

P. KOVÁCS.
SCREW PROPELLER.
APPLICATION FILED OCT. 21, 1909.

945,553.

Patented Jan. 4, 1910.

Fig. 2

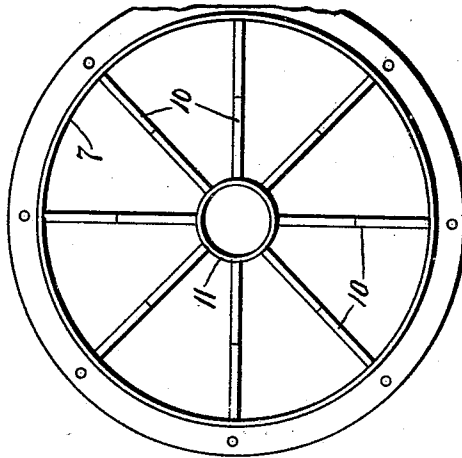
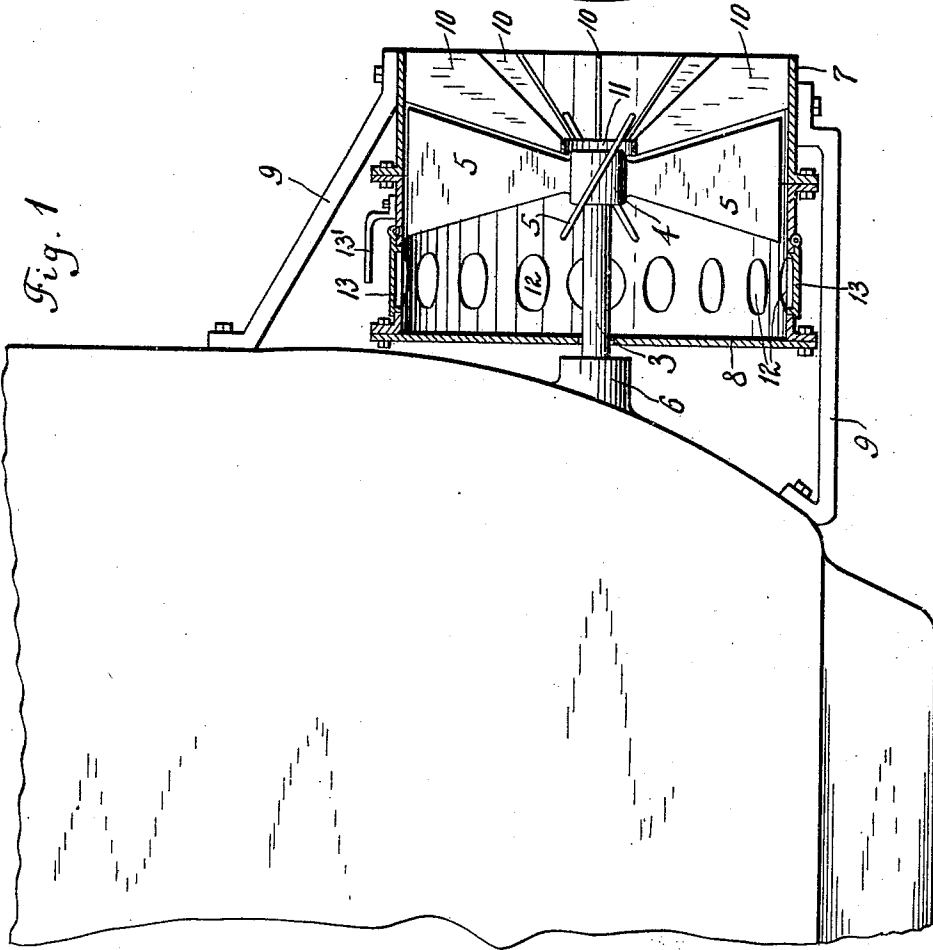


Fig. 1



WITNESSES:

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UNITED STATES PATENT OFFICE.

PETER KOVÁCS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO MAX MEYERSON, OF NEW YORK, N. Y.

SCREW-PROPELLER.

945,553.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed October 21, 1909. Serial No. 523,796.

To all whom it may concern:

Be it known that I, PETER KOVÁCS, a subject of the King of Hungary, and a resident of the city of New York, in the county of Queens and State of New York, have invented certain new and useful Improvements in Screw-Propellers, of which the following is a specification.

The present invention relates to improvements in propellers for vessels, and more particularly to an attachment thereof which may be easily applied to propellers of any suitable type and construction.

