F. JACOB.

Propeller for Vessels.

No. 167,539. Patented Sept. 7, 1875.

Fig. 1.

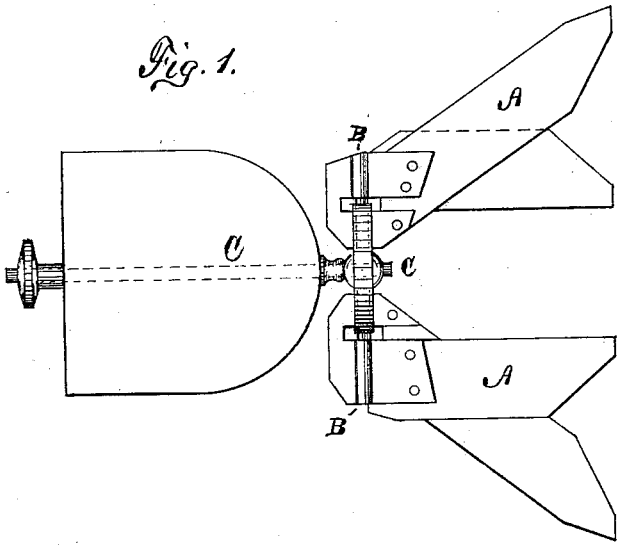
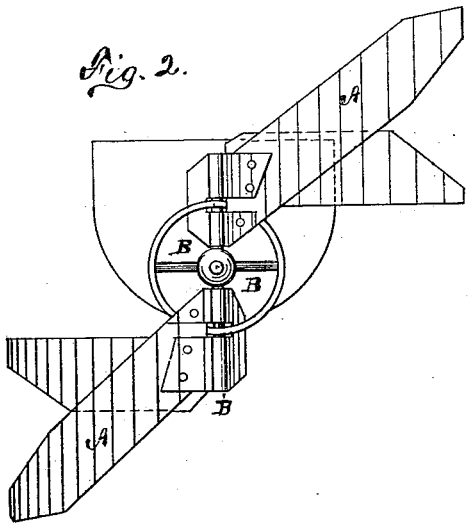


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK JACOB, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PROPELLERS FOR VESSELS.

Specification forming part of Letters Patent No. **167,539**, dated September 7, 1875; application filed August 26, 1875.

To all whom it may concern:

Be it known that I, FREDERICK JACOB, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Propellers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The nature and object of this invention is to overcome certain objections and defects in the construction of the ordinary screw-propeller, among which may be mentioned the immense weight of the screw, the enormous resistance to be overcome when a vessel is in motion, caused by the back water behind the screw, and the hinderance to the speed of a vessel when the screw is not in motion, &c.

My invention consists in certain new and useful improvements in the construction and operation of the screw, by means of which these advantages are gained, as will be hereinafter more fully set forth.

The accompanying drawing illustrates my invention, in which Figure 1 is a top or plan view of the stern portion of a vessel or propeller combining my improvements, and showing the position of the paddles or wings when the machinery is not in motion. Fig. 2 is a view taken from the stern end of the vessel, and showing the position of the paddles or wings when the machinery is in motion.

In carrying out my invention one or more paddles or wings may be used. In the former case an oscillating or rocking motion is given to the shaft carrying the paddles, and in the latter a revolving motion. The paddles or wings A—which should be made of suitable spring metal—are secured upon a shaft or shafts, B, not rigidly, but so as to oscillate from side to side to a given point, where the greatest propelling-power is attained, as clearly shown and indicated in Fig. 2.

As will be evident and readily understood, the moment the main shaft C is put in motion the paddles instantly and automatically assume the positions indicated in Fig. 2, and the moment it is stopped they assume the positions indicated in Fig. 1, thereby offering the least possible resistance to the forward motion of the vessel.

The paddles shown in the drawing are each composed of two plates, and of a peculiar form; but this is not essential, as the form may be changed, and one or more plates may be used in their construction. The shafts or arms B, upon which the paddles are adjusted, may be formed into a wheel, with said arms projecting beyond its periphery, as shown, or otherwise, as may be deemed best for strength and utility.

Having thus described my invention, what I claim as new is—

In a propeller, the automatically-adjustable paddles A, when constructed and arranged to operate substantially as and for the purposes set forth and shown.

In testimony that I claim the foregoing as my own invention I affix hereto my signature in presence of two witnesses.

FREDERICK JACOB.

Witnesses:

OLIVER DRAKE,

J. C. TUNBRIDGE.