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SCREW PROPELLER

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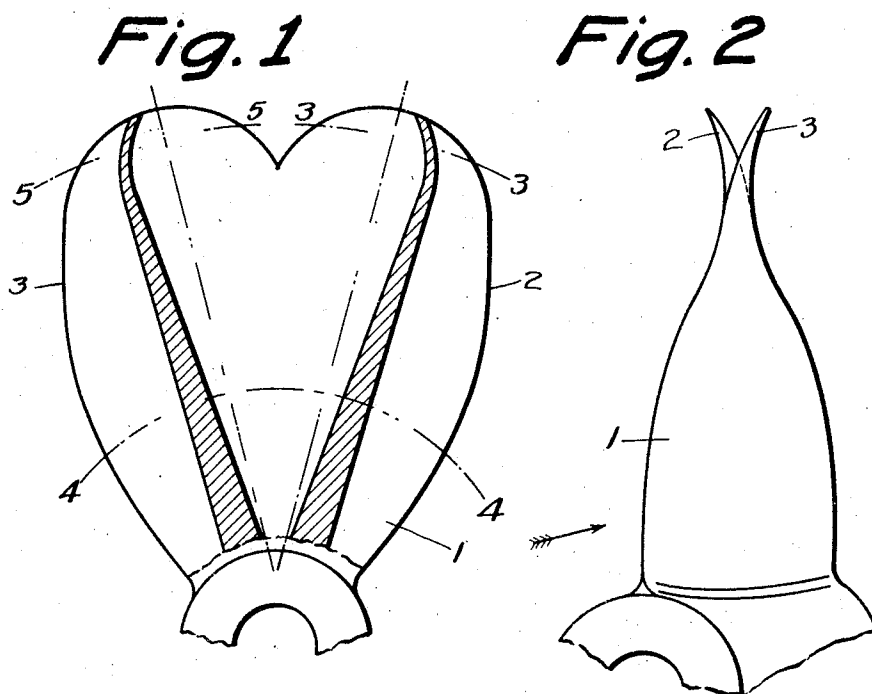


Fig. 3



Fig. 4

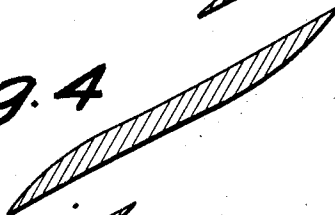


Fig. 5



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SCREW PROPELLER.

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The invention is a propeller in which the blades are provided with double threads at the tips.

The object of the invention is to provide a propeller which will operate with greater efficiency.

Another object of the invention is to provide a propeller with the blades so formed that as the revolutions are increased it will operate with less slip and prevent cavitation and torque.

Another object of the invention is to provide a propeller with the blades so formed that vibration will be lessened.

A further object of the invention is to provide a propeller with the blades so formed that the down drag at the stern will be eliminated.

And a still further object of the invention is to provide a propeller with a double thread at the tips of the blades which is of a simple and economical construction.

With these ends in view the invention embodies a screw propeller having a double thread at the tips of the blades.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:—

Figure 1 is an end elevation of a propeller blade showing the novel features of this invention.

Figure 2 is a side elevation of a left-hand propeller blade looking toward the leading edge which is indicated by an arrow and showing the double thread arrangement at the tips of the blade.

Figure 3 is a cross section on line 3—3 of Figure 1 showing the leading edge of the right-hand screw.

Figure 4 is a cross section on line 4—4 of Figure 1 showing the main part of the blade which gives a triple thread effect.

Figure 5 is a cross section on line 5—5 of Figure 1 showing the trailing edge of the right-hand screw.

The cross sections shown on the blade in Figure 1 indicate the cross sections of the blade on the straight lines adjacent to the said sections.

In the drawings the device is shown as it would be made wherein numeral 1 indicates the body of the blade, numeral 2 the leading edge of the right-hand screw and numeral 3 the trailing edge.

The blade is formed by using one half of a screw blade with the pitch running through the center of the blade and the thickness of the metal the same on either side of the pitch line. The blade runs straight from the root most of the distance to the tip and is then dropped or curved to another thread running parallel with the main blade. Another half is made identical with this and then reversed and attached to the former half which produces the pattern of a blade with a triple thread. The blade is then backed off as shown in the sections in Figures 3, 4 and 5. The outer edges of the blades are rounded as shown in Figure 1 or the edges may be made square at the tips if desired. The blades should then have the trailing edge curved toward you and the leading edge curved away from you, and looking toward the tips you would see the letter S in reverse.

It will be understood that changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the changing of the contour of the blades, another may be in the exact shape or design of the tips, and still another may be in the changing of the size of shape of the cross section of the blade.

The construction will be readily understood from the foregoing description. A blade formed in this manner produces an increased thrust on the blade which helps to compensate for increased resistance of the ship as the speed of the ship increases and also eliminates cavities and makes it possible to obtain a solid body of water over the entire surface of the screw. By forming the blades in this manner it is possible to considerably decrease the diameter of the propeller.

This propeller can also be mounted with either side toward the front as both sides are alike which also makes it possible to have perfect control of the ship in reverse which will prevent collisions and ramming of docks to a large extent.

Having thus fully described the invention, what I claim to be new and desire to obtain by Letters Patent, is:—

1. A propeller blade in which the sections on each side of the center line are exactly the same in cross section, with the face of the leading edge curving forward, while the back thereof is in a straight line and the face of the trailing edge is in a straight line while the back curves backward from the edge.

2. A propeller blade having oppositely curved tips, in which the sections on each side of the center are exactly the same in cross section, with the cross section of the main portion of the blade and also the cross sections of the tips formed with the face of the leading edge curving forward, while the back thereof is in a straight line and the face of the trailing edge is in a straight line while the back

10 curves backward from the edge.
3. A propeller blade whose outer edge forms a double thread which converges into a single thread, in which the leading or entrant edge of the blade is curved forward or
15 toward the ship, the tip of the leading edge of the blade also curved forward or toward the ship, and the trailing edge of the blade is curved backward or away from the ship with the tip of the trailing edge also curved backward.
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4. A propeller blade in which the leading or entrant edge is curved forward or towards the ship, the tip of the leading edge of the

blade is also curved forward or toward the ship, the trailing edge of the blade is curved
25 backward or away from the ship and the tip of the trailing edge is also curved backward.

5. A propeller blade whose outer edge is a double thread converging into a single thread
30 in which the leading or entrant edge is curved toward one side of the propeller with the tip of the leading edge curved in the same direction and the trailing edge curved toward the opposite side of the propeller with the tip of the trailing edge curved in the same direction.
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6. A propeller having blades with split tips in which the leading edge of the blade is curved toward the front with the tip of the leading edge curved in the same direction and
40 the trailing edge curved toward the rear with the tip of the trailing edge also curved toward the rear.

Signed at Seattle, Washington, this 12th day of April, 1926.

GEORGE H. THOMPSON.