The object of the invention is to provide an attachment which shall be simple of construction, comparatively inexpensive of production, efficient in operation, and by means of which the water is moved in a direction substantially parallel to the axis of the propeller shaft, and without churning, whereby the efficiency of the propeller is greatly increased.

A further object of the invention is to provide a device of this character which delivers the water in the direction specified with greater force than the propellers heretofore in use, whereby the speed of the vessel is greatly increased when compared with an ordinary propeller of the same type and dimensions, and rotating at the same speed.

With these objects in view, the invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described, defined in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of a propeller provided with the attachment, forming the subject matter of the present application for Letters Patent, and Fig. 2 is a front view of said attachment.

In the said drawings, the propeller shaft is indicated at 3, to which is keyed the propeller hub 4 in the usual manner. The propeller blades are indicated at 5, 5. These blades may be integral with said hub, or secured thereto by any suitable means, and may be of any suitable number, shape, size and type. The propeller shaft is journaled in the usual manner in the bearings arranged in the vessel and passes through the stuffing box 6 in the stern of the vessel.

The propeller is arranged in a cylindrical casing 7, closed at that end which is ar-

anged nearer to the stern part of the vessel by a cover 8. This casing is supported from the vessel in any suitable manner and kept against rotation, for instance, by means of braces 9, 9, and is of a slightly larger inner diameter and of a greater length than the propeller 5. Radially arranged thin guide blades 10, 10 are attached to the interior of the casing at the open end thereof; the inner ends of said blades being secured to a ring 11 of small diameter and surrounding the free end of the propeller shaft 3.

The casing 7 has upon its peripheral portion a plurality of holes 12, 12, adapted to be covered by curved, hinged lids 13, 13, acting as and for the purpose to be described. The outward movement of said lids is limited by brackets 13', 13', attached to the casing.

The operation of the device is as follows: When the propeller is rotated for the ahead direction, water will be drawn at or near to the center of the casing at the open end thereof into the same, and forced near to the periphery of said open end backward in a direction substantially parallel to the axis of the propeller shaft without churning motion, whereby the whole energy of the water will be utilized in propelling the vessel, since the sideward rotary motion of the water is prevented by the casing 7, and the movement in the axial direction facilitated by the guide blades described. Since, on the other hand, one end of the casing is closed, the water is drawn in at the center of the casing, whereby the friction between the incoming water and the casing is practically done away with, increasing thus materially the efficiency of the device. It is, of course, obvious that the lids 13, 13 are caused to cover the holes 12, 12 in the ahead direction of the vessel, due to the sucking action of the propeller.

When the direction of rotation of the propeller is reversed, the water will be drawn in at the open end of the casing and thrown out through the holes 12, 12; the lids 13, 13 being forced open by the water thrown against the same by the propeller.

It is obvious that various changes may be made in the arrangement of the guide blades and the construction thereof without departing from the spirit and scope of the invention.

What I claim is:

1. In a propeller, the combination with a cylindrical casing open at its rear end and

closed at its front end, of an actuating shaft concentrically arranged therewith, a series of propeller blades upon said shaft and in said casing, and a plurality of radially arranged guide blades located at one side of said propeller blades and attached to the interior of said casing at the open rear end portion thereof.

2. In a propeller, the combination with a stationary cylindrical casing open at its rear end and closed at its front end, of an actuating shaft concentrically arranged therewith, a series of propeller blades upon said shaft and in said casing, and a plurality of radially arranged guide blades located at one side of said propeller blades and attached to the interior of said casing at the open rear end portion thereof.

3. In a propeller, the combination with a cylindrical casing open at its rear end and closed at its front end and being provided with a plurality of holes in its peripheral portion, of a corresponding plurality of lids secured to said casing and being adapted to close said holes, an actuating shaft concentrically arranged therewith, a series of propeller blades upon said shaft and in said casing, and a plurality of radially arranged guide blades located at one side of said propeller blades and attached to the interior of said casing at the open rear end portion thereof.

trically arranged with said casing, a series of propeller blades upon said shaft in said casing, and a plurality of radially arranged guide blades located at one side of said propeller blades and attached to the interior of the casing at the open rear end portion thereof.

4. In a propeller, the combination with a cylindrical casing provided with a plurality of holes in its peripheral portion, of a plurality of lids secured to said casing and being adapted to close said holes, an actuating shaft concentrically arranged with said casing, a series of propeller blades on said shaft and in said casing, and a plurality of guide blades radially arranged in said casing and attached thereto.

Signed at New York, in the county of New York and State of New York, this 16th day of October, A. D. 1909.

PETER KOVÁCS.

Witnesses:

SIGMUND HERZOG,
S. BIRNBAUM.