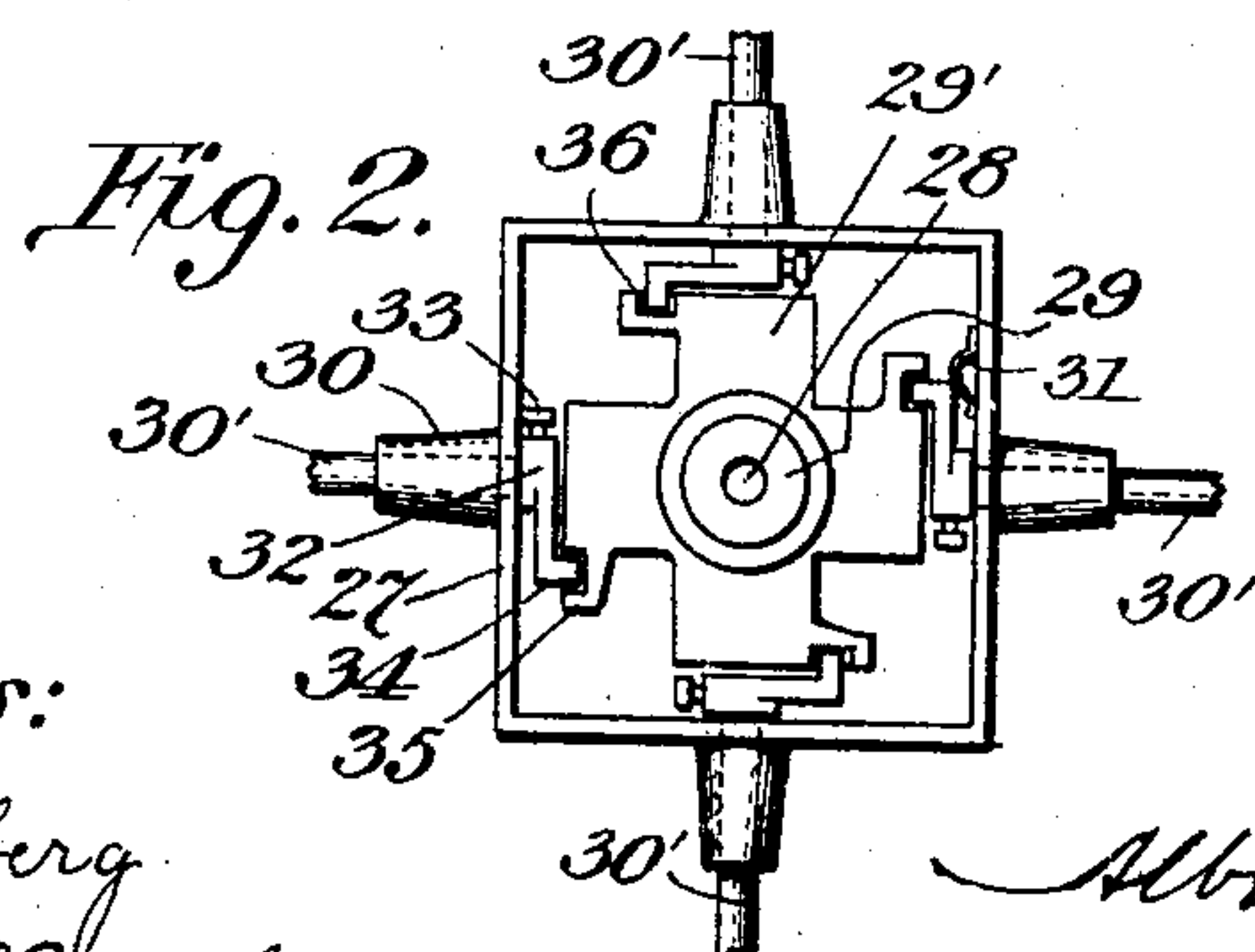
