

(No Model.)

W. C. JOHNSTON, Jr.
CIRCUIT CLOSER.

No. 450,292.

Patented Apr. 14, 1891.

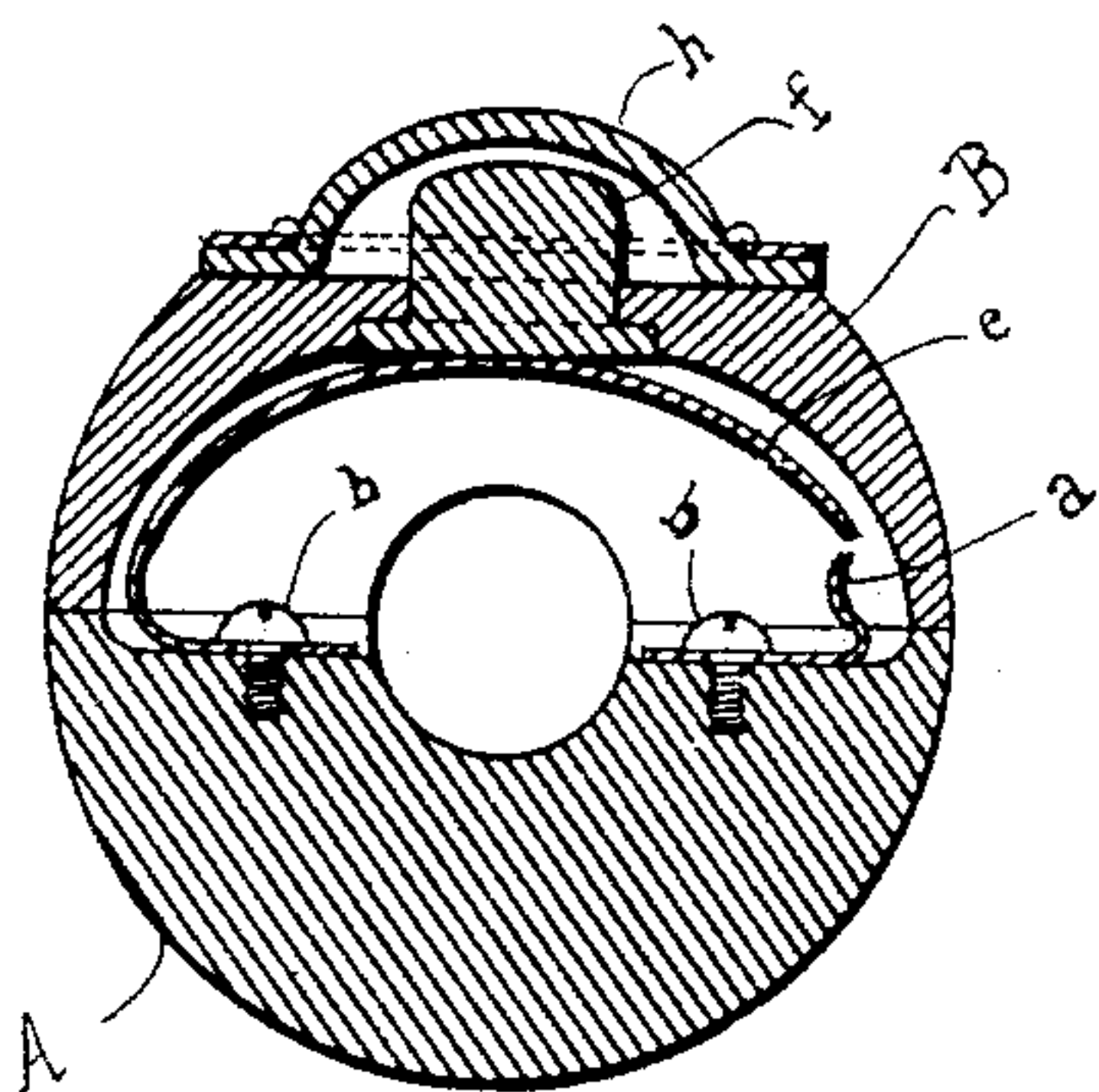


Fig. 1.

