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Joshua Humphreys, Philadelphia Ship Designer & Builder

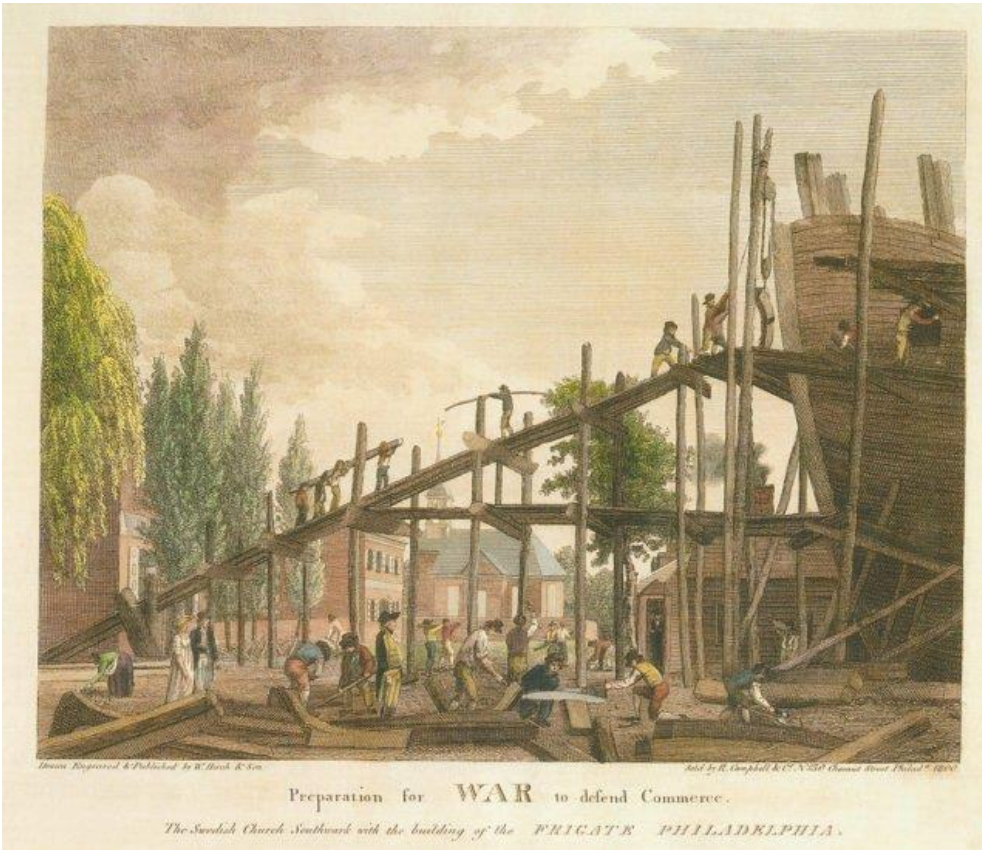


Photo of Phila. shipyard illustration.

Joshua Humphreys, a ship designer and builder in Philadelphia, played a key role in the design and construction of naval frigates during the years 1775 through 1804. These ships helped the United States to wartime victories over France, the Barbary States, and Britain.

Humphreys was born in Haverford, PA in 1751. At age 14 he served an apprenticeship with James Penrose, a shipbuilder in Philadelphia. In 1774 Humphreys partnered with his cousin, John Wharton in a shipbuilding business.

In 1775, prior to the start of the Revolutionary War, the Continental Congress acquired merchant ships for conversion into warships. The Continental Congress voted in December 1775 to authorize the construction of 13 new frigates. A definition note, a warship rated to carry between 20 and 44 guns was classified as a frigate and a warship rated for 60 – 120 guns was classified as a “ship of the line”, or battleship. Construction of 4 of these 13 frigates was assigned to Pennsylvania. The Wharton and Humphreys Shipyard received the contract to build one of the 4 Pennsylvania frigates.

The Wharton and Humphreys Shipyard launched their frigate, the *USS Randolph* in July 1776. This 32-gun frigate served until March 1778 when it was lost during an engagement with a British 64-gun ship-of-the-line. Only 4 crew members survived this battle.

At the end of the Revolutionary War in 1783, the Continental Congress disbanded the Navy due to wartime financial debts and the perception of no current international threats. After the war, Britain denied U.S.

merchant ships access to British ports. When U.S. merchant ships then entered the Mediterranean Sea in search of accessible ports, they were frequently pirated by ships of the Barbary States (Algiers, Tunis, Tripoli, Morocco). Since the Continental Congress was unable to provide protection to the merchant vessels, it decided to pay tribute to the Barbary States, to guarantee the safety of the merchant vessels. These payments kept the new nation in debt, but the growth of the economy depended on overseas trade.

In March 1794, Congress authorized construction of 6 new frigates to protect merchant shipping, and to challenge the Barbary pirates. Congress included a clause to discontinue the shipbuilding effort if a treaty was achieved with the Barbary pirates. At that time Philadelphia was the location of the Federal capital. The Secretary of War, Henry Knox, was given the job of organizing and managing the shipbuilding effort. Since he did not have any maritime experience, he started by meeting with the shipbuilders in Philadelphia.

Knox selected Joshua Humphreys as the frigate designer, with assistance from Josiah Fox, an immigrant from Britain who had apprenticed in a British naval shipyard. Humphreys design called for building frigates that were superior to conventional British frigates. The U.S. frigates were designed to be larger and more heavily armed than British frigates. The ships were not, however, intended to challenge a British ship-of-the-line.

