

No. 679,446.

Patented July 30, 1901.

G. A. WALL.
AUTOMATIC CIRCUIT CLOSER.

(Application filed Dec. 7, 1900.)

(No Model.)

Fig. 1.

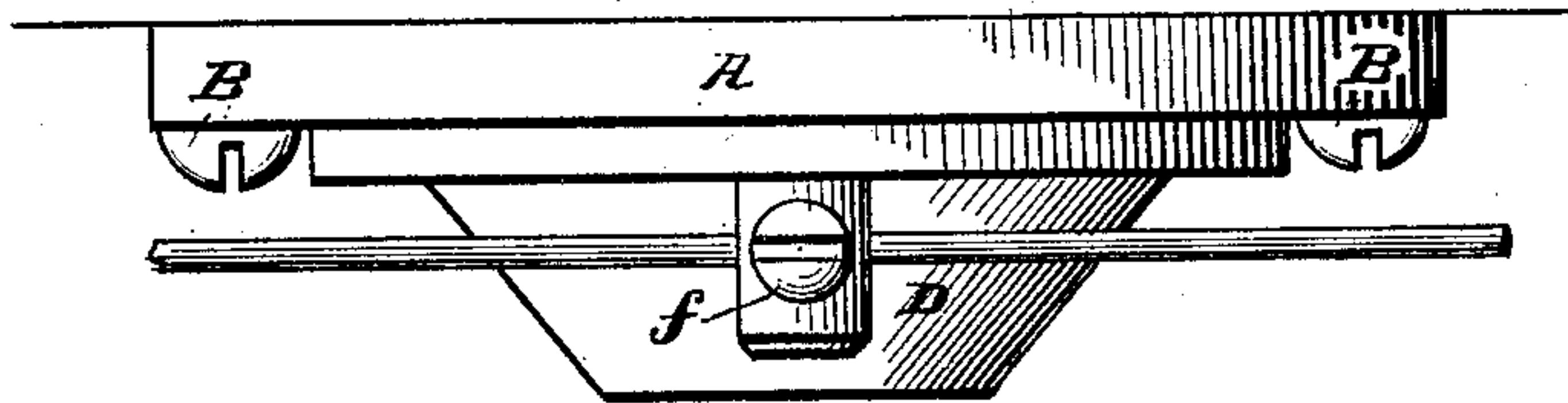


Fig. 2.

