No. 682,027. Patented Sept. 3, 1901.

H. F. BURGESS.

PROPULSION OF VESSELS.

(Application filed Sept. 22, 1899.)

(No Model.)

Fig. 1.

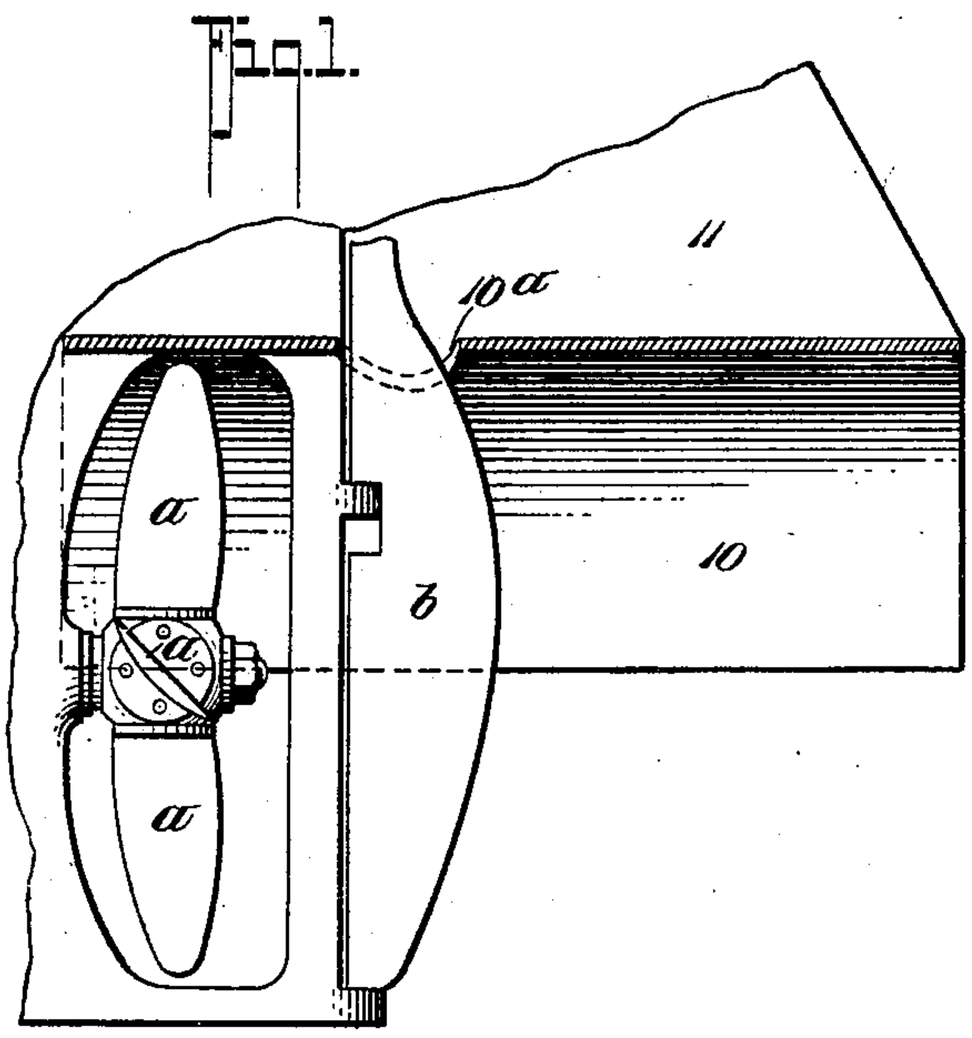
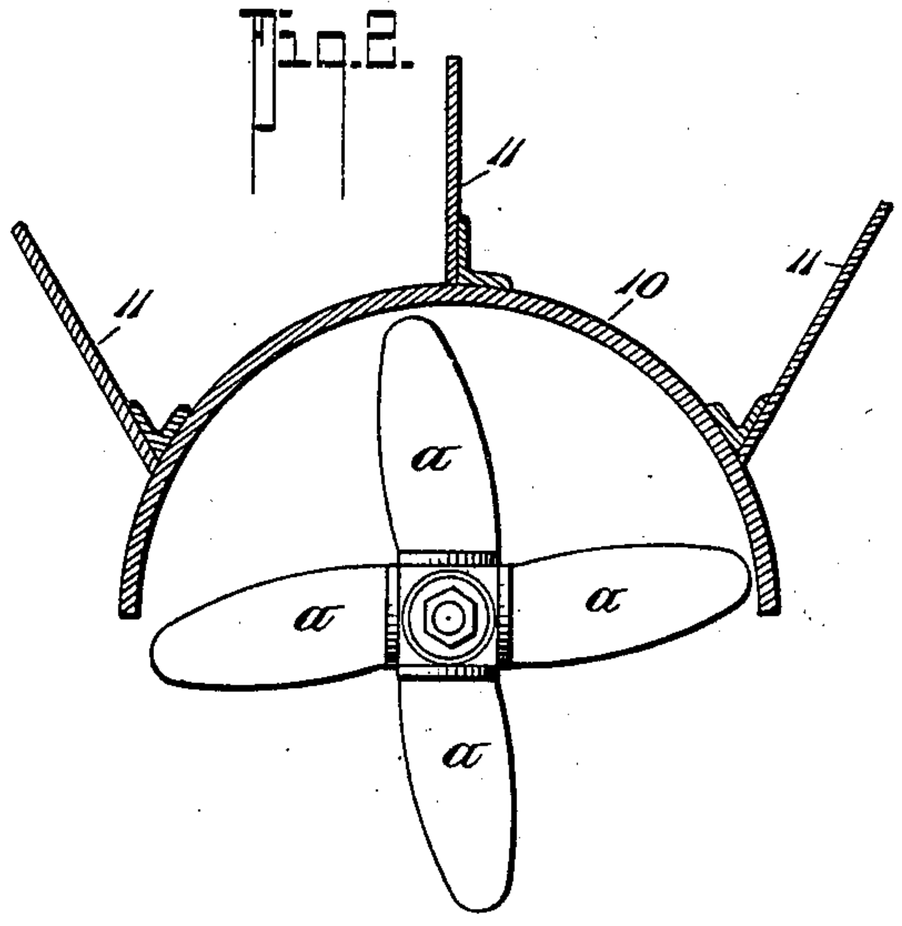


