

903,592.

C. J. LOW.
POWER GENERATOR.
APPLICATION FILED JAN. 3, 1907.

Patented Nov. 10, 1908.

2 SHEETS—SHEET 1.

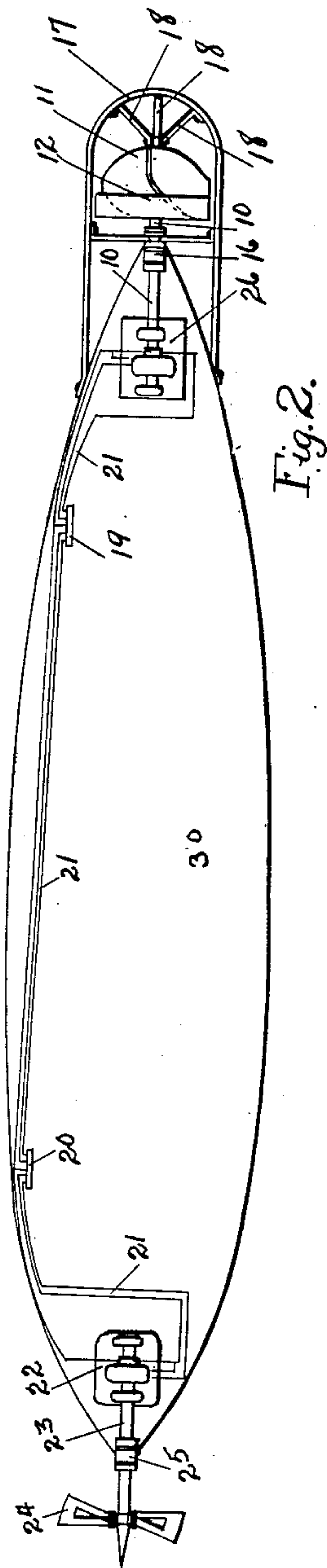


Fig. 2.

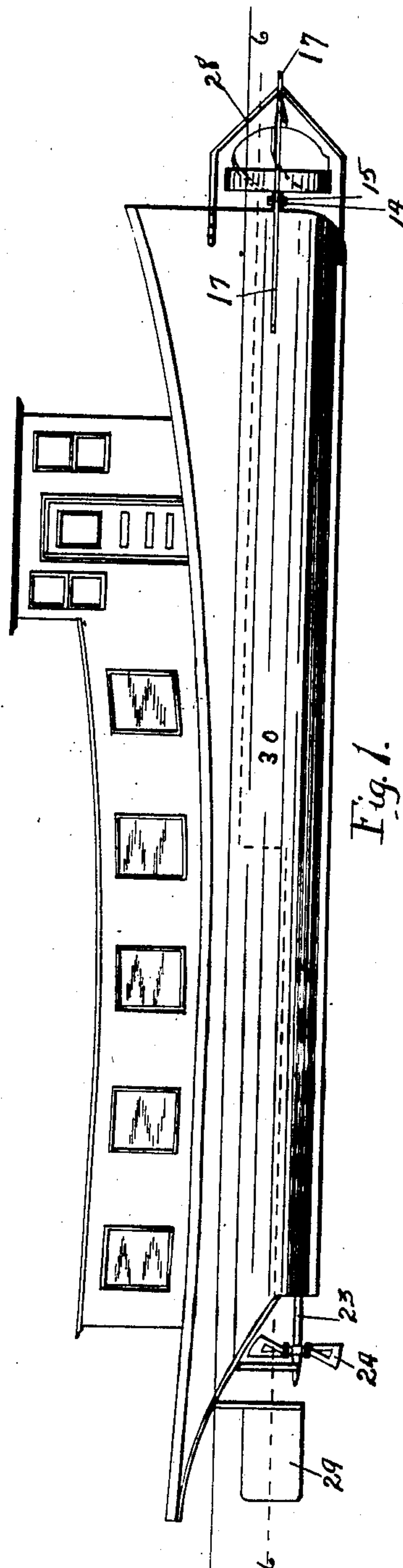


Fig. 1.

