



Polk, 1845

James K. Polk was the eleventh president of the United States.

TYPE/RIG/CLASS: Three-masted barquentines (except *McLane*, *Polk*, and *Walker*); other alterations may have been made.

BUILDER: Cyrus Alger, Boston, Massachusetts

DATES OF SERVICE: 1845-1847

DISPOSITION: Sold December 1847; became a lightship

DISPLACEMENT: 343-409 tons

LENGTH: 160 feet

BEAM: 24 feet

DRAFT: 9 feet, 3 inches to 9 feet, 9 inches

PROPULSION: Hunter's wheel, altered to side wheel

MACHINERY: 2 high-pressure horizontal, 24-inch diameter x 36-inch stroke

COMPLEMENT: 58 (*Legare*)

ARMAMENT: 4 x 32-pounders

History:

In the 1830s and 1840s the sea services were searching for an alternative to the cumbersome and highly exposed side paddle wheels. John Ericsson and Richard Loper had patented screw propellers, and Navy Lieutenant William Hunter proposed horizontally mounted paddle wheels, which rotated merry-go-round style within the hull, below the waterline. Apertures in the hull sides allowed the paddles to act on the surrounding waters. Hunter had succeeded in interesting the Navy in his idea, and the Revenue Service followed suit. In all, eight steamers were begun for the Revenue Service, four with Hunter's system (*Bibb*, *Dallas*, *McLane*, and *Spencer*), two with Ericsson's (*Jefferson*, *Legare*), and two paddle-wheel vessels (*Polk*, *Walker*). All eight were also built of iron – a very early use of that metal. Steam vessels were thought to be of particular use in the narrow waterways of the southern coasts, in pursuit of smugglers.

All eight vessels provided unmitigated failures. Lieutenant Hunter had not taken into full account the waste of power when the paddles encountered and worked against water entering the paddle-wheel casings. In addition, the vessels were coal hungry (the Navy's three Hunter's wheel vessels had the same problem).

The machinery of Ericsson's vessels proved overly complicated, and the side-wheel ships suffered from delays, lack of iron, faulty plans, and bad weather. Originally slated to cost \$50,000 each, over \$2 million was eventually spent in original construction and the massive modifications required subsequently in attempts to rectify the problems.

The eight vessels had extremely short service lives. Only the Coast Survey seemed to profit from the debacle, receiving five of the ships when they were cast off by the Revenue Service. Two became lightships and one was converted into a barque.

The 400-ton, side-wheel vessel *Polk* was delayed in completion by weather and labor problems. In March of 1847 she sailed for the Gulf under Navy Department orders but she leaked extensively and was returned to Treasury Department control. She was converted into a barque in late 1848 and her machinery was transferred to the *Jefferson*. She then sailed to San Francisco where she was sold on 29 December 1854 for \$3,350.

The *Polk* had the longest actual service with the Revenue Marine than any of her seven sister ships.

Sources:

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