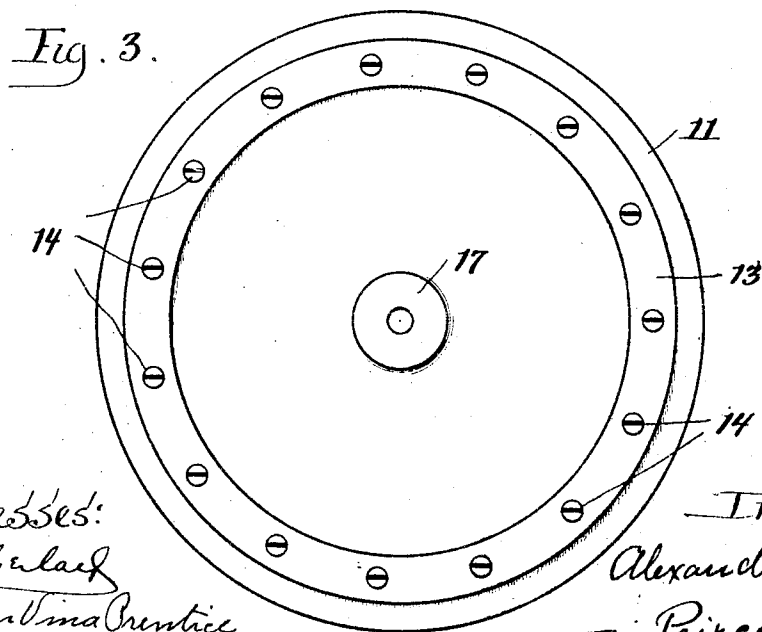
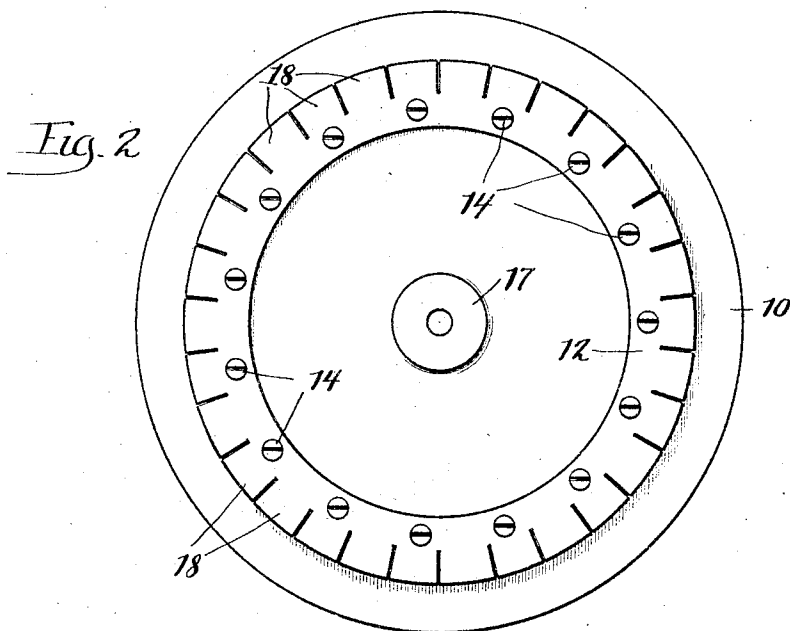
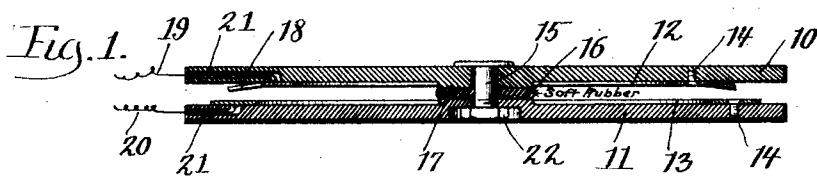


A. DOW.
ELECTRIC CIRCUIT CLOSER.
APPLICATION FILED, JAN. 22, 1904.



Witnesses:
Frederick
Williamina Brewster

Inventor:
Alexander Dow
By Peirce + Fisher
his Attorneys.

UNITED STATES PATENT OFFICE.

ALEXANDER DOW, OF DETROIT, MICHIGAN.

ELECTRIC-CIRCUIT CLOSER.

No. 804,389.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed January 22, 1904. Serial No. 190,190.

To all whom it may concern:

Be it known that I, ALEXANDER DOW, a citizen of the United States, and a resident of Detroit, county of Wayne, and State of Michigan, have invented certain new and useful Improvements in Electric-Circuit Closers, of which the following is declared to be a full, clear, and exact description.