Witnesses:
Mary Sholderer
W. R. Sampson

Charles J. Low Inventor,
by L. L. Westfall
his Atty

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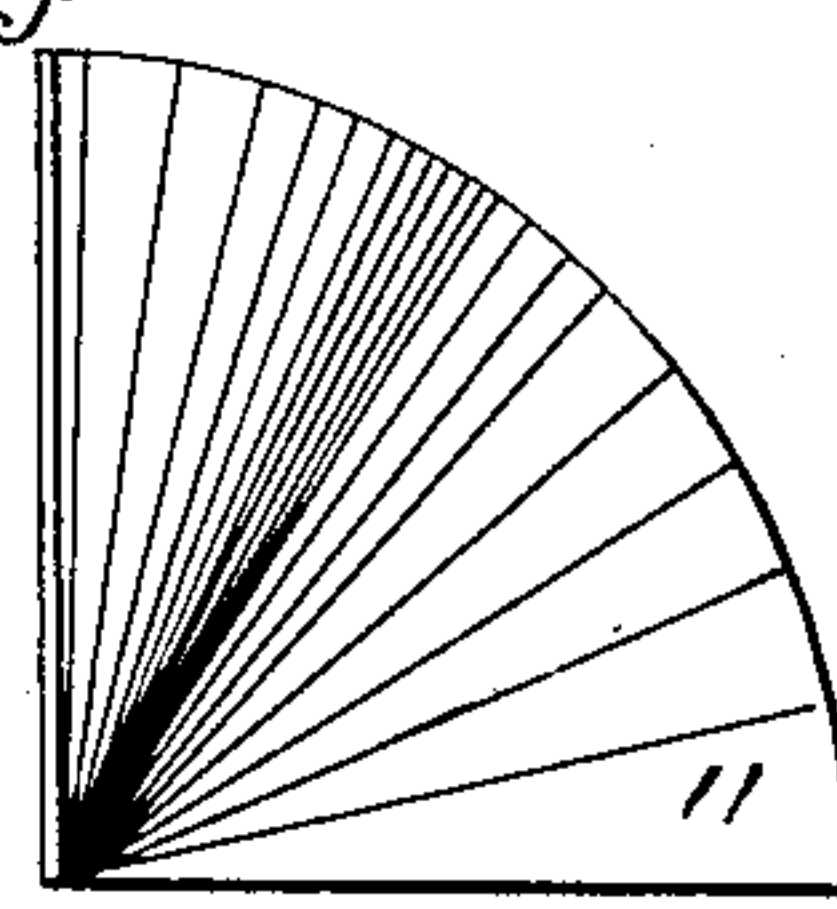
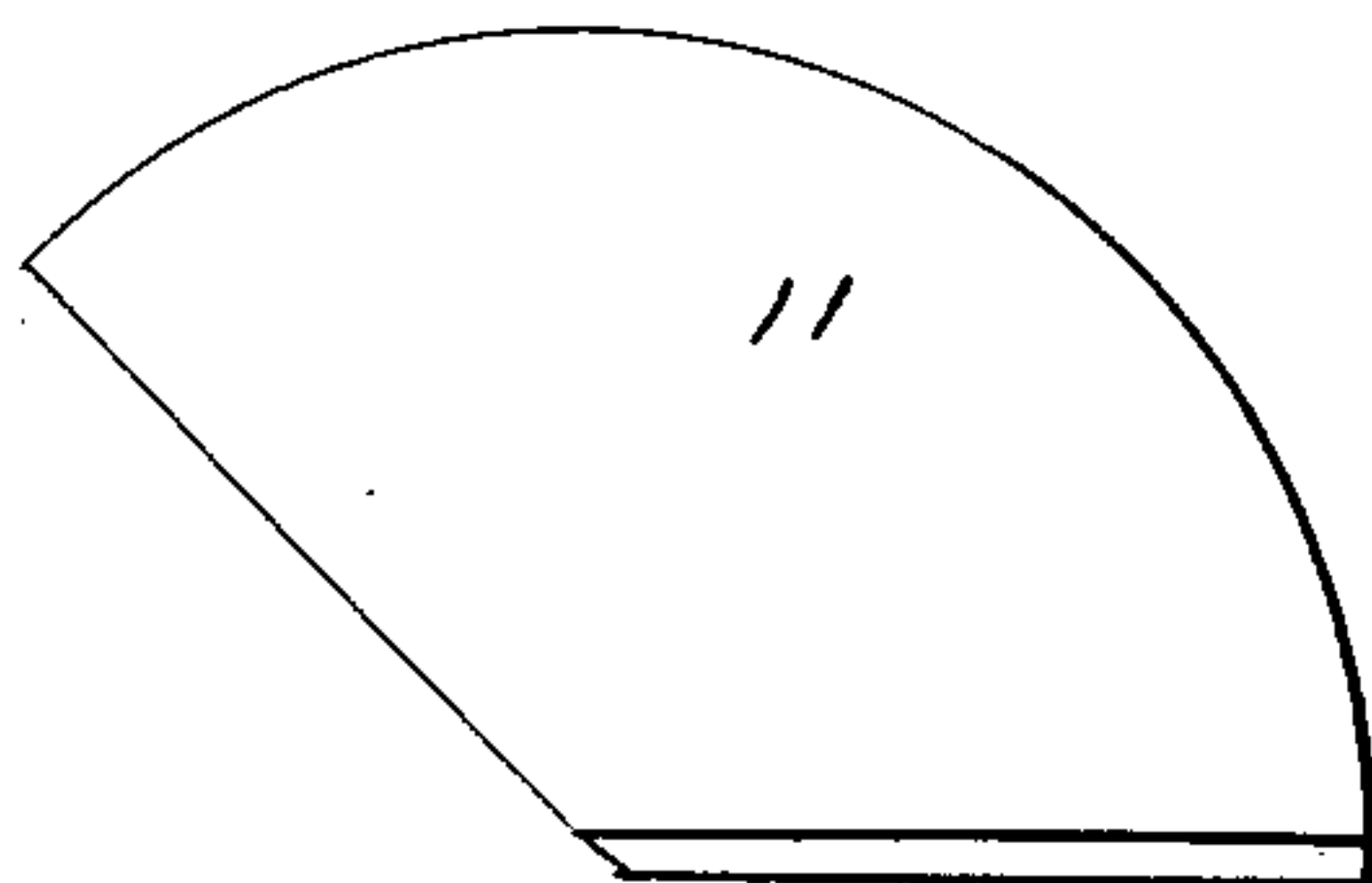
