

No. 685,089.

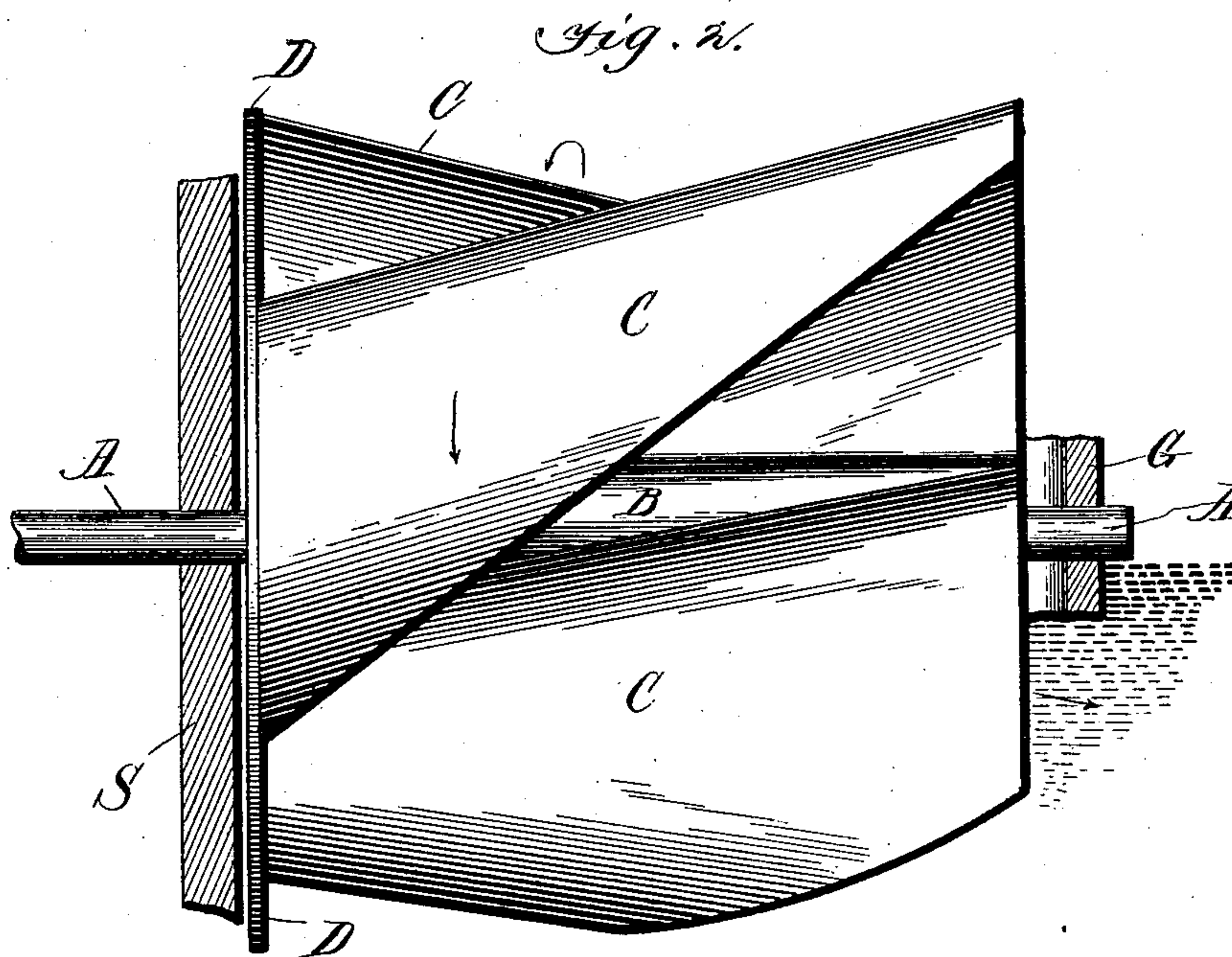
