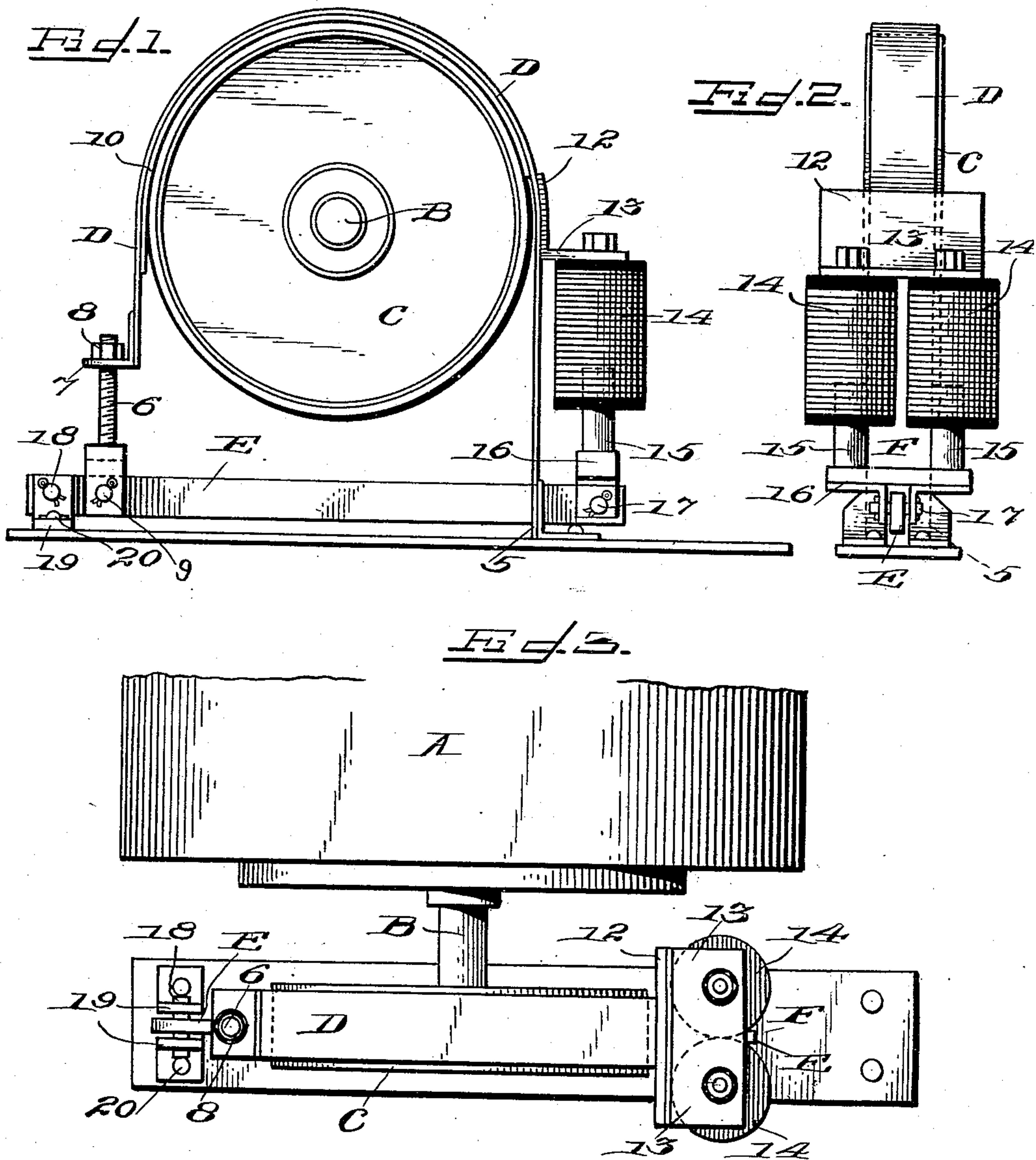


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ELECTRICALLY OPERATED BRAKE.  
APPLICATION FILED MAR. 27, 1906.

914,756.

Patented Mar. 9, 1909.



Witnesses  
R. W. Ashley  
R. B. Caranagh.

