939), assistant receiver of provisions ($582.50), assistant receiver of clothing and small stores

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89 For examples of schedules prepared for the Charlestown yard, see Board to Rodgers, Dec. 27, 1867, 181-33, Box 3, 8/14/67-6/22/68; Board to Rodgers, June 29, 1868, 181-33, Box 4, 6/22/68-2/17/69.
($582.50), and a writer ($939).\textsuperscript{90}

A measure of similarity is evident among the civil establishments at the various navy yards, with respect to the number of positions and the salaries assigned. That similarity resulted from the role of the Navy Department, which had the authority to authorize positions in the yards and to fix salaries. Heads of yard departments seeking increases for their office workers, for example, needed the approval of Washington. In August 1867, Paymaster George Harris, of the Charlestown Navy Yard, recommended increasing the pay of the two writers in his office from $3.00 to $3.50 per day. That recommendation went to the commandant and from him ultimately to the Secretary of the Navy, who turned it down since the two were already at the highest rate allowed by the Department. Through the Chief of the Bureau of Navigation, the Navigation Officer at Charlestown was advised that Welles gave approval for one clerk, to be paid $4.00 per day, and one writer, $3.00, to staff the Navigation office.\textsuperscript{91}

**PROBLEMS WITH EMPLOYEES**

Those charged with the management of the Charlestown Navy Yard spent much time with problems involving individual civilian employees. Instances of dereliction of duty were not dealt with in summary fashion, but were matters to be properly reported and possibly investigated. Only the yard commandant or the Secretary of the Navy could formally discharge a worker. This added to the paperwork. Furthermore, a worker fired by the commandant could always appeal to the Secretary of the Navy, or, better yet, to a congressman. In that event, the member of Congress might contact the Secretary of the Navy, who would pass the matter to the commandant for an explanation. Another type of personnel problem were grievances of workers against their supervisors or other reports of improprieties by those in charge. It appears to have been yard policy to make some sort of inquiry into all charges and allegations, even from anonymous parties.

Secretary Welles was fully aware of the vulnerability of navy yard workmen to financial exploitation and political manipulation by foremen, and he issued two directives on these matters in the mid-1860s. In January 1864, Welles called attention to the "disreputable practice of giving and receiving presents or gratuities . . . from inferiors to superiors or from the employed to the employers." He regarded this as "a method of extortion practiced upon the workmen that is disgraceful to the receiver and is strictly forbidden." Anyone violating this order was subject to be "summarily dismissed."\textsuperscript{92}

The second directive, issued twenty months later, concerned collection of funds for political parties. Welles had learned of an effort in the Philadelphia Navy Yard "to assess or tax for party purposes the workmen in that yard." A party committee, working through master mechanics, sought to collect from each employee a sum equal to one day's wages. Before stopped, the committee had collected more than $1000 dollars. Welles forbid any attempt to "exact money . . . either by compulsion or voluntary contributions." He prohibited committeemen from visiting navy yards to make collections for any political party. Welles took note of another improper political maneuver involving the yards. It had been reported "that some of the Masters, at some of the Navy Yards, employ extra hands preceding warmly contested elections, and that much of the time of these superfluous hands is devoted to party electioneering." Welles held that "such an abuse, if it exists, . . . must be corrected." Finally, the Secretary directed that "party gatherings and party discussions are at all time to be avoided within the Yards."\textsuperscript{93}

For the years 1865 to 1869, no evidence has been found documenting the existence at the Charlestown Navy Yard of the practices alluded to in Welles's directives. The commandant did receive a letter late in 1865 from an anonymous "citizen," who included

\textsuperscript{90} *Annual Report, Secretary of Navy, Dec, 2, 1867, House Ex Doc., vol. IV, 40-2, USSS No. 1327, pp. 98, 120, 146, 182, 198.


\textsuperscript{92} Circular Letter, Welles to Stringham, Jan. 23, 1864, 181-51, 4/19/36-1/1/72, p. 72.

\textsuperscript{93} Welles to Stringham, Oct. 3, 1865, 181-51, 4/19/36-1/1/72, p. 93.
political matters in charges made against a quartermans. The writer stated that there were numerous violations of the Navy Department order that quartermen should remain at work with their workmen until the bell sounded at noon or at night. One of those failing to adhere to this order was John W. Burbee, "in the paint department." Burbee regularly left the yard thirty or forty-five minutes before the bell. Burbee also "enters into political controversies and has been known to go into the yard on election days, answer to his name, and immediately leave and be out all day." Stringham directed his executive officer "to inquire into this matter." The results of that inquiry are unknown.44

The findings in investigations of two masters are known, but not the charges made against them. Frank B. Duress, a workman at the yard, made charges of some sort against the master founder, William W. Nichols. The commandant gave verbal orders to the chief engineer and executive officer to investigate. With one exception, they found the charges without foundation. They did report to the commandant that Nichols, in common with other masters, entered the yard in the morning about one half hour after other workmen and that they departed in the evening about one half hour before. The report contained no recommendation of what should be done about this matter. It did note that Duress had made the allegations against Nichols a few days after he had been discharged. In September 1866, a three-officer board examined charges brought against John Thurber, master boilermaker. The board informed Commandant Stringham that "the evidence obtained does not sustain the charges." We can assume in the Thurber case that someone, perhaps a workman in the yard, complained about the master boilermaker to the chief engineer, the commandant, the Secretary of the Navy, a congressman, or some other authority. From the original recipient, the complaint was sent to the commandant, who convened the board.45

That officials in high places in the yard sometimes used their authority improperly is the chief message in a one-sentence order from Secretary Welles in June 1865 to Commandant Stringham. That order reads; "You will reinstate Frederick Claridge, lately employed in the ropewalk, who was discharged for giving evidence before the special Commission of the Navy Department."46

The Charlestown Navy Yard had no rigid scale of disciplinary actions to be taken in the event of a particular kind of offense. Three cases of theft illustrate this point. In October 1865, a watchman in the Machine Shop detected James Taylor taking a piece of composition. While Taylor was otherwise occupied, the watchman examined the workman's "box" and found some twenty other pieces. Taylor was hauled before a justice of the peace, who found him guilty of petty larceny. He was fined $5.00 and costs. Some two years later, another Machine Shop worker, William H. Berry, was observed leaving Seminole with two copper bolts "concealed on his person." It was discovered that the bolts were part of a lot kept in a locked chest of the quartermaster. The back of the chest had been broken, and a large quantity of copper and composition was missing. At the direction of Chief Engineer Henderson, an assistant engineer made an investigation. Henderson could find no direct proof of theft, although there were indications of an intention to steal. Henderson recommended Berry be discharged.47 The circumstances of the Taylor and Berry cases are similar, yet one ended in a court of law.

The objects stolen in these two cases had value. In a third instance of theft, the purloined item seems worthless. Apparently as he was leaving the yard one evening, a caulker by the name of George Johnson picked up a "pine stick," broke it into three pieces and put them in his pocket. Johnson had passed through the lower gate, when a watchman, Constantine Yenethie, ordered him to come back. Johnson later explained that he refused "as it was such a small affair." The next evening, Yenethie spotted the caulker and asked him

44 "A Citizen" to Commandant, undated, 181-5, Box 16, 5/10/65-12/6/65.

45 Sewell and Clitz to Stringham, Aug. 12, 1865, 181-33, Box 2, 7/20/64-8/16/65; Sewell and others to Stringham, Sep. 6, 1866, National Archives, Record Group 181, Entry 81, Reports of Boards and Surveys (181-81), Box 6, 1866-1901.

46 Welles to Stringham, June 22, 1865, 181-11, Box 7, 12/3/64-8/18/65.

47 Nichols to Shock, Oct. 2, 1865; Shock to Stringham, Oct. 7, 1865, 181-33, Box 2, 8/21/65-6/15/66; Hartt to Clitz, Nov. 21, 1867; Henderson to Clitz, Nov. 25, 1867, 181-38, Box 2.
his name. Johnson replied, "Kiss my ass," later arguing "I did not consider you [Yenethie] had any right to ask me my name." Shortly thereafter, the watchman learned Johnson's identity and reported him to the captain of the watch for theft and abusive language. From there it went to the yard's executive officer, who ordered an investigation. That consisted of questioning Yenethie and Johnson. The caulker admitted taking the wood and refusing to cooperate with the watchman. This appears a small incident that got blown out of proportion.98

Some workmen, such as Johnson, had no great respect for the yard's civilian watchman and gatekeepers. Charles H. Dailey, a laborer, was reported "for abusive language at the gate." It appears Dailey did not return for work on time one afternoon, but made an appearance much later and attempted to enter the yard. Because he was late and also drunk, the watchman, John Rounsevelle, "put him out." Dailey returned a second time. According to the report of the watchman, Dailey "abused me and the Guard by calling us Sons of bitches and wanted us to come out and fight." Rounsevelle had Dailey arrested and put in the guard house. The incident was reviewed by the executive officer, who declared the watchman's report correct and sent the matter to the commandant for action.99

Per diem employees could be fired because of poor job performance. In May 1865, Chief Engineer Sewell recommended the discharge of J. H. Lee, a member of the crew that operated the Ropewalk engines. Sewell described Lee as "constantly afraid of doing too much work and he does not perform willingly his share of cleaning up the Engines and Boilers." Because of these attitudes and habits, others in the crew "do not want him."100

Departing work area without permission or ending work early seem to have been common offenses. In May 1865, Dennis O'Neal was discharged for "leaving his gang without accounting properly." A junior officer, Master J. W. Moore, wrote to Stringham on behalf of O'Neal, noting that it was a first offense, that O'Neal was a good workman, and that indeed "he is employed by myself at my private expense after hours." Apparently, O'Neal did work at Moore's quarters in the yard.101

A year later, Chief Engineer Henderson recommended the discharge of a worker, who had washed up before the bell despite having been previously cautioned about idleness. On May 15, 1866, Henderson observed Henry Corconan along with others idling in a building near the boiler shop. The chief engineer had already spoken to this group about the little work being accomplished. The foreman was summoned and questioned each man. It was established that they were idling and neglecting duty. The chief engineer stated he "felt loathe to discharge them" and instead merely warned them. On the following day, the foreman reported some men for washing up before the bell and for standing idle in the shop. When Henderson examined the culprits, he found Corconan and two others to be the same as had been warned the day before. Accordingly, Henderson recommended their discharge. Corconan wrote a letter to Henderson, explaining that he had been employed to attend the fires in the boilermaking shop and to sweep the shop and office. Occasionally he attended those chores one hour before the beginning of the workday. During the noon break, he sometimes swept out the office of the master boilermaker. On May 16, "I took the liberty . . . of washing my hands." Corconan's explanation failed to convince Henderson.102

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98 Yenethie to Captain of Watch, Sep. 4, 1865; Captain of Watch to Clitz, Sep. 5, 1865, 181-5, Box 16, 5/10/65-12/6/65.

99 John Rounsevelle to Clitz, Feb. 6, 1866, 181-5, Box 17, 12/6/65-1/31/67.

100 Sewell to Stringham, May 12, 1865, 181-33, Box 2, 7/20/64-8/16/65.

101 Moore to Stringham, May 16, 1865, 181-5, Box 16, 5/10/65-12/6/65.

102 Henderson to Stringham, May 18, 1866, 181-33, Box 2, 8/21/65-6/15/66; Corconan to Henderson, May 18, 1866, 181-5, Box 17, 12/6/65-1/31/67.
INDUSTRIAL ACTIVITY IN THE POSTWAR YEARS

The chief industrial activity at the Charlestown Navy Yard was, of course, the building of new ships and the repairing, outfitting, and otherwise servicing vessels that came to the facility. In addition, the yard constituted a manufacturing establishment and produced items for ships building or under repair elsewhere. The yard’s Equipment Department manufactured cordage, sails, and other canvas goods. During the Civil War, the Chief Engineer’s Department had begun the production of marine engines, some of which were sent to other yards for installation in vessels there.

In the years 1865-1869, much of the work at the yard consisted essentially of postwar activities. Such work included sale of surplus auxiliary vessels; acceptance, servicing and outfitting ships built by private ship works under wartime contracts; and completion of new construction begun in the yard during the hostilities. In addition, the yard was involved in the construction of several vessels, the keels of which were laid after Appomattox, and there was a fair volume of ship repairs.

The Navy began preparations for winding down from the war in April 1865. In the middle of that month, Benjamin Isherwood, Chief, Bureau of Steam Engineering, gave instructions to the Boston yard regarding steamers arriving to be put out of commission. The machinery of some might need repair, but those repairs should be postponed and priority given to vessels remaining in service. Isherwood also briefly outlined the procedures for preserving machinery of steamers out of commission. Respecting ships returning from the various squadrons, the Navy adopted the policy of discharging eligible crewmen immediately on arrival in the yards. Accordingly, none should be permitted to go ashore until they had been paid off. This called for special pay arrangements and circumvention of conventional requisitions forms. All those men whose terms would expire in three months and who were out of debt were to be discharged.103

SALE OF SURPLUS SHIPS

In the spring of 1861, the Navy had mushroomed in size, in part because of the purchase by the government of private vessels. Four years later, the reverse process occurred. Also the Navy put up for sale some of the vessels it had acquired as prizes. In 1865, twenty-four vessels were sold by public auction at the Boston Navy Yard. September 8 proved the busiest sale day, when seven ships were auctioned off. Five others went under the hammer on August 1 and four on November 1. During 1866, four more were sold and five in 1867.104

The government sold ships at a price less, oftentimes far less, than it had paid for the same vessels several years earlier. For example, in November 1864, the Navy bought Wando from the Boston Prize Court for $121,000; a year later it sold her for $30,200. The government paid $75,000 for Niphon in May 1863 and sold her in April 1865 for $18,250. The Boston Prize Court conveyed Cherokee to the Navy for $75,000 in November 1864; when the Navy auctioned her off in August 1865, it received only $14,500.

Every Saturday, the yard’s chief engineer made a report in which he listed the steamers in the yard and estimated the time necessary to repair each. When referring to ships to be sold, the Saturday reports contain such remarks as "waiting orders," "not reported on yet," "advertised for sale," or "recommended to be sold," with no projections of time needed for repairs. Thus, with a few exceptions, it does not appear that the yard performed repairs on vessels earmarked for sale. Circassian, sold in June 1865, was sent into the Navy’s dry dock, and Niphon, sold in April, was docked at East Boston.105

Accordingly, the yard’s activities respecting a vessel being sold was receipt and storage of her stores, discharging or reassigning crew, arranging for her inclusion in an auction, and administrative oversight of the funds produced by the sale. For example, in late February 1865, Secretary Welles directed the yard to land

103 Isherwood to Stringham, Apr. 15, 1865, 181-24, Box 1, 4/7/65-3/29/67; Welles to Stringham, May 3, May 8, 1865, 181-11, Box 7, 12/3/64-8/18/65, pp. 156, 162.

104 Preble, pp. 375, 380, 387.

105 See Sewell to Stringham, June 3, June 10, June 19, 1865, 181-33, Box 2, 7/20/64-8/16/65; Preble, p. 375.

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the stores of Nipho and to transfer the crew to the receiving ship preparatory to her being sold.106

RECEIVING NEW CONSTRUCTION FROM CONTRACTORS

When the war drew to a close, several commercial shipbuilders in the Boston area were constructing vessels for the Navy. In the next two or three years, the Charlestown yard directed some of its administrative and industrial energies to these ships. The Navy found defects in most of the vessels. Those defects had to be eliminated. They also raised questions about costs and contract compliance. Eventually the Navy established a special board of officers to investigate such matters. Somewhat in the same category as ships delivered by private contractors was Agamenticus.

The hull of Agamenticus, a double-turreted monitor, was built by the Portsmouth Navy Yard and her machinery by a Philadelphia firm. The vessel was launched in March 1863. The Boston yard became involved in her machinery trials in April, when the Portsmouth commandant called on Stringham to provide four competent assistant engineers. The ship entered commission in May 1865. In July, Welles ordered Agamenticus and two smaller monitors laid up at Charlestown as "part of a permanent naval force for the protection of Boston Harbor." Before going into ordinary, she made a six-week trial cruise with Dictator. In mld-August, Welles directed that the stores of Agamenticus be landed at Boston. He noted that in the course of her trial cruise, it was discovered that "many important things in her construction have been omitted." The Navy Department ordered that before laying her up, the yard was to make her "completed in every respect for sea service, so far as the vessel herself is concerned."

The monitor's commander, E. G. Parrott, provided the yard with a report of "her late trial trip." Troubles with the steering apparatus appeared as the most serious difficulty. Also her boats were poorly located, most of them being carried under the hurricane deck and therefore not accessible in a heavy gale. Parrott believed that all of the defects could be rectified in a short time, with the exception of the steering. At the end of September, Agamenticus went out of commission. Repairs continued on her hull and machinery. In September, Chief Engineer Sewell reported the remaining work would required one week. However, perhaps because the vessel was not going anywhere, repairs of both hull and machinery dragged on until April 1866. Renamed Terror, she remained in ordinary until May 1870.107

Between March and June 1863, the Navy had negotiated contracts with a number of private ship works for the construction of light draft, single-turreted monitors. Five of these vessels were delivered to the Charlestown Navy Yard shortly after the collapse of the Confederacy. All of them proved deficient. This meant the yard had to persuade the builders to remedy the defects or that the yard itself had to make repairs. Four of these monitors went into commission, which required the yard to provide parts of their outfits.

The Navy had designated "local inspectors" to oversee the construction of vessels by private contractors. Questions arose in May 1865 about extra charges made by Nathaniel McKay and George Aldus, builders of the monitor Squando. Ebenezer Hoyt, a naval chief engineer and "local inspector," had supervision of construction of that vessel. Hoyt was directed by the Navy to report his investigation to Commandant Stringham. A related problem was the failure of McKay and Aldus to provide certain "Articles of Equipment, Spare Gear, Tools, Etc. called for by Contract" for Squando. By early June, McKay and Aldus had supplied most of the missing items. The yard furnished the balance and also did work on the turret base. She went into commission on June 6, 1865, her outfit being completed at the Charlestown and New York navy yards.108

Curtis & Tilden, Boston, had the contract for construction of Shawnee. On instruction from the Navy Department, the contractors delivered the unfinished monitor to the Charlestown Navy Yard in July 

106 Welles to Stringham, Feb. 22, 1865, 181-11, Box 7, 12/3/64-8/18/65, p. 100.

107 T. Bailey to Stringham, Apr. 15, 1865, 181-32, Box 7, 1/23/65-8/7/65; Welles to Stringham, Aug. 17, 1865, 181-11, Box 7, 12/3/64-8/18/65; Parrott to Stringham, Aug. 21, 1865, 181-32, Box 8, 8/7/65-6/1/66; Sewell to Stringham, Sep. 16, 1865; Henderson to Stringham, Apr. 28, 1866, 181-33, Box 2, 8/21/65-6/15/66; DANFS, vol. VII, pp. 105-6; vol. III, p. 768.

108 Hoyt to Stringham, May 16, May 18, June 2, 1865, 181-33, Box 2, 7/20/64-8/16/65; DANFS, VI, p. 595.
1865. The yard did not then accept the ship because of certain deficiencies in her equipment. Curtis & Tilden promised to provide the missing articles "the first thing." After she was accepted and after being placed in commission in mid-August, repairs were made on her engines. Because of a design flaw, Shawnee had been declared unseaworthy even before her completion. She saw no active service and went into ordinary at the Charlestown Navy Yard in November 1865, remaining in that state for the next ten years.\(^\text{109}\)

The Navy had already accepted Suncook before she was turned over to the Charlestown yard in June 1865. Upon examination of the monitor, George Sewell, the yard's chief engineer, found flaws in the workings of the ship's gun carriages and turret. Neither of the two weapons could be properly maneuvered. Also, the engines required some adjustments. The contractor, the Globe Works, South Boston, remedied these defects, and she was commissioned July 25, 1865.\(^\text{110}\)

Of the light draft monitors received at the Charlestown yard in the spring and summer of 1865, Nausett, constructed by Donald McKay, East Boston, apparently presented the fewest mechanical or administrative problems. Nausett entered commission in August 1865. Wassuc was built by George W. Lawrence & Co., Portland, Maine. Completed in late October 1865, she arrived at the Charlestown Navy Yard a few days thereafter. Although not in commission, the cruise from Portland to Boston constituted a trial. During the nineteen-hour run, her engines "gave general satisfaction." However, some problems appeared. It was also determined that the contractor had not complied with certain modifications called for by the Navy in the ship's hull and machinery. A serious leak in an outboard valve required the docking of Wassuc in early 1866. This vessel never was commissioned, but went into ordinary upon arrival at Charlestown, remaining in that status until 1875.\(^\text{111}\)

In addition to the large monitor Agamenticus and the light draft monitors Squando, Shawnee, Suncook, Nausett, and Wassuc, the Charlestown Navy Yard also received two gunboats, constructed by private ship works, but not completed in time to participate in the war. Both were double-ended, sidewheel vessels, slightly more than 100 feet in length. Winnepic, built by Harrison Loring of Boston, was launched in August 1864. When she arrived at the Charlestown Navy Yard is not clear, perhaps in the early spring of 1865. On May 10, she was towed to Simpson's Dock in East Boston. After returning to the yard, her pilothouse was removed. From January 1866 to late 1867, Winnepic served as a practice ship at the Naval Academy. In the meantime, a board headed by Commo. Cadwalader Ringgold was engaged "in finally adjusting" the account of Loring respecting Winnepic. Ringgold sought information about the work performed by the yard because of deficiencies.\(^\text{112}\)

The Ringgold board also made inquiries about Ashuelot, the other sidewheel, double-ender delivered to the Charlestown yard after the war. Donald McKay had the contract for her hull and machinery. McKay secured the cooperation of the Charlestown yard at several stages in the construction of the vessel. After the hull was launched at his works in East Boston in July 1865, McKay borrowed the navy yard's large lighter to transport the ship's boilers, each weighing 450 tons, to the yard's shears. He then brought the ship itself to

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\(^{109}\) Curtis & Tilden to Stringham, July 21, July 27, 1865, 181-5, Box 16, 5/10/65-12/6/65; B. Greene, Acting 1st Asst. Engineer, Shawnee, to E. P. Williams, Cdg. Shawnee, Oct. 10, 1865; Williams to Stringham, Oct. 5, 1865, 181-32, Box 8, 8/7/65-6/1/66. There is some confusion about Shawnee in DANFS. The alphabetical section describing the vessel implies she never went into commission. However, the appendix, "Monitors of the United States Navy, 1861-1937," gives the information "Commissioned: 18 August 1865, L.t. Cdr. Edward P. Williams"; DANFS, vol. VI, p. 473; vol. III, p. 775. The letters cited above from Williams and Greene indicate she had indeed been commissioned.

\(^{110}\) J. A. Winston to Stringham, July 8, 1865, 181-32, Box 7, 1/25/65-8/7/65; Sewell to Stringham, July 22, 1865, 181-33, Box 2, 7/30/64-8/16/65; DANFS, vol. III, p. 775.


\(^{112}\) John Dearborn to Stringham, May 13, 1865, 181-5, Box 16, 5/10/65-12/6/65; Ringgold to Rodgers, Feb. 18, 1867, 181-5, Box 17, 2/1/67-6/23/69; DANFS, vol. VIII, p. 418.
the yard and used the shears to hoist the boilers aboard. McKay also obtained from the yard a pilothouse for *Ashuelot*. Learning that the pilothouse had been removed from *Winnipeg* and was available, the contractor, on behalf of the subcontractor engaged to do the "joiner work," wrote to the Bureau of Construction and Repair and proposed that the subcontractor purchase the pilothouse. The Navy agreed, and in September 1865, the subcontractor paid $826.14 for the structure and moved it from the navy yard by team.113

Eventually, McKay delivered *Ashuelot* to the Navy at the Charlestown yard. She was commissioned in early April 1866 and remained at the yard for several months, while repairs were made in her "Engine department . . . necessary to fit her for a European cruise." Later she sailed to New York and then assisted in escorting the large monitor *Miantonomah* across the Atlantic. In August, Edward Hartt, the Charlestown yard's naval constructor, prepared an estimate of the work performed by the yard to remedy "several omissions on the part of the Contractor." That letter and other documentation was used by Commodore Ringgold and his board to settle the account with McKay.114

James Tetlow of East Boston contracted with the Navy to construct four iron-hull screw tugs. They appear to have been built and launched in 1865 and were delivered to the Charlestown Navy Yard in 1866. *Standish* and *Mayflower* arrived in January and early February, went through their trials, were accepted by the Navy, and within two weeks sailed for the Norfolk yard. *Pallas* and *Leyden* were delivered in the spring, and, upon acceptance by the Navy, both went into service as yard tugs at Charlestown. Unlike the warships, no significant defects were found in any of the vessels. However, *Pallas* and *Leyden* did create some administrative problems for the yard. While still in the course of constructing the two tugs, Tetlow was declared insolvent. Since the contractor had not been paid in full for any of the four vessels, the Navy faced numerous claims from unpaid workmen, other creditors, and Tetlow's assigns.115

NEW CONSTRUCTION AT THE YARD

Another activity at the Charlestown Navy Yard at the end of the war was finishing or otherwise disposing of vessels it had under construction. In the spring of 1865, the yard had on its buildings ways six ships at various stages of construction. The keel of *Virginia* had been laid in 1822, and those of *Guerriere*, *Pompanosuc*, *Keywadin*, *Quinsigamond*, and *Manitou* during the Civil War. Two of these vessels, *Guerriere* and *Manitou*, were completed in the period 1865-1869. Also left over from the war was the cruiser *Ammonoosuc*, which had been launched in July 1864 and remained unfinished. Another part of the yard's construction activity in the aftermath of the war was building two entirely new ships, *Nantasket* and *Alaska*.

In August 1864, the yard laid the keel of *Guerriere*, a *Java*-class cruiser, on the ways in Shiphouse No. 39. The Globe Works of Boston built her machinery. After the launching in September 1865, work on her proceeded slowly until late 1866, when the Navy Department made efforts to complete her in more expeditious fashion. In early December, the Bureau of Equipment directed the Washington Navy Yard to manufacture "2 new anchors, 6350 pounds each" and "2 New Chains 1 1/16 inch, 165 fathoms each." However, two days later the Bureau decided that procedure would take too much time and ordered that the anchors and chains of *Ammonoosuc*, another cruiser still unfinished, be used for *Guerriere*. Early in 1867, the Department established April 1 as the completion date for the ship. *Guerriere* measured 319 feet in length and forty-six in breadth and had a draft of nearly eighteen feet. After entering commission on May 21, 1867, she remained in the yard for a month. On June 28, she sailed to New York and then served as flagship of the South


114 Henderson to Stringham, May 17, 1866, 181-33, Box 2, 8/21/65-6/16/66; Gregory to Stringham, Dec. 7, 1866, 181-32, Box 8, 6/1/66-6/15/67.

Atlantic Squadron.16

Shiphouse No. 39 contained the most active building ways in the yard, and between September 1865 and October 1868, three ships were launched at that site. The launching of Guerriere freed the ways for construction of another vessel. Five months after Appomattox, yard workmen laid the keel of Nantasket, a 216-foot long Resaca-class wooden screw sloop. The launching took place in August 1867, but more than two years then passed before she was ready for commissioning. The slow progress had several causes. During that time, some departments temporarily stopped working or severely reduced their activities. For example, in July 1868, the Department of Steam Engineering ceased most of its work except on Alaska and the machinery for Algoma. More importantly, at some time after the launch, at least before March 1868, the hull was taken to the Portsmouth Navy Yard, for installation of the machinery.

By the autumn of 1868, the bulk of the work on the hull of Nantasket appears to have been completed and progress had been made in preparing her outfit. In reply to a query from Commandant Rodgers, Naval Constructor Hartt reported in September that "all the Masts, Spars, Boats, Blocks and everything pertaining to the equipment of this vessel are completed as near as can be until they are required to be put on board." Some delays later ensued. After the Charlestown Equipment Department prepared the rigging, the chief engineer at Portsmouth changed the location of the smoke pipe and made alterations in the spars. This rendered most of the rigging unserviceable, and a new set had to be prepared. By the end of June, the ship was back at Charlestown, and the yard's executive officer informed Commodore Rodgers that it would take fifty working days to fit Nantasket for sea. The ship was commissioned on October 22, 1869. A week later, she left the yard for Santo Domingo. Her first commander was Lt. Cdr. F. M. Bunce, who had been Equipment Officer at the Charlestown Navy Yard in the immediate postwar years.17

On August 22, 1867, seven days after Nantasket slid down the ways, the keel of Alaska was laid in Shiphouse No. 39. A wooden screw gunboat, she took over two years to complete. On October 15, 1868, Naval Constructor Hartt informed Rodgers the vessel was nearly ready for launching, an event which occurred two weeks later. In the completion of Alaska, and doubtless in work on other vessels as well, some difficulties arose because of the assignment of different parts and aspects of the ship to different bureaus. The Bureau of Ordnance had authority over the layout of the magazines and shell room. However, these spaces were actually built by the Bureau of Construction and Repair. Naval Constructor Hartt objected to Ordnance's instructions for the fitting of the light boxes in the magazines and the shell room. He appealed to Rodgers, who doubtless referred the matter to Washington. Later, the equipment officer objected to the location by Construction and Repair of the ears for the bowsprit shrouds and, like Hartt, sought the intervention of the commandant.18

The Department of Steam Engineering gave priority to the machinery of Algoma, and in January 1869 suspended its work on Alaska. By that time, much had been accomplished. According to the monthly report of the chief engineer, Alaska's stern work "was on," the rudder post cast, the boilers in place, the uptakes and smoke pipes "ready to go on board," the crank, line shaft, &c. all finished," the cylinders, frames, and channel plates bolted in place," condenser "with all its attachments and tubes completed," exhaust pipes and valves completed and ready to go together," steam chest and valves bolted on and reversing cylinder in place," eccentrics, circulating rods, cross heads, piston and all attachments, fitted, ready to go on board," and "the propeller and hoisting gears . . . also finished." Cold weather and demands of Algoma meant postponement

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of outside work.\textsuperscript{19}

Probably work on \textit{Alaska} proceeded in an uneven fashion. Unlike the Bureau of Steam Engineering, the Bureau of Equipment ordered "progress as rapidly as possible" on that vessel. Because of difficulties created by a reinterpretation of the act of Congress dealing with wages, the naval constructor found he could not hire competent shipsmiths. And in April 1869, he informed Rodgers that "the estimated time required to complete 'Alaska'... must necessarily be considerably extended." The chief engineer reported a similar problem, which added eight months to the completion of \textit{Alaska}. A few days later, the chief engineer stated that even with a full force of mechanics it would take his department six months to have the vessel ready for sea.\textsuperscript{120}

In a report dated November 30, 1869, the naval constructor indicated that his department had completed work on \textit{Alaska}. The ship entered commissioned service on December 8. Apparently, during trials, her cast iron reversing gear fractured. The yard's machine shop produced a new part made of composition metal, which was installed in mid-January. Shortly thereafter, \textit{Alaska} left the yard and reported to the Asiatic Squadron.\textsuperscript{121}

The fourth vessel launched and completed by the Charlestown Navy Yard after the Civil War was \textit{Manitou}, her name later being changed to \textit{Worcester}. Originating in the Civil War cruiser program, her keel was laid on the \textit{Vermont} ways in 1863, but she did not enter commission until eight years later. Launched in August 1866, work on her was sporadic. Woodruff and Beach Iron Works of Hartford had the contract for her machinery, which was in the process of being installed at the yard in December 1866. In his monthly report for March 1868, the yard's chief engineer noted that work had been suspended and that, as far as his department was concerned, she could be made ready for sea in six months. The report for the following January lists \textit{Manitou} among those "ready for sea in Engineer's Department. Vessels laid up." The report for April included the ship in a different category, "laid up in ordinary." The report states of the five vessels in this group "their Engines and Boilers are in excellent condition and could be made ready for sea in the Engineer's Department" within fifteen to thirty days.\textsuperscript{122}

In the eight years that passed during the construction of the vessel, Navy Department policy changed, requiring alterations in work done years before. The new Republican administration that took over in March 1869 acted upon the fondness in parts of the service for sail as the proper propulsion of warships. To improve sailing performance, steamers were given double-bladed screws. However, \textit{Worcester} had originally been provided with a screw of four blades. Since she was in dry dock in November 1869, it was proposed to replace her original propeller. That change was delayed until she again went into dry dock in the following April. A massive layoff in January 1870 disrupted projections of time required to finish her. Previously, the naval constructor had stated hull work would require four weeks. In April, he estimated eight, unless more men were employed. The replacement of \textit{Worcester}'s screw took an entire month in dry dock. The ship finally went into commission in February 1871 and in March departed, without her sea trials for Europe, carrying much needed provisions and supplies for victims of the Franco-Prussian War.\textsuperscript{123}

\textsuperscript{19} Henderson to Rodgers, Dec. 31, 1868; Jan. 30, 1869, 181-33, Box 4, 6/22/68-2/17/69.

\textsuperscript{120} Williamson to Rodgers, Apr. 9, 1869; Hartt to Rodgers, Apr. 22, 1869; E. Lawson, Chief Engineer, to Rodgers, Apr. 27, Apr. 30, 1869, 181-33, Box 4, 2/17/69-6/30/69.


\textsuperscript{122} Woodruff & Beach to Commanding Officer, Charleston Navy Yard, Dec. 5, 1866, 181-5, Box 17, 2/6/65-1/31/67; Wharton to Rodgers, Mar. 30, 1868; Henderson to Rodgers, Jan. 30, 1869, 181-33, Box 4, 6/22/68-2/17/69; Lawton to Rodgers, Apr. 30, 1869, 181-33, Box 4, 2/17/69-6/30/69.

\textsuperscript{123} E. Robie to Rodgers, Nov. 5, 1869; Report of U.S. Vessels, Nov. 30, 1869, 181-33, Box 5, 11/4/69-2/8/70; William Spicer, Equipment Officer, to Steedman, Apr. 6, 1870; W. Hanscom, Naval Constructor, to Steedman, Apr. 29, 1870; Samuel Pook to Steedman, 181-33, Box 6, 2/9/70-6/2/70; DANFS, vol. VIII, p. 464.
After the Civil War, the Charlestown Navy Yard completed construction of the 335-foot *Ammonoosuc*, launched in July 1864. The Navy's purpose in building this class of cruisers was to hunt down rebel commerce raiders on the high seas. The collapse of the Confederacy eliminated any urgent necessity for her completion, with the result she was not ready for her trials until June 1868. In March 1868, *Ammonoosuc* was reported as in New York. Upon her return to Boston, the cruiser was laid up in ordinary, being listed in that category as early as June 30, 1868. The chief engineer reported that her engines were ready for sea. In the following August, an examination revealed a leak under the shoe bearing, which required hauling her into the dry dock. The naval constructor reported in November 1869 that his department would require five months if the vessel was to be made ready for sea. In May 1869, she received a new name *Iowa*.124

With respect to developments in the hull and propulsion systems of warships, *Ammonoosuc* was probably the most important vessel constructed by the Charlestown Navy Yard during the era of the Civil War. She was sister ship to *Wampanoag*, "today recognized as a landmark in naval design." Benjamin Isherwood, Chief, Bureau of Steam Engineering from 1861 to 1869, designed both vessels. Completed first, *Wampanoag* achieved a top speed of 17.75 knots in her trials in February 1868, making her "without doubt the fastest ship in the world, equaled to a fraction of a knot only by the second Isherwood cruiser, the *Ammonoosuc*." These record-breaking speeds were achieved by propulsion plants with big, superheating boilers and big gears, made of lignum vitae, an exceedingly hard wood. "All the machinery was below the water line, behind the coal bunkers for better protection."125

The success of *Wampanoag* and *Ammonoosuc* produced fierce controversy, fueled by the line-staff feud, Isherwood's abrasive personality, partisans of competing designs and designers, and champions of the old world of sail, now seriously challenged. Isherwood's enemies prevailed. The Navy removed half of the boilers from the two vessels and then declared them unserviceable. When the Republicans took over the Navy Department in March 1869, Isherwood was dismissed as head of the Bureau of Steam Engineering, and efforts were made to cancel projects associated with him. In May 1869, Commandant Rodgers received directions that "any work going on at the Navy Yard under your command designed or ordered by Chief Engineer Isherwood" should be "stopped without delay."126 So *Ammonoosuc* was left to deteriorate at dockside.

The Portsmouth and Charlestown Navy Yards engaged in a number of joint shipbuilding projects, namely *Nantasket*, *Franklin*, and the steam sloop *Algoma*. Portsmouth constructed the hull of *Algoma*, whereupon she was transported to the Charlestown yard, which had made her machinery. After installation of that machinery, the vessel returned to Portsmouth for outfitting. The work at the Charlestown yard on this ship initially proceeded in an unusually rapid fashion. By the time the hull arrived in the autumn of 1868, the machine shop at Charlestown had completed the engines and boilers, which were ready to go on board. *Algoma* went into dry dock for boring out the stern bearing, fitting of her stern work, and cutting down the keelsons. By the end of October, the boilers and most of the engines had been placed in the ship.

In his monthly report of December 31, 1868, Chief Engineer Henderson gave an unusually detailed commentary on *Algoma*. In general, he stated that the boilers were secured, with pipes, valves, and gauges fitted and the smoke pipes ready for putting up. The stern shoe and chair were bolted on and the line shafting in place. The condenser and its appurtenances were bolted in place. "Pistons and rods with crosstail slides &c fitted and secured." "Crank shaft, connecting and side rods have all been fitted together as have eccentrics and rods." The floor grates in the fire room were nearly all fitted, and work was progressing on the coal bunkers. All machinery was nearly completed with the exception of the stern post. Work in that area was delayed because of alterations adopted by the Bureau of Construction, first developed in the construction of *Alaska*. *Algoma*’s propellers had been made by Steam Engineering, and her rudder was being assembled by

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126 Ibid.; Porter to Rodgers, May 24, 1869, 181-51, 4/19/36-1/1/73, p. 128.
Construction and Repair. Henderson anticipated the machinery of the ship would be ready late February 1869.127

Although the Department of Steam Engineering gave priority to Algoma and, in January 1869, suspended its operations on other projects, work on the vessel slowed somewhat early in that year. By April 30, the shops had not yet completed the altered stern post or completed the rudder. Elbridge Lawton, chief engineer, and Samuel Pook, naval constructor, explained the lack of progress in their departments as resulting from inability to procure sufficient number of workmen. The Boston yard completed its work on the ship in the summer of 1869. Renamed Benicia, she returned to Portsmouth, where she was outfitted. The screw sloop entered commission in the following December.128

Four unfinished vessels on building ways of the Charlestown Navy Yard at the end of the Civil War remained in those circumstances. The ship-of-the-line Virginia had occupied one shiphouse since 1822. Prior to the war, the idea had been to wait until the national interest justified the cost of launching and completing the vessel. However, the passage of time made her obsolete as a warship. In 1870, John Lenthall, Chief, Bureau of Construction and Repair, stated that Virginia "now encumbers one of the best ship-houses." To complete her as a receiving ship would require $350,000.129 Since the Navy already had afloat numerous old and large vessels to serve as receiving ships and since better uses could be found for a third of a million dollars, the ship-of-the-line was doomed to remain as she was for another decade.130

Also still on the stocks were Pompanoosuc, a cruiser; Keywadin, a screw steamer; and Quinsigamond, a monitor. During the second half of the 1860s, these vessels received little attention other than measures to secure their preservation. The Navy had contracted with Harrison Loring's firm, City Point Works, for the machinery of Keywadin, later given the name Pennsylvania. In November 1866, Loring advised Commandant Stringham that the machinery had been completed. However, the hull was not ready, forcing Loring to store the engines, boilers, and other parts in his establishment. Subsequently, Loring delivered the machinery to the Charlestown Navy Yard, which did not install the engines and boilers, but placed them in storage. In 1869, hull work on Pompanoosuc, renamed Connecticut, would have required one year to make the vessel ready for sea. Her engines remained in the hands of the contractor. Most of the machinery of Quinsigamond, renamed Hercules and then Oregon, was on board in 1869, but the Construction and Repair Department estimated that eighteen months would be needed to complete work on the hull.131 All three vessels were broken up on the stocks in the early 1880s.

In the postwar ship work activity of the Boston Navy Yard, the screw frigate Franklin occupies a peculiar category. She was laid down at the Portsmouth Navy Yard in 1854 and partially constructed of materials salvaged from the ship-of-the-line of the same name, which was razeed and broken up. Launched in September in 1864, the hull of the frigate was brought to Charlestown at least by October 1865. Naval Constructor Hartt had charge of completing the work under the cognizance of the Bureau of Construction and Repair, and the Atlantic Works, East Boston, had the contract for the manufacture and installation of the machinery. Chief Engineer Moore was the "Supervising Engineer" or "local engineer" and monitored the work at the contractor's establishment. A number of circumstances required cooperation between the yard and the Atlantic Works.

In October 1865, the contractor informed the yard they were eager to deliver Franklin's boilers and other heavy parts before the beginning of December. Otherwise the freezing of the harbor might prevent transporting them by water. However, the hull was not yet ready to receive the machinery. The Atlantic


128 Lawson to Rodgers, Apr. 29, Apr. 30, 1869; Pook to Rodgers, May 17, 1869; Pook to Parker, June 28, 1869; Parker to Rodgers, June 29, 1869, 181-33, Box 4, 2/17/69-6/30/69; DANFS, vol. I, p. 117.


Works sought permission to deliver the machinery nonetheless. Apparently, the Navy agreed, but problems persisted. To serve as ballast, perhaps during the trip from Portsmouth, the vessel's guns had been placed in her engine and boiler spaces. Those weapons prevented the Atlantic Company from setting up the machinery, and they asked to have the guns removed. In January 1866, the Navy decided Franklin needed a stronger stern bearing than originally specified. The Atlantic Works agreed to manufacture a new bearing, the Navy paying an additional cost. Once the Atlantic Works had finished its work, the yard had the task of fitting her out. Some delays occurred with the equipment outfit because of the failure of anchors, chains, and a galley to arrive in timely fashion. But in June 1867, the new Franklin was commissioned and sailed for New York as the flagship of the European Squadron.  

SHIPS LAID UP IN ORDINARY

When a vessel in commission reported to a navy yard for repairs of any magnitude, the general procedure was to transfer the crew, unload all stores, and place her in ordinary. However, in the years after the Civil War, it appears there were two different categories of ships in ordinary at the Charlestown Navy Yard. In one group were those vessels under repair and which were expected to return to service upon completion of the work. The other group consisted of ships simply being stored, at least for the time being, and not intended to return into commission, except perhaps under extraordinary circumstances, such as a war.

Some of the ships in ordinary on a long term basis at the Charlestown Navy Yard during the years 1865 to 1869 have already been discussed. They include the large monitor Agamenticus or Terror and the two light draft monitors Shawnee and Wassuc, laid up in 1865 and still in that state in 1869. Ammonoosuc or Iowa entered ordinary in 1868 and was laid up for the next fifteen years. Several ships were placed in ordinary for a year or so prior to being sold. Pontoon, a sidewheel gunboat, was decommissioned at Boston in July 1865 and sold in October 1866. The screw sloop of war Seminole arrived at the Charlestown yard in August 1865, was laid up, and then sold in July 1870. The yard made repairs on some of these vessels. For example, Seminole, Wassuc and Shawnee went into dry dock during 1866 for hull repairs. In November 1866, the Bureaus of Equipment and Steam Engineering ordered Osceola, laid up since May 1865, made ready for a two-year cruise with the Atlantic Squadron. However, the ship remained in ordinary and was sold in October 1867.

Niagara became a permanent fixture at the Charlestown Navy Yard for two decades. A steam frigate constructed in the mid-1850s, she decommissioned at the yard in September 1865. In the following November, the chief engineer estimated she needed 150 days of work on her machinery. Little if any work was done, and in March 1866, the chief engineer reported "work suspended." She did undergo some repairs and alterations in 1869, but she never reentered commission and finally was sold in 1885.

Three vessels were in ordinary during much of the period 1865 to 1869, but the yard was making repairs upon them and they were recommissioned. Wabash was out of commission from February 1865 to 1871; Richmond, July 1865 to January 1869; and Kearsarge, August 1866 to January 1868.

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SHIP REPAIRS

During the four years following the end of the war, approximately three dozen ships on active assignment came to the Boston yard for overhauls, refitting, or repairs and then returned to duty. Some vessels needed only slight repairs. During 1865, for example, when *Tacony* arrived at the yard, Steam Engineering estimated that she needed only nine days' work on her machinery; *Tahoma*, seven days; and *Huntsville*, four. Also in the yard in 1865 were *Canandaigua*, which required 100 days' work on her machinery, and *Sacramento*, 105 days. Finally, there were those vessels that received major overhauls or machinery replacements, such as *Kearsarge*, *Richmond*, and *Wabash*.

The sidewheel steamer *Powhatan* arrived in the yard in early August 1865, apparently because of possible damage from having gone aground and also to be readied for a trip to the West Coast. The chief engineer initially estimated that repairs on machinery would require a mere two weeks, although only an inspection in dry dock could produce definite information. The ship remained in commission, thus retaining her crew. As already noted, the ship suffered from a very high rate of desertion while at the yard. Since the yard's dock was occupied, *Powhatan* was sent to Simpson's Dry Dock in East Boston. The size of the vessel, 253 feet in length and forty-five in breadth, with a draft of eighteen and a half feet, left "very little room to spare" in the dock. Nevertheless, she was safely docked on August 23, and it was determined that damage to her bottom was slight, necessitating repairs only to the head pump casing and several sheets of copper. Workmen accomplished those repairs by August 25. However, the ship could not be undocked because there was only fifteen feet of water outside at high tide.

*Powhatan* remained in the Simpson dock until September 4, when she returned to the navy yard. On September 16, Chief Engineer Sewell reported the vessel needed another week of work by his department. Equipment and Construction and Repair also had some odds and ends, such as shades and curtain rods, to attend to. The ship left the yard on October 11, having been at the yard for more two months.134

The end of the Civil War found *Sacramento*, a screw sloop, in European waters. She arrived at the Charlestown yard in mid-August 1865, and shortly thereafter went out of commission. While waiting for instructions from Washington, the yard did nothing with the ship. On October 7, the Bureau of Steam Engineering gave directions to proceed with repairs and "to put her in perfect order for a foreign cruise." Should the boiler tubes be found much corroded, they were to be replaced with seamless brass tubes. Not until mid-October did Steam Engineering produce an estimate of the time required for repairs, 105 days. Two weeks later, the chief engineer revised that estimate upward to 120 days. Work began and was continued even during the inclement winter weather, when the chief engineer suspended work by his mechanics on all ships except *Sacramento* and one other. A slowdown occurred in February and March 1866 because of delays in getting the shaft out. In August, there was an effort to expedite the outfitting, and the Bureau of Equipment authorized the employment of six additional riggers. The Bureau of Steam Engineering instructed the yard that the vessel "be got ready for an extended cruise as early as possible." That bureau also approved the hiring of more mechanics, "whatever number of men may be necessary." The ship was recommissioned in September 1866 and stayed in the yard while alterations and repairs continued and leaks in the decks caulked. Upon leaving the yard, *Sacramento* sailed to the Far East.135

With the exception of *Wabash*, the vessel repaired during this period at the Charlestown Navy Yard with the longest stay was *Richmond*. *Richmond* sailed into the yard in mid-July 1865 and was decommissioned. Several weeks passed before receipt of instructions from the Navy Department to replace her machinery with a pair of new engines being built at Washington Navy Yard and a pair of new boilers produced by the Etna


Works in New York. The Charlestown yard was also directed to make a new screw and to deepen the keel one foot at the stern.136

Removal of her existing machinery began in September 1865, and by the middle of November, the engines and boilers had been disconnected and were ready to come out. Those parts added to a large accumulation of scrap machinery in the yard, creating a shortage of space. During the process of removing her existing machinery, Richmond spent some time under the shears and in dry dock. Finally in April 1866, the old parts had been taken out. On April 14, Chief Engineer Henderson estimated that the work of installing the new machinery would require fifty days. In May, the foundry cast her new screw, which was expected to be ready in about three weeks.137

These projections proved overly optimistic, and two years later, Henderson continued to report she would be ready for sea in two months. To be sure, by June 1868, considerable progress had been made. The engines and boilers had been tested in September 1867. In June 1868, Steam Engineering was altering her smoke stack so as to make it telescopic. Equipment had assembled her rigging. The lower and topmast rigging originally belonged to Roanoke and was an inch larger than regulations required for Richmond. Most of the rest of the rigging was new, and the boatswain in charge of riggers considered "all the rigging good for at least a three-year cruise." Some unanticipated hull work had to be performed in September, when the brig Robin ran into Richmond causing some minor damage. At the end of October, Henderson claimed the vessel ready for sea respecting matters in his cognizance. However, Equipment had not yet received anchors and a galley of the correct sizes and types. At the end of December 1868, Naval Constructor Hartt announced that the vessel could receive her officers and crew, and that it was time for the "usual Board" to inspect her "as to conditions and cleanliness previous to her stores or provisions being put in." Richmond reentered commission on January 11, 1869, and sailed for Europe eleven days later.138

At the time Richmond departed the Boston Navy Yard, a new presidential administration was being organized in Washington, Ulysses S. Grant having been elected the nation's chief executive in November 1868. The departure of Gideon Welles after eight years of service as Secretary of the Navy, constitutes a somewhat significant event in naval administrative history.

In the three and a half years since the end of the war, the Boston Navy Yard had continued as an active industrial establishment. The volume of work certainly did not match that of wartime, but exceeded the performance of the yard in the three or four years before Fort Sumter. Between April 1865 and January 1869, approximately ninety different vessels received some sort of industrial, logistical, or administrative services from the yard. Twenty-nine ships, formerly civilian vessels purchased by the government during the war, were auctioned off at the yard in the two years following the end of hostilities. The yard engaged in more substantial activities respecting many of the remaining ships. Private contractors or other navy yards had delivered to Boston twelve vessels, most of which needed further work and outfitting by the yard. In addition, the yard itself engaged in new construction, building entirely or in cooperation with Portsmouth seven vessels, including the second Franklin. Finally, the yard repaired about thirty-five vessels, other than those sold, received from private contractors, in more or less permanent ordinary, or under construction.

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137 The progress of work on the vessel can be found in the weekly reports of the Chief Engineer, 181-33, Box 2, 8/21/65-6/15/66.

Chapter VIII

THE CHARLESTOWN NAVY YARD IN THE AGE OF GRANT, 1869-1877

The two-term presidency of Ulysses S. Grant occupies a distinct place in American history because of the corruption within his administration. That corruption extended to the Navy and its yards, including the one at Boston. The primary culprits do not appear to be naval officers assigned to the yard, but the civilian head of the Navy in Washington and at least one bureau chief. Through them, dubious contracts were made with private businesses to provide the Navy with timber, ships, and other items. The management of civilian work forces constituted another area for corrupt dealings. As large employers, navy yards provided opportunities for manipulation of hiring practices to secure votes for the party in office and its candidates.

During the years 1869-1877, the Navy continued to decline in size. At the time of Grant's first inauguration, the fleet consisted of 203 vessels of all classes and conditions. Eight years later there were 147, with perhaps only one-third of these on active duty. In the Grant era, Congress formally authorized the building of ten new vessels, most of them rather small. George Robeson, Secretary of the Navy during most of the Grant administration, was not content with the building program of Congress. With funds originally appropriated for other purposes and under the guise of extensive repairs on existing vessels, Robeson arranged for the construction of eleven ships, all entirely new except for their names. However, the building programs of Congress and the Secretary of the Navy were too small to check the downward spiral in the size of the Navy.

Whereas the American fleet at the end of the Civil War had been the equal of European navies in size and technology, during the next decade, it fell behind in both respects. A preference for sail persisted. In June 1869, the Secretary of the Navy ordered all ships fitted with full sail power, save only tugs and dispatch vessels. "Except in the most urgent circumstances," steam would not be used. Thus all cruising would be done under canvas, and the Secretary threatened that those ship commanders who failed to abide by the spirit of the order might be charged with the cost of the coal consumed.1

General conditions in the Navy and the nation governed the tempo of work at the Boston Navy Yard. Some of the ten ships authorized by Congress were built at government yards, Boston constructing the experimental torpedo ship Intrepid. Also the Boston yard had a role in the construction of two ships by a private contractor. Another ship construction project resulted when Secretary Robeson directed the yard to build a new Vandalia. Occasionally, extraordinary events influenced the volume of activity. In 1867 began what became known as the Ten Years War, an insurrection in Cuba against Spanish rule. The proximity of that island and opportunities for gun runners created problems between Spain and the United States. On several occasions when war seemed imminent, navy yards experienced a surge of activity. During one such emergency, the Boston yard went on a schedule of extended hours. In 1873 the nation's economy declined causing Congress to be even more parsimonious in its navy appropriations. As the fleet contracted in size, there was less work at shore establishments.

Politicians maneuvered to obtain Navy work for their bailiwicks, and because of the reduction in construction and repair activity, competition was keen. This is evident in a recommendation by a congressman from Maine, a champion of the Kittery-Portsmouth yard, to establish a commission to determine the feasibility of consolidating the Boston and Portsmouth facilities at Portsmouth.2 Nothing came of this maneuver. How-

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1 General Order No. 128, June 11, 1869; General Order No. 131, June 18, 1869, National Archives, Record Group 181, Entry 48, General Orders of the Navy Department, 1863-1892 (181-48), 1/10/63-10/15/77.

2 New York Times, Mar. 28, 1869, p. 3.
ever, suggestions that sizeable sums could be saved by reducing the number of navy yards always attracted some attention.

Research into the period 1869-1877 is facilitated by the existence of several Congressional investigations of the nation's navy yards. That published in 1876 especially provides a wealth of detail. However, this particular inquiry, as well as most of the others, had political origins, being efforts either to substantiate charges of corruption against the Navy or to defend the administration against such criticism. Nevertheless, it is clear that the Boston Navy Yard does reveal abuses, improprieties, and corruption found in the administration of the Navy during the Grant years.

THE ADMINISTRATION OF THE BOSTON NAVY YARD

Between 1869 and 1877, the Navy's bureau system experienced no alterations. One change occurred in the organization of the Navy Department in Washington, but it did not directly involve the bureaus nor their departments in the yards. That alteration was the creation in March 1869 of the position of Vice Admiral, an office immediately filled by David Porter. Commanders of navy yards and stations were instructed to "recognize all orders coming from the Vice Admiral as orders from the Secretary of the Navy." Initially, Porter had great influence, especially during the brief period when Grant's first appointee, A. E. Borie, served as Secretary of the Navy. Porter appears as a conservative force. Probably he originated the orders of March 1869 respecting the use of sail on all of the navy's ships. He seems to have sought an enlargement of the authority of line officers at the navy yards and a reduction of that of the staff. After a brief period, Porter's influence waned, although he retained his position as Vice Admiral.

THE ORGANIZATION OF THE YARD

All of the divisions within the Boston Navy Yard were staffed with military and civilian personnel. The number of persons at work in the yard constantly shifted. To illustrate the identity and composition of the yard departments, early 1872 will be used. Roughly 1250 people had assignments or employment in the major divisions of the Boston Navy Yard in February and March 1872. Civilian laborers and mechanics made up the largest single group. Also among the nonmilitary personnel were clerks and foremen. Other than a single enlisted man, the remainder were navy officers and included commissioned line and staff officers and warrant officers.

Except for the Commandant's Office and the Department of Medicine, yard departments included at least one other officer in addition to the department head. In March 1872, the Executive Department formally included twelve officers. However, five of these men were detailed to other units. For example, a carpenter officially listed as part of the Executive Department, was detailed to the rendezvous, and a boatswain and a mate were assigned to the Equipment Department.

During the period 1869 to 1877, little in the way of permanent alterations occurred in the administrative structure of the Boston Navy Yard. Two changes proved only temporary. During his brief service as Secretary of the Navy, A. E. Borie, perhaps at the instigation of Vice Admiral Porter, resurrected the position of "Port Admiral." According to a circular letter from Porter to navy yard commandants, "at each of the principal naval stations," a rear admiral on the retired list would be appointed "Port Admiral and Commander of Station." Commandants were advised that the creation of port admirals "in no way conflicts with your duties..." Port admirals would inspect each vessel returning from a cruise before going to a yard as well as those ships being discharged from yards; would be in charge of rendezvous and of receiving ships when lying outside the limits of a navy yard; and would handle ceremonial functions, such as receiving and visiting foreign dignitaries. Washington sent out additional instructions concerning port admirals in the following month.⁴

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³ Secretary of Navy to Commandant John Rodgers, Mar. 13, 1869, 181-11, Box 7, 7/18/67-9/13/69, p. 117.

⁴ Porter to Rodgers, May 7, June 21, 1869, 181-51, 4/19/36-1/1/72.
Plate 11: GENERAL VIEW OF THE CHARLESTOWN NAVY YARD, 1871. Prominent in this photograph of the yard's waterfront are the three shiphouses, a shear wharf, part of the Machine Shop, and two moored, out-of-commission vessels.
According to George Preble's history of the yard, RAdm. Hiram Paulding held the appointment to the position of Port Admiral for Boston in 1869-1870. However, no correspondence to or from that official has been discovered nor any other documentation indicating that the program was actually implemented. Borie left the Navy Department in June 1869, and perhaps the project died with his departure. His successor, George M. Robeson, made no reference to port admirals in his first annual report, submitted in December 1869. Had the change been instituted, the office of port admiral would have created a level above the yard commandant, eroding his authority somewhat and probably constituting an administrative impediment in the servicing of ships by navy yards.

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**Table 9: PERSONNEL IN YARD DEPARTMENTS, BOSTON NAVY YARD, FEBRUARY AND MARCH 1872**

Secretary Robeson sought another organizational change in navy yards. This innovation actually went into effect, although it too proved only temporary. In November 1869, commandants received instructions to create a new group of civilian workers to constitute an "ordinary," the main function being the care of ships out of commission. The ordinary gang came under the immediate supervision of the yard Executive Department, which was to designate one of its lieutenant commanders or lieutenants as "ordinary officer." All members of the gang would be quartered in the yard, either in a ship or a building, and would be paid $20 per month plus rations or an allowance for rations. Tasks assigned to the ordinary gang included mooring and unmooring, securing, masting and dismasting, stowing and discharging, and caring of ships not in commission. The gang also was to be used as part of the yard fire-fighting force and for other services which existing departments were unable to provide.

It appears that the ordinary gang of the Boston Navy Yard grew in size and function. In mid-December 1869, Robeson authorized the yard to have sixty men in its ordinary. Wages increased from $20 a month to $30. By November 1870, the ordinary had a command structure, consisting of the ordinary officer or commander, a boatswain and three mates. At the time, the ordinary officer recommended adding

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6 Circular Letter, Robeson to Commandant, Nov. 25, 1869, 181-51, 4/19/36-1/1/72, p. 155; Robeson to Rodgers, Nov. 27, 1869, 181-11, Box 8, 9/14/69-11/4/70.
four more mates and also a master at arms, a cook, and a writer. He further suggested that the pay be increased to $40 a month.\(^7\)

What bureau should pay for the ordinary posed a problem, and the Secretary switched back and forth between two of them. In December 1869, when Robeson substituted Equipment for Yards and Docks as the source of funds, he stipulated that "the men will not in any way constitute any part of the equipment force or be under supervision of the equipment officer."\(^8\) From the beginning, Robeson had directed that as far as possible the gang should consist of men who had served in the Navy as seamen or petty officers.

In August 1871, after an existence of twenty months, the ordinary gang was eliminated by orders from Washington and all of the men discharged.\(^9\) Why the ordinary was abandoned is unknown. Indeed, why Secretary Robeson created ordinary gangs in the first place is unclear. A system of shipkeepers, watchmen, and laborers already existed to perform the tasks assigned to the ordinary. Apparently, Robeson wanted a particular kind of labor force. The ordinary men would have to be paid from funds of one of the bureaus, but it seems to have been Robeson's intent to make the gang independent of any bureau with respect to its supervision and hiring.

The emergence of the ordinary in the Boston Navy Yard has a peculiar aspect. In November and December of 1869, by establishing the ordinary gang, the Secretary created a sizeable new group of yard employees, but at the end of January 1870 and "until further orders," he directed the suspension of work in the Construction and Steam Engineering Departments.\(^10\) This resulted in a massive layoff of close to one thousand men. Apparently, in December sixty men, who were not at that time employed in the yard, were hired for the ordinary, and two months later, hundreds of existing workers were suspended. Perhaps grounds exist for the suspicion that Robeson had political motivations in the establishment of ordinary gangs in the navy yards.

One part of yard organization that experienced repeated tinkering during the years 1869-1877 was the yard executive officer. Very early in his brief tenure as Secretary of the Navy, Borie ordered a substantial increase in the responsibility and authority of this yard position. Upon receipt of Borie's letter of March 11, 1869, all orders were to be executed through the executive officer, and, under the direction of the commandant, he was to have "immediate supervision of everything in the yard and all work going on." Responsibility for hauling out of ships and for caring for them and supervision of the docking of ships was transferred from the naval constructor staff officer to the executive officer, member of the line.\(^11\)

The pattern of expanding the role of the executive continued under Robeson, who early in 1870 made that officer the head of a yard's Department of Yards and Docks. Henceforth, the civil engineer, formerly in charge of that department, was retained as a subordinate and his duties reduced to making drawings, plans and estimates of intended plant improvements. Once again, a line-staff struggle may have been involved. A little more than a year later, the arrangement received reconsideration and a decision made to reestablish the civil engineer as if the order of January 1870 "had never been made."\(^12\)

A Navy regulation of the summer of 1874 resulted in a major change respecting several positions in

\(^7\) Robeson to Steedman, Dec. 18, 1869, 181-11, Box 8, 9/14/69-11/4/70, p. 60; Circular Letter, Robeson to Steedman, Dec. 31, 1869, 181-51, 4/19/36-1/1/72; Edward Potter, Ordinary Officer, to Chief, Bureau, Y&D, Nov. 5, 1870, 181-33, Box 7, 9/30/70-1/3/71.

\(^8\) Circular Letter, Robeson to Steedman, Dec. 10, 1869, 181-51, 4/19-36-1/1/72, p. 158; Robeson to Steedman, Mar. 11, 1870, 181-11, Box 8, 9/14/69-11/4/70.


\(^10\) Robeson to Steedman, Jan. 24, Jan. 25, 1870, 181-11, Box 8, 9/14/69-11/9/70, pp. 83, 84.

\(^11\) Borie to Rodgers, Mar. 11, 1869, 181-11, Box 7, 7/18/67-9/13/69, p. 113.

\(^12\) Robeson to Steedman, Jan. 29, 1870, 181-11, Box 8, 9/14/69-11/4/70; Robeson to Steedman, Mar. 4, 1872, 181-11, Box 8, 11/16/70-3/3/73, p. 66 1/2.
navy yards. The office of yard executive was eliminated, two new offices were created, several department heads were consolidated, and an office in Steam Engineering disappeared. Henceforth, each yard would have a "Senior Aide to the Commandant." This officer, not above the rank of commander, would have no authority of his own, but would transmit to department heads verbal orders of the commandant and would maintain familiarity with and keep the commandant fully informed about activities of all parts of the yard. Of greater importance than the Senior Aide was the second new position, that of "Captain of the Yard," the former Executive Officer in a new guise. The captain of the yard was to be senior to all other line officers in the yard and to assume command in the absence of the commandant. He was charged with supervision of the yard police; enforcement of yard police regulations; supervision of the yard fire department and care of all fires and lights during nonworking hours; keeping the walks and grounds clean and in good order; and the berthing, moving and mooring of ships.13

The same regulation stipulated that the officer who served as captain of the yard would also be the head of the Department of Equipment. In similar fashion, the ordnance officer would discharge the duties of the officer in charge of the Department of Navigation. Finally, the Steam Engineering office of inspector of machinery afloat was eliminated. These changes were in accord with the general pattern of contraction in the number of officers at navy yards.

RELATIONS BETWEEN YARD DEPARTMENTS

When he became Secretary of the Navy in March 1869, A. E. Borie issued a flurry of general orders in an attempt to impose his understanding of the proper relations between bureaus and navy yard departments. For example, one of his orders required the removal from the yards of all signs indicating the bureaus to which yard departments belonged. Instead, there should be "simple signs--such as 'Navigation Office' or store, 'Steam Office' or store. . . ." Borie explained: "These offices are not branches of the bureaus, but are departments of the yards, and are under the entire direction of the Commandants."14 While well intended, Borie's order appears as a hopelessly ineffective effort to counter the impact of the bureau system on navy yards.

Some division of labor at navy yards was desirable, but the bureau system tended to make yard department heads zealous in protecting their own cognizance and occasionally indifferent to problems of other units. Several episodes from the period 1869-1877 illustrate the relationships that prevailed among the departments of the Boston Navy Yard. In 1869, the galvanizing shop of the Construction Department was located in the same structure as the rigging loft of the Equipment Department. A fire occurred in that building in February. According to the naval constructor, the fire was discovered and prevented from becoming serious only by the vigilance and promptness of the men of the galvanizing shop. The constructor inferred that men in the rigging loft, Equipment employees, had allowed old rope and other discarded materials to accumulate, which had resulted in spontaneous combustion.15

The most troublesome result of the division of labor among numerous departments were difficulties in the servicing of ships. In March 1870, the chief engineer reported to the commandant that repairs on the machinery of several vessels being fitted for sea could not be completed until boiler pipes had been covered by canvas and felt, a task to be performed by sailmakers, employees of the Department of Equipment. However, the equipment officer, apparently on orders from his bureau in Washington, had directed a suspension by his workers of all work for other departments. In another instance, the equipment officer reported his department had completed its work on Shenandoah, except for installing looking glasses in the

13 Navy Regulation Circular No. 10, Aug. 1, 1874, 181-51, 1/1/72-12/15/85, p. 37.

14 General Order No. 94, Mar. 11, 1869, 181-48, 1/10/63-10/15/77.

15 Edward Hartt to Rodgers, Feb. 18, 1869, 181-33, Box 4, 2/17/69-6/30/69.
cabin. However, since Construction had not yet finished the cabin, even measurements for the glasses could not be made.\textsuperscript{16}

In another instance, Steam Engineering received orders in October 1872 to remove the boilers and the engine from \textit{Niagara}, which several years earlier had been condemned. However, the Construction Department had built a house over \textit{Niagara} to preserve its hull, and that structure prevented the removal of the machinery. The yard's chief engineer argued that his department should not have to pay the cost for dismantling the housing erected by Construction. A somewhat similar circumstance occurred a year later. A large pile of gravel belonging to Yards and Docks had been deposited in such a fashion as to block the doors to the building in which were stored new boilers for \textit{Brooklyn}. When the chief engineer asked that the gravel be removed so he could get at the boilers, the executive officer resisted, claiming that relocating the gravel would cost $1500.\textsuperscript{17}

\textbf{NON-NAVAL ACTIVITIES}

The Boston Navy Yard engaged in a great variety of activities in addition to the building, repair, and servicing of naval vessels and the manufacture and procurement of equipment, provisions, and other articles required by the Navy. Especially the commandant performed a wide range of administrative tasks for the Navy. Federal agencies other than the Navy also were served by the yard. Furthermore, as the largest federal establishment in Southern New England, the Boston yard received frequent solicitations from individuals and groups concerning such diverse matters as information on the whereabouts of a son who had joined the navy and use of some of the yard's industrial facilities.\textsuperscript{18} Beginning in 1869, there appears to have been increasing readiness by the Secretary of the Navy to allow commercial establishments to utilize facilities available at the yard. Also, often at his suggestion, favors were extended by the yard to private individuals. Finally, the yard assisted in the celebration of patriotic holidays by loaning local governments and civic organizations such items as flags and bunting.

Utilization of the yard's plant by private firms had a precedent in the Navy's policy respecting its dry docks. That policy allowed the docking of private or commercial vessels when emergency circumstances prevailed or private docks in the vicinity of government yards were in use or incapacitated. Prior to 1880, the owners or agents of such vessels paid the government only for the cost of docking and undocking. The repairs to ships once in the dock were performed by private ship repair companies engaged by the owners of the vessels. During the period 1865-1890, the dock at Boston was used for private vessels on only four occasions, none of which occurred between 1869 and 1877. In May 1870, an inquiry was made as to the docking of \textit{Royal Alfred}. The naval constructor had no objection, but noted that USS \textit{Worcester} then occupied the dock and would require ten days for the completion of work on her. Whatever the reason, \textit{Royal Alfred} did not enter the dock.\textsuperscript{19}

The procedure followed by commercial firms in the area to obtain use of facilities at the Boston Navy Yard began with a solicitation, sometimes through a member of Congress, to the Secretary of the Navy, who would then notify the yard commandant. For example, Robert E. Jackson, of East Boston, wrote to Secretary

\textsuperscript{16} Elbridge Lawton, Chief Engineer, to Steedman, Mar. 22, 1870; William Spicer, Equipment Officer, to Steedman, Apr. 25, 1870, 181-33, Box 6, 2/9/70-6/2/70.

\textsuperscript{17} J. Williamson, Equipment Officer, to Rodgers, June 19, 1869, 181-33, Box 4, 2/17/69-6/30/69; Thomas Shock, Chief Engineer, to E. G. Parrott, Commandant, Oct. 17, 1872, 181-33, Box 13, 9/28/72-11/16/72, p. 92 1/2; Inspector, Machinery Afloat, to T. A. Roe, Executive Officer, Oct. 9, 1873, 181-33, Box 17, 9/20/73-11/7/73.

\textsuperscript{18} For an example of a mother's inquiry concerning her son, see Mrs. William Healy to Commandant, Nov. 14, 1872, 181-5, Box 18, 7/6/72-7/23/74, p. 32.

\textsuperscript{19} \textit{Report}, Committee on Naval Affairs, Mar. 10, 1880, House Report No. 460, 46-2, USSS No. 1935; Docking Log, National Archives, Record Group 181, Entry 60, Docking Record, 1867-1929 (181-60); Naval Constructor to Commandant, May 20, 1870, 181-33, Box 6, 1/9/70-6/2/70, p. 193.
Robeson on November 27, 1872, requesting use of the Boston yard shears to remove the mast of a ship, "it being too large for any private shears." Robeson authorized the commandant to comply "if you are aware of no objection to granting this privilege." At the same time, Robeson gave identical directions concerning a request by Isaac Taylor to employ the shears. One year later, Taylor again sought use of the yard shears for "masting my new ship as there are no other shears in the City of Boston capable of masting her." Taylor had already consulted Commandant Nichols and determined that the yard shears were not then being utilized. Robeson sent the letter to Nichols and gave him "power to permit the use if it will be no interference with government work or interests."\(^{20}\)

The Bay State Iron Company of Boston sought use of the yard's large iron plane. It obtained the assistance of Congressman S. Hooper, who wrote to Secretary Robeson. The Secretary of the Navy solicited the opinion of Commandant Parrott before deciding whether to grant the request. The commandant recommended imposing certain conditions on the company. Parrott then received authorization to grant the request on the conditions he outlined.\(^{21}\)

In several instances in the early 1870s, the Boston Navy Yard provided commercial firms with materials and tools for use outside the yard. Cook, Rymes and Co., Charlestown, borrowed a set of large drag wheels needed for the construction of iron girders. Francis Lowe & Co., a Boston rigging firm, obtained materials and assistance from the Departments of Equipment and of Construction in connection with its work on the Boston Coliseum. Gowin and Chessman, also of Boston, were allowed the use of tackles and tools.\(^{22}\)

No accusations were made of any improprieties in granting the requests from commercial firms described in the foregoing paragraphs, nor have grounds been discovered that would sustain such charges. However, another episode did attract attention as a corrupt arrangement. In 1875, the civil engineer of the Boston yard arranged for the loan of the yard dredge to a private contractor on terms disadvantageous to the government and to commercial dredging companies in the area. This affair will be covered in another section of this chapter.