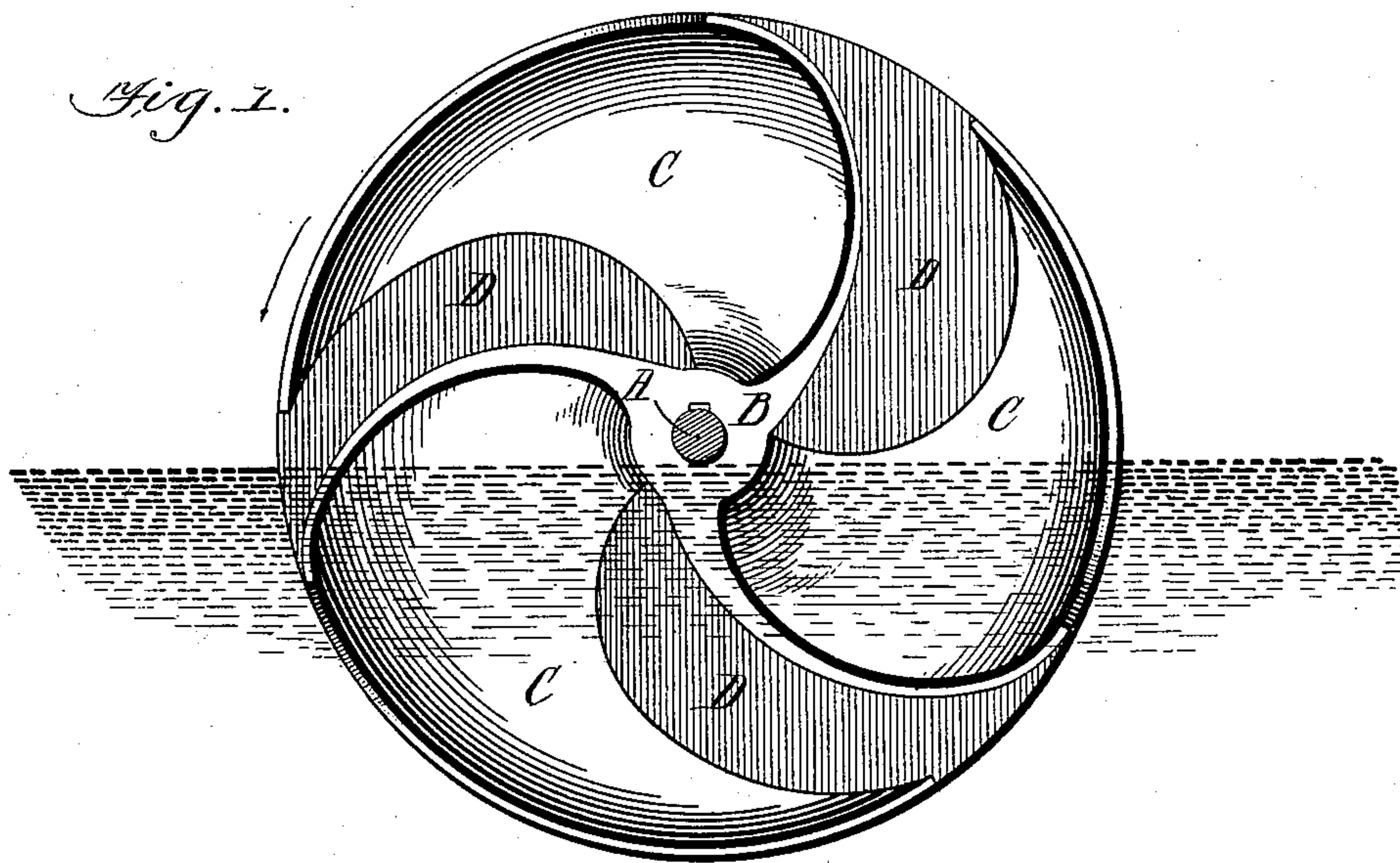
Patented Oct. 22, 1901.