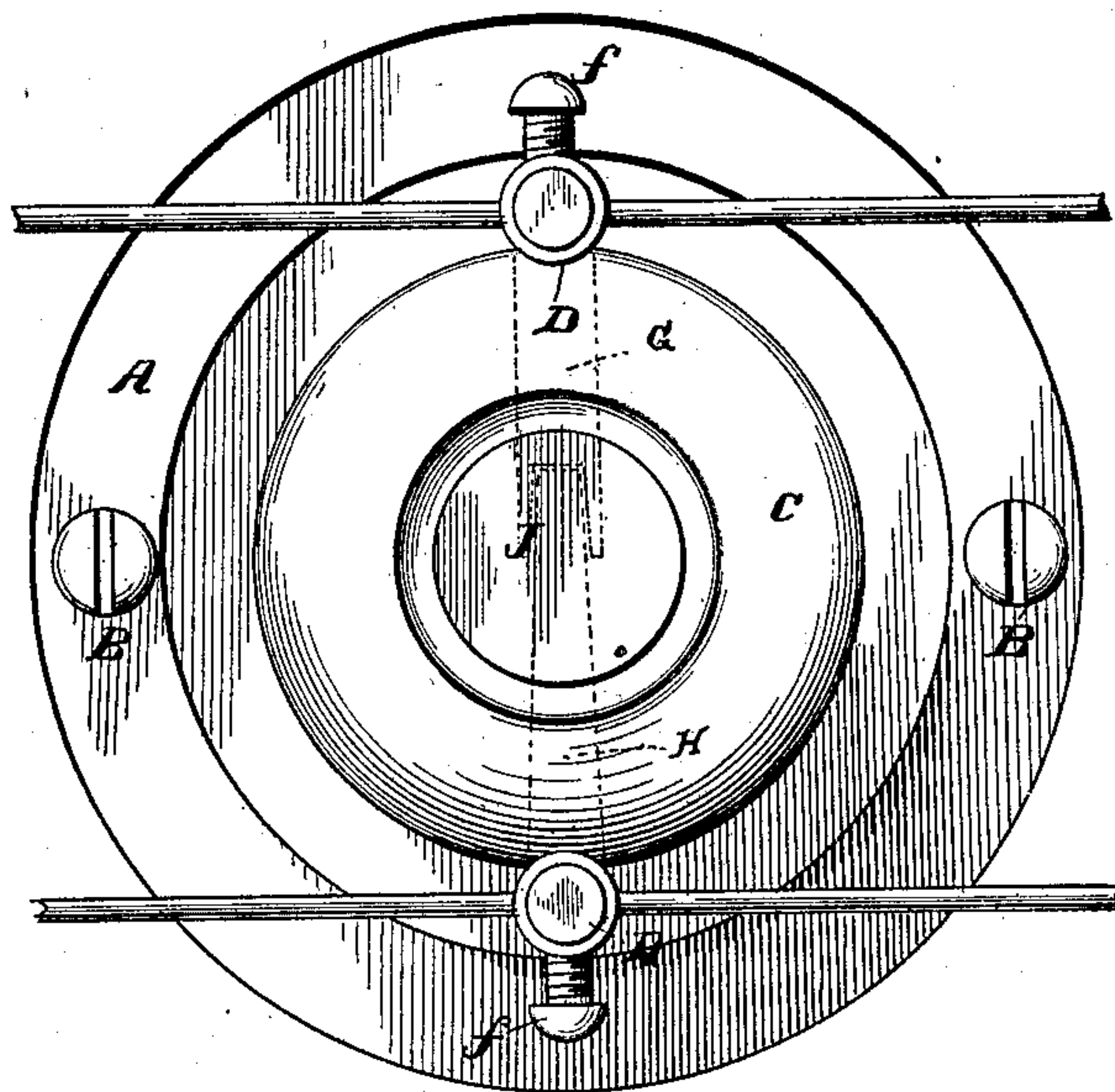
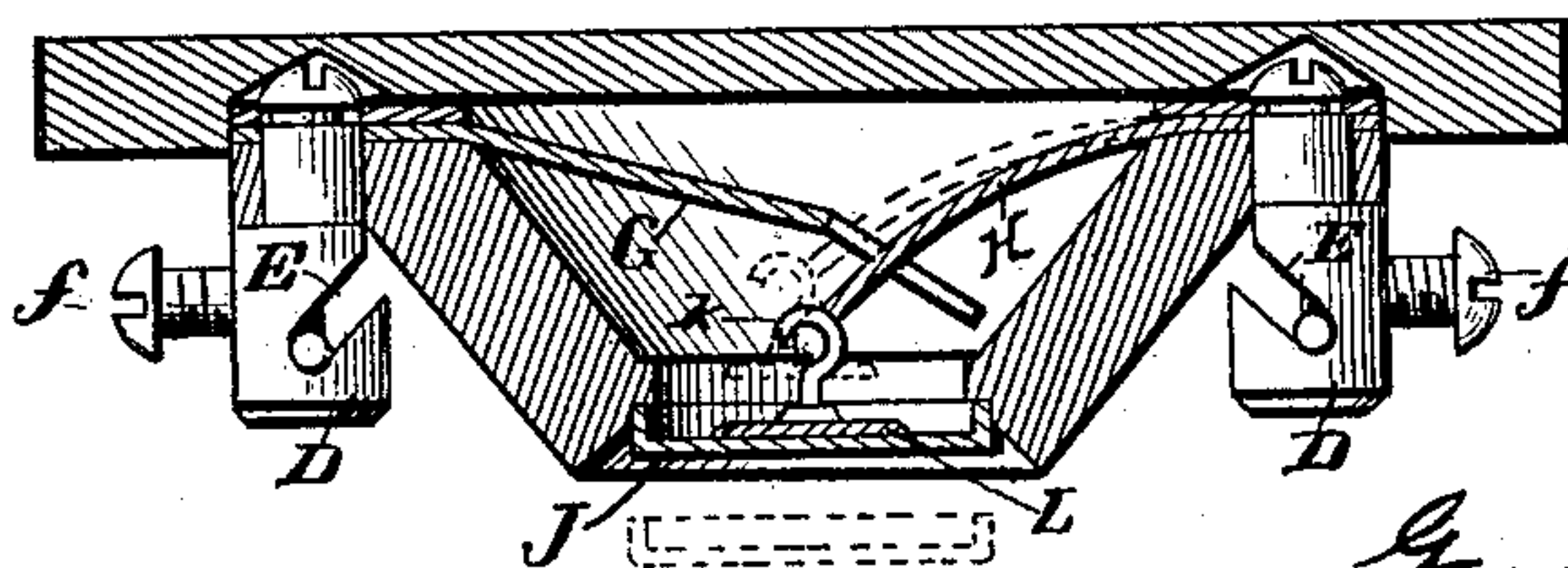


