

No. 728,974.

PATENTED MAY 26, 1903.

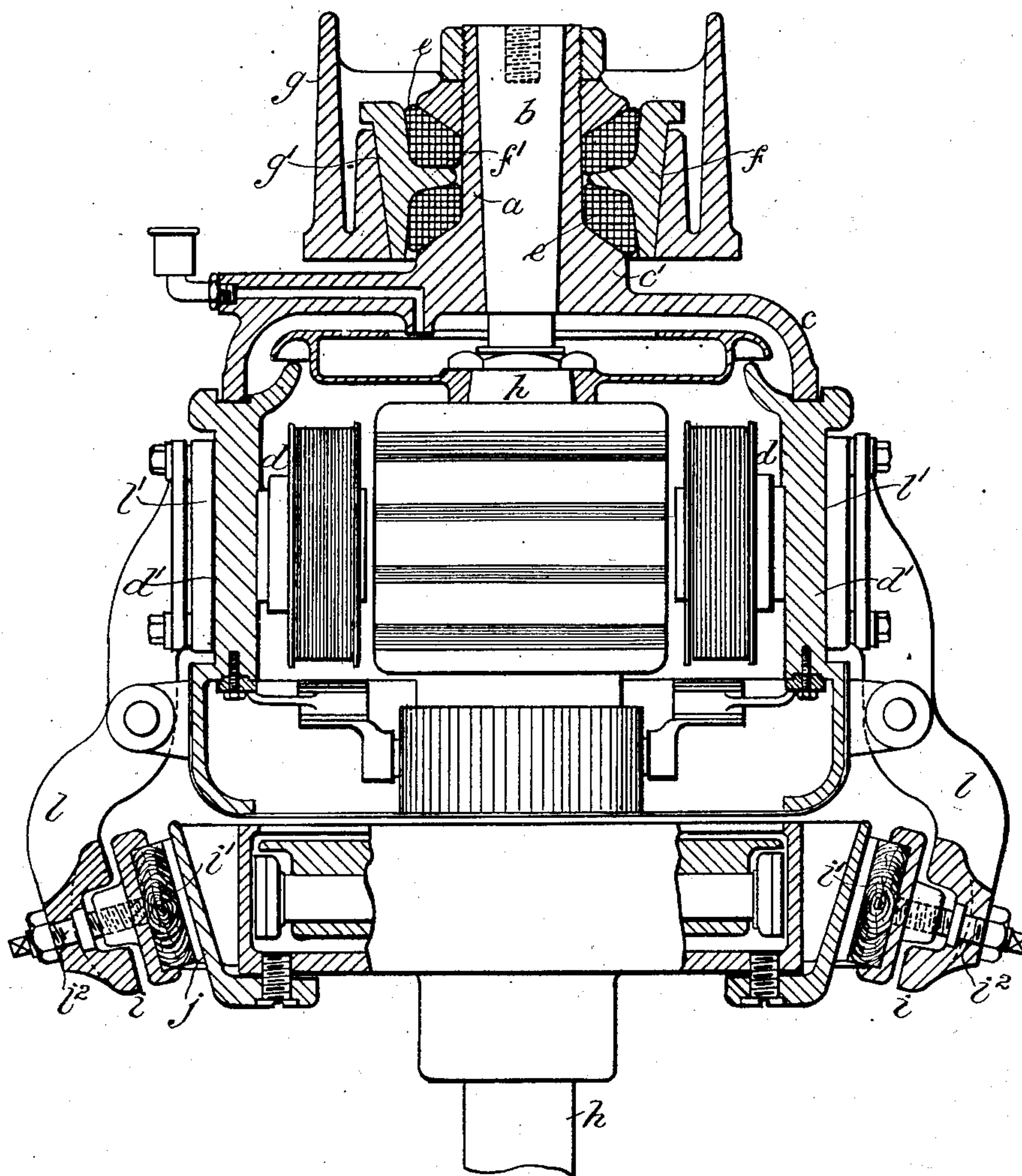
G. POTT & R. WILLIAMSON.
BRAKE FOR CENTRIFUGAL MACHINES.