At the direction of the Secretary of the Navy, the Boston Navy Yard permitted individuals to tie up boats at the yard during the winter months. Such a privilege was granted to Norman Wiard, who had a contract with the Navy for the development of a method to convert smoothbore cannon into rifled artillery. Wiard's boat, Minnehaha, variously described as a steam yacht and a tug, spent the winters of 1874-1875 and 1875-1876 at a navy yard pier. Indeed, on both occasions, Minnehaha remained well into the spring or summer, being removed in July 1876 only after the commandant pressed her owner. Two private boats were in the yard during the winter of 1876-1877. One, a small yacht, belonged to Alpheus Hardy, on whose behalf Congressman D. W. Gooch interceded. The other vessel, the yacht America, was owned by the prominent Republican leader, Benjamin Butler.\(^{23}\)

The Boston Navy Yard received frequent requests from local governments and civic groups for assistance in celebrations of national and state holidays. Usually, such requests extended no further than the loan of flags and were met with the ready compliance of the yard. Although not reflected in the correspondence concerning these requests, in the postwar era patriotic celebrations were often closely mixed

\(^{20}\) Jackson to Robeson, Nov. 27, 1872; Robeson to Commandant, Nov. 30, 1872 (two letters), 181-11, Box 8, 11/16/70-3/3/73, pp. 184-85; Taylor to Robeson, Nov. 11, 1873; Robeson to Commandant, Nov. 14, 1873, 181-11, Box 8, 2/20/73-9/1/75, p. 59.

\(^{21}\) Robeson to Commandant, Mar. 6, Mar. 15, 1873, 181-11, Box 8, 2/20/73-9/1/75, pp. 2-3.

\(^{22}\) Cook, Rymes & Co. to Nichols, Aug. 13, 1875, 181-5, Box 19, 7/23/74-3/2/76, p. 113; Robeson to Commandant, Apr. 13, July 29, 1872, 181-11, Box 8, 11/16/70-3/3/73, pp. 62, 143.

\(^{23}\) Telegram, Robeson to Commandant, Dec. 17, 1874, 181-11, Box 8, 2/20/73-9/1/75, p. 29; Wiard to Commandant, May 27, 1875, 181-5, Box 19, 7/23/74-3/28/76, p. 89; Telegram, Robeson to Commandant, Dec. 31, 1875, 181-11, Box 9, 9/6/75-7/3/77, p. 23; William Hunt to Commandant, July 19, 1876, 181-5, Box 19, 3/25/76-6/15/78, p. 29; Acting Secretary of Navy to Commandant, Sep. 8, 1876, and (no date)[Sep. 1876], 181-11, Box 9, 9/6/75-7/3/77, pp. 54, 56.

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with partisan politics, being occasions for promoting the cause of the Republican Party. Influential during these decades was the Grand Army of the Republic, a large Union veterans' organization with close ties to the Republican Party. Probably, Secretary of the Navy Robeson recommended the yard cooperate with local governments, knowing of the partisan dimension, although it is unlikely that the commandant and other yard officers were similarly motivated.

During the period 1870-1875, the yard received requests for the loan of flags from the mayor of Somerville, acting on behalf of the local post of the GAR; the towns of Lexington and Concord; and the mayor of Boston. Some solicitations went beyond mere flags. Former members of Company "L," Sixth Massachusetts Volunteers, planned a reunion and asked for the use of two 12-pounder howitzers for firing a salute. One unit of the GAR sought the services of a competent seaman from the receiving ship to perform the rigging on a monument. In his request for flags, Boston's mayor also sought halyards and blocks for hoisting them.24

The yard at Boston rendered services to at least five agencies of the federal government other than the Navy. Several of these agencies had their own vessels. The yard did not repair any of those ships, although it did furnish some articles, such as ordnance, and provided other services. Two ships of the U.S. Revenue Marine, Samuel Dexter and Gallatin, visited the yard in the mid-1870s. The Navy provided Gallatin with two 24-pounder howitzers and also shells, cartridges, powder, and other items. Gen. A. A. Humphrey, attached to the office of the U.S. Engineer, Portland, Maine, was permitted to tie up at the Boston Navy Yard during the winters of 1873-1874 and 1874-1875.25

The Boston Navy Yard manufactured sounding reels for the U.S. Coast Survey and also provided the cordage for those devices. Among parties borrowing flags and bunting from the yard was the U.S. Customs House in Boston. Finally, to assist in the removal of Rodman guns from the ramparts of Fort Warren, the U.S. Army called on the Boston Navy Yard for the use of two yoke of oxen for ten days.26

THE YARD AND FIRES IN THE GREATER BOSTON AREA

Among the various services the Boston Navy Yard performed for the inhabitants, businesses, and communities of the area, perhaps most important was assistance in contending with fires. The yard possessed several resources useful in coping with such emergencies. It had its own fire department, consisting of equipment and men. Yard tugs could be deployed when fires occurred in waterfront areas. The yard also had a contingent of Marines, useful for the preservation of property. These forces were not routinely deployed when fires occurred in Charlestown or Boston, but only in the event of major conflagrations, when federal property was threatened, or when fires occurred close to the yard. During the period November 1872 to November 1875, the yard assisted in combating fires in the Boston-Charlestown area on five occasions.

Perhaps the greatest fire occurred in downtown Boston on the night of November 9 and 10, 1872. The yard aided in fighting the blaze by dispatching two steam engines, two hose carriages, a hook and ladder

[Notes and references]

24 Mayor, Somerville, to Commandant, Nov. 30, 1872; Stevens and Trumball to Commandant, Apr. 17, 1873, 181-5, Box 18, 7/6/72-7/23/74, pp. 38, 79; Commandant to Board of Officers, Apr. 21, 1875, 181-45, 9/17/72-4/13/78; Mayor, Boston, to Nichols, June 1, 1875, 181-5, Box 19, 7/23/74-3/28/76, p. 88; Acting Secretary of Navy to Commandant, Sep. 22, 1873, 181-11, Box 8, 2/20/73-9/1/75, p. 51.

25 Commander, Samuel Dexter, to Commandant, Aug. 20, 1874, 181-5, Box 19, 7/2/74-3/28/76, p. 10; Assistant Secretary, Treasury Department, to Commandant, Apr. 9, 1875; Acting Secretary, Treasury Department, May 19, 1875, 181-5, Box 19, 7/23/74-3/27/76, pp. 71, 83; Commander, Gallatin, to Nichols, June 7, Nov. 15, 1875, 181-5, Box 19, 7/23/74-3/29/76, pp. 90, 145; U.S. Engineer to Commandant, Oct. 15, 1874, 181-5, Box 19, 7/23/75-3/18/76, p. 29.

carriage, and seventy-five men, the bulk being marines, deployed to protect the United States Sub-Treasury and the Post Office. In addition, the yard responded to a request for powder and for an explosives expert to blow up buildings, at that time a technique in fire fighting. City and federal authorities later commended the yard for its valuable assistance in contending with that fire.27

The yard’s marines again went into action on May 14, 1873, in another fire in Boston. A blaze in East Boston on July 31, 1873, saw the utilization of the yard tug Cohasset. The yard fire department turned out to aid in fighting a fire in Charlestown on December 15, 1874. In thanking the yard for its assistance respecting these last two incidents, Boston fire authorities promised to reciprocate and assured the commandant that they would answer any call from him.28

A serious fire broke out in the immediate vicinity of the navy yard in the evening of November 30, 1875. The blaze occurred on Gray's Wharf, Water Street, directly to the west of the yard. One engine and hose carriage were sent to the scene of the fire, and a second engine stationed on the shear wharf in the event that a fire was started in the yard by the great quantity of sparks and cinders. The fire destroyed several large wooden buildings on Gray's Wharf and severely damaged a brig and a schooner tied up at the wharf. No injury was inflicted to the navy yard.29

GENERAL ADMINISTRATIVE CHORES

The Boston Navy Yard, particularly its commandant, provided the Navy with a number of administrative services in no way connected with the industrial activity of the yard. On instructions from the Navy Department in Washington, the commandant established boards of yard officers to conduct examinations of candidates for appointment as warrant officers. Similar boards examined applicants for Navy pensions.30

Administration of the Navy's justice system involved the Boston Navy Yard. The yard was the site of courts martial, and yard officers sat as members of such tribunals. For example, in February 1873, Commandant Parrott presided over the hearing of an officer assigned to the Torpedo Station, Newport, Rhode Island. Also, the Boston yard commandant played an administrative role in the carrying out of punishments imposed on enlisted personnel. Some of those sentenced to periods of incarceration were sent to the Connecticut State Prison at Wethersfield. The Navy Department maintained contact with that prison's warden through the head of the Boston yard. The commandant received orders from Washington to arrange for the transfer of Navy and Marine prisoners to Wethersfield, to communicate to the warden decisions respecting reductions in sentences of men already there confined, and to arrange for prisoners who had completed their confinement.31

27 John Damrell, Boston Fire Department, to Commandant, undated [Dec. 4, 1872], Dec. 31, 1872; Executive Officer to Commandant, Dec. 6, 1872; Postmaster, Boston, to Commandant, Nov. 23, 1872, all in 181-5, Box 18, 7/6/72-7/23/74, pp. 34, 36-39, 42; Inspector of Ordnance to Commandant, Nov. 13, 1872, 181-33, Box 13, 9/28/72-11/16/72, p. 189.

28 Mayor, Boston, to Commandant, June 12, 1873; John Damrell, Boston Fire Department, to Commandant, Aug. 8, 1873, both in 181-5, Box 18, 7/6/72-7/23/74, pp. 96, 124; Board of Fire Commissioners, Boston, to Commandant, Dec. 28, 1874, 181-5, Box 19, 7/23/74-3/28/76, p. 44.


30 For example, see Acting Secretary of Navy to Commandant, Aug. 16, 1873; Secretary of Navy to Commandant, Dec. 10, 1873, 181-11, Box 8, 2/20/73-9/1/75, pp. 42, 79.

31 General Order No. 182, Apr. 2, 1873, 181-48, 1/10/63-10/15/77. For an example of the yard's involvement with Navy personnel confined at Wethersfield, see correspondence respecting Charles Dotty, Ordinary Seaman; Secretary of Navy to Commandant, Mar. 24, May 15, 1876, both in 181-11, Box 9, 9/6/75-7/3/77. Cdr. Alfred T. Mahan, then serving as aide to the commandant of the Boston Navy Yard, presided over Dotty's court martial, several aspects of which caused difficulties between Mahan and Secretary Robeson;
Presentation of the Medal of Honor to Navy personnel or Navy veterans doubtless proved a more agreeable task for the commandant. Such awards were made at the direction of the Secretary and in compliance with particular general orders. Those receiving the medal executed a receipt, which the commandant forwarded to Washington. Two such presentations occurred in 1876. In March, Commandant Nichols received the medal, a copy of the orders, and directions to deliver the award to William Newland, then a resident in Waltham, Massachusetts, who was instructed to present himself at the Navy yard. In the following September, Nichols was called on to make the presentation to Thomas Nesey, who had been transferred to the Naval Hospital, Chelsea.32

YARD OFFICERS

The administration and most of the management of the Boston Navy Yard rested in the hands of naval officers. All of the heads of the major departments and divisions in the yard held commissions. In 1869, roughly seventy officers were attached to the yard and its various related units. The number declined over the next eight years, and in 1876 Commandant Nichols reported forty-one officers in his command.33 Perhaps, 1872 can be considered representative of the period.

According to reports produced in February and March 1872, forty-five commissioned and warrant officers were assigned to the Navy Yard, Boston, not including the Paymaster’s Office in the city of Boston, the hospital at Chelsea, or the receiving ship.34 Counting the officers of the Marine Corps Barracks, there were nineteen commissioned line officers. Fifteen of the remainder were staff officers and eleven warrant officers.

RAdm. Charles Steedman, yard commandant, held the highest rank in the yard and station. Next was Capt. Edward R. Calhoun, Executive Officer, who served as commandant in the absence of Commandant Steedman. Capt. William F. Spicer filled the billet of Equipment Officer, and Capt. George Henry Preble had charge of the naval rendezvous. Line officers also headed two other departments. Cdr. W. T. Truxtum was Inspector of Ordnance, and Cdr. George E. Belknap served as Navigation Officer. Only in the naval rendezvous did line and staff officers serve in the same department or office. This means all the nine officers of the line who were not department heads served as subordinates in the Executive Department or the Departments of Ordnance, Navigation or Equipment. All of the warrant officers likewise were detailed to these four units.

According to a circular letter written by Secretary Robeson in 1869, "Navy yards in their organization assimilate to ships of war." By this he meant that command descended upon the senior line officer present, irrespective of his particular department. This order underscored the fact that line officers had precedence over staff officers in all cases involving command.35

Staff officers and only staff officers were found in the Chief Engineer’s Office, the Construction Department, the Department of Provisions and Clothing, the Office of the Civil Engineer, and the Surgeon’s Office. The largest collection of officers in the same staff appeared in the department of Chief Engineer Thomas A. Shock, in charge of the yard’s Steam Engineering Department. Two other chief engineers and three assistant engineers served under Shock in such capacities as Inspector of Machinery Afloat, Chief of


34 See Table 9, p. 224.

35 Circular Letter, Robeson to Rodgers, July 28, 1869, 181-51, 4/19/36-11/1/72, p. 149.

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Stores, and Assistant Chief of the Yard. Naval Constructor William Hanscom had the assistance of one assistant naval constructor; and Civil Engineer Charles Hastings, one assistant civil engineer. Passed Assistant Surgeon H. J. Babin managed the Surgeon’s Office with only the aid of a single enlisted man.

What is striking in the distribution of officers in the various units of the Boston Navy Yard is the rigid segregation of staff and line officers. They simply did not serve in the same office or department, with the sole exception of the naval rendezvous, which contained two line officers and two officers of the medical corps. According to primary and secondary sources, the tension between Navy line officers and staff officers became more acute in the decade immediately following the war. It is impossible to determine from the records whether that tension prevailed at the Boston Navy Yard. There are a few indications of personal animosities, but these can be explained in terms other than the line-staff feud. On the other hand, it would be unwise not to recognize the troubled relationship between the two categories of officers. During his twelve-month tour at the Boston Navy yard, Alfred T. Mahan, a line officer, bitterly complained about the unfair concessions and advantages granted staff officers both ashore and aboard ship. For example, Mahan claimed that “the power of the line officers in the Navy Yards has been abolished to all intents and purposes, and the chief power given to constructors.”

Several incidents suggest other officers’ concerns with matters of precedence. Early in 1869, a dispute arose between two captains, both connected with the Ordnance Department of the Boston yard, as to which of them was the ranking officer in that department. The then Secretary of the Navy, Gideon Welles, sought a pragmatic solution, holding that neither should give orders to the other and that all orders should emanate from the commandant. This proved an unacceptable arrangement, and one of the first acts of the newly appointed Vice Admiral, David Porter, was to render a decision as to the proper pecking order in the Boston Ordnance Department. In 1876, Chief Engineer Charles H. Loring, of the Steam Engineering Department, Boston, sought from Secretary Robeson a determination of “the senior officer of the line of whom I take precedence in relative rank.” The issue was sent to the Bureau of Navigation for resolution.

Matters of seniority, relative rank, and precedence may have been involved with the assignment of officers’ quarters in the yards. Should quarters be assigned to officers on the basis of rank or position in the yard? In a directive to the Boston yard commandant in July 1871, Secretary Robeson indicated that in the future “houses intended for line officers . . . will be assigned as they become vacant to the officer senior in rank.” However, seven months later, in a service-wide regulation, he employed a different criterion. According to a Navy Department regulation of February 1872, not rank, but position in the yard alone governed the distribution of quarters. Quarters were to be assigned according to the following order: commandant; executive officer; naval constructor; chief engineer; equipment officer; ordnance officer; civil engineer; surgeon; paymaster; and second to the executive. Apparently this regulation raised questions, and during the following fourteen months, the Secretary had to issue clarifications. It might be noted that by the terms of this regulation all of the heads of the Boston yard’s departments and offices would be entitled to housing, with the exception of the navigation officer, a member of the line.

Robeson issued his first clarification in the following April, when he stipulated that the paymaster referred to in the regulation was the officer representing the Bureau of Provisions and Clothing, not the yard paymaster or the purchasing agent. Should a yard have more than ten officers’ residences, the navigation officer should occupy the eleventh and the yard paymaster the twelfth. Finally Robeson held that the listing of yard positions in the regulation of February 1872 was not intended to establish a priority of selection.

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37 Welles to Rodgers, Feb. 20, 1869; Porter to Rodgers, Mar. 12, 1869, 181-11, Box 7, 7/18/67-9/13/69, pp. 111, 114; Loring to Robeson, Sep. 25, 1876, 181-11, Box 9, 9/6/75-7/3/77.

38 Circular, Robeson to Steedman, July, 30, 1871, 181-51, 4/19/36-1/1/72, p. 162; Circular, Robeson, Feb. 21, 1872, 181-51, 1/1/72-12/15/85.
Rather, "the officer first entitled to quarters shall occupy the first vacant house."

Evidently, confusion and perhaps animosity occurred in some yards over the matter of quarters, and in June 1873, Robeson produced a circular respecting his order of April 1872. He instructed commandants to insure "no disorganization occurs through the assignment of quarters of officers" under the April 1872 regulation. The Secretary stated: "The same attendance out of working hours should be required of Staff Officers that has heretofore been required of Line Officers occupying the same quarters; and they should be 'stationed' to meet emergencies as fire, and for the performance of ordinary and extraordinary police duties." Further, "Officers charged with duties of the several Bureaus, and having quarters in the Navy Yards, are in all respects, as much attached to such yards as though ordered without assignment to the duties of any Bureau, and are to be considered as much 'on duty' during the whole twenty-four hours."

An explanation of Robeson's June 1873 circular might be that prior to his order of April 1872, line officers who were not heads of departments occupied some of the quarters. The rationale for granting them yard residences was that they had responsibilities during nonworking hours, such as commanding the yard fire-fighting unit in the event of fire or confronting some other emergency. For example, on one occasion the Boston yard commandant issued orders specifically naming three line officer, two of whom were lieutenant commanders and the other a lieutenant, and stipulating that at no time "day or night" was the yard to be without the presence of one of them. The April 1872 circular meant that quarters previously assigned to such officers would be occupied by staff officers, who hitherto had had no such responsibilities and who now apparently resisted fulfilling them. They doubtless argued that their activities should be confined solely within the purview of their bureaus, which did not include fire fighting and yard security.

No indication has been found of difficulty at the Boston yard arising from Robeson's circulars of February and April 1872 and June 1873. On one occasion, the commandant sought to depart from the regulations respecting quarters, but was refused by Robeson. Quarters for officers at Boston became a less sensitive issue on August 1, 1874, because of the consolidation of various positions. The captain of the yard assumed the duties of the equipment officer and the ordnance officer took up the additional billet of navigation officer. With these changes, quarters became available for all department heads as well as two others officers. At least one of these extra quarters went to a line officer, the senior aide to the commandant.

Men holding the positions listed in the Secretary's February 1872 circular did not have the option of electing to live outside the yard. Civil Engineer Hastings, upon being informed that he must occupy the quarters assigned to him, resigned his position "not being willing to absent myself from my family."

THE YARD'S PHYSICAL PLANT

In terms of its size, facilities and cost, the Boston Navy Yard in 1869 ranked among the largest industrial establishment in New England. Not including the ordnance magazine and hospital at Chelsea and the nitre depot at Malden, the yard occupied eighty-seven and one-half acres, which had a value of $4,737,000.

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39 Circular, Robeson, Apr. 1, 1872, 181-51, 1/1/72-12/15/85, p. 6.

40 Circular, Navy Department, June 17, 1873, 181-51, 1/1/72-12/15/85, p. 17.

41 Robeson to Steedman, June 6, 1872, 181-11, Box 8, 11/16/70-3/3/73; Regulation Circular No. 10, Aug. 1, 1874, 181-51, 1/1/72-12/15/85, p. 37; Acting Secretary of Navy to Nichols, Aug. 28, 1874, 181-11, Box 8, 2/20/73-9/1/75, p. 142.

42 Hastings to Nichols, Apr. 20, 1874, 181-5, Box 18, 7/6/72-7/23/74.

Buildings of all sorts—industrial, administrative, storage, quarters—numbered slightly short of one hundred, including a half dozen considered temporary structures. These buildings had a combined value of $3,388,000. Except for the quarters for Navy personnel, the units in the Marine Corps complex, and a few structures designated "General," buildings were assigned to the various bureaus of the Navy Department. Six buildings were shared by two bureaus.

Among the more important buildings used by Construction and Repair were: No. 22, Dry-Dock Engine House; Nos. 63, 75 and 76, Timber-Sheds; No. 67, Sawmill; and No. 85, Mast and Spar Shed. The yard's Construction Department had joint use of a number of buildings, including No. 24, shared with Equipment and used as a storehouse and rigging loft; No. 36, shared with Yards and Docks and used as a joiner shop; No. 38, shared with Provision and Clothing and used as a cooperage; and No. 77, shared with Steam Engineering and used as a mould loft. In terms of square footage, the largest shop of the Boston yard's Construction Department was the joiner shop, which measured 59,696 square feet. The department's other shops were: block shop (5,650 square feet); boat shop (21,890); iron plating shop (7,876); mast shop (24,630); mould loft (21,650); paint shop (10,240); plumber, copper and tin shops (7,200); sawmill (18,750); shipwright shop (7,000); and smithery (19,260).

The largest and most costly building in the Boston Navy Yard belonged to Steam Engineering. The Machine Shop-Boiler House complex, Nos. 42 and 43, built in the 1850s at a cost of more than $600,000, consisted of 95,000 square feet of space. Because the Machine Shop provided room for most of the needs of Steam Engineering, the other buildings assigned this department were small or shared with other divisions. Both Steam Engineering and Equipment used No. 33, the sail loft and a storehouse. Steam Engineering and Construction shared No. 77, the mould loft. Within Building No. 42 and the other structures occupied by Steam Engineering were a half dozen shops, namely boiler shop (17,562 square feet); coppersmiths' shop (17,750); forge shop (17,500); iron and brass foundry (26,908); machine shop (61,249); pattern shop (17,362); and smithery (19,260). The tools available to the Boston yard's Steam Engineering Department were greater in number and more varied than in any of the other navy yards. Indeed, several pieces of equipment were unmatched by any establishment in the nation. The Machine Shop possessed a planer with an eighteen-inch width, a column drill, and a large shaper, all of which were the largest such machines in the United States.

The Bureau of Equipment and Recruiting had exclusive use of several buildings at the Boston Navy Yard and joint use of a few others, not counting small sheds. Cordage making took place in a complex of buildings, Nos. 58, 59, 60, and 62. As already noted, Equipment used part of No. 24 for a rigging loft and part of No. 33 for a sail loft. Building No. 39, completed in 1866, provided most of the space needed for the indoor activities of the Ordnance Department. Only two structures were designated for the use of the Bureau of Provisions and Clothing, No. 37, a wooden shed for returned stores, and No. 38, the cooperage, shared with Construction and Repair. The Navigation and the Medical Departments were assigned no buildings, although they, as well as other departments, may have used structures designated "General," such as No. 5 and No. 64, or buildings principally used by and formally assigned to other departments.

The Bureau of Yards and Docks had responsibility for the repair and maintenance of all the buildings in the yard and was also the tenant of record for many structures. Yards and Docks together with Construction and Repair jointly occupied No. 36, the joiner shop. Building No. 31 served as the office of the civil engineer. Yards and Docks activities were carried on in a number of locations: No. 25 served as a shed for carts and blacksmiths, and No. 54 as a mason's shed. In addition, the Commandant's Office (No. 29); the scale house (No. 19); No. 6 (fire apparatus); No. 21 (watch post); and other miscellaneous structures were assigned to Yards and Docks.

Major elements in the physical plant of any navy yard are the various components of its waterfront, namely docks, piers, shiphouses, and building slips. The Boston yard possessed the longest of all of the Navy's.

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44 Ibid., 56-59.


46 Ibid., pp. 225-27.
Table 10: BOSTON NAVY YARD, NEW BUILDINGS, 1866-1883, SHOWING YEAR WHEN ORIGINALLY COMPLETED

<table>
<thead>
<tr>
<th>Additions to Quarters</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, Mail Messenger's house</td>
<td>1879</td>
</tr>
<tr>
<td>B, Navigation Officer</td>
<td>1878</td>
</tr>
<tr>
<td>C, Equipment Officer</td>
<td>1872</td>
</tr>
<tr>
<td>D, Civil Engineer</td>
<td>1872</td>
</tr>
<tr>
<td>E, Chief Engineer</td>
<td>1878</td>
</tr>
<tr>
<td>F, Paymaster</td>
<td>1878</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quarters:</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>L, Captain of Yard</td>
<td>1867</td>
</tr>
<tr>
<td>M, Ordnance Officer</td>
<td>1867</td>
</tr>
<tr>
<td>N, Naval Constructor</td>
<td>1867</td>
</tr>
<tr>
<td>O, Surgeon</td>
<td>1867</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buildings:</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>13, 14, 15, Privies</td>
<td>1866</td>
</tr>
<tr>
<td>36, Joiner Shop</td>
<td>1866</td>
</tr>
<tr>
<td>39, Ordnance Building</td>
<td>1866</td>
</tr>
<tr>
<td>44, Copper Shop</td>
<td>1866</td>
</tr>
<tr>
<td>45, S/E Repair Shop</td>
<td>1866</td>
</tr>
<tr>
<td>49, Battery Shed</td>
<td>1866</td>
</tr>
<tr>
<td>78, E&amp;R Coal Shed</td>
<td>1866</td>
</tr>
<tr>
<td>80, C&amp;R Hoop Furnace</td>
<td>1866</td>
</tr>
<tr>
<td>1, Tank-Shed</td>
<td>1867</td>
</tr>
<tr>
<td>2, Wood Shed</td>
<td>1867</td>
</tr>
<tr>
<td>11, Oil Boiling House</td>
<td>1867</td>
</tr>
<tr>
<td>30, Marine Corps Officer-of-the-Day Quarters</td>
<td>1867</td>
</tr>
<tr>
<td>41, Timber-Preserving Shed</td>
<td>1867</td>
</tr>
<tr>
<td>46, S/E Spare Machinery Shed</td>
<td>1867</td>
</tr>
<tr>
<td>57, Gun-Carriage Shed</td>
<td>1867</td>
</tr>
<tr>
<td>86, C&amp;R Steam Box</td>
<td>1867</td>
</tr>
<tr>
<td>88, S/E Shed</td>
<td>1867</td>
</tr>
<tr>
<td>89, S/E Shed</td>
<td>1867</td>
</tr>
<tr>
<td>65, C&amp;R Shed</td>
<td>1867</td>
</tr>
<tr>
<td>15, Iron Platers' Shop</td>
<td>1868</td>
</tr>
<tr>
<td>67, Sawmill</td>
<td>1868</td>
</tr>
<tr>
<td>81, Y&amp;D Woodshed</td>
<td>1869</td>
</tr>
<tr>
<td>82, Y&amp;D Woodshed</td>
<td>1869</td>
</tr>
<tr>
<td>83, Y&amp;D Woodshed</td>
<td>1869</td>
</tr>
<tr>
<td>22, Boiler House, Chimney</td>
<td>1871</td>
</tr>
<tr>
<td>66, Timber-Bending Mill</td>
<td>1871</td>
</tr>
<tr>
<td>61, Angle-Bending Furnace</td>
<td>1872</td>
</tr>
<tr>
<td>92, C&amp;R Shiphhouse</td>
<td>1872</td>
</tr>
<tr>
<td>9, Furnace</td>
<td>1873</td>
</tr>
<tr>
<td>19, Scale House</td>
<td>1873</td>
</tr>
<tr>
<td>52, E&amp;R Boiler House</td>
<td>1873</td>
</tr>
<tr>
<td>25, Cart Shed &amp; Y&amp;D Blacksmith</td>
<td>1875</td>
</tr>
<tr>
<td>7, E&amp;R Coal Shed</td>
<td>1880</td>
</tr>
<tr>
<td>84, Y&amp;D Watch House</td>
<td>1880</td>
</tr>
</tbody>
</table>

dry docks on the Atlantic coast, either stone or wood. The yard had three shiphouses, Nos. 68, 71, and 73. Since 1820, the unlaunched ship-of-the-line *Virginia* had remained on the stocks in one of these shiphouses. A fourth such structure, No. 92, was built in the early 1870s to house a torpedo boat under construction at the yard. In addition, the yard had three building slips. In 1869, there were three timber storage docks, two in the western end of the yard and located between the dry dock and the Machine Shop, and the third at the eastern extremity, adjacent to the Mystic River. Four wharves extended into the harbor, providing the yard with almost one thousand feet of wharfage. A map dated July 1870 indicates four vessels more or less permanently moored at the Boston yard. *Wabash* was anchored in the stream west of the saluting battery. *Ohio* was tied up alongside the yard's easternmost wharf. *Niagara* and *Iowa*, lashed together, and their sterns secured to the end of the pier extending from Shiphouse No. 68, lay parallel with the quay wall.47

In 1869, the Boston Navy Yard had four tugs. The wooden-hulled *Cohasset* was in service. Under repair were *Palos* and *Leyden*. The Ordnance Department had its own tug, *Blue Light*. Other yard craft included two steam launches, a dredging machine, and a pile driver.48

During the years 1869-1877, the physical plant of the Boston Navy Yard did not change in any significant fashion. Nine new buildings appeared. Four were temporary, and none constituted a major addition to the yard's industrial capabilities. This was consistent with the pattern at most of the navy yards after the Civil War. In his report for 1869, the Secretary of the Navy stated: "No appropriations have been made by Congress for the improvement of the navy yards during the past three years, and but comparatively small amounts for the preservation and repairs of the large amount of property contained in them." Six years later, the same official made a similar observation: "For the past few years no appropriations for new buildings or other works of improvement have been made for several of our navy yards. . . ."49

New buildings constructed during the years 1869 to 1877 included Shiphouse No. 92, erected to protect the torpedo boat under construction at the yard; three temporary wood sheds, Nos. 81, 82 and 83; the scale house, No. 19; cart shed and blacksmith shop, No. 25; a boiler house for the Equipment Department, No. 52; an angle-bending furnace, No. 61; and a timber-bending mill, No. 66. Building No. 31, the Muster House, was significantly enlarged when a third story was added in 1871.

Perhaps the Boston Navy Yard acquired a run-down appearance because of the lack of funds for plant maintenance and repair. In 1872, the yard's civil engineer noted that "the allotments for 'Repairs of all Kinds' for the past seven years have been so small that repairs are very generally needed on various buildings and quarters."50 Between 1867 and 1875, the yard annually spent roughly $100,000 on repair of its buildings, dock, wharves, roadways, walks, water and gas systems, sewers, grounds and all other parts of its plant excepting tools.51 Even with adequate funds, maintenance of the Boston Navy Yard facilities appears as an endless struggle. Located on a large body of salt water, the yard was battered by wave, tide, and wind. Wooden structures decayed. In winter months, masonry suffered when moisture entered cracks, then froze and expanded, resulting in the breakup of mortar and the dislocation of stone and brick. Vibration and pounding of heavy machines caused damage in some buildings; heavy weights injured tracks and roadways. Boilers developed leaks.

In 1873 and 1874, the dry dock received modest repairs. Four pieces of coping were relaid, and along several courses of stone at the top of the dock, joints were cleaned and recaulked with hydraulic cement. It was reported that the dock needed a general overhauling and relaying of much of the stonework. In 1870 and

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50 *Annual Report & Estimate*, August 1872, 181-154

51 See Table 11, p. 237.
1871, $40,000 allotted by the Secretary of the Navy was used for the repair of all of the yard's wharves.\textsuperscript{52}

Improvements in the yard utilities during the Grant years included continued installation of steam heating in yard buildings, a process that had commenced in 1867. A new sewer pipe was put down in the area of Main Avenue and connected with other parts of the yard's sewage system. Gas mains were also laid for a number of buildings.

Table 11: EXPENDITURES FOR PLANT REPAIR, CHARLESTOWN NAVY YARD, 1867-1877

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Amount Spent on Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1867-68</td>
<td>$ 80,052.42</td>
</tr>
<tr>
<td>1868-69</td>
<td>111,095.44</td>
</tr>
<tr>
<td>1869-70</td>
<td>115,228.55</td>
</tr>
<tr>
<td>1870-71</td>
<td>102,589.49</td>
</tr>
<tr>
<td>1871-72</td>
<td>86,699.58</td>
</tr>
<tr>
<td>1872-73</td>
<td>79,811.72</td>
</tr>
<tr>
<td>1873-74</td>
<td>121,264.04</td>
</tr>
<tr>
<td>1874-75</td>
<td>117,578.36</td>
</tr>
<tr>
<td>1875-76</td>
<td>51,829.29</td>
</tr>
<tr>
<td>1876-77</td>
<td>17,012.94</td>
</tr>
</tbody>
</table>


In June 1869, the Navy Department ordered the removal from all navy yards of temporary storage sheds which might, in the event of fire, endanger the safety of permanent buildings. That order may have eliminated from the Boston Navy Yard some small structures put up during the Civil War.\textsuperscript{53}

CIVILIAN EMPLOYEES

With respect to civilian workers in the nation's navy yards, the Grant era has importance since it saw the implementation of the eight-hour day for federal employees. Several controversies centered on the workers in the yards. There were frequent allegations that the yard work forces included men unqualified for the positions they held and that political considerations governed hiring and firing. It was charged that politics was in ascendancy, especially at election times, when incumbents and the political party in power sought to secure votes by giving the unemployed temporary work in navy yards. The years 1869 to 1877 appear somewhat unusual in the history of the Boston Navy Yard because of the frequent directions received from the Secretary of the Navy to give employment at the yard to particular individuals. One controversy focused on the cost, efficiency, and skill of navy yard labor. Could government yards construct ships and engage in other industrial activities as cheaply and as efficiently as private ship works?

Nehemiah Gibson, a businessman in Boston, testified before a subcommittee of the House Naval Affairs Committee during its visit to the Boston Navy Yard in March 1876. In the course of his testimony, he stated:

\begin{quote}
The laborers here [at the yard] don't do anything. I have seen so much of their idleness and inefficiency that I would not pay their board for what they do. They put in everything—old cripples that are not good for anything. This makes the Navy cost tremendously. It makes
\end{quote}

\textsuperscript{52} Annual Reports & Estimates, Aug, 1870; Aug. 1871; Aug. 31, 1875, 181-154.

\textsuperscript{53} Porter to Commandant, June 10, 1869, 181-51, 4/19/36-1/1/72, p. 135.
me crawl when I go about the yard and see the men loafing. They get hid up out of sight—a pack of loafers that calculate living on the navy yard. . . . It is a premium offered to them to do nothing, because their work lasts so much longer if they don’t do anything. 54

Gibson probably reflected a common view when he described the Navy’s civilian work force.

HIRING

Depending on the job in question, civilians could obtain work at the Boston Navy Yard in one of two ways. Yard officials, most particularly master mechanics and foremen, had charge of hiring mechanics and laborers. When authorized by the naval officer in charge of the department to enlarge the labor force, master craftsmen hired workers for their particular shops. Unless the individual thus hired was exceptional or known to them, the department head and the commandant routinely approved of such an appointment.

The second avenue to a job in the Boston Navy Yard was by action of the Navy Department in Washington. Masters and foremen held their positions by virtue of appointment by the Secretary of the Navy. The Secretary also had authority to name individuals to the positions in the “civil establishments.” In addition, Secretaries of the Navy, especially George Robeson, gave frequent directions for the hiring of men for positions other than those in the civil establishments or as master mechanics or foremen. Such directives may have been interpreted as orders or recommendations to the heads of departments or the heads of shops, rather than actual appointments by the Secretary. Employees holding an appointment from the Secretary could not be discharged without the approval of the Department in Washington.

Before the 1890s, there was little to prevent manipulation of navy yard jobs for political purposes. Navy regulations did state that “laborers shall be employed in the several yards by the proper officers in charge, with reference to skill and efficiency, and without regard to other considerations.” 55 However, this requirement did not deter those intent on emphasizing political “considerations” in the hiring practices at the navy yards.

It will be recalled that in 1864, the Republican or National Union Party had designated as Lincoln’s running mate, Andrew Johnson, an anti-secessionist Democrat from Tennessee. The Lincoln-Johnson administration contained other Democrats, most particularly Secretary of the Navy, Gideon Welles of Connecticut. It appears that during the late 1860s, if not before, at least some Democrats were appointed to positions in the Boston Navy Yard. Following the election of Grant in 1868, members of the new president’s administration made a determined effort to get rid of Democrats in the employ of the federal government and to replace them with good Union men.

In many respects Secretary of the Navy George Robeson appears as a typical cabinet officer of his day. At this distance in time and lacking information about the actual party affiliation of prospective yard employees, it is impossible to know the details of Robeson’s personnel procedures. But the bold outlines seem clear enough. Upon application from a Republican congressman, senator or other party leader from Massachusetts on behalf of a particular individual, Robeson would make the appointment, if it was in his power to do so, or would recommend such an appointment to officials in the yard. It more or less goes without saying that the individuals recommended for yard positions were known to be Republicans in their voting behavior. Particularly crucial were the appointments of masters and foremen, who in turn would hire workers of the proper political persuasion.

The partisan revamping of the labor force at the Boston Navy Yard began during the short tenure of Secretary Borie, when a definite effort was made to reinstate Republican workers who had been discharged. The overt rationale for this program was to obtain justice, righting the wrongs committed by others in the past. Shortly after the new Grant administration took office in March 1869, navy yard commandants received indications of the Navy Department’s concern with employees who had allegedly been removed for “political expressions or opinions during the last administration—that is for four years past.” Each yard was to have a

54 Committee on Naval Affairs, Testimony...Boston, p. 205.

55 Committee on Naval Affairs, Testimony...Boston, p. 104.
Plate 12: MAIN GATE, 1874. This photograph was taken from Water Street and looks eastward through the main entrance to the Charlestown Navy Yard. Building No. 5 (Navy Store) is to the right and the Guard Room to the left. Both civilian watchmen and Marine Corps guards manned the gate.
permanent board of four line officers, which would investigate cases of men claiming they had been unfairly dismissed. The Board of Examiners was also charged with determining the "qualifications of Foremen and other workmen when it is proposed to employ them."56

In its first several months, the board at the Boston Navy Yard did not function in an autonomous fashion, but responded to frequent instructions sent by Vice Admiral Porter. Most of the applications it handled were matters that had been first submitted to the Department in Washington and then sent to the yard. And it seems to have been quickly established that the way to reinstatement at the Boston Navy Yard or to a position as one of its foremen was not through the yard administration, but the office of the Secretary of the Navy. In mid-April there arrived at the Boston yard the first of a long series of directives from Washington ordering the rehiring of a man formerly employed, but who had been discharged. That directive simply stated "you will please reinstate Major John H. Roberts formerly a machinist in the Navy Yard, Boston. The Secretary of the Navy desires that a place may be found for him."57

The Department in Washington did not always accept the decision of the Boston Board of Examiners. As directed by Porter, the board examined Josiah C. Bradbury for the position of master painter. Bradbury previously held that position or some other supervisory post in the yard. Apparently, the board recommended against the appointment, stating in its report that "he neglected to take the necessary steps to suppress irregularities which from time to time were brought to his notice." The Department questioned that recommendation and directed the board to furnish evidence to sustain the charge against Bradbury.58

The most blatantly political order came in mid-May 1869. Admiral Porter notified the commandant that the Department in Washington had been informed that "persons appointed foremen at the Navy yard Boston during Mr. Johnson's administration have been taking on men who are known to be hostile to the present administration." The commandant was directed "to examine this matter and see to it that no person opposed to the administration remain an employee." In hiring, "preference should be given to those who have belonged to the Union party." Porter cautioned the commandant against trusting foremen and directed that the executive officer maintain a surveillance over hiring procedures. The admiral proposed efforts be made "to see if we cannot have our yards filled with good and loyal men." To insure that end, he instructed the commandant to send a list of foremen, with a statement "of the character of each." That statement should include a judgement whether "they are good Union men and support the present administration."59

The candor evident in Porter's directive of the middle of May soon disappeared, and the Navy Department retreated to the explanation that the Johnson administration had unfairly discharged some employees. Commandants were informed in June: "It is desirable to restore all those who have been heretofore removed from yards on account of political opinions."60 After the spring of 1869, communications from Washington to the Boston Navy Yard concerning hiring rarely alluded to political parties or political opinions, and the focus was on hiring or rehiring particular individuals. But clearly politics had considerable weight in hiring and firing of yard workers.

Of all the secretaries of the Navy serving in the years 1865 to 1890, George Robeson distinguished himself by the number of times he sent the Boston yard instructions or recommendations to place specific individuals on the yard rolls. Quite obviously in these instances, the Secretary acted not because of the needs of the yard, but on behalf of the would-be employee. For example, in January 1870, he directed the employment of a particular individual "as a writer in such department of the Boston Navy Yard as his services are most needed." In the early spring of 1871, Robeson gave orders that A. H. Law be "employed at the Yard . . . upon any work which he is competent to perform" and that instructions be given "for the employment of

56 Porter to Rodgers, Mar. 20, Mar. 24, 1869, 181-11, Box 7, 7/18/67-9/13/69, pp. 120, 126.


58 Porter to Rodgers, Apr. 30, May 14, 1869, 181-11, Box 7, 7/18/67-9/13/69.

59 Porter to Rodgers, May 21, 1869, 181-51, 4/19/36-1/1/72.

60 Porter to Rodgers, June 10, 1869, 181-51, 4/19/36-1/1/72, p. 136.

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Henry Chisholm at such work as . . . he may be found best qualified to perform.  

Robeson's activities sometimes resulted in jobs being given to men viewed by yard officials as unworthy or unqualified. In October 1870, Robeson ordered the yard to employ one William Byrne as a coppersmith. However, the yard's chief engineer described Byrne as "intemperate . . . a very poor workman, having once been discharged for spoiling several pieces of work . . . unreliable . . . frequently absent from his duties."  

How the chief engineer learned of the work performance of Byrne is unknown. The yard did keep a "Black List," a record of workers who had been discharged for serious deficiencies or offenses. Men who were blacklisted were not to be rehired. However, Secretary Robeson in several instances directed that certain names be removed from the blacklist and that those workers be rehired.  

When the subcommittee of the House Naval Affairs Committee collected testimony in March 1876 about proceedings in the Boston Navy Yard, Commandant Nichols reported that the yard's naval constructor had described George Wood as "one of the least efficient men in his department." Wood owed his position in the yard, a writer in the Construction Department, to the persistent efforts of Secretary Robeson and Isaiah Hanscom, Chief, Bureau of Construction and Repair. In March 1874, Robeson ordered Commandant Nichols to employ Wood as a writer. A month later, because of a shortness of funds, the yard found it necessary to discharge Wood. To keep him on would have meant the dismissal of another writer, "probably more competent." In the following September, Hanscom informed Nichols that "by direction of the Department," Wood was to be reappointed. Apparently, another suspension occurred, and in December, Hanscom once again directed the reinstatement of Wood.  

REDUCTIONS IN FORCE AND SUSPENSION OF WORK  

For many of its workers, the Boston Navy Yard did not provide continuous employment. Layoffs were common for a variety of circumstances. A reduction in force often followed the completion of repairs on a ship. Bureaus ran out of money and had to suspend operations in the navy yards. New England winters resulted in smaller out-of-door work forces. Also affecting employment were outbreaks of economy drives in Washington.  

Shortly after his appointment as Vice Admiral, David Porter suggested to the Boston yard commandant that he immediately discharge every man in the yard "not absolutely required to be retained." Perhaps because this was a suggestion and not an order, the commandant does not appear to have responded to it. Reductions were occurring, but of a modest character and by direction of the bureaus. The Bureau of Yards and Docks in March 1869 directed that by July 1 its "civil list" at the Boston Navy Yard be reduced from fourteen to six.  

A massive reduction occurred at the Boston Navy Yard in early 1870, when the Secretary of the Navy suspended the operations of the Construction and Steam Engineering Departments. Roughly 1600 men were laid off. The Secretary issued the directive regarding Construction on January 24 and that for Steam  

61 Robeson to Steedman, Jan. 20, 1870, 181-11, Box 8, 9/14/69-11/4/70, p. 80; Robeson to Steedman, Mar. 9, Apr. 12, 1871, 181-11, Box 8, 11/16/70-3/3/73, pp. 41, 53.  

62 Chief Engineer Lawton to Commandant, Oct. 18, 1870, 181-33, Box 7, 9/30/70-1/3/71.  

63 Robeson to Steedman, Aug. 3, Aug. 12, 1870, 181-11, Box 8, 9/14/69-11/4/70, pp. 178, 182; Robeson to Nichols, Nov. 12, 1874; Acting Secretary of Navy to Nichols, Aug. 30, 1875, 181-11, Box 8, 2/20/73-9/1/75, pp. 160, 210.  

64 Copies of the several documents concerning Wood are found in Committee on Naval Affairs, Testimony...Boston, pp. 21-22.  

65 Porter to Rodgers, Mar. 18, 1869, 181-11, Box 7, 7/18/67-9/13/69, p. 118; Joseph Smith to Commandant, Mar. 20, 1869, 181-38, Box 1.
Engineering on the following day. In neither document did Robeson explain the reason for the suspension, but only noted that it would go into effect at the end of January and would continue "until further orders." He commented: "This order . . . is not intended to make any change in the present organization of force when work is resumed" and "the men now employed will then be allowed to take their old places."66

In late February, Robeson informed the Boston yard that work in the Construction and Steam Engineering Departments would resume on March 1 or as soon thereafter as practical. He ordered that 730 of the former Construction employees be rehired and 145 for Steam Engineering. Slightly more than half of the suspended work force was being reemployed. And perhaps not even that many of the former workers. Robeson outlined standards to be observed in the rehiring process. "In the selection of those to be taken on, only the competent, industrious, and deserving men will be retained, preferring those employed by direct orders from the Department, and those who have served during the late war, in the Navy or Army of the United States."67 As already noted, Porter in the previous spring had directed efforts to fill the yards with "good Union men" who supported the administration. Perhaps further research will reveal the reasons for suspending the two largest departments of the Boston yard for one month. In the meantime, the suspicion arises that it was a political maneuver to rid the yard of Democrats.

At any rate, the fact remains that navy yard workers had to confront the prospect that their department might simply be temporarily closed down. In November 1870, the Bureau of Steam Engineering ordered a reduction of the rolls of its department at Boston, and a shortage of funds forced the suspension of all employees of the Equipment Department until the first of the next month. Subsequent months which saw heavy layoffs were December 1873; May and October 1874; and October 1875.68

WAGES AND SALARIES

A controversy over wages unfolded in 1868 and 1869. At issue was the Navy's interpretation of a Congressional enactment regulating hours for federal workers. In a measure of June 25, 1868, Congress established the eight-hour day for the civilian mechanics and laborers of the national government. Thus navy yard employees worked two hours less than men employed in private establishments. However, in an act of 1862, Congress had stipulated that wages paid in a navy yard should conform "as far as is consistent with the public interest" with those of private establishments in the immediate vicinity. Did this mean that yard employees should receive for eight hours' work the same wages as workers at private establishments received for ten? Or should the wage boards recommend navy yard per diem rates based on the hourly wage used in the private sector?

Gideon Welles, Secretary of the Navy until March 1869, was uncertain of what Congress had intended. In his annual report for 1868, he referred to the act of June 1868 and stated that "if it was intended that the per diem compensation for a working day of ten hours in outside establishments should, under the statute, fix the rate of wages on navy yards, 20 per cent is added to the cost of labor."69 At least in the Boston yard, after July 1868, mechanics and laborers continued to be paid a ten-hour day's wages, although they only worked eight hours.

The new Republican administration gave early attention to the issue, and in March 1869, Secretary of the Navy Bourie sent to navy yard commandants what he considered a "fair construction" of the legislation in question. Essentially, he directed paying navy yard workers at the same hourly rate as paid in outside establishments. As a consequence, mechanics and laborers employed by the government would receive a lower

67 Robeson to Commandant, Feb. 26, 1870, 181-11, Box 8, 9/14/69-11/4/70.
68 Committee on Naval Affairs, Testimony...Boston, pp. 413ff; Spicer to Steedman, Nov. 21, 1870; Lawton to Steedman, Dec. 10, 1870, 181-33, Box 7, 9/30/70-1/3/71.
daily wage than workers in the commercial sector, and, in the Charlestown yard, workers suffered a reduction in wages. Borie lamented that Congress had neglected to repeal the 1862 act requiring navy yards to conform to the wages paid by private firms. Until Congress acted, he contended, the Navy could do little. It had no authority to extend hours of labor, that is to return to a ten-hour day. Borie informed commandants: "When ... necessity exists for extra labor, you are at liberty to exercise your discretion in the matter, so as to assist the working class and at the same do justice to the Government."

On the basis of the March directive from Borie, the Boston yard commandant on April 6 ordered a twenty percent reduction in wages. Within a month, the naval constructor, chief engineer, and civil engineer alerted the commandant that, as a consequence of the new wages and hours policy, they were having difficulty in keeping existing employees and in hiring new ones. The reduced wages did not affect all yard employees. Washington held that clerks, messengers, superintendents, and others whose pay was fixed by Congress, the Navy Department, or the bureaus should suffer no decrease or receive any increase because of changes in the pay of those covered by the wage scales. Subsequently, it was further directed that foremen would not have their wages cut by 20%, since they were liable to be called on to be at the yard before and after normal working hours and since "their pay does not appear to be in excess of that of outside labor."

Perhaps because of Congressional inactivity, President Grant issued a proclamation on May 19, 1869, dealing with the hours and wages of laborers and mechanics in the employ of the government. In effect, the president set aside the Navy Department's interpretation. Grant stipulated that no reductions should occur in the wages of employees because of the reduction in hours occasioned by the act of June 25, 1868. This constituted a major development, since navy yard workers were thereafter paid the same per diem rate for eight hours of work as men employed at private establishments received for ten. Subsequently the observation was made by both navy officers and businessmen that this wage differential resulted in increased cost for work done in the nation's navy yards.

In May 1872, three years after President Grant issued the proclamation, Congress passed legislation confirming the correctness of the president's actions. In addition, Congress provided that compensation should be made to federal employees who had received reduced wages between June 25, 1868, and May 19, 1869. The Fourth Auditor's Office, U.S. Treasury, cooperated with the Boston yard commandant and the yard paymaster in arranging for payments to persons entitled to the benefit.

The wage schedules in operation at the Boston Navy Yard for the second quarter of 1869 listed the per diem pay for workmen of the first class. According to the master schedule, the highest paid workers were loam moulders, who received $4.50 per day; plumbers, $4.26; and dredgers, gun-carriage makers, galvanizers, hammermen, leather workers, masons, stone cutters, and slaters, $4.00. Rates from $3.00 to $3.50 were assigned to many shipyard trades, such as boat builders, boilermakers, caulkers, copper smiths, engineers, file cutters and grinders, machinists, and painters. Helpers and coal passers had a per diem rate of $2.00, and rivet heaters $1.00.74

70 Circular Letters, Borie to Rodgers, Mar. 29, Apr. 22, 1869, 181-51, 4/19/36-1/1/72.

71 Naval Constructor Hartt to Commandant Rodgers, Apr. 22, 1869; Chief Engineer Lawton to Rodgers, Apr. 27, 1869; Civil Engineer Hastings to Rodgers, May 7, 1869, 181-33, Box 4, 2/17/69-6/30/69; Circular Letter, Porter to Commandant, Apr. 30, 1869; Circular Letter, Porter to Rodgers, May 24, 1869, 181-51, 4/19/36-1/1/72, pp. 120, 125.

72 Borie to Rodgers, May 24, 1869, 181-51, 4/19/36-1/1/72.

73 Acting Secretary of Navy to Steedman, Sep. 12, 1872, 181-11, Box 8, 11/16/70-3/7/73; 4th Auditor's Office to Steedman, Sep. 18, Sep. 24, 1872; Fourth Auditor's Office to Parrott, Oct. 17, 1872, 181-5, Box 18, 7/6/72-7/23/74, pp. 25, 26, 29.

74 For the schedules prepared for the Boston Navy Yard for the quarter ending June 30, 1869, see 181-33, Box 4, 2/17/69-6/30/69.
Table 12: WAGES FOR FIRST-CLASS MECHANICS IN SELECT TRADES, BOSTON NAVY YARD, FOR QUARTER STARTING APRIL 1, 1869 AND QUARTER STARTING JANUARY 1, 1875

<table>
<thead>
<tr>
<th>Trade</th>
<th>Apr 1869</th>
<th>Jan 1875</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat Builders</td>
<td>$3.00</td>
<td>$3.26</td>
</tr>
<tr>
<td>Block Makers</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Boiler Makers</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Caulkers</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Flange-turners</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Gun-carriage Makers</td>
<td>4.00</td>
<td>3.26</td>
</tr>
<tr>
<td>Joiners, Ship</td>
<td>3.26</td>
<td>3.26</td>
</tr>
<tr>
<td>Laborers</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Machinists</td>
<td>3.00</td>
<td>3.26</td>
</tr>
<tr>
<td>Moulders, Loam</td>
<td>4.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Plumbers</td>
<td>4.26</td>
<td>4.50</td>
</tr>
<tr>
<td>Painters</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Rivet Heaters</td>
<td>1.00</td>
<td>1.26</td>
</tr>
<tr>
<td>Rope Makers</td>
<td>3.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Shipwrights</td>
<td>3.26</td>
<td>3.26</td>
</tr>
</tbody>
</table>

SOURCE: 181-33

As evident in Table 12, in general the wage rates at the Boston yard did not change significantly between 1869 and 1875. For a few trades, the rates went up, for a few they went down, and most remained the same.

It appears that the Navy paid its laborers and mechanics time and a half for overtime. In November 1873, this produced dissatisfaction among the yard’s riggers, who claimed they should be paid double time, the rate paid by private establishments. Beginning in September 1869, per diem workers at navy yards were paid twice a month, on the tenth and twenty-fifth, or on the next workday, if those days fell on a Sunday or holiday. The pay office was located in Building No. 5. On payday, workmen, grouped by department, would assemble at the office. A watchman at the building entrance summoned each department. The employees formed a single file and proceeded one by one to the pay window. There a pay clerk counted out to each man the amount due him. No pay envelopes were employed.

A wage or a salary constituted the only obligation the Navy had toward its employees, there being no benefits respecting health or life insurance or retirement. In a few instances, special arrangements were sought for workers of advanced years and long service. In March 1871, Robeson ordered that John Wright be discharged as Captain of the Watch, "it being manifestly improper to keep one of his age in so responsible a position." However, because of Wright’s "faithful service" with the Navy, which began in the War of 1812, Robeson directed the commandant to "give him something more suited to his age."

HOURS, WORK WEEK, HOLIDAYS

The ringing of the yard bell signaled the beginning and end of the workday at the Boston Navy Yard.

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75 Equipment Officer Luce to Nichols, Nov. 25, 1873, 181-33, Box 17, 11/7/73-12/10/73, p. 101.

76 Circular Letter, Robeson to Rodgers, Aug. 31, 1869, 181-51, 4/19/36-1/1/72, p. 152.

77 Robeson to Commandant, Mar. 25, 1871, 181-11, Box 8, 11/16/70-3/3/73, p. 46.
and the beginning and end of the noontime dinner break. Preliminary to the start of work in the morning and after dinner and at the end of the day, workmen were mustered, the names of those in attendance being "checked off."

The precise schedule of yard hours was subject to frequent alterations, although the basic pattern essentially remained. When the Navy instituted President Grant's proclamation of May 1869 and began to pay its workers a full day's wages for eight hours of work, it sought to insure that per diem employees were actually performing their assigned tasks during the entire period. Secretary Boric directed that the yard bell start ringing at 7:45 a.m. and continue for fifteen minutes. A quarter of an hour was considered ample time for muster. Workers were expected to stay at their tasks and not leave "for any private reasons" until the bell indicated noon. The same procedure was to be followed for the four hours of work in the afternoon.8

In one of the last orders in his brief stint as Secretary of the Navy, Boric directed that as of July 1, navy yards would begin work at 7:00, instead of 8:00 and the morning and afternoon muster would start twenty minutes before the work hour, not fifteen. Boric's replacement, George Robeson, revoked that directive and essentially returned to the earlier schedule, with certain modifications. The ringing of the bell would start at such time not exceeding fifteen minutes before work "as may under the circumstances at each yard be found necessary to secure the government the full term of eight hours per day." Robeson also eliminated the evening muster.9 Throughout the years 1869-1877, the basic pattern endured of an eight-hour day, four in the morning and four in the afternoon, with an hour-long break for dinner and musters in the morning and afternoon.

The elimination of the evening muster may have been consistent with the Navy's aspiration to insure that workers provided a full day of labor. If employees were required to muster after work, some would have to stop their activity before the day actually ended, lest they be considered absent and thereby docked a half day's wages. For example, fires in forges and smitheries had to be extinguished, unused paint returned, and brushes cleaned. With the abolition of the evening muster, workers could keep at their tasks right up to the sounding of the bell. In actuality, they probably did not wait for the bell before ceasing whatever task was at hand, although these considerations may explain why Robeson ended the practice of evening muster.9

Table:<br>
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 1869</td>
<td>Navy yards would begin work at 7:00, instead of 8:00 and the morning and afternoon muster would start twenty minutes before the work hour, not fifteen.</td>
</tr>
<tr>
<td>July 8, 1869</td>
<td>Circular Letter, Boric to Rodgers, June 23, 1869; Circular Letter, Robeson to Rodgers, July 8, 1869, 181-51, 4/19/36-1/1/72, pp. 141, 143.</td>
</tr>
<tr>
<td>June 1, 1869</td>
<td>Naval Constructor S. M. Pook to Rodgers, June 1, 1869, 181-33, Box 4, 2/17/69-6/30/69.</td>
</tr>
</tbody>
</table>

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During the years 1869-1876, it seems the Navy officially recognized only one special day, May 30, sometimes called Decoration or Memorial Day. A Navy Department order of May 24, 1872, read: "On Thursday next, May 30, being set apart for decoration of graves of soldiers and sailors, the Navy yard will be closed to enable employees to participate in the ceremonies of the occasion." Whatever its origins, Memorial Day became something of a partisan and sectional observance, being the occasion of remembering the Union dead. It was not celebrated in the South and had greater meaning for the Republican than the Democratic Party. The political dimension received indirect recognition in the order of Secretary Robeson for Memorial Day of 1873. One week in advance, he mailed a circular ordering the yards closed "to enable the Employees to participate in connection with the Grand Army of the Republic in the ceremonies of the Occasion." On the 29th, he sent a follow-up telegram, underscoring the reason for the closing of the yard, "to enable employees to assist in ceremonies of Decoration Day." As already noted the GAR was a powerful veterans' group with close ties to the Republican Party.

That politics hovered around navy yards is evident in arrangements at the Boston facility for election days. Workers received no pay when the yard closed for Christmas, Memorial Day, or other recognized holidays. Prior to 1872, it was the custom to allow workers to leave the yard on election day to vote, but they did so on their own time. Doubtless, the workings of the patronage system exerted pressure upon a federal employee to go to the polls and use his vote to insure the political well-being of whoever had sponsored him for his job. At any rate, it appears some units of the Boston yard were virtually shut down in the afternoon of election days. As noted by the naval constructor, this constituted a hardship for some. He explained that on election days "the various gangs in the yard are broken up and effectiveness is destroyed." Stopping operations seemed required, but "there were always some men who feel too poor to lose time to vote." However, that changed. Shortly before election day in November 1872, the Acting Secretary of the Navy gave an order that on Tuesday, November 5, work at navy yards would stop at noon, and commandants were instructed to allow workers to absent themselves for the remainder of the day. "No checkage" was to be made "against the pay of workmen." By the time of the 1876 presidential election, the yard procedure had become routine. Commandant Parker issued an order, "by authority of the Navy Department," that stated "work in this yard will be stopped at 12 M. on Tuesday next . . . and the Employees will be allowed the remainder of that day, without loss of pay." That the only paid holiday for workers was election day speaks volumes about the political dimension of Gilded Age navy yards.

PROBLEMS WITH CIVILIAN WORKERS

Proper management and utilization of the civilian work force was crucial to the successful mission of the Boston Navy Yard. The yard profited from the services, sometimes lengthy, of many competent and dedicated workers. Occasionally, they made worthwhile suggestions in the building or outfitting of ships or manufacture of equipment. For example, in October 1873, a quartermaster sparmaker devised a special truss to prevent the chaffing of top masts. Both the naval constructor and the equipment officer saw merit in the device. Other workmen, because of their many years in the yard and familiarity with highly specialized machines or processes, must have been invaluable. In 1872, Joseph Pedrick, foreman ropemaker, was completing his thirty-fifth year in the Ropewalk, twenty of them as that shop's foreman. Pedrick had invented

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83 Robeson to Steedman, May 24, 1872, 181-51, 1/1/72-12/15/85, p. 10; Robeson to Parrott, May 23, 1873, 181-51, 1/1/72-12/15/85; Chief Clerk to Commandant, May 29, 1873, 181-11, Box 8, 2/20/73-9/1/75, p. 15.

84 Naval Constructor W. L. Hanscom to Parrott, Oct. 21, 1872, 181-33, Box 13, 4/18/72-11/16/72.

85 Circular, Acting Secretary of Navy to Parrott, Oct. 31, 1872, 181-51, 1/1/72-12/15/85.

86 General Orders, U.S. Navy Yard Boston, Nov. 2, 1876, 181-33, Box 25, 10/21/76-5/14/77.

87 Samuel Pook, Naval Constructor, to Nichols, Oct. 21, 1873, 181-33, Box 17, 9/20/73-11/7/73, p. 127.
an improved flyer for use in ropemaking. What proportion of the yard's force consisted of hard working, competent, reliable men is unknown. The simple fact is that the yard records have less information about conscientious workers than about civilian employees who were inept and unreliable or who caused problems.

The yard maintained a "Black List," but not a "White List." When brought to the attention of the commandant, serious offenses by per diem workers meant permanent banning from yard employment. This was achieved through entering the worker's name on the "Black List." In all but a few instances, the list cites orders of the commandant as the authority for the discharge. Some entries for the period 1869-1877 illustrate the reasons for firing of workers for cause: Aaron Butler, teamster in the Yards and Docks Department, stealing junk; George Brines, laborer in Construction, insulting watchman; Martin Bird, laborer, Construction, idleness during working hours; Michael Burnes, shipwright, Construction, false muster; Henry Crosby, machinist, Steam Engineering, drunkenness and sleeping during working hours; and William Collins, smith's helper, Construction, fighting.

It appears report by a department head was sufficient to secure the dismissal of a worker. In some cases, the commandant might create a board of officers to investigate. Such a procedure was used regarding charges by John Kieleber against John Galvin. The documentation does not indicate the positions in the yard held by the two men, but it seems Galvin was a supervisor. Kieleber alleged he paid Galvin $40.00, beginning in December 1869 and in the course of a year, "the object being to keep me to work in the Charlestown Navy Yard . . . during the present administration." Kieleber was laid off and in August 1870 made the charge against Galvin. Commandant Steedman appointed a board of three officers. That board could find no substantiation for Kieleber's accusations or for Galvin's denial. The officers recommended that since there was no way to determine the truth "that no official notice be taken."

A similar charge was made by a yard worker during testimony before the subcommittee of the House Naval Affairs Committee in March 1876. William Keegan, who had worked at the yard "off and on" for six years, claimed that when first seeking a job, he had been introduced by Michael Quill to William H. Chapman, foreman of the ships' gang in Steam Engineering. Through Quill, Keegan was told he could have a job, but must pay $15.00 to be "divided among three engineers." Although he could not then make the payment, Keegan started work with the understanding he would subsequently produce the money. When he failed to do this, Chapman became exceedingly angry. Keegan claimed that he gave Chapman a total of $30.00. Besides being a payoff for getting the job, the money also was a payment to Chapman for not reporting Keegan for fighting.

Theft by employees seems to have been a common problem. In March 1876, the captain of the yard reported that six bundles of brass wire had been carried out of the yard in a wagon under a load of refuse wood. The culprits were a laborer, Jeremiah Galvin, and the teamster, Patrick McCasker. The fate of Galvin and McCasker is unknown. Two years earlier, theft of a piece of composition by William Flynn, an employee in Steam Engineering, resulted in criminal charges. Taken before a district judge, Flynn entered a guilty plea and was sentenced to three months in the East Cambridge jail.

**INDUSTRIAL ACTIVITY: MANUFACTURING**

Articles manufactured at the Boston Navy Yard included cordage, rigging, sails and other canvas

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88 Black List, 1866-1882, 181-75.

89 Steedman to Kantz and others, Aug. 14, 1871; Kantz and others to Steedman, Aug. 5, 1871, both in 181-81, Box 6, 1866-1901.

90 Committee on Naval Affairs, *Testimony...Boston*, pp. 172-73.

91 Captain of Yard to Nichols, Mar. 13, 1876, National Archives, Record Group 181, Entry 45, Orders Issued by Commandant (181-45), 9/15/72-4/13/78; Assistant Engineer to Nichols, Mar. 27, 1874, 181-33, Box 19, 3/14/74-5/14/74, p. 49 1/2. For more about Jeremiah Galvin, see below, pp. 275-76.
goods, blocks, bar and nut iron, boats, and ship's engines. The Boston yard possessed the Navy's only ropewalk. However, many of the yards had the capacity to produce other goods, although there was no even distribution of these capabilities. In 1869, the Chief, Bureau of Equipment, reported that the only proper sail lofts in the Navy were in the yards at Boston and Norfolk. He further noted that only Norfolk had an adequate rigging loft, the one at Boston lacking the size sufficient to stretch the rigging of large vessels. At the direction of the Secretary, the manufacture of blocks was limited to the Boston and New York yards, the other shore establishments being restricted to repairing blocks.  

At Charlestown, the Departments of Construction, Steam Engineering, and Equipment were the most active in manufacturing. Occasionally the Ordnance and Navigation Departments produced articles. For example, in 1875, the Navigation Department made the drums for deep-sea sounding machines for use by ships of the Navy as well as by those of the Coast Survey.

INDUSTRIAL ACTIVITY: SHIP WORK

During the years 1869 to 1877, the Boston Navy Yard repaired or worked on approximately fifty ships, not counting vessels under construction either by the Navy or private establishments. Ships at the yard fell into a variety of categories. Largest and most important were naval vessels which had been on active duty and were expected to return to duty immediately upon completion of repairs. The Navy decommissioned such ships when the repairs promised to be extensive and time-consuming. A second category consisted of ships that had gone out of commission and which were not intended to return to active status. Such ships were more or less permanently moored at the yard. A third category included vessels the construction of which the yard had commenced but had ceased prior to completion. These half-finished ships were often on building ways and in shiphouses. A final group were craft used in the yard's work, namely tugs.

There were on the stocks and building ways of the Boston Navy Yard four ships which the yard had built, but which were never launched, Virginia, a 74-gun ship-of-the-line; Quinsigamond, now known as Oregon, a double-turreted monitor; Keywaden, or Pennsylvania, a screw steamer; and Pompanoosuc or Connecticut, a cruiser. The four unlaunched vessels required little attention, except when they were broken up. Between 1869 and 1877, work of this type occurred only respecting the "74," and that project was not at that time carried through to completion. To assist in the dismantling of Virginia, the yard's naval constructor sought permission to purchase two hydraulic pumps for pulling bolts from the ship's woodwork. In the autumn of 1874, the yard work force was briefly increased in connection with the congressional election. Some men then temporarily hired worked on Virginia. In 1875, a private firm expressed interest in obtaining a contract to finish the breaking up of the ship. However, it would be several years before completion of Virginia's dismantling.

Another category of vessels at the Boston Navy Yard, 1869-1877, were five ships which had been launched and completed. Some of them had been placed in commission and may even have been sent to sea. However, they had been taken out of service, decommissioned, and for years remained tied up at Boston. These included the two light draft monitors, Shawnee and Wassuc, and the steam frigate Ammonoosuc or Iowa. Two other ships, more or less in storage at Boston, had seen considerable service before being placed in ordinary. Niagara, a steam frigate launched in 1855, had been on active duty during the Civil War. She went

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92 Secretary of Navy, Annual Report, Dec. 1, 1869, p. 45; Secretary of Navy to Commandant, Oct. 1, 1869, 181-11, Box 8, 9/169-11/4/70.

93 Navigation Officer George Brown to Commandant, Jan 1, 1875, 181-33, Box 21, 12/77/4-2/13/75; Brown to Commandant, Mar. 12, 1875, 181-33, Box 21, 2/17/75-5/1/75, p. 66; Brown to Commandant, Nov. 26, 1875, 181-33, Box 23, 11/4/75-12/31/75, p. 87; Supt., U.S. Coast Survey to Nichols, Oct. 30, 1875, 181-5, Box 19, 7/23/74-3/28/76, p. 140.

94 Naval Constructor Pook to Commandant Parrott, Sep. 24, 1873, 181-33, Box 17, 9/20/73-11/7/73, p. 23; Naval Constructor Easby to Commandant Nichols, Feb. 3, 1875, 181-33, Box 21, 12/77/4-2/13/75, p. 193.
Plate 13: WATERFRONT, CHARLESTOWN NAVY YARD, 1870. The photograph shows *Niagara* and *Iowa*, the former *Ammonoosuc* and the larger of the two ships. Both were out of commission and covered over.
out of commission at the yard in 1865 and remained in that status until sold in 1885. *Miantonomoh*, in ordinary at Boston between 1870 and 1874, had a history somewhat different from the other vessels at the yard in this category.

Prior to the Navy’s formally condemning these ships, some officers at the Boston Navy Yard and in Washington regarded them in the same fashion as other vessels out of commission. For example, in 1869, the chief engineer of the Boston yard described *Shawnee* and *Wassuc* in good condition and as fit for harbor service. At approximately the same time, he examined *Niagara* and concluded repairs on her machinery would require six months’ effort by a full work force. The naval constructor stated that in order to protect *Niagara* against decay it would be necessary to caulk her above the copper. Vice Admiral Porter directed that all of the monitors were to be dry docked when the dock was vacant to have their bottoms cleaned and hulls painted. Porter stated that monitors needed painting at least once a year.95

By August 1874, a decision had been reached to remove the guns of *Shawnee* and *Wassuc*, and shortly thereafter arrangements were made to get rid of the two monitors entirely. The Navy entered a contract with a Boston firm, James Power & Company, to have both vessels cut up and disposed of. That work began in 1875. Breaking up a ship in the water is difficult, and after considering various options, the yard’s constructor recommended that the monitors be hauled into the lower shiphouse and dismantled there.96

Of the several ships in ordinary on a long-term basis, the yard probably devoted most attention to *Miantonomoh*. A large, double-turreted, iron-clad monitor, she first went in commission in September 1865. In a demonstration of her seaworthiness, she sailed to Europe in 1866, returning in 1867 after a cruise of 17,700 miles. For the next two years, she was in ordinary at League Island. After being recommissioned, she served briefly with the North Atlantic Station and in 1870 went out of commission at the Boston Navy Yard.97

A recently constructed ship, one of the most modern in the navy, there seemed to be no reason for not making the repairs necessary to keep her in seaworthy condition. Indeed, when the ship first came to the yard, there was little indication that her active duty career was over. In March 1870, perhaps because of difficulties with Spain, a brief flurry of activity took place at the yard, since Washington ordered that three vessels then in ordinary be made ready for sea. One of these was *Miantonomoh*, and the naval constructor reported it would require two weeks to complete work, including that of an outside contractor. The following month, Secretary Robeson believed “trouble with Spain inevitable,” and ordered every available ship put in commission immediately. At first, *Miantonomoh* was to proceed to Hampton Roads, and then her destination was changed to New York. The crisis passed, and the big monitor remained at Boston, traveling no further than the dry dock.98

In early January 1872, *Miantonomoh* again went into the dry dock and remained for four months, during which her turrets and plating were removed. Although the initial intent may have been to repair the vessel, this probably marked the beginning of her permanent dismantling. In the next several years, yard workmen removed other parts of *Miantonomoh*, and it became clear that the vessel would not return to duty. Subsequently the deck was taken up to facilitate taking out some of her machinery. The exposed and open hull filled with water after every rainfall and had to be pumped out. In April 1873, the naval constructor

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95 Porter to Rodgers, Sep. 14, 1869, 181-11, Box 8, 9/14/69-11/4/70, p. 2; Report of Board on Steam Machinery Afloat, Mar. 29, 1869; Report of Chief Engineer, Apr. 30, 1869; Naval Constructor to Commandant, June 18, 1869, 181-33, Box 4, 2/17/69-6/30/69.