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE A. WALL, OF PROVIDENCE, RHODE ISLAND.

AUTOMATIC CIRCUIT-CLOSER.

SPECIFICATION forming part of Letters Patent No. 679,446, dated July 30, 1901.

Application filed December 7, 1900. Serial No. 39,099. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WALL, a citizen of the United States of America, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Automatic Circuit-Closers, of which the following is a specification.

My invention relates to improvements in automatic circuit-closers, and is designed to preserve the sensitiveness of the solder fusible at a low degree of heat and used in automatic circuit-closers or fire-alarms of this class by protecting it from any chemical change which would tend to destroy its efficiency and which might be influenced or brought about by the character of the surrounding atmosphere. One of the chief difficulties in devices of this class comes from the corrosion of the solder, especially in manufacturing establishments where acids are employed, and from chemical changes otherwise arising which serve to harden the solder and prevent the prompt and timely action of the several parts depending upon its ready fusion.

My invention further consists in certain details of construction and novel combinations of parts, which will be more fully described hereinafter and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side view of my device. Fig. 2 is a bottom or under view of the same, and Fig. 3 is a vertical section showing interior parts.

In the drawings, A is a plate or disk, which may be fastened to the ceiling by screws passing through the flange B B. To this plate or disk the thermostat C is secured.

D D are studs having oblique slots E E for the reception of the conducting-wires, the latter being held in place by set-screws *f f*.

G is an arm having a triangular slot extending into the interior of the thermostat. H is a flat tapering spring also extending into the thermostat and passing through the slot in the arm G. Both the arm and the spring are connected, respectively, with the studs D D.

J is a very thin metallic air-tight cap which closes the thermostat. Upon the interior surface of the cap J and attached thereto by means of solder fusible at a low degree of heat is a hook K. The hook K may be primarily attached to a disk L in order to provide a greater soldering-surface and overcome its tendency to break out from the thin metal.

To the hook K the deflected end of the spring H is secured, as shown in Fig. 3.

It will now be readily perceived that in my device there is no solder exposed to the deleterious action of the surrounding atmosphere, but that, on the contrary, it is all within the interior of the thermostat, made air-tight through the adjustment of the metallic cap J.

The thin metallic cap J may be plated with gold or any other metal or covered with any material which will serve to prevent corrosion.

In the practical operation of my device the metallic cap J is made so thin that it will offer no appreciable obstruction to the action of the heat upon the solder, and the hook holding the deflected spring will be released in a manner well understood. Upon the release of the spring H it will assume the position shown by the dotted line in Fig. 3, and will in so doing, owing to its tapering form and the triangular form of the slot in the arm G, secure a raking action between the respective edges, which is calculated to positively secure the closing of the circuit.

It is evident that slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact details of construction herein set forth; but,

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

In an automatic circuit-closer, the combination with a shell having an opening at its center, and a cap fitted to close the opening, the inner surface of the cap having a fastening device held thereon by fusible material, of an arm located within the shell, said arm provided with a triangular slot, and a flat tapering spring fastened at one end and connected to the fastening device on the cap at the other end whereby to hold the cap in place, the free end of this spring located in position to rake against an edge of the triangular slot and automatically close the circuit when the fusible material on the cap is melted.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE A. WALL.

Witnesses:

WALTER B. VINCENT,
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