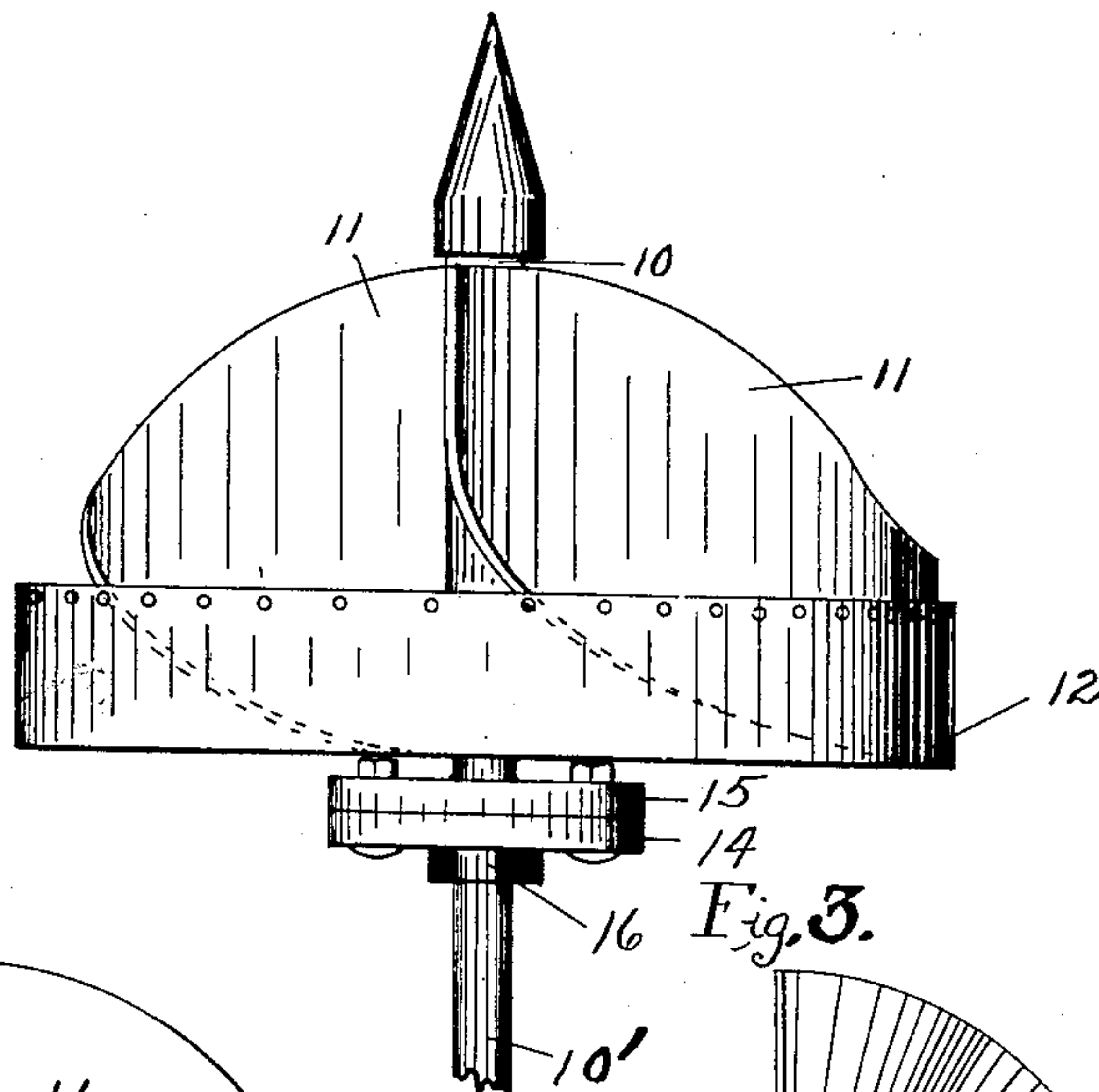
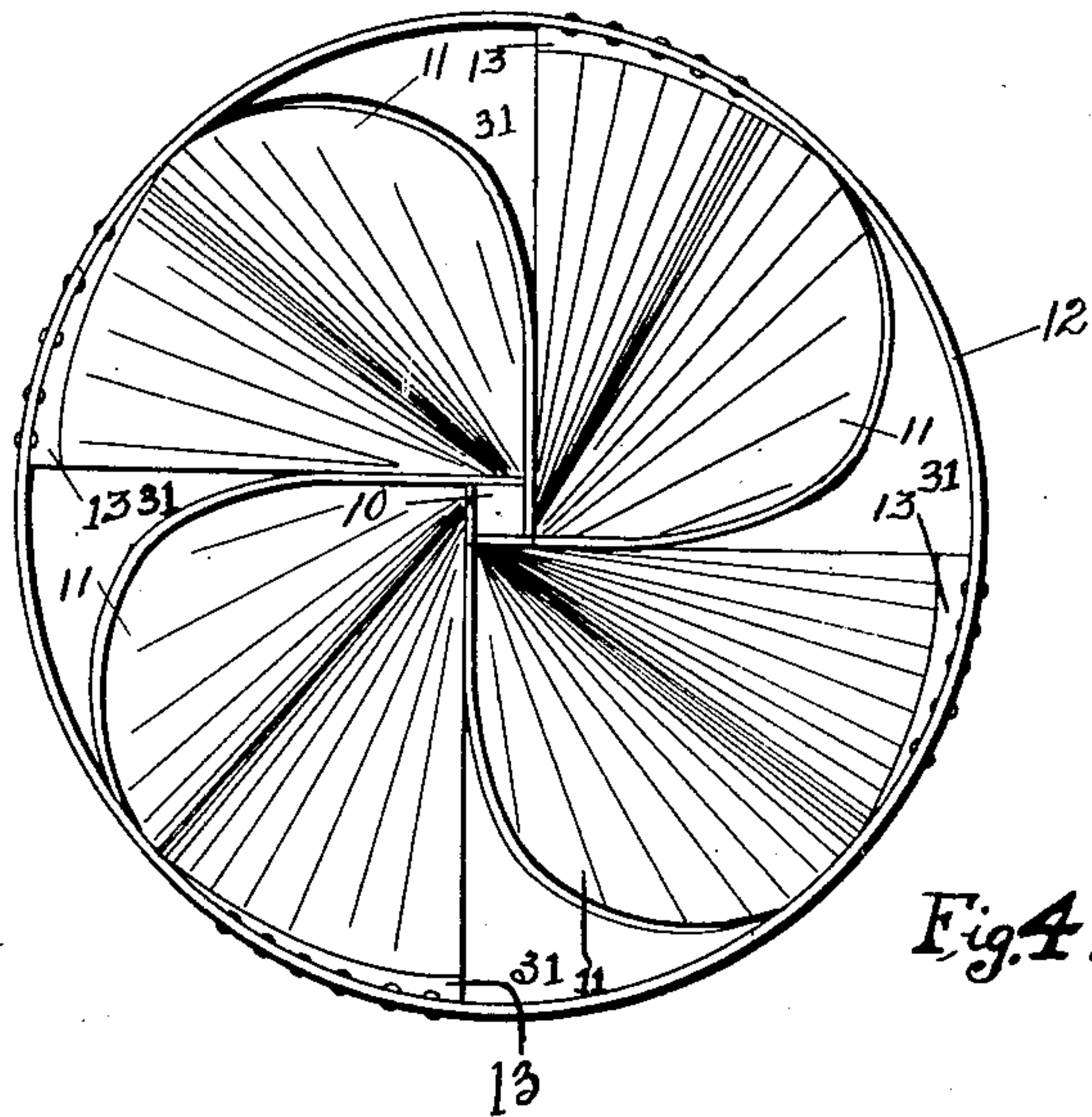


