

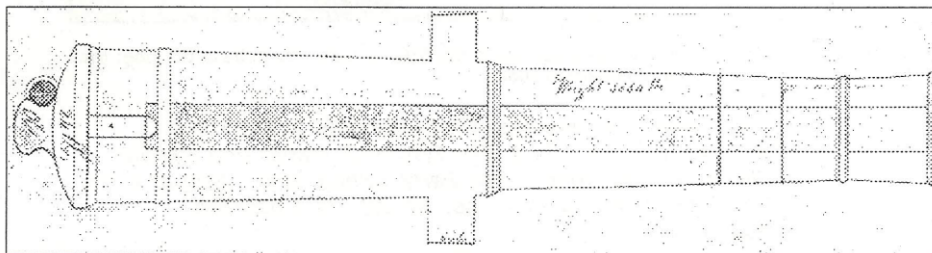


The Armament of USS Constitution, 18th - 20th Century

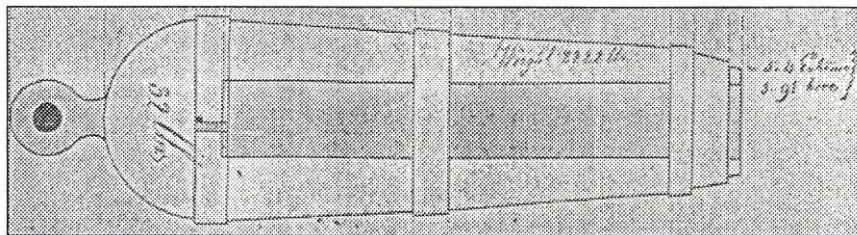
Background history of USS Constitution's guns; 18th and 19th Centuries:

The earliest armament aboard USS *Constitution*, after her successful launch October 21, 1797, consisted of thirty 24-pound guns from Furnace Hope in Rhode Island, sixteen borrowed 18-pound guns, and fourteen 12-pound guns. Midshipman John Roche, Jr., on *Constitution's* first cruise, wrote to his father on June 19, 1798, "...A lighter has gone down to the castle [Fort Independence on Castle Island, Boston Harbor] this morning to get our upper guns..."¹ The Fort Independence guns may have either been French, as is stated in the records of the Newport Historical Society, or English, with the cipher "GR" for George Rex II or III, left behind at the Fort when the British evacuated Boston on March 17, 1775.

By 1808, *Constitution* had a new set of guns on board (see illustrations below, courtesy of the National Archives). Her complement consisted of twenty 32-pound carronades, made by Henry Foxall, and thirty 24-pound long guns, cast at the Cecil Iron Works in Maryland. The long guns were fitted with cannon (flint) locks.



Plan of model 1807 24-pound cast at the Cecil Iron Works, Maryland; weight is marked at 5554 lbs & the trunnion is marked as being 6 inches in diameter. For the plan, the breech ring has been rotated 90 degrees for viewing; it would have been in line with the touch hole. Courtesy, National Archives & Records Administration/Tyrone G. Martin research.

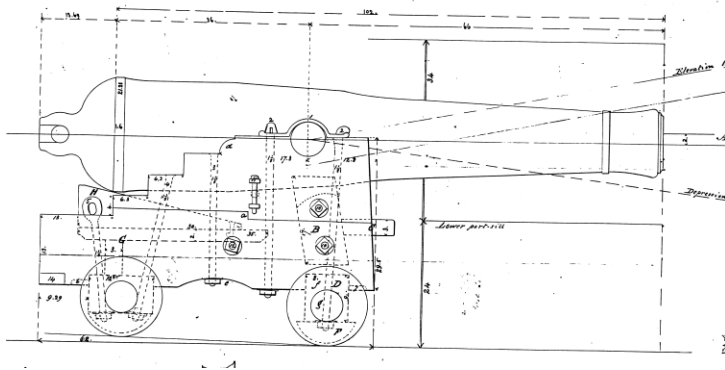


Plan of model 1808 32-pound carronade by Henry Foxhall. Note that the cascabel has been bored for an elevating screw. Weight is marked at 2222 lbs. Courtesy, National Archives & Records Administration/Tyrone G. Martin research.

¹ Christopher McKee, ed. "Constitution in the Quasi-War with France: The Letters of John Roche, Jr., 1798-1801". *American Neptune*, vol. XXVII, No. 2, April, 1967.