Charles Saunders, Inventor  
By his Attorneys Lifford & Price



# UNITED STATES PATENT OFFICE.

CHARLES SAUNDERS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO LIDGERWOOD MANUFACTURING COMPANY, A CORPORATION OF NEW YORK.

## ELECTRICALLY-OPERATED BRAKE.

No. 914,756.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed March 27, 1906. Serial No. 308,243.

*To all whom it may concern:*

Be it known that I, CHARLES SAUNDERS, a citizen of the United States, and resident of the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain novel and useful Improvements in Electrically-Operated Brakes, of which the following is a specification.

This invention relates to certain novel and useful improvements in brakes and in the present instance particularly pertains to an electrically operated band brake.

One of the objects of the present invention is to provide means for actuating a brake to throw the same into and out of operation through the making and breaking of an electric circuit.

The invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims, and while I have herein shown and described by way of illustration one particular embodiment of the invention, the same can be subjected to modification and changes without exceeding the scope of the claims.

In the accompanying drawings, wherein an embodiment of the invention is illustrated, like characters of reference indicate like parts in all of the views.

Figure 1 is a view in side elevation showing an application of my improvement; Fig. 2 is a view in end elevation showing the solenoid devices and the armature or keeper operated by the same; Fig. 3 is a top plan view embracing a portion of the motor and showing the brake mechanism applied thereto.

Referring now to the drawings in detail, the letter A indicates a motor having the armature shaft B. To this shaft is secured the band wheel C, while D is a band brake passing around said wheel and secured at the point 5, said band passing partially around the periphery of the wheel and at its opposite end is adjustably coupled with the brake lever E through the medium of the screw coupling 6 which passes through the aperture of lug 7 carried at the end of the band brake, 8 indicating a nut for securing the parts together. At 9 I have shown a pin passing through and securing the coupling to the lever E. The band D is preferably provided with a lining of leather, wood, fiber or other suitable substance, as is

shown at 10, such lining forming the braking surface, but it is of course to be understood that this lining is not necessary and may be dispensed with if desired. Secured to the outer surface of the band at the point 12 is a hanger or bracket 13, carrying the solenoid coils 14, 14, while F designates an armature or keeper member having the posts 15, 15, extending into the solenoid coils, such posts being connected through the medium of the bar 16. This keeper is secured at 17 to the lever E by cotter pin 17, as is clearly shown in Figs. 1 and 2. The lever E in turn is pivoted at 18 to the bracket or support 19, rigidly fastened at the point 20.

From the above description taken in connection with the accompanying drawings, the construction and operation of my improved brake device will be readily apparent to those skilled in the art. As heretofore stated, the lever is fulcrumed at the point 18 so that when current which is supplied to the solenoids in any suitable manner is passing through the two solenoids the keeper or armature F is lifted and the brake is loosened, swinging or moving on its fulcrumed point 18, but when the current is interrupted, the armature or keeper F falls, bringing its weight on the lever and the weights of the solenoids and the like upon the band brake, which tends to tighten the same around the periphery of the band wheel C.

It will be noted that I have provided an exceedingly simple yet effective means for controlling band brakes and one which will be found particularly adapted for use in connection with the brakes used upon the drums of hoisting engines and the like.

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

1. The combination with a wheel, a brake therefor, a brake lever extending beneath the wheel and connected to the brake, a keeper connected to said lever, and an electrical device connected to the brake and designed to control the movement of the lever.

2. The combination with a wheel, a brake therefor, a lever extending beneath the brake, an adjustable coupling connecting said lever to said brake, a solenoid carried by the brake, and means controlled by the action of the solenoid for operating the lever to actuate the brake.

3. The combination of a wheel, a brake lever, a brake band anchored at one end and secured to the lever at the opposite end, a keeper and an electrical device suspended  
5 from the brake band.

4. The combination with a wheel, of a band brake therefor, and means for actuating said brake including a lever connected thereto, a keeper connected to the lever, a  
10 solenoid suspended from the brake band and

adapted to actuate the keeper to elevate the lever and release the brake.

In testimony whereof, I have hereunto set my hand this 22nd day of March, A. D. 1905.

CHARLES SAUNDERS.

Witnesses:

F. ED. STUTZ,

DEWITT W. SMITH.