96 George Brown, Inspector of Ordnance, to Nichols, Aug. 1, 1874, 181-33, Box 20, 7/21/74-10/1/74, p. 43; James Power & Co. to Commandant, Dec. 1, 1875; Jan. 11, 1876, 181-5, Box 19, 7/23/74-3/2/76; Assistant Naval Constructor J. F. Hanscom to Commandant, May 27, 1876; Naval Constructor J. W. Easby to Commandant, June 1, 1876, 181-33, Box 24, 5/1/76-10/21/76, pp. 24, 30.

97 DANFS, IV, p. 348.

98 Telegram, Porter to Commandant, Mar. 7, 1870; Porter to Steedman, Mar. 24, 1870; Telegram, Porter to Steedman, Apr. 4, 1870; Telegram, Porter to Steedman, Apr. 23, 1870, 181-11, Box 8, 9/14/69-11/4/70, pp. 105, 116, 127, 138; Naval Constructor to Commandant, Mar. 8, 1870, 181-33, Box 6, 2/9/70-6/2/70, p. 36.
Plate 14: USS *WACHUSETT*, 1870. The Charlestown Navy Yard constructed this vessel, a 200-foot-long screw sloop, in 1861-1862. From December 1874 until the spring of 1879, *Wachusett* was out of commission and laid up at the Charlestown facility.
recommended that the boiler and the remaining machinery be removed and that the hull be broken up. Except for the breaking up of the hull, that recommendation was implemented. Parts of the monitor went into other vessels.  

In 1873, the Navy ordered Miantonomoh’s hull be made seaworthy. The yard covered her deck and, as instructed, placed aboard ninety tons of her iron plating. In August 1874, she was towed to the shipyard of John Roach in Chester, Pennsylvania. Her purpose at the Roach yard was ostensibly for repairs. But, at the orders of Secretary of the Navy, Roach built an entirely new ship, which retained the name Miantonomoh. The original vessel was broken up at Chester in 1875.

When the large monitor left the Boston yard in the summer of 1874, a Massachusetts congressmen asked the Navy Department why that yard had not been assigned her repairs. Robeson was less than candid in his response. He stated that none of the Navy’s yards had the facilities for major repairs on a monitor of that size. The Secretary did not explain there was no intention of repairing Miantonomoh, but to have Roach construct a new vessel. Robeson sought to placate the congressman by noting he agreed with the belief that “the mechanics of Charlestown and vicinity should have the advantage of a fair share of government work.” Toward that end, he was ordering other ships to Boston, and Miantonomoh herself would return for outfitting.

REPAIR OF BROOKLYN

During the years covered by this chapter, thirty to thirty-five ships which had been on active duty and which were intended to return to that status upon completion of work came to the Boston Navy Yard. One of these was the 233-foot-long steam sloop Brooklyn, first commissioned in 1859. Perhaps the high point in her career was participation in the Battle of Mobile Bay, August 1864. After the war, Brooklyn made cruises to Latin America and Europe. In mid-July 1873, the Boston yard received instructions to expect the ship shortly, put her out of commission, and land all stores. Removing stores was standard for ships going out of commission. Ship’s officers in charge of the various shipboard departments turned over supplies and stores to the yard officers of the same bureau. These items had to be inspected, inventoried, and stored in the yard.

On August 20, tugs assisted Brooklyn into the yard’s dry dock, where she remained for two months. Inspection of the vessel by boards of officers constituted the first order of business. Examination of the steam machinery indicated the need of boiler repairs, estimated at requiring eighty days and costing $6000. The Construction Department recommended that, in addition to needed hull repairs, the yard alter the vessel’s forecast. Its examination led the Equipment Department to conclude Brooklyn should have a new set of mess, stateroom, and wardroom "furniture," meaning such items as china and glassware.

Once started, repairs on the ship revealed the need for additional work and resulted in modification of original recommendations. For example, both the rudder post and the after section of the keel were found wormed and rotted, requiring replacement. Wales on the port bow proved more defective than anticipated and

99 Docking Log, 181-60; Robeson to Steedman, Jan. 30, 1872, 181-11, Box 8, 11/16/70-3/3/73, p. 119; Naval Constructor to Commandant, Apr. 19, 1873, 181-33; Chief Engineer to Commandant, May 5, 1873, 181-33, Box 15, 3/19/73-6/1/73; Naval Constructor to Commandant, Dec. 6, 1873, 181-33, Box 17, 11/7/73-12/10/73.

100 Assistant Naval Constructor J. F. Hansom to Nichols, Aug. 13, 1874, 181-33, Box 20, 7/21/74-10/1/74, p. 86.


102 DANFS, II, p. 162; Robeson to Parrott, July 12, 1873, 181-11, Box 8, 2/2/73-9/1/75.

103 Commandant to Board of Officers, Aug. 27, 1873, 181-45, 9/17/72-4/13/78; Naval Constructor to Commandant, Sep. 23, 1873; Chief Engineer to Commandant, Sep. 23, 1873; Equipment Officer to Commandant, Oct. 2, 1873, 181-33, Box 17, 9/20/73-11/7/73.
would cost an additional $2000 to repair. When raised by Steam Engineering, the auxiliary boiler proved to be in such bad condition that making a new boiler would cost less than repairing the old one. The ordnance officer discovered weaknesses in the deck under the pivot gun, and the naval constructor proposed reinforcing the deck with beams.  

When Brooklyn came to the yard, the Equipment Department had no wire suitable for rigging except that on Iowa. Since Iowa would "never go to sea again," the Bureau of Equipment gave approval to the yard's recommendation that her lower rigging be used for Brooklyn. In examining Iowa, the equipment officer discovered "the entire gang" could be fitted to Brooklyn, and recommended that course, "thereby saving labor and expense."  

In early November 1873, Washington began to inquire when Brooklyn would be ready for sea. The yard's equipment officer stated that, without a larger work force, his department could not match the pace of the other bureaus. Apparently, some adjustment was made or the equipment officer reconsidered the task, and in mid-November, he advised the commandant that with respect to matters under the cognizance of Equipment, the ship would be ready for sea in three weeks. The chief engineer estimated that by working day and night with a full force, his department could be finished in five weeks. Night work would required hand-held lamps, and the chief engineer asked authority to purchase ten dozen of those items on the open market.

Requests for the hiring of additional mechanics, for working at night, and for going to the open market to purchase needed articles were granted by the Navy Department. In fact, on November 18, 1873, the yard received orders to expedite work on all ships, perhaps because of renewed concerns in Washington over difficulties with Spain. At that time, the yard was engaged in substantial repairs on two vessels, Brooklyn and Franklin, and had under construction Intrepid and Vandalia. These activities created bottlenecks, at least in the copper shop, and the chief engineer informed the commandant that producing the copper piping for Franklin took up so much room as to prevent the shop from making pipe for Brooklyn. He recommended that the copper piping for the latter vessel be made in an outside establishment.  

Franklin was recommissioned on December 15. Completion of that ship enabled the yard to give greater attention to Brooklyn. However, three days later, the yard received telegraphed orders to suspend all extra work and assume the usual hours of labor. In early January 1874, the engines of Brooklyn were put in operation, and a board of officers checked over the ship's machinery to determine if she was ready for sea. The board found the machinery in working order, and the ship sailed from the yard shortly thereafter.

NEW CONSTRUCTION; INTREPID

In the period 1869 to 1876, the Charlestown Navy Yard completed construction of Nantasket, Worcester, and Algoma, all started prior to January 1869. The yard also finished two new ships, Vandalia, a screw sloop, and Intrepid, a torpedo boat. Torpedoes of the post-Civil War era lacked propulsion systems of their own, and the explosive devices were secured to long spars mounted on ships or to the end of a cable towed by a vessel. Tactics called for the torpedo boat to maneuver in such a fashion as to bring the torpedo

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104 Naval Constructor to Executive Officer, Oct. 8, Oct. 25, 1873; Chief Engineer to Commandant, Oct. 13, 1873; Ordnance Officer to Commandant, Oct. 27, 1873, Box 17, 9/20/73-11/7/73.

105 Equipment Officer to Commandant, Oct. 18, Oct. 20, Oct. 27, Nov. 5, 1873, Box 17, 9/20/73-11/7/73.

106 Equipment Officer to Commandant, Nov. 8, Nov. 17, 1873; Chief Engineer to Commandant, Nov. 15, Nov. 17, 1873, 181-33, Box 17, 11/7/73-12/10/73.

107 Secretary of Navy to Commandant, Nov. 18, 1873, 181-11, Box 8, 2/20/63-9/1/75, p. 62; Chief Engineer to Commandant, Dec. 3, 1873, 181-33, Box 17, 11/7/73-12/10/73.

108 Telegram, Secretary of Navy to Commandant, Dec. 18, 1873, 181-11, Box 8, 2/20/73-9/1/75, p. 75; Commandant to Board of Officers, Jan. 2, 1874, 181-45, 9/17/72-4/13/78.
near or in contact with the enemy ship. Such tactics could be best performed by relatively small, fast, highly maneuverable craft. However, a torpedo boat needed some protection against gun fire, since it came in close proximity to the vessel under attack.

*Intrepid*, a 170-foot iron-hulled steam torpedo ram, was one of two experimental torpedo boats built by the Navy in the early 1870s. Isaiah Hanscom, Chief, Bureau of Construction and Repair, designed *Intrepid*, and Admiral Porter was the architect for *Alarm*, constructed by the Brooklyn Navy Yard. Since the boats had certain innovations, the Navy elected to have the hulls built in navy yards and thus maintain a measure of secrecy. The boat designed by Admiral Porter was the more novel, being driven by a "Fowler steering propeller" instead of the normal single screw or double screw. However, the designs for both vessels called for conventional engines, and a private shipbuilder, John Roach, received the contract for their machinery.

Like so many aspects of naval affairs during the period, irregularities surrounded *Intrepid*. Because torpedoes came under the cognizance of the Bureau of Ordnance, that bureau had formal charge of the construction of *Intrepid*. The signature of the chief of the Bureau of Ordnance appears on the contracts for supplying machinery and iron plates for both torpedo boats. However, as the head of the Bureau of Ordnance explained to a congressional committee in April 1872, he did no more than sign the documents. He did not draft the contracts, did not even closely read them, did not select the contractors, and in no way exercised any oversight in the construction of the two vessels. The Navy official actively concerned with the project was Chief Constructor Isaiah Hanscom. The main suspicion of the congressional committee was that Hanscom made arrangements highly favorable to the contractors.

Several conditions made Congressmen curious about the two torpedo boats. Since the Navy sought to maintain secrecy, why did it not assign fabrication of the engines and machinery to navy yards along with the hulls? Part of the explanation was that in contract with private machine works the Navy could include explicit requirements that the engines operate at a certain number of revolutions and deliver a specific power. In agreeing to such clauses, a contractor guaranteed the performance of his engines. Navy yards gave no such guarantees. Also, the designers of the two torpedo boats wanted to equip them with compound engines. Several private works in the United States manufactured compound engines, but none of the government's yards had yet produced such engines. However, William H. Shock, Acting Chief, Bureau of Steam Engineering, and a former chief engineer at Boston, testified that compound engines indeed could have been built at the yards at Washington, New York, and Charlestown and as cheaply as a commercial establishment.

A law enacted in 1861 provided that:

all purchases and contracts for supplies or services in any department of the Government, except for personal services, when the public exigencies do not require the immediate delivery, ... shall be made by advertising a sufficient time previously for proposals respecting the same.

The Navy did not publicize its need for the engines for the torpedo boats and did not solicit bids. The head of the Bureau of Ordnance held that his bureau was exempt from that requirement. The congressional committee determined that Chief Constructor Hanscom had made the decision to have John Roach build the machinery for the two vessels. A full set of specifications accompanied the contract for the machinery for the boat built at Brooklyn. But for the one assigned to the Boston Navy Yard, Roach received no specifications, only the power requirements. Chief Constructor Hanscom testified that when deciding upon the engine requirements for the boat he designed, he consulted with no other than John Roach as to the feasibility of

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111 Ibid., p. 118.
Plate 15: USS *INTREPID*. The Charlestown Navy Yard built this experimental, metal-hulled torpedo boat in 1873 and 1874. She was launched on March 5, 1874, and spent the period from March 24 to April 17 in the dry dock, during which time, this photograph was probably taken.
the specifications and the costs involved. Roach produced a plan for the engines, which Hanscom accepted, but that plan did not become part of the contract. In essence, it appears that Roach shaped the contract later awarded to him.112

By contract with C. Pennock & Co., Coatesville, Pennsylvania, the Navy secured a superior grade of iron plate for the hulls of the two experimental craft. That plate had a capacity to bear a pressure of 54,000 pounds per square inch. The beams and some of the plates were thirty feet long. The Pennock & Co.'s brand of iron plate, "Eureka," was described as "the best iron made in the market." Again it was Chief Constructor Hanscom who selected the supplier and wrote the contract. As with the engines, there was no effort to advertise for bids and thus pay the least money possible.113

The Boston Navy Yard built Intrepid in Shiphouse No. 92, erected for that purpose. It appears most of the work was performed in 1873. In June of that year, the engines, boilers, and machinery arrived from John Roach's plant on the Delaware. By December, the hull had been completed. To expedite work, the yard's naval constructor recommended that a pilothouse of Miantonomoh be used as well as some other parts of that ship. The yard launched the torpedo boat on March 5, 1874, and she spent a three-week period in dry dock.114

While the vessel was in the dock, the yard received orders from Washington to have her ready for sea by the earliest practical date. The Departments of Equipment and of Steam Engineering prepared outfits for the vessel, and Steam Engineering also made arrangements for the steam trials. Last minute work by the Construction Department included completing the coal bunkers. Shortage of funds in July 1874 caused a suspension of most other activity by the Construction Department, but work continued on Intrepid, which the naval constructor described as then "near completion." The preliminary steam trial consisted of running the engines during parts of three successive days in late May. Chief Engineer Henderson's report indicates a successful trial. "At 62 Revolutions per minute, the engines worked smoothly, all the journals being cool, and at a steam pressure of 60 lbs. per square inch above atmosphere, the boilers are tight." The ship's machinery was subjected to further testing, including a dock trial on August 1. Following that test, Henderson declared the machinery "in every respect ready for sea." Other department heads reported the same condition respecting areas of their cognizance.115

Intrepid went into commission on July 31, 1874, and left the yard four days later for the torpedo Station at Newport, Rhode Island. The crew numbered fifty-five men. The completed vessel had a tonnage of 438, a length of 170 feet, and a breadth of thirty-five. She drew twelve feet of water and had a speed of eleven knots, somewhat slower than originally projected. Iron plating, five inches in thickness, covered the hull. Because of the large quantity of iron used in the construction of the ship, compasses did not work properly. The hull was compartmentalized, so that if a shot penetrated below the water line, only one compartment could be flooded. Originally, the ship had no armament except its ram. Later in her career she acquired four twenty-four pounder guns.116

112 Ibid., pp. 50-51, 55, 70-71.

113 Ibid., pp. 80-82, 232.

114 John B. Roach to Commandant, June 7, 1873, 181-5, Box 18, 7/6/72-7/23/74, p. 93; Pook to Nichols, Dec. 6, 1873, 181-33, Box 17, 11/7/73-12/10/73, p. 85.

115 Naval Constructor to Commandant, Apr. 6, 1874; Equipment Officer to Commandant, Mar. 19, 1874; Chief Engineer to Commandant, Apr. 15, Apr. 18, Apr. 22, Apr. 25, 1874, 181-33, Box 19, 3/14/74-5/14/74; Chief Engineer to Commandant, May 28, 1874; Naval Constructor to Commandant, July 10, 1874, 181-33, Box 19, 5/14/74-7/20/74; Chief Engineer to Commandant, Aug 1, 1874; Inspector in Charge, Provisions, Clothing, Etc., to Commandant, Aug. 1, 1874, 181-33, Box 20, 7/21/74-10/1/74.

116 Inspector of Ordnance to Commandant, July 25, 1874, 181-33, Box 20, 7/21/74-10/1/74; New York Times, Aug. 8, 1874, p. 5.
Sometime in the autumn of 1874, Admiral David Porter examined Intrepid and reported her "a good, strong vessel," capable of "considerable speed." However, she proved rather heavy for a torpedo vessel and did not respond "as handily as is desirable...." Porter judged the ship to be "an admirable ram" and claimed "with her weight and momentum when under way would sink any vessel with which she came in contact without injury to herself." The admiral suggested that Intrepid might do more damage to the enemy as a ram than as a torpedo boat. Equipped with a fifteen-inch gun, she "would be a formidable vessel for harbor defense."17

Intrepid had but brief active career. She spent her first three months in the waters of New England and off the Atlantic Coast and then went into the New York Navy Yard, where she was out of commission until the following August. Again in commission, she nevertheless remained essentially inactive. In 1882, she underwent decommissioning for conversion to a gunboat. That work was never completed, and in 1892 the ship was declared unserviceable and sold.

NEW CONSTRUCTION: VANDALIA

Secretary of the Navy George Robeson did not vigorously prod Congress into appropriations for new construction nor was he satisfied, however, with its meager program. In a maneuver that critics saw as illegal, he arranged for the building of new vessels, using funds the national legislature earmarked for ship repair and purposes other than constructing new ships. This led to the pretense of repairing an existing ship, when an entirely new vessel came into being, sharing only her name with the ship allegedly under repair. Apparently, every navy yard received such a repair or building assignment. The facility at Boston constructed Vandalia, one of the best examples of the unrelatedness between the original vessel and her replacement.

The original Vandalia, an eighteen-gun sailing sloop of war built in the late 1820s, served on the West Gulf Blockade Squadron during the early years of the Civil War. She went out of commission in 1863, and was used as a receiving and guard ship at the Portsmouth Navy Yard. In 1872, she was towed to Boston and there broken up. The second Vandalia, a screw sloop, was one hundred feet longer than her namesake and had three times the tonnage.8

The Boston yards first became involved in the Vandalia project in February 1872, when it received orders from Robeson to have Sabine towed to Portsmouth and to bring back the first Vandalia. Sabine, a sailing frigate, had received repairs at Boston during 1871. At Portsmouth, she served as the new receiving ship. The old Vandalia arrived in Boston in early April and entered the dry dock on April 11. The docking log records the entry of the ship, but not her exit, and it appears she was broken up in the dock.9

Construction of the second Vandalia proceeded at a leisurely pace. The keel was laid in 1872, and the hull launched October 23, 1874. Meanwhile, the Steam Engineering Department made castings for the ship. A cut in Construction Department funds in July 1874 resulted in the discharge of many workers and retarded progress on the ship. Naval Constructor Pook informed the commandant that "such work as was required upon the 'Vandalia' laying deck plank and with a few Calkers to prevent further damage to the planking by shrinkage was continued." Pook recommended fitting the vessel with a steam-powered anchor hoisting engine, instead of a manually operated capstan. Cdr. Stephen B. Luce, Equipment Officer, suggested another innovation, utilization of "French Reefs" on the topsails, instead "of the old method of using reef points." Luce claimed "the method known as 'French Reef' had been in use in the French & English navies

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18 DANFS, vol. VII, pp. 461-62. DANFS incorrectly states that the first Vandalia was broken up at Portsmouth.

19 Secretary of Navy to Commandant, Feb. 2, 1872, 181-11, Box 8, 11/16/70-3/3/73; Docking Log, 181-60.
for the past 25 years" and that it "possesses many advantages, being lighter, and obviating the fouling of running rigging so common where points are used."

Washington directed that *Vandalia* be ready for sea by December 1, 1875. That proved impossible because of a series of delays. Again a hassle rose between Ordnance and Construction about lighting arrangements in a magazine. The belated arrival of two copper plates ordered from the Washington Navy Yard delayed completion of the ship's rudder. Similarly, the failure of the Bureau of Ordnance to forward pivot circles stalled work on the ship's ordnance outfit. Several composition stern plates stored in the iron platers' shop could not be found, and a board of three officers was created to investigate what appears to have been a theft. The Navy had ordered the retubing of boilers in several of its ships under construction, such as *Adams* and *Essex*. Retubing *Vandalia*'s boilers contributed to the delay. The manufacturer of radiators ordered for the ship sent the wrong size. A shortage of funds prevented both the equipment officer and chief engineer from hiring the number of workers desired. Between November 17 and December 11, 1875, the ship was in dry dock. Probably at that time, the rudder was installed and work performed on the boilers. The ship entered commission on January 10, 1876, and was deployed with the European Squadron.

**DONALD MCKAY, *ADAMS*, *ESSEX*, AND THE BOSTON NAVY YARD**

The only significant congressionally authorized naval building program of the Grant years was the construction of eight sloops of war. The House Committee on Naval Affairs reported a new construction bill in 1872, and debate ensued on the number, size, and character of the proposed ships. The most controversial matters were where the ships should be built and whether in private or government yards. The house voted to build six vessels with the provision that half of them be constructed in private shipyards. The Senate had somewhat different ideas and increased the number of ships.

The final version of the bill, passed in February 1873, provided for eight new so-called "sloops of war." Several different ship designs were to be employed, and the vessels were to be built under a variety of circumstances. Three were to have iron hulls, the others wooden. Congress provided for distribution of construction over a number of states and sections. One ship was to be built in Norfolk; three on the Delaware; one in Brooklyn; and three in New England. Private builders would construct five of the vessels, including the three with iron hulls. Each of the government yards at Norfolk, Brooklyn, and Portsmouth was to build one vessel. Also, the Portsmouth yard would provide the materials and be the site for construction of another, but the work performed by a private contractor. The third of the New England ships would be assigned to a private builder who would have special privileges in the Boston Navy Yard.

The terms and the implementation of the act of 1873 resulted in the Boston Navy Yard being the site of part of the work on two of the sloops of war. Donald McKay, a Boston shipbuilder, won the contract for construction of the hull of what became *Adams*. The Boston yard provided the oak frame and other materials for the vessel. At various stages in her construction, the ship was docked or berthed at the yard. The Portsmouth yard constructed the hull of *Essex*, for all practical purposes a sister ship of *Adams*. After

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120 DANFS, vol. VII, p. 461; Pook to Nichols, July 8, July 10, 1874, 181-33, Box 19, 5/14/74-7/20/74; Naval Constructor to Commandant, Sep. 4, 1874, 181-33, Box 20, 7/7/74-10/17/74; Naval Constructor to Commandant, Oct. 5, Oct. 20, 1874, 181-33, Box 20, 10/3/74-12/7/74; Luce to Parrott, Oct. 15, 1872, 181-33, Box 13, 9/28/72-11/16/72; *New York Times*, Oct. 24, 1874, p. 5.

121 Chief Engineer to Commandant, Nov. 13, Nov. 15, Dec. 1, 1875; Assistant Naval Constructor to Commandant, Nov. 9, 1875; Ordnance Officer to Commandant, Nov. 5, Nov. 13, 1875; Equipment Officer to Commandant, Nov. 13, 1875; Naval Constructor to Commandant, Nov. 15, 1875, 181-33, Box 23, 11/4/75-12/31/75; Nichols to Board of Officers, Nov. 18, 1875, 181-45, 9/17/72-4/13/78.


launching, the incomplete Portsmouth hull was towed to the Boston yard and turned over to McKay, charged
with finishing her well as \textit{Adams}. A private contractor constructed \textit{Enterprise} in the government yard at
Portsmouth, and some of the materials used in her were provided by the yard at Boston. The Boston
ropewalk manufactured the cordage for all eight of the ships in the building program.

<table>
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<tr>
<th>Name</th>
<th>Tonnage</th>
<th>Length</th>
<th>Beam</th>
<th>Draft</th>
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<td>200</td>
<td>32</td>
<td>13'0&quot;</td>
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<td>20'6&quot;</td>
<td>Brooklyn Navy Yard</td>
</tr>
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</table>

\textbf{SOURCE: Dictionary of American Naval Fighting Ships}

Construction of the hull of \textit{Adams} and completion of that vessel and of \textit{Essex} fully engaged the
administration of the Boston Navy Yard. The yard's commandant and naval constructor served as the
intermediaries between the Navy Department and McKay, made the progress reports on \textit{Adams} and \textit{Essex},
initiated the paperwork necessary for periodic payments to the contractor, and essentially had responsibility
for insuring the contractor complied with the contract and other agreements. The Atlantic Works, a machine
shop in East Boston, constructed and installed the machinery in both \textit{Adams} and \textit{Essex}.\textsuperscript{124}

The Bureau of Construction and Repair had primary responsibility for oversight of the 1873 building
program. Isaiah Hanscom, Chief Constructor and head of the bureau, was the Washington official mostly
concerned. For each of the eight vessels, Hanscom's bureau prepared specifications, which were printed and
made available to potential bidders. Donald McKay and several other shipbuilders submitted bids for the hull
to be constructed at Boston. To insure that the contract went to a party with the ability to fulfill its terms,
the Navy ordered inspection of the facilities of bidders. At the direction of Hanscom, Commandant Parrott
appointed a board of three officers from the Boston Navy Yard, who visited McKay's plant in September 1873.
They reported that the would-be contractor had the facilities, capabilities, and securities required.\textsuperscript{125}

Sometime prior to November 1, 1873, the Navy Department decided to grant McKay the contract for
construction of the hull to be built at Boston. The contract, formally signed on November 8 in Washington,
bound McKay to build, equip and fit the hull in conformity to the specifications and drawings annexed. Any
omissions in the specifications or contract were to be resolved in favor of the United States. The Navy would
designate an inspector, who had authority to reject any material or work he judged to be defective. McKay

\textsuperscript{124} When visiting the Boston yard in the March 1876, the subcommittee of the House Committee on
Naval Affairs displayed great interest in the arrangements between McKay and the Navy. In addition to verbal
testimony, it collected documentation. Essentially, the commandant provided the committee with a copy of
every letter, telegram, or other evidence in the yard files relating to \textit{Adams} and \textit{Essex} and matters pertinent
to the Bureau of Construction and Repair. Those documents were included as an appendix in the report of
the subcommittee. That appendix is the best single source of documentation on the yard's role respecting the
two vessels; Committee on Naval Affairs, \textit{Testimony Taken...Boston Navy-Yard}, Mar. 20, 1876, pp. 275-375.

\textsuperscript{125} Hanscom to Commandant, Sep. 9, 1873; Commandant to Three Officers, Sep. 11, 1873; Board to
Commandant, Sep. 11, 1873; Commandant to Hanscom, Sep. 13, 1873, \textit{Testimony...Boston}, pp. 297-98.
agreed to provide all materials for the hull, except the live oak timber, which would be supplied by the United States. Launching was to occur within six months, meaning on or before May 8, 1874. The agreement called upon McKay to make the hull available during a three-month period to the contractor for the machinery. Unless the machinery contractor did not complete his work on time, McKay agreed to deliver the finished ship within nine months, on or before November 8, 1874, and to pay a penalty of $50 a day if the vessel was not completed on time. For his efforts, McKay would receive $148,000 in ten equal payments, to be made as the work progressed, reserving ten percent of the entire amount, which would be paid only when the vessel was accepted by the Navy. At some point, the original contract came to bear a penciled notation, "N.B. Spars will not be included in above. Per order of bureau, July 22."126

These are the principal provisions of the contract which the administration of the Boston yard had responsibility for enforcing. That the commandant and McKay should sometimes be in disagreement is not surprising. What is surprising in that the bureau chief in Washington oftentimes sided with the contractor. The role of the Boston Navy Yard in the construction of Adams went beyond that indicated in the contract. The yard provided much of the material and articles and did some of the work in the construction of the ship. It also furnished McKay with tools, fuel, and the use of the dry dock and other facilities.

Even before the formal signing of the contract with McKay, the bureau was inclined to give the builder benefits not stipulated in the agreement. Prior to the awarding of the contract to McKay, the Portsmouth yard commenced construction of the hull assigned it. On November 1, Isaiah Hanscom issued instructions that the moulds and bevelings, that is templates and angle patterns, for the Portsmouth ship should be sent to Boston for use for McKay's sloop. More importantly, he ordered that the frame for the McKay sloop "be got out" under these moulds and bevelings. This ultimately was taken by McKay and by officials at the Boston yard as instructions for the yard to cut and mould the pieces for the sloop's frame. When yard workmen began this project cannot be determined. The work was in progress at the end of January 1874, when Hanscom directed the frame be delivered to McKay without delay. Not until April 28 did the yard complete and deliver the last of the frame. That circumstance led McKay to claim that the penalty clause in his contract should not be triggered, since the final delivery from the yard was not made until ten days before the date established in the contract for launching of the ship.127

The Boston yard did more than provide the live oak and cut the frame for McKay's ship. The yard received directions from Isaiah Hanscom to supply the contractor "with such articles of timber, lumber, iron, composition, and copper" as were on hand at the yard and which could be spared. In addition, the yard was to perform work for McKay should he ask, namely "bending of the water-ways, plank-sheers, and chocks, and certain galvanizing work." As in the case of articles provided by the yard, this work was to be charged against McKay's contract. In September 1874, McKay explained to Hanscom that castings, both iron and composition, as well as other types of iron work could be best made at the yard, and he asked that such work be done for him. In addition, he requested "whatever sheet-lead, &c, also whatever brass trimmings may be required about the hull or in the cabin and ward-rooms. . . ."128
In late October 1874, five months behind schedule, McKay launched the hull, having borrowed from the yard items and materials needed for the launch, such as saws and chains. In mid-November, the Atlantic Works informed the yard in Boston and the bureau in Washington that, as a preliminary to installation of the ship's machinery, it was necessary to put in stern work and the propeller. Such action required the docking of the hull, and use of the navy yard dock was sought. By direction of Hanscom and at the expense of the government, McKay's sloop entered the dock on December 1 and remained there for seventeen days.  

By that time, the Portsmouth yard had finished its work on the future Essex, which arrived under tow at the Boston yard on October 31, 1874. No arrangements had been yet made for the completion of the vessel, except that her machinery was to be provided and installed by the Atlantic Works. That company arranged with the yard for the docking of Essex. Four days after Adams exited the dock in December 1874, Essex entered. Probably, the Atlantic Works performed the same operations as it had on Adams, that is external machinery work. Essex remained in the dock until late April 1875. 

The bulk of the work in installing machinery in Adams and Essex was performed at the Atlantic Works wharf in East Boston. Adams was towed to that site in late December 1874, and remained in East Boston for the next four months, during which time the contractor installed engines, pumps, boilers, and other machinery. On May 4, 1875, Adams returned to the yard, and Essex, having been undocked two weeks earlier, went to the Atlantic Works wharf for the installation of her machinery. The Atlantic Works completed that process by June 21, when Essex was towed to the yard. 

Thus by June of 1875, the progress on the two sloops of war consisted of more or less the completion of the hulls and the installation of machinery. Remaining work included masts, spars, rigging, boats, blocks, tanks, casks, furniture, outfits, and stores. Who would complete Adams and Essex had not been officially decided, except that it would not be the Boston Navy Yard. The records suggest that Donald McKay did little on Adams after November 1874, although he had not fulfilled his contract and although he continued to receive his partial payments. In early April 1875, a board of naval constructors convened at Boston to estimate the costs of completing Adams and Essex, other than the work yet to be performed under the original contract with McKay. However, before the reports of that board could be forwarded to Washington, Isaiah Hanscom made arrangements with McKay to complete the two sloops. 

These arrangements later caused the Boston yard commandant some difficulty. Together with the yard's naval constructor, the commandant was expected to sign certificates that the contractor was making satisfactory progress and was entitled to periodic partial payments. It seems that Commandant Nichols had already become dubious about McKay by virtue of his performance under the original contract for Adams. Now McKay had won the approval of the Navy to complete both Adams and Essex. However, no contract had been negotiated covering this second stage. All that existed was a copy of a letter from Isaiah Hanscom to McKay, in which the bureau chief accepted McKay's "propositions of April 12 as modified verbally" on April 17. The letter stipulated that the government would do the work on tanks and casks and the work "usually done by blockmakers to hull and spars." Hanscom also stated that McKay was to be allowed the use of the facilities of the yard, such as the dry dock, the use of tools in shops, and the use of materials in the yard. All...
material for doing the work was to be furnished by the government and delivered to McKay at the storehouses. McKay would be paid $25,000 for completing Adams and $46,000 for Essex.\footnote{Hanscom to McKay, Apr. 17, 1875, Testimony...Boston, pp. 296-97.}

The second phase of the work on Adams and Essex, when McKay had the privilege of working in the yard and utilizing yard facilities and tools, proved the most troublesome for Commandant Nichols. As soon as he saw the letter of agreement of April 17, Nichols complained to the bureau chief. Since he did not know the contents of McKay’s propositions nor the verbal modifications, the yard commander could not monitor the progress of work nor provide the information necessary for the superintending constructor, at that time John Easby. The Navy’s understanding with McKay had several flaws, and Nichols certainly had fixed on a major one. Hanscom realized the seriousness of the matter, and the commandant’s questions were answered by no less than the Secretary of the Navy, George Robeson, who stated that the agreement with McKay of April 17 was “complete in itself” and “embraces all the work to be done,” an interpretation that shed little light.\footnote{Commandant to Hanscom, Apr. 29, 1875; Secretary of Navy to Commandant, May 6, 1875, Testimony...Boston, p. 318.}

More particular questions arose. Some problems were caused by McKay’s view that the Navy’s obligations extended to off-yard activities. McKay had the privilege of working in the yard and the yard was to provide him with all materials. However, the contractor was free to carry on his work elsewhere as well. Essex remained at the Atlantic Works at East Boston from May 4 to June 21 and McKay worked on her there. McKay demanded that the yard provide him with materials, which he intended to remove for work elsewhere. His demand included even such articles as coal for forges and oil for mechanical purposes. Nichols contended that no means existed to insure that the materials and articles McKay took from the yard were used for the two sloops. Moreover, the commandant stated that the provisions of the agreement implied that the work should be done within the yard. Secretary Robeson decided that only for work in the yard would the government provide fuel and lubricants and that only material necessary for construction of the vessels should be taken from the yard. Whether or not McKay had the right to remove from the yard borrowed tools was another issue. Hanscom directed that borrowing tools was permissible, so long as McKay provided receipts and accurate accounts were maintained. The problems arising from McKay’s working on Essex in East Boston ended on June 21 when tugs moved the ship to the Boston Navy Yard.\footnote{Commandant to Hanscom, May 21, 1875; Robeson to Commandant, May 24, 1875; Hanscom to Commandant, June 10, 1875, Testimony...Boston, pp. 321, 322.}

Another category of problems concerned personnel. By act of Congress, federal employees worked eight hours a day. Industrial workers in the private sector had a ten-hour day. Since the McKay agreement required the yard to furnish tools and shops, it was necessary for some yard employees to be present whenever the McKay force was at work. This involved extra expense for the Navy. Robeson directed that the commandant could employ engineers and firemen to run the tools during the additional two hours, paying them the same hourly rate as in a navy yard work day. Nichols discovered that after the normal yard work day ended, McKay’s workers roamed around the nearly deserted yard. The commandant informed the contractor that orders had been given to expel permanently from the yard anyone found in areas in which he did not belong.\footnote{Commandant to Secretary of Navy, May 6, 1875; Secretary of Navy to Commandant, May 1, 1875; Commandant to McKay, Aug. 6, 1875, Testimony...Boston, pp. 318, 319, 324.}

Doubtless Donald McKay had no intention to defraud the Navy, and there is no evidence that he did so. However, as a businessman, he sought to reduce his own costs. This meant getting the Navy to do as much for him as possible. In that endeavor, McKay had several advantages. Contractual confusion prevailed. With respect to Adams, there were two understandings, the original contract of November 1873 and the agreement of April 1875. Logic might point to the conclusion that if a particular facet in the construction of
Adams was not covered by the first contract, it would be in the second. However, logic was not necessarily in McKay’s interest, and when questioned about omissions or defects, he alluded to whatever understanding aided his position. The huge gaps in the letter agreement of April 1875 certainly were a boon to the contractor. He enjoyed another advantage, the assistance of men in high positions, namely Isaiah Hanscom, Chief of the Bureau of Construction and Repair, and George Robeson, Secretary of the Navy. Of all the many questions that arose concerning the building of Adams and Essex, few were decided by the Department in Washington in a manner adverse to McKay’s interests.

When queried by Commandant Nichols, Hanscom explained that certain understandings had been reached with McKay concerning the first contract. As evident in the note in pencil at the end of the contract, McKay was relieved of providing the spars for Adams. Not included in the printed portion of the contract or any penciled amendments were agreements to change the plans for the ship’s cabin, to delete the requirement of quarter galleries, and to exempt the contractor from providing boats for the sloop. As in other instances Nichols had not been advised of these alterations.

Subsequent modifications of and departures from the contract also benefitted the contractor. John Easby, the Boston yard constructor and the Navy’s superintending inspector, observed that the plans included an air passage in one section of the hull, necessitating the building of a bulkhead. The specifications did not mention the bulkhead, and because of that omission, McKay refused to erect it. This would appear to be a situation covered by that clause of the contract that stipulated that omissions would be decided in favor of the government. However, when Nichols referred the matter to Hanscom, the bureau chief consulted with Robeson, who informed the commandant that “for the present air passages will be omitted” from Adams. In July 1875, a board of engineering officers appointed by the Bureau of Steam Engineering conducted trials of the machinery in Adams. Those officers noted in their report that the specifications called for a shaft alley constructed of iron. However, McKay had used wood for the alley. There is no evidence that McKay was directed to remedy this deviation from the contract.

The plans for both Adams and Essex required masts in two sections. In October, McKay stepped the lower sections, but objected to putting the tops on, an activity Nichols regarded as properly belonging to the contractor. Again, the authorities in Washington sided with McKay and directed that the yard’s Construction Department put on the tops of the masts.

When informing the yard of the decision about the masts, Hanscom asked when Adams would be completed. By that time, the machinery on both ships had been installed, tested, and accepted. What remained was completion by McKay of his work, such as coppering the bottom of Adams, and outfitting by the Equipment Department. The yard equipment officer estimated that his department would require six weeks. A serious antagonism between the commandant and McKay emerged when the yard sought to learn when McKay would be finished. Unfortunately, at this time, the yard did not have a naval constructor to monitor the progress of Adams. The functions of superintending inspector descended to the foreman of shipwrights, Benjamin H. Sampson. When Sampson wrote McKay, forwarding the commandant’s question as to the completion of Adams, the contractor responded heatedly. He held that he had encountered much delay and loss because of the difficulty he met in prosecuting the work at the navy yard. He had been refused materials and the use of facilities. As for the completion of Adams, the contractor could not give a projection because

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137 Commandant to McKay, Feb 12, 1875; McKay to Commandant, Feb. 19, 1875; Commandant to Hanscom, Feb. 23, 1875; Hanscom to Nichols, Feb. 25, 1875, Testimony...Boston, pp. 312, 315.

138 Easby to Nichols, May 15, 1875; Robeson to Nichols, May 24, 1875; Report of Board on Trials of Engines of Adams, July 12, 1875, Testimony...Boston, pp. 320, 342-43.

139 McKay to Naval Constructor, Oct. 6, 1875, 181-5, Box 19, 7/23/74-3/28/76, p. 128; Commandant to Hanscom, Oct. 12, 1875; Hanscom to Commandant, Oct. 12, 1875, Testimony...Boston, pp. 325, 326.

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of the work yet to be done by the Equipment Department and other yard units.\textsuperscript{140}

In the ensuing correspondence, Nichols demonstrated he could be as bristly and huffy as McKay. As evident in his testimony before the House subcommittee in the following spring, Commandant Nichols developed qualms about McKay and about his relationship with Hanscom and Robeson. However, it seems unlikely that McKay and Nichols regarded their differences as personal affronts. Neither McKay nor the Navy could take any pride in the fact that both \textit{Adams} and \textit{Essex} should have been completed by the spring of 1875, yet in October of that year, no one could say when they would be finished.

When McKay charged the commandant with responsibility for the delay in completing the contract, Nichols issued a denial and demanded McKay make specific accusations. McKay cited an order of October 18 prohibiting the delivery of material to McKay for out-of-yard use after 2:00 o’clock. According to the contractor, this order demonstrated the commandant’s obstructionist actions and also indicated to McKay that nothing would be gained at that time by a detailed listing of complaints. McKay added fuel to the fire by stating that the commandant had caused him financial loss, which compelled him to make a claim against the government. Nichols denied he gave the order concerning the delivery of material. He also noted that previously McKay had made no complaints against the commandant. Nichols announced he was referring McKay’s charges to Washington.\textsuperscript{141}

This sparring occurred while work on the sloops was supposed to be continuing. McKay manipulated the unfortunate shipwright foreman into making inappropriate requests on behalf of the contractor, such as an inspection by the Navy of the masts and spars and related iron work on \textit{Adams} and \textit{Essex} to determine if McKay had complied with the contract. Also Sampson advised the commandant that the Navy should acquire material for graving, or coppering, \textit{Adams}, since McKay refused to do so. Nichols explained to Sampson that the contract did not provide that McKay could call for examinations and reports, that coppering the vessel was part of the original contract, and that McKay should provide the material. However, to avoid further delay and, subject to the approval of the Bureau of Construction and Repair, the Navy would supply the contractor with the material for the graving. On October 19, the ship entered the dry dock of the Boston Navy Yard and the coppering was done prior to her undocking on November 3. In the meantime, McKay communicated to Hanscom his views on graving \textit{Adams}. Thus, somewhat out of the blue Nichols received instructions from Washington to the effect that \textit{Adams} was to be coppered "as per contract."\textsuperscript{142}

Previously, Isaiah Hanscom sought the intervention of the Secretary of the Navy, when Commandant Nichols raised embarrassing questions about the McKay arrangement. Nichols could also play that game. On October 25, clearly angry with McKay and Hanscom, Nichols wrote directly to Secretary Robeson, forwarding the correspondence with McKay. Nichols noted that McKay started to complain when the yard’s naval constructor was absent because of illness, leaving only the foreman of shipwrights, who knew little of the arrangements with McKay. The commandant felt compelled to defend the activities of the naval constructor, John Easty. Nichols ended his letter with a request that McKay be required to make specific charges against the commandant so that they could be answered or an investigation be conducted. On the same day as his letter to the Secretary, Nichols wrote to Hanscom about the bureau chief’s directions for coppering \textit{Adams}. Nichols protested that this matter had not been raised by him, but "outside this office," implying that Hanscom was following the wishes of outsiders, probably McKay himself, and was not making his decisions

\textsuperscript{140} Commandant to Hanscom, Oct. 14, 1875; McKay to Commandant, Oct. 16, 1875, \textit{Testimony...Boston}, pp. 326, 327.

\textsuperscript{141} Commandant to McKay, Oct. 18, Oct. 23, 1875; McKay to Commandant, Oct. 22, 1875, \textit{Testimony...Boston}, pp. 327-28.

\textsuperscript{142} McKay to Sampson, Oct. 22, 1875; Sampson to Commandant, Oct. 22, 1875; Commandant to Sampson, Oct. 23, 1875; Endorsement, Sampson to Commandant, Oct. 23, 1875; Hanscom to Commandant, Oct. 25, 1875, \textit{Testimony...Boston}, pp. 328, 329.
on information of senior officers on the spot and in charge.143

Perhaps Nichols’ appeal to the Secretary of the Navy worked. McKay in his subsequent dealings with the yard commander proved more agreeable and even apologetic. Nichols continued to accuse the contractor of taking advantage of the absence of a naval constructor. That void was filled by the assignment to the yard of an assistant naval constructor. However, eyebrows must have been raised by the identity of this particularly officer, John. F. Hanscom, a relative of the bureau chief. That appointment proved temporary and within several weeks, John Fernald was appointed as the yard’s naval constructor.144

Regardless of the relations among the various individuals, progress on the two sloops of war remained slow. McKay had received nine of the ten payments for the original Adams contract. In addition to the tenth payment, there was also due him the reservation of ten percent, payable only when the Navy accepted the ship. Because of the large volume of materials and services supplied by the Boston yard to McKay during the first stage of construction, there was no certainty that the contractor was entitled to further funds. In the meantime, he was receiving periodic payments for the completion of both Adams and Essex. In early December 1875, because of a shortage of government funds, work by the yard on Adams and Essex was suspended. Since McKay would not be paid in full until the various departments had completed their fitting out of the two ships, little progress occurred. During testimony before the congressional subcommittee at the yard in March 1876, it was reported that hearsay in Boston shipbuilding circles had it that McKay “cannot get his money, and is not in any hurry to finish the ship; that he gets his bills through, but does not get his money.”

The Navy Department became impatient for the ships, and in April 1876 directed the commandant to have Adams prepared for sea. McKay stated that if he encountered no hindrance in receiving materials from the government and no delay caused by work by yard departments on the vessel, he could be finished by June 1, if not before. Nichols instructed the naval constructor to afford McKay all facilities which his contract provided and to “avoid anything which may delay him or even remotely give him grounds for complaint.” Perhaps McKay came close to meeting the June 1 estimate. Adams went into commission on July 21. The ship remained in the yard, being docked briefly in early August. It is unknown when Adams finally sailed, but that departure was in time to permit her to serve on the North Atlantic Station during the latter months of 1876.145

Although launched before Adams, Essex was completed somewhat later. The hull that arrived at the Boston Navy Yard at the end of October 1874, required more work from McKay than her sister ship. The Atlantic Works installed the machinery in Essex after finishing with Adams. A board of officers examined Essex in April 1876 and determined that the Bureau of Construction and Repair had yet to do considerable work before the vessel was ready for sea. The Portsmouth Navy Yard had responsibility for building her boats and making her sails. Delivery of those items was slow, preventing McKay from proceeding with his work. In July 1876, the Boston yard’s naval constructor reported that the exposure to the sun had shrunk the ship to the extent that the yard force had to recaulk her. Essex was operational by late September 1876, and went

143 Commandant to Secretary of Navy, Oct. 25, 1875; Commandant to Hanscom, Oct. 25, 1875, Testimony...Boston, pp. 326-27, 329.

144 McKay to Commandant, Oct. 27, 1875; Commandant to Hanscom, Oct. 28, 1875; J. F. Hanscom to Commandant, Nov. 1, 1875, Testimony...Boston, pp. 330-31.

145 Testimony of John W. Easby, Mar. 22, 1876, Testimony...Boston, p. 96.

146 Secretary of Navy to Commandant, Apr. 12, July 20, 1876, 181-11, Box 9, 9/6/75-7/2/77, pp. 54, 70; McKay to Commandant, Apr. 17, 1876, 181-5, Box 29, 3/25/76-6/14/78, p. 8; Docking Log, 181-60; DANFS, vol. I, p. 9.
into commission on October 3, 1876. Like Adams, Essex reported to the North Atlantic Station.47

The Atlantic Works of East Boston had the contract for the manufacture and installation of the machinery in both Adams and Essex. Commandant Nichols had none of the difficulties with that contractor as plagued his relationship with McKay. Moreover, the House Committee on Naval Affairs, as evident in the account of the proceedings of its subcommittee at the Boston yard and in its final report, indicated no problems in this aspect of the two sloops of war.

The Atlantic Works followed the same basic schedule for both vessels, Adams being the first. In December 1874, the ship went into the Boston yard dry dock at the request of the Atlantic Works, which during a two-week period installed stern work and the propeller. Upon being undocked, the ship went to the wharf of the Atlantic Works in East Boston for a four-month stay. At this stage, the ship received her boilers, engines, and other machinery. That work was complete in late April, and tugs moved the ship back to the navy yard in early May. Consistent with the contract, the Atlantic Work also delivered to the yard spare parts, machinery stores, and other items for the fitting out of the vessel.48

The Bureau of Steam Engineering in March 1875 issued directions for convening a board of engineers at the Boston Navy Yard to conduct the trials of the machinery. Those trials were held for Adams in two stages in the following summer. In the second week of June, Adams received forty tons of coal, and arrangement were made to assign firemen to her. The fires were lit on June 22, and the official trial began on June 26. The bureau's instructions of March directed that the ship be secured to the dock, that she be so ballasted as to raise the screw out of the water, and that the engines be run so as to generate 560 horsepower and achieve seventy revolutions per minute. The most demanding part of the instructions for this dock trial was the requirement that the engines be subjected to "144 hours of continuous running." Perhaps the Bureau of Steam Engineering had second thoughts about this part of the trial. After twelve hours, defects in the condenser caused the engines to be stopped for repairs. Those repairs required several weeks. In the meantime, the bureau chief directed that the trial be closed "as soon as the board is satisfied the machinery has shown itself desirable and efficient." On July 8, the trial resumed, and the engine ran at intervals, "but without any more satisfactory results." The board reported a dozen specific defects and made recommendations for improving the engines, boilers, and other machinery.49

It appears that Adams remained at the navy yard, where the Atlantic Works made repairs and adjustments. The bureau directed the convening of a new board, and a second trial took place in mid-August. Apparently, the machinery functioned in a satisfactory fashion. A month later, Essex began her trial with similar results. In his annual report dated November 13, 1875, the Chief of the Bureau of Engineering reported that the engines of Adams and Essex and four other of the eight sloops had been "completed and successfully tried."50

147 Board of Officers to Commandant, Apr. 13, 1876, 181-45, 9/17/72-4/13/78; Equipment Officer to Commandant, July 11, 1876; Naval Constructor to Commandant, July 22, 1876 181-33, Box 24, 5/176-10/21/76, pp. 75, 81; Acting Secretary of Navy to Commandant, Sep. 29, 1876, 181-11, Box 9, 9/6/75-7/3/77; DANFS vol. II, p. 367.

148 Chief, Bureau Steam Engineering to Commandant, June 9, 1876, Testimony...Boston, p. 340.

149 Chief, Bureau of Steam Engineering, to Commandant, Mar. 13, 1875; Telegram, Chief, Bureau of Steam Engineering, to Commandant, June 30, 1875; Board of Officers to Commandant, July 12, 1875, Testimony...Boston, pp. 340, 341-43.

150 Commandant to Board of Officers, Aug. 9, 1875; Atlantic Works to Commandant, Aug. 10, 1875, 181-5, Box 19, 7/23/74-3/28/76, p. 112; Acting Commandant to Chief, Bureau, Steam Engineering, Aug. 21, 1875; Commandant to Board of Officers, Sep. 18, 1875, 181-45, 9/17/72-4/13/78; Annual Report, Secretary of Navy, Nov. 29, 1875, House Ex. Doc., vol. III, parts 3-4, 44-1, USSS No. 1679, p. 117.
However, the Bureau of Steam Engineering had decided to change some of the tubing in the boilers of both *Adams* and *Essex*. The Navy ordered 832 new tubes from the American Tube Works and made arrangements with the Atlantic Works to install them. In addition, the East Boston firm undertook other work, particularly to modify the funnel by reducing it by six feet. Chief Engineer H. H. Stewart of the Boston Navy Yard served as the inspecting officer. For the additional work, the East Boston company received $1800 for each of the two vessels.\(^{131}\)

At the same time as the Atlantic Works engaged in the retubing and stack modifications, the yard's Department of Steam Engineering attended to work not covered by the original or subsequent contracts. Such matters involved a variety of adjustments, changes, and replacements in the machinery itself and also work on ladders, bunkers, and water tanks. On December 9, Chief Engineer Stewart reported that there remained fifteen days of work for his department. However, all activity at the navy yard was suspended as of that date because of shortage of funds. The Atlantic Works finished its work by the end of January 1876, as evident in the appointment of a board to examine *Essex* and insure that the contract had been complied with.\(^{132}\)

In May of 1876, the Department of Steam Engineering of the Boston yard still had work to do on the two ships, but because of reduction in forces, only *Adams* received attention. After *Adams* went into commission on July 21, the yard's chief engineer advised the commandant that he would need twenty-five days for his workmen to complete the remaining machinery work on *Essex*. Among the last activities of the yard with respect to *Essex* was participation by three officers in the vessel's speed tests in Boston Harbor in October 1876.\(^{133}\)

The departments of the Boston Navy Yard most actively involved in the sloop of war program were Construction and Repair, Steam Engineering, and Equipment. The first two units had a role in constructing and completing *Adams* and *Essex*. The Equipment Department manufactured the sails and rigging outfits for those two vessels and also provided fiber and wire rope for all the ships in the program.

The first activity of the Equipment Department of the Boston Navy Yard was preparation of wire rigging for the sloops. According to the equipment officer, there were three rigging plans. The sloop constructed at Brooklyn was unique, being larger than the other seven. All seven were barque rigged. Six had identical rigging designs, but the seventh, McKay's sloop, was to have "a long lower mast and a top and to'gallant mast in one," making her different from the others. Specific requisitions for wire rigging arrived beginning in late 1874. By February 1875, rigging had been made and forwarded for five of the sloops, and work was in progress for two others. It took three weeks to prepare the rigging for each ship.\(^{134}\) The remaining vessel was McKay's sloop. The Boston equipment officer, not content to wait, requested authority to begin assembling the rigging in February 1875 in expectation that the sloop would shortly arrive in the yard.\(^{135}\)

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\(^{132}\) Chief Engineer to Commandant, Nov. 13, 1875, 181-33, Box 23, 11/4/75-12/31/75, p. 41; Stewart to Commandant, Dec. 9, 1875, *Testimony...Boston*, p. 353, Commandant to Board of Officers, Jan. 20, 1876, 181-45, 9/17/72-4/13/78.

\(^{133}\) Chief Engineer to Commandant, May 31, July 24, 1876; Commandant to Board of Officers, Oct. 6, 1876, 181-45, 9/17/72-4/13/78.

\(^{134}\) Equipment Officer to Commandant, Feb. 23, 1875, 181-33, Box 21, 2/11/75-5/1/75, p. 21; Assistant Equipment Officer to Commandant, Dec. 17, 1874; Equipment Officer to Commandant, Dec. 30, 1874; Equipment Officer to Commandant, three letters, all dated Jan. 5, 1875, 181-33, Box 21, 12/7/74-2/13/75, pp. 29, 61, 90-92.

\(^{135}\) Equipment Officer to Commandant, Feb. 10, 1875, 181-33, Box 21, 12/7/74-2/13/76.

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Production of fiber rope came next. Work began on 18,000 pounds of cordage for *Enterprise*, the first of the sloops to be launched. Some discrepancies were found between requisitions and the quantities listed in allowance books, but providing the eight sloops with cordage and rigging appears to have been carried out without difficulty.\(^{156}\)

The Equipment Department, Boston Navy Yard, had charge of assembling and installing Equipment articles for *Adams* and *Essex*. Some of the articles came from other yards. Sails and hammocks for *Essex* were made in Portsmouth and shipped to Boston. The Washington yard manufactured chains, anchors, mooring swivels, and other forge products for both *Adams* and *Essex*. The Boston yard Equipment Department manufactured sails and additional canvas goods for *Adams* and some of the canvas goods for *Essex*. The Construction Department, acting on a requisition from Equipment, produced the blocks for *Essex*. The equipment officer devoted much time to the purchase from Boston supply houses of small items, such as furnishings for the ships' dining rooms and wardrooms. The Boston yard's navigation officer played a small role in outfitting the two sloops, arranging for the acquisition and installation of such items as binoculars, compasses, and bunting.\(^{157}\)

**THE YARD IN AN ERA OF CORRUPTION:**

During the Grant presidency, corruption and fraud in public affairs constituted a widespread affliction. Not surprisingly, charges of dishonesty, graft, and corrupt dealings were levelled at the Navy, leading Congress to make several inquiries.

These inquiries often had a highly partisan character, especially after the election of 1874, when for the first time since the Civil War, Democrats gained a majority in the House of Representatives, a control they maintained until 1889. The Republicans retained ascendancy in the Senate, except for the Congressional session of 1879-1881, and they held the White House, except for the first Cleveland administration, 1885-1889. Nevertheless, the ascendancy of the Democrats in the lower house enabled them to use congressional inquiries to embarrass Republicans. In 1876, Congress examined a half dozen areas of the Grant administration, including the Navy Department.

The House Committee on Naval Affairs conducted its investigation, under instructions to "report whether any material belonging to the Government has been fraudulently or wrongfully removed from the navy-yards ... and whether there has been any unlawful combination for the purchase of the same." Also the committee had directions to determine "whether the public money appropriated for the construction of the eight steam-vessels of war ... has been misapplied for political purposes" A special charge was to ascertain "whether any portion of said money, or any other money, ... has been paid to incompetent persons, possessing no mechanical skill, and who have been employed in the Government navy-yards upon the condition, expressed or implied, that they would vote for the nominees of any party."\(^{158}\)

Under this mandate, House subcommittees visited each of the Atlantic Coast navy yards, where testimony was taken and documents collected, all of which were published. A hearing was also held on miscellaneous matters in Washington. The subcommittee of the House Committee on Naval Affairs conducted

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\(^{156}\) Superintendent of Ropewalk to Equipment Officer, Mar. 9, 1875; Equipment Officer to Commandant, Mar. 23, 1875, 181-33, Box 21, 2/11/75-5/1/75, pp. 53, 102.

\(^{157}\) Commandant, Portsmouth, to Commandant, Boston, Oct. 25, 1875; Equipment Officer to Commandant, Dec. 1, Dec. 3, 1875, 181-33, Box 23, 11/4/75-12/31/75, pp. 103, 119; Equipment Officer to Commandant, May 6, June 3, July 11, 1876, 181-33, Box 24, 5/1/76-10/21/76, p. 75; Navigation Officer to Commandant, Sep. 13, 1876 (three letters), 181-33, Box 24, 5/1/76-10/21/76.

\(^{158}\) Committee on Naval Affairs, *Investigations of the Navy Department*, July 25, 1876, House of Representatives, No. 784, 44-1, USSS No. 1712, p. 2.
hearings at the Boston Navy Yard from March 20 to March 27, 1876. Additional testimony pertinent to the
Boston yard was taken in Washington on April 11. The published volume for the Boston Navy Yard consists
of 275 pages of testimony and 154 pages of documents. Fifty-six witnesses appeared, including yard officers,
yard employees, lumber merchants, and others who did business with the Navy. This report contains massive
detail, some of it uncorroborated hearsay. The congressional questioners created suspicions and doubts about
many matters simply by innuendo. The discussion which follows deals only with some of the areas covered in
the inquiry.159

THE MCKAY CONTRACT

When the subcommittee of the House Naval Affairs Committee came to the Boston Navy Yard in
March 1876, it focused much attention on Donald McKay and his contract and agreements with the Navy for
work on Adams and Essex. The inquiry did not disclose criminal wrongdoing on the part of McKay or anyone
else. However, it did reveal the questionable ways in which Navy business was carried out.

First to be summoned before the subcommittee was Commandant Nichols, whose testimony in the
published report required thirty pages. Nichols sought to be factual and accurate. This may have proved
difficult for him because of his own troubles with McKay. Whatever the reason, the commandant erred in
describing how McKay obtained the contract for building the hull of Adams. Nichols correctly explained to
the congressmen that the Navy had not sought bids for completion of Adams and Essex, but he mistakenly
claimed that there had been no advertisement for bids on the contract of the hull for Adams. At least two
other shipbuilders had bid for that contract. Information of a different sort was collected which raised
questions as to why and how McKay obtained the hull contract.160

Several parties testified that the choice had been the result of politicking or lobbying. E. F.
McMichael, himself a shipbuilder, stated that at the behest of McKay he traveled to Washington to persuade
Isaiah Hanscom, head of the Bureau of Construction and Repair, to award the contract to McKay. In return,
McKay had promised to employ McMichael as foreman in the construction project. William A. Simons,
Collector of the Port of Boston, claimed that he had obtained the contract for McKay and had enlisted the
support of Congressman Hooper and General Butler. McKay himself testified at the hearing and stated that
he had known Isaiah Hanscom for thirty or forty years. He also denied making arrangements with McMichael
whereby the latter would be rewarded for winning the contract for McKay.161

Once McKay obtained the contract, the Navy Department, particularly Isaiah Hanscom, improperly
relieved the shipbuilder of the obligation to conform to the requirements and specifications in the agreement.
The contract required the Navy to provide McKay with the timber for the ship’s frame, but it was not obliged
to cut and mould the frame. When the Boston Navy Yard did that task, at the direction of Hanscom, McKay
saved an estimated $8000 or $9000. Commandant Nichols argued that McKay should have put the top
portions of the masts on both Adams and Essex. Again, Hanscom ordered the yard to do the work, thus
sparring McKay that expense. The commandant also believed that there was something amiss with the penciled
notation on the original contract and that McKay should have been required to make the spars for Adams.
Naval Constructor Easby estimated that McKay benefitted by $2000 in being relieved of the requirement for
quarter galleries; $800 on the force pumps; and $6450 for labor on the spars. All told, the Navy’s generosity
amounted to $23,388. In its final report, the Committee on Naval Affairs used the McKay case to demonstrate
that when disputes arose between a contractor and navy yard officers, in this case the yard commandant and
the supervising constructor, the Navy Department favored the contractor.162

159 Testimony...Boston. The final report of the committee is Investigations of the Navy Department, July 25,
1876, House of Representatives, Report No. 784, 44-1, USSS No. 1712.

160 Testimony...Boston, pp. 2, 45.

161 Testimony...Boston, pp. 37ff, 133, 242.

162 Testimony...Boston, pp. 15, 47, 91-93, 325-26, 368.
McKay had a peculiar family network operating on his behalf within the Boston Navy Yard. Simon McKay, brother of the contractor, was hired at the yard by order of the Department in Washington. Simon, along with William Sprague, selected the timber to be used in Adams. Those timbers were cut in the yard mill, placed on a dock, loaded on a vessel, and taken to East Boston. Upon completion of the delivery of the frame pieces, Simon ended his employment at the yard and went to work for brother Donald. Yet another McKay was in the yard. Samuel McKay, a carpenter, received an appointment to the yard before his brother obtained the contract for the sloop. Samuel had been quarterman in charge of getting the frame out. Like Simon, Samuel left the yard and went to work for his brother.163

The family connection attracted the interest of the congressmen in part because of a suspicion that Donald McKay received much more lumber than required for the construction of Adams. Reportedly, McKay's son offered to sell to a private party live oak that originally had belonged to the Navy. Rumors circulated of quantities of government timber being elsewhere in the harbor. Constructor Easby informed the committee that McKay had received 21,559 feet of white oak plank from the navy yard and had returned 11,624 feet. Easby stated that it did not appear that McKay had culled the timber, returning the inferior pieces. Since the Navy deducted from the payment to McKay the cost of materials received from the yard, accumulation by the contractor of surplus timber was not illegal nor was sale of that timber to others. The best the congressmen could do was to infer that McKay profited because he paid the government price for the timber and sold it at market price, presumably higher, thereby engaging in a "good speculation."164 This is an unsubstantiated charge, and, in connection with other matters, the congressional committee was trying to show that the government paid exorbitant prices for the timber it acquired from private timber dealers.

In exploring the McKay matter, the subcommittee pursued one other area. McKay had the privilege of using the yard and did so with respect to a number of operations, including building the boats for Adams. As boatbuilders, he employed men who had worked in the yard's boat shop. McKay approached the yard's foreman boatbuilder, William H. Rigby, and promised to "make it all right with" him if he would supervise the work on the boats. Viewing that as an improper overture, Rigby refused. Rigby did oversee the building of seven boats for Adams, but on behalf of the government, not McKay. Later, Easby formally authorized Rigby to provide such oversight.165

On the basis of information its subcommittees collected at each of the east coast yards, the House Committee on Naval Affairs assembled a general comprehensive report. The majority was hostile to the Secretary of the Navy and condemned him and his administration of the Navy. Respecting the sloop of war program, the committee reported that it found nothing objectionable about the contents or execution of the contracts with Roach and Harlan & Hollingsworth, "but they cannot say this as to the other contractors, Griffiths, who is building Enterprise, and Donald McKay, who is building the Adams and completing the Essex." It noted the presence of McKay's brothers in the yard and the possibility McKay benefitted from speculating in government timber. According to the committee, the sum of $23,388.44 should have been charged to McKay for work performed by the Boston Navy Yard and work on the sloops required of McKay in the original contract and agreements from which he was relieved by order of the Chief, Bureau of Construction and Repair and the Secretary of the Navy. The committee also charged that Chief Constructor Hanscom had authorized payments be made to McKay for work on Adams without the necessary certification by the Boston yard inspecting constructor or the commandant.166

Perhaps the most serious indictment made of the eight sloop program was that only one of the ships, Trenton, proved a significant addition to the Navy. That view was sustained by at least a half dozen line officers and naval constructors. In listing the ships of the Navy and their condition, the committee used the

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163 Testimony...Boston, pp. 141ff, 203ff.

164 Ibid., pp. 115, 151, 161.

165 Ibid., pp. 163-65.

166 Committee on Naval Affairs, Report, July 25, 1876, pp. 115, 116, 69.
same description for *Adams, Essex, and Enterprise*. Each was declared "new ship; boilers dangerous." Doubtless, *Adams* would have been a better ship had Isaiah Hanscom not permitted McKay to cut corners, such as eliminating the air passages and substituting wood for iron in building the shaft alley.

**SUPPLIES AND SUPPLIERS**

During the testimony he gave in March 1876 to the House subcommittee, Commandant Nichols reported an excessive supply of ship timbers in his yard, enough "for the building of a half dozen ships." The quantity exceeded storage capacity, and some of it lay in the open, exposed to the weather. Much of the timber arrived, not through a requisition from the yard's naval constructor, but "on orders from Washington." The W. C. M. Swift firm had delivered three schooner-loads of timber, "perhaps more." Initially, Nichols refused to allow the delivery since he had had no notification about it from the Department. Swift landed the timber elsewhere in the harbor, and subsequently, the commandant "was ordered to receive all the live-oak timber belonging to Mr. Swift in the navy-yard and vicinity." It also appears that Swift delivered more timber than stipulated in his contract with the Bureau of Construction and that the yard was directed to receive the excess. By 1875 and 1876, the yard had completed its new construction, and no grounds existed for any belief that it would be building additional vessels in the near future. Accordingly, the arrangement by the Navy Department with Swift served no purposes other than giving business to the timber contractor.166

One timber dealer, by the name of Jarvis, apparently paid a $500 bribe to the receiving clerk in the Boston yard's Construction Department to secure "the privilege of delivering five hundred [oak] knees." The regular system for paying contractors and suppliers was circumvented, and the dealer received his payment through the receiving clerk. In addition, the dealer did not use his real name, but that of Matthew Keeney, who "kept a corner grocery-store here in Boston, and ... did not know a ship's knee from a bale of hay, but let his name be used as a contractor." Because he believed someone was cheating him, Jarvis complained directly to Commandant Nichols. Nichols had the matter investigated and concluded that "the whole transaction proved collusion and fraud" on the part of the receiving clerk and his subordinates. However, Nichols could not dismiss the bribe taker, because "he was a Department appointee." Even after Nichols informed the Navy Department about the scheme, the clerk was never formally dismissed, although another man was appointed receiving clerk.169

An interesting figure with the Dickensian name of John T.ickey, sometimes doing business as T.ickey & Jewett, supplied all of the lumber purchased by the Bureau of Yards and Docks for the Boston Navy Yard. The purchases originated with the yard's Civil Engineer, Brownell Granger, the most questionable of all of the officers at the Boston station. On the requisitions, Granger allegedly included an estimated purchase price forty percent above the market value of the lumber, and the purchasing paymaster, Charles W. Abbott, simply placed an order at that price with T.ickey. When Abbott appeared before the subcommittee, he was asked whether T.ickey "does or does not exercise some influence in the management of this yard in some way?" Abbott acknowledged that the lumber merchant "exercises a certain kind of influence, a sort of moral influence from being a friend of Senator [Aaron H.] Cragin." What Abbott described as "moral influence," the congressmen regarded as something else, a suspicion confirmed by Abbott later in his testimony. When asked why all lumber orders went to T.ickey, Abbott replied: "If I had bought lumber from any one else, I should not have expected to remain in the office but a month." The paymaster added that "he [T.ickey] should be sure to find out. . . ." When Civil Engineer Granger came before the committee, one of the congressmen labelled T.ickey's connection with the yard as "the grossest fraud" and an "indication of fraud and rascality."167

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167 Ibid., pp. 13, 117.
168 Testimony...Boston, pp. 6-7.
169 Testimony...Boston, p. 13.
170 Testimony...Boston, pp. 67, 171, 187.
Circumstances enabled Trickey to keep tabs on the activities of the purchasing paymaster because they both had their offices at the same location, 21 Kilby Street, Boston. In fact, the Navy subleased rooms from Trickey, who held a lease on the building. Understandably, the congressmen conducting the hearing at Boston showed a great deal of interest in John Trickey and sought to learn more of his operations and his connections with the yard and with the Navy Department. It seems that Trickey provided Granger with estimates of the value of various kinds of lumber, so that in effect, the supplier set the price at which the Navy made purchases from him. In those instances in which the Navy solicited bids for parcels of lumber, Trickey connived to have other dealers submit bids somewhat higher than the price at which he offered to supply the material. In one instance, the Navy sought bids for supplying 6000 feet of white oak. At the urging of Trickey, Pembroke Huckins entered a bid of ninety-five cents per cubic foot, knowing full well that Trickey would underbid him, although he did not know the exact price offered by his fellow merchant. Trickey’s offer of ninety cents per cubic foot won him the contract.1

When they confronted Trickey himself, the congressmen insisted in one transaction the lumber dealer had purchased 70,000 feet of pine plank from another merchant, paying $32 per thousand feet and then turned around and sold 50,000 feet of that lot to the Navy at $55 per thousand and the remainder at $45. Trickey himself allegedly never laid a hand on the lumber. Other allegations against Trickey included a loan or a gift of $1000 from his firm to the Navy’s chief constructor, Isaiah Hanscom. As evident in the testimony of Paymaster Abbott, the belief prevailed that Trickey had sufficient influence in Washington to secure the transfer of yard officers. Trickey denied that he had sought the removal of the naval constructor at the Boston yard, John Easby, but acknowledged that he had spoken to two or three senators about John Lenthall, the predecessor of Isaiah Hanscom as Chief Constructor. Lenthall had refused to approve a payment of $22,000 to Trickey, because the timber he had delivered did not meet the specifications of the contract. When recounting that matter, Trickey stated he had approached several senators, including Charles Sumner of Massachusetts, to secure payment for his delivery of timber, not to unseat Lenthall. The fact remains that within seven months, Isaiah Hanscom replaced Lenthall as head of the Bureau of Construction and Repair.172 Among the individuals called before the congressional committee at Boston in March 1876 was RAdm. Charles Steedman, commandant from 1869 to 1872. He told the Congressman about 2000 tons of coal delivered by four vessels to the yard under contract with S. P. Brown. Boards of officers inspected the coal and recommended rejecting the lot because it was full of stone and shale. The Bureau of Equipment, which at that time had responsibility for obtaining coal for all yard departments, insisted that the coal be sifted and the serviceable coal be accepted by the yard. However, one cargo was condemned in its entirety, but the Secretary of the Navy sent an order to Steedman directing him to receive the coal.173

FUNDING DUBIOUS PROJECTS

The House subcommittee at Boston sought to obtain information to uphold the suspicion that large sums of money were spent by the Navy Department on supplies that were not needed. Also waste occurred by funding dubious projects. In that connection, the congressmen collected testimony about a timber-bending machine purchased by the Navy and erected at the Boston Navy Yard and about arrangements for the development of a method to convert smoothbore cannon into rifled artillery.