For the War of 1812, *Constitution* had slightly different gun configurations, at least between her first battle, with HMS *Guerriere* on August 19, 1812, and her last battle, with HMS *Cyane* and HMS *Levant* on February 20, 1815. As early as July, 1815, her battle armament was beginning to be removed, with several 24-pound long guns shifted to USS *Independence*. By the time *Constitution* was re-commissioned and being outfitted in 1820, her armament consisted of some of her 1808 Cecil Iron Works cannon and 1816 Cecil Iron Works 24-pound long guns.

For the rest of the 19th century, USS *Constitution*'s guns would be changed and up-graded as the years went on. See plan below for her 1858 armament – there were two 32-pound guns on the spar deck, and twenty-two 32-pound guns for the gun deck.



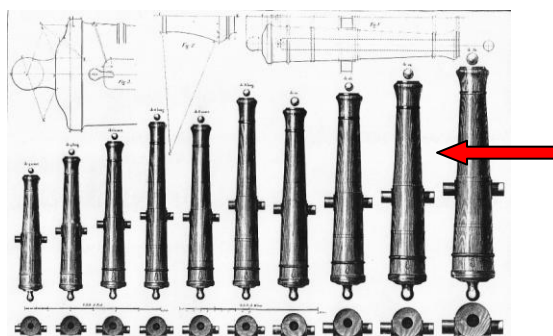
Plan# 753A 32-pound gun for

Constitution spar and gun decks, 1858 – National Archives & Records Administration

In her last years of sailing as a training ship, *Constitution* carried as few as 20 guns aboard; “*Constitution* left New York on the 8th and was in Norfolk three days later... While still there on 15 November [1879], she was again rated as a ‘ship, second class, 20 guns.’”²

Twentieth Century Armament aboard USS Constitution:

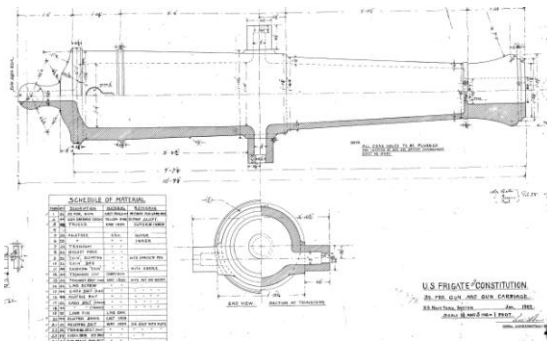
The 1906-07 restoration of USS *Constitution* was more "cosmetic" than structural. The receiving ship "barn" was removed, masts and yards were installed, the hull re-configured to her 1812 look with the open waist, and 54 replica guns cast and installed on carriages. The guns for both decks were identical in pattern, yet the guns cast for the spar (upper) deck were made 8 inches longer than those for the gun deck (see plans 14933 & 14939 below). The design may have been taken from Louis d'Tousard's *American Artillerists Companion* (1809), which was based upon a 1786 gun design for the French Royal Navy. See illustration below for the 24-pound gun, replicated for the 1906-07 *Constitution* restoration.



Tousard's *American Artillerists Companion*...1809

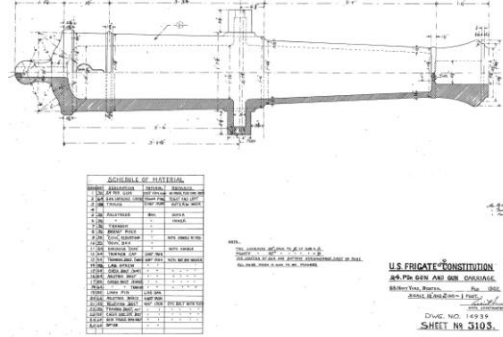
² Tyrone G. Martin, *A Most Fortunate Ship*. (Annapolis, MD: Naval Institute Press, 1997), 331.

Portion of Plan# 14933



“32-pound Gun and Gun Carriage” (1907)
Plans, National Archives & Records Administration

Portion of Plan# 14939



“24-pound Gun and Gun Carriage” (1907)

The 1906 guns were removed from the ship in April, 1927, and contrary to popular belief, they weren't all turned into bollards for the Charlestown Navy Yard. In fact, more than half of the complement of 54 guns were either given to veterans groups, ROTC units, etc., or were sold as part of the fundraising efforts for the 1927-31 restoration. To date, 33 of the 1906 guns have been located around the country, with the furthest away from Boston finding a home in Seattle, Washington. Two from the Charlestown Navy Yard were transferred in the summer of 2008 to the United States Naval Academy in Annapolis where they are displayed at the Smedberg Gate of the Navy-Marine Corps Memorial Stadium. According to the caption of an April 6, 1942, *Life* Magazine photograph, at least one 1906 gun was sold for \$50 as scrap metal during a drive for World War II. It is not known how many of the 1906 guns were destroyed in this fashion.