APPLICATION FILED JULY 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses.

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NO MODEL.

2 SHEETS—SHEET 2.

Fig. 2.

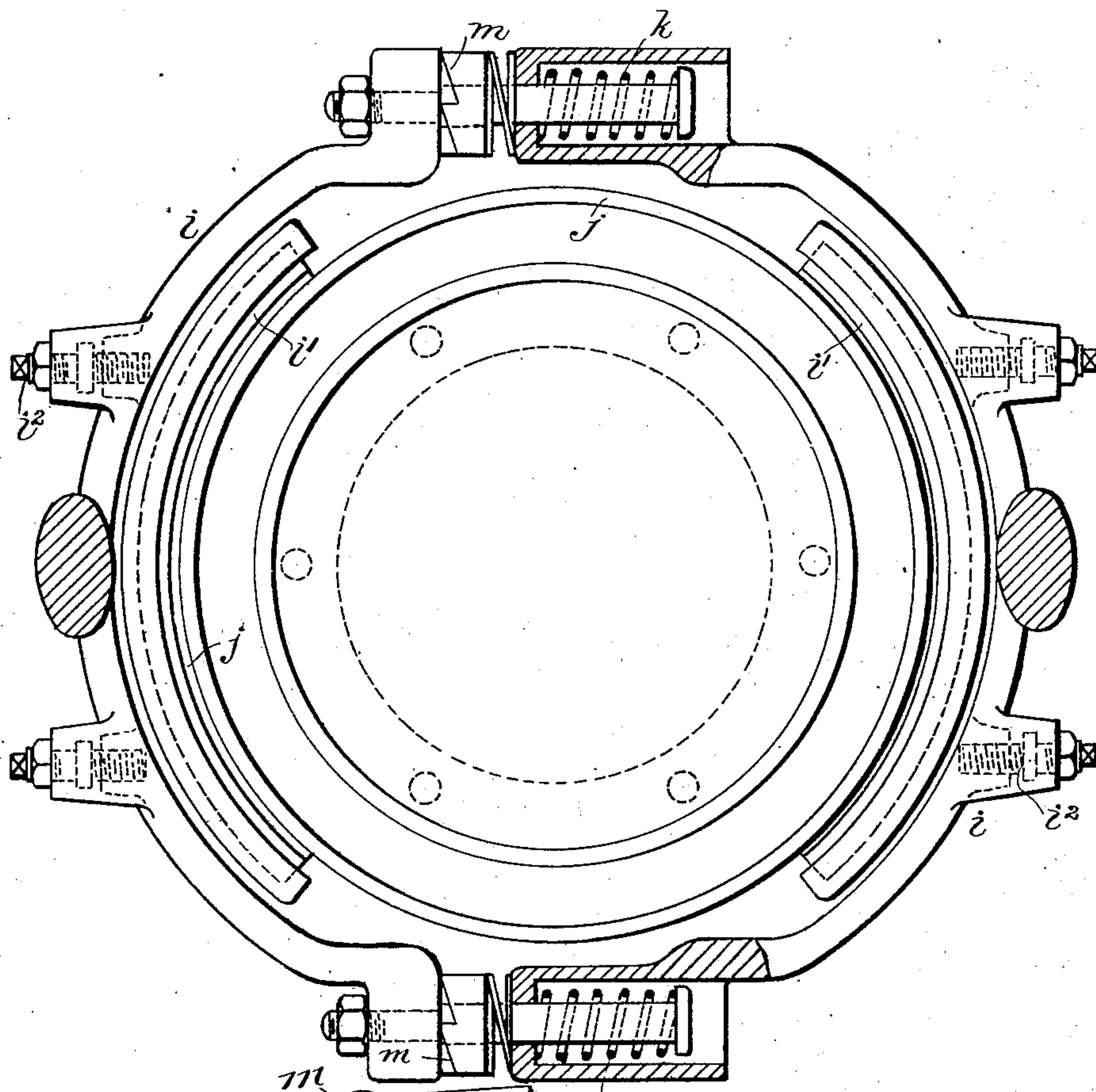


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

GIDEON POTT AND ROBERT WILLIAMSON, OF MOTHERWELL, SCOTLAND.

