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J. DIECKMANN.

STEERING DEVICE FOR SHIPS.

APPLICATION FILED AUG. 5, 1905.

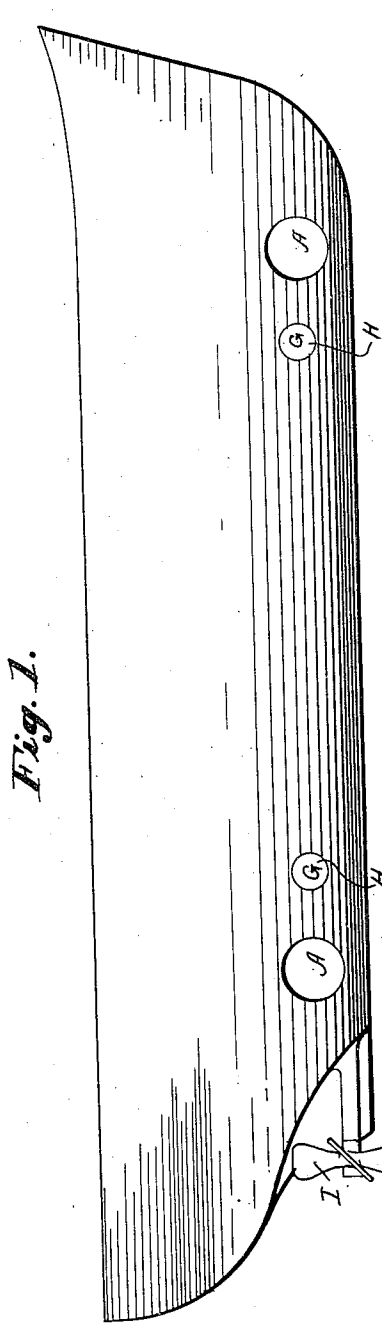


Fig. 1.

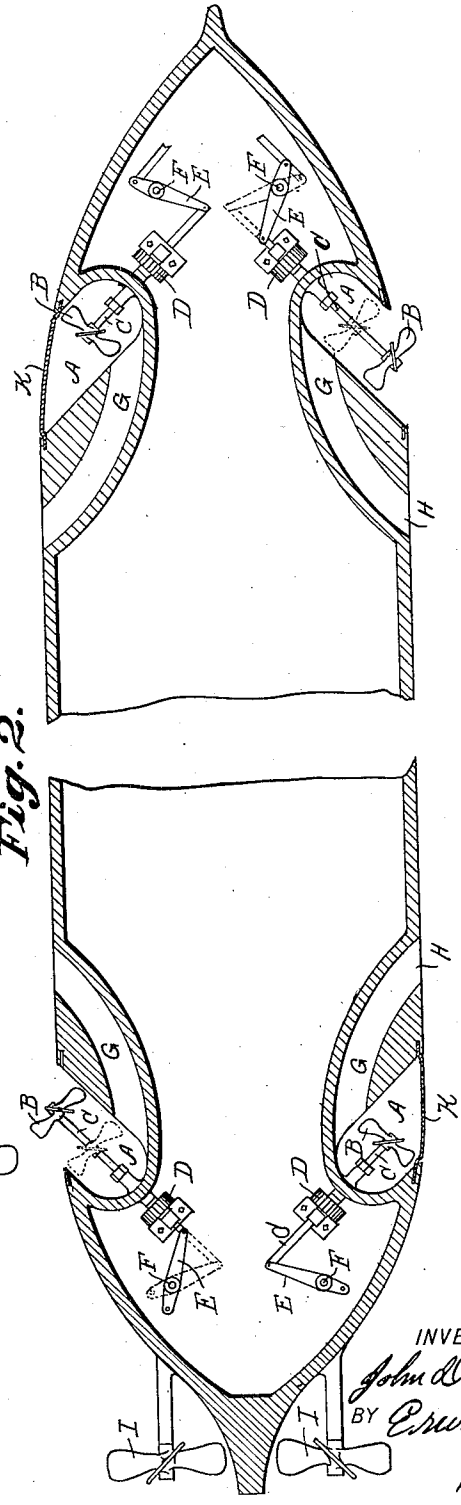


Fig. 2.

WITNESSES:

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JOHN DIECKMANN, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-THIRD TO AUGUST BORTH, OF MILWAUKEE, WISCONSIN.

STEERING DEVICE FOR SHIPS.