The guns aboard USS Constitution today:

The present guns aboard USS *Constitution* date from the 1927-31 restoration. They are inaccurate replicas, purporting to be like the ship's War of 1812 armament (refer again to information above), and were never intended to be fired. However, in early 1976, two “American” 24-pound bow guns were retro-fitted at the Naval Ordnance Station, Louisville, Kentucky with Mk11 salute mechanisms sleeved through their breech ends. It is these two guns that are used for daily colors on the ship and for firing the ceremonial 21-gun salute on the 4th of July and other occasions.

The following reference information is from the "U.S. Frigate CONSTITUTION - Research Memorandum", dated c. October/November, 1931 and explains the research rationale behind the style of guns that were replicated for the ship:

In restoring the battery of the Constitution in the 1927-1931 restoration it was determined, after considerable research, to follow quite closely the battery found on board the Frigate United States...in the year 1835, as shown in the Inspection Return of Ordnance for the Frigate United States, at the Navy Yard, New York, dated September 10, 1835.

*The Constitution as now restored has 52 guns – [1931]
30 on the Gun deck,
22 on the Spar deck (forecastle and quarter deck), as follows –*

- 18, 24-pdr. long guns, British type, Gun deck.*
- 12, 24-pdr. short guns, American type, Gun deck.*
- 16, 32-pdr. Carronades on Quarter deck.*
- 4, 32-pdr. Carronades on Forecastle.*

2, 24-pdr. (18-pdrs. bored out as 24-pdrs) as bow chasers, located on Forecastle.

As shown above, the Main or Gun deck battery of the *Constitution*, 1931, consists of 30, 24-pdr guns. Eighteen of them are long 24-pounder replicas of British guns, marked with a crown and "G.R." as a portion of her original gun deck battery was purchased in England, and 12, 24-pounder short, replicas of American type and manufacture. [NOTE: See comments above re source of English guns aboard USSC for her first cruises – they were NOT purchased in England.]

The 18 British long 24-pounders have been located on the gun deck in the main body of the ship, 9 on starboard side and 9 on port.

The 12, 24-pounder short guns, American manufacture, have been located on Gun deck at the two ends of the ship, 6 forward and 6 aft, making a total of 30, 24-pdr. guns carried on the gun deck abaft the bridle port forward, starboard and port sides....

The design of the 32-pdr. carronade guns and carriages was drawn largely from the cuts and dimensions specified in the British book, "Naval Pocket Gunner," dated 1814, - with the following changes:

A. Trunnions were substituted in lieu of yokes on all carronades.

Reason: Trunnions were used in carronades prior to yokes and were considered stronger and more serviceable.

Note: - Carronade gun at Marblehead (Crowinshield Home) is fitted with Trunnion and quoin.

B. Omission of elevating screw and substitution of elevating block (Quoin).

Reason: The quoin would permit a greater elevation and depression of muzzle, also increase speed in operating the gun.

The crown and 'G.R.' appearing on the British type of long guns (24-pounders) on the gun deck, are reproductions of the monogram appearing on the British guns on exhibition at Soldier's Monument Ground, near Harvard Square, Cambridge, Mass...³

³“On Cambridge Common where General Washington took command of the Continental Army are today three cannon with a stone marker that states

These Cannon/Were Abandoned/At/Fort Independence/(Castle William)/By The/
British Forces/When They Evacuated/The/City of Boston/March 17, 1776

Two of the cannon are 10 feet long and have a bore of 6 ½ inches...One bears the broad arrow of the British government and in script the initials GR on which is superimposed a 2 for George II...

There is no conclusive evidence that the guns came from Castle Island [originally "Castle William"]. One writer suggests that they came with Col. Henry Knox from Ticonderoga and were left in 'the forts surrounding Boston.'...We do know that in 1848 the acting quartermaster general of the state militia informed the governor that there were 37 cannon at the arsenal at Cambridge that were to be sold. 'Some of these guns bear the British royal cipher and came from Fort Independence.'...The superintendent of the arsenal selected three from the 'whole stock'...The superintendent mounted the three...on carriages on the arsenal grounds...

On March 31, 1875, the legislature resolved that 'three old British cannon and their carriages now in the state arsenal yard' be transferred to the city of Cambridge, and that the city 'shall furnish a suitable platform thereon the Cambridge common, the first camp-ground of the Revolution...'” quoted from William J. Reid, *Castle Island and Fort Independence*. Boston: Trustees of the Public Library of the City of Boston, 1995.

