H. TAYLOR.

BOAT PROPELLER.

APPLICATION FILED MAR. 26, 1912.

1,092,960. Patented Apr. 14, 1914.

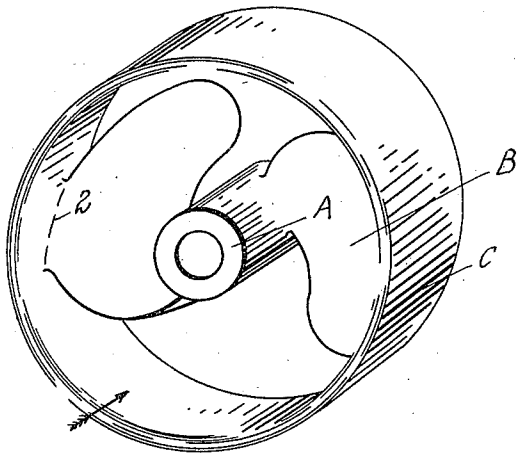


FIG. 1.

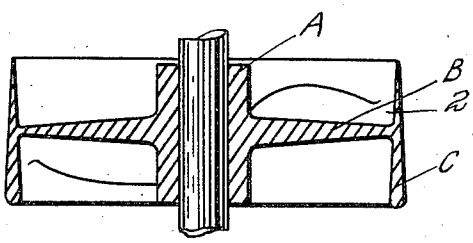


FIG. 2.

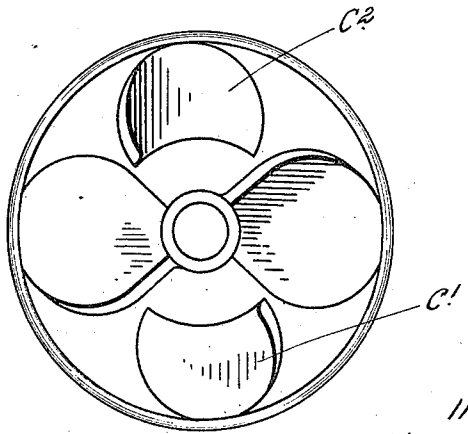


FIG. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY TAYLOR, OF HAMILTON, ONTARIO, CANADA, ASSIGNOR TO HORACE WELLESLEY BURRETT, OF TORONTO, CANADA.

BOAT-PROPELLER.

1,092,960. Specification of Letters Patent. Patented Apr. 14, 1914.

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To all whom it may concern:

Be it known that I, HARRY TAYLOR, a subject of the King of Great Britain, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Boat-Propellers, of which the following is the specification.

My invention relates to improvements in boat propellers and the object of the invention is to devise a propeller particularly adaptable for off shore work and in shallow water and by which the power of the propeller is increased, in which the blades are protected against snags and striking bottom or running foul of mooring ropes and by which the engine vibration is lessened and it consists essentially of a propeller comprising a central hub, propeller blades extending therefrom, an annular rim encircling the blades and connected thereto at the outer edge thereof as hereinafter more particularly explained by the specification.

Figure 1 is a general perspective view of my wheel. Fig. 2 is a plan sectional view of my wheel. Fig. 3 is a front elevation showing an alternative construction.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the hub of the wheel. B are the blades extending therefrom in the usual manner.

C is a rim surrounding the blades and connected thereto at their outer edges at 2. The rim in cross section is constructed in what I term as "streamline form," that is the inner face is tapered from the front of the wheel rearwardly so as to reduce the skin friction and eliminate drag. However, it will be noted that the rim decreases in thickness from the front to the rear and that by this means the outer face of the rim is concentric with the axis of the hub. This is essential for the reason that by thus graduating the thickness of the rim the outward flare of the inner wall is not communicated to the outer wall. The water passes through the rim and between the blades in the direction of arrow and in compact column.

It will be seen from this description that the blades of the propeller are absolutely protected from damage from striking snags or in striking bottom or when over-running of moorings. My encircling rim C prevents the blades of the propeller striking foul of the ropes, chains or of the wharf or dock. Also my rim tends to steady the engine lessening the vibration and acting somewhat as a balance wheel. Also by the employment of my rim the water is forced therethrough in a column thus holding the water compactly around the blades of the propeller so that the leverage of the blades upon the water is increased which leverage would otherwise be lost through the water being forced out centrifically.

By my construction I am enabled to construct the propeller of reduced diameter and yet at the same time increase the power. It will also be seen by my construction that the blades may be made lighter and being fully protected, may be sharpened so that the blades will cut through the weeds or sticks which are carried straight astern by the column of water instead of wrapping around the hub as is usually the case.

In Fig. 3 I show a modified construction in which I provide intermediate blade sections C′ and C² connected to the rim between the ordinary blades of the propeller. These also serve to increase the power of the propeller. Also in this form the blade area is increased by inserting the blade sections C′ and C² thus dispensing with the central portion which tends to cause a drag in the wheel.

What I claim as my invention is.

A propeller comprising a center hub, propeller blades extending therefrom and an encircling protecting rim connected to the blades and tapered from front to rear on its inner face, the distances between the hub and the outer face of the rim in a straight transverse line being substantially the same throughout the width thereof.

HARRY TAYLOR.

Witnesses:
B. BOYD,
M. EGAN.

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