

No. 706,086.

Patented Aug. 5, 1902.

P. MULLER.
BRAKE CONTROLLER.

(Application filed Dec. 4, 1901.)

(No Model.)

Fig. 1.

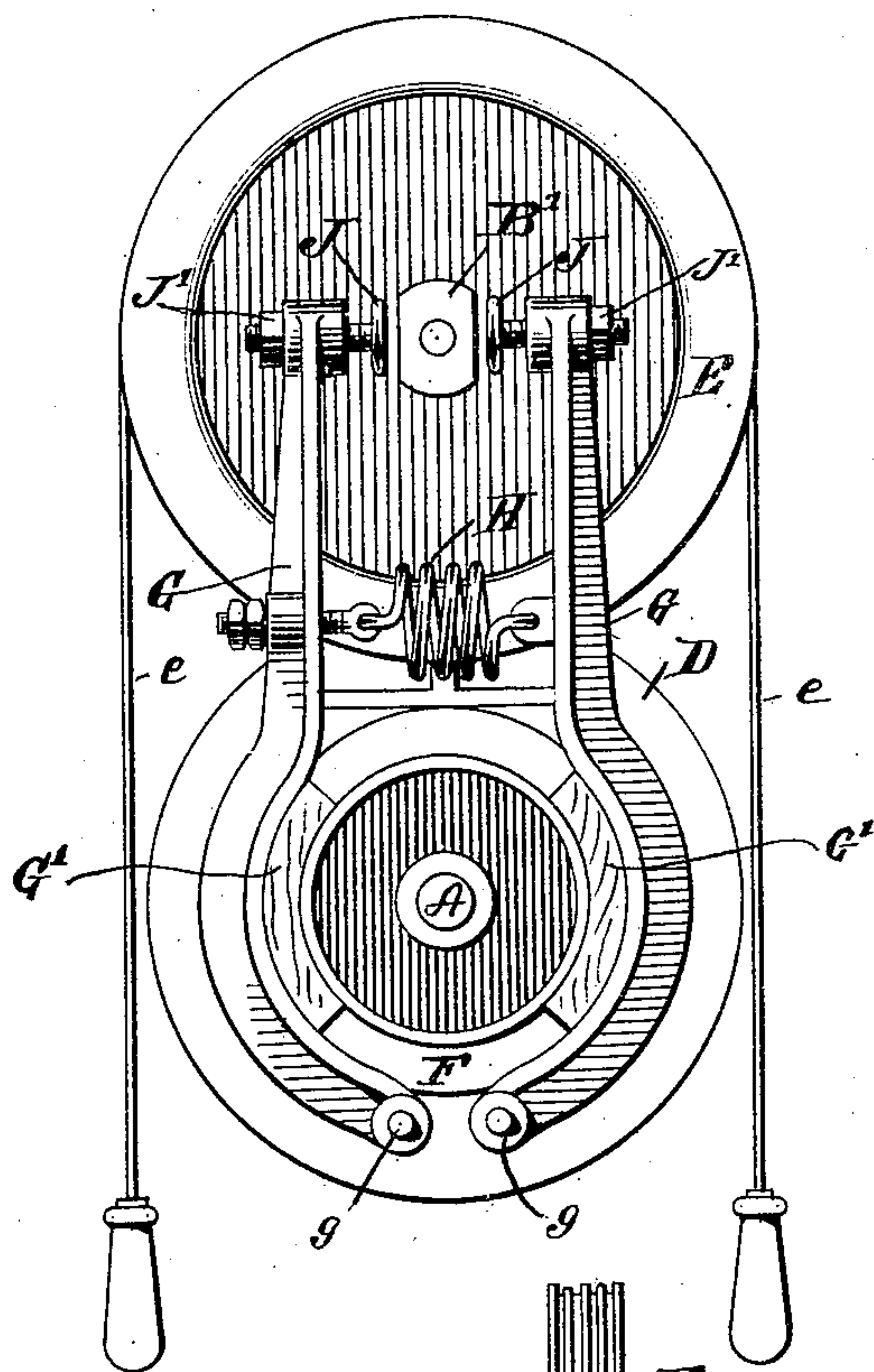
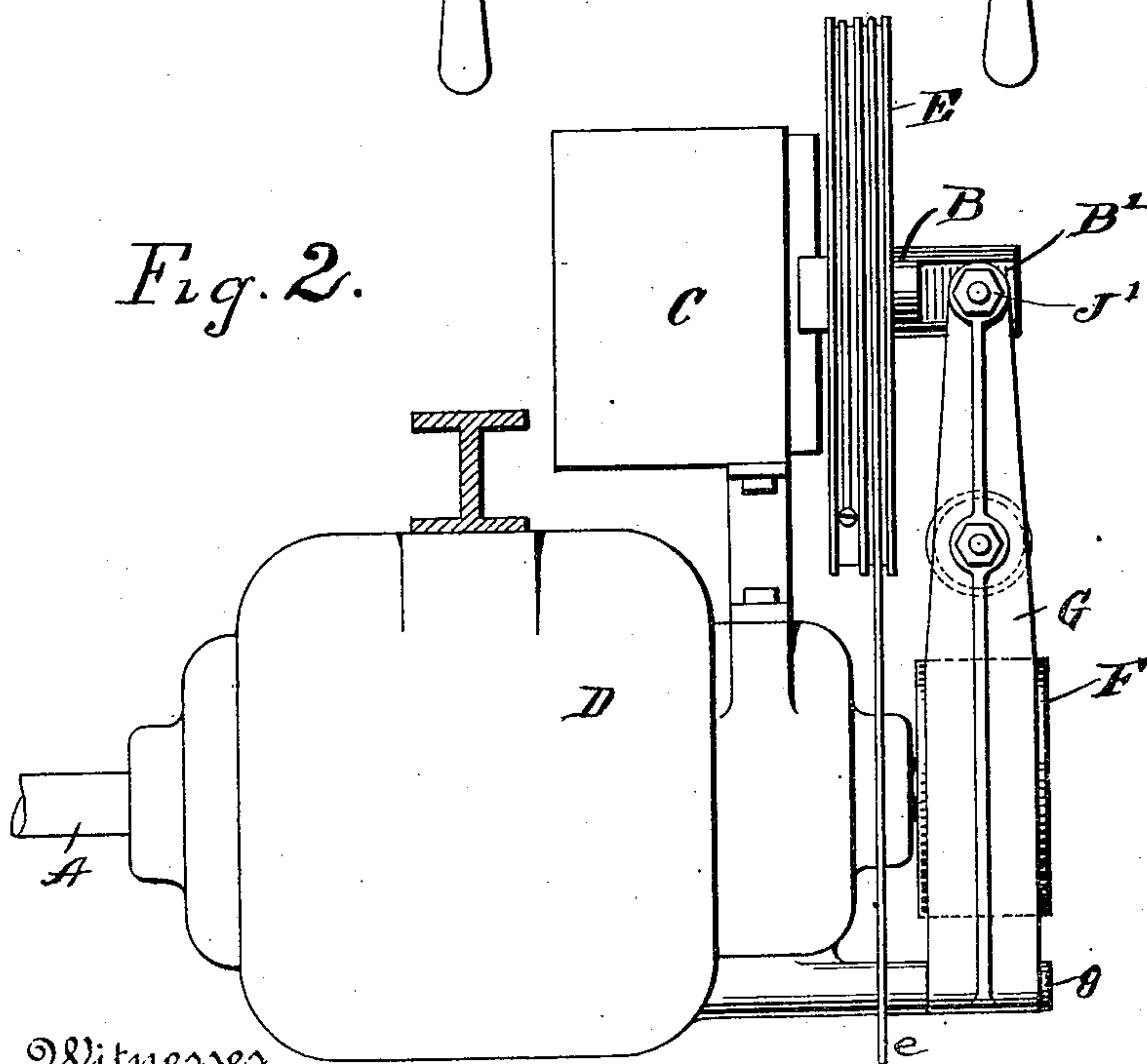


Fig. 2.



