No. 779,961. PATENTED JAN. 10, 1905.

J. E. NICHOLSON.

MEANS FOR STEERING BOATS.

APPLICATION FILED FEB. 23, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

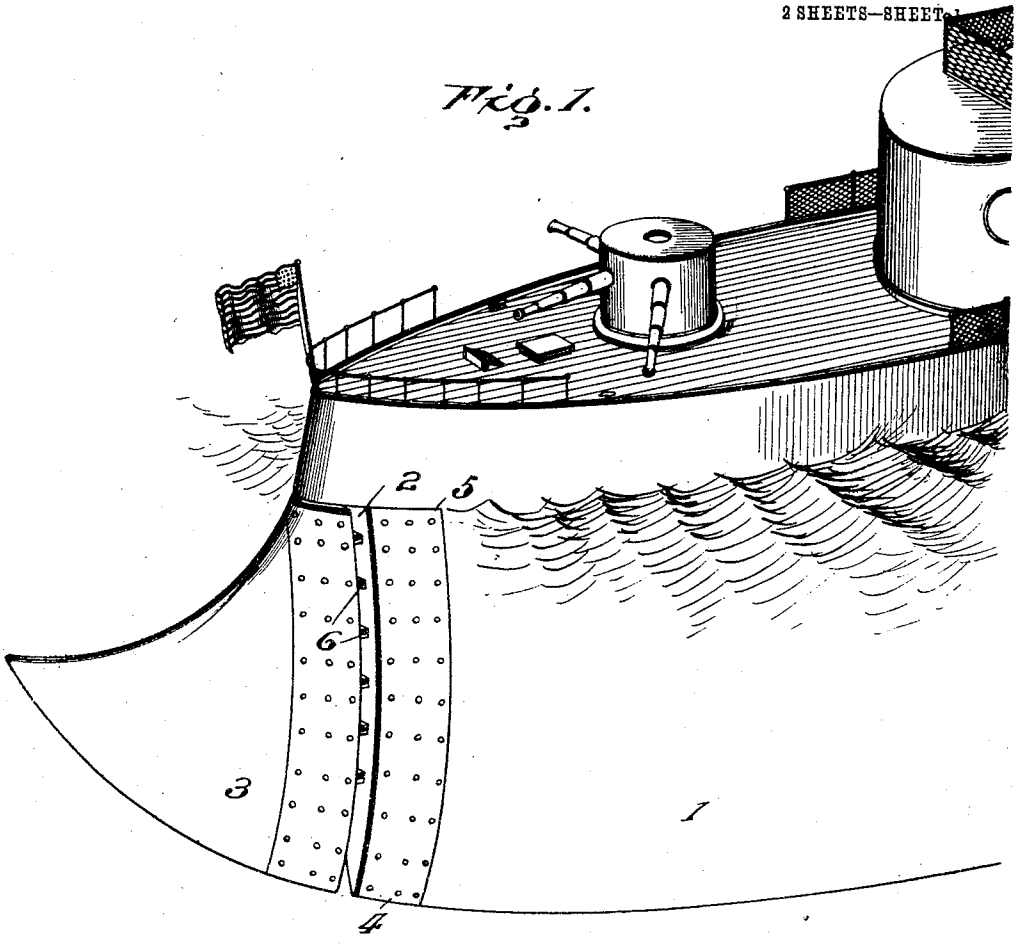
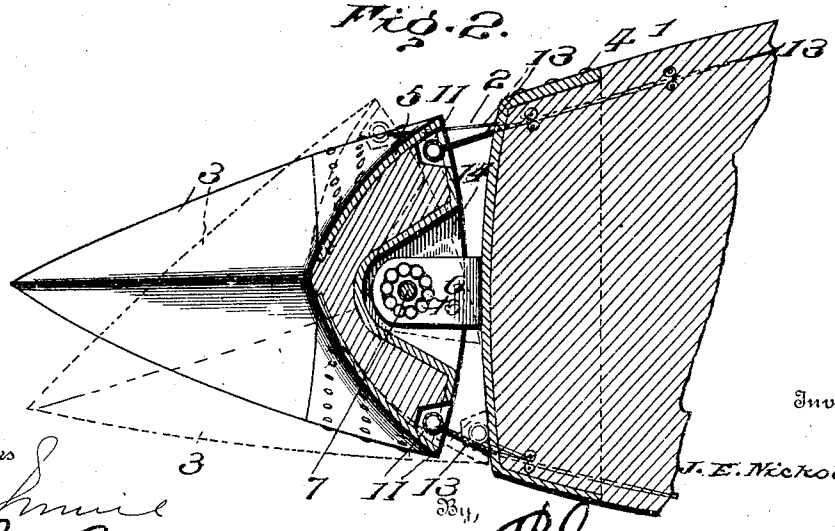


Fig. 2.