Fig. 5.

Fig. 6.

Witnesses:
Mary Sholderer,
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UNITED STATES PATENT OFFICE.

CHARLES J. LOW, OF CHELAN, WASHINGTON.

POWER-GENERATOR.

No. 908,592.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed January 3, 1907. Serial No. 350,695.

To all whom it may concern:

Be it known that I, CHARLES J. LOW, a citizen of the United States, residing at Chelan, in the county of Chelan and State of Washington, have invented certain new and useful Improvements in Power-Generators, of which the following is a specification.

My invention relates to a new article of manufacture and has for its object, to provide an apparatus to attach to a steamer or boat, that will gather power from the waves coming in contact with the steamer or boat and also convert into power the force effected by the resistance of the water to the traveling momentum of the vessel in its passage through the water.

Various and different processes may be adopted in effecting these purposes, but for the purpose of illustrating my invention, I have adopted a simple and effective means of applying my invention, which is shown in the accompanying drawings. I have applied the power gathered by the means shown, to generate electricity and in turn applied the electricity as an added power to the propelling apparatus of the boat. However, the power may be applied for any other useful purpose, such as for the purpose of furnishing lights for the illumination of the vessel and for a search light or for other purposes.

I have provided a system of cups or buckets arranged around a shaft, in the form of a wheel, and secured to the vessel at its bow and preceding the bow of the vessel in its forward movement. The apparatus is secured to the hull of the vessel by proper braces and guards, the shaft extending through the frame work of the hull at the bow of the boat. An electric generator is attached to the shaft inside the hull of the vessel. From this generator the electricity is conveyed by mesne process to a motor attached to the shaft of a screw-propeller at the rear of the vessel.

