

No. 645,605.

Patented Mar. 20, 1900.

W. E. PUGSLEY.
SCREW PROPELLER.

(Application filed Aug. 4, 1899.)

(No Model.)

FIG. 1

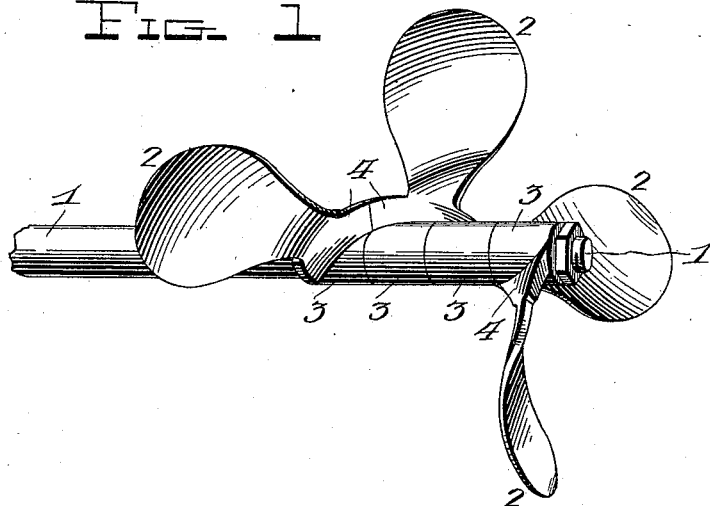
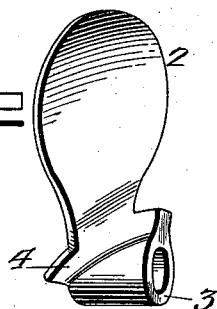


FIG. 2



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM EDWARD PUGSLEY, OF LINCOLN, NEBRASKA.

SCREW-PROPELLER.

SPECIFICATION forming part of Letters Patent No. 645,605, dated March 20, 1900.

Application filed August 4, 1899. Serial No. 726,082. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDWARD PUGSLEY, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Screw-Propellers; and I do 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.

My invention relates to a sectional screw-propeller for vessels; and the object is to improve the construction and increase the efficiency of the propeller and at the same time provide a means whereby a damaged blade may be replaced without sacrificing the entire propeller.

To these ends the invention consists in certain features of construction and combination of parts, which will be hereinafter more fully described and claimed.

In the accompanying drawings the same reference characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved sectional screw-propeller. Fig. 2 is a similar view of one of the blades detached from the shaft.

1 denotes the propeller-shaft, and 2 2 denote the counterpart blades, which are fixed or removably secured on the shaft in any approved manner, and as each blade and its hub are identical in construction the description of one will suffice for all of them. Each blade is provided with an integral hub 3 and an intervening spiral shoulder 4, which in the present instance is the one-fourth of a circle, so that when the blades are assembled on the shaft these spiral shoulders will form a complete thread around the hub or shaft and of a pitch corresponding to that of the blades.

An important advantage of a construction like this is that each blade revolves in its own plane, and consequently has the solid water behind it. Moreover, each blade by reason of its spiral shoulder gathering the water directly from the hub utilizes the full repelling-surface of the blade. Again, the blades can be made much larger in area without increasing the diameter of the propeller, and should one of the blades become damaged it can be replaced without sacrificing the uninjured ones.

In using this form of propeller on a twin-screw steamer of course the pitch will be reversed on one, as is usually the case.

The accompanying drawings show my invention in the best form now known to me; but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of my invention as set forth in the claim at the end of this specification.

Having thus fully described the invention, what I claim, and desire to secure by Letters Patent of the United States, is—

A propeller comprising a series of individual blades arranged to rotate in different planes and provided with independent hubs formed with spiral shoulders, the shoulder on the one hub forming a spiral continuation of the shoulder on the contiguous hub or hubs and the reduced shank of each blade forming a continuation of its contiguous shoulder, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM EDWARD PUGSLEY.

Witnesses:

GEO. E. TOBEY,
F. A. BOEHMER.