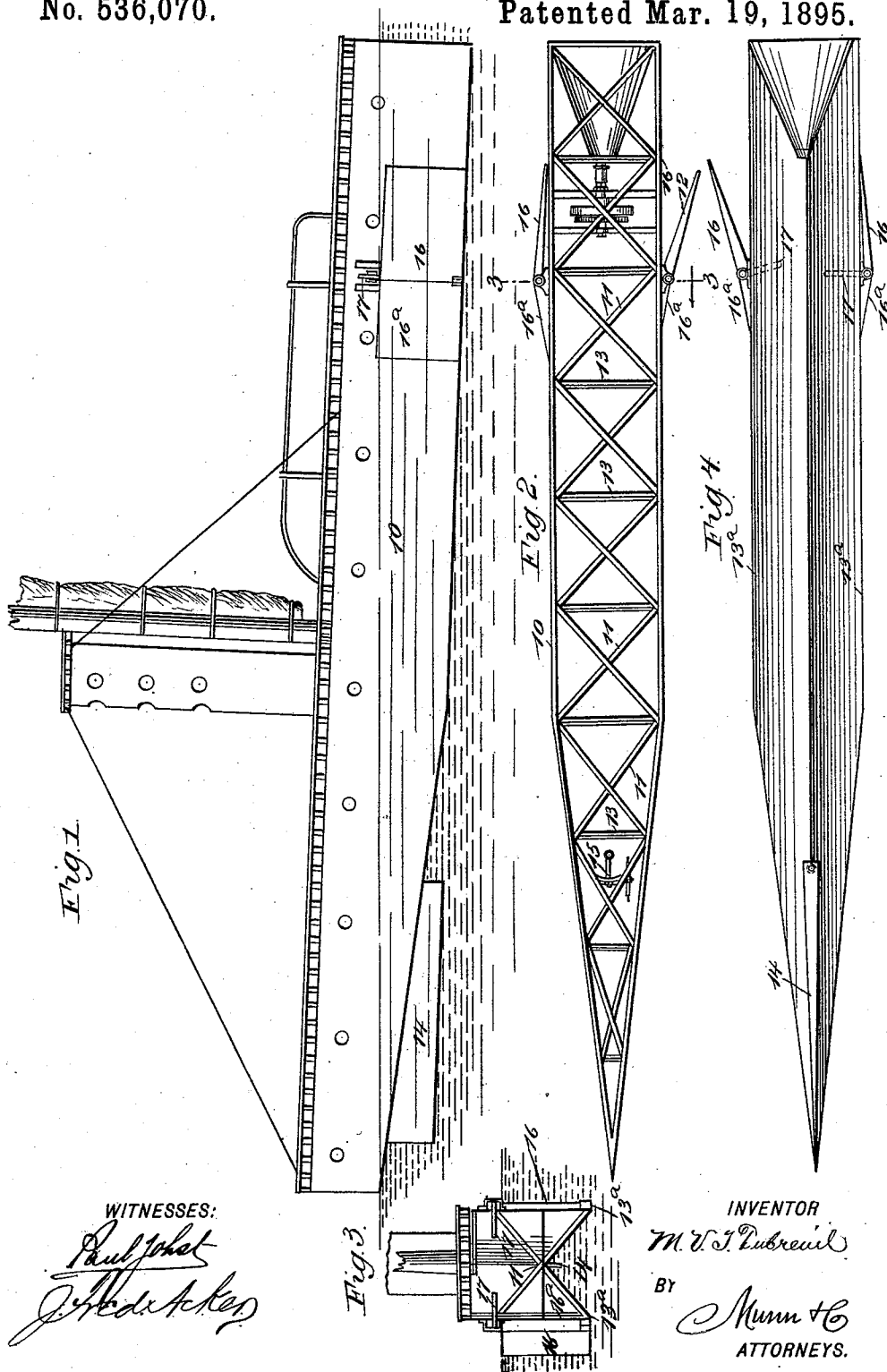


(No Model.)

M. V. T. DUBREUIL.
RUDDER FOR VESSELS.

No. 536,070.

Patented Mar. 19, 1895.



WITNESSES:

Paul J. H. A. K.
J. H. A. K.