Fig. 2.



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HAROLD FUBISTER BURGESS, OF VANCOUVER, CANADA.

PROPULSION OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 682,027, dated September 3, 1901.

Application filed September 22, 1899. Serial No. 731,299. (No model.)

To all whom it may concern:

Be it known that I, HAROLD FUBISTER BURGESS, a citizen of the Dominion of Canada, residing at Vancouver, in the Province of British Columbia, Canada, have invented a new and useful Improvement in the Propulsion of Vessels, of which the following is a specification.

My invention relates to improvements in the propulsion of vessels having one or more screw-propellers; and it consists of arranging a concave hood or segment of a circle directly over the propeller and extending it for a distance aftward in proportion to the diameter of the propeller; and my object is to increase the speed of the vessel to which my improvement is attached by providing an artificial resistance for the water that is forced upward by the blades of the propeller, and consequently providing approximately the same resistance for the blades above the same as beneath where the head of the water is greater. I attain this object by the mechanical arrangement of the device illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my invention sectioned through the center longitudinally. This shows its position in relation to the propeller. Fig. 2 is a rear view of the same.

Similar letters and numerals refer to similar parts in the views.

The invention consists of a curved plate 10, which is rigidly fixed to the stern of the vessel by plate-brackets 11 and arranged to lie over the propeller *a*. This plate extends for a distance aft with its concaved surface parallel to the propeller-shaft. The contour of said plate is concentric with the path of the propeller-blades, its lower edges ending in a plane parallel with the horizontal axis of the propeller. This causes the water to be thrown from the blades rearward instead of being allowed to radiate upward, as is the case without my improvement. The above plate 10 has its forward end fixed just forward of a perpendicular line in front of the hub of the propeller, so that the water thrown upward will be arrested and received within the concave of the hood and ejected aft. As shown in Fig. 1, where my invention is attached to a single propeller, the rudder-post and rudder-stem *b* may be passed through an aperture 10^a in the hood.

From the foregoing it is obvious that the flute formed by the plate 10 may be made over the propeller by an attachment, as shown, or by a conformation of the hull at this point when the vessel is constructed, in which case brackets 11 would represent the skin or shell of the ship.

I am aware that it is not new to provide a casing encircling the propeller—such, for example, as shown in Patent No. 122,630—and to provide the hull with a longitudinal trough under which one or more propellers may be held for rotation—such as, for example, Patent No. 365,180. My invention differentiates from such forms of propeller-encircling mechanisms in that my improved hood is a segment of a circle the base-line of which does not extend below the horizontal axis of the propeller-shaft and which extends aft to a distance beyond the rudder, such arrangement providing an artificial resistance for the water that is thrown upward by the propeller-blades without affecting the ordinary action of the blades on the water at a point below the axial line of the propeller. Furthermore, by extending the hood aft beyond the rudder-line the artificial resistance of the water at the top is not minimized by reason of the hood stopping short of the rudder or by impact of the water against the rudder that is thrown up by the propellers.

Having now described my invention, what I claim as novel, and desire to be protected in by Letters Patent, is—

The hereinbefore-described improvement, comprising in combination with the hull, the propeller and the rudder; a hood projected rearwardly from the hull over the propeller and rudder and extending aft of the rudder, the front end of the hood being at a point in advance of the propeller, said front end being imperforate whereby the water thrown upward will be arrested thereby, received therein and thrown aft, said hood having a semicircular shape in cross-section—its lower edges being disposed in a plane with the horizontal axis of the propeller, and stays or braces secured to the top of the hood projected radially therefrom, said hood having an opening for the rudder-post, as specified.

HAROLD FUBISTER BURGESS.

Witnesses:

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