Information concerning the size and kind of breechings, side training falls and tail blocks and falls for operating Spar and Gun deck battery was taken from "Naval Pocket Gunner."

Additional sources of information:

- a. *British gun at Bath, Maine. This gun was removed from the British Sloop of War "Somerset, wrecked on Peaked Hill Bar, Mass., in 1779.*
- b. *Tousard's "[American] Artillerist[s Companion]," (2 vols.), from Boston Public Library [NOTE: Tousard's is actually 3 volumes – 1 & 2 are the text, and vol. 3 contains illustrations – a complete set is located at Boston Athenaeum]*
- c. *"The Naval Pocket Gunner, or Compendium of Information relating to Sea Service Gunnery, Including Proportion of Guns and Ordnance Stores for every class of ships and Vessels in the British Navy, compiled from the most correct documents;" by Messrs. Atkinson and Clarke of the Office of Ordnance, London. Printed for Robert Scholey, 46 Paliastic Row, 1814. The dimensions given in this book check very closely with those of the guns carried by the frigate United States.*
- d. ***The Frigate Constitution*** by Ira Hollis
The War of 1812 by Theodore Roosevelt
The Naval Monument by [Abel] Bowen
The Arlington Edition, Terrors of the Sea, by an Old Salt, 1840

Examination of guns at:

Philadelphia, Pa.

Marblehead, Mass.

Brunswick, Me.

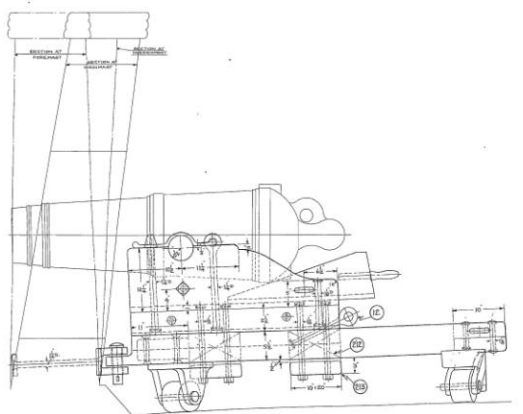
32-Pdr. Carronades guns as manufactured by Hunt-Spiller & Co., Dorchester, Mass.

Sketch of carronade gun belong[ing] to Mr. Nickerson of Chatham, Mass.

Examination of 1812 guns at Atheneam [sic], Portsmouth, NH.

Sea Life in Nelson's Time by John Masefield⁴

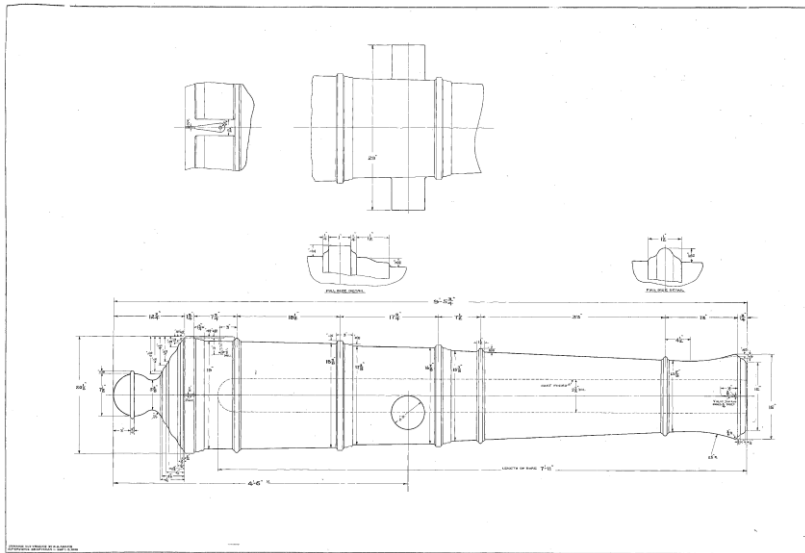
Portion of Plan# 22364, 32-pound Carronade – 1927 *Constitution* Restoration