Witnesses

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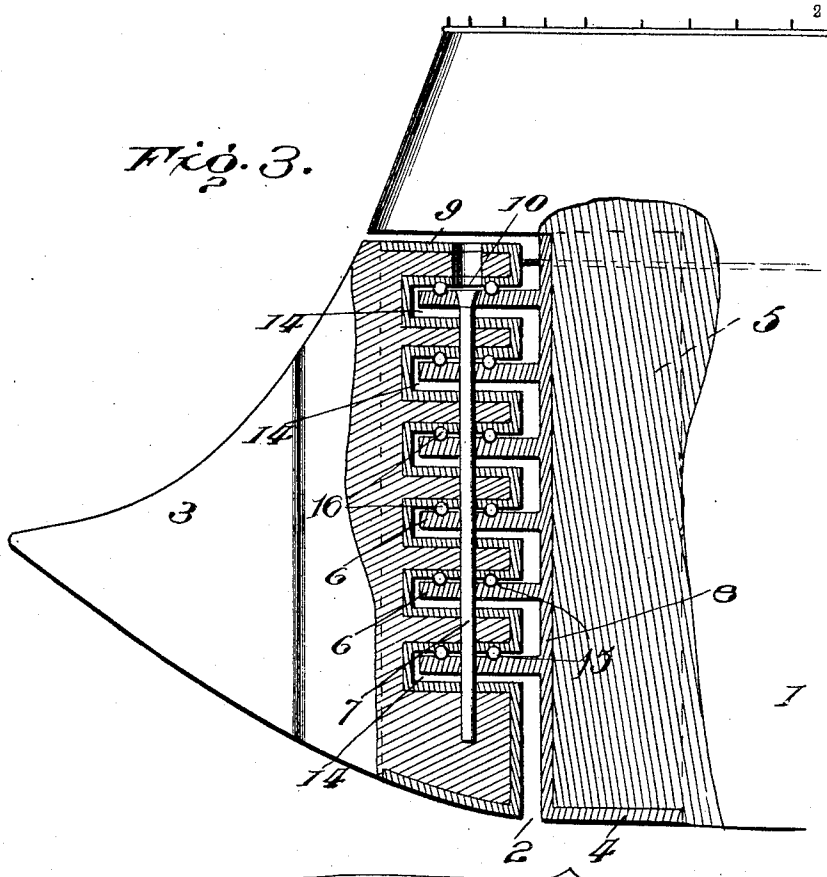
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2 SHEETS—SHEET 2.

Fig. 3.



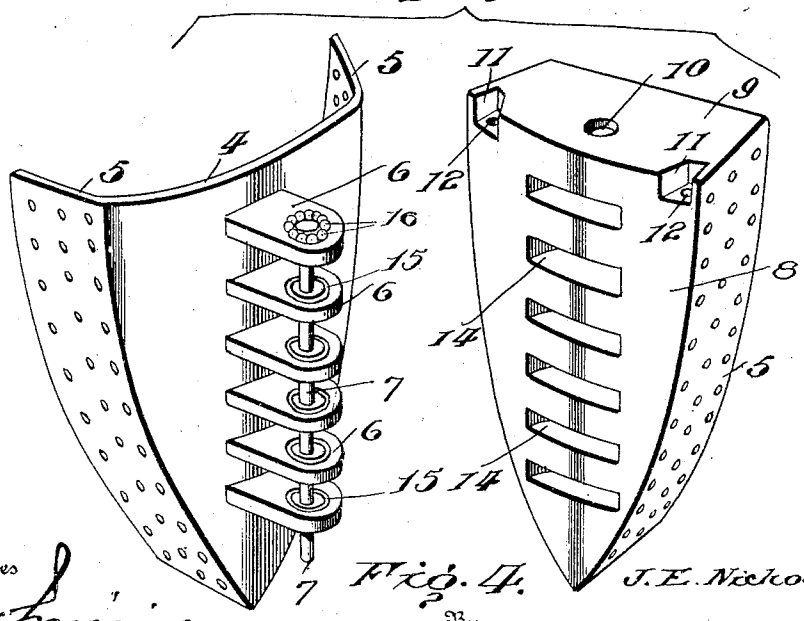


Fig. 4.

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Attorneys

No. 779,961. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

JOHN EDWARD NICHOLSON, OF ELKHART, ILLINOIS.

MEANS FOR STEERING BOATS.

SPECIFICATION forming part of Letters Patent No. 779,961, dated January 10, 1905.

Application filed February 23, 1904. Serial No. 194,834.

To all whom it may concern:

Be it known that I, JOHN EDWARD NICHOLSON, a citizen of the United States, residing at Elkhart, in the county of Logan and State of Illinois, have invented certain new and useful Improvements in Means for Steering Boats, of which the following is a specification.