J. BARNETT.
PROPELLER.

(Application filed June 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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INVENTOR

John. Barnett.

BY *Munn & Co.*

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2 Sheets—Sheet 2.

Fig. 3.

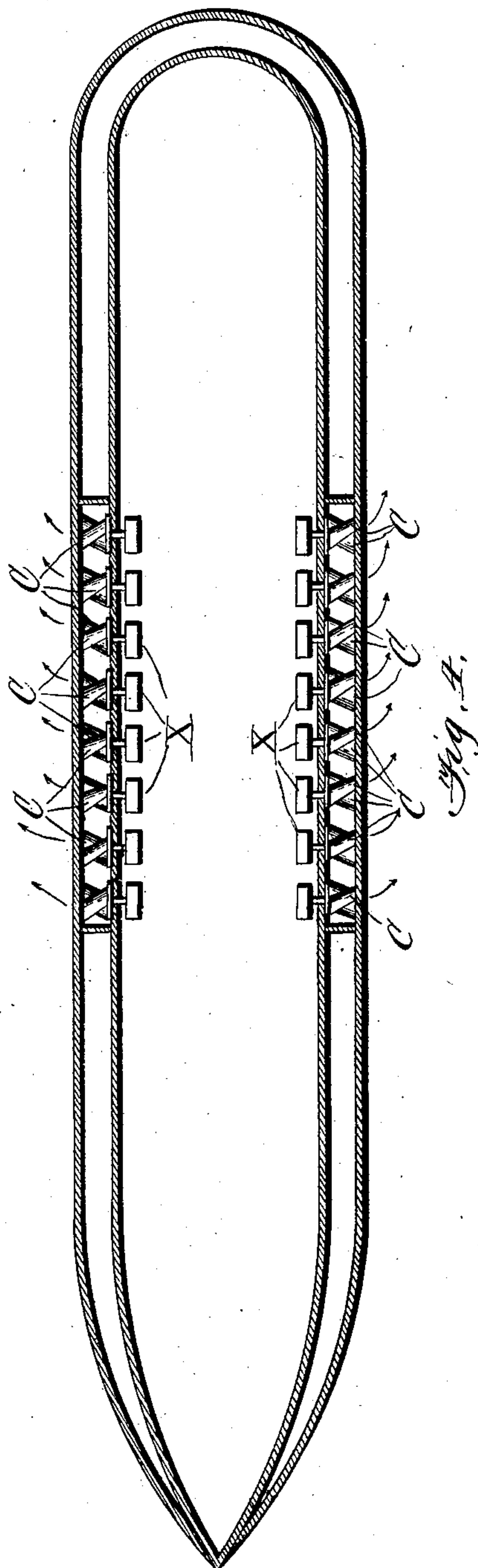
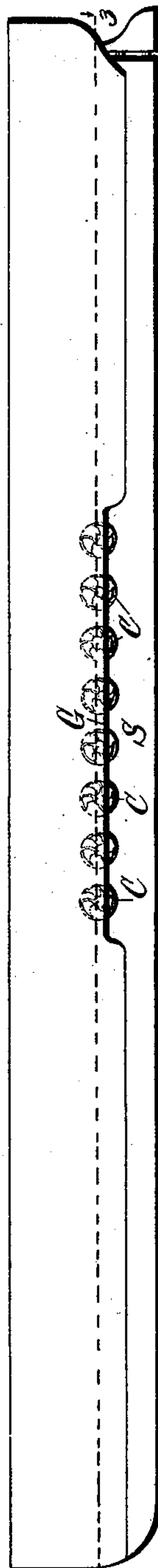


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN BARNETT, OF LOS ANGELES, CALIFORNIA.

PROPELLER.

SPECIFICATION forming part of Letters Patent No. 685,089, dated October 22, 1901.

Application filed June 29, 1901. Serial No. 66,507. (No model.)

To all whom it may concern:

Be it known that I, JOHN BARNETT, of Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Propellers, of which the following is a specification.

