

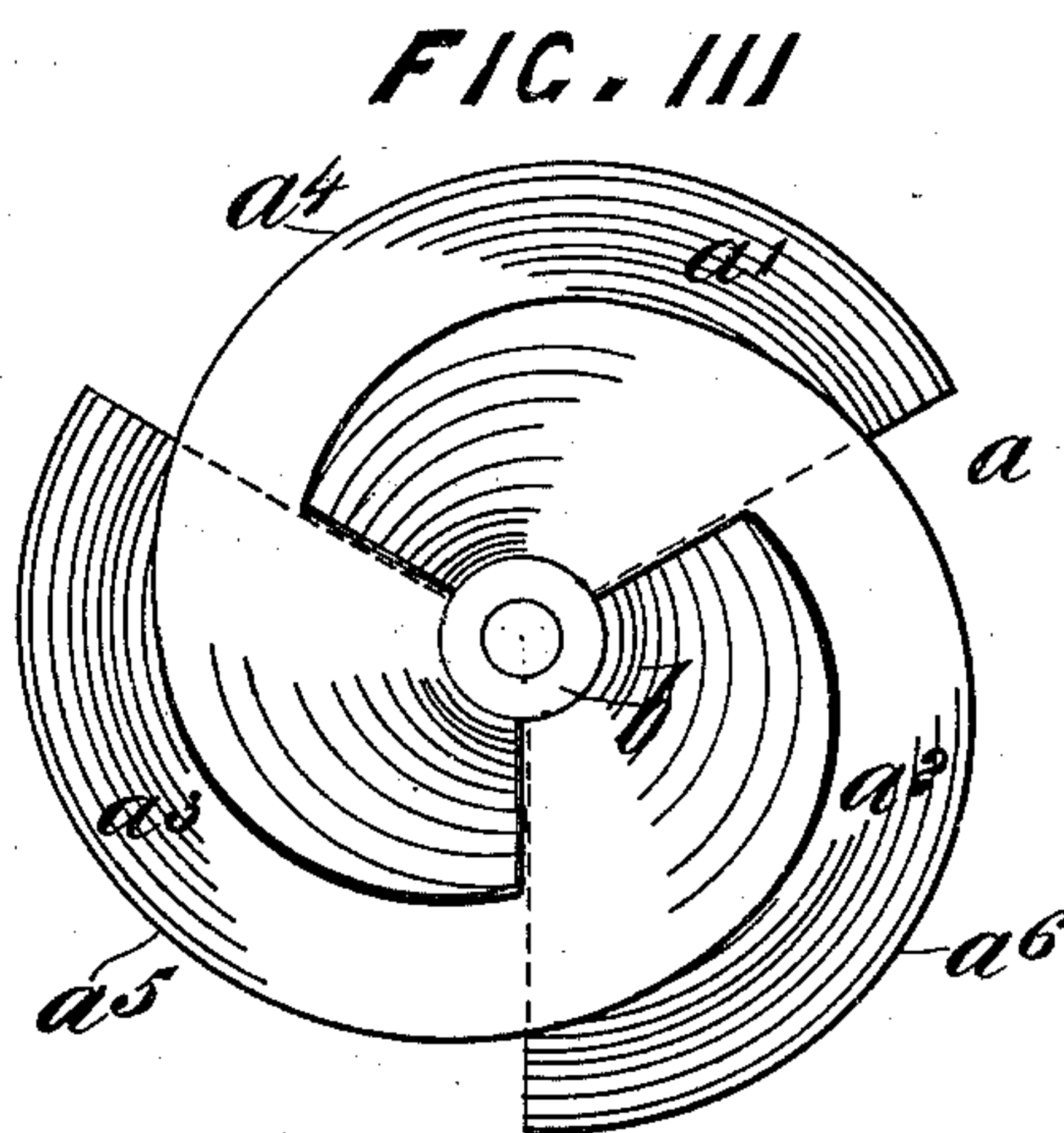
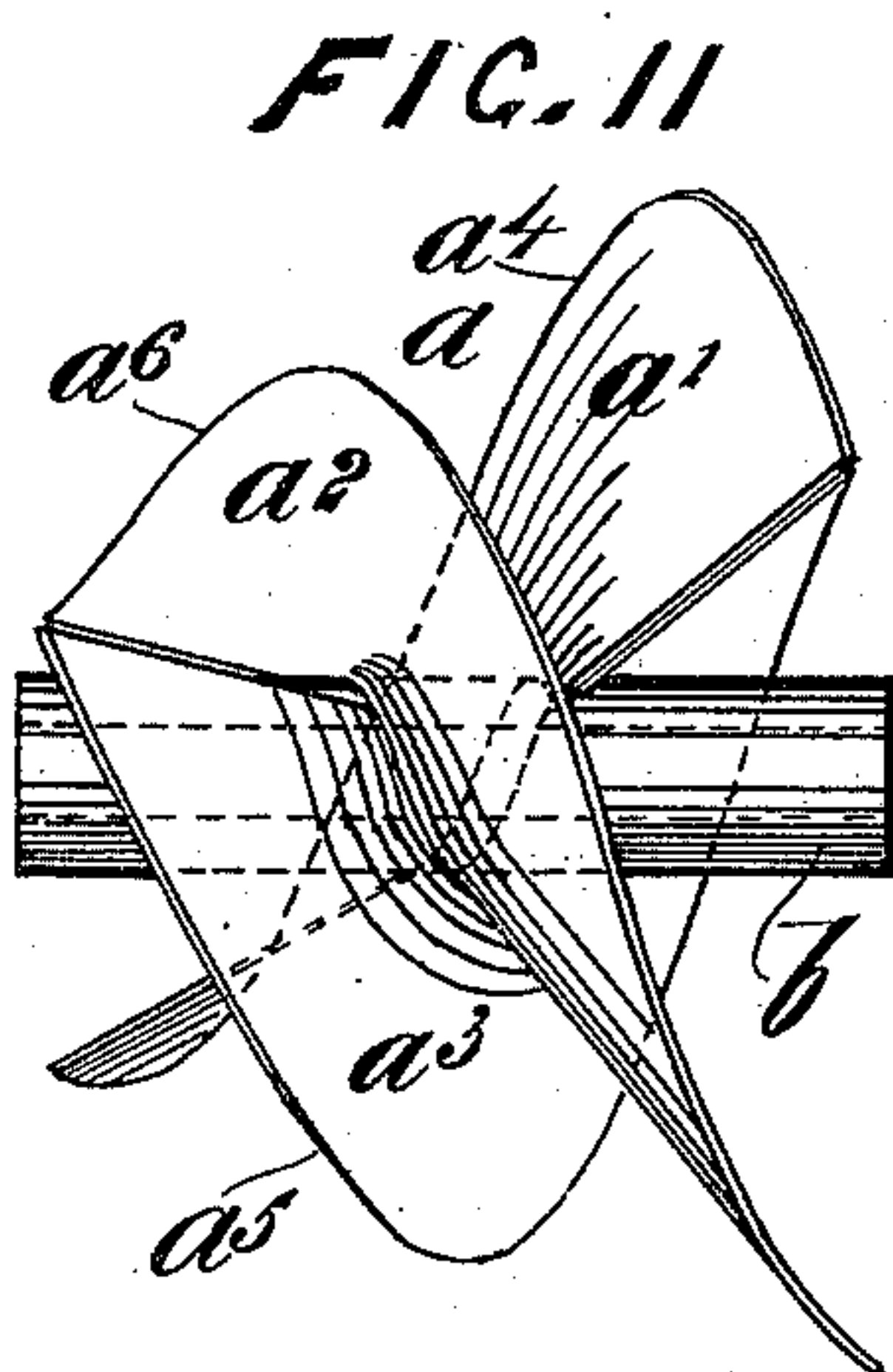
