(No Model.)

C. T. ROSS.

AUTOMATIC ELECTRIC CIRCUIT CLOSING DEVICE.

No. 298,121. Patented May 6, 1884.

Fig. 1.

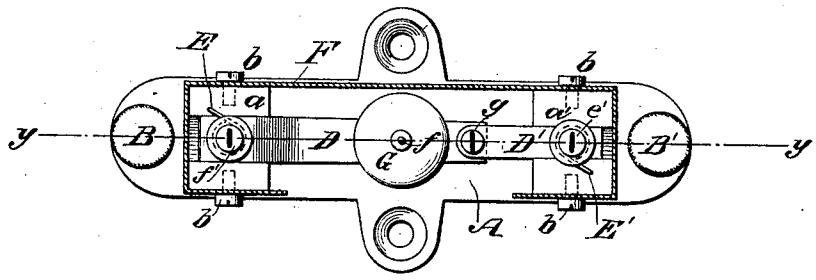


Fig. 2.

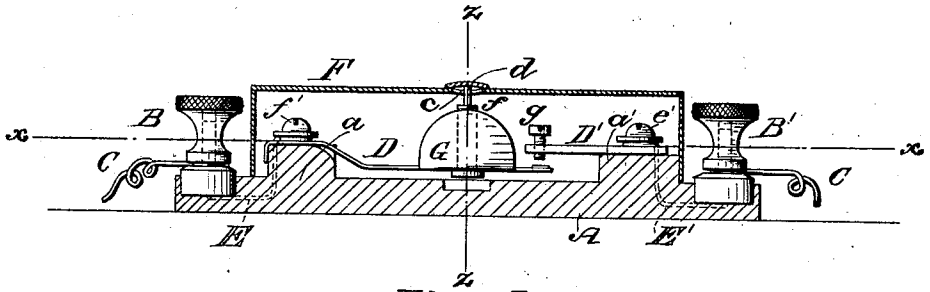
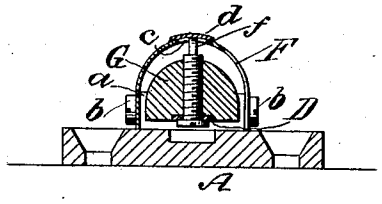


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES T. ROSS, OF NEW YORK, N. Y.

AUTOMATIC ELECTRIC-CIRCUIT-CLOSING DEVICE.

SPECIFICATION forming part of Letters Patent No. 298,121, dated May 6, 1884.

Application filed November 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. ROSS, of the city, county, and State of New York, have invented a new and Improved Automatic Electric-Circuit-Closing Device, of which the following is a full, clear, and exact description.

This invention consists of a device to be placed in an electric circuit, and arranged for normally breaking the circuit, but adapted to close the circuit automatically at a given temperature. The device is more especially intended for use in connection with fire-alarms for automatically giving the alarm of fire.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional plan view of my invention, taken on the line *x x* of Fig. 2. Fig. 2 is a sectional elevation taken on the line *y y* of Fig. 1, and Fig. 3 is a transverse sectional elevation taken on the line *z z* of Fig. 2.

A represents the base of the device. This is made of some insulating material, preferably hard rubber, and is formed with the enlargements *a a'*. In the base A are fitted the binding-posts B B', which hold the electric wires C C. The posts B B' are put in electric connection with the contact-pieces D D', respectively, by the wires E E'. Over the contacts D D' is placed the cover F, held in place by the screws *b b*, entering the enlargements *a a'*. The cover F is formed with the opening *c*, which is closed by the cap *d*, held in place by solder, which will fuse at a low temperature. The contact D is held upon the enlargement *a* by a screw, *f'*, made of spring metal, and is held under tension by the post *f* thereof, coming against the under side of the cap *d*. The contact D' is held upon the projection *a'* by a screw, *e'*, and may be provided at its outer end with the screw *g*, which may be adjusted to suit the tension of the contact D. The outer free end of the contact D reaches under contact D' and screw *g*, and the post *f* is of such length relative to the depth of the cover F and the position of the contact D' that when the cap *d* is held in place it will force the spring-piece D downward out of contact with the piece D' or its screw *g*, thus breaking the electric circuit.

In use—say for a fire-alarm in an office, room, or building—the wires C C will be connected with the battery and distant alarm apparatus. The cap *d* being in place, the contacts D D' will be held apart, and the circuit thus kept constantly broken. In case of fire, the cap being held by material that fuses at a very low degree of heat, as soon as the given temperature is reached in the room or building the cap *d* will become detached from the cover F, thus permitting the spring-piece D to come in contact with the piece D', and thus automatically complete the circuit and give the alarm.

The device may be attached upon the floor, wall, or ceiling in the room, office, or building. If attached to the ceiling in upside-down position, I shall employ the weight G, attached upon the contact D, which will assist the tension of the contact D in forcing off the cap *d* and making the connection; and by making the weight G or the contact-piece D quite large and hinging it, it need not be made of spring metal or caused to be operated by a spring.

When the device is made to be placed in horizontal or vertical position, the weight G will be dispensed with.

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

1. The automatic circuit-closing device herein shown and described, consisting of two suitable contact-pieces placed in the circuit and held normally apart by a cap arranged to be released by heat, the contacts being arranged for closing the circuit when the cap is so released, as set forth.

2. The combination, with the contact-pieces D D', of the cover F, having opening *c* and cap *d*, for holding the contacts apart, as and for the purposes set forth.

3. The combination, with the contact D, made of spring metal and provided with post *f*, of the contact D', cover F, and removable cap *d*, arranged to operate substantially as and for the purposes set forth.

4. The contact D, provided with the weight G and post *f*, in combination with contact D'

and cover F, having removable cap *d*, substantially as and for the purposes set forth.

5. The circuit-closing device herein shown and described, consisting of the base A, of insulating material, binding-posts B B′, contact-pieces D D′, connected with the posts, respectively, cover F, and cap *d*, the contact D being made of spring metal, and the cap *d* adapted to be released at a low temperature, substantially as and for the purposes set forth.

CHAS. T. ROSS.

Witnesses:
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