Witnesses
Frank A. Oyster
R. B. Allen

Inventor :-
Paul Muller,
By his Attorney
R. B. Allen

UNITED STATES PATENT OFFICE.

PAUL MULLER, OF NEWARK, NEW JERSEY, ASSIGNOR TO SPRAGUE ELECTRIC COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

BRAKE-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 706,086, dated August 5, 1902.

Application filed December 4, 1901. Serial No. 84,621. (No model.)

To all whom it may concern:

Be it known that I, PAUL MULLER, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Brake-Controllers, of which the following is a full, clear, and exact description.

My invention relates to brake and controlling mechanism for rotating shafts, and particularly to a unitary method of control therefor.

It consists in providing a brake mechanism for a rotating shaft which shall be set in operation by the same means which operates the controller for the motive power for the shaft.

The object of this invention is to secure an efficient, simple, and reliable mechanism whereby a brake may be applied to a moving shaft to limit its movement when the driving power has been turned off. It has been found especially useful in connection with an electrically-driven hoist, and I have herein shown a construction which meets such requirements; but it is obvious that its field of usefulness is not so limited.

In the drawings, Figure 1 is an end elevation of an adaptation for use with a hoisting mechanism. Fig. 2 is a side elevation of the parts shown in Fig. 1.

A is a power-driven shaft.

B is a second shaft, upon which a controller C is mounted for the motor D. Inasmuch as the controller and the motor may be of any approved form, they are here shown conventionally. The controller itself may be conveniently operated by a drum E and cords *e e*.

The shaft A is provided with a brake-pulley F. At *g g* are mounted brake-arms G G for applying the brake-shoes G' G'. The brakes are normally drawn into contact with the brake-pulley F by the spiral spring H. In the preferred construction the brake-arms are provided at the free end with cam-followers J J, which may coact with the cam B' on the controller-shaft, so that when the controller is rotated the brakes are retracted and the motor-shaft released. When the motive power is cut off by revolving the controller

to its zero position, the cam rotates to the position shown in Fig. 1 and allows the brake-arms to operate, thus applying an immediate breaking action to the drum 7 and shaft A. I have found it a reliable and simple method to work the cam out of the end of the controller-shaft, and thus form the cam integral therewith. The cam-followers are made, preferably, adjustable by means of the check-nuts J' J', so that when the brake-blocks wear down the proper action of the release may be attained.

As has been stated, the normal position of the controller is as shown. When the controller is turned in one direction to start the motor ahead, the brake is released and rotation of the shaft permitted. When the controller is released, it may be allowed to return to its normal or zero position by the action of a spring of the well-known spiral type, too well known to require illustration. The operation is clearly the same upon reversing the controller and motor.

What I claim is—

1. A brake mechanism comprising a motor-driven shaft, a brake-pulley, spring-actuated brake-arms, adjustable followers carried thereby, a controller-shaft and cam thereon adapted to release said brakes when power is applied and vice versa.

2. A brake mechanism comprising a motor-shaft, a self-acting brake therefor, a controller for said motor, a cam carried by said controller and adjustable means carried by said brake coacting with said cam so that when said motor is started said brake is released and when the power is turned off said brake is applied.

3. A controlling mechanism for rotatable shafts comprising, a motor-driven shaft, a brake-wheel for said shaft, a controller for said shaft, a cam carried by said controller, a brake-arm pivoted at one end and carrying a brake-shoe adapted to coact with said brake-wheel, means for normally holding said brake-shoe in contact with said brake-wheel, and a stop carried by said brake-arm adapted to coact with said cam.

4. A controlling mechanism for a motor-

driven shaft comprising a motor-driven shaft,
a brake-wheel carried thereby, a controller
for said motor-shaft, a cam carried by said
controller, brake-arms normally drawn into
5 engagement with said brake-wheel by a spiral
spring connecting the two arms together, and
means for operating said controller.

Signed at East Orange, New Jersey, this
25th day of November, 1901.

PAUL MULLER.

Witnesses:

T. FRALEY BAKER,
ROGER H. BUTTERWORTH.