The bending machine had been built by John Griffiths and was owned by several individuals, sometimes referred to as the Bending Machine Company. The machine was originally erected in East Boston, and at one time a number of civilian shipbuilders and naval constructors, including Isaiah Hanscom, were invited to observe its operation. According to a private shipbuilder, Isaiah Hanscom then saw little practical

1 Testimony...Boston, pp. 170, 171, 248, 271.

172 Testimony...Boston, pp. 269, 274.

173 Testimony...Boston, pp. 43, 69-70.
value in the machine because of his belief that a mechanically bent straight stick would not be as strong as a naturally crooked stick. In order to promote the machine, the owners had constructed a ship, *New Era*, using machine-bent timbers. However, shipbuilders in Boston condemned the process. One shipbuilder testified before the subcommittee that, if the machine was offered to him, he "should not want it at any price" and that he would "sell it for what it is worth for old junk." In August 1870, the Secretary of the Navy directed Commandant Steedman to establish a board of three line officers and one naval constructor to examine the machine, still in East Boston. The board reported favorably and the report was forwarded to Washington. Commandant Steedman also observed the machine in operation and felt it could be of value to the Navy.174

In October 1871, the Bureau of Construction and Repair entered a contract with Griffiths for the purchase of the timber-bending machine for $160,000. Griffiths agreed to erect the device and to construct a building for it, all at his expense, except for the material for the mill, which would be provided by the yard. Reassembling the machine and constructing a mill over it took six months. At least $30,000 was expended on the machine and its various parts, such as a boiler, engine, and three hydraulic compressors, and perhaps another $20,000 for the building. The individual charged with overseeing the assembly of the machine concluded that "it was rather a failure."175 By this he meant that the machine could do its work of bending timber, but that there was a question whether the timber might break in the process or stay bent.

Naval Constructor John Easby was in the yard in 1874, when the bending mill produced timbers to sheath the outside of the iron hulls of *Miantonomoh* and other vessels of that class. Easby had no confidence in machine-bent timber. He also offered the opinion that it cost more to build a ship with timber produced by the machine than with timber bent by nature. However, Jeremiah Remick, a quartermaster at the bending mill in 1873 and in charge of the operation in 1874, offered testimony in favor of the process. He alleged that only two percent of timber he processed at the mill was spoiled and that the remainder proved as good as natural shapes. The mill produced timber that went into *Vandalia*, namely her chocking, forecastle, poopdeck, plank shears for the poopdeck, and a portion of her water ways.176

The foreman ship joiner in the yard, William Hichborn, informed the House subcommittee that, on verbal instructions from Naval Constructor Hanscom, he and his gang of twelve to twenty men did considerable work on the construction of the timber-bending mill, work that was not charged to Griffiths. When pressed, Hichborn estimated the total value of the work performed by the ship joiners as about $1000.177

The Boston hearing produced conflicting reports about the bending machine. Democrats on the subcommittee sought evidence to support the contention that a device well-known in Boston shipbuilding circles as unworkable had been purchased at a highly inflated price by the Navy, perhaps at the urging of Isaiah and William Hanscom, both of whom had been naval constructors at one time or other at the yard. Isaiah Hanscom, Chief, Bureau of Construction and Repair during the later years of George Robeson's administration of the Navy Department, was regarded by most committee members as one of the leading figures, along with Robeson, responsible for corruption and mismanagement in the Navy.

The Navy Department made several contracts whereby Norman Wiard, of Boston, received $100,000 for conducting experiments in methods to convert heavy smoothbore artillery into rifled guns. The Chief, Bureau of Ordnance, concluded in October 1874, if not before, that the Wiard scheme was "useless." Perhaps, because it knew of the failure of these experiments, the subcommittee at Boston summoned Cdr. George Brown, Inspector of Ordnance at the Boston Navy Yard, and questioned him about Wiard's project. Brown stated that it was well known that experiments of a similar nature had been made in Great Britain, France,

174 Testimony...Boston, pp. 36-7, 40, 73-4.

175 Testimony...Boston, pp. 60-6.

176 Testimony...Boston, pp. 114-15, 200.

177 Testimony...Boston, pp. 118-19.
and Germany "at very great expense" and had "resulted in failure." Under orders from the Bureau of Ordnance, Brown had observed tests of Wiard's guns and projectiles on Nut Island, in Boston's outer harbor, in 1873 and 1874. According to Brown, the experiments "were perfectly worthless . . . a total failure." He believed "that the money was wasted." Some of the 15-inch, 11-inch, 100-pounder guns, and 10-inch Parrotts employed had been provided by the Navy and the Army. Because Wiard used extremely heavy charges, 140 pounds, guns frequently exploded. At each firing, observers and Wiard himself sought safety "in the bomb-proof." Wiard had developed his own projectiles, "mitten shot," which Brown acknowledged offered some possibilities, although it could only be used in guns that Wiard had modified. However, sometimes the projectiles failed to leave the gun and were broken up in the barrel by the force of the powder-gases and from being wedged.178

Brown advanced the opinion "there was a very grave irregularity in this whole Nut Island transaction," since Wiard had complete control over the experiments and the expenditures. Wiard "literally threw away a great deal of money," and "all of his expenses were paid here by the Government." Some of the funds went for public relations, and Wiard endeavored to win the support of newspapers, local government, and scientific and military circles by taking representatives of these institutions and groups out to the island in his vessel Minnehaha.

CIVIL ENGINEER BROWNELL GRANGER AND THE YARD DREDGE

That navy yards had needless positions and superfluous personnel appear as common beliefs. The position of civil engineer, head of the Yards and Docks Department, came under assault during the congressional inquiry at Boston. Critics of that office gained ammunition from the fact that that yard's civil engineer, Brownell Granger, had loaned the yard dredge to a private firm, one of whose principals was his personal friend, and that Granger had made arrangements favorable to that firm and disadvantageous to the government.

When asked about the navy yard position of civil engineer, Commandant Nichols told the congressman: "My opinion ... is that it is simply a waste of money." He continued by saying that "we pay the civil engineer $3,000 a year, when there is really no engineering work that a person of common sense could not perform." Doubtless Nichols and other line officers regarded civil engineers as the most objectionable members of the staff. The commandant contended that "any intelligent naval officer... could perform the duties" and that "a naval officer, say a lieutenant or lieutenant-commander, could take his place" as a means "simply to keep things running straight in that department." One strike against the civil engineer as far as Nichols was concerned was that "he is a civil appointment, and, as a general rule, a political one, too." During his testimony, Granger confirmed the political dimension of his own position when he stated that he had "relied for my appointment upon Senator [Henry L.] Dawes, principally, and Mr. [Henry Lillie] Pierce, and Speaker [James G.] Blaine."179

Doubtless, Nichols was not speaking in the abstract about civil engineers and had in view Granger and the matter of the dredger. As Nichols recounted the incident, in August 1875, Granger had urged that the yard dredging machine be loaned to Charles H. Lewis, a general contractor, who had an agreement with the Boston Harbor Commissioners to dredge a shallow place between the navy yard and the city of Boston. That shallow area constituted an inconvenience for the yard in the movement of naval vessels. With the recommendation of the commandant and with the approval of the chief, Bureau of Yards and Docks, a contract was made between the Navy and Lewis, whereby he would take the yard dredger exactly as it was. The dredger had been out of service for some time, its boiler and machinery removed, and its hull partially sunk. To make the dredger serviceable would have required an expenditure by the government of $2,000. The contract included the provision that Lewis, at his own expense, would put the device in working order, in return for


179 Testimony...Boston, pp. 11, 189.

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which he could use it for ninety days for the work stipulated in the arrangement with the Harbor Commissioners. The dredger was hauled up on blocks, a large hole in her bottom patched, and other repairs made, whereupon she was taken away.180

Subsequently, the Woolley Brothers, a dredging firm, protested to the Collector of the Port of Boston that Lewis employed the navy yard dredge in private work and at a price lower than commercial dredgers could afford to charge. Lewis could underbid other dredging companies because the expenses for the dredger used by Lewis, including repairs, were being paid by the Navy. The Woolley Brothers’ letter went to the Secretary of the Navy, who sent it to Commandant Nichols. When asked, Granger could not give an explanation satisfactory to Nichols, who, at the direction of the Bureau of Yards and Docks had the matter investigated. A board of yard officers reported that, indeed, the cost of repairing the dredger had been paid by the Navy, "with the knowledge and connivance of the civil engineer of the yard." The report and various other documents were sent to the Navy Department, which by March 1876, had done nothing about the matter. An implication arose that the Department did not dismiss Granger, because he himself went to Washington and won the support of Secretary Robeson.181

During his explanation of the affair, Granger informed the congressmen that he was an intimate friend of Charles Lewis, having gone to college with him. Later, they had spent six or seven years in "the western country together." Granger explained that his foreman, Philip Cassidy, and a gang of Yards and Docks workers had done minor work on the dredge, "a small job that took his men about a half an hour," and that the foreman had also allowed several of his gang to be "exchanged with two of his [Lewis's] men on the wharf for that day." According to Granger, the repair of the dredge, ostensibly by Lewis, had taken a month. The civil engineer sought to exculpate himself by claiming that Commandant Nichols gave his approval to the work by the yard on the dredge, that Cassidy and another foreman had ordered work done and had been paid about $40 each by Lewis, and that the time clerk did not inform him that yard workmen were employed in repair of the dredger. Under questioning, Granger did acknowledge that, without the approval of the commandant or the bureau, he had authorized $1300 worth of work on the dredge-boat's rigging and also repairs of an undetermined value on the machinery.182

After submission to the Department of the findings of the board of officers about the dredge, Granger had traveled to Washington for a stay lasting two weeks. Cdr. George Brown, Inspector of Ordnance at the yard, informed the congressmen of a conversation he had with Granger upon his return to Boston. Granger told Brown that "his matters were all settled; that the officers who signed that report would be called to account for doing it; that he had disproved the matters which this board had alleged against him." When a member of the subcommittee asked who Granger had met with in Washington, Brown replied: "He stated that he had seen the Secretary."183

IMPROPIETIES RESPECTING YARD EMPLOYEES

The House Committee on Naval Affairs had a particular mandate to investigate civilian employees at navy yards with respect to competency and the hiring of additional workers to influence the outcome of elections.

When asked by the subcommittee at Boston if his yard employed any persons "who perform no service here," Commandant Nichols replied that such matters "are kept entirely out of my way." However, he then

180 Testimony...Boston, pp. 10, 11.
181 Testimony...Boston, pp. 10-11.
182 Testimony...Boston, pp. 181-93.
183 Testimony...Boston, p. 57.
informed the congressmen about Jeremiah Galvin, "about whose honesty there are some suspicions and it is very questionable... if he earns his $3 a day as inspector of chips." Nichols explained that Galvin, who could not read or write, "came here by an order from the department." That being the case, he could not be dismissed without approval from Washington. Galvin had "been moved from one place to another, and is now inspector of chips."184

Later, Galvin himself appeared before the subcommittee. When asked, he stated that his job was to open seventeen doors of the timber sheds in the morning and shut them at night. In between, "I look after the old wood, and whenever there was chips made, I looked after those chips." Galvin stated that he had been at the yard for six or seven years and had gotten the appointment through Henry L. Dawes and Gen. Nathaniel G. Banks. He could not recall whether or not he had worked in any political campaigns and ducked the question of how he used his vote. Explained Galvin, "I don't know what right I have to tell that. A man don't know probably sometimes when he would miss a vote." The committee did succeed in eliciting from Galvin that he had been recently reappointed because of a letter someone had written for him to the Secretary of the Navy, George Robeson.185

As directed by its mandate, the subcommittee made inquiries about the political dimension in the yard's hiring practices. Particular attention was given to the congressional election of 1874. As Nichols recounted the incident, toward the end of September, "friends of Mr. [Daniel W.] Gooch, or Mr. Gooch's committee" presented to John Easby, naval constructor, a list of the names of twenty men, who the Gooch people wanted the yard to employ. Apparently, fearful of his position at the yard, Easby made out a requisition. After receipt of the requisition, Commandant Nichols contacted the naval constructor to ascertain whether sufficient money existed to pay the additional men. Upon learning that the funds for that month had already been exhausted, Nichols did not approve the requisition and ordered all workers in the Construction Department suspended for the remainder of the month. Two days later, Nichols received a telegram from the Navy Department directing him to make no suspensions in any yard unit. A second telegram instructed him to hire twenty additional workers in the Construction Department. Another list of twenty names appeared, probably the same men as on the first list, and they were hired.186

Late in October, the Chief, Bureau of Construction and Repair, Isaiah Hanscom, was in Boston and sent a letter to Nichols asking him to approve requisitions for the hire of more workers. He noted that "some fifty additional men has [been] allowed from the Chelsea district, and I suppose some more will be required from Gooch's district." He added: "The Administration desires the success of Gooch and [Rufus S.] Frost." Nichols supplied the subcommittee with copies of the telegrams and letters. Several developments seem to have enabled the commandant to readily recall the proceedings. Frost appeared to have won his election, but Gooch was defeated, and the rumor circulated that "nine-tenths of the men who had been employed at the yard had gone back on their employers," that is they had not voted for the Republicans. More importantly, in December after the election, Hanscom, now back in Washington, wrote the commandant that he had noted that in October "the force was largely increased." And he asked Nichols to inform the bureau "under what orders the increase was made"187

Several yard officers informed the subcommittee that the men hired in connection with the 1874 election did little work. Commander Brown stated of "the fall of 1874, when they had that large influx of men," that the foremen and quartermen were unable to control the new workers. Brown said the men were loafing, "standing about doing nothing, or idling."188

184 Testimony...Boston, p. 30.

185 Testimony...Boston, pp. 30, 258-59.

186 Testimony...Boston, pp. 4-5.

187 Testimony...Boston, pp. 421-22.

188 Testimony...Boston, p. 57.
Josiah G. Abbott, the Democratic opponent of Frost, challenged the results of the contest, which led to an investigation by the House Committee on Elections. One charge related to "the giving of employment to a large number of voters in the United States navy yard at Boston . . . for the purpose of inducing them to vote for the sitting member." The Committee on Elections concluded that prior to the contest more than 300 voters from the congressional district in question had been hired at the yard and that the number of employees in the yard increased by five or six hundred men, all of whom were laid off by the first of December. The Committee on Elections recommended to the full house that the election of Frost be set aside and the seat assigned to Abbott.\(^{190}\)

The election frauds, such as occurred at the Boston Navy Yard in 1874, produced an act of Congress in 1876 that specifically prohibited navy yards from increasing their work forces during the sixty-day period before presidential or congressional elections, unless the Secretary of the Navy formally certified the need for such an increase. No such concrete results followed the investigations of the House Committee of Naval Affairs. No one was fired at the Boston yard, although Brownell Granger disappeared from the scene. No changes occurred in navy yard procedures in hiring, in making contracts for supplies or other purposes, or in any other area.

**COMMANDER MAHAN AS NAVY "REFORMER"**

Among the individuals in the mid-1870s convinced of corruption in the Navy Department was Alfred Thayer Mahan. During 1875 and 1876, Mahan served at the Boston Navy Yard. The thirty-five-year-old commander expressed his views in several different settings. During its hearings in March 1876 at the yard, the subcommittee of the House Committee on Naval Affairs questioned Mahan. In addition to his oral testimony, he replied in writing to a circular letter sent by the full committee to certain naval officers soliciting their opinions on a half dozen topics. Most significantly, apart from the congressional inquiry, Mahan was in touch with influential figures in the government. Robert Seager II, one of Mahan's biographer, uses the title "Navy Reformer" for his chapter covering the years 1875-1880, which include Mahan's stint at the Boston yard.\(^{190}\)

Following a two-year assignment as commander of *Wasp*, Mahan was on leave of absence in the summer of 1875 and thus on reduced pay, when he learned of a vacancy in the position of senior aide to the commandant of the Boston Navy Yard. Mahan contacted the Chief, Bureau of Navigation, and successfully applied for the post. On September 1, he reported to Commandant Nichols and began what proved to be a brief tour, ending his career at the yard in the following August.\(^{191}\) Mahan, his wife and two-year-old daughter took up residence in one of the yard's officers' quarters.

When he appeared at the House subcommittee hearings at the Boston Navy Yard on March 24, 1876, Commander Mahan conducted himself in the restrained fashion common among most officers giving testimony before Congress. Their rule of thumb was to be truthful in answering questions of the congressmen, but not to volunteer information. Compared to statements made in other contexts, Mahan's testimony appears almost timid, there being no indication of the contempt he had for those in charge of the Navy Department.

The office of yard civil engineer and the previous and present incumbents of that position at Boston received the greatest attention and criticism in Mahan's testimony. Mahan subscribed to a common view of line officers that civil engineers usually performed no services that could not be provided by others. When asked about "any deficiency in lumber in any department" in the yard, the commander stated that earlier in 1876 he had been a member of a board of investigation that had looked into a shortage in the civil engineer's

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\(^{190}\) *Josiah G. Abbott v. Rufus S. Frost*, June 10, 1876, House of Representatives, Report No. 653, 44-1, USSS No. 1712, pp. 11, 13, 42.


department of "between a half million and a million feet of lumber." The board had concluded "that probably the timber was never received; . . . it was a deficiency caused by false receipting. . . ." The shortage occurred during the tenure of Charles Hastings, who had resigned in April 1874. Mahan informed the subcommittee that, after Brownell Granger succeeded Hastings, irregularities continued in the management of its timber supply by the Civil Engineer's Department. Those irregularities included forged signatures and fraudulent alterations on receipts and order forms. The culprits remained unknown. The board did censure Brownell Granger, because, after being informed of the likelihood of a large deficiency in his department's stock of lumber, he had waited six months before making an investigation.192

As part of its inquiry into the administration of the Navy, the House Committee on Naval Affairs, through its chairman, sent to some commissioned line officers a circular letter with six somewhat general questions which the recipients were requested to answer in writing. Mahan prepared his response three days before he appeared before the subcommittee. One of the questions dealt with navy yards. In answering it, Mahan began with something of a disclaimer: "My own experience in navy-yards is small." He then proceeded to explain the main problem at such facilities. "The economical working of the yards is much hindered," he wrote, "by the admission of political influence in the employment or discharge of men." Mahan had in mind not merely "the scandal of election seasons," but "the general fact that political bias, rather than trustworthiness or good workmanship, controls employment." This political "influence," through "appeals directly to Washington," overrode the authority of the yard commandant. "Power is centered too much in the Secretary of the Navy; and the politician has even undertaken and is thought to have contrived the dismissal of an obnoxious commandant or constructor; these having the largest control over employment."193

Mahan referred to several recent incidents involving the Boston yard and its workmen. A foreman of laborers "has been removed and a substitute appointed by the Secretary, without the previous knowledge of the commandant . . . or the chief of the bureau employing him." In another instance, a workman boasted to Mahan that he had gone to Washington "and obtained orders from the Secretary of the Navy to be employed at higher wages than he had had." The rest of the letter dealt with other topics and questions, but Mahan returned to his favorite target in his final comment. "The tendency of the present administration has been to condone offenses of commanding officers, and provide against abuses by general orders. It is the policy of a weak man."

By March 1876, Mahan had already begun his brief career as a naval reformer, having entered into what his biographer describes as a "confidential political alliance" with a Democratic senator from North Carolina, Augustus S. Merriman. Through a mutual friend, Samuel Ashe, Mahan sent to the senator summaries of documents that became available to him at the Boston Navy Yard and which would expose the wrongdoing of Secretary Robeson. Mahan's stated aim was "to get rid of the Secretary."194 The depths of the naval officer's dismay with the condition of the Navy is probably most evident in his letters to Sam Ashe, to whom Mahan unburdened himself, with the knowledge that his views would be passed on to Merriman.

In a letter written at the Boston Navy Yard in December 1875, Mahan articulated his general opinion that "there is little doubt that the Navy is rapidly getting into a deplorable condition, and that the fault lies largely with our present Secretary." He further stated: "We of the Navy" believe that congressional appropriations "have been diverted from their legitimate use. . . . that government workmen here in this yard for instance and elsewhere no doubt have been employed to do work for contractors, an indirect fraud upon Government." At election times, "larger numbers of workmen are employed, a barefaced bribery." In apparent reference to the hiring in connection with the 1874 election, Mahan informed Ashe: "The Commodore of this yard was brought up before a Court & compelled to deliver up a letter written by the

192 Testimony...Boston, pp. 195-98.


194 Seager, pp. 103-04; Mahan to Ashe, Dec. 27, 1875, Seager & Maguire, vol. I, pp. 436-39. According to Seager, none of Mahan's communications to Merriman or to other such parties has survived.

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Chief Constructor of the Navy directing him to take in as many [workmen] as necessary, to throw open the gates, 'that the Administration attached great importance to the election of so & so.' Several times in the course of the letter, Mahan reiterated his contempt for Robeson. In one place, he stated: "The Navy is sick of its Secretary--few of us believe him to be personally an honest man. . . ." In another, he reasserted his belief that the Navy was suffering "demoralization and injury from the neglect of the present Secretary, and from his corrupt use of his office to promote political, personal & pecuniary gain."  

Mahan also had an equally harsh view of the Navy's chief constructor, Isaiah Hanscom, "an infernal scoundrel." To document his case against Hanscom, the senior aide referred to the circumstance of William Mintoyne, the naval constructor at the Boston Navy Yard. Hanscom had made an attempt "to unship the Constructor at this yard, who is very honest, and [to] send one of doubtful reputation." As explained by Mahan, Mintoyne "is out of favor with contractors, etc; and the welfare of the Republican party is thought to be at stake."  

On several occasions, Mahan urged Ashe to exercise caution in handling that correspondence which contained denunciations of Robeson, Hanscom and their management of the Navy. In one letter he wrote: "It is scarcely necessary to say . . . that holding such language touching the Secretary as I have here would expose me to severe punishment." Because of that possibility, he directed Ashe "when you have made such use of this letter as you may judge fit, and safe to me, to destroy it." In any notes that Ashe might make of the communication "let the authorship drop." It was Mahan's belief that the only one of his letters "in any danger of publicity" was that sent to the House Committee on Naval Affairs.

In June, to his great "astonishment," Mahan discovered that the committee had printed his letters and those of other officers. One of Mahan's friends, who lived in Washington, informed him that his letter "has excited considerable comment in the Dept." In the following month, he learned unofficially that "in consequence of the (alleged) smallness of the appropriation for the pay of the Navy, a number of officers will be relieved from duty and put on waiting orders--and that I will be among them." Mahan correctly anticipated that the Secretary planned to place such officers on "furlough" status, which meant they would receive only one-half of waiting orders pay. The formal orders arrived at the yard in early August, according to which Mahan's annual salary would be $1150.

Along with other officers, Mahan rejected the contention that Navy funds were insufficient to provide men in his circumstances with "ordinary leave pay while off duty." Moreover, he believed that he was being punished. He stated that Robeson was "astute and so worded his order, and arranged the lists as to make it impossible to prove that he [was] actuated by hostile feelings to any one." Commandant Foxhall Parker permitted the former senior aide and his family to stay in their quarters at the Boston Navy Yard for the time being. Mahan planned to remain there until September, then to stay at his mother's home in New Jersey until December, and, "if nothing turns up," to take up temporary residence with his wife's parents in France, where his meager income would go much further. Late in 1876, it appeared Mahan would speedily return to active duty, and he received in early December orders to report on January 1 to the Naval Academy as head of the Department of Gunnery. However, Secretary Robeson struck, and at his direction Mahan's order appointing him to the Naval Academy were "annulled." Mahan could only apply for a year's absence from the Navy and take his family to Europe.

The shabby treatment of Commander Mahan by the Navy illustrates the atmosphere surrounding naval
affairs during the Grant presidency. Mahan's story is also useful since it provides further insight into improprieties at the Boston yard and in the Navy at large. Finally, Mahan's criticisms and activities have importance as they indicate that the charges of corruption made against the administration of the Navy in the mid-1870s did not result simply from partisan maneuvering.
Chapter IX

A NAVY YARD IN DECLINE, 1877-1883

According to Charles Oscar Paullin, during the presidency of Rutherford Hayes, 1877-1881, the U.S. Navy suffered from neglect and "touched its low-water mark." Indeed, "probably less was done for the improvement of the fleet under Hayes than during any administration since that of Jefferson." That neglect resulted from widespread indifference to naval affairs. Also, Democrats gained a majority in the House of Representatives in December 1875 and used that control to reduce expenditures and force economy in management of the Navy. In addition, they sought partisan advantage by several investigations aimed at discrediting the administration of the Navy under its former Secretary George Robeson.

The fleet continued to contract and by January 1881 numbered only 139 ships, with merely fifty in commission. During the Hayes years, the construction of not a single vessel was authorized by Congress. The much reduced expenditures resulted in deterioration of the physical plant of navy yards, including that at Boston. The investigations of the Robeson years revealed the widespread corruption in the management of civilian employees at the yards and pushed both political parties to support, reluctantly, civil service reform. That movement culminated in the Pendleton Civil Service Act of 1883, although a decade passed before that measure affected the yards. The contraction of the fleet, the unwillingness to pay the cost of maintaining navy yards, well-founded suspicions about hiring practices at shore stations, and the lack of interest in achieving a competent fleet led Congress to give thought to closing and selling some yards. That sentiment first appeared in 1876, but actual steps were not taken until 1882.

During the years 1877-1883, four men served as Secretary of the Navy. Richard W. Thompson held the position from March 1877 to December 1880. Nathan Goff, Jr., finished out the three remaining months of Hayes's term, too short a period for him to make an impact. President Garfield appointed William Hunt as the civilian head of the Navy. After the death of Garfield, the post went to William E. Chandler, who remained in the office from April 1882 to 1885. Chandler ranks as the best of the four and appears as a reformer in at least certain aspects of naval affairs. It was during his administration of the Navy Department that Congress passed the important legislation of August 1882, which embarked the Navy on a new course. However, Chandler's reforms also involved suspension in 1883 of shipyard work at a number of navy yards, including that at Boston.

Generally, the period saw decreased activity at the Boston Navy Yard, fewer ships being serviced by smaller numbers of workers and no improvements in plant. That trend culminated in the closing of the yard as an active establishment for the construction and repair of ships.

YARD ADMINISTRATION

During the years 1877 to 1883, little change occurred in the components of the larger station of which the Boston Navy Yard was a part or in the relationships among them. It appears that at times, the navy rendezvous was closed.

In the summer of 1879, questions may have arisen about the authority that the yard and station commandant had over the Marine Corps Barracks. In July, Commandant George Ransom issued orders to James H. Jones, commanding officer of the Marine Corps unit. An unusual development of itself, the nature

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1 Paullin, p. 337.

2 Paullin, p. 341.
of the order was also interesting. Ransom instructed Jones to "discontinue the sounding of any horn or trumpet by any person of your command at any time between sunset and sunrise, and likewise dispense with all reveille and tattoo performances . . ." Jones appealed to the Navy Department. In early December, Secretary Thompson sent to Ransom a copy of "what purports to be your order of July 10, 1879," and he directed the commandant to explain "under what authority & for what reasons the order was issued." Ransom's explanation proved unacceptable, and within a few weeks he was informed that "as the order . . . is in violation of the Navy Regulations, you will please revoke it."

The Boston naval station grew ever so slightly and only temporarily by the addition of a discontinued technological research program. In 1873, President Grant authorized creation of a federal Boiler Commission with a budget $100,000 to experiment with the prevention of steam boiler explosions. In 1876, the commission arranged to rent a small plot of land belonging to Clark & Sons, Cambridge, for $50.00 per year. The commission erected two small buildings on the property, accumulated tools and equipment, conducted experiments for several months, made a settlement with Clark & Sons, and departed, leaving the buildings and equipment. In 1878, the Navy took over the now defunct operation. Four years later, Clark & Sons contacted the Navy Department, seeking compensation of $210, calculated at the rate of $35.00 a year, and the removal of the buildings. Washington directed Commandant Oscar Badger to obtain information about the matter and placed under his command whatever articles and materials the Navy owned at the Cambridge site. Since this assignment to Badger's command occurred at a time of strict regulations respecting the disposition of Navy property, the Boston yard had to go through an elaborate process to arrange a public auction of the remnants of the boiler project. That auction, including sale of the two abandoned sheds, yielded the handsome sum of $57.82.

Foxhill A. Parker, Jr. served as commandant of the yard and station at Boston from October 1876 to June 25, 1878, when he departed for his new assignment, Superintendent of the Naval Academy. William F. Spicer, who relieved Parker as commandant, died five months later, possibly from a disease contracted "in the line of duty." Milton Haxtun, captain of the yard, became "commandant (pro tem)." The temporary commandancy of Haxtun ended in February 1879 with the arrival of George Ransom, who had the standard three-year tenure as commandant, being succeeded by Oscar Badger in February 1882.

THE ORGANIZATION OF THE YARD IN 1882

As part of an effort to reform its shore establishments, the Navy Department collected data about the military and civilian manpower at its yards on November 16, 1882, the cost of that force, and the actual work done on that day. The report on the Boston Navy Yard provides an insight into the organization of the yard and also indicates the identities of the military personnel as well as the clerical force and civilian foremen. In November 1882, approximately 600 people comprised the human element in the Boston Navy Yard and the Boston station. The personnel at the shipyard consisted of 440 civilian employees, six enlisted men and petty officers, and thirty naval officers. In addition to Commo. Oscar C. Badger, the commandant's office included
his son, Master Charles F. Badger, aide to the commandant, and three civilians. John Hudson was at the halfway point in his thirty-five-year-long career as first clerk to the commandant. A second clerk and a writer completed the office of the commandant.6

Capt. Ralph Alexander, captain of the yard, headed what was sometimes called the Executive Department. That department also included Lt. N. J. K. Patch and Mate William Jenney, both of whom engaged in "general yard duty," and Carpenter J. E. Keen, in charge of the yard scales. In 1882, E. K. Rawson served as chaplain, and for administrative purposes, was associated with the Executive Department.

The other major divisions in the Charlestown yard represented the eight bureaus in the Navy Department in Washington. The smallest of these divisions was that connected with the Bureau of Medicine and Surgery and consisted of three people. Surgeon George Winslow performed "Yard Duty, attending sick at Marine Barracks, etc." The yard dispensary was staffed by an enlisted man, with the rank of apothecary, and a civilian "scrubber." Other medical personnel were assigned to the station, being on duty at the Navy hospital in Chelsea. The Bureau of Navigation had a four-man establishment at the Charlestown yard. Cdr. Charles Gridley, Navigation Officer, had charge of the department, with a Navy sailmaker temporarily assigned to him.7 The civilian staff consisted of one "special man," who apparently took care of the paper work, and one laborer.

Because of off-yard activities, the officer contingent of the Ordnance Department at Boston was fairly large. Capt. R. L. Phythian served as Inspector of Ordnance and had charge of the department. Also stationed in the yard were Lt. Cdr. G. W. Wilde and Gunner Felix Cassidy. Master Robert Platt had supervision of the Nitre Depot, Malden, and Gunner G. H. Foster performed the same task at the magazine in Chelsea. A civilian chief took care of Ordnance paperwork. The Bureau of Ordnance employed only ten mechanics and workmen at Boston, including three watchmen, one messenger, and one engine tender. The department did not have any master mechanics or foremen. With a force of merely five mechanics, obviously this department had only a small work load, frequently consisting of inspections, storage, and maintenance.

The Bureau of Provisions and Clothing had a three-fold presence at the naval station at Boston—the P&C division in the yard, the office of the purchasing officer in the city of Boston, and the paymaster of the yard and station. Pay Director A. N. Gilman, as Inspector of Provisions and Clothing, headed the yard's P&C Department. Pay Director G. E. Thornton was "Purchasing Paymaster of Station, office in Boston." Paymaster J. F. Tarbell filled the position of "Paymaster of Yard and Station." A paymaster's yeoman assisted Tarbell. The office establishment of the Inspector of Provisions and Clothing consisted of four clerks, writers, and receivers. The same number was found in the Purchasing Pay Office, Boston, and a clerk and a writer manned the office of the yard paymaster. Six mechanics and laborers worked in the P&C storerooms in the yard.

Capt. Edward P. Lull, Equipment Officer, had the aid of four other officers. Lt. Cdr. A. S. Snow was assistant to Lull; Boatswain J. B. Aiken had charge of the rigging loft; and Sailmaker H. T. Stocker and Mate John Griffin were assigned "general equipment duty." A chief clerk and a writer took care of clerical matters at the Equipment Office. Another writer was assigned to the Ropewalk. In 1882, Moses Webber held the position of Superintendent of the Ropewalk. The Equipment Department employed a foreman sailmaker, a foreman machinist, a foreman ropemaker, and a quartermann ropemaker. The manual work of the department was performed by fifty-one mechanics and laborers, including twenty ropemakers. Although the 1882 report on the Boston Navy Yard does not specifically group foremen and workers into productive units or shops, it appears that the Equipment Department shops were the rigging loft, the sailmakers' department, a machine shop, and the Ropewalk. The 1882 report on the manpower at the Boston Navy Yard makes no mention of a rendezvous. Previously such a unit had existed, staffed and funded by the Bureau of Equipment and Recruiting. Perhaps, with the general contraction of the Navy, separate recruitment offices had been

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6 Information in this and subsequent paragraphs about the organization and manning of the yard is from Report of Officers...Civil Employees...Naval Station, Boston, Nov. 16, 1882, 181-75. For the relationship between the Badgers, see Reynolds, p. 9.

7 Gridley later commanded Olympia in the Battle of Manila Bay in May 1898, and was the party addressed in Dewey's famous order: "You may fire when ready, Gridley."
suspended, and men interested in enlisting were referred to the receiving ship *Wabash*.

In terms of personnel, the largest departments in the Charlestown Navy Yard in the late 1870s and early 1880s were Steam Engineering, Yards and Docks, and Construction and Repair. In 1882, Chief Engineer E. D. Robie headed the Steam Engineering Department. Another chief engineer, C. N. Baker, had responsibility for stores, and Passed Assistant Engineer C. L. Smith was assistant to the yard's chief engineer. For its size, Steam Engineering had a relatively small office force, composed of a chief clerk, a writer, a special man, and a messenger. Seven foremen directed the department's force of mechanics and laborers, divided into seven shops or work gangs. One foreman, in charge of machinery afloat or outside, supervised Steam Engineering work aboard ship. Another master mechanic had charge of machinists in the machine shop. Patternmakers, boilermakers, moulders, coppersmiths, and blacksmiths constituted the other Steam Engineering shops. On November 16, 1882, the department employed seventy-six mechanics and laborers.

Civil Engineer U. S. G. White headed the Department of Yards and Docks at the Boston yard in the years 1877 to 1883. A warrant officer, Carpenter J. P. Carter, performed general duties in that department. Yards and Docks had a diversity of responsibilities, as evident in the different kinds of civilians it employed. The Civil Engineer's office force consisted of a chief clerk, a store clerk, an assistant draftsman, and a messenger. Two captains of the watch, a gatekeeper, and twenty watchmen constituted part of the yard's security personnel. Five master mechanics provided supervision for Yards and Docks masons, joiners, machinists, painters, and laborers. The department's sixty-four mechanics and laborers represented a broad range of specialties in the building trades.

The largest department in the Boston Navy Yard with the greatest number of people was Construction and Repair, made up of two officers and 167 civilians. Thomas E. Webb was the naval constructor, and J. F. Hanscom the assistant naval constructor. Hanscom had retained his position despite allegations made against him in the late 1870s. Naval Constructor Webb had an office staff consisting of a chief clerk, a store clerk, three writers, a draftsman, and an assistant draftsman. His section also included a timber inspector, a messenger, four special store hands, a receiver and deliverer, and a tool keeper. Among the department's tasks was security of vessels out of commission, a responsibility handled by one shipkeeper-in-charge and nine shipkeepers. Construction and Repair employed twelve master mechanics, one each for ship carpenters, joiners, smiths, iron platers, sparmakers, boatbuilders, painters, blockmakers, plumbers, caulkers, moulders, and laborers. There was also a quartermaster shipwright and a quartermaster in charge of coopers. These masters and quatermen directed the activities of the department's 128 mechanics and laborers.

The report for November 1882 lists as other units at the Boston yard and station the Naval Hospital, Chelsea, with three officers, one apothecary, and seven civilian employees; the receiving ship *Wabash*, with ninety-one enlisted men; and the yard tug, four seamen. At that time, the Marine Corps Barracks consisted of three officers, approximately twenty noncommissioned officers, and seventy-five enlisted men.

**THE YARD OFFICERS**

Ten of the yard's naval officers resided at the facility in quarters provided by the government. In August 1877, the then commandant, Commo. Foxhill Parker, occupied House G; yard paymaster, Paymaster F. H. Swan, Quarters B; Senior Aide, Cdr. O. A. Batcheller, Quarters C; Civil Engineer U. S. G. White, Quarters D; Chief Engineer J. W. King, Quarters E; head, Department of P&C, Pay Inspector R. Washington, Quarters F; Equipment Officer, Capt. E. Y. McCauley, Quarters L; Inspector of Ordnance, Capt. B. B. Taylor, Quarters M; Naval Constructor W. L. Mintoyn, Quarters N; and Medical Inspector W. T. Lord, Quarters O.8

No evidence exists of any difficulties in the assignment of officers' quarters. It may have been well established that certain billets in the yard carried with them the privilege of quarters. For example, when Naval Constructor Samuel Pook was ordered to the yard, Secretary of the Navy Thompson directed he occupy the house vacated by his predecessor, William Mintoyn. Instructions given by Thompson to all yard commandants in June 1877 stated that the Chief of the Bureau of Yards and Docks, "subject to the approval

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8 White to Parker, Aug. 14, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 149.
of the Secretary of the Navy," should assign vacant quarters "to such officers, as, in his opinion, may be entitled to them." Quarters C became a matter of concern in late 1879 and early 1880 because one or more of its occupants came down with diphtheria.9

The Navy provided quarters in the yard without charge. Some officers saw themselves as underpaid and regarded free quarters as an advantage. Cdr. Alfred Mahan, the famous naval strategist, served as aide to the commandant at the Boston Yard in 1875-1876. He noted that "as a rule on shore," navy officers were not given quarters. According to Mahan's calculation of "allowance for 4 rooms (at $12 per month)...," the free quarters increased his annual pay by $576. All officers were confronted with a problem in personal finance in April 1877, when Secretary Thompson announced "that the amount of money... in the Treasury of the United States, to the credit of appropriation 'Pay of the Navy' is insufficient to pay the Officers for the months of April, May and June." Thompson proposed to use the limited funds in that account for the allotments of wives of officers and enlisted men whose husbands were abroad. Not until the following November did Congress appropriate money to cover the back pay due officers and men in the Navy.10

During the period 1877 to 1883, the Secretary of the Navy made frequent reference to the "reorganization" of navy yards, but those changes did not include alterations in the administrative structure or the assignment of responsibilities to yard officers. As in the past, Washington tinkered with the position of captain of the yard. In March 1878, Secretary Thompson issued a revised regulation concerning that office. Each yard would have a captain of the yard, who would serve as the "Aid or Executive of the Commandant and who in the absence of the Commandant will act in his stead." His responsibilities, included the yard police and enforcement of police regulations; fire department; fire boats and other tugs; walks and grounds; the mooring of vessels; maintenance of the yard log; and inspection and control of the passage of articles and packages into and out of the yard. Thompson eliminated the separate office of "aid to Commandant."11 That part of the regulation may have applied only to a commissioned officer filling that role, and Commandant Badger in 1882 had a mate as his aide.

According to instructions issued in June 1877 by Secretary Thompson, the heads of departments in a navy yard were expected to assemble at the commandant's office at 10:00 a.m. At that time, Navy Department letters of importance to the yard as whole may be read to them collectively. Letters relating to the "special duties" of a particular department head would be handed to him with directions that they be copied and returned to the commandant within twenty-four hours.12

Evidence does not exist for the period 1877-1883 on the personal relationships among officers at the Boston Navy Yard, including any tension between members of the line and those of the staff. Officially, staff officers were achieving gains. In 1879, the Navy began annually to send several graduates of Annapolis to the Royal Naval College in England and other institutions in Europe for formal instruction in naval architecture. This marked the beginning of the modern Construction Corps and gave increased status to constructors. In February 1881, the President conferred relative rank on civil engineers of the Navy, and in June of the same year, the Attorney General of the United States held that civil engineers were bona fide naval officers and not

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9 Telegram, Thompson to Parker, Oct. 16, 1877, 181-11, Box 9, 7/6/77-6/16/79, p. 33; Circular No. 1, Instructions to Commandants of Navy Yards, June 22, 1877, 181-51, 1/1/72-12/15/85, p. 69; Batcheller to Ransom, Jan. 6, 1880; Ransom to Board, n.d., 181-45, 5/22/78-6/14/83.

10 Mahan to Ashe, May 19, 1876, in Seager and Maguire, vol. I, pp. 453-54; Circular, Navy Department, Apr. 3, 1877, 181-51, 1/1/72-12/15/85, p. 62; An Act to Provide for Certain Deficiencies..., Nov. 21, 1877, Statutes at Large, vol. XX, pp. 4-5.

11 U.S. Navy Regulation No. 11, Mar. 14, 1878, 181-51, 1/1/72-12/15/85. This regulation uses the spelling "Aid" to designate the position of official, confidential assistant to the commandant, although the Navy usually spelled it as "Aide."

12 Circular No. 1, June 22, 1877, 181-51, 1/1/72-12/15/85, p. 69.
"civil officers connected with the Navy." As such, civil engineers were entitled to the same benefits as other officers, including retirement pensions. In 1878, Secretary Thompson amended a regulation that had required the presence of a commissioned officer "of the line" when a muster of workmen took place at navy yards. The amendment enabled a member of the staff to serve as a "check-officer." 13

Line and staff officers at the Boston Navy Yard formed a united, and conservative, front in February 1883, when forty-one of them signed a petition to the Secretary of the Navy opposing proposed changes in the uniform of officers. 14 Whatever their attitude toward staff officers, some members of the line saw themselves as experts in matters of hull and machinery design. While commandant of the yard at Boston, George Ransom sent to the Secretary of the Navy his scheme for a propulsion system, which located the propellers amidship, at "the center of displacement." That scheme was outlined in a five-page paper complete with drawings. Ransom sought authority for the yard to build a steam launch according to his design. He estimated the cost as $4000. Nothing appears to have resulted from Ransom's efforts. 15

One staff officer came under official scrutiny in 1879. By direction of the Chief Naval Constructor in Washington, Commandant Ransom appointed a three-man board to investigate statements in an article in the Bunker Hill Times "reflecting upon the character and conduct of Assistant Naval Constructor John Hanscom." That article and the report of the board have not been discovered. Perhaps the charges concerned improprieties in the handling of stores. One week after the first board was convened, Ransom created another "to take an account of stores on hand in the Construction department of this yard." The second board discovered significant shortages, which produced yet a third board, established to "ascertain how the deficiencies occurred." Ransom named John Hanscom "an additional member of this Board," and it appears he had been exonerated by one or both of the previous panels. The third board, although unable to explain how the large shortages occurred, identified the culprit as the store clerk, C. W. Parker, and concluded that "the evidence . . . tends to show that Mr. Parker had, in several instances, certified to receiving larger quantities of material than had actually been furnished." Furthermore, the evidence "warrants the suspicion of collusion on his part with outside parties." 16

USE OF YARD FACILITIES BY PRIVATE PARTIES

Equipment and facilities of the Boston Navy Yard continued to be available to private businesses in the area. At the direction of the Secretary of the Navy, the yard loaned Nathaniel McKay timbers, a chain, and a jack to raise a sunken vessel. The Boston Tug Boat Company borrowed some large spars for a similar purpose, to lift a sunken lighter that was obstructing the harbor. The South Boston Iron Company obtained permission through the Bureau of Steam Engineering to send one of its employees to the yard to use a boring mill and slotter. 17

13 History of the Construction Corps, p. 40; General Order No. 263, Feb. 24, 1881; General Order No. 274, Nov. 1, 1881, 181-48, 12/3/77-9/27/92; Circular No. 12, Navy Department, Mar. 14, 1878, 181-51, 1/1/72-12/15/85, p. 79.

14 To the Secretary of the Navy, Feb. 2, 1883, 45-32, 1883, p. 28.

15 Ransom to Thompson, n.d., 45-34 (1880), p. 35.


Yard officials had increasing doubts about the capacity of the yard shears to lift extreme loads in safety. In 1878, a Boston commercial rigger, Albert B. Low, sought use of the shears to remove a forty-ton boiler from a steamer and to replace it with another of the same weight. He also needed the shears to replace the smoke pipe and the pilothouse. Low obtained permission only after he had written a letter holding himself "personally responsible for any damage done to the Navy Yard Shears or wharf while in my use..." Four years later, Low again used the shears, this time to hoist a boiler of fifty-three tons. He signed a contract stipulating that he was aware of the defects and unreliable condition of the shears, that the Navy could not be held responsible for any injury to Low's property, and that the rigger was liable for any damage to Navy property.18

Between the two occasions on which Low used the yard shears, the Atlantic Works, East Boston, sought permission to employ the lifting device in the installation of the boiler and machinery in Penobscot. The heaviest item, the boiler, weighed fifty-five tons. Commandant Ransom was inclined to grant the request. However, he noted that, "while in their present condition," the shears could be considered adequate for any likely government service "in the course of many years to come," he did not regard them as safe for lifting the fifty-five-ton boiler.19 That the activities of the yard itself required a far lighter lift capacity in the shears testifies to the relative insignificance of the yard's work at that time.

In October 1883, the Boston agent for the Cunard Steam Ship Company made arrangements to have Batavia docked at the Boston yard and repairs made upon her by the Atlantic Company.20 The docking of Batavia was exceptional, being the only commercial vessel to use the dock in the years 1877-1883.

Secretary Thompson may have changed the policy respecting the mooring of private vessels at navy yards. Initially, he permitted private yachts to spend winters within the precincts of the Boston yard.21 However, in 1878, the master and the general manager of the 320-foot steamer Empire State approached Congressman Leopold Morse to obtain from the Navy permission to have the vessel spend the winter of 1878-79 at the yard. Morse wrote to Secretary Thompson, explaining that the parties interested in the steamer were "personal friends of mine." Thompson directed Commandant Spicer to report on the "practicability" of the request. Spicer replied that arrangements could be made for "wintering" the steamer without interfering with yard operations, but he recommended imposing conditions to protect government property from "fire and other depredations." Thompson had already decided to refuse Morse's request. He informed the congressman "there is no authority in law for permitting the government yards and wharves to be occupied by private parties." Moreover, granting the favor would "open the door to other applications of the same and similar kinds." In addition, the "danger from fire and other causes makes the risk too great and would open the Boston yard to private parties at all times of night."22

It appears that in November 1881, the Atlantic Works made arrangements for a vessel temporarily to be tied up to a wharf at the yard. Perhaps, this was Penobscot. Problems arose because woodworkers of that or another company were entering the yard with their teams to work on the ship. The understanding with


19 Atlantic Works to Ransom, Oct. 28, 1881; Endorsement by Ransom, Oct. 29, 1881, 181-5, Box 20, 5/19/80-11/30/82, pp. 83, 84.

20 P. H. DuVernet to Badger, Oct. 9, 1883 (two letters); Atlantic Company to Badger, Oct. 25, 1883, 181-5, Box 20, 11/30/82-1/26/84, pp. 116, 117, 130; DuVernet to Chandler, Oct. 26, 1883; Chandler to Badger, Oct. 31, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 56.

21 Acting Secretary of Navy to Parker, Sep. 11, Sep. 19, 1877, 181-11, Box 9, 7/6/77-6/26/79, pp. 23, 26; Parker to Secretary of Navy, Sep. 13, 1877, 45-34, p. 111.

22 Spicer to Thompson, Sep. 21, 1878, 45-34, p. 133; also see Thompson's note on the reverse of this document.
navy yard officials did not include outside woodworkers in the yard, and the Atlantic Works removed the vessel.23

No complaints by civilians have been discovered about the policy of the Navy to permit private firms to use the Boston yard's dock, shears, wharfs, tools, and equipment or private individuals to moor their boats in the winter at the yard. A protest was made against the yard lending flags and bunting to municipalities and community organizations. In December 1877, a committee of citizens of Boston organized a fair to raise money for the preservation of the historic Old South Church. The organizers borrowed flags and other decorations from the navy yard, which also provided sailors from the receiving ship to help rig the interior of the church. This occasioned a complaint from the firm of Simon Lamprell and William Marble, Commercial Street, Boston. Lamprell and Marble manufactured, rented, and sold flags, bunting, streamers, tents, sails, and other canvas goods. The company also installed their products, and its advertisement stated "Decorations furnished and put up at Short notice."24

In a letter to the Secretary of the Navy, Lamprell and Marble complained that for the past two or three years, the Boston Navy Yard was "not content to loaning the Decorations, but supply the men" and that "Flags and Bunting are lent to every Small Society, and friends of the Government." This practice was "detrimental to all parties who rely upon this business for support." The two men informed Thompson that a few years before, an order had been given "not to allow any of the property of the U.S. to be loaned." With the City of Boston unable to borrow flags from the Navy, many dealers had "procured large Stock of this material," which then became "comparatively useless" because the yard continued to loan flags, bunting, and similar decorations.

Thompson passed the complaint of Lamprell and Marble to Commandant Parker, who essentially challenged the accuracy of the allegations. He denied that the yard loaned decorations to "every small society and friends of the government." Parker stated that he had refused numerous requests for such articles. He made exceptions "in cases considered of a national character such as the reception of the president." As to the fair at Old South, the commandant alleged that the seaman had volunteered their services. Parker concluded that "private enterprise has not been in anyway interfered with." In early January, Parker journeyed to Annapolis, leaving the yard in the charge of Captain McCauley. The issue reemerged, and the commandant sent a terse telegram to McCauley: "Let flags remain in old south."25

For its 1878 celebration of Bunker Hill Day, June 17, the city of Boston borrowed flags and lines from the navy yard in the usual fashion. A few years later, however, a compromise solution seems to have been adopted. Boston municipal authorities continued to borrow flags from the Navy, but engaged Lamprell and Marble to put them up. Other parties who borrowed flags from the yard were the Somerville Charity Club; Miss M. J. Page, of Boston; and the Boston Light Infantry.26

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23 Acting Secretary of Navy to Spicer, 181-11, Box 9, 7/6/77-6/16/79, p. 113; Atlantic Works to Ransom, Nov. 26, 1881, 181-5, Box 20, 5/29/80-11/30/82, p. 88.

24 Lamprell and Marble to Secretary Thompson, Dec. [n.d.], 1877, 181-5, Box 19, 3/15/76-6/14/78, p. 112.

25 Parker to Thompson, Dec. 20, 1877, 45-34, p. 166; Telegram, Parker to McCauley, Jan. 11, 1878, 181-5, Box 19, 3/25/76-6/14/78, p. 119.

26 Mayor to Parker, June 4, 1878, 181-5, Box 19, 3/25/76-6/14/78, p. 119; Chairman, Board of Aldermen, to Ransom, June 15, 1880, 181-5, Box 20, 5/19/80-11/30/82, p. 8; Spicer to Thompson, Nov. 23, 1878, 45-34, p. 166; Ransom to Thompson, Dec. 3, 1879, 45-34, p. 167; Ransom to Hunt, Jan. 3, 45-34, 1882, p. 5. Apparently, the yard cooperated with a production in 1879 of Gilbert and Sullivan's "HMS Pinafore" at the Boston Museum. According to a naval officer who witnessed a performance, "the crew of the Pinafore was borrowed from the receiving ship Wabash. All the technical details were perfect.... The yards were manned in shipshape style..."; Albert Gleaves, The Admiral: The Memoirs of Albert Gleaves, USN (Pasadena: Hope Publishing House, 1985), pp. 28-29.
Because of the vast quantity of documentation for the Boston Navy Yard, it is dangerous to base conclusions on the absence of evidence. But it does seem that the number of requests to borrow flags and other items from the yard was greater in the days of Secretary Robeson. It also appears that the Secretaries during the years 1877-1883 displayed less concern with placating local partisan organizations. For example, in October 1878, the Republican State Committee of Massachusetts made arrangements whereby the navy yard chaplain, George A. Crawford, was to speak at one of its functions. However, there was a last minute "misunderstanding," and Crawford may have had another speaking engagement. The committee chairman complained to Commandant Spicer and the matter was brought to the attention of Secretary Thompson, who fired off a telegram: "Chaplain Crawford may speak when and wherever he pleases." Robeson would have been much more ready to oblige such an important party organization as the Massachusetts Republican State Committee.27

THE COMMANDANT AT THE NAVY'S LEGAL REPRESENTATIVE

Accidents in waters off the Boston Navy Yard or involving ships of the Navy resulted in claims for damages which were processed through the office of the commandant. On October 6, 1876, a commercial tug, Glide, allegedly came in contact with a submerged buoy belonging to the navy yard. Evidently, the commandant convened a board of yard officers to investigate the matter and found either no damage to the tug or concluded the Navy was not at fault. The owners of Glide protested the procedure, claiming they were denied an opportunity "to defend our side." Also they regarded the yard's board as partial and sought the formation of a panel of "disinterested, competent and fairminded men." The Navy did acknowledge liability for damages sustained by the schooner Willie Edix when she collided with Tallapoosa in Vinyard Sound in March 1882. Tallapoosa, a side-wheel steamer, transported materials from one navy shore station to another. Willie Edix came to the Boston yard, where yard workmen made repairs, the cost for labor and materials being $376.00. Nine months later, Tallapoosa tore up moorings at Marblehead, requiring a yard tug to go and replace them.28

In June 1882, the navy yard was on the receiving end of a mishap. While in the tow of two tugs, Virginian, a vessel of the Leyland Line of steamers, collided with a yard wharf and Hartford, then under repair. The estimates of damage made by Leyland differed greatly from that of the Navy. But the matter was handled amicably. The steamship company engaged the Hoosac Tunnel and Dock Company to make the repairs to the wharf.29

ADMINISTERING STORES

Perhaps because of the revelations of mismanagement and fraud respecting stores during the years of Secretary Robeson, special efforts were made beginning in the late 1870s to maintain more precise inventories and accounts. Also, the continued emphasis on economic efficiency meant concern with stores.

One change introduced by Secretary Thompson was the creation in each yard of a permanent board of inspection to examine articles purchased by the Navy. The board consisted of a line officer and a paymaster,

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28 Rogers and Sears to Parker, Mar. 19, 1877, 181-5, Box 19, 3/15/76-6/14/78, p. 49; Hunt to Badger, Mar. 22, 1882; Chandler to Badger, Apr. 17, 1882, 181-11, Box 10, 6/27/81-1/12/83; Bartholomew Whalen to Badger, Mar. 24, 1882, 181-5, Box 20, 5/24/80-11/30/82, p. 120; Telegram, Chandler to Commandant, Dec. 4, 1883, 181-11, Box 10, 6/27/81-1/12/83, p. 183.

29 U.S. Attorney to Badger, June 6, 1882; Leyland Line to Badger, June 9, June 24, 1882; Receipt from Yard Workmen, July 1, 1882, 181-5, Box 20, 5/19/80-11/30/82, pp. 138, 139, 146, 149; W. Shelburne to Badger, July 6, 1884, 181-5, Box 20, 1/26/84-2/2/86, p. 44.
and service on the board was for three months. When necessary, the commandant would designate a third member, to be chosen from the department whose materials were being inspected. In compliance with this regulation, Commandant Foxhall Parker appointed Lt. William Parker, Jr., and Assistant Paymaster H. E. Drury as the Boston yard's first board of inspection.30

Should a yard Board of Inspection reject articles delivered by a supplier or contractor, a special board might be convened consisting entirely of officers from the department for which the goods were intended, particularly if the supplier challenged the decision of the original board. In May 1879, Commandant Ransom appointed a chief engineer and three passed assistant engineers to "investigate and report in regard to the rejection of certain iron delivered . . . by P. Y. McDonald. . . ." In the following month, in compliance with directions from the Bureau of Steam Engineering, another board of engineers examined boiler plate furnished by Otis Iron & Steel Company. The yard also rejected a lot of steel delivered by Park Brothers & Co., which wrote to the commandant appealing "from the decision of the board" and requesting "a board of Survey, at which we may be present."31

The Secretary of the Navy touched off a round of great activity at the Charlestown yard and elsewhere by a directive of August 1878. His aim was to do no less that obtain an approximate estimate of the value of all the property belonging to the Navy. To that end, he directed each commandant to make an inventory of his yard. That inventory would include major items, such as the number and value of acres of real estate; the number, size, and value of buildings; the quantity, character, and value of machinery; and quantity, character and value of materials on hand.32

At the Boston yard, Commandant Spicer called on his department heads "for a strict and prompt compliance" with Thompson’s order. In September, Spicer created a board of four officers and provided it with the writer from his own office to act as the board’s recorder. The board had the duty of examining the inventories submitted from the separate yard departments to insure they included the information sought by the Navy Department. The annual report of the Secretary submitted in late November 1878 contained total figures produced by this exercise. "The approximate value of property belong to the United States Navy" was set at $118,295,833.50. The value determined for all Navy property at Boston was roughly $18.5 million, making the Boston yard the Navy's second most valuable, behind New York, valued at $23.7 million.33

Doubtless, the results of the Department-wide inventory of 1878 had important and long-range significance. In the Boston yard, the immediate consequences seem to have been increased awareness that among the stores of the various departments were items of no value. Surveys and other actions were taken to identify and condemn those goods and then to dispose of them, usually by public auction. Such measures, of course, had already been used. In August 1877, for example, a "local or Special Board" was convened at Boston "to examine all clothing, material for clothing, bedding, etc. now on hand in the Pay Department," meaning Provisions and Clothing. The board was to condemn "all unfit for issue and to recommend the disposition thereof."34

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30 Circular No. 1, Navy Department, June 22, 1877, 181-57, 1/1/72-12/15/86, p. 69; Parker, General Order, July 1, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 49; Spicer, General Order, Aug. 1, 1878, 181-33, Box 27, 5/27/78-11/21/78, p. 80.

31 Ransom to Emerson and Others, May 2, 1879; Ransom to Wilson and Others, June 18, 1879, 181-45, 5/22/78-6/14/83; Park Bro. & Co. to Ransom, Aug. 25, 1879, 181-5, Box 19, 6/12/78-5/29/80, p. 132. For other cases of rejected supplies, see Geo. D. Putnam to Ransom, Jan. 29, 1880, 181-5, Box 19, 6/12/78-5/29/80, p. 179; Ransom to Carpenter and Others, Nov. 5, 1881, 181-45, 5/22/78-6/14/83.

32 Thompson to Spicer, Aug. 6, 1878, 181-11, Box 9, 7/6/77-6/16/79.


34 Thompson to Parker, Aug. 18, 1877, 181-11, Box 9, 7/6/77-6/16/79, p. 58.
Each navy yard engaged a professional auctioneer to manage public sales of condemned goods. George Atwood filled that role at Boston from 1877 to 1881. As with other positions, appointment as auctioneer was a matter of politics, and shortly after William Hunt became Secretary of the Navy, he named Charles Sawyer to the position. Navy regulations regarding public auctions called for the placing of advertisements in local newspapers, giving notice of the date, time, and place of such sales; the nature of the items being offered; and the terms of sale. In May 1878, Atwood submitted to Parker a draft advertisement for the sale of condemned articles of the Equipment Department. The auctioneer recommended use of the Boston Daily Herald, because "it reaches a class of buyers that take no other paper." The items offered on this occasion included the usual leftovers and by-products of ropemaking, plus scrap iron, old wire rope, rubber hose, canvas clippings, eight boat detaching apparatus, boatswain's stores, boiler tubes, table covers, curtains, cook stoves, and spittoons.\(^{35}\)

The terms of sale required the successful bidder to pay twenty percent at the time of the auction, which would be forfeited to the government if the balance was not paid within ten days. Three departments held auctions in August 1878. The Ordnance Department sold woolen cartridge bags, canvas sponge caps, muzzle bags, old fire buckets, gun slings, and magazine lamps. At a sale on behalf of the Bureau of Navigation were offered five barrels of olive oil, thirty-three lamps and lanterns, and 230 pounds of old brass and copper. The Bureau of Steam Engineering sold a large number of small items, including 322 corn brooms, 417 pounds of pure gum packing scraps, 157 pounds of hemp packing, 480 pounds of old turret hemp rope, five pairs of bellows, 139 brass squirt cans, two grinders, and one lot of brass foundry ashes. The auction of Steam Engineering goods yielded $236.06.\(^{36}\)

The yard and the Navy Department received some complaints about the conduct of auction sales and about the items sold. F. N. Lambert, a Boston ship chandler, complained about flax canvas he purchased in September 1883. On the morning of the auction, he endeavored to examine the canvas, but was told he could only look at the samples and that the canvas "was nearly if not quite up to the standard in the width." Lambert assumed that meant a width of twenty-four inches, only to discover once having purchased the canvas that it measured merely twenty inches. In addition, the material was "yellow and rotten with age." Subsequently, Lambert did not produce the balance of his bid within ten days, but offered to buy the canvas at four cents a pound, the price paid recently at an auction in Portsmouth. In his letter, the chandler referred to a "ring" that manipulated the auction. He claimed the ring arranged to have the samples of canvas for inspection located at some distance from the place where the auction occurred. The ring had determined on a price for the canvas and was angry when Lambert bid above it.\(^{37}\) Others attending auctions in the Boston Navy Yard in 1882 and 1883 also complained about rings and combinations.

One wrote anonymously to the Secretary of the Navy in September 1882, about sales of second-hand items in navy yards and arsenals generally. According to this unknown party, the usual practice was for junk dealers to form a ring, buy up the stock at the government auction, and later have their own sale, dividing up the profits. "Every such sale is carried on the same way for the last 20 years without but a few exceptions. "If a man wants to buy anything square they will not let him have it." On orders of Secretary Richard Chandler, the captain of the yard at Boston, Ralph Chandler, made an investigation and concluded there had been no irregularities at auction sales in his yard. Another unsigned letter went to the Boston yard a year later. In it, the author described the operations of the "fortys, as they are called, robbing the government." That combination "divided in this yard $13,000." They achieved this, for example, by paying $4.50 a ton for boilers, when the actual worth was $20.00. The letter concluded with a barely intelligible, but interesting statement:

\(^{35}\) Atwood to Parker, May 14, 1878, 181-5, Box 19, 3/25/76-6/14/78, p. 115; Ransom to Hunt, June 6, 1881, 45-34, p. 72.


\(^{37}\) Lambert to Badger, Oct. 18, 1883, 181-5, Box 20, 11/30/82-1/26/84, p. 125.
"So you keep faithful me to watch them and you catch them, they were caught in the Brooklyn yard at it."38

The acquisition, inspection, and storage of ships timber and lumber presented particular problems. Merely keeping track of the quantities on hand and their condition were demanding tasks. In the late 1870s, Naval Constructors Mintoyne and Pook and Assistant Naval Constructor John Hanscom made efforts to examine the timber at the Boston yard. It appears that there were some shortages and also that, for a variety of reasons, some of the planks, knees, and other pieces were unserviceable. In early June 1877, at the direction of the Bureau of Construction and Repair, Mintoyne determined the quantity of live oak on hand according to the books. Those accounts indicated a total of almost 500,000 cubic feet of different kinds of live oak pieces. Mintoyne, however, stated that he was of the opinion that none of the books were accurate.39

In the following month, Assistant Naval Constructor John Hanscom examined a lot of 125 white oak knees, most of which he found "so badly sap-rotten from being in the weather with the bark on as to be useless and greatly reduced in size." It was determined that some white oak knees had been on hand since 1855. The following year, Naval Constructor Samuel Pook asked for a survey on all white oak and yellow pine to condemn the pieces unsuitable for Navy use and to establish a value for the balance.40 Making an inventory of ship timbers was an arduous task, since it involved hauling pieces out of the timber dock, inspecting them, and then putting them back in the dock.

In the last days of Robeson's regime as Secretary of the Navy, contracts illegally had been made for the delivery of sizeable quantities of timber. One contract, dated March 6, 1877, with the J. Bigelow Company called for delivery of a lot of timber to the Boston yard. On April 10, the new administration under Secretary Thompson suspended certain of those contracts, including that with Bigelow. However, the contractor had not received news of the suspension before the first deliveries were made. Thompson held that Bigelow had acted in good faith and the yard had no option but to accept the timber, although the suspension applied to the undelivered balance.41

Because of the Bigelow deliveries and despite the shortages that had accrued over the years and the losses from improperly stored timber, it appears that a surplus existed at the Boston Navy Yard. Consequently, the Navy Department ordered some of the lumber shipped to the navy yards at New York and League Island. At least on one occasion, Tallapoosa carried the timber, and on others, the yard made arrangements with private vessels.42

At the Boston yard, there was a reduction of stores in general, not only timber, since in the early 1880s, it became Department policy to rid all navy yards of useless supplies. The important legislation of August 1882 added the weight of Congress to that policy.

PLANT, 1877-1883

During the period 1877 to 1883, the Boston Navy Yard experienced no significant changes in its


39 Mintoyne to Parker, June 1, 1877, 181-33, Box 25, 5/12/72-8/23/77.

40 Hanscom to Parker, July 2, July 26, 1877; Mintoyne to Parker, July 30, 1877, 181-33, Box 25, 5/12/72-8/23/77; Pook to Parker, May 6, 1878, 181-45, 9/17/72-4/13/78.

41 Thompson to Parker, July 31, 1877, 181-11, Box 9, 7/6/77-6/16/79.

42 Telegram, Acting Secretary of Navy to Ransom, Sep. 27, 1881, 181-11, Box 10, 6/27/81-1/12/83, p. 35; Arthur Sewall to Badger, Feb 2, 1883; Prince Pearse to Badger, Feb. 12, 1883, 181-5, Box 20, 11/30/82-1/26/84, pp. 29, 33.
physical plant, there certainly being nothing in the way of any substantial additions. Congress failed to appropriate funds specifically for plant improvement, with the result that no new structures were erected, and the only enlargement of existing buildings consisted of extensions to several of the officers' quarters. On the other hand, the period saw the removal of a number of small and temporary structures. The chief challenge confronting the yard and its civil engineer was proper maintenance of the existing plant with the meager funds available. Throughout the period, U. S. G. White held the position of civil engineer, and as such, had charge of Boston's Yard and Docks Department and responsibility for much of the plant.

The annual expenditures on plant repairs at the Boston Navy Yard in the years from 1877 to 1883 were generally lower than in the preceding decade. Not including work on machinery or dredging, the Navy spent $17,000 in Fiscal Year 1876-77 on repairs of buildings, docks, wharves, other structures, roads, grounds, fences, and utility systems at the Boston yard; $22,000 in 1877-78; $27,000 in 1878-79; $50,000 in 1879-80; $67,000 in 1880-81; and $54,000 in 1881-82. No dredging expenses at all were incurred in most years, and only small amounts in others, such as $44.00 in 1878-79.

In August of each year, the civil engineer prepared a document entitled "Annual Reports of Expenditures and Operations." One section described the work accomplished by the Yards and Docks establishment during the fiscal year that had just ended. Another part consisted of requests for funds to be used in the fiscal year which would begin the following July. The annual report also contained recommendations and cost estimates for plant improvements. Another section consisted of justification for an appropriation for "Repairs and Preservation of all kinds."

Although these reports offer a useful glimpse of the yard's physical plant, they contain some deficiencies. Occasionally the requests for appropriations for improvements constituted exercises in unwarranted optimism and included proposals for another dry dock or the acquisition of increased acreage, items that neither the Department nor Congress were likely to approve. The reports should be read bearing in mind that yard civil engineers as well as the heads of the Bureau of Yards and Docks sought to get as much money as they could for their administrative divisions. Thus, they had a tendency to paint as bleak a picture as possible of plant conditions and to argue that the utmost necessity prompted their proposals for improvements. Those segments of the reports looking to the near future have utility primarily because they inform us of conditions in the yard. Not included in Yards and Docks reports and estimates were the purchase, installation and repair of machinery and tools under the cognizance of the Bureaus of Construction and Repair, Equipment and Recruiting, Steam Engineering, and Ordnance. Frequently, in making out his annual report, the civil engineer drew heavily upon those of previous years, sometimes copying from them verbatim. Often, the summaries of work accomplished during the year were vague. However, when supplemented with other documents, the annual reports offer a convenient method of studying the conditions and developments in the yard's plant.

THE YARD IN 1877

The Annual Reports of Expenditures and Operations submitted on August 1, 1877, by Civil Engineer White began with the statement that during the fiscal year that ended on the previous June 30, "no new or extended alterations have been made. . ." Repair projects worthy of mention included completion of the cellar of Building No. 33, that structure being used for the sail loft and as a storehouse. That work entailed digging up the floor and laying a new bottom of concrete to keep the cellar dry. The foundation stone supporting the main shaft of the auxiliary engine of the Ropewalk received repairs. The shaft ran through a bearing bolted to the stone, which had shattered at the holes through which the bolts passed. Repairs consisted of cutting away the damaged portion of the stone and then raising it to support the bearing.44

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43 Table No. 4 (Boston), Report of Commission on Navy Yards, in Letter of Secretary of the Navy, Jan. 14, 1884, p. 95.

44 Annual Reports of Expenditures and Operations, Aug. 1, 1877, 181-154, Box 1; White to Parker, May 14, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 6.

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A third repair project in 1876-77 was mending the boilers of the dry dock pumping engine. In March 1877, Yards and Docks made repairs on the furnaces under the boilers to the engine of the dry dock pumps. Further repairs may have been performed in July. The yard's chief engineer periodically inspected all of the steam generators in the facility and submitted a report to the commandant. The inspection by Chief Engineer King on July 1, 1877, found one of the dry dock boilers corroded at the water line about one-third the thickness of the shell. Another of the boilers had a leaky tube, and it lacked some safety valves. The valves that were attached were stuck fast.45 Yards and Docks had responsibility for maintenance of the dry dock and its appurtenances. Thus, it is likely that the repair of the defects found by Chief Engineer King were part of the dry dock boiler work mentioned in Civil Engineer White's report of August 1877.

The civil engineer reported that "repairs upon yard Buildings have been limited on account of the Small allotment." Similarly, "the repairs upon Roads, Walks, Gas & Water pipes, Drains, Sewers &c, have been performed as circumstances required . . . and in all cases finished in as thorough a manner as the limited funds . . . would permit." White could have cited the fencing in the yard as an example of limitations imposed by the meager funds. The fencing around the gun, shot, and other parks had become dilapidated, with a large portion of the posts rotted away and many of the rails broken. Since repairs would entail great expense, White sought permission from the commandant to remove the fencing.46

Among the machinery repaired in 1876-77 was the engine in the Ordnance Building (No. 39). In June 1877, a leak led to the discovery of a fractured cylinder head which put the engine out of service. The Inspector of Ordnance, Cdr. B. B. Taylor, recommended purchasing a new cylinder head on the open market in Boston. The yard's inventory of large tools diminished significantly in 1877, when the heavy forge hammer in Building No. 40 was sold, and what had been a heavy forge shop became a rolling mill.47

In that part of the August 1877 report consisting of recommendations and estimates for Fiscal Year 1878-1879, White included seven proposed undertaking, four of them in the nature of renovations and improvements in the existing plant and three constituting new structures. He requested $25,700 to renovate the yard's water and gas pipes; $35,000 for paving and grading; $11,000 for extension of some of the officers' quarters; and $19,000 for a new floor for the Ropewalk. The three innovations were $15,000 for an additional boundary wall; $19,000 for a new cart shed; and $71,000 for a civil engineer's building to house his department's workshop and provide it with storage space.

