

(No Model.)

R. S. PEABODY.
SCREW PROPELLER FOR SHIPS.

No. 562,020.

Patented June 16, 1896.

Fig. 1

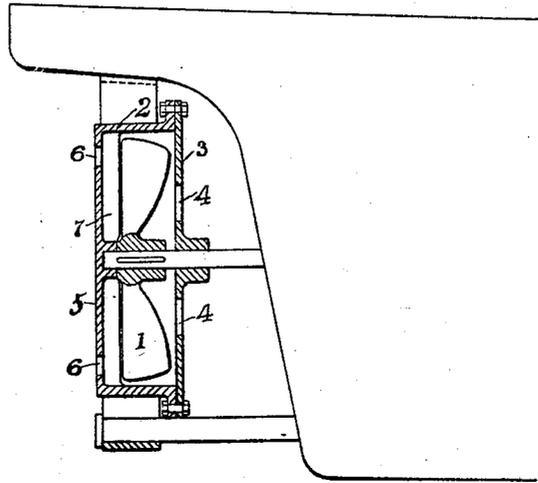


Fig. 2

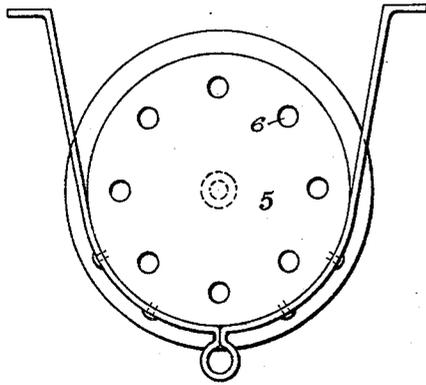


Fig. 4

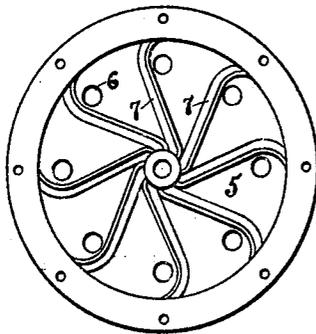


Fig. 3

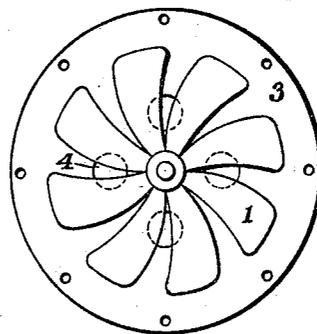


Fig. 5

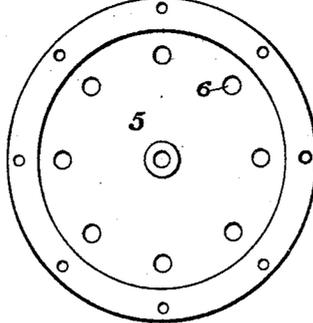
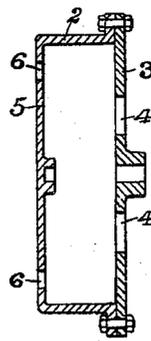


Fig. 6



WITNESSES:

Edward R. Zoll,
Jno. A. Corbin

INVENTOR

Robert Singleton Peabody

BY

Augustus B. Stoughton,

ATTORNEY

UNITED STATES PATENT OFFICE.

ROBERT SINGLETON PEABODY, OF PHILADELPHIA, PENNSYLVANIA.

SCREW-PROPELLER FOR SHIPS.

SPECIFICATION forming part of Letters Patent No. 562,020, dated June 16, 1896.

Application filed May 17, 1895. Serial No. 549,657. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SINGLETON PEABODY, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Screw-Propellers for Ships, Boats, and the Like, of which the following is a specification.

