

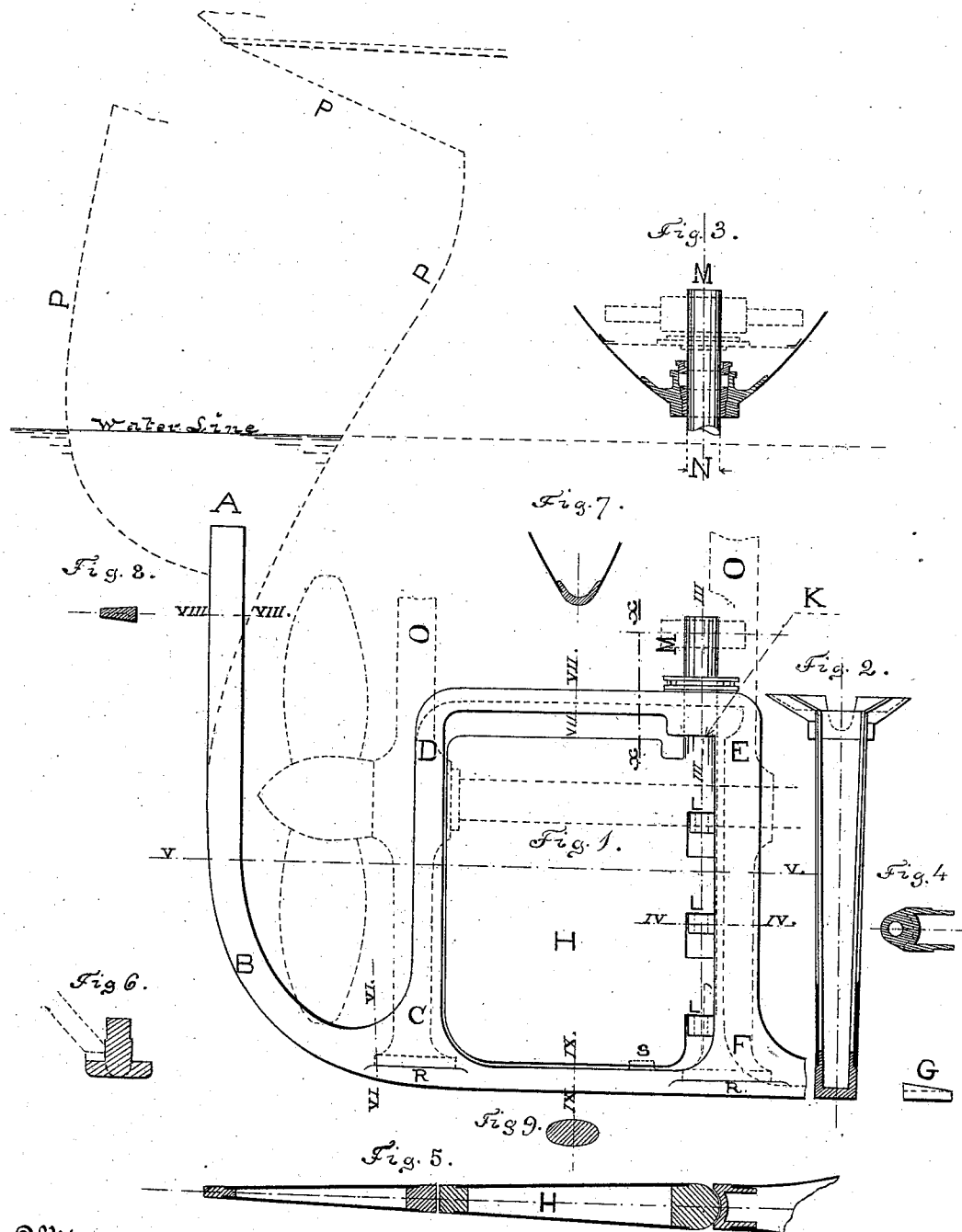
(No Model.)

W. T. SYLVÉN.

STERN POST AND STERN FRAME FOR STEAMSHIPS.

No. 382,014.

Patented May 1, 1888.



Witnesses.

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WALFRID THEODOR SYLVÉN, OF WASHINGTON, DISTRICT OF COLUMBIA.

STERN-POST AND STERN-FRAME FOR STEAMSHIPS.

SPECIFICATION forming part of Letters Patent No. 382,014, dated May 1, 1888.

Application filed January 4, 1888. Serial No. 259,789. (No model.)

