

(No Model.)

P. WATTS.
APPARATUS FOR STEERING VESSELS.

No. 468,377.

Patented Feb. 9, 1892.

Fig. 1.

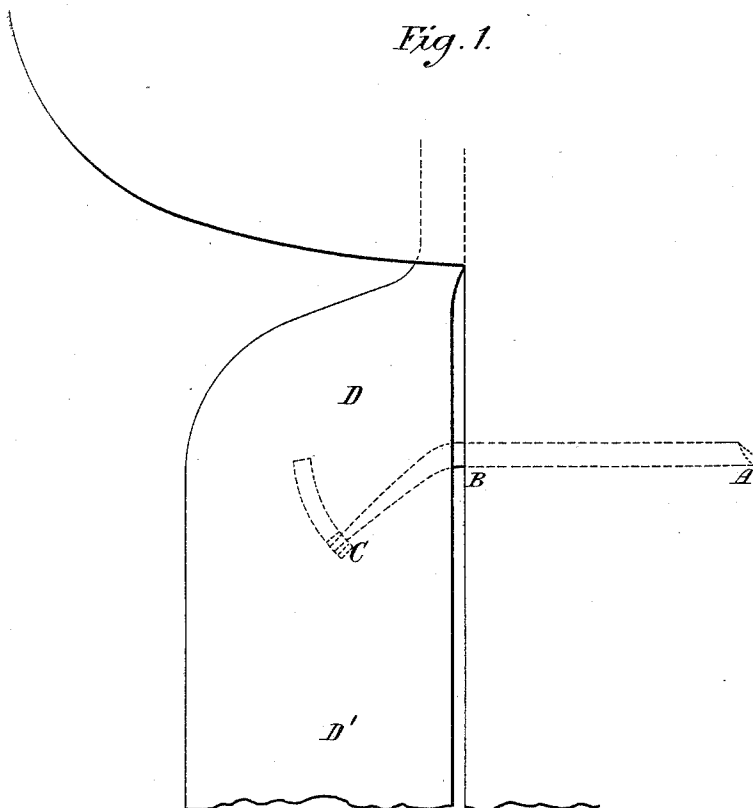
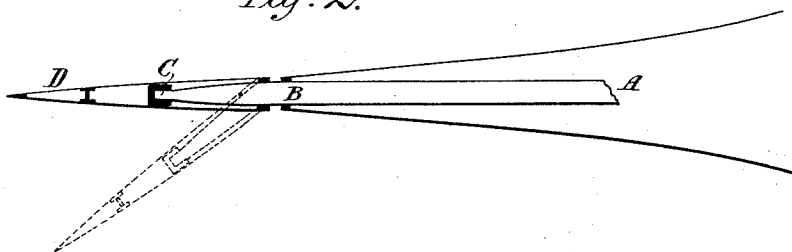


Fig. 2.



Witnesses.

C. W. Brooke.

Edw. Rouse

Inventor.

Philip Watts

By his Attys.
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UNITED STATES PATENT OFFICE.

PHILIP WATTS, OF NEWCASTLE-ON-TYNE, ENGLAND.

APPARATUS FOR STEERING VESSELS.

SPECIFICATION forming part of Letters Patent No. 468,377, dated February 9, 1892.

Application filed November 17, 1891. Serial No. 412,178. (No model.)

To all whom it may concern:

Be it known that I, PHILIP WATTS, naval architect, a subject of the Queen of Great Britain, residing at Elswick Shipbuilding Yard, Newcastle-on-Tyne, England, have invented a certain new and useful Improvement in Apparatus for Steering Vessels, of which the following is a specification.

The rudder (which may be of ordinary type or of any special kind) is actuated and controlled by a shaft which may be wholly below the surface of the water and is partly within the ship and partly outside the ship. The part outside the ship is inclined at a suitable angle to the part within the ship and passes into a hollow space within the rudder, its end, which may be fitted with a roller, being capable of pressing against the sides of the rudder; or, if preferred, a hollow space within the rudder need not be provided, it being only necessary that some suitable means be provided by which the bent portion of the shaft can actuate the rudder, the whole arrangement being such that when the part within the ship is rotated the inclined part turns the rudder to one side or the other, according to the direction in which the rotation takes place.

Figure 1 is a side elevation, and Fig. 2 is a horizontal section, of part of the stern of a vessel to which my steering apparatus is shown fitted.

A B is the portion of the shaft within the vessel.

B C is the portion of the shaft outside the vessel and within the rudder.

D D' is the rudder—in this case an ordinary rudder carried at the stern of the vessel.

What I claim is—

To actuate and control a rudder by the rotation of a shaft situated partly within and partly outside the ship, the part outside the ship consisting wholly or partly of an arm at the extremity of the shaft, inclined at a suitable angle to the main portion of the shaft, the connection between the rudder and the outer extremity of the shaft being such that when the main portion of the shaft is rotated the rudder is turned to one side or the other, according to the direction in which the shaft is rotated.

P. WATTS.

Witnesses:

I. R. PERRETT,

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Both of Elswick Ship Yard.