

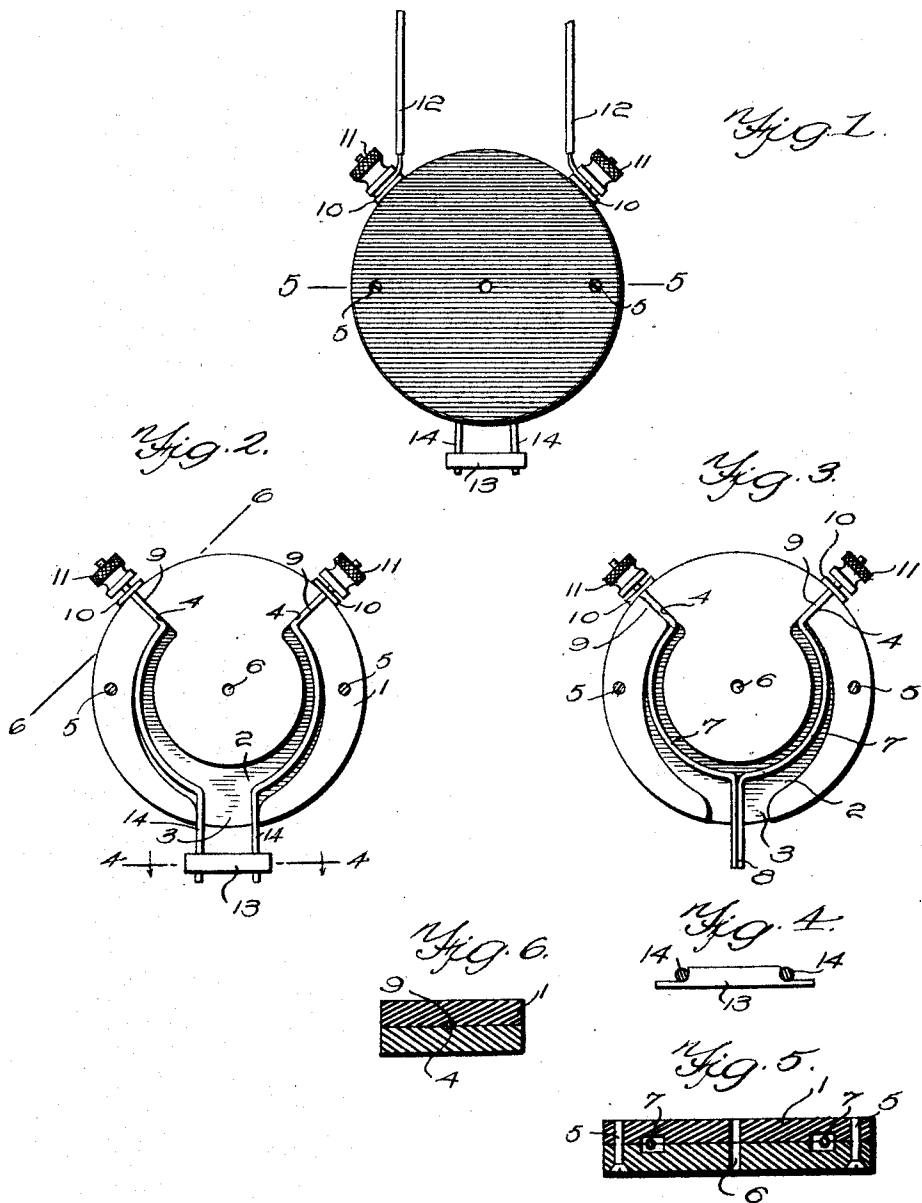
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J. M. BIGGS

THERMOSTATIC CIRCUIT CLOSER

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THERMOSTATIC CIRCUIT CLOSER.

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To all whom it may concern:

Be it known that I, JOHN M. BIGGS, a citizen of the United States, residing at Helena, in the county of Phillips and State of Arkansas, have invented certain new and useful Improvements in Thermostatic Circuit Closers, of which the following is a specification.