President Washington decided to build the 6 frigates in 6 different ports, rather than build all of them in Philadelphia. The six ports were Philadelphia, Portsmouth, NH, New York, Boston, Baltimore, and Norfolk, VA. Humphreys built the *USS United States* in his shipyard. Humphreys specified Southern live oak for the structural members of the ships. It took 6 months for crews to harvest and deliver the required timber from islands off the coast of Georgia. During that period, the shipyards were prepared for keel-laying.

In August 1795, the United States negotiated the Jay Treaty with Britain, which normalized trade relations between the two countries. France was at war with Britain at that time, and considered this treaty as a hostile act on the part of the United States. France broke off all diplomatic relations with the U.S. and its ships started to seize U.S. merchant vessels on the high seas. This provided another incentive to build the 6 frigates. However, in February 1796 the U.S. negotiated a new treaty with the Barbary States, requiring large payments to the pirates. As a result of the clause in the 1794 authorization, 3 of the 6 frigates were cancelled when the Barbary States treaty was negotiated. The 3 ships that were closest to completion were continued: the *USS United States* in Philadelphia, the *USS Constitution* in Boston and the *USS Constellation* in Baltimore.

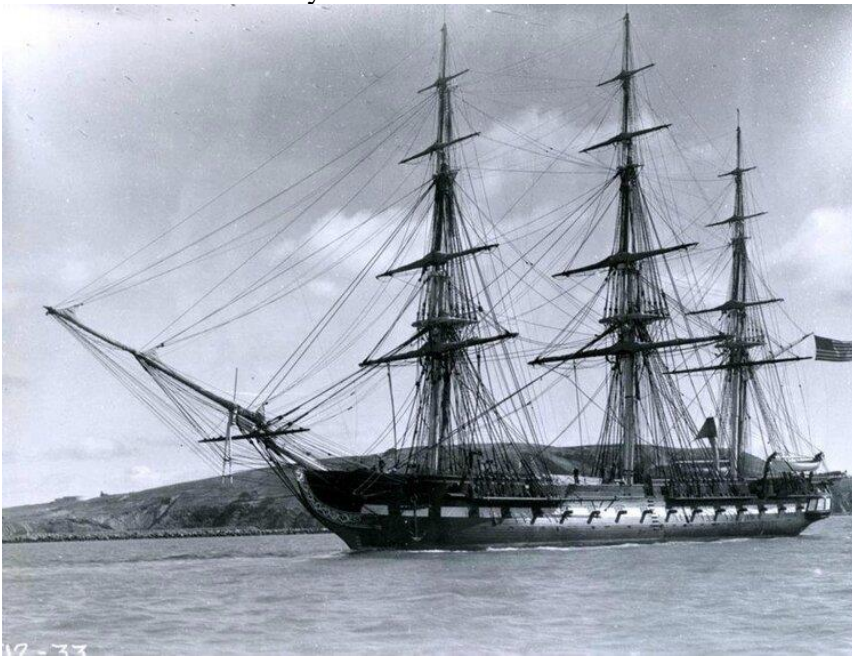
The *USS United States* was launched in Philadelphia on May 10, 1797. It was the largest ship ever launched in the U.S. The ship had a length of 175 ft., a beam of 43 ft., a draft of 23 feet (19 feet at launch), and displacement of 2,200 tons. The ship struck the bottom of the river during launch, damaging the keel and rudder. Repairs were completed by the end of August. Due to the launching problems, Henry Knox asked Humphreys to go to the Baltimore to assist with the launch of the *USS Constellation*. This launch in September 1797 was successful. The *USS Constitution* was launched in Boston in October 1797.

In June 1798, President Adams appointed Benjamin Stoddert as the first Secretary of the Navy. Stoddert appointed Joshua Humphreys as the Chief Naval Constructor. Construction of the 3 postponed frigates resumed: The *USS Congress* in Portsmouth, NH, the *USS President* in New York, and the *USS Chesapeake* in Norfolk, VA.



The undeclared “Quasi War” with France lasted from February 1799 until October 1800. The *USS United States*, the *USS Constitution*, and the *USS Constellation* deployed to the Caribbean area and engaged French frigates that were disrupting American merchant ship activity. The French lost two frigates in these battles and eventually agreed to a negotiated end to the war in October 1800. The ships of the navy were then consolidated at the Washington Navy Yard during this pause in foreign conflict.

In 1801, President Jefferson refused to continue paying tributes to the Barbary States. The Navy sent squadrons that included the *USS Constitution* and *USS Constellation* into the Mediterranean to protect the merchant vessels. In 1804 President Jefferson decided to increase the Naval presence in the Mediterranean. The Secretary of the Navy sent Joshua Humphreys to the Washington Navy Yard to help in placing the *USS President* and the *USS Congress* back into service after sitting in “mothballs” since 1801. Humphreys brought skilled workers with him since there was a shortage of skilled workers at the Washington Navy Yard. The conflict with the Barbary States lasted until 1805.



During the War of 1812, the frigates authorized in 1794 and designed mainly by Joshua Humphreys, were very successful against the British frigates. The *USS Constitution* defeated the *HMS Guerriere* and the *HMS Java*, and the *USS United States* defeated the *HMS Macedonian*. After these losses, the British Admiralty ordered their frigates to avoid one-on-one engagements with the American frigates. The design decisions of 1794 were confirmed by these successes against the British navy.

Joshua Humphreys passed away in 1838 at age 86.

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