My invention is in the nature of a new form of propeller-wheel and its combination and arrangement with the coacting parts of a ship designed to secure the more efficient propulsion of the vessel and to be used in a series so arranged that the discharge of water from one propeller does not interfere with the effective action of the next propeller in the rear; and it consists in the peculiar construction and arrangement of the propeller, as will be hereinafter more fully described with reference to the drawings, in which—

Figure 1 is a view of the propeller-wheel looking endwise at it in relation to its axis and at right angles to the direction of movement of the ship. Fig. 2 is a side view of the propeller with the hull of the ship in section and looking in direction parallel with the longitudinal axis of the ship. Fig. 3 is a horizontal section on line 3 3 of Fig. 4 of a ship, showing a series of my propellers along each side; and Fig. 4 is a side view of a ship looking endwise into the propeller-wheels.

The axes of my propeller-wheels are arranged transversely to the ship after the manner of the paddle-wheel shaft, and the propeller-wheels act something like screw-propellers and something like paddle-wheels. They act like screw-propellers in that the blades have a spiral pitch and they act like paddle-wheels in that they are similarly placed in relation to the ship and are only about one-half immersed in the water, as seen in Figs. 3 and 4.

The construction of my propeller-wheel is best seen in Figs. 1 and 2, in which A represents its shaft, to which is attached a large disk D, made of boiler-iron and having extending from it as a base on one side three, more or less, blades C C C, which extend horizontally a distance somewhat greater than the diameter of the disk D. These blades C join onto a central hub B, fixed to the shaft, and wind spirally around the same in such direction that when rotated for a forward move-

ment they throw the water outwardly from the disk and away from the sides of the ship. The outer end of the shaft A turns in bearings in an overhanging guard-brace G, which runs longitudinally along each side of the ship. The inner end of each shaft A turns in a braced bearing in the ship, and on this portion of the shaft there is mounted the revolving armature of an electric motor, (shown at X,) which is the motive power which I prefer to employ, as it is proposed to run the propellers at a very high speed. I do not, however, confine myself to the use of electric power, as steam-turbines or even reciprocating engines may be employed.

My propellers are designed to be used in a series along each side of a ship, as shown in Figs. 3 and 4, and as they rotate they take the water in front and exert a pull on the same for forward propulsion; but instead of discharging water immediately in the rear, where it would produce frictional retardation against the sides of the ship and also render ineffective the propeller immediately behind it, my propeller throws its water away from the side of the ship, as shown by the arrows in Fig. 3. In this way each propeller acts somewhat like a paddle-wheel; but each has its full individual effect for forward propulsion without being interfered with by the discharge-water from the propeller-wheel immediately in front of it.

The disk D gives a base to render the long spiral blades stiff and strong and also compels the water to move outwardly in relation to the ship.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A propeller-wheel comprising a shaft having a rigidly-attached disk with spiral blades attached to said disk and winding around said shaft and having a free outward discharge away from the disk, substantially as described and for the purpose set forth.

2. A propeller-wheel comprising a shaft having a rigidly-attached disk with spiral blades attached to said disk and winding around said shaft and having a free outward discharge away from said disk, combined with a ship, the propeller-shaft being arranged

transversely to the ship with the disk arranged next to the side of the ship, substantially as described.

3. A propeller-wheel having a rigid disk at right angles to its axis and spiral blades connected thereto and winding around said axis with a free outward delivery, combined with the ship and an outer guard-brace, the propeller-wheel being located between the ship and guard-brace, substantially as described.

4. A propeller for a ship having its axis arranged transversely to the ship and having spiral blades partly immersed in the water and a rigid disk next to the ship, whereby it is made to act as a paddle-wheel and also as

a screw-propeller to throw the water away from the side of the ship, substantially as described.

5. The combination with a ship, of a series of propeller-wheels arranged upon each side of the same with their axes arranged transversely as described, said propellers being each constructed with a rigid disk next to the ship and rigidly-attached spiral blades having a free outward delivery away from the ship, substantially as described.

JOHN BARNETT.

Witnesses:

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