No. 837,288. Specification of Letters Patent. Patented Dec. 4, 1906.

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To all whom it may concern:

Be it known that I, JOHN DIECKMANN, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Steering Devices for Ships, of which the following is a specification.

My invention relates to improvements for steering devices for ships.

The object of my invention is to provide means for turning a ship quickly, or for effectively guiding a ship in narrow channels, or for turning it when it is without headway.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a side view of a ship embodying my invention. Fig. 2 is an enlarged horizontal sectional view of the front and rear ends of a ship embodying my invention.

Like parts are identified by the same reference characters throughout both views.

The side walls of the ship are provided with recesses A near the front and rear ends and below the water-line. Propeller-wheels B are located in these recesses on axially-movable shafts C. Pulleys D are splined to these shafts, whereby the shafts may be rotated from any suitable source of power, preferably from the main engines of the ship. Levers E, pivoted to suitable shafts F, are used for adjusting the shafts axially, whereby the propeller-wheels B may be drawn into the recesses A or pushed outwardly therefrom until they are permitted to operate in solid water adjacent to the side of the ship. When it is not expedient to push the shafts outwardly, the propeller-wheels may be revolved within the recesses A, in which case water is admitted to the recesses in the rear of the propeller-wheels by means of tubes G, leading from suitable apertures H, which are located between the transverse center of the ship and the recesses A. In such case the operation of the propeller-wheels will draw in water through the tubes G and discharge it outwardly from the recesses A.

In the drawings I have illustrated a ship provided with four propeller-wheels B in addition to the driving propeller-wheels I. The recesses A have a pitch toward the transverse center line of the ship—that is, the recesses in the front end of the ship extend angularly outwardly and rearwardly toward the transverse center line, while the corresponding recesses in the rear end of the ship extend outwardly and forwardly toward the same line.

It will be understood that in turning the ship to the left the right-hand forward propeller-wheel and the left-hand stern propeller-wheel B will be actuated either simultaneously, or, if desired, one of these wheels may be employed separately. In turning the ship to the right the left-hand forward wheel and the right-hand stern-wheel B will be actuated.

I am aware of the fact that vessels have been equipped with transverse tubes in which propeller-wheels have been located in order to force a stream of water transversely of the ship, and I am also aware of the fact that tubes have been provided through which streams of water are pumped in various directions to facilitate steering or turning. In such cases, however, the propeller-wheels or pumps do not act upon the dead-water at the side of ship, except indirectly through the medium of the stream of water forced through the tube, and the ship is turned only by the reactionary pressure of such stream of water. A further objection to the use of such constructions as are above referred to is found in the fact that they obstruct the space in the hold of the ship, while my invention contemplates providing means whereby the main portion of the hold is left entirely unobstructed.

While I have described the propeller-wheel as mounted upon an axially-movable shaft, whereby the wheels may be either projected from the ship or withdrawn to the interior, I do not limit the scope of my invention to the use of an axially-movable shaft, as it is obvious that the propeller-wheels may be operated entirely within the recesses A, if desired, although with somewhat less effect in turning the ship quickly. Neither do I limit the scope of my invention to the use of tubes G, since it is obvious that the propeller-wheels may, if desired, be projected from the side of the ship sufficiently to engage the solid water beyond the hull. By using the tubes G, however, it is possible to operate all of the propeller-wheels simultaneously, one of the forward wheels and one of the rear ones being reversed in movement and serving

to draw the water in through the recesses A and discharging it through the tube G pertaining to such wheel.

When the propeller-wheels are not in position, the recesses A and apertures H are closed by means of suitable gates K.

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

1. In a ship provided with a recessed hull, a propeller-wheel operative in the recess of the hull; and means for shifting the propeller-wheel along the axis of its rotation, whereby it may be projected from, or withdrawn into said recess.

2. In a ship provided with a recessed hull, a propeller-wheel operative in the recess of the hull; and means for shifting the propeller-wheel along the axis of its rotation, whereby it may be projected from, or withdrawn into said recess; said recess having an angular pitch outwardly and in the direction of the transverse center line of the ship.

3. The combination with the hull of a ship, of propeller-wheels located between the respective ends of the ship, and normally disposed within recesses in the hull of the ship; and axially-movable shafts for driving the propeller-wheels; said shafts being arranged to project through the wall of the ship's hull.

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

JOHN DIECKMANN.

Witnesses:

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