Most industrial buildings in the Boston Navy Yard needed fresh water for their operations, if only for boilers, and fire fighting throughout the yard relied on a certain supply of water. An adequate water system required numerous shut-off valves and gates to stop the flow of water in a section suffering from a leak. Also hydrants were needed for fighting fires. Some of the piping used in the initial installation of the water system in 1863 had decayed or was undersized for the needs of the late 1870s. Thus Civil Engineer White recommended replacing mains, such as those along Avenues A, D, and E. To supply the boilers of the joiners' shop with a back-up water supply, a 6-inch pipe should be laid along Ninth Street. The possibility of a fire required the installation of adequate water facilities and hydrants in the vicinities of the oil and tar boiling house, the saw and timber-bending mills, the hemp house, and the lower quarters. High tides constantly submerged the water meter at the main yard entrance, causing it to freeze up in cold weather and block the flow of water into the yard.

White described the yard's gas pipes in 1877 as much worse than the water pipes. At that time, the yard had 2268 gas burners in street lights and the thirty-six buildings with gas illumination. However, the gas lighting system proved inefficient because that number of burners required a 6-inch gas main, whereas the largest in the yard was only three inches. The yard needed to be connected with the gas company main on

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45 White to Parker, July 9, 1877; King to Commandant, July 1, 1877, 181-33, Box 25, 5/12/72-8/23/77, pp. 73-81.

46 White to Parker, May 15, 1877, 181-33, Box 25, 5/12/73-8/23/77, p. 8.

47 Taylor to Parker, June 5, 1877, 181-33 Box 25, 5/12/72-8/23/77, p. 38; Chief Engineer Bartleman to Parker, 181-33, Box 25, 10/21/76-5/14/77, p. 94.
Chelsea Street by a 6-inch pipe running under the Ropewalk to Avenue D and thence to the lower timber shed. Elsewhere, 4-inch or 3-inch pipe should replace 2-inch pipe, including a section, laid in 1873, which had settled.

In his 1877 request for appropriations, White proposed improvements in several existing structures. Officers’ Quarters C and D had been enlarged in 1872 by building an extension to each. In 1877, it was proposed that units B, E, and F should have the same addition. In the two previous years, the yard had asked for funds for providing the Ropewalk with a much needed new floor. A scaled-down estimate was submitted this year, the scheme being to lay a bottom of concrete over which would be fitted a hard pine floor, "beamed and matched."

Perhaps the most frequent proposal in the annual reports of the civil engineer during the period was for paving and grading one portion or another of the yard’s roadways and grounds. As White noted in 1877, "many of the Streets . . . are neither graded nor paved." He proposed work on certain streets and avenues, including paving, grading, and the construction of cesspools and side and surface drains.

The 1877 Yards and Docks report for the Boston Navy Yard described the need for three new structures. One was a building for storage of carts, wagons, wheels, and other Yards and Docks vehicles, the existing wooden shed being "far beyond repair, very old, and in dilapidated condition." Another structure included in the estimate was for a Yards and Docks workshop and storehouse. At that time, the work and storage spaces of that department were located in various structures throughout the yard, most of them "small, unsightly, dilapidated wooden sheds," and "not suited to the wants of the department." Construction of a proper Yards and Docks building on the site of Building No. 54, a mason’s shed, would allow concentration of the department’s shops and stores in one place and also permit the removal of several old, unattractive wooden sheds. The final item in the yard’s 1877 list of recommended improvements was construction of a wall on the southwesterly boundary line. At that time and in that area, an old wooden shed and a wooden fence belonging to the Fitchburg Railroad Company bordered the yard, creating a fire hazard and a security problem. Those problems could be eliminated by construction of 460 feet of sixteen-foot-high stone wall, stretching from Water Street to deep water.

The largest single appropriation White sought for Fiscal year 1878-79 was $195,000 for "Repairs and Preservation of all Kinds." That amount represented the monies the civil engineer judged as required to make repairs on the yard’s buildings, structures, roadways, utilities, and grounds. He provided justification for the request with descriptions of the particular conditions needing attention. Among the buildings requiring repairs were the Machine Shop (No. 42) and Officers’ Quarters L, M, N, and O.

If the yard received the full $195,000, half of it would be used for the Machine Shop. In many places the mortar between the bricks in the exterior walls had washed out to the depth of one inch or more, and nearly all of the walls needed pointing. The building’s roof leaked and required extensive repairs to prevent damage to the shop’s machinery and tools. Floors in many parts of the structure were "entirely gone and the drains need a thorough overhaul." Most all of the officers’ quarters needed work, but particularly units L, M, N, and O required repairs "for the health and comfort of the officers living in them and as a matter of economy to the Government."

Elements of the yard’s grounds were in a state of disrepair. The "Roads, Walks, gutters and drains need a complete overhauling," wrote the civil engineer, and the existing boundary wall had to be repointed. Repairs were also required on furnaces, forges, tracks, scales, and water and gas works.

The part of the yard receiving the greatest attention in the "Repairs and Preservation" section of the 1877 report was the waterfront, most of which, according to White, wanted repairs. The wharves were rapidly deteriorating. Before some cranes and derricks could be used, extensive repairs had to be made. White stated that the limited appropriations for the current year precluded proper care during the coming winter. Thus, "their condition will be much worse by the time the amount asked for in this estimate will become available." The same was also true for the dry dock. "Quite a number of the stones" had been "heaved at some time by the frost." They needed to be removed and reset. Elsewhere in the dock’s stonework, the pointing was gone. Both the swinging gate and caisson required attention.

White gave particular consideration to the need for dredging. The waterfront of the yard, not including the slips, measured 4200 feet in length. Because of the depth of the water, in only 800 feet could vessels be brought to the wharves, and large ships could be accommodated only in even a smaller area. Monies were needed to dredge so that vessels could be hauled up to the wharves. However, dredging was not
the long-run solution, according to White. Since soundings taken in 1873, filling had been occurring at the rate of about two feet a year. That filling resulted from the meeting in the front of the yard of the currents of the Charles and Mystic rivers, producing a large eddy which caused the silt and solid matter in both currents to be deposited. In addition, two sewers of the city of Charlestown emptied at the yard's waterfront. Material was also brought to that front by sewers and drains from the yard itself. Thus the silt and solids carried by the Mystic River, the Charles River, the two city sewers, and the drains and sewers of the yard all ended in front of the yard and were never carried to deep water. The most effective solution to the problem would be extension of the quay wall and of the sewers out to deep water, where currents would immediately carry off all materials.

The Annual Reports submitted in August 1879 shows the fate of the proposals and requests White made in the summer of 1877. He had asked for almost $200,000 for "Repairs and Preservation." The yard was awarded merely $39,000. Of his proposals for plant improvement, only the extensions for officers' quarters were authorized. Some items, such as the new floor for the Ropewalk, would be funded subsequently.

CONDITIONS AND PROPOSALS IN THE LATE 1870S

The report White submitted in August 1878 indicates that during the fiscal year just ended, an extension had been built upon Quarters E, under contract with P. L. Ritner. Only units B and F remained without additions. Other work during the year consisted of "patching and slight repairs . . . upon Yard Buildings" and limited work on roads, walks, drains, sewers, and water and gas pipes. Building No. 77 required repairs because of the collapse of the first floor. Steam Engineering occupied part of the structure as a mould loft and had stored 250 tons of iron in a rack on the first floor. That great weight caused the supports in the cellar to break, and the floor, beams, rack, and iron crashed to the cellar floor. In making repairs, White suggested reconstructing the rack with six-by-eight hard pine timber. Other "slight work" performed by Yards and Docks in 1877-78 consisted of mending sewers.

In January 1878, at the direction of the Chief, Bureau of Equipment, the firm of Tucker, Carter & Co., New York, shipped to the Boston yard's Ropewalk two wire-making machines, supposedly with all parts and for which the government had paid $600. However, upon receiving the shipment, Moses Webber, Ropewalk Superintendent, found several parts missing and other parts that did not fit or match. Accordingly, it was impossible to set up the machines. Webber requested that the Tucker company send someone to identify the missing parts and help assemble the machines. Once the machines were in running order, they could be inspected by a board of officers. In May of the same year, the Bureau of Construction instructed Commandant Parker to have a survey made of a six-inch steam hammer, which he had described as "entirely worn out." This would administratively clear the way for action on his requisition for a replacement.

In the recommendations and estimates for improvements in Fiscal Year 1879-80, White simply repeated the proposals made in August 1877, with slightly diminished estimates. Along with the usual report filed by White in August 1878, he wrote a lengthy letter to the commandant to accompany his plans for development of a wet basin. He stated he did not include it in the regular proposals, so as "not to swell the estimates . . . as the Improvements asked are very necessary." In making his point, White gave a brief history of parts of the waterfront. He noted that in a plan of the yard


51 Annual Reports of Expenditures and Operations...and Estimates, Aug. 6, 1878, 181-154.
agreed to by the Navy Commissioners in 1828, provision was made for locating a rigging and repair basin in that part of the yard occupied in 1878 by the timber dock between Building No. 24 and Shiphouse No. 68. The 1828 scheme also called for the building of three stone dry docks on the southwesterly side of the proposed basin. Rather than adhere to the plan, part of the area had been filled in and Building No. 42 constructed. A granite stone wall enclosed another section for use as a timber dock.

In March 1865, the then civil engineer, Joseph Billings, informed the Navy Department that the size of the timber dock exceeded requirements because of the discontinuation of docking certain kinds of timber. The following year, the Bureau of Yards and Docks assigned $40,000 for filling in part of the timber dock. Those funds were soon exhausted and the project remained unfinished. Between 1869 and 1871, the yard's estimates for completing the undertaking were not accepted, after which the item was dropped from the annual reports.

Since that time, the basin had been used as a dump for ashes and other materials. A large sewer emptied into the dock, and part of it was filled to replace an old foot bridge over it. In 1875, the yard's civil engineer in his annual report proposed construction of a wet basin in the area at a cost exceeding $2 million. After studying the situation for a number of years, White wrote, he came to the conclusion the wet basin was a much needed improvement. Another proposal made in 1875 was extending the quay wall out into the water. This would greatly increase the yard's wharfage. Moreover it would alleviate the rapid filling along the waterfront, as discussed in his report of August 1877. Finally, the quay wall could be incorporated into his scheme for a wet basin. White's presentation succeeded in attracting the attention of the Navy Department. One week later, the Secretary of the Navy directed suspension of any more filling in the timber dock, which was to be kept in its existing condition pending further consideration.

Of the $39,000 allotted for "Repairs and Preservation" in Fiscal Year 1878-79, somewhat more than $35,000 went to payment of labor, and about $3000 for materials, according to the report submitted by Civil Engineer White in August 1879. Work performed under this appropriation included building extensions to the remaining officers' quarters, units B and F, and also Quarters A, the mail messenger's house. A second entrance to the yard was created at the end of the tank shed (Building No. 1) to enable residents of the upper block of officer's quarters and their guests to pass to and from Chelsea Street.

For repairs and preservations in Fiscal Year 1880-81, White sought $317,000, a figure he went to some length to justify. White estimated the value of the buildings, wharves, docks and other plant components of the Boston Navy Yard at about $10 million. "This immense property," he contended, had not had adequate care for several years. As a result, "there is not a building ... which is not in urgent need of extensive repairs to put it in proper order and to prevent rapid deterioration." The Steam Engineering Machine Shop, No. 42, covering three acres, was "in shameful condition, and serious results were to be expected if repairs were not soon made." Building No. 85, the mast house, 400 feet long and eighty feet wide, was "in even worse condition." Built over one end of the timber basin, the piles which served as the foundation and the sills were rotted. Delay in repairing the piles and replacing the sills might result in having to build a new structure. Other buildings specifically mentioned in the 1879 report were the upper quarters, Houses L, M, N, and O. White explained that these units originally had been a naval hospital, and years ago had been divided into four sets of quarters. Most of the woodwork dated back to the initial construction of the hospital and by 1879 "is about all gone."

The yard sought $22,500 for overhaul of the drainage system, which was "in a fearful state"; $5000 to repair and repoint the boundary wall; and $10,000 for the railroad tracks and yard scales. The proposal made by White two years earlier to renovate the water and gas service had not been accepted. In the summer of 1879, the civil engineer stated the gas and water systems "could hardly be worse." The defective pipes meant financial loss due to leakage, which would become even greater in the future as the deterioration of the pipes accelerated.

52 White to Spicer, Aug. 6, 1878, 181-33, Box 27, 5/27/78-11/21/78, p. 99.


54 Annual Reports, Estimates, &c, Aug. 13, 1879, 181-154, Box 1.

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Chart 3: PLAN OF U.S. NAVY YARD, BOSTON, MASS., JULY 1880. As compared to its condition prior to the Civil War, the yard by 1880 had less in the way of open spaces. This resulted in part from the construction of buildings in the area generally northwest of the Machine Shop. Among those structures were the Ordnance Building (No. 39); Joiners' Shop (No. 36); Rolling Mill (No. 40); Timber Preserving Shed (No. 41); Timber-Bending Mill (No. 66); and Sawmill (No. 67). Plant improvements in the southwest corner of the yard included purchase of White's Wharf and construction of Shiphouse No. 92. At the end of the Civil War, the yard had begun to fill in parts of the timber dock west of the Machine Shop. That project was temporarily halted in the mid-1870s, when U.S.G. White, the yard's civil engineer, started to promote the development of a wet basin in that area. In his Annual Reports of Expenditures and Operations, August 3, 1880, White included recommendation of the expenditure of $1,237,369.60 for the proposed wet basin. No funds were ever appropriated for the project.
List of Improvements most needed at this Station at the present time with estimated cost of each:
A. Storehouse
B. Mercantile Depot
C. Blacksmith's Shop
D. Engineering Workshops
E. Cars and Carriage
F. Dock

Cost
$42,000.00
$20,000.00
$1,000.00
$1,000.00
$1,000.00
$1,000.00
$1,000.00
Essential components of the yard's waterfront were nearing critical conditions, according to White, who contended "there is not a good Wharf in the Yard" and who labeled the condition of the facility's wharfage as "simply disgraceful." Similarly, "there is not a crane or derrick . . . which is capable of doing the work required of it, every one being more or less decayed." The dry dock and its appurtenances were described in grim terms. The swinging or turning gates had been condemned and put out of service, causing the yard to rely on the caisson or floating gate, which was "in almost as bad condition." The caisson, in service for forty-six years, had to withstand a pressure of greater than 800 tons "and there is very great danger that the gate will give way before this enormous weight." So defective was the caisson that at times it did not float properly and took two or three days to get it in place after docking a ship. The keel blocks on the dock floor had almost entirely deteriorated and needed to be replaced. The dock's southwest wall was bulging from the frost and from the weight of two iron turrets removed from monitor probably Miantonomoh, four years ago and allowed to rest almost on the coping throughout one winter. Other repairs required at the dock included work on the pump and the galleries from the dock to the pump.

That section of White's 1879 report dealing with requests for major improvements contained estimates for two projects he had not hitherto included and four he had previously recommended, the latter being a cart shed, paving and grading, a workshop for the Yards and Docks Department, and renovation of gas pipes. In addition to reiterating the necessity of replacing many of the gas mains, the civil engineer suggested that with an expenditure of $9000, the yard could produce its own gas from petroleum, as a number of state institutions and private establishments were doing. The advantages of such an operation included independence from an external source, the Charlestown Gas Company, in the supply of a vital commodity and a gas of a higher quality at a considerably lower cost.

One of White's new proposals consisted of a blacksmith shop for his own department, to be attached to the proposed Yards and Docks workshop. The other was the wet basin, which would cost more than $1 million, one of the most expensive and ambitious improvement project advanced by the yard during the years 1877-1883 and one least likely to be acted upon. In the report of August 1879, the civil engineer stated that the need for such an improvement was "patent to any one having any knowledge of Dock Yard administration, and it is in accordance with the practice in England, France and other European countries." To finance such a project would require a congressional appropriation, and, needless to say, the national legislature never gave approval. In the 1890s, when Congress and the Navy Department did agree upon a major addition to the Boston ship repair facilities, it was not a wet basin, but a second and larger granite dry dock.

Yards and Docks work performed in the Boston yard during the Fiscal Year 1879-80 included repairs on the Ropewalk. In the lower story, a 4-inch bed of concrete was laid and over it a 2-inch hard pine floor. The first and second floors of the headhouse also were renewed. Other work involved the installation of two cast iron turntables to transfer machines from one track to another; relaying the slate roof on that part of the building consisting of one story; and the introduction of skylights for lighting and ventilation. The civil engineer concluded that the Ropewalk building was "in good order and will need no extensive repairs for many years." Subsequent events suggest that White should have added the qualifier "discounting any unforeseen accident." No other repair work was described in the civil engineer's report of August 1880, except for the removal of six old dilapidated sheds, Buildings Nos. 1, 8, 13, 51, 53, and 55. Before their demolition, they had been used principally by Yards and Docks. The sites they occupied were graded and sown with grass.

THE YARD MARKS TIME, 1880-1883

Most of the improvement recommendations in the August 1880 report covered old and familiar ground, although some new arguments on their behalf appeared. In advocating construction of the Yards and Docks workshop, the civil engineer noted that his department had been using some of the six tumble-down sheds that had been dismantled, resulting in the removal of his shops to an assortment of structures previously housing old ships. One of the buildings that had been taken down had served as a cart shed. Its elimination made mandatory the erection of a new structure to store carts, wagons, wheels, and other vehicles. Failure to
replace the leaking water mains had resulted in 8.5 million gallons of water being wasted between January 1, 1878, and August 1, 1880. In addition, the old pipes required repairs be made "almost continuously."

Other improvements recommended by the civil engineer in the summer of 1880 were paving and grading, the Yards and Docks blacksmith shop, the wet basin, and a new caisson for the dry dock. The existing caisson was in such poor condition that White believed it soon must be taken out of service. With the turning gates already condemned, the dry dock then would become useless. White recommended both a new caisson and new turning gates, but he favored the caisson if only one or the other could be provided. The estimate for building a caisson was $32,000. White's recommendations in 1880 totaled $1,460,000 for improvements, mostly for the wet basin; $289,000 for repairs and preservation; and $123,000 for general maintenance.

During the fiscal year ending in June 1880, work costing $20,000 had been performed on the Ropewalk, leading the civil engineer to conclude no further major repairs would be required for a number of years. However, three weeks after he submitted his report, a fire damaged the Ropewalk, destroying 140 feet of the upper story of that part of the building connected to the head house. The damage to machinery and material was not extensive. Special appropriations totaling $25,000 financed repairs, which were still in progress in August 1881, when the civil engineer prepared his reports for the 1880-1881 year. No other significant repairs were made in the yard's plant during the period covered by that report. The only somewhat new item in the civil engineer's proposals for improvements was a call for $28,000 for rebuilding Officer's Quarters L, M, N, and O. In previous reports, he had directed attention to the sad condition of this block of housing, but now argued that the only effective approach was to rebuild them.56

By the time the Boston yard civil engineer submitted his report of operations in Fiscal Year 1881-82 and his estimates for 1883-84, Congress had enacted the pivotal legislation of August 6, 1882, which indirectly indicated that yards such as Boston might encounter rough sailing. Perhaps that explains why the package of proposed improvements did not include the wet basin, although it repeated all of the other projects recommended in August 1881. A half million dollars was sought for repairs to be made in 1883-84. Of that amount, $150,000 was earmarked for work on buildings, the Machine Shop by itself requiring $45,000. The wharf situation had grown worse, "there not being a single safe wharf in the yard." The three lower wharves and White's Wharf needed to be almost entirely rebuilt. White's Wharf and the lower shear wharf had begun falling in and were described as "absolutely unsafe." Of the yard's shears and cranes, but one remained in use. The lower shears could lift only the lightest load and the upper shears were unsafe. The dry dock required repairs to its blocking and galleries and the resetting of the first three courses of stone at the head and on one side of the dock's entrance. As a consequence of the disrepair of the caisson and swinging gate, the docking of Powhatan in November had to be delayed, while temporary repairs were made to the caisson.57

Increasing ship traffic caused congestion in the waters off the yard. The Leyland Line, an English steamship company, began weekly service using wharves located between the yard and the Warren Bridge. In March 1881, the company complained to the commandant that the yard had recently placed a mooring buoy in such a fashion that a ship tied up there would constitute a danger to vessels seeking to navigate the deep water channel. In June of the same year, one of the Leyland steamers under tow collided with Hartford and a yard wharf, damaging both.58

Except in the description of Yards and Docks work performed, White's report of September 6, 1883, gives no hint that the yard had been ordered closed as a shipbuilding and repair facility. If anything, it suggests that the yard would become increasingly more active and that monies could be obtained for dramatic


Plate 16: OFFICERS’ QUARTERS B THROUGH F, CHARLESTOWN NAVY YARD, 1882. A non-military and non-industrial dimension of the yard is revealed in this photograph of the seemingly civilian-type row houses and the large number of children and other dependents, apparent residents of the quarters.
improvements in the yard's plant. The cost of White's various proposals reached $3.3 million dollars—roughly $2.9 million for works of improvement, $370,000 for repairs and preservation, and $75,000 for maintenance.

Since 1877, the volume of major repairs to the yard's plant had steadily declined. The 1882-83 Fiscal Year essentially continued that trend and little work was done. On June 15, 1882, a fire damaged the roof of Building No. 28, the Construction plumbers' shop. A board convened to determine the origins of the conflagration was able to trace the course of the fire, which reportedly began in a sawdust-filled "spit box" in an office on the second floor. The board found no evidence of violation of smoking regulations and could not identify the specific cause of the fire. Another board estimated damage to the building at $1600, and during Fiscal Year 1882-83, the roof was rebuilt.59 Other than repairs on No. 28, White noted only the repainting of both the upper and lower quarters and eleven other buildings.

In that section in which he gave the reasons for his request of $370,000 for repairs and preservation work in Fiscal Year 1884-85, White copied the previous year's discussion respecting the yard buildings. In August 1883, White stated that three of the wharves (Nos. 2, 4, 5) were "so far gone that they need rebuilding," an activity requiring a special estimate. The remaining three wharves (Nos. 1, 3, 6) required $15,0000 in repairs, consisting of new caps, fenders, piles, and mooring posts. White asked for $115,000 to put the yard's cranes and shears in working order and to purchase an iron floating derrick. As in other parts of his report, White simply repeated the prior year's account of the needs of the dry dock.

The last section of White's August 1883 report, his recommendation for "Works of Improvements," dropped two items found in his 1882 submission, more or less duplicated five others, and added five new ones. After many years' lack of success in winning any support for his proposed Yards and Docks workshop and a Yards and Docks blacksmith shop, he omitted them in 1883. Items reappearing from the reports of previous years were the recommendations for renovation of water pipes, the cart shed, paving and grading, the floating gate for the dry dock, and rebuilding one block of the officers' quarters. In calling once again for a new cart shop, he noted that the yard's wagons, carts, timbers wheel, and other vehicles were being stored in the lower shiphouse, in the archway of the Ordnance Building (No. 39), and in the shed used for his department's blacksmith shop, Building No. 25. For want of storage facilities, some vehicles were left standing in the open, exposed the weather.

It was the new proposals for plant improvements that make White's report of August 1883 an interesting document. Whether he acted on his own initiative or under the encouragement of the yard commandant or the Chief, Bureau of Yards and Docks is unknown. One recommendation, for a new chapel, was quite modest; the other four were expensive—an erecting and copper shop, with an estimated cost of $42,000; an iron platers' shop, $121,000; rebuilding wharves, $74,000; and additional dry docks, somewhat less than $2.5 million.

In the 1870s and early 1880s, the yard chapel occupied half of Building No. 23, the structure never having been intended as a place of worship. The other part was used as a steam box. The expenditure of $6000 for a new chapel appears as a small expense. However, the yard sometimes was without a chaplain, and when such an officer was on duty his main function was to conduct services for the Marine Corps Barracks and the enlisted men on the receiving ship.

In 1881, Wharves Nos. 2, 4, and 5 had been surveyed by order of the Bureau of Yards and Docks. As a result of that examination, Wharves No. 4 and 5 were placed out of service, no teams or heavy weights being allowed on them. Civil Engineer White regarded all three as unsafe, requiring rebuilding from the pilings upward. Wharf No. 2 was fast approaching the same condition as the other two and, without repairs, it too would soon be unusable.

The copper and machinery-erecting shop recommended by White in August 1883 was intended to replace Buildings Nos. 44, 45, and 46, in use by Steam Engineering as coppersmith shop, spare machinery shed, and erecting shed. These old wooden structure had so deteriorated as to be "almost worthless" and to constitute fire hazards. He proposed they be replaced with a one-story brick structure measuring 200 by forty feet. Construction and Repair would have use of the second new shop proposed by White, a building for iron platers. The existing iron platers' shop, Building No. 22, would then be available to the Department of Yards and Docks.

59 Badger to Chandler, June 16, 1882, 45-34, p. 92; Board to Badger, June 16, 1882, 45-34, p. 91.
The Commission on Navy Yards, established in 1882 to investigate conditions in all yards, had inquired what changes would be required at each yard to "place it in proper and effective condition for any probable demands in time of war." Using that approach, White included in his proposals for yard improvements at the Boston Navy Yard two additional dry docks, which would "put the Yard in condition for war purposes." He claimed that ample space existed for as many as six modern stone dry docks. Economy directed that the two docks be constructed simultaneously. White perceived additional dry docks as an alternative to the wet basin previously recommended, but not included in the August 1883 report.

Obviously, White was looking well into the future and contemplating the needs of the Navy should there be a major war. The ship repair activity at the yard in the early 1880s barely justified keeping the yard open, let alone expenditures of millions of dollars for additional dry docks and other improvements. Secretary Chandler's approach was to divert funds away from maintaining and improving costly navy yards and to use those monies for the construction of modern ships. Ultimately, the New Navy would need expanded ship repair facilities. Until that time, the physical plant at the Boston Navy Yard would continue to decline.

CIVILIAN EMPLOYEES

In part because of the excesses of Robeson's administration of the Navy Department from 1869 to 1877, criticism of the employment practices at the nation's navy yards became widespread. Despite an elaborate system to make wages at the public yards conform to those at private shipbuilding and ship repair establishments, many believed the Navy's civilian workers were overpaid, given their general inefficiency. During one inquiry into the Navy Department, a congressman asked: "Is it not a fact that labor is done a great deal cheaper in these private establishments than in navy-yards?" The Secretary of the Navy and many members of Congress constantly pressed the argument that navy yards employed excessive numbers of workers, and movements were initiated to reduce the labor rolls.

LAYOFFS AND WORK SUSPENSIONS

Between 1877 and 1883, the Boston Navy Yard experienced a number of layoffs, work slowdowns, and suspensions of work. Secretaries Thompson and Chandler held the opinion that the labor rolls of navy yards contained many employees whose services were not necessary. Because of that belief, they issued frequent directions to reduce forces. In addition, budgetary constraints compelled cutbacks in the number of workers. This was the situation in Boston, when Thompson began his administration of the Navy in March 1877. In late 1876, Navy Department funds for work at the yards had began to run out, and a financial crunch continued into the new year. The yards at Portsmouth, New York, and League Island were then preparing for sea some of the eight sloops of war, and in those yards "the work went on notwithstanding the labor was not paid for." Subsequently, Congress made a special appropriation to provide funds for workers in those three yards who had not received their wages. At the Boston, Norfolk, and Mare Island yards, most work was simply stopped. A reduction in force had already occurred at the Boston yard, and employment went down from 400 in October 1876 to 170 in the next month. The number of workers declined even further in January and February 1877 and did not attain the same levels as October 1876 until the following July. During the period November 1876 to May 1877, mechanics, clerks, and foremen had been laid off. That layoff occasioned a round of appointments and reappointments in the spring of 1877.

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61 See testimony of Naval Constructor Easby, *Contracts of Navy Department, May 10, 1878*, pp. 30-35; An Act to Provide for Deficiencies..., Apr. 30, 1878, *Statutes at Large*, vol. XX, pp. 41-47. See also Greatest Number of Men Employed..., 1858-1886.
What is referred to as "the suspension of work" at the Boston Navy Yard from late 1876 to the following July, while not total, was severe, especially for the Departments of Construction and Steam Engineering. It saw the discharge of foremen and employees with long terms of service. The "resumption of work" that began in early July proved painful for some of the suspended workers, as they had to fight to regain their former positions. The new administration responded to the requests of men who challenged the claims of the last incumbents.

As was true of almost all new secretaries, one of Thompson's first activities respecting navy yards was to direct the elimination of unnecessary clerks, writers, and other employees. Commandant Parker responded to that order by stating that no employees in his yard could be discharged "without detriment to the Naval Service," except one, a receiver in the Inspection of Provisions and Clothing. In a telegram sent in April, Thompson instructed Parker to discharge "today" "all writers employed on the receiving ship and at the yard . . . whose services are not absolutely required." Parker recommended the discharge of a writer on the receiving ship "whose services are desirable but not absolutely necessary."

The campaign to reduce civilian workers gained congressional sanction in an appropriations bill in May 1878. The lawmakers instructed the Secretary of the Navy to "institute a rigid inquiry" into the prevailing "civil establishments" in the navy yards "to the end that the civil force employed therein may be consolidated and reduced at least one-half from the existing complement."

A crisis for Navy shore establishment unfolded in late June 1882. A new fiscal year began on July 1, but Congress had not yet enacted an appropriations bill. At issue was whether work would continue at navy yards. In late June, Chandler telegraphed instructions, which Commandant Badger repeated and enlarged upon in orders he immediately issued. "The present organization and work . . . will continue until further orders, on and after the first of July." However, "men now suspended will not be called in, except those absolutely necessary to go on with work actually in hand." The problem was not only that Congress had not yet acted, but that when it did so it was expected that the appropriation for the civil establishment at all yards would be half of that of the previous year. Chandler sent a letter to the Boston yard in early July explaining this situation and directing Badger to continue those employed in the civil establishment during the remainder of July. However, "you will immediately notify every person so employed that his employment will cease on July 31." Prior to August 1, the Department would issue instructions concerning "the clerks and writers to be thereafter employed." Chandler sought from Badger suggestions as to how to maintain "the requisite force at the Yard" with only one half the funds of the year just ended.

Replays of this sequence occurred during the remainder of the summer. On July 29, Chandler instructed Badger to continue the existing civil establishment during the first three days of August, and on August 3, he ordered the maintenance of the civil force until the 15th of that month. And so it went into the middle of September. By that time, the bureaus may have adjusted to the reduced funds for their civil establishments at the yards, but the pressure for retrenchment continued. In December, Secretary Chandler instructed yard commandants to "cause it to be informally made known that during . . . January reductions

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62 Circular, Navy Department, Mar. 15, 1877, 181-51, 1/1/72-12/15/85, p. 58; Telegram, Thompson to Parker, Apr. 4, 1877, 181-11, Box 9, 9/6/75-7/3/77, p. 38; Parker to Thompson, Mar. 20, May 1, 1877, 45-34, pp. 32, 45.

63 An Act Making Appropriations for the Naval Service..., May 4, 1878, Statutes at Large, vol. XX, pp. 48-56.

64 Telegram, Chandler to Badger, June 27, 1882; Chandler to Badger, July 8, 1882, 181-11, Box 10, 6/17/81-1/12/83, pp. 135, 137 1/2; General Order, Badger, June 19, 1882, 181-45, 5/22/78-6/14/83, p. 365.
will be directed in the force of civil employees and workmen." The purpose of the informal circulation of that news was to enable employees who might be discharged to obtain other employment.\footnote{Chandler to Badger, Jul 29, Aug 3, Aug 12, Aug 28, 1882, 181-11, Box 10, 6/27/81-1/12/83, pp. 147, 149, 150, 153 1/2; Badger, General Orders, Jul 31, Aug 2, Aug 14, 1881, 181-45, 5/2/78-6/14/83, pp. 373, 374, 375; Chandler to Badger, Dec 15, 1882, 181-11, Box 10, 6/27/81-1/12/83.}

Another reduction in forces occurred at the end of the period, when Secretary Thompson announced the suspension of work at Boston, except for the Ropewalk and the sailmakers' department. That suspension was ordered on June 27, 1883, but employment increased in the following months, and not until November did it begin to drop. The general delay in carrying out his reforms angered Thompson, who stated to the bureau chiefs in Washington that "it is not difficult to discover that satisfactory progress had not been made in enforcing economy in work in the Navy Yards." He directed particular attention to the yards at Boston and League Island, both of which were earmarked for suspension of work. Thompson stated that "the completion of the 'Shenandoah' at Boston ... leaves no reason for longer maintaining workmen for the repair of vessels." He further stated "the whole force there engaged in such repairs should, therefore, within a reasonable period be discontinued," excepting a few workers to preserve property.\footnote{Parker, General Order, Jun 20, 1877, 181-33, Box 25, 5/12/72-8/23/77.}

INQUIRES INTO YARD EMPLOYEES

The years from 1877 to 1883 seem somewhat unusual because of the interest shown by the Navy Department with the identities of navy yard employees, as distinct from merely the numbers of different categories of workers. That concern is evident at the Boston yard in a series of orders from Washington and the commandant, directing department heads to provide information on their civilian employees.

In June 1877, Commandant Parker gave instructions for a list of employees, including their rating, date of employment, who authorized their employment, "their peculiar fitness for the places they occupy," and whether they had served in the Army or Navy.\footnote{Thompson to Parker, Nov 10, 1877, 181-11, Box 9, 7/6/77-6/16/79, p. 43; Parker to Thompson, Nov 16, 1877, 45-34, p. 154; Thompson to Ransom, May 21, 1880, 181-11, Box 9, 6/16/79-6/27/81, p. 89; Ransom to Thompson, May 24, 1880, 45-34, p. 63.} Presumably, the Navy Department could study the data collected and develop some policies respecting yard employment. The same could not be said for other requests for information about yard workers.

The following November, Secretary Thompson called for a list of names of all employees and "the Congressional Districts to which each belongs." The breakdown for the 320 employees in the Naval Constructor's Department at Boston indicates that nine congressional districts were represented. The Fifth District contained 187 workers; the Fourth, ninety-six, and the other seven, from one to eight. Four years later, the yard received directions to make a list of men "charged to the 8th Congressional District." That produced sixteen names.\footnote{Chandler to Badger, Dec 31, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 82.} The inquiries respecting congressional districts underscore the fact that navy yard employment was a political matter. Such information had no value in the management of an industrial or military establishment.

In a telegram of October 1881, the Department directed the collection of data for "employees of every description" on July 1, and noted it was "wanted for the blue book." In 1883, similar information was sought for July 1 of that year "for the U.S. Official Register." Another listing, called for in May 1882, was to include, in addition to the usual information, "from what state appointed." Secretary Chandler hit upon the device of publishing information about numbers of employees and work performed on November 16 of each year. His
purpose, as evident in his annual reports of 1882 and 1883, was to assemble a profile for the service as a whole and for each yard to show the vast discrepancy between the large number of employees on the one hand and the "scanty" work performed on the other.69

HIRING, FIRING, REHIRING AND SECRETARIES OF THE NAVY

During the eight years George Robeson was Secretary of the Navy, a pattern developed wherein individuals on their own behalf or on account of others contacted his office about employment or employees in navy yards. In response to such inquiries, Robeson constantly intervened in the hiring, firing, and disciplining of workers at the Boston yard and often directed the employment or rehiring of particular individuals. His two immediate successors, Thompson and Hunt, more or less routinely routed to the commandant all communications received from outside parties with grievances about work or workers at the yard.

True to form, Robeson, in the closing hours of his administration of the Navy, directed the Boston yard to rehire or retain two individuals who had secured his favor. On March 6, 1877, he sent directives to Commandant Foxhall Parker for the reemployment of George W. Pierce in his former position in the Yards and Docks Department and to retain C. W. Parker as store clerk in Construction and Repair. The new Secretary, Richard Thompson, did not order the appointment of any individuals at the Charlestown yard until May. Then he made an unfortunate move. He directed the employment of Moors Pattee as the constructor's clerk and the discharge of D. A. Green from that position. A month later, he had to reverse himself and instruct Commandant Parker to discharge Pattee and reappoint Green. The explanation given was that information had reached the Department showing that, in the substitution of Pattee for Green, "the best interests of the service were not promoted, and further, that the means used by [Pattee] to secure the change was not such as could meet approval." Shortly thereafter, Naval Constructor Mintoyne, when asked for the names of the most efficient clerks and writers in his department, submitted a list with Green at the top.70

When work was resumed at the Boston yard in July 1877, it was necessary to make reappointments. Thompson ordered the reinstatement of W. Mansfield as chief clerk, Department of Steam Engineering. Commandant Parker informed the Secretary that the chief engineer reported Mansfield as inefficient, and that is why he had not been reemployed when work resumed. However, the commandant had carried out Thompson's order.71

Perhaps because of the Pattee-Green affair and awareness that he had directed the reemployment of an inadequate chief clerk, Thompson abstained from ordering or advocating the hiring or firing of any individual until the following March. He did pass on to the yard inquiries about employment, but with no directions to the commandant. Then, in mid-March 1878, he called for the reemployment of George McElwain, first-class iron plater, "upon the condition that if he drinks hereafter, he will be discharged."72 Subsequently, in a fairly regular fashion, but never on the same scale as Robeson, Thompson gave directions

69 Telegram, Acting Secretary of Navy to Commandant, Oct. 19, 1881; Chandler to Badger, Oct. 31, 1882, 181-11, Box 10, 6/27/81-1/12/83, pp. 46, 172 1/2; Chandler to Badger, June 20, Oct. 16, 1883, 181-11, Box 10, 1/2/83-10/17/84, pp. 20 1/2, 51; Chandler to Ransom, May, 15, 1882, 181-51, 1/1172-12/15/85.

70 Robeson to Parker, Mar 19, 1877 (two letters), 181-11, Box 9, 9/6/75-7/3/77, pp. 124, 125; Thompson to Parker, May 5, June 7, 1877, 181-11, Box 9, 9/6/75-7/3/77, pp. 142, 149; Mintoyne to Parker, July 9, 1877, 181-33, Box 25, 5/12/77-8/23/77, p. 71.

71 Thompson to Parker, July 10, 1877, 181-11, Box 9, 7/6/77-6/16/79, p. 46; Parker to Thompson, July 16, 1877, 45-34, p. 80.

72 In the following October, McElwain was reported by his foreman for being absent from his work and, when found asleep, in a state of intoxication; Thompson to Parker, Mar. 19, 1878, 181-11, Box 9, 7/6/77-6/16/79, p. 70; John Roberts to Samuel Pook, Oct. 9, 1878, 181-5, Box 19, 6/12/78-5/29/80, p. 46.
or recommendations to the yard to hire particular individuals.

For example, in October 1878, he sent to Commandant Spicer the "application and accompanying testimonials" of Charles Myers for a watchman's post. In his letter, the Secretary wrote: "If the man is worthy (as he seems to be) and you can give him the place, I would be grateful if you would do so." Archibald Morrison, a yard employee, wrote to A. H. Devens, the Attorney General of the United States under President Hayes. "The boss told me," stated Morrison, "I could be working every day if I had a word from the attorney general." Morrison's letter eventually found its way to Thompson, who sent it on to Captain Haxtun, then commander of the yard, "with the request that he be kept at work on full time if possible." Early in his brief stint as Secretary of the Navy, William Hunt directed that George Wood, then employed in the yard and doubtless a party legman, "shall not be disturbed, and that constant work be given him."

In three instances and on behalf of store owners and other creditors who wrote to him, Thompson directed the Boston yard commandant call the attention of particular employees to allegedly outstanding debts. According to a grocer in Maine, William Perkins, employed in the Steam Engineering Department, had accumulated unpaid grocery bills. At the direction of Commandant Ransom, Chief Engineer King contacted Perkins, who stated that "family misfortunes" had involved him in "pecuniary difficulties," and he promised to "pay as soon as possible." Another grocer had allowed William R. Huzzey, then unemployed, to run up a bill for foodstuffs. After Huzzey got work at the yard, he refused to make good on the debt. W. P. Innis was the creditor of Thomas Bohan, engineer at the Chelsea Hospital. After nine months of nothing but promises and insults, Innis wrote to Thompson and also to Congressman Leopold Morse. In the twentieth century, the Navy Department regarded the personal finances of its employees as outside of its concern, but Thompson seems to have assumed that his intervention was proper.

Reminiscent of Robeson were efforts of Secretaries Thompson and William Hunt on behalf of yard employees who had been blacklisted. For being drunk in the yard and "using insolent language to ladies while in that condition," the name of John LeRoach was entered into the list in January 1879, and an explanation for that action sent to Secretary Thompson. It appears LeRoach contacted the proper parties, including Congressman Morse. Thompson directed a reconsideration of the matter. Captain Haxtun interviewed LeRoach, who made promises of reform. Upon receiving Haxtun's report, Thompson wrote that "in view of the promises made" by LeRoach "and the recommendations in his behalf," his name should be removed from the list. By order of Thompson, the names of Dennis Lowery and Joseph Butts also were removed. Butts, employed by Steam Engineering, had been fired and blacklisted in 1873. He had been reported by foreman William Chapman for refusing to do work that he considered dangerous. Three weeks after being discharged, Butts joined the Navy and served in the engineering departments of Brooklyn and Alliance. In October 1880, his letter to Thompson led to a reassessment by Captain Haxtun, Chief Engineer King, and very likely Foreman Chapman, still in the yard. That he had been on the list for seven years may have been a factor in the Butts case.

Francis Wilson, ropemaker, had been discharged and blacklisted on October 6, 1880, for being a "discordant element among workmen." Sixteen months later, Secretary Hunt wrote Ransom that "in consideration of the length of time" that Wilson's name had been on the Black List, "you are directed to remove it from that list." Another former employee, William Thompson, was in circumstances similar to

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74 King to Ransom, Apr. 25, 1879; Thompson to Ransom, Apr. 25, July 3, 1879, 181-11, Box 9, 7/6/77-6/16/79, pp. 41, 61; Spicer to Thompson, Oct. 5, 1878, 45-34, p. 145.

75 LeRoach to Morse, n.d., 45-34 (1879); Haxtun to Thompson, Jan. 17, 1879, 45-34; Thompson to Haxtun, Jan. 23, 1879, 181-11, Box 9, 7/6/77-6/16/79; Thompson to Ransom, July 23, 1879; Butts to Thompson, Oct. 27, 1880; Acting Secretary of Navy to Butts, 181-11, Box 9, 6/16/79-6/27/81, pp. 67, 128.
Wilson, and successfully petitioned Hunt to have his name also taken off the Black List.76

Oftentimes, the Secretary acted on behalf of particular men seeking work or reemployment at the Boston Navy Yard because he had received communications concerning these individuals from other parties, frequently members of Congress or other officeholders. Three congressmen concerned themselves with employment in the yard during the period 1877-1883, Leopold Morse, Nathaniel P. Banks, and Henry B. Loring. Loring, elected in the early 1880s, differed from the other two, since he did not bother to go through the Secretary, but most often wrote directly to the commandant. The congressman often used stationary with the heading "City of Lynn, Mayor's Office."

Loring was particularly concerned with the yard watch, operating under the cognizance of Yards and Docks, and shipkeepers, under Construction and Repair. Between April 12 and Oct. 10, 1883, he wrote letters requesting appointment or reappointment of six men to the force of watchmen and shipkeepers. Loring recommended reinstatement as watchman of John Bateman of Charlestown. As the basis of his request, Loring stated Bateman "has many friends in Lynn whom I hold in high esteem" and that Bateman "had, I understand, a long and honorable record in this position." In another letter sent four days later, Loring took note that an opening existed in the watch because one watchmen was physically unfit for duty. The congressman asked for the appointment to the position of E. Callahan, also of Charlestown. Another communication supported the desire of a shipkeeper to be transferred to the watch. In October, when the yard was adjusting to its semi-closed status, Loring acted on behalf of Peter Sullivan, "who by my advice, upon his discharge from the position of shipkeeper, accepted the place in the laborers dept." Loring requested Badger reinstate Sullivan as shipkeeper "whenever the opportunity may present." 77

Congressman Loring had little hesitation in voicing his own understanding of conditions in the yard or how the yard should be run. As an economy measure in 1883, the position of gatekeeper at the main entrance was abolished and the incumbent discharged. In pressing the rehire of the gatekeeper, Loring argued that stationing one Marine Corps sentry and the captain of the watch at the main gate was inadequate and that "a reliable keeper should at all times be at the main gate." He took a similar approach in a letter on behalf of a suspended machinist in the Ropewalk. Loring stated to Badger: "I am of the opinion that there is plenty of work in the way of repairs to belts, bobbins, . . . &c," which the machinist in question could repair. On another occasion, Loring took up the cause of a discharged fireman in the Provisions and Clothing building. However, the interesting aspect of Loring's solicitations remains his focus on the watch and shipkeepers. It seems that he assumed these labor forces were his particular preserve. In the light of the excesses of the Gilded Age in manipulation of the patronage, it is not inconceivable that Loring and other wheelers and dealers sat down and decided who got what with respect to the spoils in the Boston area. 78

Nepotism appears on the part of commandants of the Boston Navy Yard. John Hudson, chief clerk to the commandant, retained his position for more than three decades. But apparently, a new commandant had the privilege of appointing the second clerk. Shortly after taking command of the yard, Capt. William Spicer appointed V. C. Spicer as second clerk; and Commo. George Ransom, when he became commandant, named Mr. C. Ransom to the clerkship. 79

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76 Hunt to Ransom, Feb. 13, 1882; Hunt to Badger, Mar. 7, 1882; Hunt to Badger, Feb. 28, 1882, 181-11, Box 10, 6/27/81-1/12/83, pp. 13, 24, 96 1/2. Of all the blacklisted workers discussed in these two paragraphs, only the names of Wilson and Thompson are found in the surviving "Black List," both with a line through them and an entry that the erasure was by order of the Secretary. The names of the others are not found, nor are there any gaps or deletions where their names might be expected to appear. This suggest that the document had been edited and that it was copied over; 181-75.

77 Loring to Badger, Apr. 12, Apr. 16, Apr. 29, Oct. 1, Oct. 10, 1883, 181-5, Box 20, 11/20/82-1/26/84, pp. 59, 60, 64, 108, 123; Loring to Chandler, July 27, 1883, 45-34.

78 Loring to Badger, Oct. 8, Nov. 26, 1883, 181-5, Box 20, 11/30/82-1/26/84, pp. 115, 155.

79 Spicer to Thompson, July 1, 1878, 45-34, p. 87; Ransom to Thompson, Feb. 17, 1879, 45-34.
WAGES AND WORK SCHEDULES: THE PROBLEM CONTINUES

During the Grant administration, a presidential proclamation in 1869 and an act of Congress in 1872 had established that navy yard employees should be given a full, ten-hour day's pay for eight hours of work. However in the years 1877-1883, there continued to be tension between the legislation of 1862 directing that navy yard wages should be as close as possible to those paid in private establishments and the act of 1868, fixing eight hours as the work day for per diem workers.

The new administration installed in Washington in March 1877 reopened the issue and followed an uncertain, ambiguous course for several years. In his first annual report as Secretary of the Navy, Thompson contended that the higher cost of shipbuilding in government yards as compared with private shipyards arose partly because the Navy paid the same wages for eight hours of work that commercial establishments paid for ten. "With this inequality removed, it is believed that ships may be built as cheap at the government as at private yards."

The Navy Department began to make official distinction between a ten-hour and an eight-hour day. Wage schedules for Boston for the quarter beginning July 1, 1877, had written in their margins: "The above is to be the pay for ten hours as per Department General Order No. 227." A Navy Department Circular dated June 30, 1877, listed two wage rates for foremen and superintendents paid by the Bureau of Construction and Repair, one for eight hours per day and the other for ten. Subsequently, the master schedule in force at Boston listed rates per hour and for days of eight hours and ten hours.

A major change occurred in 1877 in the work routine at the Charlestown Navy Yard, and the yard returned to a ten-hour day during the spring and summer. The formula was formally spelled out in a circular issued by Secretary Thompson in October 1877, although evidence indicates that in the months previous the Boston yard was on a schedule of ten hours. Thompson's directive had a peculiar wording and stated that the working hours in navy yards "may be as follows." The hours outlined in the circular were 7:00 a.m. to 6:00 p.m. from March 21 to September 21, and 7:40 a.m. to 4:30 p.m. from September 22 to March 22, "with the usual intermission of one hour for dinner." Thus the Secretary's formula provided for a ten-hour day for half of the year and seven hours and fifty minutes for the other half. The October 1877 circular closed with the statement: "This regulation is not designed to carry with it any present reduction of pay." That closing statement probably meant that the workers would continue to receive the same wages, even though the yards shifted in September from a ten-hour to an eight-hour day.

In March 1878, Thompson issued a new document which was to be "substituted...for the Circular of October 25, 1877." "Will be" replaced "may be," but the formula for working hours in the second circular was identical with that in the earlier directive. A change was to be found in the provisions on wages. The circular of March 1878 stipulated that:

The Department will contract for the labor of mechanics, foremen, leading-men and laborers on the basis of eight hours a day. All workmen electing to labor ten hours a day will receive a proportionate increase of their wages... The Commandants will notify the men employed, or to be employed, of these conditions, and they are at liberty to continue or accept employment under them or not.

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81 See schedules for Department of Steam Engineering and Naval Constructor's Department, June 25, 1877, 181-33, Box 25, 5/12/72-8/23/77; Navy Department, Circular No. 2, June 30, 1877, 181-51, 1/1/72-12/15/85, p. 70; Employees of the U.S. Navy Yard,... Boston, Sep. 30, 1878, 181-33, Box 27, 5/27/78-11/21/78.

82 Thompson to Parker, Oct. 25, 1877, 181-51, 1/1/72-12/15/85, p. 75.

83 Thompson, Circular No. 8, Mar. 21, 1878, 181-51, 1/1/72-12/15/85, p. 81.
Thompson’s circular suggests that workers had a choice and that they could choose not to work ten hours. In practical terms, probably no such choice existed.

It seems unlikely that in the spring and summer some men at the Boston yard stopped working at 4:00 o’clock, while others remained on the job for two more hours. Yard routines were geared to ten hours, and the evening bell rang at 6:00 and not 4:00. Foremen and superintendents probably did not arrange their gangs of workers so that some could leave earlier than others, and indeed foremen may have taken a dim view of any worker who insisted on being allowed to stop work at 4:00. Because wages during the second half of the nineteenth century were barely sufficient and work was not steady, most industrial workers simply had to work as much as they could and could not afford to elect to work eight hours instead of ten.

Confusion existed among some yard administrators as to the policy respecting hours and wages. On September 18, 1878, Commandant Spicer sought clarification from Thompson, whose response indicates that ten hours was assumed to be the norm for the workday at navy yards. On September 21, the day before the shift to the winter schedule, Spicer was informed, by telegram and by letter, that the "change in the working hours which goes into effect on the 22d instant, will not involve any reduction of pay." This was essentially the same statement as found in the circular of October 1877. To remove any misunderstanding, the directive of September 1878 added: "The employees will be paid the same as if they could work the full length of time that the working hours in the Spring and Summer permit them to do."  

It took several years to work out this interpretation of legislation dealing with navy yard wages, and ambiguity persisted. In August 1878, Secretary Thompson had occasion to explain the policy of the Department in his reaction to a letter sent President Hayes by a worker at the Boston Navy Yard, Edwin K. Rogers. Apparently, yard per diem employees had met to consider the matter, and Rogers later was identified as "Chairman of a Public Meeting" on the wage issue. Rogers requested Hayes to issue an executive order to reduce the hours of labor at the yard "one hour and a half on Saturday, P.M. of each week, without a reduction of pay, the reduction to continue during the season of the year in which ten hours is demanded as a day's work." Rogers presented his proposal "as a measure of conciliation," something of a compromise between the Thompson administration's policy and the view that navy yard workers should be paid a full day's wages for eight hours of work. The letter was passed to Thompson, who responded to Rogers at length and in some acidity.

Thompson informed Rogers that "you are mistaken in supposing that ten hours are demanded as a day's work, at any season of the year." Rather, "eight hours are considered as a day's work, in this respect complying fully with the law." The Secretary stated that wages were established for a workday of eight hours "and no man . . . is required to work more than that number of hours, unless he chooses to do so." To accommodate those who so choose, the Department also "fixes wages for ten hours of labor so those who work that length of time shall be paid accordingly." Obviously, "the amount thus paid for ten hours of work is . . . more than that paid for a legal day's labor of eight hours." Since "it is discretionary with all the laborers to earn it or not as they may think proper, the Department is unable to see any injustice in it." This arrangement "does not make a day's work longer than eight hours but merely provides for additional payment to those who think proper to work a greater length of time."

Thompson then explained the reasons for the dual wage schedules, one for eight and one for ten hours. "To adopt any other rule would be to recognize the principle that a man is entitled to be paid . . . for ten hours work when he worked only eight." Such a rule would constitute a "discrimination against all the other laborers of the country." The Navy Department had no legal authority to make such a discrimination nor "to pay for any other labor not performed." Moreover, the principle Rogers accepted "would proportionately increase the cost of work in the Navy Yards over and above that at private ship yards" by twenty per cent, "a degree of improvident extravagance the country will never justify." That "extravagance" would lead to "the abandonment of all the Navy yards and the building of public vessels by private parties."

84 Spicer to Thompson, Sep. 18, 1878, 45-34, p. 130; Acting Secretary of Navy to Spicer, Sep. 21, 1878, 181-51, 1/1/72-12/15/85, p. 88.

85 Thompson to Rogers, Aug. 10, 1878; Thompson to Spicer, Aug. 10, 1878, 181-11, Box 9, 7/6/77-6/16/79.
Thompson returned to the relationship between the Navy Department and its employees, which he described as contractual. "All the laborers . . . have been advised of the existence and nature" of the regulations, "that is that they would be paid a fixed sum for a day's work of eight hours and an additional sum for ten hours when they thought proper to work that long." Workers accepted "their present positions upon these terms and will be expected to comply with them so long as they remain in the government service." However, nothing in the contract prevented a worker from leaving government employment whenever he wanted to. Thompson defended his policy as "in precise accordance with existing law and will be followed until the law is changed." That could happen "whenever Congress thinks proper to discriminate against all other laborers in the country by making those who work for the government a privileged class and increasing their wages on that account."  

In his letter to Rogers, the Secretary of the Navy asserted that the Department's procedure was "in precise accordance with existing law." But which procedure? What he defended was the payment of eight hours' wages for eight of work and ten hours for ten hours. But that system prevailed only half of the year. Between September and March, navy yard workers did receive ten hours' wages for eight hours of work. So the tension remained.  

The arrangement whereby workers at the Boston Navy Yard worked eight hours part of the year and ten hours during the remainder prevailed, with one modification, from 1877 to March of 1883. The modification consisted of allowing workers to quit work one hour early on Saturdays in the two hottest months. This change was instituted by Secretary Thompson in the summer of 1880. On the basis of a telegram from Thompson, Commandant Ransom issued a general order that in July and August, "the Yard bell will be rung on the afternoon of Saturdays for work to cease at 5 O'Clock." Similar instructions were given in 1881 and 1882.  

At the very end of the period under consideration in this chapter, another shift occurred in the Navy Department's thinking on wages and hours. In March 1883, when the yard should have returned to a ten-hour day, Commandant Badger received first a telegram and then a letter of confirmation directing him to "continue the present eight hours of labor until otherwise ordered." The letter fixed working hours as from 8:00 a.m. to noon and from 1:00 p.m. to 5:00 p.m. Thus the Boston yard returned to the schedule that had prevailed during the Grant years of an eight-hour day during the entire year. Moreover, instead of a new wage schedule going into effect on April 1, 1883, the commandant received instructions from Secretary Chandler to "continue to pay wages according to present schedules until further orders." No further orders came until early May, when Chandler directed the preparation of wage schedules.  

More important were the Secretary's remarks about navy yard wages. "There is no statute," he wrote, "describing any principle or rule for determining the rates of wages to be paid, or discriminating in this respect for or against government workmen in comparison with employees in similar private establishments." He claimed that the Act of 1868 fixed the length of the work day, "but it does not establish any rule by which the compensation for a day's work shall be determined, this being left to be fixed in the ordinary or customary manner." Chandler, in essence, was placing the problem in the lap of the commandant. "Due inquiry should be made . . . into all the facts which may aid in arriving at a correct conclusion, and schedules should be submitted proposing wages considered appropriate for a day of eight hours labor, and fair and just, under all

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86 Rogers to Thompson, Aug. 12, 1878, 181-11, 7/6/77-6/16/79, p. 100.  
88 Badger, General Order, Mar. 21, 1883, 181-45, 5/22/78-6/14/83, p. 441; Chandler to Badger, Mar. 23, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 5.  
89 Chandler to Badger, Mar. 31, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 7.
the circumstances, both to the government and the workmen." Badger, in turn, passed the problem to a board of officers convened to propose wage schedules for May and June, "in conformity with" the letter from Chandler, a copy of which was provided the board.90

On occasion, because of dwindling funds, yard workmen were put on half-day schedules. This occurred for employees of the Construction Department, and apparently for others as well, in July 1878. In December of the same year, shipkeepers were employed on a part-time schedule.91

For the per diem employees at the Boston Navy Yard, the work routine was governed by the ringing of the yard bell. As ordered by Commandant Parker, as of early July 1877, the yard bell started ringing at 6:55 a.m. and 12:55 p.m. and on each occasion sounded for five minutes. The muster of the workman was to begin "at the last tap of the bell." The cessation of work at noontime and again in the evening was also signifyed by the bell. Secretary Thompson changed that arrangement somewhat in the following month, ordering that in all navy yards, the bell be rung for ten minutes before the "hour of labor in the morning and afternoon." Moreover, the moment the men are mustered they must proceed to the place of work," where they must remain "until the bell rings to knock off."92

Although the Department gave specific orders as to when and how long the mid-day break should be, some local discretion may have been allowed. It appears that late in 1877, the Boston yard had a thirty-minute, not an hour break for dinner. Commandant Parker received two petitions in December of that year. Perhaps, workers at the Ropewalk initiated the first of these. The first signature is that of Joseph Pedrick, foreman ropemaker, and the document bears a cover sheet on which is written "U.S. Ropewalk." Three other foremen signed directly below Pedrick and the document bears a total of 199 names, so it represents the views of other workers in addition to those in the Ropewalk. That petition asked "that the Hours of Labor in the Yard may be arranged as to allow the men one Hour's time in which to get their Dinner, instead of a Half Hour as now."93

News of that petition generated a second document. Offered "in rebuttal," it sought to have "the present working hours . . . retained, there being a greater number of employees benefitted thereby." However, this quantitative assertion was not demonstrated. The document bore no signatures, but was allegedly submitted by "employees from Cambridge, South Boston, East Boston, Boston proper, Boston Highland, Somerville, Waltham, Medford, Malden, Everett, Revere, Chelsea." An important community missing from this list was Charlestown. Perhaps these two documents represent a division in the yard work force, with the Charlestown employees seeking an hour-long dinner period to enable them go home for the meal, while those not residing in Charlestown, relying on the dinner pail, preferred a short noontime break and an earlier ending of the workday.

Orders given by the Secretary of the Navy and the yard commandant governed the work schedule of blue-collar employees, that is the men in the shops and storehouses, on board ships, and, in the case of Yards and Docks, those maintaining and repairing the yard's plant. Employees in the yard offices had a different schedule. A Department directive of September 1882 declared "office hours for the force in the offices" at navy yards and stations should be from 9 a.m. to 4 p.m. Commandants had the authority to extend those hours.

90 Chandler to Badger, May 4, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 11; Badger to Board of Officers, May 7, 1883, 181-45, 5/22/78-6/14/83, p. 445.

91 Pook to Spicer, July 18, 1878, 45-34, p. 95.

92 Parker, General Order (two documents), July 9, 1877, 181-33, Box 25, 5/12/72-8/23/77, pp. 65, 70; Thompson, Circular No. 9, Aug. 6, 1877, 181-51, 1/1/72-12/15/85, p. 73.

should it become necessary. If the office staff took the same hour-long noon break as the mechanics and laborers, then the clerks, writers, and probably the naval officers in charge put in only a seven-hour work day.

A development with interesting political dimensions occurred in late May 1877. Beginning in 1872, the Secretary of the Navy had ordered the yard closed on Memorial Day, May 30, to enable workers to participate in the ceremonies of remembrance for the men who died fighting to preserve the Union. Consistent with that policy, on May 29, 1877, Commandant Parker issued an order to his captain of the yard that "the bell will not be rung tomorrow, the 30th instant, Decoration Day." However, later on the 29th, Parker received a telegram from Secretary Thompson, stating that "the yard will not be closed Decoration Day." Thompson further directed that "per diem employees who desire it can have leaves of absence without pay." No evidence has been found that during the remainder of the period, the yard closed on May 30.

In fact, documentation is thin with respect to all holidays. By general orders of the commandant, the yard bell did not ring on June 17, 1878, "being Bunker Hill Day;" on February 23, 1880, Washington's Birthday; and on April 8, 1880, "Fast day." Scant evidence also exists respecting election day procedures. In late October 1880, Commandant Ransom sought instructions from Secretary Thompson as to whether yard employees should be allowed time to vote in the presidential election on November 2. In his inquiry, he referred to a Navy Department Circular of October 3, 1872, which gave permission to navy yard employees to stop work at noon when elections occurred and to be absent the remainder of the day without a loss of wages. Thompson's response, if there was one, has not been found.

During the years 1877 to 1883, overtime work was rare or nonexistent at the Boston Navy Yard. This is consistent with the absence of international crises, the lack of new construction, and the contraction of the fleet. In the spring of 1883, Commandant Badger gave an order prohibiting such work, except with his approval. He stated that "per diem employees . . . will not be allowed to make overtime, or work on holidays, or other occasions when the Yard bell does not ring, or after evening bell-ring, without special permission." When a department head secured such permission, he was to provide the captain of the yard with a list of names of men assigned extra work and indications of the time required of them. Only workers on the list would be allowed to enter or remain in the yard.

PROBLEMS WITH INDIVIDUAL EMPLOYEES

Investigation of charges made against or by individual employees of the Boston Navy Yard continued to generate much paper work and take time away from the more pressing business of repairing ships and manufacturing articles of equipment. Because the yard was a public entity, more attention was probably given to personnel matters than at a private establishment engaged in the same type of work.

In June 1878, the yard commandant received a letter from one John Power, who lodged a complaint against an employee. Earlier that month, Power had visited the yard and to his "great surprise" found one James Slatery employed in a machine shop. According to Power, during the Civil War, Slatery and another "Notorious Character" were in the business of "stealing" men from the Army and reenlisting them in other states, presumably collecting the bounties. Slatery, allegedly, was also an "associate of some of the worst thieves in Boston and is well known to the Police," particularly Detective Shelton. Power had already written to Naval Constructor Samuel Pook, who had done nothing, apparently because Slatery had been sponsored by Congressman Leopold Morse. Power said he intended to write to Morse and to the Secretary of the Navy.

94 Circular to Navy Yards and Stations, Sep. 21, 1882, 181-51, 1/1/72-12/15/85, p. 138.


96 Parker, General Order, June 12, 1878, 181-33, Box 27, 5/27/78-11/21/78, p. 18; Ransom, General Orders, Feb. 19, 1880; Apr. 5, 1880, 181-45, 5/22/78-6/14/83, pp. 153, 157; Ransom to Thompson, Oct. 29, 1880, 45-34, p. 146.

about Slatery, "in view of the hundreds of good honest men who served the country . . . and are now out of work and their families starving." The disposition of the matter is indicated by a notation by Captain Haxtun that the naval constructor made inquiries, found Slatery a good workman, and "upon examining one of the witnesses he does not confirm the within statement."98

Charges against a worker brought by a foreman or some other supervisor carried much greater weight. Serious misconduct resulted in expulsion and possible blacklisting. However, during the years 1877 to 1883, only eleven names were entered in the Black List, five of them for the same offensive, "conspiracy against Foreman Bell." The Bell case will be discussed later. The six others were discharged and blacklisted for a variety of causes: drunkenness; profanity and insolence to the sergeant and sentry at the gate; writing a disrespectful letter to the naval constructor; neglect of duty; an unspecified misdemeanor; and inattention to work. Except for a few entries in the late 1880s, the Black List stops in 1882.

By direction of Secretary Thompson in March 1878, the yard hired George McElwain. In the following October 1878, John H. Roberts, foreman iron plater, reported McElwain for arriving at the yard intoxicated and then absenting himself from his work place, later to be found asleep in the shop basement. Roberts wrote to Constructor Pook, "with no malice toward the said McElwain and with no desire to deprive his family of the wages of his labor, I respectfully recommend that he shall not receive employment to the exclusion of men more worthy."99

There was a more serious case of a man absent from his place of work and being discovered asleep and drunk. On July 10, 1880, the engineer in charge of the dry dock engine noticed an unusual noise and when he entered the fire room realized that the fireman, Daniel McCormick was absent. Water in the boilers had become very low, the "lower cock blowing steam and water." Had the trouble not been discovered, in another ten minutes an explosion might have occurred. In addition to the engineer in charge, another employee reported the incident to the commandant. Captain of the Yard Haxtun investigated and concluded that McCormick was "not very competent." Also he determined this was not the first time the fireman's drinking and carelessness had "jeopardized the lives of those in and around that building." Commandant Ransom referred the matter to Pook, who recommended McCormick be discharged.100

On a day in September 1882, E. A. Randstone, clerk in the Ordnance Office, either came to the yard drunk or achieved that state on the job, which rendered him unable to perform his work. He left the office without permission, was reported by the Inspector of Ordnance, and was suspended. Randstone wrote a letter to Badger asking for leniency, humbly apologizing, and promising "to abstain from the slightest use of all intoxicants so long as I may be in government service." Badger found the explanation "not satisfactory." But in consideration of Randstone's long service and his pledge of abstinence, the suspension was lifted. However, the commandant ordered the letter kept on file in the Ordnance office.101

Charges, investigations, and rebuttals generated when clerks were accused of malfeasance in carrying out their duties sometimes give an insight into yard procedures. Such is the case with J. P McCready, a recently hired writer in the office of the naval constructor and against whom charges were made in February 1878. In a lengthy letter to Commandant Parker, McCready claimed "the whole matter a conspiracy" against him by other writers, clerks, foremen, and seemingly the naval constructor. As McCready described it, the conspiracy sought to cover up and perpetuate a systematic false reporting of the time worked by mechanics and laborers in certain work gangs. McCready had responsibility for making out work requisitions and reports

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98 Power to Commandant, June 19, 1878, 181-5, Box 19, 6/12/78-5/19/80.

99 Roberts to Pook, Oct. 9, 1878, 181-5, Box 19, 6/14/78-5/29/80, p. 46.

100 James Brown to Ransom, July 16, 1880; Haxtun to Ransom, July 19, 1880; Pook to Ransom, July 21, 1880, 181-5, Box 20, 5/29/80-11/30/82.

for 200 men, the shipwrights, borers, mill men, store hands, and shipkeepers. Previously, the foremen had control of the preparation of the reports, the implication being that McCready's appointment interfered with the system whereby the reports were falsified. He contended he was denied correct information with which to make out his various reports and that after he had completed them, additions or other changes were made.102

McCready stated that when he first came into the office, instead of providing a copy of a work requisition, Benjamin Sampson, foreman of shipwrights, relied on his own memory and verbally gave McCready the names and rankings of men working in his gang. After McCready objected to this procedure, Sampson provided the names "on small scraps of paper." Many times the names or the ratings were incorrect. McCready further alleged that the number of different reports required of him was increased for no other purpose than to cause him difficulties. For example, the constructor added a weekly report, giving the money spent on "each object." "This was a new movement to injure me," wrote McCready.

McCready described changes made in his reports for November 1877 for workers in the stores division of the Construction Department. Someone added five days to the time of G. L. Williamson, store hand, and seven days for Quarterman George Frothingham. S. P. Edwards, also in the stores section, "was marked in Stormy days while other men of the same rating were marked out." Another store hand, John Trickey, had not come in for work three or four days before McCready learned in an unofficial way of his absence, "the understanding being . . . that all the storehands were to be marked in unless Mr. Parker—store clerk reported otherwise."

A similar account was given by McCready of the shipwright gang. Friends of Foreman Sampson and Quarterman Rice "have been marked in and time added upstairs without my knowledge after my report had been made." One shipwright had been discharged, but for the next two days "was marked in the quarterman's book." Nepotism existed and "Mr. Sampson has always been surrounded by his relatives, one of his former writers being his son in law."

Samuel Pook, Naval Constructor, was hostile to McCready. "He called me to his office and wished to know some matters which were none of his business, viz—where I came from—who recommended me and matters of that kind." McCready described Pook as "insulting and abusive." The day following that meeting, the naval instructor apologized and promised to provide McCready with whatever information he wanted. However, after two days, "he fell back upon the old ways." McCready recalled seeing "requisitions approved by the Commodore changed, the name of some party being substituted for 'Black' by the Constructor." McCready's standing in the office was shown in several ways. He did not receive "shears, Pen Knife and other articles I needed, although all the others received theirs." On Thanksgiving Day, when "all the other writers were marked in," the acting time clerk "checked me out."

On McCready's letter, a notation reads "Report filed in Survey book." What that report contains is unknown, and the only document found on the McCready case is his rebuttal. Hence, the validity of his charges cannot be determined. By September 1878, if not before McCready, left employment in the Naval Constructor's Office. Pook, Sampson, Rice, Parker, and Frothingham remained at the yard.

Foremen and master mechanics hired the workmen and laborers in navy yards. They also often decided who should be laid off when work slowed or funds dried up, and they could arrange the dismissal of a particular worker for cause. When a worker lost his job, he might hold his foreman responsible. Certainly this was an element to be considered when a discharged worker brought charges against a foreman, as in the case of George Doyle, former blockmaker, and Daniel Barrett, foreman blockmaker. Doyle made allegations against Barrett which were investigated by a board of officers.

On March 26, 1878, Barrett and other foremen left the yard to visit shipyards and shops in the area to collect data about wage rates. In the afternoon, Barrett had an encounter with a man by the name of Crowley. Words and then blows were exchanged. According to Doyle, Barrett was intoxicated and assaulted Crowley. Barrett suffered injuries and did not report for work. Doyle contended that not until April 2 did Barrett return. Doyle included his charges in an affidavit, and two other blockmakers read the document and attested to its accuracy. The board of officers made an investigation of Barrett and of Doyle. The altercation

102 McCready to Parker, Feb. 13, 1878, 181-5, Box 19, 3/15/76-6/14/78, p. 135.
with Crowley, the board determined, resulted from his misinterpretation of remarks made by Barrett. Another foreman, John Roberts, reported that after the incident, he met with Crowley, who regretted what had happened and considered himself in the wrong. Whatever the cause of the exchange, Barrett received "several bruises about the head and face." As a consequence of those injuries, Barrett "was checked out on the 27th, 28th, & 29th of March, and came on duty on the 30th." The time clerk's books indicate Doyle in error. John Roberts, with Barrett in the afternoon of March 26, stated that the foreman blockmaker was not intoxicated. Constructor Pook regarded Barrett as "a steady, efficient and reliable man."\textsuperscript{103}

As for Doyle, the board learned that he had been employed as a blockmaker until suspended three months earlier. In the opinion of the naval constructor, he was not a first-class mechanic and "had had more or less trouble with Mr. Barrett on account of inefficiency and insolence and his discharge increased his animosity towards Barrett." Barrett told the board that Doyle was "working in the interest of Mr. Edward Swan of New Bedford," who was "desirous of receiving the appointment of Foreman Blockmaker in the place of Barrett." Should Swan succeed, said Barrett, the understanding was he would reemploy Doyle in the blockmaking shop.