The improvement relates to closers for electric-bell circuits and the like by which the circuit may be manually closed for a short time.

The object of the invention is to dispense with the small push-button generally employed for such purposes and to provide a simple compact arrangement having a pair of contact-plates which may be manually shifted into engagement at a number of points and which, therefore, can be more conveniently and quickly operated than the ordinary closer employed where a small button must be shifted.

The invention consists in the features of construction and arrangements of parts hereinafter set forth, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a sectional view through the improved circuit-closer. Fig. 2 is a plan view showing the inner face of one of the insulating-disks and the contact-plate carried thereby, and Fig. 3 is a similar view of the other insulating-disk and contact-plate.

The closer comprises a pair of insulating-mounts, preferably in the form of flat circular disks 10 and 11, of indurated fiber or other suitable insulating material. The metal conducting or contact plates 12 and 13 are preferably thin, flat, and annular and are preferably formed of brass. These conducting-plates 12 and 13 are secured by screws 14 to the inner opposing faces of the insulating disks or mounts 10 and 11. The insulating-disks are connected together, but spaced slightly apart in parallel relation and in such a manner that their edges may be moved toward each other at any point to bring the conducting-plates into contact. Preferably the disks 12 and 13 are connected by a central bolt 15, which passes rather loosely through openings therein, and the disks are yieldingly held apart by a soft-rubber washer 16, interposed between central projections 17 on the disks, and through which washer the bolt 16 passes. Other means may be em-

ployed for yieldingly holding the disks apart, or the disks themselves may be formed of yielding somewhat-springy material.

As shown, the conducting or contact plate 13 is held by screws 14 closely against the face of the insulating-disk 11. In the conducting or contact plate 12, however, the holding-screws 14 are arranged adjacent its inner edge, and its outer edge is slitted to form a series of spring-fingers 18, which, as shown in Fig. 1, stand slightly away from the face of the insulating-disk 10. Preferably, also, the plate 12 is somewhat smaller in diameter than plate 13, so that the spring-fingers 18 of plate 12 will engage the central part of plate 13 and make good contact therewith.

The conducting-wires 19 and 20 of the circuit preferably pass through openings 21, extending inwardly from the edges of the disks 10 and 11, and are secured, respectively, to the conducting-plates 12 and 13, so that, if desired, the circuit-closer may conveniently rest flat upon the floor and beneath the carpet or rug. For this purpose, too, the head of bolt 15 is flattened and the face of disk 11 is countersunk to receive the nut 22 on the bolt 15.

The circuit-closer thus constructed may be conveniently placed flat upon the floor beneath a table or desk and, if desired, under the rug or carpet, and by pressure of the foot at any point near the edge of the uppermost disk 10 conducting-plates 12 and 13 may be brought into contact at a number of different points, and it is not necessary to hunt around for the small button heretofore used.

The improved device is not limited to use upon the floor, but smaller sizes similar in construction may be employed, for example, as pendent circuit-closers, when by pressing the insulating-disks 13 and 14 together with the hand at any point near their edges the circuit may be conveniently and quickly closed.

It is obvious that the details of structure may be varied without departure from the essentials of the invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An electric-circuit closer, comprising two conducting-plates centrally connected together but insulated from each other, said plates being relatively shiftable toward each other flexibly to make contact at any point adjacent the periphery thereof.

2. An electric-circuit closer comprising

two circular conducting-plates centrally connected together but insulated from each other said plates being relatively shiftable toward each other flexibly to make contact at a number of different points adjacent the periphery thereof.

3. An electric-circuit closer comprising two flat insulating-disks centrally connected together and arranged substantially parallel to each other, contact-plates fixed to the inner opposing faces of said disks, said disks being relatively shiftable flexibly toward each other to make contact between said plates at a number of different points.

4. An electric-circuit closer comprising two flat, circular, connected, insulating-disks yieldingly spaced apart in parallel relation and contact-plates fixed to inner opposing faces of said disks.

5. An electric-circuit closer comprising two flat insulating-disks connected together

at their central portions and yieldingly spaced apart in parallel relation and annular contact-plates fixed to the inner opposing faces of said disks.

6. An electric-circuit closer comprising two flat insulating-disks connected together at central portions and yieldingly spaced apart in parallel relation and annular contact-plates fixed to the inner opposing faces of said disks, one of said contact-plates being provided with a series of spring-fingers.

7. An electric-circuit closer comprising a pair of flat insulating-disks, a central bolt connecting said disks, a spring about said bolt yieldingly holding said disks apart in parallel relation and annular contact-plates fixed to the inner opposing faces of said disks.

ALEXANDER DOW.

Witnesses:

KATHARINE A. McINTYRE,
CHARLES C. MUNROE.