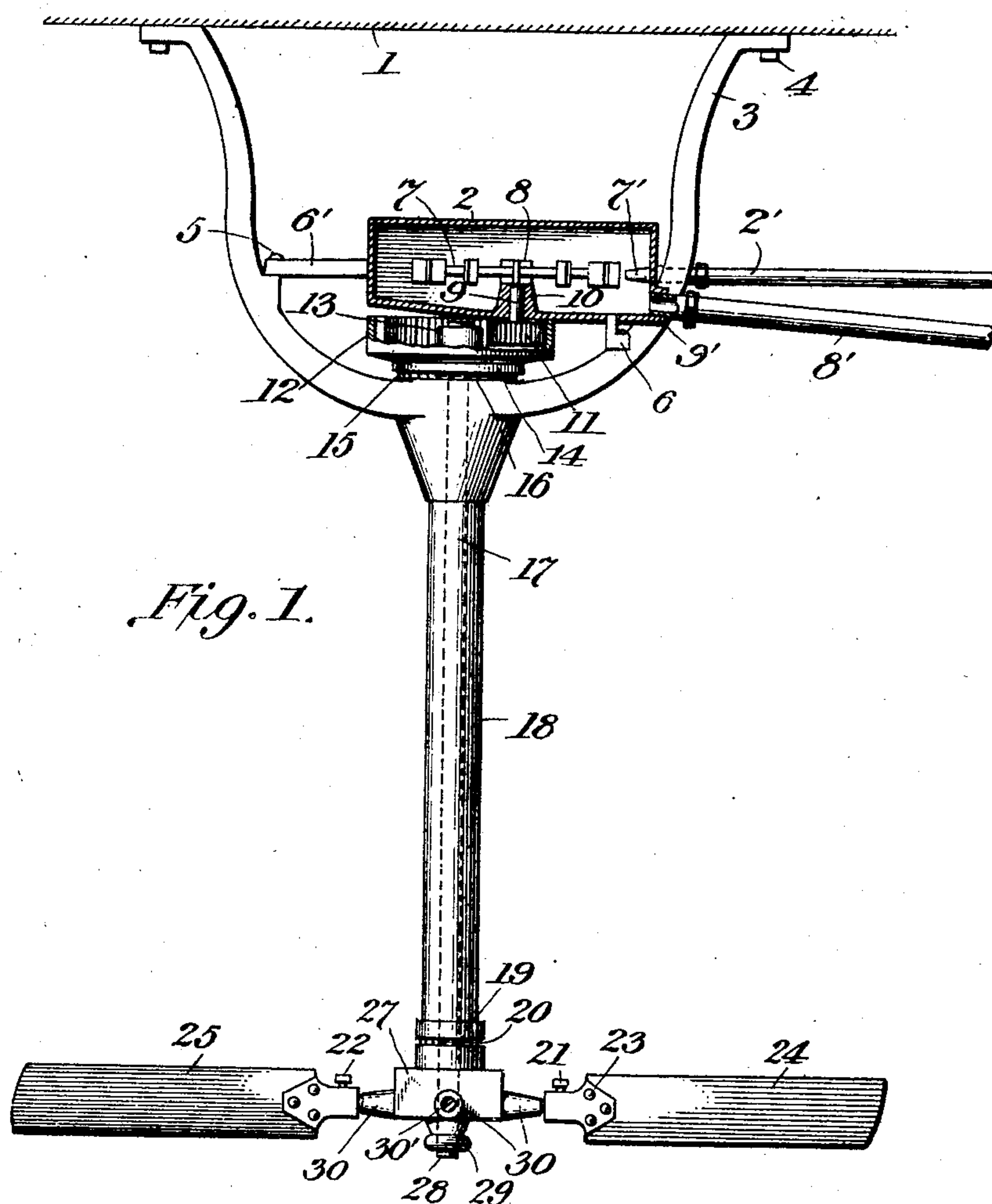