A complaint in 1881 made by "certain citizens of Boston" against James Bell, foreman of blacksmiths in the Steam Engineering Department, led to an investigation by a board of yard officers. That board exonerated Bell and concluded that seven yard employees, who had signed a petition, had conspired against the foreman. The recommendation that they be discharged and blacklisted was accepted by the Secretary of the Navy. One of the seven engaged the services of an attorney to obtain the removal of his name from the Black List. In an affidavit, David Burke maintained that at the time of the incident, he was not employed at the yard, that he did not sign the paper nor authorized anyone to sign his name, and that he was unable to write, even his own name. Burke's affidavit also raised the issue of due process. Not until after the investigation and after the Secretary had ordered him blacklisted did he become aware of the charges against him; he did not appear before the board as a witness or on his own behalf and had no opportunity to be heard in his own defense.\textsuperscript{104}

As a group, navy yard shipkeepers may have been suspect in the eyes of navy yard critics. On the payroll of the Bureau of Construction and Repair, shipkeepers served as watchmen aboard ships out of commission. Employment as a shipkeeper may have been regarded by some as a reward to the faithful or needy.

Late in 1878, there appeared an article in the Boston Express, describing the "intriguing and unfair means" used by George W. Cook, identified as foreman of shipkeepers at the Boston Navy Yard, to bring about the discharge of seven deserving shipkeepers, all of whom had served in the war and most of whom had been wounded. One "carries a bullet in his head at the present time." Those shipkeepers Cook retained were "neither naturalized or civilized," and Cook was accused of "having sent to Nova Scotia for his old friends and companion wood choppers to be employed" in the place of "good Americans." The article expressed surprise that the naval constructor allowed himself "to be made a cat's paw of by this miserable corrupt ring." But, it praised the acting commandant, Captain Haxtun, "who would not sign the discharges and thus frustrated this infamous proceeding." Secretary Thompson sent a copy of the article to Haxtun and asked for a report.

Directed by Haxtun to investigate, Naval Constructor Pook reported that the "whole article is false and without foundation," probably originating with someone who had been or feared he would be discharged. According to Pook, the Express was "not noted for its care in establishing as fact any matters of this kind before publication." He further noted that no one from the newspaper had sought information from "anyone in charge of workmen in the department." It is of some interest that Pook did not address himself to the validity of the charges themselves. He did not point out, for example, that Cook was not foreman of shipkeepers, but of shipwrights. It was Haxtun who explained the situation to Secretary Thompson. There

\textsuperscript{103} Affidavit, George Doyle, Apr. 22, 1878; Capt. R. Chandler to Parker, May 1, 1878, 181-81, Box 6, 1866-1901.

was insufficient work to employ all of the shipkeepers full time, and they had been put on part time. However, some of them "applied" for a reduction in their number to allow those who remained to work a full day. In response to that application, Pook had selected six whose services could be dispensed with and prepared a requisition for their discharge. Whereupon, the shipkeepers reconsidered and requested that the whole gang be retained on half time. Haxtun allowed the requisition to be withdrawn.105 Despite Haxtun's actions at the end of 1878, several shipkeepers contacted Thompson in the following February, alleging "unfair treatment in the matter of their discharge." Ozias Rayner raised several of the same issues as in the Express article and alleged that only two of the eight retained shipkeepers had served in the Civil War, while he himself had fought in both the Mexican and Civil wars. Again Thompson sought a report from Captain Haxtun. Haxtun responded that he and Pook had selected those to be retained, basing the decision on competency, not military service. It was true that six of the shipkeepers who remained on the job were not veterans.106

George Cook appears as a controversial employee, being the subject of several inquiries between late 1878 and February 1881. An anonymous letter arrived in the Navy Department in December 1878, respecting charges against Cook and J. L. Frisbee, leadingman shipwright. A listing of master workmen for October 1879 names Cook as quarterman shipwright, but that demotion proved temporary and a list for the following month indicates his restoration to the position of foreman. In January 1881, Commandant Ransom constituted a board for an investigation of Cook, now designated as "late Foreman of Shipwrights." The board was directed to "carefully consider the statements of John LeRoach, and such other employees in the Construction department of this Yard and of such certain citizens of Charlestown, as will be designated by the said John LeRoach." At issue was the "conduct of Geo. W. Cook at an election" in Charlestown in December 1880 and "of such previous or subsequent conduct of... Cook as may have any bearing upon that identical election." Unfortunately, none of the reports submitted by the commandant or any board have been located.107

As suggested in the last inquiry of Foreman Cook, politics hovered over employment at the Boston Navy Yard. Clearly, having a political sponsor was an avenue to obtaining and retaining a job. It was almost expected that clerks, writers, foremen, and others who held their position by appointment of the Department had a political connection. Politicians openly and freely intervened on behalf of their constituents, and Congressman Loring acted as if jobs as shipkeepers and watchmen in the yard were his to parcel out as he saw fit. The Secretary of the Navy forced the employment of men whom yard department heads judged unsatisfactory. McCready may have been abrasive, cantankerous and a troublemaker, but his account of the falsified time sheets has a ring of authenticity. Workers at the Boston yard did " goof-off" and even went to sleep and were drunk on the job. When detected, some were fired. Doubtless, the yard's work force included some unsavory characters. One watchman in August 1879 had been reported for conduct "whilst on duty... too unnatural and disgusting for literal expression in a report to the [Navy] Department."108 In these matters, the Boston Navy Yard was probably no worse nor any better than most other navy yards. But one can understand why reform-minded administrators, such as Secretary Chandler, saw navy yards as a major problem.

105 Pook to Haxtun, Jan. 3, 1879, 45-34; Haxtun to Thompson, Jan. 3, 1879, 45-34.

106 Haxtun to Thompson, Feb. 13, 1879, 45-34.


108 Ransom to Thompson, Aug. 15, 1879, 45-34, p. 112.
As distinct from administrative and personnel matters, the material activity at the Boston Navy Yard consisted of manufacturing articles of equipment, machinery and other parts for ships; maintaining, outfitting and repairing vessels; and the accumulation, storage, and stowage of stores and supplies for ships. Manufacturing included the making of goods for ships at the yard as well as items to be transported to vessels at other stations. Among this latter category of articles were the products of the yard's ropemaking establishment--fiber, hide and wire rope. The yard's Equipment Department, in addition to making rope, also assembled the rigging for ships at other stations. For example, in February 1877, the rigging loft prepared the running rigging for Constitution, then at League Island. In June 1878, that department's sail loft had ready for shipment the awning and wind sails for Adams, and at the end of 1882, it made sails for Jamestown. On one occasion, the Boston Construction Department manufactured five deck pumps for shipment to League Island. The same department also made mess tables, benches, and deck buckets for New Hampshire.109

One Steam Engineering activity beginning in 1877 was receiving ships' boilers manufactured by the South Boston Iron Company and the Providence Steam Engine Company in accordance with contracts negotiated by the Navy Department under Secretary Robeson. Those boilers were intended for installation in particular vessels at some future date. In the meantime, they had to be moved from the shear wharf, where the contractor was obliged to deliver them, to Building No. 92 to be stored. The South Boston company made boilers for Hartford and Shenandoah, and the Providence firm those for Kearsarge and Richmond.110

During the period 1877 to 1883, the Boston Navy Yard's work on ships consisted solely of repairing, overhauling, and outfitting vessels of the Navy. The yard constructed no new vessels nor did private contractors deliver ships they had built. It appears that the yard did not repair vessels of the Coastal Survey, Treasury Marine, or any other federal agency. Except in two instances, commercial or privately owned vessels did not enter the yard's dry dock. In one of the exceptions, the work was done for the Navy. In March 1882, Tallapoosa collided with the schooner Willie Edix, resulting in damage to the sailing ship. The Navy accepted liability and arranged with her owner for the yard to make the repairs. In the course of those repairs, Willie Edix occupied the dock for five days. The other commercial vessel to use the dock was Batavia, her owner engaging the Atlantic Works to do the repairs.111

Naval vessels continued to come to the Boston Navy Yard for purposes other than repairs. For example, during the month of July 1877, the tug Speedwell and the sailing vessel Supply visited the yard, as did the steamers Kearsarge, Minnesota, Tennessee, and Vandalia in August 1880.112

The distribution of ship repair assignments among the various navy yards was decided by the Navy Department. The Navy did not adopt some scheme whereby whenever a particular ship in commission needed repairs, she would go to a certain yard. Of course, each yard was responsible for the maintenance and any other work required on uncompleted ships still on buildings ways. The same also holds true for ships more or less permanently out of commission and yard tugs. With respect to ships in commission, the Navy Department probably sought to spread repairs among the different yards. Given the peacetime conditions and


110 Chief Engineer to Parker, Feb. 21, 1877, 181-33, Box 25, 10/21/76-5/14/77; Annual Report, Secretary of Navy, Nov. 30, 1877, House Ex. Doc. 1, Part 3, 45-2, USSS No. 1799, pp. 262-64.

111 Docking Log, 181-60.

Table 14: NUMBER OF DRY DOCKINGS, BOSTON NAVY YARD, 1872-1890

(Does not include vessels docked in East Boston. Asterisk indicates private or foreign vessels.)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER</th>
<th>NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1872</td>
<td>6</td>
<td>Miantonomoh, Vandalia, Juniata (twice), Worcester, Gazelle*</td>
</tr>
<tr>
<td>1873</td>
<td>4</td>
<td>Leyden, Fortune, Brooklyn, Franklin</td>
</tr>
<tr>
<td>1874</td>
<td>6</td>
<td>Intrepid, St. Mary's, Plymouth, Adams, Boxer, Vandalia</td>
</tr>
<tr>
<td>1875</td>
<td>6</td>
<td>Leyden, Cohasset, Wabash, Adams, Essex, Vandalia</td>
</tr>
<tr>
<td>1876</td>
<td>4</td>
<td>Adams, caisson, Huron, Saratoga</td>
</tr>
<tr>
<td>1877</td>
<td>3</td>
<td>Leyden, Wachusett, Richmond</td>
</tr>
<tr>
<td>1878</td>
<td>2</td>
<td>Leyden, Cohasset</td>
</tr>
<tr>
<td>1879</td>
<td>5</td>
<td>Plymouth, Vandalia, Swatara, Nina, Hartford</td>
</tr>
<tr>
<td>1880</td>
<td>1</td>
<td>Hartford</td>
</tr>
<tr>
<td>1881</td>
<td>3</td>
<td>Powhatan, Alliance, Saratoga</td>
</tr>
<tr>
<td>1882</td>
<td>6</td>
<td>Willie Edix*, steam launch, Cohasset, Powhatan, Shenandoah (twice)</td>
</tr>
<tr>
<td>1883</td>
<td>4</td>
<td>Tallapoosa, caisson (twice), Batavia*</td>
</tr>
<tr>
<td>1884</td>
<td>1</td>
<td>Newcastle City*</td>
</tr>
<tr>
<td>1885</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1886</td>
<td>1</td>
<td>Pieter de Leoninck*</td>
</tr>
<tr>
<td>1887</td>
<td>4</td>
<td>Caisson (twice), Rocket, pilot boat Hesper*</td>
</tr>
<tr>
<td>1888</td>
<td>1</td>
<td>Blake</td>
</tr>
<tr>
<td>1889</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

SOURCES: Preble; Docking Log
the contraction of the fleet, more yards existed than were needed. In 1881, Vice Admiral Porter stated that all of the Navy's ship repairs on the east coast could be handled by the Brooklyn and Boston yards.113

THE BOSTON YARD'S "ROTTEN ROW"

In 1877, the Boston Navy Yard was home to eight vessels, none of which were likely to be put into service. *Virginia, Connecticut, Oregon,* and *Pennsylvania* remained unfinished on the ways. In the water, but out of commission and in ordinary on a long-term basis were *Ohio, Iowa,* and *Niagara.* *Wabash,* out of commission, served as the yard's receiving ship. In 1878, *Ossipee* sailed into the Boston Navy Yard and went into ordinary. An 1882 newspaper article described this assortment of vessels as "rotten row, that limbo for worn out and disabled naval architecture." In 1882, *Ossipee* was sent to League Island; in 1883, *Ohio* and *Iowa* were sold; and in the following year, the four unfinished vessels on the stocks were broken up. After one earlier unsuccessful attempt, *Niagara* was finally auctioned off in 1885. Prior to the elimination of the worn out, disabled or unfinished components of "rotten row," its members from time to time required attention, if only to remove some of their machinery or to house them over. As such, they constituted an expense. In addition, ships in ordinary and not under repair required round-the-clock, on-board security, provided by the yard's force of shipkeepers. In January 1882, for example, shipkeepers were posted on *Ohio, Hartford, Iowa,* and *Niagara.* Some savings was achieved by mooring together the last two vessels, which permitted one shipkeeper to care for both.114

Once it became clear that a steamer would never be put in or resume service, decisions had to be made regarding her machinery, even if for the time being the hull remained intact. In the case of the unfinished *Connecticut,* the boilers and engines had been delivered by the contractor, but were stored rather than installed. In 1877, those parts were sent out of the yard. The machinery of *Oregon,* the uncompleted monitor on the ways, had been placed in the vessel, but subsequently was removed and shipped elsewhere. Late in 1876, the Bureau of Steam Engineering ordered the sale of a substantial amount of line shafting and crank shafts manufactured at the yard for vessels on the stocks, retaining only the shafting for *Pennsylvania.*115

In the summer of 1877, Commandant Parker, responding to a directive from the Department, appointed a board consisting of Chief Engineer King, Naval Constructor Mintoyne, and Cdr. B. B. Taylor, who served as both Inspector of Ordnance and Navigation Officer, to examine *Iowa,* estimate the cost of repairs falling within the cognizance of the Bureau of Construction, determine her value if condemned, and state what she would bring if sold. The board decided the ship was "worthless for any Government use." It pointed out that the removal of her 1400 tons of machinery would be costly and would also make the hull unstable. In August 1877, the Navy formally condemned the ship, and, despite the recommendations of the board, ordered her machinery taken out. By the end of the year, two of the boilers and some engine attachments had been removed, the boilers being refitted for another ship. The remainder of her machinery was taken out in the summer of 1878.116

The 300-foot screw frigate *Wabash* went out of commission at Boston in 1874, and from 1876 to 1912 served as the yard's receiving ship. During the years 1877 to 1883, a few surveys were made of the repairs


114 John Hanscom to Ransom, Jan. 30, 1882, 45-34, p. 23.

115 Mintoyne to Parker, Jan. 6, Feb. 2, 1877, 181-33, Box 25, 10/21/76-5/14/77, pp. 68, 107; King to Parker, July 26, 1877, 181-33, Box 25, 5/12/77-8/23/77, p. 106.

required by the ship, but she received little work, except for an occasional caulking of her decks.\textsuperscript{117}

In October 1880, the Navy reaffirmed the conclusion that none of the vessels in Boston's rotten row were worth repairing, with the possible exception of Ossipee. Accordingly, little was done with the hulls of these vessels before they were sold or demolished. In 1882, the Navy Department received a recommendation that its three double-turreted monitors on the stocks, one at Portsmouth, another at New York, and Oregon at Boston, be scrapped.\textsuperscript{118}

In May 1878, after a decade of service in the North Atlantic, Ossipee, a wooden screw steamer launched in 1861, arrived at the Boston Navy Yard. By direction of Secretary Thompson, her stores were landed and her crew transferred and the ship put out of commission. Parker ordered her surveyed and she went into ordinary. The Bureau of Steam Engineering reported she needed new boilers and extensive engine repairs. In February 1881, Commandant Ransom created two boards of survey, one to examine Ossipee's machinery and the other her hull and other parts within the cognizance of the Bureau of Construction. Some work was performed by both Construction and Repair and Steam Engineering in Fiscal Year 1881-82, before the ship was sent for complete repairs to League Island.\textsuperscript{119}

**REPAIRING TUGS**

During the years 1877 to 1883, the Boston Navy Yard repaired four tug boats. Several served as yard tugs for a part of the period and were assigned to the Newport Torpedo Training Station during the remainder. Cohasset's career as yard tug at Boston stretched from 1865 to 1882. In the years under consideration, she occasionally received minor and major repairs. In May 1877, her awning stanchions and sockets were straightened and resecured. More substantial repairs were made to her machinery in 1879. In 1882, the Navy Department directed she be readied to serve the Torpedo Training Station at Newport. That preparation involved work in dry dock.\textsuperscript{120}

Leyden, one of the tugs delivered shortly after the Civil War, performed duties at the yard from 1866 to 1879. In January 1877, the Navy Department gave orders for her repairs, and beginning in July, she underwent major renovations, requiring sixteen days in dry dock. Repairs included overhauling her engine and replacing her boilers. The boiler work necessitated taking up part of her decking and a portion of her pilothouse. Some of her beams and framing around the towing bits and timbers amidship had rotted and were replaced. Late in 1878, Leyden and Cohasset were both under repair, the two tugs being docked at the same time. In 1879, Leyden was reassigned to Portsmouth.\textsuperscript{121}

In the fall of 1882, the tugs Rocket and Cohasset exchanged assignments. Rocket steamed into the yard from Newport. Her officers and crew transferred to Cohasset, which was then taken to the Rhode Island station. Rocket became the sole yard tug at Boston. She was soon hauled out of the water for examination.

\textsuperscript{117} Ransom to Board, Aug. 18, 1881; Mar. 2, 1883, 181-45, 5/22/78-6/14/83, pp. 265, 430.


\textsuperscript{119} DANFS, vol. V, p. 183; Thompson to Parker, May 1, 1878, 181-11, Box 9, 7/6/77-6/16/79, p. 80; Parker to Board, May 13, 1878, 181-45, 9/17/72-4/13/78, p. 85; Ransom to Bunce and Others, Feb. 11, 1881; Ransom to Chief Engineer Wilson and Others, Feb. 11, 1881, 181-45, 5/22/78-6/14/83, pp. 231, 233; Annual Report, Secretary of Navy, Nov. 30, 1879, House Ex. Doc. 1, Part 3, 46-2, USSS No. 1909, p. 188; Annual Report, Secretary of Navy, Nov. 29, 1882, p. 188.

\textsuperscript{120} Hanscom to Parker, May 18, 1877, 181-33, Box 25, 5/12/72-8/23/77; DANFS, vol. II, p. 139.

\textsuperscript{121} DANFS, vol. IV, p. 106; Mintoyn to Parker, July 19, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 99; Monthly Report, Jan. 31, 1877; Feb. 28, 1877; July 31, 1877; 45-34, pp. 12, 23, 87; Annual Report, Secretary of Navy, Nov. 30, 1877, p. 264; Haxtun to Thompson, Dec. 12, 1878, 45-34, p. 178.
The survey estimated repairs to her hull would take forty-eight days and those to her machinery sixty. That work included a new boiler. During the time Rocket was under repair, the yard had to manage without a serviceable tug. Nina had been converted at the Washington yard from a tug to torpedo boat and assigned to the naval station at Newport. In 1879, she came to the Boston yard for repairs, which included docking and work on her hull. She left in early March 1880 for her return to Newport.  

REPAIR PROCEDURES

Ships underwent repairs under orders of the Secretary of the Navy, who usually sent word to the yard that a particular vessel would be coming for work. When the ship actually arrived, the commandant telegraphed that news to the Department. He then created boards of officers to make surveys of the ship and report the work required, the time the repairs would take, and their cost. One board made a survey of work under the cognizance of the Bureau of Construction and Repair, another for Steam Engineering, a third for Equipment, and possibly a fourth for Ordnance. Especially in the case of Construction and Repair, the initial survey was preliminary, since a complete examination required docking the vessel. In several instances toward the end of the period, master workmen were included in the survey boards in order to make their reports more accurate.

In the case of a ship returning from a long cruise and intended for a major overhaul, all of the stores had to be landed, including coal and ammunition. This task was performed by the ship's crew. The ship's officers in charge of the different categories of stores formally transferred custody of them to the head of the appropriate yard department, who then became responsible for them. Enlisted men often signed up for a single cruise on a particular vessel, and after the stores had been removed, they would be paid off and discharged. The officers received new assignments. The ship was then taken out of commission and placed in ordinary, and her captain turned her over to the yard commandant. At this point, the ship might enter the dock to begin repairs or for a more thorough survey of the hull. Generally, the order to dock was given by the Secretary of the Navy, although a commandant had authority to dock a ship when it appeared the docking would be only for a brief period, less than a week.

Any work to be performed by a commercial establishment required a contract, made under the authority of one of the bureaus in Washington and signed by the head of the department in Boston. All ships at the yard were listed in a monthly "Report of Vessels," prepared by the yard's naval constructor and signed by him and the commandant. In the case of vessels in ordinary, the report indicated the length of time required for repairs under Construction and Repair and under Steam Engineering. Those reports, sent to Washington, kept the Department informed of the progress of work. The yard also advised the Secretary when a vessel left the dock, and individual departments reported work being performed to their bureaus in Washington.

The monthly expenditure each bureau assigned its yard department governed the tempo of repairs. The larger the allotment, the greater the number of mechanics who could be employed, and the more rapidly work progressed. Generally, other departments had to wait until Construction and Repair made substantial progress before they could complete their work. Of the three major departments, Equipment did its work last. A ship could not be rigged, for example, until new boilers were aboard, the masts stepped, and the spars positioned.

When the end of repairs seemed near, the Secretary sometimes gave instructions to prepare a ship and outfit her for a particular assignment, for example a year's cruise as flagship of the Asiatic Squadron. The assignment had meaning for the volume and character of equipment and provisions to be placed aboard. As a flagship, a vessel needed quarters for the admiral commanding the squadron. When a ship became habitable, her officers and crew might begin to assemble. Prior to the loading of stores, Navy regulations required an examination by a board of officers to insure that the ship's bilges had been cleaned. If repairs

included replacing boilers or engines or a major overhaul of machinery, the ship might undergo a series of steam trials with boards of engineers checking the performance of the propulsion system. At some point, the Secretary would authorize the ship being placed in commission and her captain would take command. "Ready for sea" was the phrase most often used to describe a vessel whose repairs, outfitting, and provisioning had been completed.

STEAM-POWERED SCREW SLOOPS OF WAR

In the years 1877 to 1883, the Boston Navy Yard made repairs upon approximately fifteen vessels, in addition to the tugs and the ships in "rotten row." Most of the vessels were steam screw sloops of war. Two other categories were steamers driven by sidewheels and sailing vessels.

In the summer of 1877, three ships were at the Boston Navy Yard for general repairs, Wachusett, Richmond, and Saratoga. Wachusett, a 200-foot-long screw sloop, had been built by the Boston Navy Yard between June 1861 and March 1862. She returned to the yard late in 1874, was decommissioned in December, and remained laid up for five years. A survey of the ship in January 1875 reported numerous defects, and the Department directed repairs be made. Work did not begin until the summer of 1877 and then dragged on for another two years. The slow progress may have in part resulted from budgetary considerations, and at least one bureau issued orders "to exercise the greatest economy in preparing" this ship. During 1878, the Navy Department gave priority to another vessel, Richmond.123

Five of the yard’s departments had a hand in the work on Wachusett: Navigation, Ordnance, Equipment, Steam Engineering, and Construction and Repair. In early July 1877, Captain Taylor, in his capacity as Inspector of Ordnance, estimated that it would require six months and $3600 for his small force of workmen to fit the ordnance, practically all of the money going to labor. It had been "customary" for the yard to manufacture small ordnance hardware, such as hooks, thimbles and staples, according to Taylor, although labor and expense could be saved if they could be found and purchased on the open market. At least part of the Wachusett’s armament was changed, and two 20-pounder guns were replaced by a 12-pounder light howitzer and a rifled 12-pounder. As Navigation Officer, Taylor made arrangements with a private contractor to furnish and install electric bells.124

To expedite the outfitting of new ships, the Navy Department often utilized equipment and articles on hand and intended for vessels already in service. By direction of the Bureau of Equipment in August 1876, the chains belonging to Wachusett, then laid up in ordinary, had been used for the newly constructed Essex. In the summer of 1877, the Boston yard had no chain that could readily be made suitable for Wachusett, except that from the first Vandalia. However, the links of the Vandalia cable varied in length a half inch or more, which had probably caused difficulties in fitting the capstan. Nonetheless, the yard’s Equipment Officer believed "two chains can be gotten out" of the lot suitable for Wachusett. All of it required "going through the 'heating machine' and cleaning."125

The two main ship repair units at the yard, Steam Engineering and Construction, did work on the vessel in August 1877, when she entered the dry dock for a stay of five months. Chief Engineer King requested a decision of the type of propeller to be fitted. When originally constructed during the Civil War, she had a four-bladed screw. In the late 1860s, the Navy Department insisted its ships rely principally on sail, not steam. To improve sailing performance, the propellers on Wachusett and other vessels were replaced with screws of

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123 McCauley to Parker, Aug. 20, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 159; Thompson to Spicer, Oct.21, 1878, 181-11, Box 9, 7/6/77-6/16/79, p. 128.

124 Taylor to Parker, July 5, July 10, July 30, Aug. 10, 1877, 181-33, Box 25, 5/12/72-8/23/77, pp. 59, 72, 113, 144.

125 McCauley to Parker, Aug. 20, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 159.
two blades. At that time, the original screws were retained to be used "when the fashion changed." However, \textit{Wachusett}'s first propeller initially could not be found nor any other suitable for that vessel. King suggested that the original may have been sold along with seven other screws. The Department apparently located the original four-bladed screw, which was refitted to the ship.\textsuperscript{126}

When Naval Constructor Mintoyne examined \textit{Wachusett} in dry dock in August 1877, he discovered defects not reported in the survey of eighteen months earlier. Essentially these flaws consisted of rotten planking and other components of the wooden hull, including the wales on the port side, waterways, parts of batteries, gun ports, hatches, and several knees. Half of the main yard spar had also rotted. In addition, spars had shrunk so that the bands were loose, and the bowsprit was defective.\textsuperscript{127}

In November 1877, the Secretary of the Navy reported that the work on \textit{Wachusett} would cost $50,000. The repairs made in the next sixteen months included a thorough overhaul of machinery, installation of new boilers, replacing the propeller, and work on the hull and spars. In April 1879, the Bureau of Steam Engineering gave instructions to the yard for the dock trial of the ship's propulsion system. \textit{Wachusett} was recommissioned in May 1879 and made a cruise to the Gulf of Mexico. She returned to Boston in August 1879 and was ordered to Portsmouth for docking. Again in the Boston yard in September 1879, she was outfitted for duty on the South Atlantic Station. It had been the intention of the Department to have a final inspection of the ship, but "through some misunderstanding," proper arrangements had not been made. Rather than delay her sailing, she was ordered to sea as soon as ready. She cleared Boston harbor in early October en route to Rio de Janeiro. The Boston-built ship remained in service until 1885, when she entered her final decommission at Mare Island.\textsuperscript{128}

In August 1877, while \textit{Wachusett} was in dry dock, another wooden steam sloop of war of approximately the same vintage came to the yard. \textit{Richmond}, 225 feet in length and launched by the Norfolk Navy Yard in 1860, was no stranger to the Boston yard, which eight years earlier had installed her new engines. By direction of Secretary Thompson, in early September 1877, \textit{Richmond} was inspected, her stores landed, and she was put out of commission. The inspection revealed the ship required four months of work on her hull and an equal amount of time for her machinery, the total cost being estimated as $126,000.\textsuperscript{129}

Part of the work to be performed by Steam Engineering was installation of new boilers built by the Providence Steam Engine Company.

In early December, \textit{Wachusett} left the dock, and two weeks later, \textit{Richmond} entered the facility. Like the previous occupant, \textit{Richmond} remained docked for half a year. Chief Engineer Charles F. Baker inspected the four new boilers constructed by the Providence Steam Engine Company and found defects in the bracing. Baker stated that the one and three-quarter-inch horizontal bracing was formed of boiler plate, which, given the size and material, "will be rapidly reduced by oxidation." Much of the fixed bracing consisted of rods secured at the ends by a single rivet. Baker detected an "appearance of carelessness in the arrangement of the bracing, the disposition of it being various in the [four] several boilers." There was also an "appearance of imperfection in workmanship." The chief engineer anticipated no immediate troubles, but feared the defects "will occasion need for some extensive repairs after the boilers shall have two or three years of use."

\textsuperscript{126} King to Parker, Aug. 2, 1877, 181-33, Box 25, 5/12/72-8/12/77, p. 125.

\textsuperscript{127} Mintoyne to Parker, Aug. 7, 1877, 181-33, Box 25, 5/12/72-8/23/77, p. 137.


\textsuperscript{129} Thompson to Parker, Aug. 30, 181-11, Box 9, 7/6/77-6/16/79, p. 20; Thompson to Parker, Sep. 19, 1877, 45-34, p. 114; \textit{Annual Report}, Secretary of Navy, Nov. 30, 1877, p. 4.
He suggested that the bracing be reinforced by straight brace rods and replacing imperfect and improperly fitted brace pins and bolts.\footnote{Baker to Spicer, July 30, 1878, 181-33, Box 17, 5/17/78-11/21/78, p. 78.}

The yard also made extensive repairs on Richmond’s other machinery parts, fitted two Wood’s boat detaching devices, installed a newly designed ventilation system, replaced the leads and backstays for the masts, and made new furniture. Beginning in early August, Richmond underwent a series of tests and trials, none of which appear to have revealed significant problems. On August 9, 1878, steam was raised as a preliminary trial to test the boilers and pipes, and the engines were run for a short period at moderate speed. Boilers and pipes proved to be tight and the engines in good working order. Later in the month, a formal machinery trial at the dock was conducted by a board of three chief and three passed assistant engineers. In November 1878, a crew was assembled, the vessel turned over to her captain, and she was put into commission.\footnote{King to Spicer, July 9, 1878; Pook to Spicer, July 10, 1878; Equipment Officer to Spicer, Aug. 9, 1878; Wilson to Spicer, Aug. 14, 1878, 181-33, Box 27, 5/27/78-11/21/78, pp. 54, 55, 91, 94; James Reid to Commandant, Apr. 4, 1878, 181-5, Box 19, 3/25/76-6/14/78, p. 149; Spicer to Board, Aug. 20, 1878, 181-45, 5/22/78-6/14/83, p. 20.}

In early October 1878, the Bureau of Steam Engineering issued comprehensive instructions for the conduct of the vessel’s steam speed trials. Essentially, the bureau called for “a continuous full speed run of not less that six (6) hours with a pressure of steam not to exceed twenty-five (25) lbs. per sq. inch above atmosphere.” A delay ensued, and on December 23, the ship’s captain received orders through the yard commandant “to make a trial trip of the Richmond from Boston to New York & report the result after his arrival.” Doubtless some adjustments were required at the New York Navy Yard. Early in the new year, the sloop set out for Yokohama to take up her duty as flagship for the Asiatic Fleet.\footnote{Haxtun to Board, Dec. 21, 1878, 181-45, 5/22/78-6/14/83; Acting Secretary of Navy to Spicer, Oct. 3, 1878; Telegram, Thompson to Haxtun, Dec. 23, 1878, 181-11, Box 9, 7/6/77-6/16/79, pp. 122, 142; DANFS, vol. VI, pp. 102-4.}

During 1879, the Boston Navy Yard made significant repairs on three ships, Vandalia, Swatara, and Plymouth. The yard had built Vandalia in the mid-1870s. She returned in December 1878 for work on her machinery and hull, and she occupied the dry dock the first two weeks of February 1879. Her boilers, engines, and other machinery received general overhauling and repairs, and she left Boston in early April.\footnote{Annual Report, Secretary of Navy, Nov. 30, 1879, p. 160; DANFS, vol. VII, pp. 460-61.}

In October 1878, following her duty with the North Atlantic Squadron, Swatara entered the Boston Navy Yard. Her crew landed the stores and stripped the vessel, and in early November she was decommissioned. She remained undisturbed in ordinary until May 1879, when the repair process began. Commandant Ransom convened boards to assess the cost and time required for the work necessary to prepare and fit her for a two-year cruise at sea. The screw sloop occupied the dry dock from the end of May to the following September. Repairs included overhauling her engines, boilers, and other machinery. Modifications were made in her hull, rigging, and ordnance fixtures to increase the arc of fire of the forecastle gun. Swatara reentered commission the day before Christmas 1879 and in January sailed for the Far East.\footnote{DANFS, vol. VI, p. 697; Thompson to Spicer, Oct. 15, 1878, 181-11, Box 9, 7/6/77-6/16/79, p. 126; Ransom to Board, May 6, 1879; Ransom to Board, Oct. 13, 1879, 181-45, 5/22/78-6/14/83, pp. 84, 125; Annual Report, Secretary of Navy, Nov. 30, 1879, p. 160.}

The ship briefly returned to Boston in the autumn 1883. In January of that year she had completed an overhaul at Norfolk, and she had spent most of the summer under repair at the New York yard. In early October, the Boston Navy Yard received instructions to prepare Swatara immediately for a three-month cruise to the Caribbean. The ship’s commanding officer sought to have the hull caulked about the water line. However, the Department informed the yard that she had been caulked the previous January. It authorized
Commandant Badger "to do what you deem necessary," so long as the ship put to sea shortly. Swatara did not enter dry dock, and evidently no caulking was done below the water line.135

The steam-powered, wooden-hulled sloop of war Plymouth, completed in 1868, measured 250 feet in length. In December 1878, she arrived in the Boston Navy Yard from the West Indies. While in those waters, an outbreak of yellow fever occurred, causing at least two deaths. At the Boston yard, she was stripped and fumigated and entered the dock on January 22, 1879. The purpose of her stay in the dock was not only for repairs, but also for health reasons. It was erroneously believed that low temperatures destroyed germs. The normal cold of a Boston winter could be intensified by placing a ship in dry dock, the aim being to "freeze out the germs." Plymouth remained in the dock for twelve days, until medical authorities declared it safe to undock her. The Steam Engineering Department did a general overhaul and made repairs of the boilers and machinery. A board reported that the repairs performed by the yard totaled almost $7000. Upon completion of repairs in March, Plymouth's commander, Capt. D. B. Harmony, praised the "excellent and economical work done . . . by the Construction Department of this Yard." He singled out for particular commendation George Cook, master shipwright, and Samuel Pook, naval constructor. Much of the work on the ship's rigging and sails was done by the crew.136

Plymouth experienced difficulties in getting under way. A board arrived from Washington for a final inspection just when she was ready for sea. The board recommended that the ship not return to the West Indies, lest the yellow fever reappear. However, according to the recollections of one of her officers, "the report was disapproved and orders were issued to get to sea at once." Another delay ensued because of an accident as the vessel sought to steam away from the wharf. A six-inch line, left hanging over the taffrail, got wrapped around the propeller. It required several hours to clear the line, forcing the ship to remain in the yard another full day. Once she did leave, events demonstrated that the twelve-day stay in the dry dock did not have the hoped for consequences. Shortly after Plymouth arrived in the Caribbean, yellow fever again broke out, as the board from Washington had anticipated, and another death occurred. After receiving coal at Bermuda, the unfortunate ship made her way to Portsmouth, where she stayed for the next five years. By October 1880, the vessel had been laid up in ordinary, and she continued in that status until scrapped in 1884.137

Alliance, one of the eight sloops of war constructed in the mid-1870s, visited the yard on several occasions. In December 1879, she spent several days taking on coal prior to going to Norfolk for an overhaul. The ship received repairs at the Boston yard between November 1881 and February 1882. Her stay included a week in the dry dock. Again, in June and July 1882, the yard did work on the ship. Prior to the completion of those repairs on Alliance, funds for navy yards were drastically cut. However, Secretary Chandler notified the Boston yard that the Department had approved the continuation of work on that ship.138

In the years 1877 to 1883, the Boston Navy Yard made repairs on vessels it had constructed, namely Wachusett, Vandalia, and Hartford. Hartford was a screw sloop of war, 225 feet in length, which the yard had

135 Telegrams, Acting Secretary of Navy to Badger, Oct. 4, 1883; Oct. 6, 1883, 181-11, Box 10, 1/12/83-10/17/84, pp. 46, 47; Telegram, Badger to Secretary of Navy, n.d., 45-35 (1883), p. 105.


completed in 1858. Twenty years later, in November 1879, she was ordered hauled to a wharf at the yard and her guns and stores landed. Commandant Ransom appointed a three-man board of engineers to make a survey of her engines, boilers, and their appurtenances. In his instructions, he quoted a recent statement by the Bureau of Steam Engineering: "As the estimates in surveys are frequently indefinite and unreliable, which cause great embarrassment to the Bureau, it is directed that they be as near accurate as possible and the report as much in detail as practicable." Two weeks after the appointment of the board, Hartford entered the dry dock. That structure became her home for almost two years, except in February 1880, when she was undocked on the 13th and then redocked on the 25th. She was not floated out of the dock again until the last day of October 1881. Her twenty-two month stay in the dock constituted something of a yard record.

The yard made extensive repairs on Hartford, but her protracted occupancy of the dock has to be explained in terms other than the magnitude of work performed on her. The number of ships arriving at the yard for repairs had declined, and the dock was not needed for other vessels. Because of the contraction of the active fleet, the Navy had docks elsewhere to accommodate a vessel that might otherwise have been sent to Boston. Perhaps the bureaus sought to stretch out their appropriations and were not prepared to assign funds for a labor force large enough to speedily complete repairs on Hartford. Probably little work was performed on the exterior of the ship during the two winters she was in the dock.

Even before the results of the survey became known, Steam Engineering had a general understanding of the work to be done under its cognizance: installing new boilers, fitting a four-bladed propeller, and extensive repairs on the rest of the machinery. Subsequently, it was decided to replace the existing propulsion plant with a pair of 60-by-30-inch engines. Construction and Repair replaced deteriorated planks and woodwork. In his report of ships at the yard during the month of February 1880, Commandant Ransom informed the Department that Hartford would require twenty months of work, "with the present rate of expenditure." During the spring of 1882, the yard completed repairs and outfitting. In the morning of June 7, 1882, an English steamer collided with Hartford and the wharf to which she was tied up. Damage to the sloop was small, and in early August 1882, the ship was manned and put to sea.

**POWHATAN AND TALLAPOOSA**

The 254-foot, 2415-ton sidewheeler Powhatan was the largest ship repaired at the Boston Navy Yard during the period 1877 to 1883. On at least four occasions in the early 1880s, the yard worked on the vessel. She remained in commission and none of the work constituted major repairs. During this time, the ship made five voyages to the Caribbean, and it appears that in between cruises she may have visited Boston for repairs and provisions. The first visit of Powhatan saw criticism of the yard by Secretary William Hunt for the slow progress of the work.

On June 29, 1881, the ship came to the yard under Hunt's orders for repair of a connecting rod. Her crew disconnected the rod and the next morning sent it to the machine shop. At that time, Chief Engineer King, head of the Steam Engineering Department, was on leave, and the officer in charge was Fletcher A. Wilson, whose regular duty was responsibility for the department's stores. Wilson directed the rod to the forge. However, the foreman blacksmith stated he did not have sufficient men for the job. Accordingly, a contract for the work was made with the Boston Forge Company. That company promised to expedite the job, but did not deliver the rod to the yard until July 13. The yard's machine shop then mounted the rod on a lathe and worked it for the next week. On July 19, Hunt wrote to Commandant Ransom regarding the "dilatoriness displayed at your yard," stating that the delays were "not creditable to a Government Yard." Ransom called on Wilson for a written explanation, which was sent to Washington. Hunt regarded that explanation as lengthy, but "unsatisfactory," and he directed Ransom to warn Wilson "that a repetition of such delays would not be tolerated."
delay will call for and receive severer punishment than a mere reprimand." On July 23, the yard completed the repairs to Powhatan's machinery.41

In the following October, Powhatan returned to Boston. The ship entered the dock on November 5, 1881, and was undocked three weeks later. Back in the yard in early November 1882, a board was convened to determine work needed under the cognizance of the Bureau of Construction and Repair. This time Powhatan remained in the dock for a month, during which both Construction and Repair and Steam Engineering made repairs on the paddle wheels. Also the yard repaired sea valves, gangway pumps, and one of the ship's cutters. She left the yard in the middle of January 1883 for the island of San Domingo.42

Another sidewheeler frequented the yard during the period under consideration. The Navy Department employed Tallapoosa as a transport, carrying goods and personnel from one East Coast station to another. In October 1881, she arrived at the yard in disabled condition, and the yard made temporary repairs. In September 1883, she spent five days in the Boston dry dock undergoing repairs.43

THE YARD REPAIRS THREE SAILING SHIPS

During the years 1877 to 1883, the Boston Navy Yard repaired several sailing ships, all of them employed as training vessels. The third ship in the Boston yard in the summer of 1877 for repairs was the sailing sloop of war Saratoga. Launched in 1842, she was twenty years older than Wachusett and Richmond. During most of the period since the end of the Civil War, Saratoga had been in ordinary. In May 1877, she was reactivated as a school ship for naval apprentices. Preparing her for that assignment required some repairs, and she arrived at the Boston yard on June 13, 1877. A week later, Commandant Parker convened a board consisting of Naval Constructor Mintoyne, Assistant Constructor Hanscom, and Equipment Officer Batcheller. A more thorough examination was made when she entered dry dock on July 2.44

Approximately 250 sheets of copper at the light water line were found to be worn out or "so thin that it would be but a short time before it would be necessary to renew them." The bottom of the shoe was bare, requiring removal of the blocks and recoppering. The inspection revealed leaks in the decks and repairs needed on the scuppers and head pipe. Mintoyne estimated the repairs would require $600 and eight days of work. Ordnance estimated nine days of labor and $650 to fit boat tracks and prepare ammunition. The yard undocked Saratoga on July 12, by which time the Construction work was probably completed. The Ordnance Inspector announced the work of his department finished two days later. On July 31, the ship was reported lying in the stream. She was still at the yard on August 31, although it appears that repairs had been completed in July.45

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43 Docking Log, 181-60; Telegram, Ransom to Secretary of Navy, Oct. 10, 1881, 45-34, p. 150.

44 DANFS, vol. VI, pp. 336-39; McCauley to Secretary of Navy, June 13, 1877; Parker to Thompson, July 2, 1877, 45-34; Parker to Board, June 21, 1877, 181-45, 9/17/72-4/13/78.

45 Mintoyne to Parker, July 3, 1877; Taylor to Parker, July 7, July 11, July 14, 1877, 181-33, Box 25, 5/12/72-8/23/77, pp. 58, 64, 75, 83; Monthly Reports of Vessels, July 31, 1877, Aug. 31, 1877, 45-34, pp. 87, 88.
Saratoga, still serving as a training ship, returned to Boston in November 1881, and spent two months in the dock. Minor repairs were made on the gundeck and forefoot. The vessel's captain approved a nine-page requisition of articles from the Bureau of Equipment, as provided by the allowance book for one year. The bureau had other thoughts, however, and ordered a board convened to determine "the quantity of different stores, that may actually be necessary . . . for a cruise of 6 months, without regard to the Allowance Book." Such a board was created, but in the meantime, the Navy Department became disturbed over the delay in getting the ship ready for sea. Secretary Hunt ordered her prepared by March 15, only to be told the yard might not meet that deadline. On March 2, he wrote he was "surprised to learn that there is some doubt as to the carrying out of this order by that date." The Bureaus of Construction and Equipment had told him "there is no reason why the ship should not be ready at the required time." The Bureau of Navigation needed only forty-eight hours to furnish the required charts. Hunt informed Badger that "the Department is at a loss to know why there should be any delay," and he ordered the commandant to "see that the order is carried out." By March 29, the ship was ready for sea, much of the final work in completing her outfit being performed by her crew.\footnote{Ransom to Board, Nov. 28, 1881, 181-45, 5/22/78-6/14/83, p. 288; Equipment Officer, Saratoga, to H. C. Taylor, Cdg, Saratoga, Feb. 18, 1882; Chief, Bureau of Equipment, to Badger, Feb. 20, 1882; Badger to Board, Feb. 23, 1882, 181-81, Box 6, 1866-1901; Hunt to Badger (Telegram), Mar. 2, 1882; (Letter), Mar. 2, 1882, 181-11, Box 10, 6/27/81-1/12/83, pp. 97, 98 1/2; Badger to Hunt, Mar. 29, 1882, 45-34, p. 46.}

Jamestown, a 163-foot-long sailing sloop used in the training of naval apprentices, visited Boston twice in 1882. She arrived on July 19 and underwent ten days of hull work, sailing on August 24. The yard again worked on her between early November 1882 and mid-January 1883, when Construction and Repair did approximately two weeks of repairs on her.\footnote{Telegrams, Acting Secretary of Navy to Badger, Aug. 15, Aug. 21, Nov. 7, 1882, 181-11, Box 10, 6/27/81-1/12/83, pp. 152, 153, 174; Monthly Report of Vessels, Dec. 13, 1882, 45-34 (1883), p. 6; DANFS, vol. III, pp. 501-02.}

At the end of 1882, a third sailing vessel employed for training purposes was at the Boston Navy Yard. When the forty-year-old Portsmouth returned to Newport from a European cruise with her crew of naval apprentices, she was a troubled ship. Her captain, William Bainbridge Hoff, had reported to the Secretary of the Navy that the bow was so rotten that it "probably could not stand an ordinary winter gale, without giving way" and that "in a seaway, the rotten inside lining breaks across letting a steady and large stream of water into the Sick Bay." Hoff further stated that the ship's medical officer believed the rotten lining of the bow and of the hold were "soaked with fever germs." To that cause, the captain ascribed "the typhoidal conditions of nearly all the steerage mess during the cruise just made" and one fatality. Before "risking so many young lives in the Tropics," Captain Hoff requested an examination by a naval constructor and a medical officer. Hoff felt it necessary to make a direct appeal to the Secretary since the Department had previously decided not to have the vessel repaired. The Navy Department ordered Commandant Badger to send the Boston yard's senior medical officer and the naval constructor to Newport to examine the ship.\footnote{Hoff to Chandler, Nov. 2, 1882; Acting Secretary of Navy to Badger, Nov. 7, 1882, 181-11, Box 10, 6/27/81-1/12/83, p. 174.} Portsmouth came to Boston for repairs, but as the story of her cruise unfolded, it appeared more than a rotten and leaking bow had troubled the ship. According to a newspaper article of late December, once ashore the apprentices complained bitterly about the treatment they had received, alleging they were poorly clothed, ill-fed, and physically abused. One boy had his ear mutilated, and another suffered a broken rib when thrown to the deck. The article maintained that "a hundred of the boys deserted during the stay of the ship at this port." As the newspaper had recommended, an investigation by the Navy ensued. A three-man board appointed by Badger reported that the statement about poor clothing and poor food "is untrue" and that only seven apprentices had deserted after the ship's arrival at Newport. However, the board concluded "there is
more or less foundation for the remaining charges." The report explained that the board obtained its information from the ship's officers, except six who been detached and one "absent without leave." None of the apprentices had remained aboard and therefore none were examined.149

The Navy Department found the report unsatisfactory and ordered the board reconvened. A supplementary report confirmed instances of abuse during the cruise. In the meantime, the yard worked on Portsmouth's hull, without, however, placing her in dock. The ship was ready for sea by January 18, although the Department delayed her departure while it collected further information about the cruise.150

THE YARD'S LAST MAJOR REPAIR ASSIGNMENT

Shenandoah was the final ship to received major repairs at Boston before that yard closed as an active shipyard. Another screw sloop of war constructed in the early years of the Civil War, Shenandoah arrived in the yard in May 1882. Commandant Badger had received no advance instructions about the ship. In reply to the commandant's telegram, Secretary Chandler gave orders to land her stores and put her out of commission. In May, Badger created three different boards of survey to report the work required under the cognizances of the Bureaus of Equipment, Ordnance, and Steam Engineering. Another round of surveys was made in the following September. However, in the instructions for the second surveys, Badger made reference to the provisions of the Act of Congress of August 5, 1882. His directions for the Steam Engineering survey called for, in addition to the usual projections of time and cost, "the estimated amount it would require to construct and erect on board this vessel machinery &c. of the same character and power. . . ." He then included an extract from that part of the legislation prohibiting the expenditure of funds when the estimated cost of repairs exceeded thirty percent of the estimated cost of new engines and machinery of the same character and power.151

Badger's letter creating a board for Construction and Repair had several novelties. One was the direction to provide an estimate of whether the costs of the repairs would exceed thirty percent of the cost of a new ship of the same size and built of the same material. Another innovation consisted of the inclusion of master mechanics in the board. Badger addressed the letter to five naval officers and John Nicolson, master shipwright. Moreover, the commandant directed the officers to consult with other master workmen who would have charge of the repairs should they be made. "For example," wrote Badger, "the hull includes the work of the caulkers, smiths, joiners, plumbers, and painters, and the Master Workmen in charge of these departments will sign together with the other members of the Board."152

In October 1882, Shenandoah went into the dock for two weeks, and she entered the dock again in December, this time remaining until September 1883. At the end of 1882, Commandant Badger and Naval Constructor Webb submitted a report on ships at the yard, listing Shenandoah as under repair and as requiring 180 days for the hull work and 120 days for the machinery. New boilers had been made by the South Boston Iron Company and delivered to the yard in 1877. They were now placed aboard, and the rest of the vessel's

149 Board to Badger, Jan. 8, 1883, 45-34, p. 12.

150 Board to Badger, Jan. 15, 1883; Badger to Chandler, Jan. 17, 1883, 45-34, pp. 12, 13.


machinery was overhauled. The yard's Ordnance Department repaired some of the ship's gun carriages. In June 1883, with Shenandoah still in dry dock, the Secretary of the Navy announced he was closing a number of navy yards, including Boston. However, after a brief delay, he notified the Boston yard that, under certain conditions, it could continue its repairs on the warship. By November 5, 1883, the ship's officer and crew had been assembled and placed aboard, and she went back in commission. Stores for a three-year cruise were loaded. On November 20, the Board of Inspection and Survey judged her ready for sea. The Department issued orders for the ship to make her way to the Pacific coast of South America. Probably Shenandoah would have sailed in mid-December but for an unforeseen problem.

For some time, several of the ship's officers had detected "foul, sweet, pungent and sickening odors" in the wardroom and cabin, which had "been increasing in strength daily" and which "caused nausea, and headaches and loss of appetite." Examination by the crew of the bilges and other obvious possible sources of the odors proved unproductive. As soon as notified by the commanding officer, Badger appointed a board of yard officers to investigate. In the course of two visits to the ship, that board could detect "no disagreeable odor of any kind." Nor could it locate any condition that might produce the odors complained of. The ship's surgeon suggested that the higher temperatures of the second week in December might have been a factor in the original appearance of the odor, which decreased in the colder weather of the third week, when the yard board made its investigation. If that was the case, as soon as the ship experienced warm weather, the odor would reappear. The surgeon concluded that "it is impossible to say what effect this may have on the health of the ship's company, but from the experience of the former occasion it may produce much inconvenience if not sickness."

Capt. C. S. Norton, Shenandoah's commander, submitted the matter to Secretary Chandler, noting that nothing could be done at Boston because of the increasingly colder temperature. He rejected the suggestion of visiting a southern port in the United States with higher temperatures because it would result in desertions. Captain Norton could offer "no solution to the problem." He thought it unlikely that once out at sea the odor would force him to return to some American port. However, he desired to place on record the report of his surgeon and bring the matter to the attention of the Secretary. Obviously Norton wanted no delay. "I am anxious to be off," he informed Chandler, "and to take advantage of a favorable season through the Magellan Straits." Norton had his way, and without resolution of the problem, Shenandoah sailed on December 29.

Commandant Badger offered a possible explanation of the source of the offensive odors on Shenandoah. In the hull work, the yard had used timber which the American Wood Preservation Company had treated with chemicals to protect it against rot and deterioration. In the repairs around and underneath the ship's boilers, much new timber had been employed. Badger speculated that the heat from the boilers may have caused evaporation of the chemicals in the wood preservation solution.

In his 1884 annual report, Secretary Chandler used Shenandoah as an illustration of the Navy Department's lamentable policy of making costly repairs to worn-out and obsolete ships. Built in 1862 at a

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154 Chandler to Chiefs of Bureaus, June 23, 1883; Chandler to Badger, July 5, 1883; Chandler to Chief Constructor Wilson, July 5, 1883, 181-11, Box 10, 1/12/83-10/17/84.

155 Lt. Cdr. Edwin Longnecker, Shenandoah, to Badger, Dec. 12, 1883; Badger to Board, Dec. 15, 1883; Board to Badger, Dec. 18, 1883; Simons to Badger, Dec. 21, 1883 45-34, pp. 153, 154, 155, 156.


157 Badger to Chandler, Dec. 12, 1883, 45-34, p. 152.

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cost of $463,867, Shenandoah received repairs in the twenty years since amounting to $906,500.158

Administrators and employees at the Boston Navy Yard doubtless had a full awareness of the meaning of the departure of Shenandoah. If they did not, Chandler soon explained that the way was now clear for the suspension of all ship repair activity and that the vast bulk of employees should be dismissed.159
Chapter X

A SEMI-CLOSED NAVY YARD, 1883-1890

During the second half of the 1880s, the Boston Navy Yard reached a low point in its post-Civil War history in terms of the size of its contingent of Navy officers, number of civilian employees, condition of its physical plant, industrial activity, and number of ships at the yard. By virtue of a bill Congress passed in August 1882 and of decisions made by the Secretary of the Navy, the facility was closed as a shipyard, and after the summer of 1883, no vessels arrived for repair or outfitting. By 1890, the yard had been administratively converted to a manufacturing center for items under the cognizance of the Bureau of Equipment. Theoretically, except for purposes of maintaining their machine tools, the Departments of Construction and Repair and Steam Engineering had ceased operations.

The same legislation that resulted in the closing of the Boston Navy Yard made provision for construction of the nation’s first modern ships of war, the beginnings of the so-called “New Navy.” The acquisition of up-to-date ships and the ultimate enlargement of the fleet had importance for the Boston Navy Yard and in the long run helped revive it. The immediate meaning for the yard was mixed. Work on ships was terminated in order to make more monies available for the construction of modern vessels. During the 1880s, the only positive contribution made by the yard to the “New Navy” was the manufacture of articles for those vessels by the Department of Equipment.

THE NAVY BILL OF AUGUST 1882 AND THE CESSATION OF SHIP REPAIR

The Navy appropriations act of 1882 authorized the construction of “two steam cruising vessels of war,” both made of domestic steel and armed with high-powered, breech-loading rifled cannon.1 Within the context of the history of the Boston Navy Yard, other provisions of the bill had greater short-range importance, particularly those allowing some yards to be discontinued as ship repair and shipbuilding facilities.

In the measure, Congress enacted that, should the Secretary of the Navy determine that funds were insufficient to carry on industrial activity at all navy yards, he shall “suspend work at those yards where he finds it can best be dispensed with and shall close such yards and transfer all perishable property and stores therefrom. . . .” Certain operations were exempted from closing, such as the Boston yard’s Ropewalk. At the yards selected for closing, “only such officers and employees shall be retained as are necessary to preserve and take care of the property of government.” The act contemplated not only the closing of some yards, but also their sale. To make recommendations in this matter, Congress directed the appointment of a three-man commission to report to the next session whether it was advisable to sell any of the yards and, if so, which. The Navy Yard Commission was also charged with collecting information about each yard—its cost; area; the value of its various components, such as land, structures, and machinery; its “advantages and disadvantages as a naval station and for the construction of vessels”; and “any other facts which such commission may deem useful . . . in regard to this question.”

For yards remaining in operation, the legislation reduced the volume of repair work on older ships. One provision prohibited repairing any wooden ship, “when the estimated cost of such repairs shall exceed thirty per centum of the estimated cost of a new ship of the same size and like material.” All ships, those in commission, those in ordinary, and unfinished vessels at navy yards were to be inspected by special boards.

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and those declared unfit for service or, in the case of unfinished ships, "those which cannot be finished without great and disproportionate expense," were to be condemned and stricken from the Navy Register. This meant the elimination of such vessels as Ohio and Iowa, both at the Boston Navy Yard.

The 1882 enactment affected navy yard personnel. The appropriation for paying the "civil establishments" at the yards was half of that of the previous fiscal year, which meant reductions in civilian work forces. Another section stipulated that no Navy officer "shall be employed on any shore duty" after October 1, 1882, "unless the Secretary ... shall determine that the employment of an officer on such duty is required by the public interest. ..." In complying with this directive, Secretary Chandler collected information from commandants about officers at the yards. In late August 1882, Commandant Badger received instructions to report the "number of Officers ... of all grades, the employment of whom at the station under your command" after October 1 "will be advantageous to the public interests." Chandler described the "plain intent of the law" as insuring that officers were not assigned nominal duty at shore stations "for the purpose of allowing them increased pay." However, the Secretary also advised Badger that proper assignments in navy yards had the tendency ... to improve officers professionally by the opportunities afforded for keeping pace with the ... rapid progress ... in the appliances for modern Naval warfare and by the additional 'esprit de corps' engendered, both of which are of direct and positive benefit to the service and the country.

In another part of the 1882 statute, Congress instructed the Secretary to cause "an account to be taken of the stock of stores and supplies" of the various bureaus, to include "the original cost of each article and the date of purchase, ... and an appraised value." The Secretary was to appoint boards of officers to make the appraisals. Stores and supplies found unserviceable were to be sold at public auction. These provisions required the several departments at navy yards to take accounts of their entire stock of articles and materials. The Secretary and all others were prohibited from selling or exchanging old material which could be used in the construction or repair of vessels, their machinery, armament or equipment. No favorite contractor, such as John Roach, would receive for a pittance used but valuable machinery parts or other items.

By the terms of the 1882 legislation, two agencies called on the navy yards for information, the Secretary of the Navy and the Commission on Navy Yards. The Secretary had responsibility for assembling accounts or inventories of the stores and supplies of the bureaus. For many bureaus, those materials were located in the navy yards, and the yards commenced another round of inventory taking. In August and September 1882, Commandant Badger issued orders establishing boards in each of the departments of the Boston Navy Yard to "carry out the provisions of the Act of Congress ... for inventory and appraisal of Stores and Supplies." The inventories made in the late 1870s may have served as a basis or starting point, but the accounts mandated by the 1882 program required additional data, such as date and cost of the original purchase. Both programs pointed in the same direction, however, the disposition of surplus stores through auctions. The frequent public sales at the Boston Navy Yard in 1883 and 1884 were conducted in accordance with the 1882 enactment.

One new category of surplus Navy property now to be disposed was unwanted ships. As required, Secretary Chandler established a Board of Inspection and Survey, which examined all ships of the Navy and recommended those considered unserviceable be stricken from the Navy Register. Seven of the condemned vessels were at the Boston Navy Yard: Connecticut, Iowa, Niagara, Oregon, Ohio, Pennsylvania, and Virginia. Essentially, these ships fell into two groups. Iowa, Ohio, and Niagara had been launched, completed, and placed in commission, before going into long-term ordinary at Boston. The remaining four were still on the building ways. To appraise the worth of these ships, the board's president, Commo. Alexander Semmes, requested information from Badger, including an inventory of "things now on board ... which can be easily

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2 Chandler to Bagder, Aug. 11, 1882, 181-11, Box 10, 6/17/81-1/12/83. For Badger's list of the positions at the yard to be filled by naval officers, see Badger to Chandler, Sep. 4, 1882, 45-34, p. 129.

3 As examples of these orders see Badger to Chief Engineer Robie and Others, Aug. 14, 1882; Badger to Robie and Others, Sep. 18, 1882, 181-45, 5/22/78-6/14/83.
removed, without docking, and at slight cost for labor..." Semmes also wanted reports of the iron, copper or composition used in the construction of the ships and an estimate by the yard's naval constructor of the "least cost to the Government to break up the 'Connecticut,' 'Oregon,' 'Pennsylvania,' and 'Virginia.'" In addition, the president of the Board of Inspection also sought an estimate of the "expense of recovering the metal after the vessels have been destroyed."4

With data provided by the Board of Inspection and Survey the Navy Department decided to sell certain ships and fixed appraised values on them. In June 1883, the Department published "Proposals for Purchase of Vessels," giving the names of all the ships to be sold, their locations and appraised value, and instructions for submitting bids. Interested parties could inspect a vessel by making arrangements with the commandant of the yard in which she was located. Sealed bids were to be sent to the Secretary of the Navy prior to noon, September 24, 1883, when the bids would be opened. The vessels would be sold for cash to the party offering the highest price above the appraised value. Each bid had to be accompanied by a deposit of not less than ten percent and a bond with a penalty sum equal to the whole amount of the offer.5

For the use of bidders, the Navy Department published a list describing each of the vessels. According to that list, three vessels at Boston were to be sold. Iowa, a wooden screw steamer, from which the machinery had been partly removed, had an appraised value of $44,600. Niagara was appraised at $29,000, and the information in the Navy Department list indicated, as it turned out erroneously, that her engines and four boilers were aboard. The third vessel at Boston was the wooden sailing ship Ohio, appraised at $15,700. According to the Navy Department's list, all vessels were to have one anchor and at least sixty fathom of chain. The Department in Washington handled the sale of the vessels, with the navy yards playing only a minor role. For example, Commodore Badger, the Boston yard commandant, answered an inquiry from a Boston-based packet line interested in Ohio and Niagara.6

The Navy Department gave the successful bidder a certificate of ownership, which served as authorization to a yard commandant to release the vessel to the new owner. Problems arose concerning two of the ships at Boston. Israel Snow purchased Ohio, intending to take her to Rockland, Maine, a passage that entailed anchoring the vessel at ports en route. Snow claimed to have come into legal possession of all items on the ship at the time of the sale, including one 1140-pound anchor and thirty fathom of chain, in addition to the anchor and chain mentioned in the list. Badger, having received no instructions from Washington, believed that Snow was not entitled to an extra anchor and chain. When consulted, Secretary Chandler stated: "If articles which should not have been sold were not removed, there is now no remedy for it."7

A more serious problem arose with respect to the sale of Niagara. The published description of the vessel mentioned her four boilers. However, as Badger informed the Navy Department after the sale, all of the boilers had been removed some years ago. The Department stated that the appraised value, $29,000, did not include the boilers. In his annual report for 1883, Secretary Chandler reported Niagara among the vessels auctioned off, but when reporting a year later, he noted that "the sale of [Niagara] was set aside." The vessel remained at the Boston yard for several more years. Edward Stannard purchased Iowa and removed her from the yard on December 5, 1883. Snow had already taken Ohio on October 28.8

4 Semmes to Badger, Mar. 19, Mar. 20, Mar. 30, 1883, 181-5, Box 20, 11/30/82-1/26/84.

5 Proposals for Purchase of Vessels, June 21, 1883, 181-11, Box 10, 1/2/83-10/17/84.


7 Badger to Chandler, Oct. 10, 1883, 45-34, p. 109; Chandler to Badger, Oct. 12, 1883, 181-11, Box 10, 1/2/83-10/17/84, p. 49.

8 Annual Report, Secretary of Navy, Dec. 1, 1883, House Ex. Doc., vol. VIII, 48-1, USSS No. 2188, p. 19; Badger to Chandler, Oct. 10, Nov. 7, Dec. 6, 1883, 45-34, p. 119, 124, 144; Stannard to Badger, Nov. 6, Dec. 4, 1883, 181-5, Box 20, 11/30/82-1/26/84, pp. 137, 160; Telegrams, Acting Secretary of Navy to Badger, Nov. 6, Nov. 7, 1883, 181-11, Box 10, 1/12/83-10/17/84, pp. 59, 60; Annual Report, Secretary of Navy, Dec. 1, 337
The other four ships condemned in 1883, *Connecticut, Oregon, Pennsylvania, and Virginia*, for the time being remained on their building ways. Thus, by January 1884, two of the seven useless ships at the Boston Navy Yard had been eliminated by the program authorized by the Act of 1882. Efforts were being taken to implement other parts of that legislation, most importantly the work of the Commission on Navy Yards.

That commission, consisting of a line officer, a staff officer, and a civilian, had the responsibility of evaluating the industrial, strategic, and monetary worth of the existing yards to determine if any should be sold and if so at what price. Also Congress in 1882 had given power to the Secretary, should funds for navy yard work be exhausted, to suspend work in those yards in which "it can best be dispensed with." While there was no formal link in the legislation between the charge of the Navy Yard Commission and the charge of the Secretary, obviously the findings of the commission would have importance in any decision to suspend work in a particular yard. The act of August 1882 creating the commission directed it to report to the next session of Congress. The funds governing expenditures in navy yards were for the fiscal year ending June 30, 1883, and it probably was accepted that decisions respecting the closing of navy yards would be made at that time.

The commission, headed by Commo. Stephen B. Luce, first collected information from commandants about the monetary worth of land, buildings, structures, machinery, and other property. Then in October 1882, Luce sought the views of the Boston yard commandant, Commodore Badger, on more general matter, "the value to the U.S. Government of the Navy Yard" under his command.9 Doubtless, Badger collected the thoughts of his department heads and in mid-November wrote a response to Luce. Essentially, the commandant contended that various conditions made the Boston Navy Yard valuable to the Navy.

Badger argued that by virtue of its location in "the great commercial and manufacturing capital of New England," his yard was in a position to benefit from the numerous railroads and shipping lines that served the area. The particular site of the yard could be readily defended. A prime attribute was the granite dry dock, which the commandant described as exceeding the capacity of any other stone dock in the nation. Badger listed and described seventeen shops, giving special emphasis to eight connected with Steam Engineering. He claimed that the Machine Shop was among the largest and best equipped in this country and was capable of doing all work required for iron or steel shipbuilding. The nine other shops in his list were those associated with hull work. In addition, the yard possessed shops for ordnance work, storehouses, and two wet timber docks for seasoning purposes. Ship construction facilities included three shiphouses with ways and three other building slips and ways. During the late war, noted the commandant, 5000 men had labored at this yard. Boston, South Boston, and East Boston provided additional wharfage and ship repair facilities if required.10

Subsequently, the Navy Yard Commission asked for additional information about the yard, sometimes detailed factual data, such as a building inventory, and, on other occasions, more general intelligence. In April 1883, it approached Badger for his views as to whether his yard "is fully equipped and provided with all necessary appliances . . . for such work as may be required" and "what will be required to place it in proper condition for war." It appears that in the course of the commission's inquiry, two of its members, Chief Engineer Charles H. Loring and A. B. Mullett, the civilian, visited the Boston station.11

That some yards would in fact be closed seemed to be the thrust of a provision in a "Sundry Civil Appropriation" act of Congress of March 3, 1883. In the section dealing with the Navy, the legislation


10 Badger to Luce, Nov. 15, 1882, 181-38, Box 1.

provided "for Navy Yards and Stations $150,000, and $50,000 additional, which shall be used only in the care
and preservation of such Yards and Stations as may be closed."12

The Navy Yard Commission issued three reports in 1883: a preliminary "memoranda" on June 6, a
set of recommendations on October 11, and the final report on December 1. For the Boston yard, the first
paper appears as the most significant. Among the less important matters in that document, the commission
made recommendations that in all yards, shops of the various departments be consolidated, so that there
would be only one of each type in any yard; that there be a service-wide consolidation of shops manufacturing
articles of equipment for ships; and that each yard establish a central steam-generating plant, rather than
having separate plants for each department. Then, the commission made observations and recommendations
for the separate yards. The report indicates that unanimity did not prevail in the commission on certain
matters, and it describes various views without indicating the identity of the members holding them.13

Particularly with reference to the Boston and Portsmouth yards, "some differences of opinion exist
in the Commission." All three members agreed that Portsmouth, except by enormous expenditures, was not
and could not be made indefensible against attack by a "fleet of iron-clads armed with rifled ordnance." All
recommended against any further expenditures for improvements of that yard. However, no agreement existed
as to what should become of Portsmouth. Two commissioners believed that that yard should be closed. One
held that it should remain open for medical purposes, that is as "a sanitary station" for the reception and
refitting of ships returning from southern stations." The same member also argued that Portsmouth could
repair wooden ships as well and as cheaply as any other yard. However, all concurred that whenever the need
ceased for repair of wooden ships and for a sanitary station, Portsmouth should be closed.

The commission members unanimously agreed on four points respecting the facility at Boston. They
held "that it would be difficult to overestimate the importance of the Boston yard in time of war." They
recommended "it should be so improved as to utilize the water frontage to its utmost extent and at the earliest
moment." The commission's preliminary report echoed Commandant Badger's view that the yard was readily
defensible and that "no further expenditures for fortifications were required for its defense beyond those
demanded for the protection of the city itself." Finally, the entire board advised that the Ropewalk continue
to function and, "in view . . . of the superior quality of the painted canvas goods made at this yard, the
sailmaking department should be kept in operation . . . ."

As to the central issue, the immediate future of the Boston Navy Yard with respect to basic shipyard
activities, the members of the commission divided. One maintained the opinion that the yard "should be
retained in active operation," while the two others believed "that no necessity exists that would justify the use
of the Boston yard as a construction and repair yard in time of peace." Thus, without fully explaining their
reasons, two-thirds of the commission called for the closing of the yard, except for ropemaking and canvas
work. The rest of the memoranda of June 1883 dealing with the Boston yard offered a listing of what positions
as foremen should be retained, consolidated, or abolished should the yard be kept in working condition, and
which should be retained, abolished, or consolidated should it be closed with the exception of the Equipment
Department.

Regarding the remaining yards, the commission recommended that Mare Island, New York, and
Norfolk be retained as working yards; that New London and Pensacola be closed; that the Washington yard
be redesignated a naval arsenal and be "retained in full working condition for the manufacture" of certain
classifications of articles for the Bureaus of Ordnance, Equipment, Construction and Steam Engineering; and
that League Island be closed until proper plans were prepared and approved for its improvement.

Prior to the end of the 1882-1883 fiscal year and before the commission's final report, Secretary
Chandler made a decision on suspension of work at navy yards as authorized by the 1882 legislation. In doing
so, it seems likely that Chandler took into consideration elements other than those raised by the first report

582-600.

13 Navy-Yard Commission, Memoranda, June 6, 1883.
of the Navy Yard Commission. One objective was to husband funds so as to spend as much as possible on the
construction of modern ships. From that perspective, the Secretary had to consider what combination of work
suspections would produce the most funds while still providing the Navy with sufficient shipyard facilities.
Another aspect of the question were the political considerations, unmentioned in official Navy and
congressional documents.

Essentially Chandler accepted the recommendations of the commission. In late June 1883, within three
weeks of its initial report and one week before the end of the fiscal year, he issued a one-page directive to
heads of the bureaus in Washington on the discontinuance of activities at navy yards. That document stated
that "work is ordered to be suspended as soon as practicable at the Pensacola, League Island, New London,
and Boston Yards." The order for Boston was qualified only by the instruction that "however, work in the
rope-walk and sail-maker's department will continue." The Secretary limited activities at two other facilities.
He directed that "at Portsmouth, repairs of wooden vessels may continue for the present." And "at
Washington, work upon repairs of vessels or for other purposes not mentioned in the memoranda of the
Commission, will be discontinued." 14

As authority for his orders, the Secretary cited the legislation of August 5, 1882, and March 3, 1883.
And as justification for his use of that authority, he directed attention to information collected on the number
of navy yard employees, expenditures for their compensation, and work done on November 16, 1882. On that
day, the yards collectively employed 657 foremen, clerks and others in the civil establishments and 3,805
mechanics and workingmen, making for a daily payroll of $11,319.37 or an annual compensation of more than
$3 million. At that particular time, "the only work in progress on ships of war at all Yards was repairing the
Omaha, Shenandoah, Trenton, Ossipee, Mohican, and Alert." For the Secretary the lesson was clear. "This
enormous expenditure for such feeble results is inconsistent with faithful administration, and the Department
stands pledged that all unnecessary work shall be discontinued and all employees not needed dismissed."

In his directive Chandler instructed each commandant to institute in his particular yard the changes
in organization recommended by the Navy Yard Commission in its memoranda of June 6, meaning the
consolidation of shops and elimination of certain positions of foremen. Commandants also received orders
to consider ways to achieve a reduction in foremen "beyond that recommended by the Commission" and "to
discover additional reductions . . . in the list of civil employees." Particular attention was "called to the large
number of persons engaged. . . as clerks or writers."