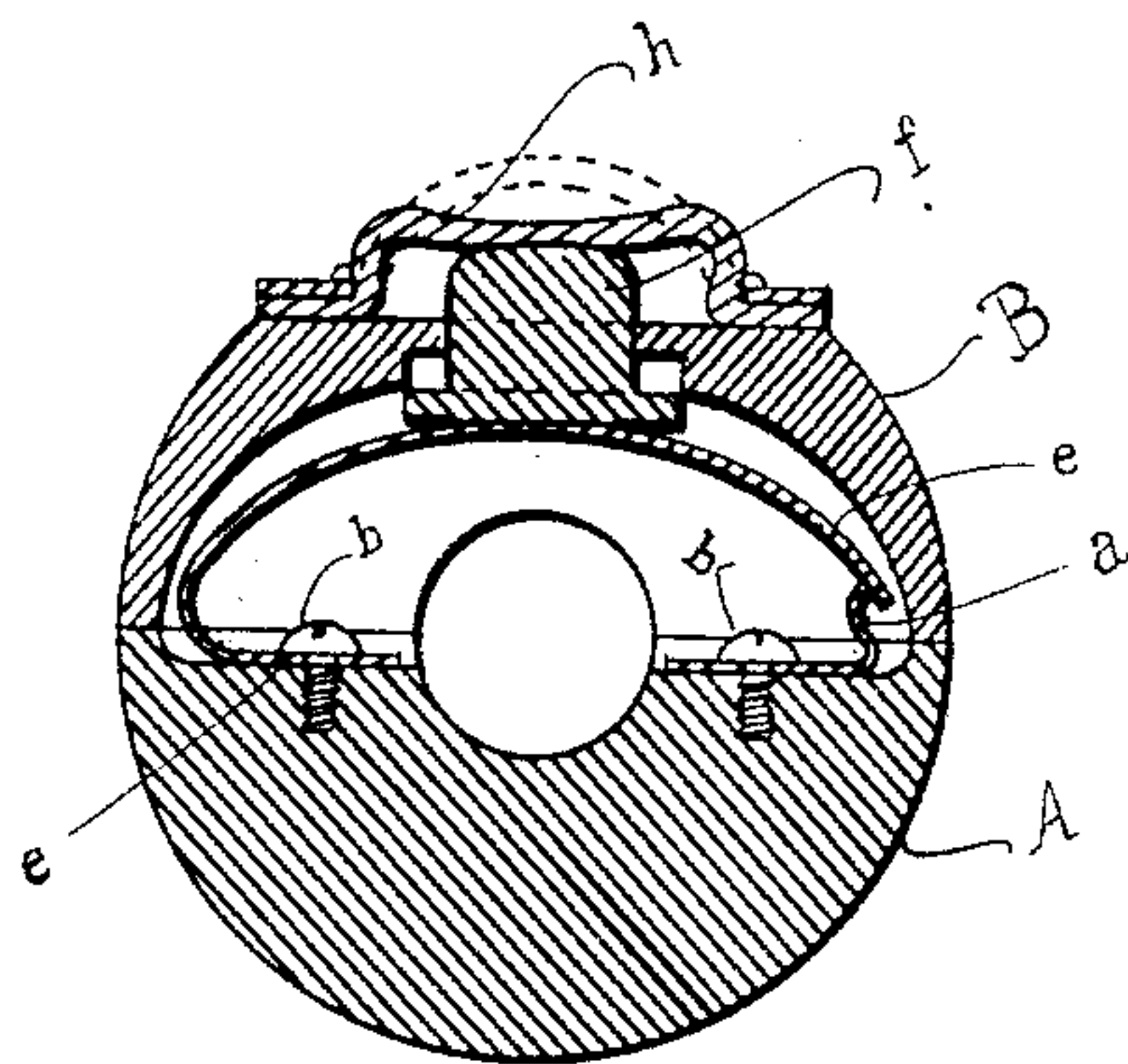


Fig. 2.

