

M. R. WHITE.

PROPELLER.

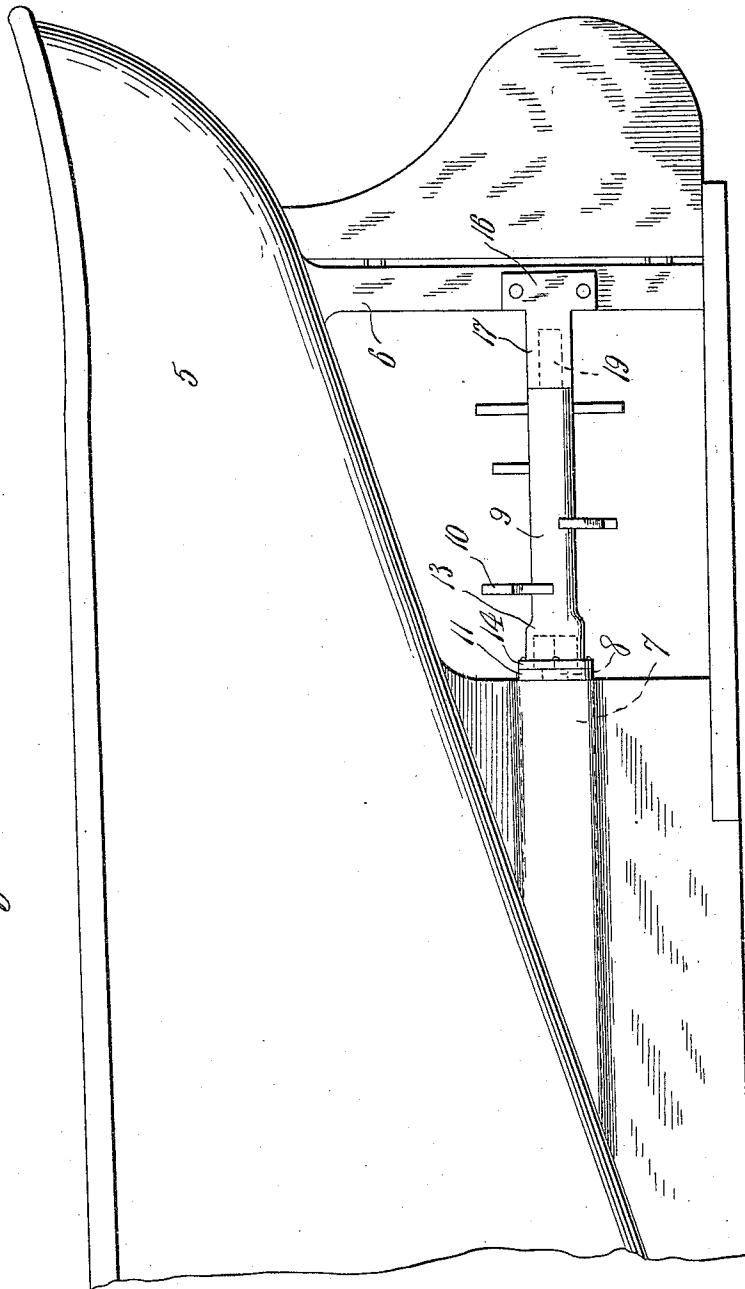
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938,733.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

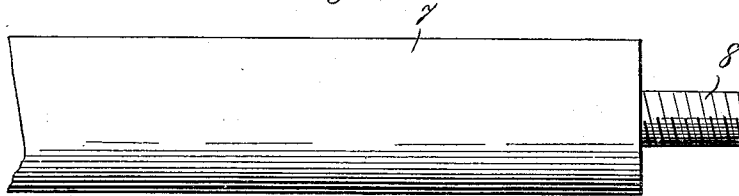


Fig. 4.

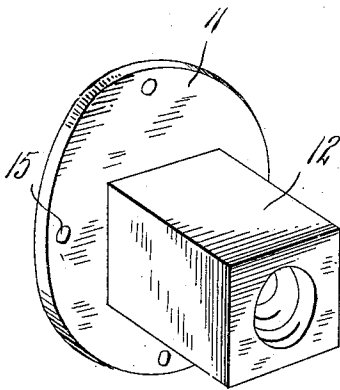
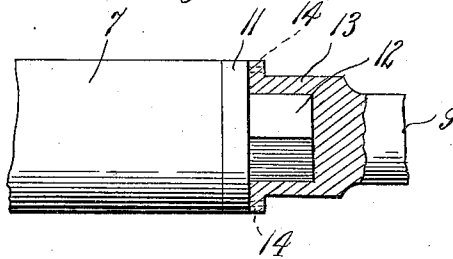
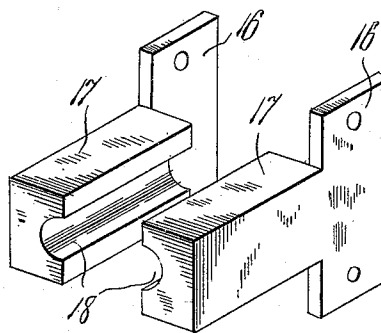


Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE.