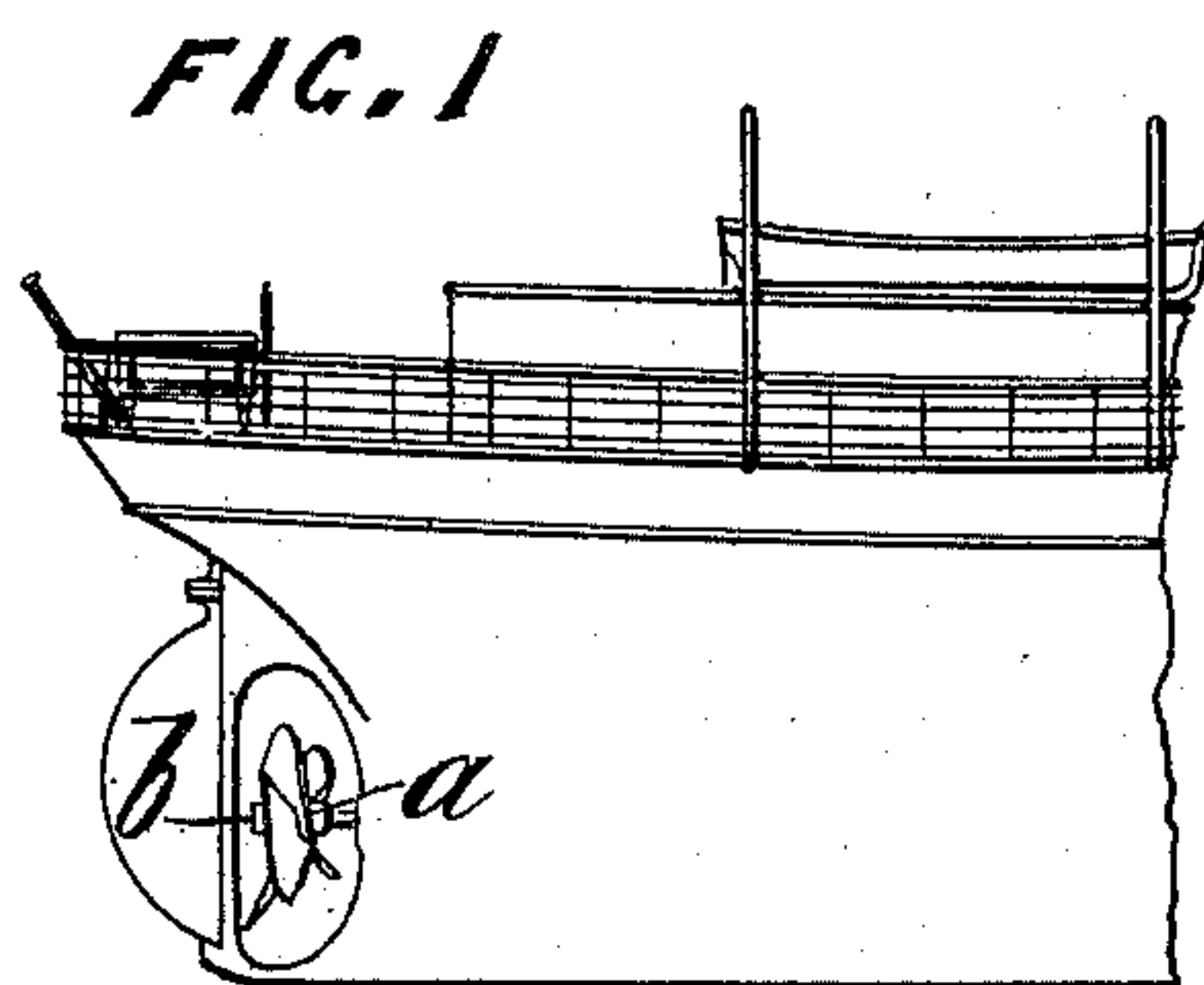
No. 639,134.