No. 864,265.

PATENTED AUG. 27, 1907.

A. ROSENBERG.  
CEILING FAN.

APPLICATION FILED JULY 20, 1906.



*Witnesses:*

J. D. Rosenberg.  
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# UNITED STATES PATENT OFFICE.

ALBERT ROSENBERG, OF BALTIMORE, MARYLAND.

## CEILING-FAN.

No. 864,265.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed July 20, 1906. Serial No. 327,041.

*To all whom it may concern:*

Be it known that I, ALBERT ROSENBERG, (business address 629 North Carey street,) a citizen of the United States of America, and a resident of Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Ceiling-Fans, of which the following is a specification.

This invention relates to fans suspended from ceilings and has for its objects to provide a new and improved ceiling fan, to provide a ceiling fan operated by water pressure, to provide means for attaching the fan and motor to the ceiling; to provide a novel means for adjusting the blades of the fan, and to provide a means for simultaneously adjusting or reversing any number of blades attached to a ceiling fan.

To these ends my invention consists in the features and in the construction, arrangement, or combination of parts hereinafter described, and pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1—is a side elevation of my improved ceiling fan showing only two blades in position, with the motor and parts in section. Fig. 2.—is a plan view of the device for adjusting and reversing the blades of the fan.

Referring to the drawings, the numeral 1 indicates a ceiling of a room, to which is secured the water motor 2 attached to the hanger 3 by its legs 6 and 6'. The bolt 5 secures the leg 6 to the hanger, and bolt 4 secures the hanger to the ceiling.

7 is the water wheel attached by its hub 8 to its spindle 9 which it revolves in the journal 10 when the water is let into the nozzle 7' from the supply pipe 2'. After the water has done its work it will flow out of and away from the motor, by the outlet 9' attached to the outlet pipe 8' attached to any rainspout or drain. The spindle 9 extends through the bottom of the motor and has secured to it a pinion 11 which meshes with an internally cut gear 12 secured by its hub 13 to the spindle of the fan 17 indicated by the dotted lines.

14 is a flange on the gear 12 under which the balls 15 revolve to relieve the friction, the said balls run in a race on the bearing of the hanger 16.

18 is a casing to which is secured the hanger at one end and at the other end the bearing 19 which serves to steady the spindle 17.

The upward thrust of the fan is taken up by the balls 20.

The box 27 is rigidly secured to the spindle 17 and integral with the socket 30 in which the pins 30' rock to adjust the blades 24 and 25 secured by the bracket 23 and the set screws 21, 22 to the pins 30'. The pins 30'

extend inside of the box 27 and each pin is attached to a crank 32 by the screw 33. The crank 32 is provided with a handle or projection 34 which fits into a recess 36 in the arms 35 of the sliding adjuster 29' attached to the knob 29. The sliding adjuster 29' has a vertical movement on the spindle 17 and is prevented from falling off by the ferrule 28 on the end of the spindle 17.

31 is a suitable spring catch to hold the adjuster or the crank after it has been adjusted.

It is obvious that the handle 34 and the recess 36 can be reversed, the handle may be cast integral with the adjuster and the recess cast into the crank.

I do not care to limit myself to any particular construction. I may connect the spindle of the motor direct to the spindle of the fan, by moving the motor so the spindles will be in line.

Having described my invention, what I claim is:—

1. The combination with a support and a spindle depending from and journaled in said support, of a motor removably secured to said support and adapted to rotate said spindle, substantially as described.

2. The combination with a support and a spindle depending from and journaled in said support and fan blades secured to one end of said spindle, of a motor removably secured to said support and adapted to rotate said spindle, substantially as described.

3. The combination with a support, a spindle depending from and journaled in said support and fan blades secured to one end of said spindle, of a motor provided with a casing having an inlet and outlet removably secured to said support, substantially as described.

4. The combination with a support and a spindle journaled in and depending from said support, of a motor removably secured to said support and a pinion secured to said motor, a hollow flange secured to said spindle and the inner surface of said hollow flange adapted to be engaged by said pinion, substantially as described.

5. The combination of a support and a fluid-operated motor provided with an inlet and outlet secured to said support, a rotatable spindle journaled in and depending from said support, a hollow flange secured to said spindle between the motor and said support, a pinion secured to said motor and adapted to engage the inner surface of said flange, whereby the said spindle is rotated, substantially as described.

6. The combination with a spindle and a support therefor, of a motor removably secured to said support and adapted to rotate said spindle, and a hollow flange secured to said spindle, the inner surface of which is engaged by a pinion secured to said motor whereby said spindle is rotated, substantially as described.

7. The combination with a spindle and a support therefor, of a motor removably secured to said support, a pinion secured to and rotated by said motor, a hollow flange secured to said spindle the inner surface of which is engaged by said pinion, and a series of balls or rolls between the flange and the support, substantially as described.

8. The combination with a spindle and a support therefor, of a motor provided with a casing and removably secured to said support, said motor being provided with a



spindle extending outside of said casing, a pinion secured to said motor spindle, a hollow flange secured to the spindle between the casing and the support the inner surface of said hollow flange being engaged by said pinion, substantially as described.

5 9. The combination with a support and a spindle journaled in and depending from said support, a casing removably secured to said support, a rotor inside of said casing secured to a spindle projecting outside of said casing, a pinion secured to said motor spindle, an inlet and

outlet to said casing, a hollow flange secured to the former spindle the inner surface of which is engaged by said pinion, substantially as described.

Signed by me at Baltimore city this 19th day of July, 1906.

ALBERT ROSENBERG.

Witnesses:

S. McDONNELL,

J. D. ROSENBERG.