Ordinarily a screw-propeller is immersed and rotated, with the result that work is lost or dissipated; and it is the object of my invention to confine the water and cause the screw-propeller to throw it off sternwardly, whereby the efficiency of the latter is increased. To this end I inclose or mount the screw-propeller in a casing or housing having openings for the ingress and egress of water, and cause it to forcibly expel or eject the water through the outlet opening or openings and thus propel the vessel or ship, all of which is hereinafter more fully described, and particularly referred to in the claims.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a view illustrating, partly in central section, propelling means embodying features of my invention and applied to a vessel or boat. Fig. 2 is a rear elevational view of the housing or casing, showing outlet-openings for the egress of water. Fig. 3 is an elevational view of the rear side of the propeller, showing also inlet-openings for the ingress of water at the front of the housing or casing. Fig. 4 is a detached view of the housing or casing, illustrating the same detached from its front plate and turned over in order to show radial inclined vanes or guides applied to the interior face of its rear wall; and Figs. 5 and 6 are respectively an interior and a sectional view of a housing or casing in which the vanes or guides are not present and which embodies a modification of my invention.

In the drawings, 1 is a screw-propeller suitably mounted and otherwise adapted to be rotated—for example, in the direction indicated by the arrow upon Fig. 3.

2 is a housing or casing suitably supported

and within which the screw-propeller is mounted. As shown in the drawings, this housing or casing is carried by framework attached to the vessel. The front wall 3 of this housing or casing is provided with inlet-openings 4. The rear wall 5 of this housing or casing is provided with outlet-openings 6, and the curved wall of this housing or casing is imperforate. The blades of the propeller may be accurately fitted to the curved and other walls of the housing or casing in order to limit and as far as possible prevent the passage of water between them. The size and number of the openings 4 and 5 may be increased or diminished to permit of the proper and most advantageous flow or passage of water through the housing or casing.

7, Fig. 4, are radial vanes or guides which may be applied to the interior face of the rear wall 5. These vanes or guides 7 are inclined in a direction opposed to the inclination of the blades of the screw 1, and are disposed adjacent to the respective outlet-openings 6.

Of course the number of blades on the screw-propeller, as well as the number of vanes or guides 7, may be increased or diminished, and the adjacent edges of the vanes and blades may be made straight, as shown in Fig. 1, in order to permit of their being placed near together, so as to limit the passage of water between them.

The mode of operation of the above-described apparatus is as follows: As the screw-propeller 1 is rotated water enters the housing or casing 2 by way of the inlet opening or openings 4, and the blades of the rotating screw-propeller engage or otherwise act upon the water confined by the imperforate rim and other parts of the housing or casing and forcibly expel or eject it through the outlet opening or openings 6, which results in the propulsion of the vessel or boat, and substantially all the force exerted or work done upon the screw-propeller is utilized and availed of in this way for the propulsion of the vessel.

In the exemplification of my invention illustrated in the drawings the inlet-openings 4 are of greater area than the outlet-openings 6, and are disposed nearer to the center of the casing or housing, so that water is freely supplied to the screw-propeller and is constrained to move from the center outward prior to its

expulsion or ejection from the casing or housing. The vanes or guides 7, when present, prevent water from being carried around with the screw-propeller and at the same time assist in its delivery through the outlet-openings 6.

It will be obvious to those skilled in the art to which my invention relates that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth, and illustrated in the accompanying drawings; but,

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

1. The combination with a screw-propeller and an imperforate tubular rim surrounding the same, of, front and rear walls applied to said rim near the respective faces of the pro-

PELLER and provided respectively with inlet-openings near the hub of the propeller and outlet-openings near the tips of the blades of the propeller, substantially as described. 25

2. The combination with a propeller and an imperforate tubular rim surrounding the same, of, a front wall applied to said rim near the face of the propeller-blades and provided near its center with inlet-openings, a rear wall applied to said rim and provided near its periphery with outlet-openings, and curved inclined blades carried by the inner face of the rear plate and extending into proximity with the outlet-openings, substantially as described. 30 35

In testimony whereof I have hereunto signed my name.

ROBERT SINGLETON PEABODY.

In presence of—

ROBERT THOMAS,

AUGUSTUS B. STUGHTON.