

J. KOBUS.
SCREW PROPELLER.
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1,029,694.

Patented June 18, 1912.

Fig. 1

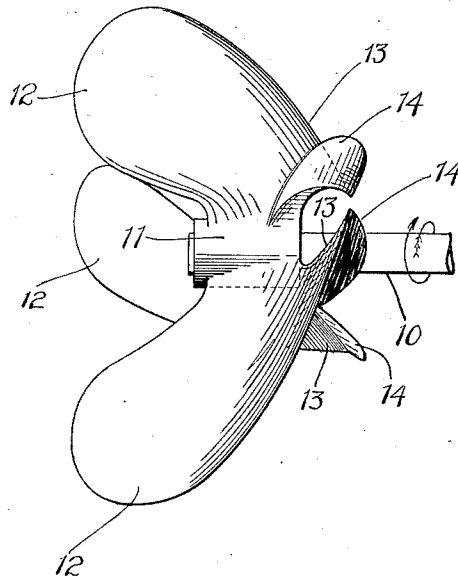
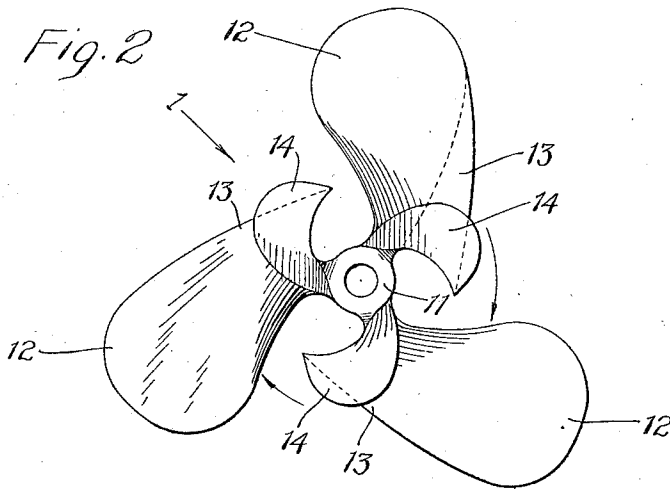


Fig. 2



WITNESSES:

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JACOB KOBUS, OF BRIDGEPORT, CONNECTICUT.

SCREW-PROPELLER.

1,029,694.

Specification of Letters Patent.

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Application filed February 17, 1912. Serial No. 678,389.

To all whom it may concern:

Be it known that I, JACOB KOBUS, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Screw-Propellers, of which the following is a specification.

This invention relates to propellers for vessels adapted for general use as upon launches and large sea-going vessels.

It is well understood by those familiar with the art of marine propulsion that with the usual forms of screw propeller a large percentage of energy is lost.

With the knowledge of this fact in view my invention has for its general object to provide a screw propeller so constructed as to save a large portion of this lost energy and turn it into work.

With this and other objects in view I have devised the novel screw propeller which I will now describe referring to the accompanying drawing forming a part of this specification and using reference characters to indicate the several parts.

Figure 1 is an elevation of my novel propeller as seen from the direction indicated by the arrow in Fig. 2; and Fig. 2 is an elevation as seen from the right in Fig. 1.

10 denotes the shaft to which the hub 11 of the propeller is rigidly secured in any ordinary or preferred manner. Rotation of the propeller is in the direction indicated by the arrows, the stern of the vessel being adjacent the broken end of the shaft.

12 denotes the blades of the propeller which in general contour may follow the lines ordinarily used. The forward ends of the blades are provided with extensions 13 which project forwardly and obliquely from the hub and are for the purpose of taking the water and gaining a greater propulsive surface, the pitch of the extensions conforming approximately to the helixes of the blades. The action of these extensions is to cut into the body of water, prevent anything in the nature of an angular blow of the blades upon the water and to reduce the slip to the minimum.

14 denotes curved fins located at the enter-

ing edges of the extensions and lying at an acute angle thereto on the sides opposite to their working faces. The exact size or configuration of these fins is not of the essence of the invention. I have shown the fins as projecting forward beyond the outer edges of the extensions. These fins, as well as the forward edges of the extensions, cut into the body of water and cause volumes of water to pass between themselves and the extensions by which they are carried, which volumes of water are discharged backward against the operative faces of the next following blades; that is to say, the volumes of water collected by the fins are removed from the paths of the next following extensions and are delivered in the paths of the next following blades, which I have found in practice to add greatly to the efficiency of the propeller. In other words, the fins in coöperation with the extensions prevent a partial vacuum back of each blade and provide a solid body of water for the operative face of the next following blade to work against.

It will of course be understood that the diameter of the propeller, the configuration and curvature of the blades and the size and configuration of the extensions and fins may be greatly varied in practice to correspond with the requirements of different types of vessels to which the propeller may be applied.

Having thus described my invention I claim:

1. A screw propeller comprising a hub and blades extending therefrom, said blades being provided with forwardly projecting extensions of the character described, and said extensions being provided with curved fins on the sides opposite to their working faces and lying at an angle thereto.

2. A screw propeller comprising a hub and blades extending therefrom, said blades being provided with forwardly projecting extensions of the character described, and said extensions being provided with curved fins on the sides opposite to their working faces, which lie at an acute angle to the extensions and project forward beyond the outer edges thereof.

3. A screw propeller comprising a hub, blades extending therefrom and provided with extensions of the character described, and curved fins secured to the extensions and lying at an acute angle thereto. 5
4. A screw propeller comprising a hub, blades extending therefrom and provided with extensions of the character described and curved fins secured to the extensions and projecting forward from the outer 10 edges thereof.
- In testimony whereof I affix my signature in presence of two witnesses.
- JACOB KOBUS.
- Witnesses:
MARIE L. HAGGEMAN,
S. W. ATHERTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."