This invention relates to novel improvements in boats or vessels, and particularly to the provision of a peculiar construction of steering means therefor. In the preferred contemplation of the invention the vessel is of sectional construction, being provided with a movable prow or bow section which is so mounted relative to the hull or body of the vessel as to constitute a rudder or like steering means by which the movement of the vessel may be readily directed.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the invention in its application to large vessels. Fig. 2 is a horizontal sectional view through the vessel, showing more clearly the relative disposition of the bow-section and hull-section. Fig. 3 is a vertical sectional view bringing out more clearly the exact construction of the parts. Fig. 4 is a combined view in perspective of the hull-plate and bow-section plate, which are pivotally secured together in mounting the bow-section upon the hull of the vessel.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, 1 indicates the hull or hull-section of a boat or vessel of any suitable size, the principle and construction involved in my invention being susceptible of adaptation to all classes of marine vessels. In the preferred construction of the invention the forward portion of the hull adjacent the bow is cut away, as shown at 2, for purposes which will appear more fully hereinafter. Mounted upon or carried by the forward portion of the vessel is a movable bow-section or prow 3, which is pivotally supported and which is adapted under actuation of suitable steering apparatus for a lateral pivotal movement to govern the course of the vessel in a rudder capacity. A special construction of parts is utilized to properly support the movable bow-section 3 upon the hull-section 1, so as to admit of thorough control of the movement of this section by those steering the boat. In carrying out the above a hull-plate 4 is secured to the hull-section 1 of the vessel and covers the forward cut-away portion 2 thereof. The hull-plate 4 is provided with rearwardly-extending flanges 5, which are secured to the body or hull by means of substantial fastenings, such as are commonly employed for analogous purposes. Projected from the hull-plate 4 are a plurality of supporting or pivot members 6, which are arranged in an approximately vertical disposition and which are provided with vertical openings to receive a shaft 7, the latter constituting the pivot member upon which the bow-section 3 is adapted to turn. The bow-section 3 is provided upon its rear side with a bow-plate 8 of a construction similar to the hull-plate 4, this plate 8 being provided also with the flanges 5 to secure same in position. The plate 8 is also provided with a horizontal flange 9, the flange 9 overlapping the upper portion of the bow-section 3, as shown most clearly in Fig. 3 of the drawings. An opening 10 is provided in the horizontal flange 9 to admit of proper disposal of the pivot-shaft 7. Sockets or depressions 11 are also provided upon the flanges 9 of the bow-plate, within which sockets are disposed rings 12, which form connecting means for attachment of the ropes 13, which form a part of the steering apparatus proper. The ropes 13 extend through the hull of the vessel and are connected, if found desirable, with the steering-wheel in the usual manner. The bow-plate 8 is also provided with a plurality of

vertically-arranged bearing-recesses 14, which recesses receive the pivot members 6 projected from the hull-plate 4, and the pivot-shaft 7 when the parts are arranged in working position intersects the bearing-recesses 14, passing through the vertical openings and provided in the pivot members 6 to establish the pivotal connection between the bow-section 3 and the hull-section 1.

The bow-plate 8 and the hull-plate 4 are each curved between the flanges 5 thereof, so as to admit of the pivotal movement of the bow-section, as above described.

In order to facilitate the turning movement of the bow-section 3 under the actuation of the steering apparatus and to mount the bow-section to permit of a maximum ease of pivotal movement thereof, the pivot members 6 of the hull-plate are provided upon their upper sides with annular grooves 15, which grooves are concentrical with the vertical opening in the pivot members and receive antifriction ball-bearings 16. It will be thus seen that all friction between the pivot members 6 of the bearing recessed portions 14 is reduced to a minimum, which is essentially desirable in a device of this class.

Though in the preferable embodiment of the invention the bow-section or prow of same is used in the rudder capacity described, it will be understood that the stern portion of the vessel could readily be constructed and mounted in substantially the same manner as the bow-section to constitute the steering medium for directing the movement of the vessel. Further, it will be understood that specific changes of construction may be made as regards the detail parts of the invention without departing from the spirit thereof.

An advantageous feature of the construction indicated above will be found in the fact that the various connected portions by which the bow-section is mounted upon the hull-section are fully protected both from the elements and from other adverse conditions which may arise in the use of a boat or vessel constructed in accordance with my invention.

Having thus described the invention, what is claimed as new is—

In a boat or vessel, the combination of a hull-section, a hull-plate secured to the hull-section, pivot members projected horizontally from the hull-plate, a movable bow-section, a bow-plate secured to the bow-section and provided with a plurality of bearing-recesses to receive the pivot members of the hull-plate, a pivot-shaft connecting the pivot members of the hull-plate and the bow-section, a lateral horizontal flange projected from the upper portion of the bow-plate and overlapping the bow-section, sockets provided in said flange, connecting-rings or the like disposed in said sockets, and steering-ropes connected to the said rings.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN EDWARD NICHOLSON. [L. S.]

Witnesses:

P. H. BRENNAN,

RALPH LAMVERT.