To all whom it may concern:

Be it known that I, WALFRID THEODOR SYLVÉN, a native of Sweden, (having declared my intention to become a citizen of the United States,) residing at Washington, District of Columbia, have invented a new and Improved Stern-Post or Stern-Frame for Steamships, the invention also including the mounting of the rudder and the locating of the propellers, of which the following is a full, clear, and exact description.

My invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

It has hitherto been the practice to place the propellers in a twin-screw steam-vessel forward of the rudder.

My invention consists in placing the rudder in such a vessel forward of the propellers. Thus the rudder-head, continued into the wider part of the hull, can be more conveniently fitted with an appropriate steering-gear, and the rudder-head, as well as the steering-gear, can be located farther below the water-line; also, the propellers being located farther aft, where the lines of the vessel are finest, the propellers will, on account of the water entering them under a more favorable angle, be more efficient for propelling the vessel, besides increasing the steering capacity of the vessel—all features desirable, especially in a man-of-war ship. I apply one rudder and two propellers. The rudder is located in the longitudinal axis of the vessel, and the propellers are placed so that there will be one propeller on each side of said rudder and nearer to the extreme after end of the vessel than is the rudder.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken vertical elevation of a stern-post or stern and rudder frame in a twin-screw steamer. Fig. 2 is a vertical sectional elevation looking aft. Fig. 3 is a detailed cross-section taken on the line III III, which line is the center of the rudder-head. Fig. 4 is a detailed sectional plan view taken on the line IV IV. Fig. 5 is a detailed sectional view taken on the line V V. Fig. 6 is a cross-sectional view taken on the line VI VI. Fig. 7

is a cross section taken on the line VII VII. Fig. 8 is a sectional plan view taken on the line VIII VIII, and Fig. 9 a cross-section taken on the line IX IX.

The stern-post or stern and rudder frame A B C F G is made either of wrought-iron, cast-steel, or any other suitable metal or material, and so constructed that the part A B forms the after end of the vessel's under-water body, besides acting as a shield for the propellers. The part C D E F forms an opening for and a framing around the rudder, the latter to be given any form suitable for a rudder, the opening being made large enough to allow the rudder to be shipped and unshipped. The foremost broken part, F G, continues into the hull of the ship and is made long enough to insure a solid connection to the hull. The after side of the part E F is, when a common rudder is adopted, provided with chocks for the rudder-pintles, as usual. The whole frame is everywhere shaped and molded so as to suit the different shapes of the hull at the point of connection with the stern-frame, thus giving a fair ending of the lines of the vessel. At K, where the rudder-head M passes through the stern or rudder frame, the latter is swelled out in order to give room for the stuffing-box. (See Figs. 1, 2, and 3.)

The rudder H will be shipped or unshipped from either side of the vessel, the hole N in the stern or rudder-frame being for this purpose made large enough athwartships. The propellers will be placed as indicated by dotted lines, and will be supported by one or two hangers or struts, O, as may be deemed necessary, the chocks R being provided for the lower end of these struts. By this arrangement it will be seen that the propellers, being placed aft of the rudder, where the lines of the ship are finest, will work in more solid water, entering under a more favorable angle, thus giving more efficiency to the propellers and better steering capacity to the ship. Moreover, the rudder being placed forward of the propellers and in a place where the ship is fuller than at the extreme stern, more room will be available for the steering-gear. The rudder will also be more protected from shot in time of war, and better protected against being damaged in case of running ashore. The rudder

can also be located deeper down in the water than is usual, and this being the case, the armor in a man-of-war ship may consequently also be laid deeper under the water-line, thereby affording greater protection to the hull as well as to the steering-gear. If a so-called "balanced rudder" is adopted, the whole difference will be that the rudder will turn around a center in the vicinity of the line *x x* instead of around the line III III. The chocks LL will in such case be dispensed with. The center of the swell at K will be located at *x x*, and a chock, S, will be provided for the foot of the rudder.

PPP indicate only different shapes of a vessel's over-water body.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of one common or balanced rudder located in the longitudinal axis of a ship or vessel, a stern-post or stern-

framing, an opening in said stern-post or stern-framing of suitable form to receive said rudder, and propellers located astern of such rudder, one or more of said propellers on each side of the said rudder, the dead-wood of the vessel being continued between said propellers, the whole relatively arranged substantially as described.

2. The combination, with a common or balanced rudder and two or more propellers located astern of and on each side thereof, of a protecting-frame, A B C D E F G, the forward portion, C D E F G, forming a suitable opening and support for the rudder, and the after portion, A B C, serving as a shield for the propellers, substantially as and for the purpose set forth.

WALFRID THEODOR SYLVÉN.

Witnesses:

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