The directive was in the form of a circular and general letter, intended for distribution to heads of
the bureaus. As such, the Secretary was not addressing himself to any one station, such as the Boston Navy
Yard. However, it is clear that Commandant Badger was included in the Secretary's instructions regarding
the consolidation of shops and reductions in foremen and other employees. Yet the main messages for Badger
existed in certain provisions in the act of August 5, 1882, which were cited in the Secretary's order. According
to that legislation and that order, in yards where work had been suspended by the Secretary, "only such officers
and employees shall be retained as are necessary to preserve and take care of the property of the government,
and all other persons shall be transferred or discharged." Chandler sent to Badger, for his "information," a
copy of the circular letter to the bureau chiefs, with directions "to make such suggestions to the various
Bureaus as you deem appropriate for carrying out the purpose expressed in that letter." 15 Some delay
ensued, but the process had begun of closing the Boston yard as a bona fide naval shipyard.

Subsequent to the closing of the yards at Boston and elsewhere, the Navy Yard Commission submitted
two other reports, including one in October 1883, occasioned by directions from the Secretary to assemble
information not specifically sought when the board first came into being. Among the additional charges to
the commission was an assessment of improvements and costs required in each yard to "place it in proper and
effective condition for any probably demands in time of war." The commissioners informed the Secretary that
a thorough answer to that question would require careful study and much time, a labor they believed they
were unable to undertake. However, the board did offer a few proposals. Among them was the
recommendation that the "waterfront of the Boston yard be reconstructed and deepened, a wet basin, already


15 Chandler to Badger, June 23, 1883, 181-11, Box 10, 1/1/83-10/17/84.
half constructed, and additional dry-docks constructed." In similar brief fashion, the board made recommendations for the yards at New York, Norfolk, and Washington, but additional dry docks were mentioned only in the case of Boston.16

The October report included general observations on the internal organization of navy yards. Those observations resulted from a question asked of the commission by the Secretary, whether "any improvements can be made in the system of performing work at the navy-yards which will promote efficiency and reduce expenses." In the first report of June 1883, the board had recommended the consolidation of shops, so as to avoid duplication. It now alluded to that recommendation and commented broadly about causes of the duplication, "the present wasteful extravagance in employing so great an excess of nonproducers," "the inefficient system . . . which has for years past been steadily increasing in our navy yards." Those conditions were "but the natural outgrowth of the constitution of the Navy Department itself."

The report offered an apt description of the impact of the bureau system on the yards:

Each navy-yard is made up of a number of separate and comparatively independent establishments, little principalities, as it were, each owing allegiance to its own sovereign, the chief of the Bureau to which it belongs. The heads of departments of a navy-yard have extensive and responsible duties, and a large patronage, and are naturally jealous of the interference of any one but their own chiefs.

At each yard, each department sought to make itself independent of others. This entailed acquiring the capacity to do all of its own work, by having its own body of workers, its own machinery, its own steam generator, its own way of "doing business." Vast duplication resulted. As a case in point, the commission argued that there then existed "enough machinery of various kinds in either the New York or Boston yard to do the work of its own particular class of the entire Navy during peace.

The Commission on Navy Yards submitted its formal report to Congress on December 1, 1883. The legislature had given the commissioners the charge of collecting detailed factual data about the plant and circumstances of each yard. The assembling of such information related to a larger obligation, responding to "the question whether it is advisable to sell any of the navy-yards, and, if so, which." An early section of the report listed ten characteristics of a "good site for a navy-yard" and took note of other attributes of a valuable yard. The commissioners then offered an evaluation of the several navy yards, with sections on each station dealing with its "Advantages," "Disadvantages," and "Condition of Plant." This is an informative document, with useful brief descriptions of the nation's navy yards. But its methodology seems flawed, as perhaps evident in its overall conclusion, that being that none of the yards and stations covered in the report should be sold, not even the undeveloped yard at New London nor the station at Sackett's Harbor. Moreover, the first two "conditions of a good site" emphasized security from attack by land or sea. However, few if any of the navy yards had such an attribute.17

The chief advantages of the Boston Navy Yard, according to the Navy Yard Commission, arose from its location in Boston harbor and its proximity to the city. That harbor, "being one of the best on the Eastern coast," and Boston, because of its population and wealth, "must necessarily be provided with defensive works; hence the protection of the navy-yard may be considered assured." Defenders could readily be supplied by the "numerous population." An enemy would have difficulty in maintaining a blockade, because of the exposure confronted by ships outside the harbor. Harbor improvements then being made were expected to provide a main ship channel at least 600 feet in width and twenty-three feet in depth at mean low water. The vicinity provided the government with labor skilled in iron-shipbuilding and "marine enginery." Materials for shipbuilding were in abundance or could readily be obtained through the shipping and railroad lines with terminals at Boston. Among its other advantages, the yard was in good general condition and in working


order for constructing and repairing wooden ships and marine engines and boilers. The area enjoyed a good climate, with no serious problems arising from ice.

As already indicated, the commissioners held that the Boston Navy Yard, "with nearly all others," could easily be attacked and destroyed. It contended that "an iron-clad may lie in Broad Sound and be within four and one-half miles of the yard." A lesser disadvantage was that maintenance of an adequate depth of water on the waterfront required periodic dredging, "though to no great extent." Fogs prevailed somewhat in the spring and summer. Commercial establishments crowded the yard, some of the surrounding buildings constituting a fire hazard.

In the section headed "Conditions of Plant," the report gave a generally favorable view. The stone dry dock, "the longest of the three on the East coast," would be able to accommodate the largest ship then being proposed by the Naval Advisory Board. Old boilers in poor condition and antique pumps with small capacities constituted defects in the dock. The facilities of the Construction Department were excellent for constructing and repairing the largest of the navy's wooden ships, but the yard had only a small "supply of plant" for building metal hulls. The Steam Engineering shops could build engines and boilers of the largest size. The Machine Shop's "largest tools are superior to those of their kind found in any other yard." However, many of the small tools were in poor condition or of obsolete design. The Equipment Department possessed the Navy's only ropemaking plant, which was in good condition and capable of meeting all of the Navy's demands for hemp and wire rope. Other part of the Equipment plant were adequate, except for coaling of ships lying off the yard. The facilities for Ordnance and Provisions and Clothing were satisfactory.

The Navy Yard Commission could conceive of no worthy purpose to which the government could put its property on the Charles other than as a shipyard. Because of a demand from mercantile establishments, the yard could be easily sold. However, the commission could not advance even an approximate fair sale price. In the final section of its discussion of the yard, the commissioners advised against selling the Boston Navy Yard, because of its value to the service arising from "its geographical position, excellent plant, fine dry dock and buildings, and adaptability to further improvements." The three commissioners did recommend sale of all or part of the lands of the Naval Hospital at Chelsea. The grounds exceeded the needs of the hospital, according to the report, the surplus being used only for "pasturage and gardening." Because of the demand by private parties for building sites, the lands of the hospital could command an attractive price if offered for sale.

Congress had created the Navy Yard Commission to make recommendations respecting sale of one or more of the nation's navy yards. The commission fulfilled that charge in its formal report, and there was no need to explain why it or the Secretary had ordered work suspended at the Boston yard. Indeed, in none of the three reports filed by the commission were particular reasons given for that suspension. Nor did the Secretary offer an explanation for accepting the proposal to suspend work at Boston.

That the Boston Navy Yard might be sold appeared within the realm of possibility in the spring of 1882, when Congressman Leopold Morse of Massachusetts offered a bill in the national legislature toward that end. According to an article published at that time in the Boston Evening Transcript, the proposal had the united support of businessmen in the area and "no contrary opinion has appeared in public print." The Transport then proceeded to offer an opposing view, consisting partly of the reactions to the proposed sale from Commandant Badger and partly of a general survey of the capabilities and history of the yard. The next day, the Boston Herald referred to the Morse bill and then presented another general history of the accomplishments of the yard.18 Stimulated by the articles in the two newspapers, a movement developed against the proposed sale of the yard. That movement included a protest meeting at the Charlestown YMCA in the evening of April 18.

Most of the speakers celebrated the yard, its value to the nation, and the magnificence of its plant. A state senator informed the gathering that champions of the Portsmouth station favored the sale and believed that abolition of the yard at Boston would increase the importance of the remaining New England yard. Advocates of the sale also included supporters of other yards. "We have got in this matter," claimed the senator, "to contend against the State of New Hampshire, the States of Maine, Connecticut and Pennsylvania."

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18 Boston Evening Transcript, Mar. 31, 1882; Boston Herald, Apr. 1, 1882, National Archives, Record Group 181, Entry 83, Press Clippings File (181-83).
He also challenged the Transcript's report of late March and stated that he had been "unable to find any business man who did not look upon the proposition [to sell the Boston yard] as a sort of joke." E. Gerry Brown, of the Bunker Hill Times, said that the author of the bill had three purposes, "first to add $7,000,000 of taxable property to the city of Boston; second, to get rid of disgraceful patronage; and third, the government could use the money coming from the sale of the yard to build ships." Brown saw validity in none of these reasons. The meeting ended with the adoption of resolutions against the sale and appointment of a committee to present the view of the meeting to the area's congressmen.

The Morse bill of March 1882 for sale of the Boston Navy Yard never reached the floor of the House of Representatives. Whether it played any role in the decision of Secretary Chandler to close the yard as a shipbuilding and repair facility is unknown. It might have suggested that closing Boston may have been political feasible, since at least one congressman from Massachusetts was on record as recognizing the yard was not indispensable to the nation's well-being.

Chandler set no deadline for achieving the change in the status and activity of the yard at Boston, and generally he seems to have left to the chiefs of the bureaus in Washington the implementation of his orders of June 23, 1883, respecting all yards. In that order, he had called particular attention to the large number of clerks and writers and instructed the bureau chiefs to "endeavor to direct or recommend the discharge of some of these." Commandant Badger solicited from his department heads suggestions for the reduction of clerical forces in their units. Immediate opposition arose. On June 27, Civil Engineer White told the commandant that it would be impossible for him to reduce the number of clerks and writers. In addition, he argued that the proposed reorganization for the yard called for the closing of the departments of Steam Engineering and Construction, not the Yards and Docks establishment.

When it came to his own immediate bailiwick, Badger himself resisted change and informed the Secretary that for the time being the immense paperwork performed by his office required two clerks. He had received orders to complete repairs on Shenandoah and the tug Rocket, which had considerably increased the work force in some departments. So long as the yard remained open, "the clerical duties of the Commandant's office are greater than those of any other in the yard." He indicated one clerk might be sufficient after the closing of the main working departments, an event that, given the present activity, might arrive in four months.

A question about continuation of work on Shenandoah arose in June 1883, when Secretary Chandler made his announcement of the closing of the Boston Navy Yard as a repair facility. Chandler clarified that matter in letters to the chiefs of the bureaus and to Commandant Badger. He stated that the repairs on the ship "may be completed at the Boston Navy Yard." However, "the work must be done promptly, economically and with no more force than is necessary." Moreover, "a date must be fixed for the completion and if not finished within that time, the vessel will be removed elsewhere." That Chandler suspected that the bureau heads might not be diligent in adhering to these orders was implied in instructions to Badger. The commandant was directed to "designate as a special Inspector to report to you progress upon the Shenandoah some officer not connected with either of the Bureaus."

With the commandant and his department heads dragging their feet and with the Navy Department allowing ship repairs to continue, the change at Boston came slowly. In June 1883, when the Secretary ordered the suspension of repair work in the yard, there were 390 workers. That number increased in July and did not drop below the June figure until November. The delay in carrying out his reforms angered Chandler, who observed to the bureau chiefs in Washington that "it is not difficult to discover that satisfactory progress had not been made in enforcing economy in work in the Navy Yards." He directed particular

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20 White to Badger, June 27, 1883, 181-38, Box 1.

21 Badger to Chandler, July 10, 1883, 45-34, p. 71.

22 Chandler to Chief Constructor, July 7, 1883; Chandler to Badger, July 5, 1883, 181-11, Box 10, 1/12/83-10/17/84.
attention to the yards at Boston and League Island, both of which were earmarked for suspension of work. Chandler stated that "the completion of the "Shenandoah" at Boston . . . leaves no reason for longer maintaining workmen for the repair of vessels." He further stated "the whole force there engaged in such repairs should, therefore, within a reasonable period be discontinued," excepting a few workers to preserve property.23

YARD ADMINISTRATION

Although closed as a repair facility, the Boston Navy Yard continued as a manufacturing center and as a naval station. As in the past, it performed a number of administrative functions for the Navy and provided services for other federal agencies and for communities, businesses and civilian groups in the greater Boston area.

On the night of August 21, 1884, in waters off Cape Cod, Tallapoosa collided with the schooner James S. Lowell and sank, her crew being rescued. The Boston Navy Yard took care of some of the administrative chores resulting from that accident. It provided temporary quarters for the crew of 104, which arrived from Wood's Hole two days later. Captains of several commercial vessels retrieved Tallapoosa's dinghy and other articles and submitted claims to the Boston yard commandant for compensation for their services. The yard was the site of a court of inquiry established to investigate the circumstances of the collision.24

The commandant of the Boston Navy Yard, as head of the station, continued to have administrative responsibility for off-yard units. For example, on November 18, 1888, a fire destroyed the watch house at the magazine at Chelsea. Commo. William P. McCann, in command of the yard, established a board to investigate the accident.25

SERVICES TO FEDERAL AGENCIES, BUSINESSES, COMMUNITIES

A newcomer among federal agencies to receive assistance from the Boston Navy Yard was the U.S. Commissioner of Fish and Fisheries, located at Wood's Hole, Massachusetts. In 1884, the yard loaned the commissioner a number of machine tools, including a lathe, shaper, and drill press. At the end of the decade, the Secretary of the Navy directed the yard commandant, when called on by the commander of any vessel of the Fish Commission, to furnish coal or other supplies which the yard might have on hand and which could be spared.26

With its wharves unused by ships of the Navy, the yard had no problem in accommodating vessels of other parties. The U.S. Engineer's Office, Boston, laid up two of its vessels at the yard in the second half of the 1880s, one being General Henderson and the other Tourist. In 1888, the yard dry-docked Blake, a steamer of the U.S. Coast and Geodetic Survey.27

23 Number of Employees at Navy Yard Boston, 1872-1889, 181-75; Chandler to Badger, Dec. 31, 1883, 181-11, Box 10, 1/12/83-10/17/84, p. 82.

24 Commandant Badger to Secretary of Navy Chandler (two letters), Aug. 23, 1884, 45-34, pp. 96, 97; Acting Secretary of Navy to Badger, Aug. 26, Aug. 27, 1884, 181-11, Box 10, 1/12/83-10/17/84, pp. 142, 153.

25 John Foster, Naval Magazine, Chelsea, to McCann, Nov. 18, 1888, 181-5, Box 21, 2/11/86-6/19/89, p. 166.


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The U.S. Treasury Department obtained permission from the Secretary of the Navy to create and operate its own coal depot at the Boston Navy Yard. Treasury built several sheds on the coal wharf and arranged for the delivery of coal under contract with New York firms. The fuel was intended for heating purposes in buildings in Boston under the control of the Treasury Department. The only restriction imposed by the Navy was that the quantity of coal on hand at the depot was not to exceed 3000 tons.

Until 1888, Navy Department policy enabled its industrial establishments to make loans of equipment and facilities to private companies. For example, in 1884 and in 1886, the Boston Navy Yard allowed the South Boston Iron Works to borrow hydraulic jacks. And in 1885, McManus & Son, commercial sailmakers, obtained several days' use of the yard's sail loft to fit sails being made for a yacht. However, in response to an inquiry from the commandant of the New York Navy Yard in 1888, Secretary of the Navy William Whitney ordered an end to the policy of granting private parties use of facilities in the yards. The New York yard had developed the practice of permitting commercial firms to use various machines at the yard, when the work was of such a nature or size as could not be accommodated by the machinery in private shops. Whitney objected and held that the utilization of government property for private purposes was not authorized by law. Exceptions did exist, especially ships in distress. But the general thrust of the Secretary's remarks was to curtail practices and policies that had developed in a number of yards, including the one at Boston.

At the Boston Navy Yard, there appear to have been several exceptions in the new policy. The dry dock remained available to private businesses. Another exception was a firm doing work for the Navy. Harrison Loring, a Boston shipbuilder, had a contract for construction of one of the new cruisers. However, a fire had destroyed his mould loft, and the Secretary of the Navy authorized the commandant of the Boston yard to allow Loring to use the yard's loft. No change occurred in the "wintering" of private vessels at the yard. Between 1884 and 1890, permission to spend the winter at the yard was granted to a yacht of P. W. Peirce; Benjamin Butler's America; and Daisy, the yacht of a friend of Congressman Henry Loring.

Local governments and organizations continued to ask the navy yard for the use of equipment and for other favors. The 1889 celebration of Bunker Hill Day, June 17, included various contributions from the yard. At the request of the mayor of Boston, the yard guns fired salutes at sunrise, noon, and sunset, and the parade included a detachment from the Marine Barracks and a contingent of seamen from the receiving ship. A volunteer firemen's association, composed of veterans, borrowed a length of rope from the yard to attach to their engine during the parade, and Ladder Company No. 9, Boston Fire Department, obtained from the yard a spar for displaying a flag.
CHANGES IN YARD DEPARTMENTS

The most significant change in the Boston Navy Yard in the late 1880s consisted of and resulted from the closing of the yard as a shipyard for the repair, outfitting, and servicing of vessels of the Navy. The departments of Construction and of Steam Engineering decreased in their activity and the size of their labor forces. The Department of Equipment, without any significant enlargement in the number of its workers, emerged as the yard's most important industrial unit. Several of the smaller departments almost disappeared. An administrative change being made in all yards was the creation of a new position and department, that of the General Storekeeper.

In the late 1880s, the Department of Navigation became almost a phantom organization at the Boston Navy Yard. In early 1884, when Cdr. Charles Gridley, the yard's navigation officer, received orders for duty at sea, Secretary Chandler informed the yard that he did not intend to appoint a replacement. Henceforth, the duties of navigation officer were performed by the inspector of ordnance. In March 1885, Lt. Cdr. Henry Lyon received orders to report to the Boston Navy Yard as its ordnance officer. However, the commandant received instructions that Lyon's primary responsibility consisted of special duty at the South Boston Iron Works, which was manufacturing guns for the Navy. Thus the yard's inspector of ordnance was a part-timer, who also was expected to perform the chores of the navigation officer. The Boston yard's Navigation Department was practically annihilated by the Navy appropriations act of March 1887, which included no financial provisions for civilian employees of the Bureau of Navigation at Boston.

The Navy Department continued to meddle with the position of captain of the yard. In 1887, that office was redefined or, more accurately, given a form that had already been tried in the past. On orders of the Secretary of the Navy, as of May 1, 1887, the captain of the yard was to have the same relationship with the Bureau of Yards and Docks as the heads of other departments had with their bureaus. The civil engineer was reduced to a position of assistant to the captain of the yard. In July 1889, the Department, in effect, rescinded the orders. The civil engineer regained the responsibility for making plans for yard improvements and submitting proposals through the commandant to the Bureau of Yards and Docks. He was given "sole control" of the execution of all civil engineering work, including the hiring of all employees.

The organization of the Boston Navy Yard, along with all other yards, experienced a change in the years 1884-1890, because of the creation of the yard office of General Storekeeper. As of January 1, 1887, stores and supplies previously in the custody of the separate departments were to be turned over to the GSK, a paymaster and associated with the Bureau of Provision and Clothing. However, the Department of the General Storekeeper was separate from the yard Department of Provision and Clothing, which continued to exist. The Navy Department directed that the shift of stores and supplies to the General Storekeeper was to be completed by July 1, 1887. In addition, civilian workers previously involved in the accounting and care of the stores for the departments were transferred to the GSK. To enable it to fulfill its functions, the new department was assigned storehouses and office space.

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34 Chandler to Badger, Jan. 25, 1884, 181-11, Box 10, 1/12/83-10/17/84, p. 94. Because of the decline in the number of yard officers and with no new navigation officer arriving, there was no urgency in the Gridley family's vacating their quarters. Mrs. Gridley continued to live in the residence during the next ten months; Acting Secretary of Navy to Badger, Aug. 12, 1884, 181-11, Box 10, 1/12/83-10/17/84, p. 146.


36 Circular Letters, Secretary of Navy to Commandant, Apr. 25, 1887; July 1, 1889, 181-51, 7/27/86-11/19/94, pp. 10, 32.

The creation of the post of General Storekeeper appears as a useful reform, especially in view of the fraud and corruption that involved navy yard stores and supplies during the Gilded Age. However, in Boston, the change was unwelcome in those departments, such as Construction and Steam Engineering, which already had been severely reduced in activity and size. Now those departments became even more truncated, as they lost management of their own stores and the civilian personnel who had been charged with supervision and care of those goods.

THE MARINE CORPS BARRACKS, 1865-1890

In the decades after the Civil War, the United States Marine Corps divided its personnel between ships at sea and ten shore stations. Each of the eight navy yards had resident garrisons, such as the Marine Corps barracks at the Boston facility. In addition, there were units at the naval academy at Annapolis and corps headquarters in Washington. Roughly half of the corps' enlisted personnel was assigned duty on shore.

Manning sentry posts constituted the principal duty of the Marine Corps at the navy yards. The two men who served as corps commandants during the period, Brig. Gen. Jacob Zeilin and Col. Charles G. McCawley, agreed with most navy yard officials that the number of marines at the yards was insufficient. The limited numbers meant the men had to perform extra duty. Colonel McCawley claimed that marines at the navy yards were overworked, a condition he charged was responsible for the high rate of desertion. Indeed, desertion appears as frequent occurrence. For example, of the 1950 enlisted men in the corps in 1890, 520 deserted.38

The manpower shortage had other important consequences. McCawley held that new recruits should serve in a garrison ashore for one year before being assigned sea service. However, this often was impossible owing to insufficient men. Because yard security required most of the time of the men of the barracks, there was little opportunity for drill, target practice, and other training activities "which perfect the soldier in his profession." Doubtless, the barracks at Boston did take time out to familiarize the men with new weapons. In 1870, the Marine Corps distributed to its various units a new breech-loading, rifle-musket. That firearm continued to be used until the late 1880s, when it was replaced by the .45 caliber Springfield rifle.39

Throughout the period 1865 to 1890, the Marine Corps barracks at the Boston Navy Yard usually had four officers. For example, in September 1882, the unit included a lieutenant colonel, a captain, one first lieutenant, and one second lieutenant. The number of enlisted men was in the neighborhood of one hundred. In mid-November 1883, the Boston barracks had twenty noncommissioned officers and seventy-four privates.40

Routine, the corps commandant in Washington and also the barracks commander and the yard commandant at Boston complained of the inadequate numbers of officers and men available for shore duty. In 1870, General Zeilin informed the Secretary of the Navy that the shortage of marines at the northern navy yards made it necessary to employ "irresponsible watchmen." Five years later, Zeilin claimed it necessary to at least double the troop strength at the navy yards at Boston, New York, Philadelphia, Norfolk, and Mare


Island. Because of their inability to persuade Congress to increase the size of the Marine Corps, Zeilin and McCawley had to reject requests from the Boston Navy Yard for additional officers and men. In 1877, irregularities at the main gate led Commandant Parker to recommend that a marine officer be stationed there. That staffing necessitated adding two more lieutenants to the Boston barracks. A decade later, Commandant Louis A. Kimberly sought the addition of a single officer. Neither Parker nor Kimberly had success in increasing the officer corps at the Marine barracks. The shortage of commissioned officers led the Boston yard to consider assigning a "sergeant of the guard" to perform the duties of the "officer of the day."

Whether marines were preferable to civilian watchmen for manning sentry posts and beats in navy yards was a matter of controversy, at least in the Boston yard in early 1878. At that time, the Bureau of Yards and Docks sent a confidential circular letter to navy yards commandants informing them of a proposal to greatly reduce the number of watchmen and replace them with marines. The bureau sought information as to the number of watchmen who could be discharged and the number of marines needed as replacement. At Boston, Capt. Edward McCauley responded to the bureau's letter. McCauley, captain of the yard, was serving as temporary commander of the facility in the absence of Commandant Parker. McCauley proposed to cut the civilian force of watchmen from eighteen to nine. Fifteen marines would be required to man the posts vacated by the civilians. McCauley held it necessary to maintain some civilian watchmen for duty at the main gate, where they were useful in identifying workmen entering and leaving the yard.

When Commandant Parker returned to the yard several weeks later, he challenged the original proposal and argued that marines should not be used to take the place of civilian watchmen. According to Parker, the watchmen at the Boston yard were honest and industrious individuals with a good standing in the eyes of their community. They never presented the commandant with any difficulties, which could not be said of the marines. Parker stated that "as a rule here it had been necessary to punish marines "again and again for drunkenness and neglect of duty." Parker expressed his view that navy yards should be regarded as civilian rather than military establishments, and "the less of the pomp and circumstance of war we have the better. We're it not necessary to have a military force present in the event of fire, all of the marines could be removed."

The records seem to sustain Commandant Parker's argument that marines attached to the Boston barracks were the subjects of frequent disciplinary action. During a two-day period in 1873, four privates committed offenses. Two were discovered drunk and fighting while on guard duty. A third guard, also intoxicated, cursed his sergeant. In a fourth case, a private was apprehended trying to desert. During the night of August 4 and 5, 1878, Pvt. Amos M. Burton, assigned sentry duty at Post No. 5, abandoned his beat, leaving his weapon leaning against a building. The duty officer discovered Burton returning to the yard from the street through a small gate. The private could give no explanation for his actions. In another incident, in April 1884, the marine sentry at Post No. 6, near the lower sea wall, could not be found by the officer-of-the-
day. A detail from the barracks finally located him in one of the shiphouses, drunk and with a bottle of whiskey at hand.46

The functions of the Marine Corps at the Boston Navy Yard included the custody of a handful of Marine Corps and Navy prisoners. In 1886, a prison was constructed in Building No. 39. Prior to that time, a small number of cells on the second floor and in the cellar of the Marine Corps barracks served to confine prisoners. That arrangement proved inadequate, as many recognized. In 1871, the yard commandant and the barracks commander recommended to the Secretary of the Navy that a proper prison be created at Boston. Although the chief, Bureau of Yards and Docks agreed on the necessity of a suitable prison at that facility, no funds then existed for such a project.47

Of the two sets of cells in the barracks, those in the cellar were considered the stronger. However, two medical boards had recommended against their use because of health considerations. As a result, prisoners were confined in the cells on the second story. These cells had never been intended for use by men convicted through court martial proceedings, but only for disciplinary action against members of the resident Marine Corps garrison. An escape in October 1873 demonstrated several physical and personnel deficiencies in the prison arrangements.

William Walker, an ordinary seaman under sentence of a court martial, occupied one of the cells on the upper floor of the barracks. A guard checked on him at 10:30 p.m. Sometime thereafter, Walker cut through the door of his cell and, using rope from his hammock, lowered himself from a window to the court yard. He then made his way through the cellar, out another window, and then over the yard wall into Chelsea Street. His absence was not detected until a guard visited his cell at 4:30 a.m. Walker owed his escape to the "thin materials" used in construction of the cells and also to the fact that many members of the barracks had overstayed their liberty, it being payday. As a consequence, there were insufficient men to man all the sentry posts, and a guard usually assigned to keep an eye on the prisoners was stationed elsewhere.48

It appears that some improvements were made in the cells at the Boston barracks, but because of security and health considerations, the facility remained unable to accommodate many prisoners. As a result of a directive from the Secretary of the Navy in August 1878, Commandant Spicer appointed a board of officers to inspect the cells at the Marine Barracks. The board reported conditions were unsuitable for lengthy confinement. As a consequence, two prisoners recently committed at Boston were ordered removed to the navy yard at New York. Again in 1884, the prison population exceeded the capacity of the facility. The barracks commander, Lt. Col. C. D. Hebb, reported to the captain of the yard that he had only six cells and that all six were in use by court martial prisoners, including two men recently arrived from Portsmouth. Hebb stated it was necessary to have at least one empty cell available "for use of cases continually arising," and he recommended that several of the prisoners be transferred to some other yard.49

For the officers and men at the Marine Corps barracks at the Boston Navy Yard, several developments might break up the routine of guard duty. One possibility was reassignment as part of the Marine guard aboard a ship on active duty. Emergencies and disturbances at home and abroad occasionally required deployment of Marine Corps units. For example, as already noted, the garrison at Boston was called upon to maintain order or protect public property during several major fires in the civilian community. In 1877, the nation experienced a serious wave of strikes and labor violence by railway workers. Marines stationed at Washington and Philadelphia intervened to maintain order in several cities in Maryland,


47 Robeson to Steedman, Dec. 11, 1871, 181-11, Box 8, 11/16/70-3/3/73, p. 113.


49 Thompson to Spicer, Aug. 7, 1878; Acting Secretary of Navy to Spicer, Aug. 20, 1878, 181-11, Box 9, 7/6/77-6/26/79, pp. 99, 107; Hebb to Capt. Ralph Chandler, Feb. 11, 1884, 45-34.
Pennsylvania, and New Jersey. Apparently, disorders did not occur in New England and the Boston garrison was not called out.

In April 1885, a rebellion occurred in Panama, which threatened to disrupt rail traffic across the isthmus and to impede the work of a French company constructing a canal. All available marines at Boston were ordered equipped for sea service and transferred to the navy yard at Brooklyn, where they and units from other yards and stations on the East Coast, organized into two battalions, boarded several vessels and were taken to Panama. American marines remained until mid-May, when Colombian troops assumed responsibility for maintaining order.50

NADIR AND RECOVERY: THE YARD’S PLANT, 1884-1890

From 1884 to 1886, the Boston Navy Yard received monies only for maintenance of its plant and no appropriations for substantial repairs or improvements. Such funding accorded with the establishment's official status as a "closed Navy Yard." A change came in 1887, when Congress made an appropriation for much needed repairs to the dry dock caisson and one wharf. In funding those undertakings, the legislators did not explicitly alter the status of the yard, nor did the Navy Department announce a departure from the orders of June 1883, which had eliminated ship repair activity at Boston. Some political figures had advocated the sale of the Boston Navy Yard, but the prevailing opinion favored retaining the yard and holding it in reserve, to be activated in the event of national emergency, such as war. However, the yard could not fulfill that stand-by mission if its dry dock, wharves, and other critical facilities had deteriorated and become unserviceable. Thus the necessity remained to expend money on the yard. Probably many came to agree with F. O. Maxson, one of the civil engineers at Boston during the period, when he pointed out that, with respect to plant, it cost as much to maintain a closed yard as one in operation.51

During the mid-1880s, Bureau of Yards and Docks officials in Washington and Boston claimed to be in a quandary as to the course to be charted for the yard. In 1884, the bureau chief stated that "the anomalous position of this navy yard places me under some embarrassment as to what to recommend." However, he then proceeded to act on the assumption "that it is not to be abandoned, but on the contrary, to be eventually restored to its former condition of efficiency. . . ." Given that assumption, he recommended improvements at the yard totaling almost a half million dollars. Among these were an iron platers' shop, copper shop, floating gate, the rebuilding of wharves, and, most strikingly, constructing a new dry dock.52

Congress did not accept those recommendations and continued for several years to be parsimonious in its appropriations for the yard. In August 1886, Civil Engineer Maxson calculated the decrease in monies available for plant expenditures at the Boston Navy Yard. In Fiscal Year 1885-1886, $4589.08 had been expended at Boston on "Repairs and Preservation," whereas during the preceding twelve years, the average annual expenditures under this account had been $44,165.00, nearly ten times greater.53 Secretary Chandler had sought the closing of several navy yards for the purpose of reducing expenditures of all kinds at those yards, and it is clear that there did occur a decline in expenditures for the maintenance, preservation, repair, and improvement of facilities at the Boston Navy Yard. The consequences of that program also seem clear. According to the report of the yard's civil engineer in 1886:

Everything is fast coming to that state when only the most extensive repairs can prevent its utter destruction. Paint is scaling off leaving woodwork and iron exposed to the weather;

50 Telegram, McCawley to Commandant, Apr. 3, 1885; Secretary of Navy to McCawley, June 12, 1885, 181-5, Box 20, 1/26/84-2/2/86, pp. 117, 139; Metcalf, pp. 232-35.


roofs are leaking to the detriment of the floors beneath and of the materials stored on them; walls need repointing; wharves are decaying. . . . 54

There is evidence that the yard descended to a material condition which made it unfit for servicing a ship of war. At a meeting in the city of Charlestown in December 1890, Henry Cabot Lodge and other local political leaders argued the necessity to reactivate the yard. During that gathering, the point was made that in August the Navy Department had directed Chicago, one of the first ships of the New Navy, to proceed to Boston for major repairs, only to rescind that order upon concluding that the yard lacked the plant necessary for the work. 55 Indeed, in late August 1890, the dry dock was briefly out of service.

It is true that descriptions of the conditions of the plant of a navy yard provided by its administrators and by its partisans have to be read with some discretion. As Secretary Benjamin Tracy stated in his first annual report: "Navy yard officials tend naturally to take a magnified view of their wants in the matter of improving the property in their charge, and do not feel the restraints which a close margin of profits imposes on a private manufacturer." 56 While this point is well taken, the plant of the Boston Navy Yard did come close to being unserviceable in the second half of the 1880s, as a review of its major elements reveals.

THE WATERFRONT

The single most valuable ship repair facility at the Boston Navy Yard was its granite dry dock. In the second half of the 1880s, that facility suffered from a number of defects, the most serious problems being with the swinging or turning gates and the floating gate or caisson. The swinging gate had been condemned and put out of commission in 1878, but the loss of that device was not crucial, so long as the caisson remained operational. However, the reliability of the caisson became a matter of increasing doubt. In 1884, the yard's civil engineer, U. S. G. White, stated that the bad condition of the caisson might cause it to be placed out of service, which would render the dry dock useless. 57 The existing wooden caisson had been in use since the 1830s, and the best course would have been to replace it with an entirely new iron or steel floating gate. The Navy did not take that action until the early twentieth century. In the meantime, the existing caisson underwent repairs.

In March 1887, after several years of providing no funds for major plant repairs at Boston, Congress voted $31,000 for rebuilding the floating dry dock gate, a task undertaken by yard workmen. To permit docking of the caisson, necessary for its rebuilding, the swinging gate was temporarily put in working order. The caisson was docked twice in 1887. However, the results of the repairs were unsatisfactory, and the caisson, although rebuilt, continued to be a problem. In Fiscal Year 1888-1889, additional new parts were installed, including a four-inch rotary pump, upper flooding valves, and strainers. A portable boiler provided the power to run the pump. In the early 1890s, the arrangement for providing steam power for the pumps failed, and it became necessary to operate the pump manually, which proved slow and occasionally impossible.58

The pumps for the dry dock itself constituted another defect. The dock's battery of six cylindrical tubular boilers had been condemned by boards of survey in April 1882 and June 1885, and two locomotive boilers had been placed in temporary use. The fear that the pumping system might "give out" was realized on August 22, 1890, when the foreman in charge of the Construction Department reported that the two "main

54 Ibid.


57 Annual Reports of Expenditures and Operations, Aug. 1, 1884, 181-54.

Chart 4: PLAN OF U.S. NAVY YARD, BOSTON, MASS, SHOWING LOCATIONS OF THE IMPROVEMENTS RECOMMENDED IN THE ANNUAL REPORT TO THE BUREAU OF YARDS AND DOCKS, AUGUST 1890.

LIST OF BUILDINGS

<table>
<thead>
<tr>
<th>Qtrs A, Porter's House</th>
<th>Qtrs E, (Chief Engineer)</th>
<th>Qtrs L, (Captain of Yard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qtrs B, (Paymaster)</td>
<td>Qtrs F, (Pay Director)</td>
<td>Qtrs M, (Ordnance Officer)</td>
</tr>
<tr>
<td>Qtrs C, (Equipment Officer)</td>
<td>Qtrs G, Commandant</td>
<td>Qtrs N, (Naval Constructor)</td>
</tr>
<tr>
<td>Qtrs D, (Civil Engineer)</td>
<td>Qtrs I, Marine Barracks</td>
<td>Qtrs O, (Surgeon)</td>
</tr>
</tbody>
</table>

No. 1, (Mason's Shed) | No. 32. Shell House | No. 58, Ropewalk |
No. 3, Store House | No. 33, Sail Loft | No. 60, Tarring House |
No. 4, Store House | No. 34, Store House | No. 62, Hemp House |
No. 5, Old Navy Stores | No. 36, Joiner Shop, Boiler House | No. 63, Timber Shed |
No. 6, Fire Apparatus | No. 38, Store House, Prison | No. 64, Timber Shed |
No. 9, (Furnace) | No. 39, Ordnance Stores | No. 65, Shed |
No. 10, Pitch House | No. 40, Heavy Hammer House | No. 66, Timber Bending |
No. 12, Pitch Boiling House | No. 41, Store Shed | No. 67, Sawmill |
No. 16, Shed | No. 42, Machine Shop, Foundry, Smithery | No. 68, Shiphouse |
No. 19, Scales | No. 43, Boiler House, Coal Shed | No. 71, Shiphouse |
No. 20, Barn | | No. 73, Shiphouse |
No. 21, (Watch House) | No. 44, Shed | No. 75, Timber Shed |
No. 22, Engine House, Boiler House | No. 45, Shed | No. 76, Timber Shed |
| No. 23, Chapel | No. 46, Shed | No. 77, Mould Loft |
No. 24, Carpenter Shop | No. 47, Heavy Shell House | No. 78, Shed |
No. 25, (Cart Shed) | No. 48, Magazine | No. 79, Wire Rope Mill |
No. 28, Tinners & Plumbers' Shop | No. 49, Shed for Battery Guns | No. 80, (Hoop Furnace) |
No. 29, Commandant's Office | | No. 82, (Shed) |
| No. 30, (Officer of the Day) | | No. 83, (Shed) |
No. 31, Muster House | No. 52, Boiler House | No. 84, (Guardhouse) |
| | No. 56, Barn | No. 85, Mast House, Spar Shop |
| | | No. 87, Timber Dock |
| | | No. 92, Shiphouse |

NOTE: The improvements recommended in 1890 by the yard's civil engineer consisted of: remodeling Building No. 32 for offices of the commandant and the captain of the yard (at location A); repair of Wharf No. 1 (B); construction of steel shears (C); building an electric light plant (D); paving and grading (E); rebuilding Wharf No. 5 (F); repair of the dry dock (G); development of a wet basin (H); enlarging the wharfage by building a new quay wall (I); and installing new water pipes at various places in the yard.

The map for 1890 includes some structures for which a number or letter is given, but no name or indication of its use. In the above list, information from sources other than the map is placed in parentheses.
pumps of Dry Dock do not draft." That failure resulted from leaks in temporary patches and from a cracked valve. Immediate repairs were required to enable the docking of the torpedo boat Cushing on the following day.90

The dock's masonry work experienced continuous deterioration, as water worked its way into the concrete seams and behind the stones. When the temperature dropped below freezing, ice broke up the masonry and dislodged the stones. Freezing had particularly damaged the wells in which were located the windlasses to operate the swinging gates, so that "gradually the whole mass of masonry was broken up." Since that arrangement for working the gates was not absolutely vital, the Bureau of Yards and Docks approved filling the wells with concrete, and block and tackle were used to operate the gates. In 1888-1889, work on the dock included cutting out crumbled seams, sometimes to a depth of twenty-four inches, and filling them with a compound of grit sand and Portland cement. Into the larger seams, strips of "Monumental" lead were driven and then the cement applied. Drains were cut into nearly all of the altars. Workmen replaced broken stones in the inner grove of the entrance to the dock. During the docking of the French cable steamer Ponyer Quertier in April 1889, debris was discovered obstructing one of the flooding culverts. An extremely low tide permitted the removal from that culvert of a quantity of timbers, ships' gratings, and a ladder. The yard manufactured gratings to cover that and other culverts. During 1888-1889, the slip leading to the dry dock was dredged.91

In June 1890, Congress voted $50,000 for four new boilers and pumping machinery for the dry dock and for further repairs on the stonework.61 Although difficulties persisted, especially with the caisson, the dock proved able to handle ships of war when the yard resumed its function as a repair facility in the 1890s.

In the last third of the nineteenth century, the Boston Navy Yard had six wharves, all wooden structures with earth fillings. No. 1, White's Wharf, the most western in the yard, was used for loading and unloading coal. Wharves Nos. 2 and 3 were on either side of the entrance to the dry dock. The eastern half of the waterfront contained the three remaining wharves. Yard documents sometime refer to No. 4 as the "Shear Wharf," although Wharf No. 2 was also equipped with a set of shears. In the mid-1880s, all six wharfs needed rebuilding or major repairs, and several of them were out of service.

Navy yard wharves suffered deterioration from the ravages of water and weather and from normal wear and tear caused by usage. In addition, occasional mishaps resulted in damage to them. Twice during the period 1884 to 1890, ships ran into wharves at the Boston facility. In early May 1884, Tallapoosa collided into the Upper Shear Wharf, Wharf No. 2, carrying away twenty feet of its planking on the side next to the dry dock slip. Two months later, the steamer Boston City damaged one of the wharves.62 However, lack of proper maintenance primarily accounted for the poor state of the yard's wharves.

In his report of August 1884, Civil Engineer White stated that Wharves Nos. 2, 4, and 5 had "become so much deteriorated as to be in an unsafe condition and all require rebuilding (with the exception of the filling)." The three wharves had been out of service for several years, "no teams or heavy weights being allowed on them." Wharves Nos. 1, 3 and 6 needed repairs, including new caps, fender piles, mooring posts, and some planking. The situation saw no improvement until 1887. In March of that year, Congress assigned $25,000 for wharf rebuilding, and in July, work began on the reconstruction of Wharf No. 2. That process took place during the next several years. In the meantime, deterioration continued, and in 1888, only one of

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90 Chief Engineer to Commandant, July 7, 1890, National Archives, Record Group 181, Entry 103, Chief Engineer, Press Copies of Miscellaneous Letters Sent (181-103), 7/7/90-7/20/93, p. 8; William Hichborn to B. F. Day, Aug. 22, 1890, 181-33, Box 42, vol. 52, p. 6.


62 Morning Report, May 12, 1884, 181-144; W. Shelborne, Master, Boston City, to Badger, 181-5, Box 20, 1/26/84-2/2/86, p. 44.

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the wharves in the eastern end of the waterfront was fit for use. The reconstruction and repair of Wharves Nos. 1, 3, 4, 5, and 6 occurred in the first half of the 1890s.

Both pairs of shears had been condemned by the summer of 1887, having been in bad condition since at least the early 1880s. In 1885, the civil engineer recommended their repair and overhaul. However, the wooden parts had become so badly decayed that the shears were taken down. Apparently, the rebuilding of Wharf No. 2 included the construction of a lifting device, but of small capacity, and in 1890, the civil engineer stated that "the yard is without an appliance for loading or unloading heavy weights." He recommended construction of a new set of shears, made of steel and with a lift capacity of 100 tons. Although Congress funded that project and the steel shears were assembled, they never became operational, and the yard continued for several decades to lack adequate shears and cranes.

Silt gradually accumulated along the yard's waterfront. However, no efforts were made to combat that accumulation until 1888 and 1889 when dredging was undertaken in the slip fronting the dry dock, the area in front of Wharf No. 2, and part of the west side of Wharf No. 1. Since the boiler for the yard's dredging machine had been laid up in a shed for several years, it seems likely that a commercial firm was engaged.

BUILDINGS

During the years 1884-1890, the yard acquired no new industrial, storage, administrative, or residential buildings. The inventory of buildings decreased with the dismantling of a number of wooden structures. Other building changes included remodeling part of No. 39, erecting an extension to that structure, and rebuilding the officers' quarters in the lower section of the yard.

Between August 1887 and August 1890, Yards and Docks workmen removed nine buildings, nearly all of them old, decayed wooden sheds of little value. Building No. 54 was taken down in Fiscal Year 1887-88, and Nos. 37, 57, 61, 65, 74, 81, 83, and 86 in 1889-90. Many had been used for storage purposes, such as Nos. 37, 57, 65, 81, and 83. Others had, at one time, housed industrial activities, namely No. 86 (boatbuilders' steam box) and No. 61 (angle-bending furnace). Many wooden buildings remained in the yard, such as No. 44 and No. 45, used by Steam Engineering for a copper shop and a repair shop, and four shiphouses, Nos. 68, 71, 73, and 92.

Major changes occurred in Building No. 39, a three-story brick structure originally used as a shop, storage area, and offices for the Ordnance Department. Beginning in 1886, the east wing of No. 39 was altered into a naval prison. To serve that purpose, the structure was equipped with iron beds, a "dark cell," iron doors, and a prison yard. In 1890, the Chief, Bureau of Yards and Docks, described improvements then being made in the prison's lighting and ventilation. However, he contended that the structure's original purpose as a storehouse made it unsuitable for a prison. Another part of Building No. 39 underwent an extension to make it serve as a foundry.

In September 1889, the Navy entered into a contract for the rebuilding of Officers' Quarters L, M, N, and O. The original walls were utilized as much as possible, and, where necessary, they and the foundations were reinforced. During the period, yard workmen improved the drainage in the area of the lower quarters

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64 Annual Reports of Expenditures and Operations, Aug. 1, 1885; Aug. 6, 1888; Aug. 13, 1890, 181-154.


and laid new pipe to connect those units to a city sewer. Work on the upper quarters included grading and laying drain tiles at Quarters F and repairs to the heating system. As a consequence of the small sums provided for repair, preservation, and maintenance, the buildings of the Boston Navy Yard suffered. According to Civil Engineer Maxson in 1886: "Every building in the yard is in need of repairs in amounts from a few hundred to many thousand dollars." The larger the structure, the more extensive the work required. Thus, No. 42, the Machine Shop, needed the greatest repairs, including buttressing the walls; replacing the roof in part of the structure and repairing roofs in other parts; pointing external walls; and repairs to the flooring. The mast house (No. 85) required work on its pile foundation, ground sills, and flooring. The civil engineer recommended roof repairs for Building No. 41, used by the American Wood Preservation Company; the middle shiphouse, No. 71; and the bending mill, No. 66.

During the years 1884 to 1890, roadways received little attention, no funds being set aside for paving, repaving, or grading. Improvements in 1889 and 1890 to the water system included laying new pipe and installing new gates and hydrants. In August 1890, the civil engineer estimated $5000 would be needed to complete the revamping of the water system. Beginning in 1888, yard officials recommended the installation of an electric light plant instead of renovating the defective, ailing gas lighting. The Navy Department and Congress accepted that proposal and in the 1890s, the yard acquired its first generating plant.

In the second half of the 1880s, the yard acquired little new machinery and tools for its various shops. Some of the tools previously used by Construction and Repair and by Steam Engineering were turned over to the Equipment Department. For example, Equipment came into possession of the old rolling mill, which it was soon discovered, needed repairs and improvements. Workmen sought to preserve the idle machinery of the Construction and Steam Engineering Departments, anticipating the day the yard would resume the repair of ships. That day might not be too distant seemed to be the thrust of an act of Congress in 1890. Legislation passed in June provided $50,000 to be expended for the Construction plant at the Boston Navy Yard to acquire additional tools with the objective of giving the yard the capacity to repair iron and steel hulls. The same legislation provided $40,000 to improve the Steam Engineering plant to the point of enabling the yard to repair modern marine engines, boilers, and other machinery.

Respecting future developments in the plant of the Boston Navy Yard, a most important step had been taken by Congress in a measure passed in March 1887. That legislation authorized the construction of two new timber dry docks at whatever navy yards the Secretary of the Navy might direct. In the 1890s, Congress modified that authorization so as to permit building the docks with stone instead of timber, and the Secretary of the Navy selected the Boston yard as the site for one of the new structures. Also in 1890, Congress appropriated almost $100,000 for new tools at the Boston yard for Construction and Repair and Steam Engineering. Thus, if the 1880s represents a low point in the condition of the yard’s physical plant, that state was only temporary and the following decade saw the yard recover and enlarge its facilities.

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CIVILIAN EMPLOYEES

The last half of the 1880s may have been regarded as a confusing period by employees of the Boston Navy Yard. Several conditions probably produced fears that most workers would be fired. On the other hand, some continuities made these years appear as ones of stability. Procedures for fixing wages remained constant, as did the wages themselves. The Navy Department seems to have finally accepted the eight-hour day, with workers receiving per diem wages equal to those prevailing in private establishments in the area, irrespective of the length of the workday at those establishments.

POLITICS, PARTIES, AND THE BOSTON NAVY YARD

In his annual reports for 1883 and 1884, Secretary of the Navy Chandler emphasized the need to eliminate all political considerations in the hiring practices and operations of navy yard workshops. Chandler frankly expressed his doubts about the capability of government yards to do quality work because of the role of partisan politics. Speaking of propulsion systems, he stated: "We cannot afford to destroy the speed of our naval engines in order to make votes for a political party." He went so far as to argue that unless some plan could be devised to insure competent foremen at navy yards and to establish nonpartisan management of yard shops, "all of them should be closed and all building and repair of government vessels" should be contracted out to private firms.72 No steps were taken in that direction beyond implementing the 1883 orders to close the League Island facility and suspend ship repair at Washington and Boston.

During the period 1884-1890, partisan politics had the potential to affect the Boston Navy Yard in a number of ways. Although Congress passed the Pendleton Civil Service Act in 1883, that program was not extended to navy yards until the 1890s. Accordingly, there was the usual involvement of congressmen in matters of civilian personnel. Because a Democratic administration replaced a Republican presidency in 1885 and the Republicans regained control of the White House in 1889, there could have been two occasions of significant turnover in the holders of such positions as foremen and clerks. The Democratic administration made efforts to influence the outcome of the election of 1888 by seeking temporarily to increase the number of employees at the Boston Navy Yard. Finally, the status of the yard was something of a partisan issue. It appears that in 1889 and 1890, Republicans in Massachusetts favored restoring the yard to fully active status. Democrats criticized such a move, since they had lost control of the patronage generated by the yard.

If the Secretary of the Navy received fewer solicitations from congressmen recommending men for positions in the Boston Navy Yard, it was because there were fewer jobs to go around, not because of any decline in the old system. In 1884, Secretary Chandler sent to the yard a copy of a letter from a party who asked the Secretary not to disclose his name. The author complained that at the Boston yard unqualified men held positions as foremen. He further claimed that employees were retained or discharged in some shops, not on the basis of their performance but because they had "papers from Mr. [Leopold] Morse or Mr. [Patrick] Collins," two Democratic congressmen. The unknown writer informed Chandler that the "boss" of one of the Steam Engineering shops "discharged every Republican he had--and all the men he kept were Irish Democrats. . . ." Obviously, this was not right, since, "other things being equal, under a Republican administration, a Republican should have as fair a show for work as an Irish Democrat."74

In addition to Leopold Morse and Patrick Collins, politicians who contacted the Navy Department or the yard about jobs for particular individuals were A. T. Ranney, another of Massachusetts' congressmen; Senator Justin Morrill of Vermont; Senator John A. Logan of Illinois and a former national commander of the GAR; and Alexander Rice, ex-governor of Massachusetts and an important Republican. In view of the suspension of work in the yard in January 1884, Rice wrote to Commandant Badger recommending the retention of J. Homer Edgerly, "lately Master painter." Rice used the title "Major" in referring to Edgerly.


74 Unknown to Chandler, Jan. 24, 1884, 181-38, Box 2.

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and based his recommendation on the candidate's "most excellent military record . . . and high testimonials from Mr. Stanton, while Secretary of War and from Generals under whom he served in the Army." Rice candidly admitted he was "not competent to speak . . . of the manner he [Edgerly] performed his duties in the yard." What is somewhat unusual here is not Rice's letter, but the man he recommended. Edgerly, a resident of Charlestown, was a leader in Republican Party affairs in Massachusetts and served in the state legislature in 1890.73

A change in presidential administrations, particularly when one national party replaced another, raised the possibility of change in some of the occupants of key positions in navy yards and produced letters and applications from incumbents, would-be replacements, and their political sponsors. In early 1885, the Democrats moved into the White House and the Navy Department for the first time since the Buchanan years. Congressman Leopold Morse apparently had determined how the new Secretary of the Navy, William Whitney, intended to handle navy yard patronage. In a letter to Commandant Kimberly, Morse wrote: "I understand that the Honorable Secretary intends to leave the management of the Yard entirely in your hands." For Morse and others of his breed, the only important matter in "management of the Yard" was patronage. Because of the policy of the Secretary, Morse intimated he would contact Kimberly directly, a practice the congressman had generally pursued during the previous administration. On this occasion, Morse supported a petition and application of a man aspiring to be master sparmaker.76

As a consequence of the election of 1888, the Cleveland Democrats were replaced by Harrison and his Republican entourage. That election returned Henry Cabot Lodge to his seat in Congress and raised him to prominence in national politics. Lodge became a member of the House Committee on Naval Affairs. Because of that assignment, as well as the inclusion of the Boston Navy Yard in his congressional district, he had a particular interest in that establishment. Respecting the spoils system, Lodge revealed an ambivalence found among many of his day. He favored civil service reform, mainly because of the chaos the old system created at the beginning of every new administration. He also objected to the constant attention officeholders had to give patronage matters. However, so long as politics had a role in navy yard appointments, Lodge went along. According to one of his biographers, Lodge, "at the request of his Congressional colleagues from Massachusetts," undertook management of the patronage at the Boston Navy Yard, and after inauguration of Benjamin Harrison in March of 1889, "decapitated," that is removed, seventeen men from their yard positions for political reasons.77 Lodge's interest in the yard resulted in a rebuke given a yard officer in 1889 by Secretary of the Navy, Benjamin J. Tracy.

It appears Lodge, perhaps as a consequence of his arrangement with fellow congressmen from Massachusetts, wrote a letter to Cdr. B. F. Day, the Boston yard's equipment officer, relating to the hiring of civilian employees, Day being head of the department with the largest work force. The equipment officer probably questioned the propriety of the congressman's involvement. Through and with the approval of acting commandant E. O. Matthews, Day sent the Navy Department copies of the letter from Lodge and his reply. Day asked to be informed by Washington "for my future guidance, whether or not my views, so far as set forth in this correspondence, regarding the way in which business should be conducted, and the authority of Mr. Lodge in this navy yard, meet with the approval of the Department."78

Tracy, clearly upset with Day, wrote to Matthews, explaining that the Department regarded the letters between Lodge and the equipment officer as personal correspondence, meaning that they should never have been brought to the attention of the Department; that the methods for conducting navy yard business were spelled out in regulations, orders and circulars; and that those orders gave responsibility for appointment of "subordinate employees" to foremen "without limitation." Since Lodge had not sought to exercise any authority

73 Rice to Badger, Jan. 18, 1884, 181-5, Box 20, 11/30/82-1/26/84, p. 172.
76 Morse to Kimberly, May 6, 1885, 181-5, Box 20, 1/26/84-2/2/86, p. 124.
78 Tracy to Matthews, Aug. 5, 1889, 181-11, Box 13, 5/11/89-8/14/90, p. 52 1/2. No originals or copies of the correspondence between Lodge and Day have not been located.
in the yard, "it is . . . unnecessary to make any general statement" on such a question. Tracy held that it was proper for the Navy Department to receive recommendations of individuals by congressmen. "I know of no reason why an unfavorable exception should be made in reference to the recommendations of the member of Congress from this District." The Secretary held that it was "unfortunate that a question of this kind, involving consideration of the tact, discretion, and courtesy of an officer in his personal intercourse, should be presented by that officer to the Department." Although Tracy directly criticized Day for seeking to involve the Department, he also was lecturing Matthews, who had approved and forwarded Day's inquiry.

In his letter, Tracy stated that the Department desired "to employ competent and industrious workmen; and that it has no intention of taking on workmen for no other reason than to give them a place." But the general thrust of his letter was to accept sponsorship of job applicants by a congressman and to berate a naval officer who questioned that system.

To his credit, Tracy did seek to minimize the influence of his office in the hiring of particular individuals at the yards. Shortly after he became Secretary in March 1889, he issued a circular letter to commandants respecting applications received at the Department "for employment in the various mechanical branches at the different navy yards." In the future, such applications would be forwarded to a yard commandant, who would "have them acknowledged to the applicant and placed on the files of the Yard." That the applications came through the Department was not "intended to add any additional weight or influence to the applicant's claim for employment." The consequence of this policy was to allow "the Commandants [to] dispose of the applicants in such manner as may be deemed best for the interests of the Government."79

Presidential and congressional elections had the potential to interfere with operations at navy yards. The desire of incumbent administrations to remain in power sometimes led to efforts to garner votes by arranging for the temporary hiring of additional workers shortly before election day. During most of the Gilded Age, election days disrupted the work routine at navy yards, since no work was done in the afternoon. Doubtless, the more politically active employees took the morning off as well.

An act of Congress of 1876 prohibited an increase in the number of navy yard employees within sixty days of an election, unless the Secretary certified that the public interest required additional employees. No documentation has been found indicating that Secretary Chandler authorized any increase during the two months immediately preceding the election of 1884. An increase in the rolls at the Boston Navy Yard had occurred earlier, from 158 employees on July 31 to 420 by September 30. That figure remained constant into November and then dropped to 159 by the end of that month. On election day 1884, the employment roster at Boston was the highest it had been since September 1883 and higher than it would be at anytime before the mid-1890s.80 It is possible that the enlarged work force had a legitimate purpose, the breaking up of the unfinished ships.

Prior to the congressional elections in November 1886, the Navy Department, now under a Democratic civilian head, instructed Commandant Kimberly not to increase the force at the Boston yard except upon receipt of a certificate from the Secretary. Such a certificate subsequently was issued, but for the addition of only fourteen men to be employed by Yards and Docks.81

Two years later, the instructions to the yard had a different tone. They did not direct the commandant not to lay on additional workers, but informed him of the procedure to be used should an increase in workers become necessary. And, lo and behold, during the sixty days before the election such a necessity arose in a half dozen instances. The procedure was for the commandant by letter or telegram to request authority to enlarge the labor force for explicitly stated purposes. The Department then gave the authority, enclosing a certificate signed by the Acting Secretary. As required by law, arrangements were made to publish the certificate in a Boston newspaper, the Navy Department rotating its advertisements among three journals, the Post, Herald, and Globe. Six separate certificates were issued in the fall of 1888 by an Acting

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80 Number of Employees at Navy Yard, Boston, 1872-1889, 181-75.

81 Telegrams, Acting Secretary to Kimberly, Sep. 14, Oct. 7, 1886, 181-11, Box 11, 11/1/84-2/19/87, pp. 163, 166.
Secretary of the Navy to enlarge the labor force at Boston for different projects: work on water pipes; the manufacture of cordage and repairs to officers' quarters; "for heating the building occupied by the General Storekeeper"; work on the auxiliary boilers of *Wabash* and *Rocket*; and for two separate instances of unloading coal. The results were a modest increase in the overall work force from 310 on August 31 to 369 on October 31. Probably the increase represents no serious endeavor to affect the election, and it pales compared to the hiring of 1000 temporary workers at the Brooklyn Navy Yard during the same election.

In August 1890, the Secretary of the Navy, once again a Republican, sent a circular letter to navy yard commandants, calling their attention to the 1876 statute and directing them, as soon as possible after September 4, to inform the Department of the number of men who worked that day, broken down according to bureau and to rating. The Secretary further ordered "you will continue the work under your charge as if no election were about to take place, but you will, under no circumstance, make any increase even temporary in the aggregate force at the yard under your command." It was then announced that the Navy Department "does not foresee any exigency requiring an increase of force" in the sixty days before the election. Respecting the Boston Navy Yard, the Department adhered to that policy, and no enlargement in the labor force occurred in the fall of 1890.

At the time of the 1884 election, the Navy Department did a disservice to its civilian employees at the Boston Navy Yard and apparently several other shore stations. On November 4, the day before the election, Commandant Badger issued a general order that in view of the presidential election the next day, "there will be no bell ring in the afternoon." On the day after the election, he reaffirmed that position, directing that "employees of the yard who answered to their names on Tuesday morning . . . and were subsequently given permission to go out and vote, will be credited for the whole day." However, three days later the commandant revoked that directive. Badger now proclaimed:

> [I]n consequence of a decision of the navy department in regard to the employees at the New York and League Island Navy Yards, who were absent for the purpose of voting, the permission to credit the employees of this yard for the time they were absent for the same purpose on the 4th inst., is hereby revoked.

It is unknown how many employees at the Boston yard lost a half day's pay as a result of this maneuver by the Navy Department.

The elections of 1884 and 1888 had significance because they resulted in the removal of the party in power. Following the installation of the Democrats in March 1885, only a few changes appear to have been made in personnel at the Boston Navy Yard. The new Secretary, William Whitney, directed the discharge of the general foreman, a quartermaster, and a first-class machinist in the yard's Yards and Docks Department, "because of the limited amount of money remaining of the appropriations from which they are paid." In August 1885, Commandant Kimberly received numerous letters from men applying for appointment to positions they seemed to regard as open, such as master blacksmith in the Construction Department, foreman.

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of teams and laborers in Yards and Docks, and foreman painter. No similar flurry of applications was received following the installation of the Republican administration in March 1889.

**FIRINGS, WORK SUSPENSIONS, AND LAYOFFS**

Navy yard employees had little protection against loss of job because of lack of work or budgetary restraints. Most vulnerable were per diem mechanics and laborers. Supervisory and salaried personnel could also be fired, but only with the approval of Washington. In July 1884, Secretary Chandler issued a circular letter stipulating that "in no case should an officer or employee in a navy yard... who cannot be appointed without the approval of the Chief of a Bureau or the authority of the Department, be removed without like approval or authority." According to a local official of the Grand Army of the Republic, both per diem and salaried workers at the navy yard had some job security if they had been in the Union military during the war. In February 1888, the superintendent, "Employment Bureau, Dep't of Mass., G.A.R.," sought information from Commandant William P. McCann about Thomas H. Haskill, who had been recently discharged from his position as clerk in the office of the yard's civil engineer. The GAR official declared that "under the law, veteran Soldiers cannot be discharged from Government Employ except for cause." Thus, he sought information about the firing of "Comrade" Haskill, Late 1st Lieut 36th Mass, Inf. Vol. No such law then existed, and perhaps the GAR was seeking to take advantage of a new commandant. It is understandable why the veterans' group contacted the yard commander, rather than the Secretary of the Navy, a Democrat and not likely to grant favors to an organization with strong links with the opposing party.

At Boston and other navy yards, a temporary reduction in work was referred to as a "suspension," and an employee temporarily laid off was regarded as "suspended." When work resumed, "suspended" workers were reemployed. This category had evolved in an informal fashion. In October 1886, Secretary Whitney drew attention to "a custom... of having a list of men-employees--'Suspended.'" He proceeded to point out that "there is no authority in law for this" and then directed commandants to "see that it is discontinued and all such lists erased." Despite the Secretary's order, the practice endured. Soon after the Republicans returned to the White House in March 1889, the new Secretary of the Navy, Benjamin F. Tracy, directed yard commandants to "inform all suspended per diem employees they will consider themselves discharged." Such a directive was consistent with Whitney's order of 1886 and also cleared the way for the new administration to handle the patronage unencumbered.

In the years 1884-1890, civilian employees at the Boston Navy Yard may have been less certain of retaining their employment than during other periods. The cessation of ship repair activity and completion of the dismantling of the unfinished vessels on the ways reduced the need for workers in the Construction and Repair and the Steam Engineering Departments. Reductions of funds for plant maintenance and repairs shrank the need for Yards and Docks workers. In addition, the Navy Department occasionally issued the usual directives to discharge unnecessary workers. Probably some employees worried about their jobs when the Democrats replaced the Republicans in March 1885 and when the Republicans returned to power four years later. Finally, Congress occasionally was belated in enacting appropriations measures, which raised the possibility that the Navy would simply run out of money, temporarily, to meet its civilian payroll.

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86 Whitney to Badger, Apr. 3, 1885, 181-11, Box 11, 11/1/84-2/19/87, p. 50; Thomas D. Riordan to Commandant, Aug. 1, 1885; Jeremiah Mahoney to Kimberly, Aug. 4, 1885; Henry Cotton to Kimberly, Aug. 31, 1885, 181-5, Box 20, 1/26/84-2/2/86, pp. 150, 152, 159.


88 Charles Hapgood to McCann, Feb. 6, 1888, 181-5, Box 21, 2/11/86-6/19/89, p. 128.

In July 1883, the Boston Navy Yard had 547 men on its employment roll. A decline followed, and by the following December, there were 306. During the next month, sixty workers lost their jobs; in March, 140. Beginning in August 1884, the force increased to almost 500 because of the labor needed in the breaking up of the unfinished vessels. Completion of that project saw a sharp drop at the end of 1884. From 137 workers in January 1885, the figure went down to seventy-seven in July, the lowest level for the entire period 1860-1890. From August 1885 to May 1887, the work force ranged between 120 and 200. In terms of numbers of employees, the Boston Navy Yard was at its lowest ebb in the two-year period beginning May 1885. Activity at the yard picked up in 1888 and 1889, the size of the work force varying between 200 and 410.  

The Navy Department called for reductions of forces at the Boston yard in December 1883, again in the following February, and in April 1885. On February 19, 1884, Secretary Chandler directed Commandant Badger to "discharge on or before March 15 all employees . . . not absolutely needed for the protection of property or for work then actually in progress." Badger instructed his department heads to give those instructions "the broadest interpretation" and to "embrace" in the reduction "all employees, including Writers, Foremen, and other Leadingmen whose services are not required." The call for reductions was no empty communication, and the rolls dropped from 270 to 130.  

After the new Democratic administration took office in March 1885, the Navy Department requested Commandant Kimberly to notify it whether there were any employees in the yard whose services could be dispensed with. Kimberly's response has not been located, but the employment roll for the end of April had sixty fewer names than listed at the end of March. One device to trim navy yard employment rolls was to replace civilian watchmen and shipkeepers with marines.  

On four occasions between 1884 and 1890, continuation of work at the Boston yard was threatened by failure of Congress to enact annual appropriations in a timely fashion. When the old fiscal year expired on June 30, 1884, Congress had yet to make financial provision for the new. In the absence of instructions from Washington, Badger continued operations as usual. A week later, Congress passed a six-month appropriations bill. It continued work on three steel cruisers under construction by a private shipbuilder, but cut back elsewhere. The reduced funds for the Boston Yards and Docks Department caused the suspension of four of the thirteen watchmen. Because of the general decline in navy yard employees and in view of the decrease in personnel available for security, the commandant ordered closed as of August 1 the gate at the upper end of the yard.  

Another fiscal crisis arose at the end of 1884, when the current funding expired. The Senate and the House of Representatives were deadlocked on the Navy appropriations bill. Given that circumstance, Secretary Chandler issued General Order No. 329, which contained directives for the conduct of Navy business in the absence of funds and authorization. Civilian employees would be allowed "to continue on duty where the work in which they are engaged is . . . necessary to meet a sudden emergency which may involve the loss of human life or the destruction of property." Such workers had to "stipulate that they work voluntarily and without contract or agreement that they shall be paid therefor." In such cases, the Navy would give workers certificates
indicating the work they performed, but the recipients were to have no claim for compensation unless Congress made a specific appropriation.  

As a consequence of the expiration of funds and Chandler’s order, work was suspended at the Boston Navy Yard during January 1885. With only six men on the rolls of the Equipment Department, certainly the Ropewalk ceased operations. Congress finally acted at the end of the month. On the 31st, Commandant Badger directed that “work will be resumed at this Navy Yard and Station Monday morning February the 2d.” He directed the calling in “as many of the suspended employees . . . as may be necessary to proceed with authorized work.”  

When the end of the 1885-1886 fiscal year came without a new appropriations act, Secretary Whitney instructed navy yard commandants to be guided by General Order No. 329, issued by Chandler during similar circumstances in December 1884. At the Boston yard, by the direction of Commandant Kimberly, the general order was read to workmen at the morning muster on July 1. Little, if any disruption occurred, since on that day, Congress extended the previous year’s appropriation for fifteen days, and news of that development was telegraphed to the yards on July 2. In mid-July, Congress passed another resolution for the remainder of that month. Two years later, in June and July of 1888, the same scenario was played out.  

HOURS, WORK WEEK, HOLIDAYS

During the second half of the 1880s, the Boston Navy Yard experienced only slight changes in the basic schedule of eight-hour days and six-day weeks. The yard apparently did not close on Saturday afternoons in the hottest months of the summer, as had been the custom previously. On the other hand, for the first time, formal provision was made for holidays with pay. In January 1885, a joint resolution of Congress established as paid holidays for all government workers January 1, February 22, July 4, December 25, and whatever day the president designated for “national thanksgiving.” An act of Congress in March 1889, established April 30 of that year as a national holiday. That date marked the centennial of the inauguration of George Washington as the nation’s first president in the system of government established by the federal Constitution. The Navy Department directed that its yards be closed and that employees be paid on that day. In accordance with Navy regulations, Commandant McCann ordered Wabash to fire a national salute at sunrise, noon, and sunset.  

In addition to regularly scheduled national holidays, the Boston yard closed on special occasions. The Navy Department ordered work suspended and employees paid on August 8, 1885, the day of the funeral of ex-President Grant; and December 1, 1885, because of the death of Vice-President T. A. Hendricks. During 1888, the yard was closed on at least ten days: January 2, New Year’s Day, the 1st falling on a Sunday; February 22, Washington’s Birthday; April 5, Fast Day; May 30, Memorial Day; June 18, the anniversary of
the Battle of Bunker Hill; July 4, Independence Day; September 3, Labor Day; the afternoon of November 6, election day; November 29, Thanksgiving Day; and December 25, Christmas.\textsuperscript{99}

THE YARD LABOR FORCE ON JULY 1, 1885

As in the past, the Navy Department occasionally called on its yards to provide a complete listing of all employees and certain information about them. Such a roster was assembled for the Boston Navy Yard for July 1, 1885, and records for each worker his name and position; place of birth; "whence appointed," apparently his state of residence when hired; yard department; and annual salary or per diem wage.\textsuperscript{100}

The list contains 148 names and includes several off-yard operations, namely the Naval Hospital at Chelsea and the Navy Pay Office in Boston. Twenty of the 148 employees were clerks, superintendents and others whose annual salaries are indicated, and the remainder per diem workers, that is foremen, mechanics, and laborers. The breakdown by bureaus and departments is as follows: Equipment and Recruiting, fifty-nine; Yards and Docks, twenty-nine; Construction and Repair, twenty; Medicine and Surgery, ten; Steam Engineering, nine; Provision and Clothing, eight; the yard Paymaster’s Office, four; Navy Pay Office, Boston, four; Ordnance, three; Navigation, one; and Commandant’s Office, one.

Eighty-three of the employees were born in Massachusetts, sixteen in other New England states, and eleven elsewhere in the United States. Canada was the place of nativity for two workers, and Prince Edward Island, one. Next to the United States, Ireland was the most common place of birth, producing twenty-nine of the yard workers. The distribution for other European countries was two for Sweden, and one each for England, Germany, Scotland, and France. All but five of the yard’s employees were residing in Massachusetts when appointed to their positions in the yard. The roster names two women, Kate Murphy and Margaret Murphy, both born in Ireland and both cooks at the Naval Hospital. Ages or dates of birth are not indicated, but the list contains three employees in the job category of “boy.” No mention is made of any apprentices.

That the yard did not function as a genuine navy yard is indicated by the small number of workers, especially in the departments of Construction and Repair and Steam Engineering. A general foreman, William Hichborn, was the only supervisor in Construction and Repair, there being no other foreman, quartermaster, or even leadingman. Foreman Machinist Thomas Chapman filled a similar role in Steam Engineering. Only the Ropewalk had the personnel for a complete shop. They included Moses Webber, superintendent; Joseph Pedrick, foreman; Henry Gardner, quartermaster ropemaker; five ropemakers first-class; thirteen second-class ropemakers; and two of the fourth class. Doubtless, some of the helpers, laborers, machinists, engine tenders, and messengers employed by the Equipment Department also worked in the Ropewalk.