MONNIE R. WHITE, OF DEAL ISLAND, MARYLAND.

PROPELLER.

938,733.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MONNIE R. WHITE, a citizen of the United States, residing at Deal Island, in the county of Somerset and State of Maryland, have invented certain new and useful Improvements in Propellers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to propellers for vessels, and has for its object the provision for a device of that kind designed to materially increase the speed of the vessel.

A further object is the provision of a device which may be applied to most forms of steam-vessels using a screw propeller, without materially altering the construction of the vessel.

A still further object is the provision of a construction which may be readily attached and detached from its position on the vessel.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims. It being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of this specification: Figure 1 is a side elevation of a part of a vessel showing the improved propeller applied thereto. Fig. 2 is a detailed side elevation of the end of the propeller shaft. Fig. 3 is a detailed perspective of the coupling member. Fig. 4 is a side elevation of the propeller hub, partly in section, and disclosing the end socket. Fig. 5 is a detailed perspective of the end members.

Similar numerals of reference are employed to designate corresponding parts throughout.

The after or stern portion of the vessel is designated by the numeral 5 and is shown provided with the vertical stern post 6. The shaft which is driven by any suitable source of power located within the vessel is indicated by the numeral 7, and extending into

the propeller space in the usual manner. The outer or free end of the shaft is reduced so as to provide a shank 8 which is provided throughout its length with a screw 60 thread, as shown.

The hub of the propeller is an elongated structure and is the equivalent of that portion of the propeller shaft which in most instances extends for a considerable distance 65 beyond the stern of the vessel and to which the blades are attached. The function of the elongated hub in this instance, is to provide an attachment which may be applied to the propeller shaft of most forms of single 70 screw vessels without the necessity of making expensive alterations. The said hub 9 is provided with a plurality of blades 10, which are disposed in the usual manner on the hub, that is to say, that the blades are 75 perpendicular to the hub. Instead of arranging the blades in one plane in the present instance, they are shown secured to the shaft in convolutions following the curves of a screw. As shown in the drawings four 80 blades are employed of different lengths, the shortest of which is disposed adjacent to the forward end of the hub, and the largest adjacent the after end. In following the 85 curves of a screw the blades are so arranged on the shaft that the distance between their bases will be approximately 90 degrees.

In coupling the hub to the shaft, an element which will be subsequently termed a coupling member, is employed, and in the 90 present instance is shown to consist of a metallic plate 11 of a diameter approximately the same as the propeller shaft 7. This plate is provided on one face with an outwardly extending socket 12, the outer surface of 95 which is non-cylindrical in contour, while the inner surface is round and provided with a screw thread which engages with the threaded shank 8. The length of the socket 12 is substantially the same as the length of the 100 shank 8 and its function is to form a support for the forward end of the hub 9. The last named end of the hub is flared outwardly to a diameter approximately the same as that of the plate 11, and this flared end is provided 105 with an axial non-cylindrical bore to receive the socket 12. Suitable openings 14 are formed in the flared end 13 of the hub, which are adapted to register with similar openings 15 formed in the plate 11; these openings 110 receive suitable bolts or the like by means of which the parts are secured.

By referring now to the drawings it will be seen that the stern post 6 is provided on its opposite side face with a bearing box, this member is formed of two sections, each consisting of a vertical end portion 16 which is secured to the stern post, and a horizontal portion 17, formed integral with the vertical portion and projecting in advance of the stern post. The inner face of each member extends inwardly for a considerable distance beyond the plane of the inner face of the vertical portion 16, so that when the sections are secured to the stern post as shown their opposed inner faces will contact. A centrally disposed longitudinal groove 18 is formed on the inner face of each section so that when the sections are brought together as before stated, an annular opening is presented for the reception of the after end 19 of the hub. The last named end of the hub is reduced in diameter as shown, so as to provide a cylindrical bearing surface.

Thus it will be seen that I have provided a device which is comparatively simple in structure and which may be readily applied to most forms of single screw vessels.

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

1. In a propeller the combination with a shaft terminating at its outer end in a threaded shank; of a plate having on one face an interiorly threaded socket to engage said shank, the outer surface of said socket being non-cylindrical, a hub provided with an opening at one end to receive the said socket, and a plurality of blades carried by said hub.

2. In a propeller for vessels the combination with a propeller shaft; of a bearing sleeve having two sections disposed on opposite sides of the stern post and in alinement with the said propeller shaft, an elongated hub having a flared end provided with a bore to receive said propeller shaft and having its opposite end reduced and bearing in said sleeve and a series of spirally arranged blades secured to said hub.

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

MONNIE R. WHITE.

Witnesses:

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