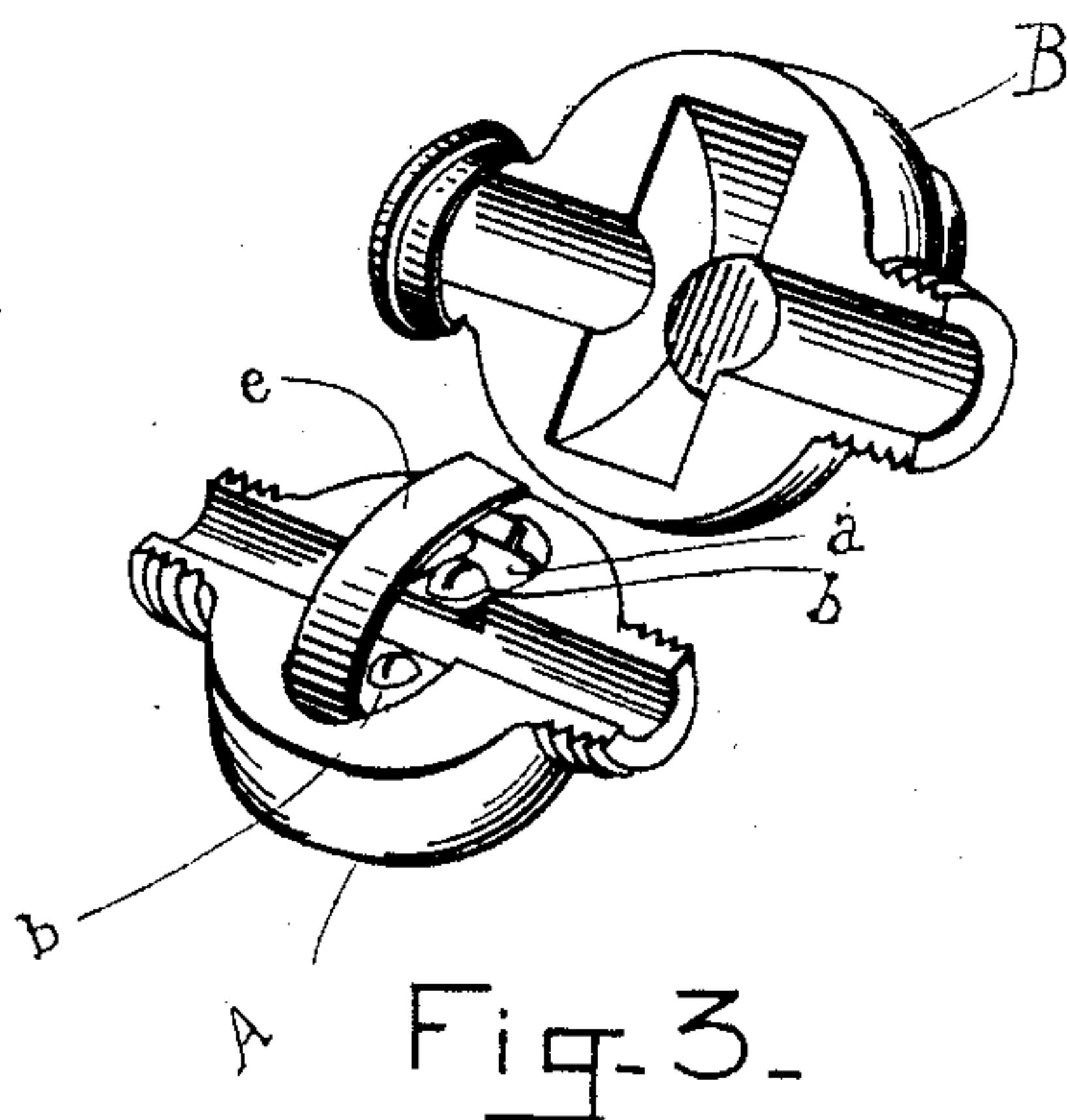


Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM C. JOHNSTON, JR., OF LYNN, MASSACHUSETTS.

CIRCUIT-CLOSER.

SPECIFICATION forming part of Letters Patent No. 450,292, dated April 14, 1891.

Application filed December 17, 1888. Renewed February 3, 1891. Serial No. 379,977. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. JOHNSTON, Jr., of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented
5 an Improved Device or Means for Making and Breaking Electric Circuits, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention has for its object mainly to
10 provide a device for making and breaking electric circuits, which shall be positive in its operation and not liable to be disturbed by foreign matter or particles of corroding metal interposed between the contact-surfaces.

To this end the invention consists in the
15 combination, in an electric circuit, of two contact surfaces or terminals arranged so as to be brought together and separated by a movement which causes the contact-surfaces to
20 slide over each other, whereby foreign matter and corroding particles are removed and the contact-surfaces kept polished.

In the drawings, Figure 1 is an elevation of
25 a central cross-section of the device embodying my invention and represents the circuit opened, the contact-surfaces being drawn apart. Fig. 2 is a similar view representing the contact-surfaces together, the circuit being in this case closed. Fig. 3 is a perspective
30 view representing the device, the casing or shell being opened to illustrate the mechanism within.

The device represented in the drawings is designed for combination with an electric
35 cable. To that end it is provided with a central opening or hole for receiving the cable.

The device is preferably formed in two parts in order to facilitate the combination thereof with the cable. The one part A is
40 provided with the terminals *a e*. Said terminals are connected with the supporting-shell A by means of suitable connections, as screws *b*. They are preferably composed of spring metal and formed substantially as represented. Said terminals are connected with
45 the electric conductor, so that the current is made to pass through said terminals when the same are closed together and is inter-

rupted or opened when the terminals are drawn apart. The part B of the casing is provided with a suitable opening in which is located a plunger *f*, the bottom end of which bears upon the terminal *e* and the opposite end of which reaches outward through the shell, as represented. A suitable inward
55 pressure applied by the thumb or the finger of the operator to said plunger forces downward the terminal *e*, whereby the said terminal is first made to contact with the terminal *a*, and next by a further movement to slide
60 or move its own contact-surface over the adjacent surface of the terminal *a*, to facilitate which operation the terminals are preferably formed of spring metal, so as to yield to accommodate each other. When pressure is
65 removed from said plunger *f*, it is forced outward by the tension of spring-terminal *e*, which lifts to its normal position away from the terminal *a*, as shown in Fig. 1. The plunger *f* is represented as covered by a hood *h*,
70 formed of rubber or other flexible material, which serves to keep dust from entering the casing and yields to permit operation of the plunger, as described.

A device formed as described is kept polished and in condition for operation by the
75 movement of the contact-surfaces consequent upon the closing of the circuit, substantially as described.

I claim—

In combination, the casing, the stationary
80 contact *a*, having a turned-up end, the movable contact *e*, of spring material, curving upwardly and extending over and above the edge of the contact *a* and normally out of
85 contact with the same, and the push-button to bear upon the curved spring-contact *e* to cause the same to bear upon the edge of the contact *a* and slide thereon, substantially as
90 described.

Signed at Boston, Massachusetts, this 21st day of November, A. D. 1888.

WILLIAM C. JOHNSTON, JR.

Witnesses:

E. E. HAMILL,
C. B. TUTTLE.