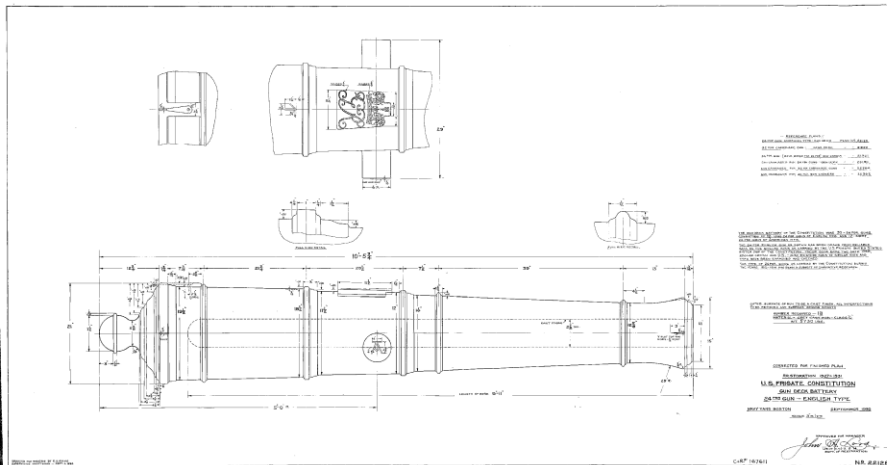
GENERAL ARRANGEMENT
SCALE 1/2" = 1'-0"

⁴ RADM L.M. Nulton, Commandant, Boston, "U.S. Frigate CONSTITUTION (IX21) – Research". (Boston: U.S. Navy Yard, 1931), 35-37.

Portion of Plan# 22129, American 24-pound long gun, 1927 *Constitution* Restoration



Portion of Plan# 22128, English 24-pound long gun, 1927 *Constitution* Restoration



Plans, Naval History and Heritage Command Detachment Boston

The 2009 armament of USS Constitution carries the following of the 1927-31 battery:

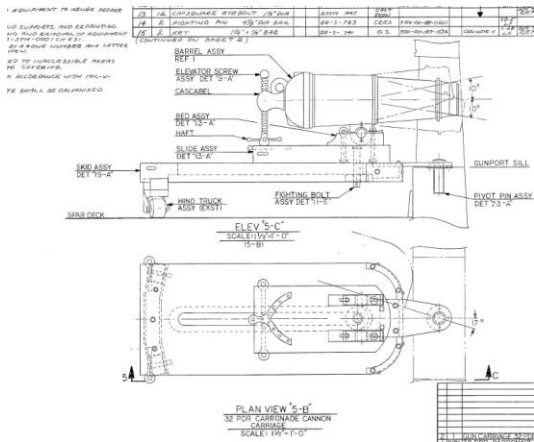
Spar Deck: Three 32-pound carronades, forecastle (one port gun removed for generator during *Constitution's* annual underway demonstrations)

Two 24-pound bow chasers, forecastle

Sixteen 32-pound carronades, quarter deck. Two were re-cast in the late 1980s with elevating screws, as opposed to wooden quoins and pivots and yokes as opposed to trunnions – see illustration below. These two carronades, while not exactly replicating the 1812 armament, are more accurate version of the carronades than those cast in 1927. The ship's log, May 31, 1811 carries the remark that the armorers were repairing the elevating screws for the carronades. The "4th Auditor's

Settled Accounts” for USS *Constitution*, during the War of 1812, includes the following list of repairs: “1812/Nov. 30/15 Eleb Faxon’s for Blacksmith’s Work [altering 24 elevating screws...]⁵”

Total Guns on Spar Deck: 21



Portion of Plan# 6184310, “USS *Constitution*

1812 Era 32 Pounder Carronade Cannon”, 1985 – Naval History and Heritage Command Detachment Boston

Gun Deck: Eighteen 24-pound English long guns ("GR II" cipher)

Nine 24-pound American "short" guns

Total Guns on Gun Deck: 27

TOTAL COMPLEMENT = 48 guns

- NOTE:** A) In 1997, two of USS *Constitution*’s American 24s were loaned to the Naval History & Heritage Command and are presently displayed in the National Museum of the United States Navy, Washington, DC.
 B) One American 24, on a section of portable gun deck, is used for educational programs in the Charlestown Navy Yard and at off-site locations.
 C) One carronade is usually removed from the spar deck, so that the ship can accommodate its generator; the carronade is currently stored by the Naval History & Heritage Command Detachment in the Charlestown Navy Yard.

Total armament, including the guns noted above = 52, the complement cast for USS *Constitution* in the 1927-1931 restoration.

**M.M. Desy, Historian, Naval History and Heritage Command Detachment Boston
 Up-dated, January, 2017**

⁵ 4th Auditor’s Settled Accounts, USS *Constitution*. National Archives & Records Administration, RG217.