INVENTOR

M. V. T. Dubreuil

BY

Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MARIE VICTOR THEODORE DUBREUIL, OF NEW YORK, N. Y.

RUDDER FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 536,070, dated March 19, 1895.

Application filed November 23, 1894. Serial No. 529,710. (No model.)

To all whom it may concern:

Be it known that I, MARIE VICTOR THEODORE DUBREUIL, of New York city, in the county and State of New York, have invented a new and useful Improvement in Rudders for Vessels, of which the following is a full, clear, and exact description.

My invention relates to the construction of vessels, and especially to the rudder or steering apparatus, and it has for its object to provide a means whereby a rudder may be located at the bottom of the vessel at the bow, to be used in connection with rudders located one upon each side near the stern.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a side elevation of a vessel having the improved rudders applied thereto. Fig. 2 is a plan view of the framing of the hull. Fig. 3 is a section through the said hull, taken substantially on the line 3—3 of Fig. 2; and Fig. 4 is a bottom plan view of the hull.

The vessel's hull preferably consists of an outer casing 10 and a skeleton frame to which the casing is applied, the said frame consisting of a series of transverse crossed or X-braces 11, side braces of substantially the same construction, and crossed floor braces 13. The casing follows the inverted V-shape of the bottom of the hull, due to the X-braces 11. Consequently there is a channel produced longitudinally in the hull, and two side keels 13^a are obtained. The sides of the casing are made tapering from a point near the center of the hull in direction of the bow, and the forward portion of the two keels is given an upward inclination, starting from the point where the side inclination commences and terminating at the bow. It will be understood that the two keels may be at the bow.

A rudder 14 is placed longitudinally in the bottom channel of the hull, and this rudder is free at its forward end and pivoted at its rear end, as is best shown in Fig. 4. It is located centrally in the said channel in the bottom of the hull, as shown in Fig. 3, and

extends below the cut-away portions of the keels, as illustrated in Fig. 1. The rudder 14 is shifted by means of suitable gearing 15, connected with its post, and this gearing may be located either on deck, or at any point within the hull of the vessel.

In addition to the bow rudder 14 fin rudders are located upon the outer face of the hull, one at each side, both rudders being near the stern. These fin rudders are usually pivoted at their forward ends to a block 16^a, inclined sternwardly from the vessel's side, and these rudders may be shifted through the medium of levers 17 or their equivalents, as shown in the drawings, or other forms of shifting device may be used. The levers 17, when employed, extend within the hull, and in their turn are operated by suitably applied power.

When the three rudders are used in the manner above set forth, a vessel may be steered much more quickly than when a single rudder only is used at the stern. The vessel is rendered much more weatherly, and will come about quickly, turning almost on its center.

The construction of the hull of the vessel, by which the two keels are formed, forms no part of the present invention, the same being the subject of a concurrent application, Serial No. 529,711.

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

1. The combination with the hull of a vessel having a keel at each side, said keels having inclined forward ends, of a rudder pivoted at its rear or inner end to the bottom of the vessel at the bow, centrally between the keels extending down below the same, substantially as described.

2. The combination with the hull of a vessel having an inverted V-shaped bottom and side keels, the keels having an upward inclination at the bow, of a rudder arranged centrally and longitudinally in the bottom channel of the hull at the bow, said rudder being pivoted at its rear or inner end, and extending below the cut away or inclined portions of the keels, substantially as described.

3. The combination of the hull of a vessel provided with double keels one at each side,

said keels extending from the stern in approximately parallel lines and converging at the bow, the front lower edges being inclined upwardly, and a rudder pivoted at its rear or
5 inner end to the bottom of the vessel centrally between the keels at the bow, said rudder extending down below the keels, substantially as described.

4. The combination, with a vessel's hull, the
10 said hull being provided with double keels extending from the stern in substantially

parallel lines and converging at the bow, the front lower edges of the keels being inclined upwardly of a rudder located centrally between the keels at the bow portion of the hull, 15 and a fin rudder located at each side of the hull near the stern, as and for the purpose set forth.

MARIE VICTOR THEODORE DUBREUIL.

Witnesses:

J. FRED ACKER,
JNO. M. RITTER.