Approximately forty of the workers listed at the yard at the beginning of July 1885 were no longer employed by the end of that month. That reduction appears to have resulted from a temporary slowdown at the Ropewalk.

PROBLEMS WITH SUPERVISORY PERSONNEL

In the late summer and fall of 1884, the activity at the yard requiring the greatest number of employees was breaking up the three ships on the stocks. That project led to an increase in the employment rolls of the Construction and Repair Department from fifty in July to 300 in September and October.
Subsequently, the rolls dropped to forty-six and remained exceedingly low for the next several years. The decline in November of 1884 may have resulted from the onset of cold weather, which would reduce outdoor activity, or from the termination of the work. The laborers dismantling the ships could anticipate the likelihood of their being laid off. It may also have been important that a presidential election occurred in November. This was the background for allegations made against the quarterman of laborers in charge of the break up of the ships and his three leadingmen.

In early October, Leadingmen Thomas Bibbi, John Mountain, and Uriah Higgins collected money from some members of their gangs to raise a fund for purchasing a present for Albert Thompson, quarterman in charge of Construction laborers. Such proceedings violated Navy regulations. The gift consisted of a gold watch and chain, which were left at Thompson's home. Commandant Badger learned of the matter from Congressman H. B. Lovering, who obtained his information from a constituent, whose father, a laborer in the yard, had been approached by Bibbi. On the basis of a letter from Lovering, Badger directed Naval Constructor George R. Boush to look into the matter. The naval constructor's findings indicated sufficient grounds for a formal inquiry by a board of officers.

Despite denials by the three leadingmen, it appears that they did seek to collect money from yard laborers. According to laborer Thomas Davis, on October 6, after the morning muster, Bibbi gave orders to his gang to congregate in a room of the shiphouse containing Oregon. At that meeting, Bibbi took a piece of paper, wrote his name on it, removed from his pocket a silver dollar, and "put it on top of that paper." Turning to Davis, Bibbi allegedly said: "Tom, you know what that means." When Davis replied he did not know, the leadingman stated "it is for a charity," but would explain no further. Davis and two others refused to contribute, and were reported to the naval constructor. It was Davis' son who informed Congressman Lovering of these proceedings. Two of the three leadingmen maintained that they themselves had recently given money for a gift for a friend, but that that gift had no relation with the Navy yard. All three held that "the recipient had not the remotest knowledge of the matter."

Thompson informed Boush that if his three leadingmen had collected a subscription, "it has not been done with my knowledge or consent." The quarterman stated that "some friends left at my house when I was away something for a member of my family or myself which was not clear which, and which was a surprise to me." He continued that "it never entered my head that it had a political significance or had anything to do with the Navy yard or its employees."

In its investigation, the board of officers concluded that Thompson had violated regulations in "receiving a present of a watch and chain from Laborers in his gang." They further found that Mountain and Higgins had committed violations "in receiving contributions of money from men in their gangs," but the board did not think "they had any evil intent, as we believe them to have been ignorant of the Law." Badger submitted the report to Secretary Chandler. Thompson also wrote Chandler and again insisted that the gift "had no connection with the Yard nor did it interfere in the least with the Government business or its employees." He added that he had since "learned a small portion was contributed by men employed at the Yard, but it was mostly contributed by men who were never employed in the yard." Thompson then informed Chandler that he had "returned the watch and chain to the person who left it at my house." In a subsequent letter to Badger, Chandler stated that he had accepted Thompson's explanation and directed that "no further action will be taken in his case."

The statements made by Thompson and his leadingmen have some obvious flaws, and the administration of the Boston Navy Yard did not diligently investigate the charges against these supervisors. Boush acknowledged to Badger that his inquiry was not thorough. To have questioned all the Construction laborers about the contributions, for example, would have disrupted the work of dismantling the three unfinished ships. Perhaps, there were other reasons for the perfunctory inquiry. A national election occurred in early November. Moreover, the gang of laborers under Thompson declined dramatically. If the

Lovering to Badger, Oct. 14, 1884; Boush to Badger, Oct. 20, 1884; Moriority to Boush, Oct. 18, 1884; Thompson to Boush, Oct. 16, 1884; Board of Officers to Badger, Oct. 25, 1884, 181-38, Box 2; Thompson to Chandler, Nov. 11, 1884; Chandler to Badger, Nov. 21, Dec. 3, 1884, 181-11, Box 11, 11/1/84-2/19/87, pp. 4, 7; Badger to Board of Officers, Oct. 21, 1884, 181-45, 6/23/83-11/7/91. Unfortunately, missing is the second page of the report of the board of officers, Oct. 25, 1884, and with it the findings regarding Bibbi.
subscription was an effort by the leading men to insure their own employment at the yard or if workmen gave money with the same hope in mind, they were all disappointed. By July 1885, Construction and Repair employed only seventeen workers of all sorts, none of whom had been involved in the October subscription matter.

Moses Webber, Superintendent of the Ropewalk, appears to have been the subject of official inquiries on at least three occasions in the 1880s. The nature of the charges against him remain unknown. In January 1883, a board of officers investigated complaints about Webber made by a former employee at the yard. Another inquiry focusing on Webber took place in July 1884. The findings of the second board of officers produced yet a third proceeding respecting the Ropewalk superintendent. At the direction of the Secretary of the Navy, a Court of Inquiry was convened at the Boston yard in mid-September. Such a court had the authority to place witnesses under oath and to take sworn testimony, which the usual board of officers could not do.²

Whatever the findings of the Court of Inquiry, Webber retained his position, at least for the time being. In January 1885, when work at the Boston yard was suspended because of the failure of Congress to enact an appropriations measure, the Bureau of Equipment directed Commandant Badger "to restore Mr. Moses H. Webber to his position as Superintendent of the Ropewalk ... as necessary to prevent destruction of property under the conditions of General Order 329." The listing of all civilians and their positions at the Boston Navy Yard on July 1, 1885, includes Webber. However, he was no longer employed at the yard on August 1, 1885, when the Bureau of Equipment instructed Commandant Kimberly to place Joseph Pedrick, the foreman ropemaker, in charge of the ropewalk "pending the appointment of a superintendent."³

Webber did not meekly accept his separation from the yard. He informed the Navy Department that he was claiming payment as royalties for the use in the Ropewalk of certain regulators that he had invented. The commandant convened a board of officers to investigate Webber's claim.⁴ Subsequently, the Navy and Webber patched up their differences, and Webber returned to the Boston yard as Superintendent of the Ropewalk, retaining that position until 1899.

INDUSTRIAL ACTIVITY, 1884-1890

Beginning in 1884, the Boston Navy Yard did not operate as a bona fide naval shipyard, and between September 1883 and August 1890, no ships of the United States Navy entered the Boston dry dock, except the yard tug. The policy of the Navy Department of eliminating vessels of no value produced peculiar circumstance. The Boston Navy Yard, which throughout its prior history had constructed and repaired ships, found its chief activity consisting of the dismantling and destruction of warships. The same policy led to the sale of one other vessel. The yard made a positive contribution to the New Navy through the manufacturing activities of the Equipment Department. Throughout the period since 1865, including the years in which it was closed for ship repairs, the Boston Navy Yard engaged in the examination of recently developed products, whose inventors and promoters hoped to make sales to the naval service.

PRODUCT TESTING

As a major industrial undertaking, the Navy constituted a potential purchaser for a variety of goods. Oftentimes, manufacturers sought to have their products tested in hopes that the Navy would place orders with

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² Acting Secretary of Navy to Badger, Sep. 11, 1884, 181-11, Box 10, 1/12/83-10/17/84, p. 75.

³ Chief, Bureau of Equipment, to Badger, Jan. 24, 1885; Chief, Bureau of Equipment, to Kimberly, Aug. 1, 1885, 181-19, Box 19, 10/18/84-8/31/85, pp. 94, 217.

them. During the 1870s and 1880s, the Boston Navy Yard was called on to make a number of such evaluations.

Several products brought to the attention of the Boston Navy Yard fell into the category of fire fighting. Among them were the "Hydro-Pneumatic Fire Extinguisher," produced by a New York company; the "American Cotton Rubber Lined Seamless Fire Hose," made by the American Fire Hose Manufacturing Co., Chelsea, Massachusetts; and the "Hayward Hand Grenade Fire Extinguisher," Hayward Grenade Co., New York. In the case of the Hayward grenades, the company, unsolicited and with its compliments, sent a dozen of the items to Commandant Kimberly, who referred the company's letter to the Bureau of Yards and Docks. The Department instructed Kimberly to distribute the grenades about the yard so as to be on hand when it became necessary to extinguish a fire.105

In 1879, Secretary of the Navy Thompson directed Commandant Ransom to appoint a board "to test and report upon the merits" of the American Cotton Rubber Lined Seamless Fire Hose. That board consisted of three yard officers, and a company representative was invited to be in attendance. Although it made no specific recommendation, the board found the product a superior hose, suitable for use on ships of war. Constructed with two knitted jackets enclosing a rubber lining, the hose had great strength. It remained serviceable even when the outer jacket became damaged from rough treatment, such as being dragged over a sanded deck or hatch cover. The board learned that a damaged hose could be readily repaired with needle, twine, rubber cement, and a small wooden cylinder. Its greater pliability meant the American hose required a smaller area for stowage than conventional equipment. The hoses tested at the yard withstood great pressure, one section bursting only after the pressure reached almost a thousand pounds per square inch.106

The products of four different paint manufacturers arrived at the yard for tests in the late 1870s and early 1880s. At least two of the paints were intended for use on metal hulls. Unlike the evaluation of the hose, tests of the paint took greater time, since the main challenge was to withstand the ravages of sea water over an extended period. In 1884, Secretary Chandler instructed Commandant Badger to cooperate with representatives of the firm of Johnson & Coventry, which hoped to demonstrate to the Navy the superior qualities of two of its products. In early July, the company delivered to the yard a steel plate covered on one side with two coats of an anti-fouling compound and on the other with two coats of a silica paint. The plate was submerged off the yard's waterfront and remained in that state for three months. When the plate was retrieved, Naval Constructor Boush reported it "in a perfect state of preservation and free from barnacles." A bucket of water thrown on the plate easily removed some dirt that had accumulated. Boush concluded that the test "seemed to justify the opinion that these compounds applied to the bottom of iron or steel ships could prove anti-fouling." Badger also examined the plate and found a small number of "living organisms" and "minute vegetable organisms." He concluded that both of the paints "appeared . . . likely to be very useful, though not absolutely anti-fouling."107

THE AMERICAN WOOD PRESERVATION COMPANY

It might be supposed that by the beginning of the last quarter of the nineteenth century the advantages of metal-hulled vessels had been clearly established. However, wooden ships continued to have their champions, including within the Navy Department. Such advocates had to contend with the fact that ships made of wood suffered fairly rapid decay. From time to time, methods had been devised and promoted


106 Thompson to Ransom, June 5, 1879, 181-11, Box 9, 1/6/77-6/16/79, p. 52; Ransom to Thompson, July 10, 1879, 45-34, p. 100.

107 Chandler to Badger, June 15, 1884, 181-11, Box 10, 1/12/83-10/17/84, p. 129; Badger to Chandler, Oct. 2, 1885, 45-34, p. 119.

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to preserve timber and planking used in ship construction. Invariably, the results fell far short of the claims advanced by the inventors and promoters. For a decade, the Boston Navy Yard housed a ship timber-preservation works, operated by a private company through a contract with the Navy.

The undertaking began under a legal cloud. In February and March of 1877, during his last weeks as Secretary of the Navy, George Robeson approved a number of contracts with private parties to provide the Navy with goods and services. Robeson's critics regarded most of the contracts as illegal, since no authorization or funds had been granted by Congress for such purposes. Among these questionable agreements was one dated February 8, 1877, between the Bureau of Construction and Repair and the American Wood Preservation Company, Cleveland, Ohio. The contract stipulated that the company erect a wood-preservation works at the Boston Navy Yard. The Navy agreed to pay $14,000 for 100,000 feet of impregnated timber. For processed timber in excess of this quantity, the contractor would receive four cents per cubic foot. The contract also contained provisions whereby, at its option, the Navy could purchase the entire operation, that is the apparatus and the patents.108

Moving quickly, the American Wood Preservation Company's representative, James Young, arrived at the Boston Navy Yard a few weeks after the signing of the contract. Young and Commandant Parker agreed that the company's operations be conducted in Building No. 41, a corrugated steel structure located immediately northwest of the Machine Shop. Steam Engineering had originally erected No. 41 for storage of engines and boilers. In early 1877, the building was empty, although the yard anticipated the delivery shortly of new boilers which would require storage. However, Building No. 92, constructed for the building of Intrepid, appeared more suitable for storing the boilers, since it was closer to the wharf at which they would be delivered. Young agreed to pay the expense necessary to put No. 92 in condition for receipt of the boilers. These arrangements met with the approval of Secretary Robeson, and work began on the two buildings.109

However, Robeson's successor had doubts about the original agreement.

Shortly after assuming the office of Secretary of the Navy, Richard Thompson canceled many of the last-minute contracts made by Robeson. Others, including that with the American Wood Preservation Company, he suspended while undergoing a review. In late March 1877, Thompson notified the company in Cleveland and Commandant Parker in Boston that all work under the contract was to be discontinued until further instructions. During the suspension, the company had permission to store its materials and machinery in Building No. 41.110 On March 22, 1878, after passage of a full year, Thompson announced the American Wood Preservation Company could proceed with the work under the contract, so long as it waived claims against the Navy for any losses occasioned by the twelve-month suspension, terms to which Young quickly agreed.111

During the next several months, Young, using labor hired and paid by the company, erected the apparatus in Building No. 41 and placed it in working order. The company received permission to tap the closest yard water main. Installation of a meter allowed an accurate billing of the company for the water it consumed. In late May 1878, Young announced that he had completed his preparations, that he had engaged


109 Parker to Robeson, Feb. 20, 1877, 45-34, p. 21; Robeson to Parker, Mar. 1, 1877, 181-11, Box 9, 9/6/75-7/3/77, p. 123.

110 Thompson to Parker, Mar. 20, 1877, 181-11, Box 9, 9/6/75-7/3/77, p. 128; Thompson to Parker, Oct. 20, 1877, 181-11, Box 9, 7/6/77-6/16/79, p. 31.

111 Thompson to Parker, Mar. 22, 1878, 181-11, Box 9, 7/6/77-6/16/79, p. 73; Young to Parker, Mar. 28, 1878, 181-5, Box 19, 3/25/76-6/14/78, p. 148.
From 1878 to 1885, under the original contract and several extensions, the American Wood Preservation Company treated quantities of ship timbers at its plant in Building No. 41 at the Boston Navy Yard. The work was not continuous throughout the period, and on at least two occasions, the company announced that it had met the terms of its contract and the latest extension and was ending its operations. The Navy then placed orders for additional lots of treated timber and work resumed. The processed wood was used in ships under repair at Boston and other navy yards. The efficacy of the preservation process could be determined only after the passage of time. Meanwhile, between 1879 and 1885, at least five different boards were convened to decide whether the operation should continue and whether the government should take over and operate the works.

The preservation process consisted of placing ship timbers in large tanks and impregnating them under pressure with a chemical solution containing compounds of copper and barium. The Navy's Chief Constructor, James W. Easby, referred to the procedure as the "Thilmany process," but James Young, the company's general agent and later its managing director, insisted that the proper designation was the "copper process." In April 1879, a board of three naval constructors, accompanied by Samuel Pook, naval constructor at the Boston yard, and Young, visited Building No. 41 and observed the processing of a car-load of timber. The board then examined that timber and also pieces that had been treated on earlier occasions. In all instances, it found the wood evenly and adequately impregnated. It also determined that the preservation process did not affect the characteristics of the wood with respect to bending. The board recommended that additional types of timber be treated and inspected. Although Chief Constructor Easby found encouragement in the report, he did not believe there yet existed grounds "to adopt the system permanently or purchase the apparatus."113

In the spring of 1880, Young informed Commandant Ransom that it was his understanding that the company had met its obligations to the Navy and that he, "in the absence of further instructions must close our works," while awaiting "the decision of the Navy Department in regard to taking the work for the United States as provided in the contract."114 The closing proved short-lived because of several developments. The Bureau of Yards and Docks requested the American Wood Preservation Company process spruce pilings to be used in a test to discover whether the treatment gave protection against marine worms. More importantly, the Bureau of Construction made arrangements with the company for the treatment of an additional 40,000 cubic feet of timber.115

Later in 1880 and again in 1881, two more boards were convened to report to the Department and the Bureau of Construction on the success of the preservation process and to make suggestions for the future. It appears that Secretary Chandler recommended to President Chester Arthur consideration of purchase of the preservation company's apparatus and that the president in turn sent the proposal to Congress, where it was either shelved or defeated. Meanwhile, the company continued operations in Building No. 41. In February 1883, Young notified the yard commandant, now Oscar Badger, that his works had processed all the timber that the Navy had furnished him. In the following November, if not before, the Navy provided for

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112 Young to Parker, Apr. 22, May 27, 1878, 181-5, Box 19, 3/25/76-6/14/78, pp. 155, 118; Statement of Water Consumed U.S. Navy Yard Boston, June 27, 1878, 181-33, Box 27, 2/27/78-11/21/78, p. 32.


114 Young sent two identical letters to Ransom, one in March and the other in June: Young to Ransom, Mar. 18, 1880, 181-5, Box 19, 6/12/78-5/19/80, p. 186; Young to Ransom, June 16, 1880, 181-5, Box 20, 5/19/80-11/30/82, p. 10.

115 Young to Ransom, June 1, July 1, 1880, 181-5, Box 20, 5/19/80-11/30/82, pp. 6, 13.
another extension of the contract. The company impregnated 160,000 cubic feet of yellow pine and other
timbers in 1883-84.116

Perhaps the Navy officials most enthusiastic about the wood preservation project were two chief
constructors, first James Easby and then his successor, Theodore Wilson. In the fall of 1880, Easby reported
that the Boston Navy Yard was utilizing material treated by the American Wood Preservation Company in
repairing Hartford. The chief constructor had high regard for the "Thilmany process, experience thus far
having shown its excellence," and he now seemed to advocate "its general introduction in the repair and
building of naval vessels." Three years later, Chief Constructor Wilson reviewed the Navy's experience with
timbers treated at the Boston yard. He noted that during the past five or six years, impregnated wood had
been extensively used in work on ships at various yards, most recently in repairs on Ossipee, Trenton, Omaha,
and Shenandoah, the last mentioned having been repaired at Boston. Wilson was in "favor of continuing the
use of this process for the preservation of timber" and believed that "all ship-timber should be contracted for,
to be landed at the navy-yard Boston, impregnated, and furnished on requisition to other yards when
required." Finally, he recommended the Navy take over the machinery and patents of the American Wood
Preservation Company.117

The operations of the American Wood Preservation Company ended in May 1885, when a federal
marshal took custody of its apparatus and other material, which were then sold to the government. Wood
preservation at the Boston yard terminated with the apparent demise of the company, the Navy not electing
to itself engage in treating ship timbers.118 Whatever the particular circumstances of the American Wood
Preservation Company, continuation of the operation at Boston seemed to be bucking the tide. By 1885, the
yard was a semi-closed facility, the work of its Construction Department in particularly having been suspended.
Moreover, by that time the advocates of a steel navy had secured congressional support. For the hulls of ships
of war, wood, preserved or otherwise, had become obsolete.

THE ASCENDANCY OF MANUFACTURING

By the end of the 1880s, the Boston Navy Yard had officially become a manufactory for articles
identified with the Bureau of Equipment. That status resulted partly from default and partly by design.
Theoretically, most of the manufacturing activity of the Bureau of Equipment and Recruiting was to be
consolidated at Boston. Reality did not conform to official pronouncements and theoretical constructs, but
at the Boston Navy Yard manufacturing had ascendancy over ship repair in the second half of the 1880s.

The pivotal naval reform legislation of August 1882, among other objectives, aspired to achieve more
economical operations by consolidating the Navy's ship repair activities at a relatively few locations. That
legislation empowered the Secretary of the Navy to suspend work at and close one or more yards, but to
exempt from any closing order the Ropewalk at the Boston yard. Also, the Washington Navy Yard, at the
discretion of the Secretary, could "be maintained as a manufacturing yard for the Bureaus of Equipment and
Recruiting and Ordnance."

In its first report, a memoranda dated June 6, 1883, the Navy Yard Commission recommended
elimination of duplicate shops in each yard and consolidating that activity at that yard in one shop. Similarly,
the commissioners urged consolidation in the manufacturing of equipment, so that "each of the several articles"

116 Arthur to Senate and House, Mar. 28, 1882, in James E. Richardson (ed.), A Compilation of the
Messages and Papers of the Presidents, 1789-1902 (New York: Bureau of National Literature and Art, 1904),

117 Easby to Secretary of Navy, Oct. 29, 1880, in Annual Report, Secretary of Navy, Nov. 30, 1880, House
Ex. Doc. 1, Part 3, 46-3, USSS No. 1958, p. 523; Wilson to Secretary of Navy, Nov. 1, 1883, in Annual Report,

118 F. M. Bunce to Commandant, May 11, 1885; Telegram, Bunce to Commandant, May, 22, 1885, 181-5,
Box 20, 1/26/84-2/2/86, pp. 126, 131.
in the outfitting of ships "shall be made in a single shop, to be established in such yard as may have the best facilities and conveniences therefor." In the recommendations for the Boston yard, two commissioners proposed closing the facility in peacetime for purposes of construction and repair. All three agreed that the Ropewalk should remain open and that "the sailmaking department be kept in operation for the manufacture of tarpaulins and other similar articles for the entire Navy." The commission proposed transforming the Washington station from a navy yard to a naval arsenal for the production of "manufactures of specialties under the Bureaus of Equipment and Ordnance."  

Secretary Chandler largely accepted the recommendations of the Navy Yard Commission and later in June ordered work suspended at Boston, except in the Ropewalk and sail loft. In a second statement, the commission made further suggestions for industrial consolidation, including "that the engines and boilers of steam launches, engine and boiler mountings, gun-carriages and fittings, anchors, chains, sheet copper, &c., be made exclusively in the manufacturing arsenal at Washington."

Chandler's successor, William Whitney, continued the move to consolidate certain activities at certain yards and sought to make the Washington and Boston Navy Yards specialized manufacturing establishments. In August 1886, Whitney placed the Washington station exclusively under the Bureau of Ordnance as of October 1, 1886, and directed the plant, machinery and equipment theretofore used by other bureaus be turned over to Ordnance. Not indicated in the order of August 1886 was the fate of important activities now discontinued at Washington, particularly the manufacture of chain and anchors.

Four months later, Whitney issued a directive respecting the Boston Navy Yard. As of February 1, 1887, the Boston station would be "used as a permanent, general manufacturing yard for articles of equipment." Toward that end, "all shops, machinery and appliances" formerly employed by the Bureaus of Construction and Repair, Steam Engineering, Yards and Docks, and Ordnance, would be reassigned to the Bureau of Equipment. "Quarters now occupied by representatives of those Bureaus will be vacated." Whatever tools, machinery, and appliances Equipment did not need would be shipped elsewhere. Had this directive been adhered to, the yard's departments of Construction, Steam Engineering, Yards and Docks, and Ordnance would have been obliterated. Equipment did take over some of the tools and spaces previously used by other departments, but no more than required for actual operations.

By the late 1880s, the Department of Equipment at the Boston Navy Yard had significantly expanded its functions, although it had not engulfed other departments. Some of its shops had been in operations for considerable time. They included the Ropewalk, which manufactured both fiber cordage and wire rope; the rigging loft, which now assembled all of the Navy's rigging, except that produced in the loft at Mare Island; and the sail loft, given responsibility for the manufacture of all sails and canvas needed by new ships under construction. In addition, the Bureau of Equipment had shifted to Boston activities previously carried out at other yards, especially that at Washington. Chief among the new operations at Boston was the manufacture of chain and anchors. The yard also began to produce ship galleys.

The plant of the Boston yard's Equipment Department increased with the transfer of machinery, tools, and operations previously assigned to other departments in the yard. For example, Equipment came into possession of the rolling mill, formerly part of Steam Engineering. Furthermore, machines and equipment for chain making were moved from Washington to Boston. At least one entirely new device was acquired.


120 Circular Letter, June 23, 1883, 181-38, Box 1.


123 General Orders No. 356, Dec. 18, 1886, National Archives, Record Group 181, Entry 47, General Orders of the Navy Department, 1848-1904 (181-47), Box 2, 10/15/83-8/16/93, p. 121.
Plate 17: ANCHOR PARK, CHARLESTOWN NAVY YARD, C. 1890. Prior to the Civil War, a part of the yard had been set aside for the storage of anchors. However, the anchor park doubtless became more conspicuous in the late 1880s and early 1890s, when the yard became the Navy's chief manufacturer of anchors.
In 1888, Riehle Brothers, of Philadelphia, delivered and assembled a machine with a 200,000-pound capacity for testing chain cable and wire rope. Previously, when the yard needed to determine the breaking point of chain and wire rope, it used the facilities and services of the Watertown Arsenal.124

Through its Department of Equipment, the Boston Navy Yard made contributions to the first ships of the "New Navy," the cruisers Atlanta, Baltimore, and Chicago; the dispatch boat Dolphin; and the gunboats Yorktown and Petrel. Under contract with the government, private shipyards built these vessels, but at least part of their outfits were supplied by the Navy. Naval constructors at the building sites advised the Boston yard of progress on the ships and sent information required for the manufacture, assembly, or purchase of items needed for them. For example, in the spring of 1884, John Hanscom, formerly assistant naval constructor at the Boston yard and now Inspector of Hulls at the Roach shipyard, reported completion of the hull of Dolphin, so that measurements could be taken for her rigging. Five years later, Hanscom sent the dimensions of the mess tables of Yorktown, to enable the yard to purchase the proper size tablecloths. The yard also provided shackles for the securing the rigging of Petrel.125

The Ropewalk at the Boston Navy had developed the capacity for the production of wire rope, but the Navy made a contract with the Palmer Wire Company, Palmer, Massachusetts, for manufacture of the wire needed for the rigging of the new cruisers. The yard's job was to assemble the rigging, beginning with Atlanta. However, when the yard inspected and tested wire delivered by the company, it found that it failed to achieve the tensile strength stipulated in the contract. The Bureau of Equipment gave the Palmer works an additional month to provide wire conforming to the specifications, but that proved of no help. The Navy canceled its contract with Palmer Wire and advised the yard it would obtain the wire from England.126

REMOVAL OF SHIPS ON THE STOCKS

In the middle of the 1880s, the Navy arranged for the removal of five unfinished, or otherwise useless, vessels which for decades had been taking up space at the Boston Navy Yard. Four were broken up on the stocks and the other, Niagara, was auctioned off. Occupying shiphouses and building ways were Virginia, a ship-of-the-line whose keel was laid in 1822; Connecticut, a Civil War cruiser; Oregon, a double-turreted monitor; and Pennsylvania, a screw steamer.

A decade earlier, in 1874, laborers at the Boston Navy Yard had been put to work dismantling Virginia. That project had more to do with influencing the outcome of a congressional election than with the removal of the ship. Consequently, little was accomplished, the undertaking was suspended, and the liner continued to occupy Shiphouse No. 71. A general decision to rid navy yards of unwanted and unfinished vessels had been made early in the tenure of Secretary Chandler. He gave attention first to ships that had been launched, and then to those on the stocks. The breaking up of Connecticut began in 1883 and was completed in March 1884. Oregon, Pennsylvania, and Virginia were dismantled between August 1884 and June 1885.

As stated by the Navy Department, the objective in breaking up the vessels was to "clear the Yard of the useless ships, at the lowest possible cost." Washington explicitly rejected any intention "to give employment to workmen." To keep expenditures low, the task was performed by day laborers employed by the yard, rather than through a contract with a private firm. The Department noted that "the same skilled


126 Commandant to Joseph Fyffe, Nov. 8, 1884, 181-45, 6/23/83-11/7/91, p. 95; Chief, Bureau of Equipment, to Badger, Nov. 18, Nov. 24, 1884, 181-19, Box 19, 10/18/84-8/31/85, pp. 38, 42.
labor required to build a ship is not necessary to break her up." Accordingly, "only a small number of shipwrights" and "a limited number of borers" were to be employed, and the bulk of the workers were to be paid as unskilled laborers. In his instructions to Naval Constructor Boush, Commandant Badger stipulated that "only healthy men will be employed." Each day, the men would continue their work "until actual bell ring both at noon and evening." To maintain fiscal tabs on the undertaking, a special payroll was established, separate from the ordinary yard payroll. The main work force consisted of laborers divided into three gangs. A quartermaster had charge of overall operations, aided by three leading men.\(^{127}\)

Economy in the breaking up of the vessels was also achieved by salvaging whatever could be used or sold. Essentially, the Navy Department sought to obtain through the sale of salvaged materials monies sufficient to cover the labor costs in taking the vessels apart. The condemned wood produced by Connecticut was sold as firewood in a half a dozen different auction sales in late 1883 and early 1884, producing $825.92. It was estimated that, when sold, the metal salvaged from the same ship would yield nearly $20,000. According to one account, the labor involved in the break-up of the ship totaled $18,743.41. Thus, it appears the Navy was in a position to realize its aspiration to get rid of the vessel without sustaining a fiscal loss. The breaking up of Connecticut proved arduous, since no shiphouse enclosed the vessel, and workmen were exposed to the cold, snow and ice of the New England winter of 1883-84.\(^{128}\)

In August 1884, the Navy Department reaffirmed its decision to break up Oregon and Pennsylvania, and to complete the dismantling of Virginia. The sequence was Pennsylvania, Oregon, and Virginia. Perhaps that order was dictated by the fact that Pennsylvania was on an open building ways. Breaking her up first meant workmen would be inside the shiphouses containing Oregon and Virginia when severe weather arrived. Yard laborers cut the wood into four-foot lengths, carted it to a vacant area near the timber sheds, and stacked it into numerous piles which were sold at public auction.\(^{129}\)

THE SALE OF NIAGARA

A wooden screw steamer built in 1856 and with a displacement of 5,440 tons, Niagara had been in ordinary at the Boston Navy Yard since 1865. Only on its third attempt did the Navy Department succeed in auctioning off the thirty-year-old vessel.

In December 1884, Commandant Badger described to Secretary Chandler how the "old ship Niagara" constituted a needless drain on the labor and funds of the yard. During several recent gales, she broke loose from her moorings, "causing some expense and considerable trouble to secure her again." It cost $6.00 a day to employ three shipkeepers to look after the vessel. Badger recommended the Navy simply give her to anyone willing to take her away. As an alternative, Badger suggested having her broken up in the same fashion as vessels on the stocks. That process could be facilitated by placing Niagara in the dry dock, which was then unoccupied.\(^{130}\) However, the Navy Department had decided that the vessel should be disposed by auction. Niagara had been among those ships put up for sale in 1883. The Secretary of the Navy reported the vessel sold, but the sale was not carried out, perhaps because the advertisement issued by the Navy mistakenly had indicated the engines, boilers, and machinery had remained on board. In 1883, the Navy had fixed the ship's upset price at $29,000. Subsequently, the vessel underwent several reappraisals. In February 1885, the

\(^{127}\) Acting Secretary of Navy to Badger, Aug. 14, 1884, with Badger's endorsement, Aug. 18, 1884, 181-11, Box 10, 1/12/83-10/17/84, p. 149.

\(^{128}\) Badger to Chandler, Jan. 5, 1884; Webb to Badger, Mar. 5, 1884; Badger to Chandler, Mar. 18, 1884, 45-34, pp. 4, 30, 35.


\(^{130}\) Badger to Chandler, Dec. 12, 1884, 45-34, p. 150.
Board of Inspection and Survey determined an appraised value, relying largely on reports indicating the amount of various metals used in the original construction of the ship. It was assumed that the purchaser would burn the wooden hull and recover the copper, composition, iron, and lead for sale as scrap. Most valuable was the copper. The ship contained "at least" 171,226 pounds of this material, on which the board placed a value of eight cents per pound. *Niagara*’s copper alone had a worth of better than $15,400. The board calculated that the cost of burning the hull and recovering the metals would be $5125. Allowing the purchaser a 20% profit on the sale of the scrap metal, the board arrived at an appraised value of $17,900.131

When the Navy Department offered to sell *Niagara* at a minimum price of $17,900, no one advanced a bid at that or a higher figure, and the second effort to sell the ship failed. In April 1885, the new Secretary of the Navy, William Whitney, signed a notice to the effect that the ship would be once more put up for sale. He scheduled a public auction at the Boston Navy Yard on May 6 and set the minimum price at $10,000.132 In view of subsequent developments, it may be important that Whitney also designated the auctioneer to conduct the proceedings. This time a sale was completed, although a report of irregularities at the auction led the Secretary to delay delivery of the ship to the successful bidder, Thomas Butler & Co.

Among the interested parties at the auction on May 6 was Edward Stannard of New York City, who had purchased *Iowa* in 1883. Immediately after *Niagara* had been knocked off, Stannard wrote a letter to the Secretary of the Navy protesting the conduct of the auction. A second letter followed on May 7. Stannard described the sale as "a farce" and the action of the auctioneer as "not an honest one." According to the New Yorker, bids "were made in quick succession by different parties," then a bid was received, followed as quick as it could be repeated "once, twice, three times," followed as quickly by the name of "Butler" as the bidder. The Butler bid was $12,300. Stannard and others complained to the auctioneer that he had ignored their higher bids. In his second letter, Stannard spoke of a "combination" which had control of the auction, and he recommended that the ship remain in the yard "until this is settled, or another sale made." George Boush, naval constructor at the Boston yard, also reported irregularities.133

On the basis of Stannard's complaints and Boush's report, Whitney directed that Commandant Kimberly not deliver *Niagara* until further orders and to collect information from Boush, Butler and Co., the auctioneer, and others who had attended the auction. Upon receipt of that information, Secretary Whitney decided there was "no sufficient reason upon which to base a refusal to deliver the ship." It had been determined that Butler was part of a syndicate, which after the sale at the yard, had its own auction, at which the ship reportedly was resold for $13,000. Whitney did not deny that the auctioneer, his appointee, had prematurely terminated the bidding, but he concluded only a small difference existed between the bid by Butler and the price at which the ship might have been sold had bidding continued. Said the Secretary, "in my opinion, it is a matter, probably of a few hundred dollars;--at the outside not exceeding $2000. . . ." Probably Whitney was on better foundation when he claimed that legal grounds did not exist for withholding the ship from Butler & Co.134 In June 1885, *Niagara*, the sole remaining member of Boston's "rotten row," left the yard.
DOCKING COMMERCIAL VESSELS

During a seven-year period, extending from September 1883 to August 1890, the Boston Navy Yard docked no ships of the U.S. Navy, except two tugs. The dry dock did not remain totally unused, and several commercial ships entered the facility for repairs. Yard workmen were involved in the docking and undocking of these vessels, but private companies, particularly the Atlantic Works of East Boston, performed the actual repairs.

In correspondence about the docking of a private vessel in 1886, Secretary Whitney outlined the policy of the Navy Department. He stated that the Department "has usually, as a matter of accommodation, allowed the use of the Government docks when others could not readily be procured," with the provision that "the customary charges of private parties engaged in the docking business were paid for the same." The only sizeable dock in Boston Harbor, other than that at the navy yard, was the facility of the Simpson Dry Dock Company. In 1884, its rates were as follows: twenty cents per gross ton for docking and the first day; ten cents per ton for each of five lay days; $150 each day for twenty additional lay days; and for each day thereafter $100. In the case of the docking of one commercial vessel at the navy yard, Commandant Badger recommended the money paid to the Navy be used for much needed repairs of the dock.135

In the spring of 1884, the Atlantic Works arranged with the Navy Department for the docking of the 2190-ton English steamer Newcastle City, belonging to the Furness Line. The Atlantic Works requested use of the facility because the dock of the Simpson Dry Dock Company would not be available for four weeks. Newcastle City entered the navy yard dock in the mid-afternoon of April 30, with workmen of the Construction Department providing the skill and labor required for the operation. They completed their tasks at 8:00 p.m. Two hours later, the Atlantic Works began repairs. Occasionally, during the next three weeks, men of the Atlantic Works labored all night on the ship. On May 20, the repairs were completed. Because of the desire to undock the steamer early the following day, yard workmen remained after hours to prepare the dock. At 1:00 a.m., another gang of carpenters and laborers came into the yard to complete the process of getting the dock ready and to carry out the undocking. Newcastle City was taken out at 6:30 a.m. and hauled under the upper shears, where the Atlantic Works continued repairs. The steamer left the yard on the morning of May 23.136

Two months later, the Atlantic Works sought and obtained permission to dock Empire State at the Boston Navy Yard. However, upon reconsideration and taking further measurements, it was determined that the ship had too much beam for the entrance of the navy yard dock, and the owners decided to take her to New York for repairs. The Atlantic Works offered to reimburse the government for any expenses incurred by the Boston yard in anticipation of the docking of Empire State.137

Throughout the period 1865 to 1890, amiable relations existed between the Atlantic Works and the Boston Navy Yard, in large part because of the propriety with which the company's officers conducted business with the Navy. The Atlantic Works did not take for granted privileges allowed it by the yard, such as docking of ships and the use of the shears; it did not seek to take advantage of the government when such favors were granted; and it does not appear that the company attempted to cut corners in fulfilling any of its many contracts with the Navy.

Following the undocking of Newcastle City in May 1884, the dry dock at the Boston Navy yard remained unused for almost two years. Then, on March 11, 1886, it received a Belgian steamship, the 2564-ton Pieter de Coninck. Charles S. Gill, consul for Belgium in Boston, made arrangements for the docking and agreed to pay the same charges as would have been imposed by the Simpson company for use of its dock.

135 Whitney to Charles F. Gill, Apr. 1, 1886, 181-11, Box 11, 11/1/84-2/19/87, p. 130; Badger to Secretary of Navy, Apr. 28, 1884, 45-34, p. 49.


137 Atlantic Works to Badger, July 22, 1884, 181-5, Box 20, 1/26/84-2/2/86, p. 40; Telegram, Chandler to Badger, July 21, 1884, 181-11, Box 10, 1/12/83-10/17/84; Badger to Chandler, July 22, 1884, 45-34, p. 82.
It appears delays ensued in getting the repairs underway, and the ship remained idle in the dock. Four days after the docking of Pieter de Coninck, Gill requested the ship be relieved of paying dockage rates for the time no repairs were being made. Secretary Whitney refused this request. The Belgian steamer remained in the dock until April 10.\(^\text{158}\)

In August 1887, Hesper, a privately-owned pilot boat, spent twenty-five days in the navy yard's dry dock, and in October 1888, the dock received Blake, a steamer of the U.S. Coast and Geodetic Survey. Some confusion exists in the yard's docking log as to Blake, but it seems likely that the vessel spent a few days in the dock, being hauled out on October 18.\(^\text{139}\) In 1889, the yard docked one vessel, a French cable ship, Ponyer Quertier. In December 1888, the ship's captain had sought permission to tie up his vessel at the Boston Navy Yard for three or four months. Early in the following April, the Navy Department received a request that Ponyer Quertier be permitted to go into the dry dock. Secretary Tracy authorized the Boston yard to accommodate the French steamer, so long as "the government dock can be spared" and representatives of the ship furnished the commandant with evidence that no other dock in the vicinity was available. The yard's docking log does not indicate when or even if the ship entered the dock. It contains only an entry that Ponyer Quertier sailed on April 20, 1889. Other documentation reveals that the ship did enter the dock, but when or for how long is unknown.\(^\text{160}\)

In 1888 and 1889, the dock at the Boston Navy Yard received vessels at the rate of one ship each year. The tempo of activity changed dramatically in 1890, when twenty-one vessels were hauled into the facility. However, seventeen of them were commercial or privately owned ships, the repairs being performed by the Atlantic Works. It almost seems that in 1890, the Navy's dock at Boston existed primarily to serve the Atlantic Works.

THE YARD AS A CLOSED REPAIR FACILITY

Orders issued by Secretary Chandler in June 1883 aimed at closing the Boston Navy Yard as a repair facility for ships of the Navy. Between 1883 and 1890, the Navy Department generally realized that objective. In the early spring of 1884, the Navy Department made one of its inventories of work done in the navy yards on a particular day, in this instance March 17. The report for the Boston Navy Yard indicates no "work performed on or for vessels of war" by the departments of Yards and Docks, Ordnance, Navigation, Medicine and Surgery, Steam Engineering, or Construction and Repair. Manufacturing cordage for Dolphin, one of the Navy's new steel vessels under construction, was the sole activity at the Boston yard on that day which constituted a direct and positive contribution to the fleet and its mission.\(^\text{141}\)

In the years from 1884 to 1890, the Boston Navy Yard made significant repairs only to its own tug, Rocket. It also rebuilt the dry dock caisson. Both these activities may be considered in the nature of plant maintenance or improvement rather than as bona fide ship repairs. And the yard did not perform all the repairs required on its tug. On May 24, 1889, as directed by the Navy Department, Rocket sailed from Boston for the Portsmouth Navy Yard, for the purpose of being repaired. In addition to the tug and the caisson, the Boston yard did work on Wabash, the receiving ship. During the period 1884 to 1890, on three occasions boards, made surveys of the condition of Wabash. In Fiscal Year 1887-1888, Steam Engineering made slight

\(^\text{158}\) Whitney to Gill, Apr. 1, 1886; Whitney to Kimberly, Apr. 1, 1886, 181-11, Box 11, 11/1/84-2/19/87.

\(^\text{139}\) Telegram, Acting Secretary of Navy to McCann, June 19, 1887, 181-11, Box 11, 2/21/87-7/1/88, p. 18; Acting Secretary of Navy to McCann, Oct. 13, 1888, 181-11, Box 12, 7/1/88-5/1/89, p. 34; Docking Log, 181-60.

\(^\text{140}\) Stuart Tossard to Commandant, Dec. 21, 1888, 181-5, Box 21, 2/11/86-6/19/89, p. 173; Tracy to Commandant, Apr. 4, 1889, 181-11, Box 12, 7/1/88-5/1/89, p. 102 1/2; Docking Log, 181-60.

\(^\text{141}\) List of Employees at Boston Navy Yard on March 17, 1884, 45-34.
repairs to the machinery of the receiving ship, and Construction and Repair performed work amounting to $1500. Again, in 1889-90, Wabash received minor repairs.142

Following the breaking up of the unfinished ships on the stocks and the sale of Niagara, the only vessels of the Navy at Boston were Rocket and Wabash. Occasionally, ships in commission stopped at the yard. Galena arrived in November 1884 to take on board and carry to New York some of the men on the receiving ship. In September 1886, the yard issued torpedoes to Dispatch. The Boston yard’s Steam Engineering Department made slight repairs to the machinery of Ossipee in Fiscal Year 1887-1888. Between January 1884 and April 1890, Ossipee appears as the only ship, other than yard vessels, to receive repairs at Boston.143 Without any official pronouncement, the Boston Navy Yard resumed repair of Navy vessels in 1890.

It is not clear how long the Boston Navy Yard officially remained in a semi-closed status. In 1889, the Secretary of the Navy reported that only the yards at New York, Norfolk and Mare Island were then in operation as ship repair and construction facilities. The others had been closed, except for Portsmouth which was restricted to work on wooden vessels. He further contended that, since the Navy Department had been complying with the 1882 act of Congress respecting termination of work at some of the yards, those yards "must remain closed until the law shall re-open them," and "it rests with Congress to decide whether the steps that have been taken shall be retracted. . . ."144 However, Congress never explicitly and formally called for the resumption of ship repair activities at Boston, and no specific order has been found wherein the Secretary of the Navy or some other official gave instructions for the Boston Navy Yard to once again function as a fully operating shipyard.

From time to time, the Secretary of the Navy and bureau chiefs in Washington urged the reopening of the Boston facility. For example, in 1889, the Chief, Bureau of Construction and Repair, stated of the Boston Navy Yard that his agency "cannot assent to its remaining closed." On several occasions in the early 1890s, the heads of Steam Engineering and Yards and Docks urged that the yard be reactivated. Furthermore, the Bureaus of Steam Engineering, Construction and Repair, and Yards and Docks recommended appropriations for plant improvements at Boston, and Congress did vote funds for several projects.145 Beginning in 1890 the yard made repairs each year on a small number of ships of war. However, if the Navy Department had made a decision to reopen Boston, it did not broadcast that news. For example, an article in the New York Times in 1894 indicates that the only normally functioning yards were those at New York, Norfolk, and Mare Island.146

It may have not have been until 1897 that the Boston Navy Yard was back on fully active status and was so regarded by the Navy. In October of that year, the Boston Sunday Herald reviewed circumstances at

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143 Chief, Bureau of Equipment to Badger, Nov. 1, 1884, 181-19, Box 19, 10/18/84-8/31/85, p. 20; Telegram, Acting Secretary of Navy to Commandant, Sep. 27, 1886, 181-11, Box 11, 11/1/84-2/19/87, p. 162; Annual Report, Secretary of Navy, Dec. 1, 1888, pp. 323, 336.


146 Apr. 17, 1894, p. 9.
the yard as well as reports and rumors that had recently appeared in the press about it. "Secretary [John D.] Long believes the yard should be open" was among the numerous statements made in other newspapers. The Herald noted that the yard was then working on three warships and that "this new work has come to the yard so gradually and so quietly that it has caused no great stir there." And indeed, in 1897 the yard docked five ships of the Navy, whereas the prior year it had docked only one. Another change in 1897 was assignment of a naval constructor to the yard on a permanent basis. Previously, except on occasion, a civilian general foreman had charge of the Construction and Repair Department. Yet another development occurred suggesting a change in the yard in 1897. A board of naval officers recommended the building of a new masonry dry dock at Boston. In the following year Congress appropriated funds for several new docks on the East Coast, and the Secretary of the Navy designated the Boston yard as the site for one of them. Certainly, by late 1897, the Boston Navy had ended that part of its career in which its activities had been limited by virtue of the act of Congress of 1882.

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SOME CONCLUDING OBSERVATIONS

Clearly, the most important happening in the history of the Boston Navy Yard, 1842-1890, was the Civil War. That terrible national trauma marked the pinnacle of the yard’s accomplishments in the nineteenth century. During the war years and in no others did the yard’s capabilities become evident. According to several observers in the 1870s and 1880s, navy yards could be accurately assessed only in the context of war.

Among the opinions solicited from naval officers in a circular letter sent in 1876 by the Chairman, House Committee on Naval Affairs, were views on the possible closing and sale of navy yards. In his reply, Cdr. Alfred T. Mahan, then stationed at the Boston Navy Yard, claimed he lacked the competence necessary for a responsible answer. However, he urged that Congress exercise caution and not thoughtlessly “throw away what has cost much money to establish . . . .” He suggested: "Let all these questions have the light of war and its necessities cast upon them before deciding." For in the final analysis, "navy-yards, like naval vessels, exist only for war. . . ."¹

Perhaps Mahan can be challenged respecting peacetime functions of the Navy, but his essential point remains valid. Because of their existence "only for war" and because war, fortunately, has not been a permanent condition, navy yards have often appeared as inefficient, costly, and perhaps unnecessary. Certainly, in the 1880s, this view prevailed respecting several yards, including that at Boston. However, Mahan’s point is that it takes war to demonstrate the necessity for navy yards. In its final report to Congress, the Navy Yard Commission of 1882-1883 made a similar observation. Writing of times of war, the commissioners stated: "It is only then, when their capacity and resources are strained to the utmost, that the value of a navy-yard can be fully appreciated."²

Having made that point, the commission then recommended the cessation of ship repair and construction at the Boston Navy Yard. Nowhere in the several reports of the commissioners or of Secretary of the Navy William Chandler is there an explanation of why Boston was particularly selected for a partial closing, and not the yard at Brooklyn or that at Norfolk. While their reasoning must remain a matter of conjecture, the problem does afford the occasion for reviewing the Boston Navy Yard in comparison with the other yards.

Throughout the two decades following 1865, only four of the Navy’s eight industrial shore stations can be regarded as fully established and fully functioning shipyards. Both Pensacola and Norfolk had been heavily damaged during the war. In the late 1880s, these two southern yards had not yet been rebuilt, and they continued to labor under serious handicaps. Pensacola was the least productive of all the yards. The Washington Navy Yard steadily increased its manufacture of ordnance and equipment, while its work on ships diminished. Shortly after Appomattox, the yard at Philadelphia had been transferred from its original location to League Island, the new site being occupied in 1869. The repair of ships did not begin at League Island until 1875, and in the 1890s, the yard still lacked a dry dock and other facilities required of a completely operational navy yard. Prior to 1883, the Navy’s bona fide and active shipyards were those at Boston, Portsmouth, Brooklyn, and Mare Island.

An appreciation of the standing of the Boston yard relative to the Navy’s other industrial establishments is provided in findings of the Navy Yard Commission of 1882-1883. The commission prepared several useful tables covering conditions and activities at each of the yards for the period 1867 to 1882,

¹ Mahan to Washington C. Whitthorne, Mar. 21, 1876, in Seager & Maguire, I, p. 448.

including such matters as size, worth, and industrial productivity.\textsuperscript{3}

As of June 30, 1882, the yard at Mare Island possessed the largest site, having 741 acres of upland and more than 4000 of marshlands. Among the East Coast yards, the one with the greatest extent was League Island, with 580 1/2 acres. New York had 179 1/2 acres; Boston 87 1/2; Pensacola 83; Norfolk 82 1/2; Portsmouth 58; and Washington 42. Of the nation's navy yards, the site of the one at New York ranked as greatest in value, having an estimated worth of $7,720,000. Second was Boston, the yard itself being worth $4,737,000. Inclusion of the grounds of the hospital and ordnance depots at Chelsea would add $314,000. Except for Washington ($1,414,000), all the other yards occupied sites of less than $1 million in value.

The Boston Navy Yard had the greatest worth in terms both of its buildings, estimated at $3,388,000, and its machinery, $1,039,000. The yard next behind Boston was New York with reference to worth of buildings, $3,322,000, and Washington with reference to machinery, $933,000.

The Navy Yard Commission of 1882-1883 prepared a table which included for each of the years 1867 to 1882 and for each yard a figure representing the "Estimated value of manufactured articles produced and work performed for the Navy." Elsewhere in the chart, this figure is designated as "earnings." The method used to arrive at these sums appears somewhat arbitrary. Nevertheless, the information has great importance since it indicates the volume of industrial activity, that is the annual monetary worth of work at each yard on the construction, repair, outfitting and other services performed on vessels of the Navy and work in that yard in the manufacturing of products for use of the Navy. These figures do not include the expense of repairs to buildings or machinery or other costs in maintaining or improving the yards.

According to data provided, the average annual value of the productive efforts of the Boston Navy Yard during the years 1867 to 1882 was $1,093,267. That was surpassed only by New York with an average of $1,243,667. Washington was third with $898,273.

\begin{table}[h]
\centering
\begin{tabular}{lcc}
& 1867-1874 & 1874-1882 & 1867-1882 \\
Portsmouth & $965,143 & $348,250 & $655,733 \\
Boston & 1,703,289 & 559,500 & 1,093,267 \\
New York & 1,790,143 & 765,375 & 1,243,667 \\
League Island & 0 & 214,000 & 114,133 \\
Washington & 1,100,857 & 725,125 & 892,733 \\
Norfolk & 566,571 & 409,000 & 502,600 \\
Pensacola & 21,143 & 28,750 & 25,133 \\
Mare Island & 622,571 & 379,250 & 492,800 \\
\end{tabular}
\caption{AVERAGE ANNUAL PRODUCTION, U.S. NAVY YARDS, 1867-1882}
\end{table}


Boston and most of the other yards experienced their greatest industrial activity in the period 1867 to 1874. For those years, the estimated annual "earnings" for each of the yards was: New York $1,790,143; Boston $1,703,289; Washington $1,100,857; Portsmouth $965,142; Mare Island $622,571; Norfolk $566,571; and Pensacola $21,143. (League Island had not yet commenced operations.) Obviously, New York and Boston existed in a category by themselves, and their combined efforts, adding to $3,493,432, easily exceeded the total performance of the other five yards. During two years, 1868-69 and 1871-72, Boston outdistanced New York and accomplished more industrial work than any other navy yard. For Boston, the year of greatest production was 1869-1870, when its industrial output reached an estimated $2,250,000, a figure unexcelled by any other yard from 1867 to 1882, except for New York's $2,616,000 in the same year. Clearly, in the decade after the

\textsuperscript{3} Commission on Navy-Yards, \textit{Report}, Dec. 1, 1883; see particularly Tables No. 2, 3, 4, pp. 90-100.
Civil War, Boston occupied a position as the nation’s second most important navy yard.

Beginning in 1874-1875, industrial activity at all yards contracted, excepting League Island and Pensacola, both somewhat unique. With the completion of the eight sloops of war program legislated in 1874, new naval construction practically ceased. When it resumed in the building of the earliest vessels of the “New Navy,” the work was carried out by private shipyards. As a consequence of these and other developments, there occurred a conspicuous decline in productivity at the navy yards. Perhaps the Boston yard demonstrated the most dramatic decrease. In fiscal year 1880-81, Boston slipped from the second most productive yard to fifteenth. With implementation of the decision in 1883 by the Secretary of the Navy to cease work at certain stations, the importance of the Boston Navy Yard declined even further, especially relative to the three yards that remained in full operation, Brooklyn, Norfolk, and Mare Island.

From the ignominious years of 1884-1890, when it was closed for the repair of ships, the Boston Navy Yard rapidly reemerged in the 1890s as an active industrial facility. Beginning in the first decade of the twentieth century, the yard routinely docked more vessels, hired more men, and engaged in a greater volume of activity than at any previous time, except for the Civil War. In the same fashion as the Civil War, the subsequent high points in the history of the yard occurred during the Spanish-American War, World War I, and World War II. The twentieth-century history of the yard has been covered in a segment of this overall study previously published.

The completion of this volume rounds out a narrative history of the Boston Navy Yard for the entire period 1800 to 1973. There now exists a chronologically comprehensive and, hopefully, reliable and useful account of the past of that naval establishment. However, no one familiar with the subject can assert that little now remains to be done. Several areas requiring further investigation readily come to mind.

In the conduct of our research, Edwin Bearss and I concentrated on documents produced by the yard, the Navy Department, and the federal government. Such sources do not provide an informed understanding of the ongoing relationship between the yard and the greater Boston area, especially that relationship as perceived by the neighboring civilian communities. A competent study of that aspect of the yard requires consulting such sources as local newspapers and other periodicals, records of the cities of Charlestown and Boston and of the Commonwealth of Massachusetts, and statements of community leaders and spokesmen. What was the economic importance of the yard to the surrounding area? How did various groups in that area perceive the yard and its personnel?

In the same fashion, the general history now in existence does not provide much information about the labor force of the Boston Navy Yard, except within the context of the work place. In only a few instances do we know anything about the ethnicity of employees, their family circumstances, and the neighborhoods they lived in. During its history, the Boston Navy Yard employed hundreds of thousands of individuals, and I am not suggesting that it would be possible or even worthwhile to seek information about large numbers of them. But perhaps something could be done with a small group, for example the employees in a single work crew or shop, such as the Paint Shop. From yard payrolls or similar lists, it might be possible to assemble a series of rosters of painters, the rosters separated by thirty years or so. By obtaining data about those individuals from state and federal census reports and other such sources, a more comprehensive and sophisticated understanding of the yard’s workforce would emerge.

Quite probably, it will require specialists, with competence in the various aspects of shipbuilding, to cope with two aspects of the yard’s main activity that need additional consideration. The design and construction of warships altered considerably between 1813, when the yard launched the first vessel it built, Independence, a 74-gun ship-of-the-line, and 1958, when it finished work on its last, Suffolk County, an LST. It would be of value to have a single study, technologically authoritative, that described in detail the construction of three or four vessels built by the Boston Navy Yard during the course of its existence. One of those vessels should be from the period of wooden-hulled sailing ships; another perhaps representative of the screw sloops of the Civil War era; and a third possibly a destroyer of the World War II years. Most of the information needed to write such a history lies outside of the records of the yard and of the Navy.

A similar competence would be useful in making the necessary connections between changes in the yard’s physical plant and the advances in marine architecture and engineering. Yard records give information as to what machines were acquired from time to time, but rarely, and then often in only a general sense, do they tell us what tasks the machines performed.

In making these recommendations for further inquiry into the history of the Boston Navy Yard, it is
not my intention to imply major shortcomings in those parts of the general study written by Edwin Bearss. Nor are they intended as some sort of confession to failings in the sections which I produced. Rather those suggestions should be seen as an effort to encourage further research into the past of a unique institution. The Boston Navy Yard has a peculiar, complex, multi-faceted history, incapable of being encompassed in a general chronological narrative, even one a half-dozen volumes in length.
Appendix

GEORGE HENRY PREBLE AND THE NAVY YARD HISTORIES

In communications sent to navy yard commandants in mid-March 1872, Commo. C. R. P. Rodgers, Chief, Bureau of Yards and Docks, announced a plan of his bureau "for compiling a history of the various Navy Yards. . ." To aid in that undertaking, he asked each commandant for data, "particularly of the early history of the yard or of its site before it became the property of the United States." The bureau chief also sought information about "any interesting traditions, or anecdotes . . . or of distinguished officers" connected with the yard. Rodgers instructed that the yard's civil engineer be directed to "interest himself in obtaining such information. . . as he can from any sources which he may be able to discover." Cdr. Edward P. Lull, then on duty with the Bureau of Yards and Docks, had the charge of "collection of data for the proposed work." Rodgers' first communication on the matter was a letter, dated March 14, to the commandant of the Norfolk Navy Yard. Two days later, using almost identical language, he issued a circular letter for all the yards.

In his letters of mid-March, Rodgers did not explain his motives in seeking a history of the navy yards. Nor is such an explanation found in subsequent writings by the bureau chief or others. Except for the navy yard project, Rodgers himself never undertook the writing of history nor did he promote such activity on the part of others. Although the Yards and Docks head appears to have initiated the navy yard history program, it had or soon obtained the approval of the Navy Department and its Secretary.

Rodgers' circular ultimately produced results, including the first history of the Boston Navy Yard, but there were significant departures from the original scheme. The language of the circular suggests an intention to cover all of the yards in a single work, perhaps a single volume, which Lull would prepare using information provided by the civil engineers of the various yards. However, only one yard seems to have responded in a fashion consistent with the circular. In the month after announcement of the project, the New York Navy Yard sent to Rodgers a "historical sketch," compiled by a party identified as "the Rev. Dr. Carmichael." At some subsequent point, the particulars of Rodgers' original proposal were abandoned. Ultimately, four books appeared, each narrating the history of a separate yard. Moreover, civil engineers had little to do with these yard histories.

Upon receipt of the Yards and Docks circular in March 1872, Charles Steedman, the Boston Navy Yard commandant, entered an endorsement: "Civil Engineer Hastings will be governed by the directions of Rodgers to Steedman, Mar. 16, 1872, National Archives, Record Group 181, Entry 12, Fair Copies of Letters, Telegrams and Circulars Received from the Navy Department (181-12), Box 2, 12/13/71-5/20/72; Rodgers to C.H. Davis, Mar. 14, 1872, National Archives, Record Group 71, Records of the Bureau of Yards and Docks, 1820-1946, Fair Copies of Letters Sent . . . to Commandants, 1842-85, Entry 1 (71-1), vol. 36, p. 45. In the letter to Norfolk, Rodgers included a request for information concerning the yard's "occupation by the British prior to the War of the Revolution and by the State of Virginia during and subsequent to that period . . . ."

— Circular, Rodgers to Steedman, Mar. 16, 1872, National Archives, Record Group 181, Entry 12, Fair Copies of Letters, Telegrams and Circulars Received from the Navy Department (181-12), Box 2, 12/13/71-5/20/72; Rodgers to C.H. Davis, Mar. 14, 1872, National Archives, Record Group 71, Records of the Bureau of Yards and Docks, 1820-1946, Fair Copies of Letters Sent . . . to Commandants, 1842-85, Entry 1 (71-1), vol. 36, p. 45. In the letter to Norfolk, Rodgers included a request for information concerning the yard's "occupation by the British prior to the War of the Revolution and by the State of Virginia during and subsequent to that period . . . ."

2 For brief biographies of Rodgers, see Charles O. Paullin, "Christopher Raymond Perry Rodgers," DAB, vol. VIII, pp. 72-73; Reynolds, pp. 279-80. It may be of some importance that Rodgers was a member of a family with close ties with the U.S. Navy. His father, an uncle, several cousins, and two brothers were all commissioned officers in the Navy. Included in that clan was John Rodgers (1812-1882), who served as commandant of the Boston Navy Yard from 1866 to 1869.

3 Rodgers to M. Smith, Apr. 18, 1872, 71-1, vol. 36, p. 113.
this order." How Hastings responded to the directives from Rodgers and Steedman is not known, except that at Boston, as elsewhere, the project ended in other hands.

Among the officers stationed at Boston in 1872 was one who had already established himself as a writer and historian. By that time, George Henry Preble had produced approximately eight book-length works, including several on aspects of the history of the Navy. In the 1870s, there were few professional historians in the United States, and most historical writing was done by men such as Preble. Between 1860 and 1874, Preble had written two books on the history and genealogy of his family. His more important publications included *Our Flag: Origin and Progress of the Flag of the United States.* . . ., (1872); *The First Cruise of the United States Frigate Essex* (1870); and *A Complete History of the Vessels of the United States Navy from 1797 to 1874* (1874). Apparently he saw himself and was regarded by others as a man of letters, being elected to positions in several literary and historical societies, including resident membership (1866) and life membership (1869), New England Historical and Genealogical Society; corresponding membership (1866), Maine Historical Society; and corresponding membership (1868), State Historical Society of Wisconsin.4

Because of his previous writing endeavors, Preble was more qualified than Civil Engineer Hastings to undertake a history of the Boston Navy Yard. He possessed another advantage in that, since becoming a midshipman in 1835, he had frequently been assigned to the Boston facility or to ships at that yard. For seven months beginning in October 1842, he was attached to *Ohio*, then under repair at the yard. In the decade prior to the Civil War, Preble was at the yard from December 1852 to March 1853; briefly in August 1856; and from October 1857 to September 1859. During the last mentioned tour, he served as librarian and curator of the yard's Naval Library and Institute and was a principal in the ceremonies accompanying the launching of *Harford* in 1858. In the fall of 1859, he joined *Narragansett* as executive officer during a two-year cruise as a unit in the Pacific Squadron. Apparently, his family continued to occupy quarters at the Boston yard, which is listed as the place of birth of his fourth child in July 1860. After the war, Preble filled important offices in the administration of the Boston yard and station. In October 1865, he reported as General Inspector of Stores. From that position he advanced to the post of equipment officer. Back at sea in the late 1860s, he returned to Boston in January 1871 as commanding officer of the rendezvous. In November 1873, Preble, now a commodore, went on "special duty."

The new assignment consisted of writing histories of the Boston and Portsmouth navy yards. In the preface to his study of the Boston facility, the author states that the assignment had been made upon the solicitation of Rodgers, still chief, Bureau of Yards and Docks, and with Preble's consent. At some time prior to November 11, 1873, Preble personally met with Rodgers concerning the navy yard history program. On November 11, Preble sent a letter to the bureau chief reporting for duty. In his response, Rodgers stated that "the Chief of the Bureau having communicated to you instructions verbally the Bureau now only has to desire you will commence preparations for writing the history of the Navy yards at Boston and Portsmouth." He further noted that the Navy Department intended to assign Preble "wholly to this duty, after the arrival of Capt. [C.H.B.] Caldwell from Brazil." On November 26, having been relieved as commander of the rendezvous by Caldwell, Preble formally went on special duty status.5

As instructed by the Bureau of Yards and Docks and utilizing funds provided by that agency, the Boston yard commandant, now Edward Nichols, supplied Preble with an office, stationary, furniture, and the services of a writer.6 Preble continued on special duty at Boston until April 1874, when, retaining the same

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5 Rodgers to Preble, Nov. 13, 1873, 71-1, vol. 38, p. 480.

6 Rodgers to Preble, Nov. 19, 1873; Rodgers to Nichols, Nov. 11, Nov. 19, 1873, 71-1, vol. 38, pp. 479-80, 494, 495; Rodgers to Nichols, Jan. 22, Jan. 26, 1874, 71-1, vol. 39, pp. 144, 151; Preble to Rodgers, Nov. 17, 1873, Record Group 71, Records of the Bureau of Yards and Docks, 1820-1946, Letters Received, 1842-85.
status, he reported to the Navy Department in Washington. Probably, his assignment to Washington enabled him to use Department sources in his histories. In May 1874, before he had completed his writing projects, the Navy ordered Preble to the post of commandant of the navy yard at Philadelphia. In early September 1874, shortly before Rodgers left the Bureau of Yards and Docks, he asked Preble when the bureau could have "the history of the Boston Navy Yard for publication." Preble's response is unknown. On several occasions in the first two months of 1875, Commandant Preble sought to obtain from the bureau certain documents and information needed for his history of the Boston yard, namely particulars about the lengthening of the dry dock in 1857 and copies of entries on particular dates in the yard journal. In June 1875, a year after becoming commandant at Philadelphia, Preble finished his work on the Boston yard.

Administering the Philadelphia Navy Yard proved to be Preble's final significant assignment on shore. In March 1876, he returned to "special duty" status, now being attached to the yard at Portsmouth. Promoted to rear admiral in September 1876, he went to sea for the last time in March 1877, as commander of the South Pacific Squadron. At the end of that cruise in April 1878, Preble retired. He established a home in the City of Boston and resided there until his death in 1885.

Two other officers contributed volumes in the navy yard history program. Cdr. Edward P. Lull, connected to the project from its origins, produced the first finished work in the series, History of the United States Navy Yard at Gosport, Virginia, published by the Government Printing Office in 1874. The title page indicates that the volume was prepared for the Bureau of Yards and Docks, its chief being Rear-Admiral Rodgers. Accordingly, it appears Lull completed his sixty-four-page study prior to Rodgers' departure from the bureau in late September 1874. Nowhere in his preface or elsewhere in the book does the author describe the origins of the project or the circumstances by which he came to undertake writing the history of the Norfolk yard. The preface mainly relates the difficulties the author encountered in obtaining reliable information. In that connection, the author extended his thanks to "Doctor Kennedy, of the civil engineer's office at Gosport, for his labor in collecting information, though scarcely any of it could be used." A decade and a half passed before publication of a second navy yard history. In 1890, the GPO printed Henry B. Hibben's, Navy-Yard, Washington: History from Organization, 1799, to Present Date. Hibben, a Navy chaplain, completed his manuscript in October 1889 and turned it over to the commandant of the Washington yard. It appears he prepared his account under orders from the yard commandant and with approval of the Secretary of the Navy. Hibben made no acknowledgement of any involvement by the Bureau of Yards and Docks.

In 1892, Preble's History of the United States Navy Yard at Portsmouth, N.H. appeared. According to the title page, the work was "Prepared by order of the Hon. Secretary of the Navy, Under the Direction of the Bureau of Yards and Docks," but no further information is given about the genesis or the history of the study. Preble's volume on the Portsmouth yard is similar in format to his work on the Boston facility. It is not organized into chapters, but proceeds more or less in a year-by-year fashion. The text proper fills 120 pages, after which there is a hundred-page-long appendix, consisting of a "Register of the Principal Officers" and a copy of an 1867 Navy Department report on Portsmouth, which includes copies of deeds and other documents pertinent to the early history of the area.

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Commandant, Boston, 1842-1885, Entry 5 (71-5), Box 32, 10/1/73-11/30/73, p. 61; Nichols to Rodgers, Dec. 3, 1873, 71-5, Box 32, 12/1/73-1/31/74, p. 4.

7 Rodgers to Preble, Sep. 7, 1874, 71-1, vol. 40, p. 135; Howell to Preble, Jan. 8, Jan. 12, Feb. 9, 1875, 71-1, vol. 40, pp. 402, 411, 478. The bureau informed Preble that it could not locate that part of the yard journal he requested and that "it presumes that if the books in question were ever sent to the Department they must have been destroyed by a fire which occurred in the building about a year ago or they possibly may have been sold as waste paper."


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This volume, like the two others, was published by the Government Printing Office. Publication of works by that federal agency required the approval of Congress. Obtaining approval entailed a special resolution which contained authorization to produce a specific number of copies. The House and Senate Committees on Printing then considered the resolution and made recommendations to the full chamber. For example, in March 1892, the Senate Committee recommended the printing and binding of 500 copies of Preble’s volume on the Portsmouth yard.10

Preble’s study of the Boston Navy Yard had a fate different from the volumes on the facilities at Portsmouth, Gosport, and Washington. An abridged version, "The Navy and the Charlestown Navy Yard," appeared in 1881 in a history of the city of Boston. However, no action was taken on the full manuscript for twenty-seven years after its completion. In 1902, a resolution for its publication was introduced in Congress. The House Committee on Printing noted that the manuscript "is now in the hands of the Bureau of Yards and Docks . . . and is ready to be printed." That bureau was then headed by Commo. Norman H. Farquhar, who, according to the House committee, stated of the manuscript "that in his opinion it is important that it be published as a public document." The members of the committee concurred and recommended to the Committee of the Whole House that the resolution for publication be passed.11 However, somewhere in the subsequent legislative process, the resolution was either defeated or shelved, and, except for the 1881 abridgement, Preble’s history of the Boston Navy Yard remains unpublished.

10 Senate Committee on Printing, Report, Mar. 23, 1892, Senate Report No. 430, 52-1, USSS No. 2912.

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Record Group 45, Naval Records Collection of the Office of Naval Records and Library. Among the sections of this group that have value for this study are: Records of the Secretary of the Navy (see especially Letters from Commandants of Navy Yards and Shore Stations, 1848-86, Entry 34); Records of Naval Shore Establishments, 1814-1911 (a small collection that includes correspondence, orders, logs, and miscellaneous records of the Boston Navy Yard); Board of Navy Commissioners, 1815-1842, Entries 212 and 222; Captains' Letters (Microcopy M-125).

Record Group 71, Records of the Bureau of Yards and Docks, 1820-1946. Especially useful are Letters Sent, 1842-1895, Fair Copies of Letters Sent . . . to Commandants, 1842-85, Entry 1; Letters Received, 1842-85, Commandant, Boston, 1842-1885, Entry 5.

Record Group 127, Records of the United States Marine Corps.

II. PRIMARY SOURCES, UNPUBLISHED, NATIONAL ARCHIVES--NEW ENGLAND REGION, WALTHAM, MASSACHUSETTS

Record Group 181, Records of Naval Districts and Shore Establishments. That section of RG 181 consisting of Boston Navy Yard and First Naval District material is housed in the National Archives-New England Region, Waltham, Massachusetts. For this report, the documents used are from the following subdivisions:

- Miscellaneous Letters Received, 1823-1908 (181-5)
- Letters and Telegrams Received from Secretary of the Navy, 1827-1908 (181-11)
- Fair Copies of Letters, Telegrams, and Circulars Received from the Navy Department (Secretary and Bureaus), 1864-1901 (181-12)
- Letters and Telegrams Received from Bureau of Equipment, 1862-1908 (181-19)
- Letters and Telegrams Received from Bureau of Navigation, 1863-1908 (181-21)
- Letters and Telegrams Received from Bureau of Ordnance and Bureau of Steam Engineering, 1863-70 (181-24)
- Letters and Telegrams Received from Commanders, 1855-1908 (181-32)
- Letters Received from Yard Officials and Heads of Departments, 1855-1908 (181-33)
- Commandant's Personal File, 1857-1908 (181-38)
Orders Issued by Commandant, 1872-1913 (181-45)

General Orders of Navy Department, 1848-1904 (181-47)

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