In the drawings, Figure 1 is a side elevation of a boat with the apparatus attached, Fig. 2 is a top plan view of the same taken on the line 6—6 of Fig. 1, Fig. 3 is a side elevation of the cupped wheel 12, Fig. 4 is a front elevation of the cupped wheel 12, Fig. 5 is a plan view of the cups 11 of the wheel 12 before they are curved and ribbed, Fig. 6 is a plan view of the cups 11 curved and ribbed and as used in the wheel 12.

In a detailed description of my invention

30 indicates the hull of a vessel, at the bow of which is secured the cupped wheel 12 upon a shaft 10. The shaft 10 is attached at its outer end to the guard 17, braces 18 radiating also from the shaft 10. Both guard 17 and braces 18 are secured to the hull of the vessel 30. The wheel 12 is provided with a system of cups 11 around the shaft 10, with openings 31 between the cups 11. Water or waves striking within the cups 11, would be forced through the openings 31 by the contact of the wheel 12 with the water, the revolving of the wheel 12 with the shaft 10, and with the assistance of the curved chutes of guides 13. The shaft 10 is made in two parts 10 and 10¹ and secured together by bolts at the plates 14 and 15. This is done in order to facilitate the placing, removing and replacing of the wheel 12. At the inner edge of the plate 14 I place the packing 16 to add to the firmness of adjustment of the parts. In the adjustment of the wheel 12 to the hull of the vessel 30 I aim to effect a setting of the wheel 12 so that a portion of the same will be above the water line, when in calm water. This is done in order to take full advantage of the force of the waves that strike the wheel 12 at the bow of the vessel. The wheel 12 is calculated to gather force from the waves striking the wheel as well as to form a vortex for the passage of the vessel, enabling the vessel to make swifter passage and economize on propelling force. The portion of the wheel 12 that is to be left above the surface of the water in its adjustment to the hull of a vessel may depend upon the roughness of the seas in which the vessel travels or upon other conditions and I reserve the right to vary this adjustment to suit conditions. In the plan of applying the power that may be developed by the revolutions of the wheel 12, as shown in the drawings, the shaft 10 is calculated to rotate with the wheel 12, and at the inner end of the shaft 10 I place a generator 26, calculated to generate electricity, which is conveyed by the wire 21 to the switch board 19, thence by wire 21 to the motor 22, which motor 22 is secured to the shaft 23 bearing the screw propeller 24. The shaft 23 passes through the packing 25. This means of applying the power may be of ordinary construction or otherwise, the purpose here being simply to show a plan whereby the power may be applied. Upon

the drawing I have shown a rudder 29 simply to complete a side elevation of the hull 30 of a vessel but the same has no particular significance in so far as my invention is concerned.

For the purpose of more effectively gathering force from the water, I have made the cups very wide and have also made the rim of the wheel wide to more effectively confine the water and force the same through the openings between the cups and to the rear of the wheel.

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

1. In combination with a boat, a guard 17, and radiating braces 18, secured to the hull of the boat; an axle 10—10¹, rotatably secured in said guard, and in the front end of the boat; a wheel 12, consisting of cups 11, and a rim rigidly secured on said axle; plate 15, secured on the rear end of the front part of said axle 10, and at right angles thereto, and a plate 14, secured on the front end of the rear part 10¹, of said axle, said parts secured together; a washer 16, surrounding said axle, and abutting against the rear face of said plate 14; an electric generator 26, situated in the front end of said boat, and adapted to be

operated by said axle; a wire 21, having one end connected to said generator, its other end passing backwardly through switchboards 19 and 20, and adapted to be connected to a motor, substantially as shown and described and for the purpose set forth.

2. In combination with a boat, a guard secured to the hull and front end of said boat, and extending forwardly; an axle, having its front end journaled in said guard, its rear end extending backwardly and journaled in the front end of said boat; a wheel, consisting of a rim and a system of cups, said cups arranged to leave between them openings for the passage of water; an electric generator, situated in the front end of the boat, and operated by the axle of said wheel; a wire connected to said generator, its rear end passing backwardly, conveying an electric current to a motor, substantially as shown and described and for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

CHARLES J. LOW.

Witnesses:

L. L. WESTFALL,
MARY SHOLDERER.