Patented Dec. 12, 1899.

J. A. BELK.
PROPELLER FOR SHIPS.

(Application filed Sept. 28, 1898.)

(No Model.)



Witnesses:
E. B. Bolton
Attorney

Inventor:
John Algen Belk

By Richard D. [Signature]
his Attorneys

UNITED STATES PATENT OFFICE.

JOHN ALGEN BELK, OF WELLINGTON, NEW ZEALAND.

PROPELLER FOR SHIPS.

SPECIFICATION forming part of Letters Patent No. 639,134, dated December 12, 1899.

Application filed September 28, 1898. Serial No. 692,090. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALGEN BELK, a subject of the Queen of Great Britain, residing at 54 Lambton Quay, Wellington, New Zealand, have invented an Improved Propeller for Ships and Boats, of which the following is a specification.

This invention relates to propellers used for driving steamships and the like through the water; and the object of the invention is to provide a propeller of high efficiency and whereby the jar and shaking to which vessels fitted with ordinary propellers are subjected are obviated and whereby a saving of steam, and consequently of fuel, ensues and racing of the engines avoided.

The propeller may be fitted to vessels at present constructed, the hulls being slightly altered to suit, if necessary.

A propeller constructed in accordance with my invention preferably has three blades arranged in the manner of a treble-threaded screw around the propeller-shaft. I may, however, employ four or more blades. The periphery of each blade is a portion of a spiral, the propeller thus being conical. The smaller diameter of the propeller is placed to lead and cut the water first.

The invention is illustrated on the attached drawings, to which reference will now be made for purposes of a detailed description.

Figure 1 is a view of the stern of a vessel with the propeller in position. Fig. 2 is a side view of the propeller on a larger scale. Fig.

3 is an end view of the same, looking at the leading end.

Similar letters refer to similar parts.

Referring to the drawings, the screw *a* has three or more blades *a'*, *a''*, and *a'''*, arranged and shaped as shown, their peripheries *a⁴*, *a⁵*, and *a⁶*, respectively, being spirals and expanding through two hundred and forty degrees approximately of a circle. The said blades are disposed around the boss *b* in the positions shown on Fig. 3. The propeller is placed in the usual stern-frame, and owing to its shape works with great smoothness and little vibration.

What I claim, and desire to secure by Letters Patent of the United States, is—

In combination with a propeller-shaft a conical screw-propeller adjusted upon said shaft with its smaller diameter leading, the propeller comprising three or more blades having spiral peripheries extending approximately through two hundred and forty degrees of a circle, each of the blades springing from points equidistant from the ends of the boss and all the said blades ending in points equidistant from the end of the boss, substantially as and for the purposes set forth herein.

In witness whereof I have hereunto subscribed my name, this 8th day of June, 1898, in the presence of two subscribing witnesses.

JOHN ALGEN BELK.

Witnesses:

A. S. COLLINS,
W. ALEXANDER.