BRAKE FOR CENTRIFUGAL MACHINES.

SPECIFICATION forming part of Letters Patent No. 728,974, dated May 26, 1903.

Application filed July 23, 1902. Serial No. 116,654. (No model.)

To all whom it may concern:

Be it known that we, GIDEON POTT and ROBERT WILLIAMSON, subjects of the King of the United Kingdom of Great Britain and Ireland, residing at Motherwell, in the county of Lanark, Scotland, have invented certain new and useful Improvements in Brakes for Centrifugal Machines, (for which application for patent has been made in Great Britain, No. 1,587, dated January 21, 1902,) of which the following is a specification.

This invention relates to centrifugal machines, and more particularly to those of the self-balancing and electrically-driven type, in which the rotating armature of the motor is connected to the tubular driving-spindle, either direct or through a clutching device, while the outer or stationary casing carrying the field-magnets is connected to the inner stationary spindle; and it comprises means in electrically-driven centrifugals for automatically applying the brake to stop the rotation of the machine when the current is switched off and for relieving the brake when the current is switched on.

In the accompanying drawings, which illustrate the invention, Figure 1 is a vertical sectional elevation of the driving-gear or upper part of the centrifugal machine. Fig. 2 is a plan of the brake mechanism, and Fig. 3 is a detail view of a device for relieving the brake when the basket of the machine is to be turned by hand for emptying it.

As shown by the drawings, the top block in which the inner or stationary spindle *b* is carried is made in the form of a sleeve *a*, extending upward from the central boss *c'* of the casing *c*, carrying the field-magnets *d* or stationary part of the electric motor.

The brake is made, preferably, of two bands *i*, each extending around less than half the perimeter of the brake wheel or disk *j*, which is secured on the usual tubular shaft *h*, supported from the inner spindle *b*, and is applied by means of springs *k*, connecting the bands *i*, which are fitted with wooden brake-shoes *i'*. To each of the bands *i* is attached the lower end of a pivoted lever *l*, whose opposite end terminates in an iron block or keeper *l'* in proximity to an external core-

piece *d'* on the electromagnet *d* of the motor or to a core magnetized by the passage of current through the motor. When the current to actuate the electric motor is switched on, each of these core-pieces *d'* attracts the corresponding block or keeper *l'* on the lever *l* and withdraws the brake strap or band *i* from the wheel or disk *j*, and when the current is switched off the keepers *l'* are released and the brake applied by the springs *k*. Adjustment of the brake-shoes *i'* is effected by means of screw-pins *i''* or like devices.

The brake may be of any form other than that described and automatically operated by the switching on and off of the current in the manner set forth.

For the purpose of relieving the brake-pressure when the machine is not in motion cam-surfaces *m* are fitted between the ends of the brake-bands *i*, which cams *m* are turned to press apart the bands by means of a lever-handle *n*, attached to one of the cams and connected by a link *n'* to the cam on the opposite side, as indicated at Fig. 3.

Having now described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an electrically-driven centrifugal machine the combination with a brake-wheel of brake-blocks, springs holding said blocks in normal engagement with said wheel, pivoted levers supporting said blocks, core-pieces on the field-magnets adapted to attract the ends of said levers and thereby relieve the brake when the current is turned on the motor.

2. In an electrically-driven centrifugal machine the combination with a brake-wheel of brake-blocks, springs adapted to hold said blocks in normal engagement with said wheel; cams interposed between the ends of said brake-blocks and means for turning said cams to throw the blocks out of engagement with said wheel.

In witness whereof we have hereunto set our hands in presence of two witnesses.

GIDEON POTT.

ROBERT WILLIAMSON.

Witnesses:

WALLACE FAIRWEATHER,

WALLACE CRANSTON FAIRWEATHER.