This invention relates to circuit closers, and it comprises a casing formed of two complementary sections, each of said sections being provided with registering arcuate cavities and radial cavities connected thereto, a pair of conductor members arranged in said cavities, one end of each of said conductor members passing through one of said radial cavities forming a binding post, and a fusible element connected to the other ends of said conductor members and normally maintaining them in spaced relation.

An object of the present invention is to provide a circuit closer comprising a pair of spaced conductor members connected to a source of current, and a celluloid combustible member for normally maintaining the conductor members in spaced relation, the celluloid combustible member being adapted to burn out instantly at the first touch of fire, permitting the conductor members to contact with each other and close a circuit through suitable alarm or signalling apparatus.

A further object is the provision of a device of this character of simple construction which will be efficient in operation.

A further object is the provision of a fire alarm which will be highly responsive and positive in operation.

A further object is the provision of a fire alarm in which the conductor members are retained in position by the binding screws connecting them to the circuit.

In the accompanying drawings, I have shown one embodiment of the invention. In this showing:

Figure 1 is a front elevation of the frame,

Figure 2 is a similar view, showing one of the casing plates removed,

Figure 3 is a similar view showing the conductor members in contact with each other,

Figure 4 is a detail sectional view on line 4—4 of Figure 2,

Figure 5 is a detail sectional view on line 5—5 of Figure 1, and

Figure 6 is a detail sectional view on line 6—6 of Figure 2.

Referring to the drawings, the reference numeral 1 designates a pair of plates which may be of any suitable shape and size, and which are made of insulating material, either molded or stamped out of hard fibre. Each of these plates is provided with an arcuate cavity 2 on one face, the cavities being open at the bottom, as indicated at 3. The upper ends of the cavities are connected to radial cavities 4, smaller in size than the arcuate cavities (see Figure 6). The casing plates are provided with openings for the reception of bolts or screws 5 by means of which they are secured to each other, and are further provided with central openings 6 for the reception of a suitable fastening element whereby the device is secured to a support.

Each of the conductor members comprises a curved section 7, having an offset lower end 8, the curved section being adapted to be arranged in the arcuate cavity and the offset end in the open end of the cavity. As shown in Figure 5, the conductor members are smaller than the size of the cavity, permitting them to move within the cavity. The upper end of the conductor member is offset, as at 9, and is adapted to pass through the radial cavity 4. As shown, the diameter of this portion of the conductor member is substantially the same as the diameter of the passage formed by the pair of radial cavities 4, forming substantially a tight fit. The terminal of the upper end is threaded and adapted to receive a washer 10. A binding nut 11 is arranged on the threaded end forming a binding post for the reception of a lead wire 12.

The lower ends of the conductor members are normally retained in spaced position by means of a celluloid combustible member 13. As shown, the celluloid combustible member is provided with shoulders 14, adapted to engage the offset ends of the conductor members and normally retain them in spaced position.

In operation, the circuit closers are arranged at any desired point. When one of the celluloid combustible elements 13 burns out, due to actual contact with fire, the ends of the conductor members assume the position shown in Figure 3 of the drawings and close the circuit. It will be noted that the offset ends 8 may contact throughout their entire length, insuring

proper closing of the circuit when the celluloid combustible element burns out.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the sub-joined claims.

Having thus described my invention, I claim:

1. A circuit closer comprising a pair of substantially flat plates, means for securing said plates in superposed relation, said plates being formed of non-conducting material, the contacting faces of said plates being provided with arcuate cavities, radial cavities extending from the ends of said arcuate cavities to the edge of said plates, the bottom of each of said radial cavities being open, the cavities in one plate being adapted to aline with the cavities in the other plate to form a central recess, a pair of contacting members arranged in the arcuate portion of said recess, the upper ends of said

conductors extending through the portion of the recess formed by the radial cavities and projecting beyond the edges of the plates, the lower end of said conductor members being offset and projecting from said plate through the portion of the recess formed by the open bottom of said cavities, and a combustible element normally retaining said offset ends in spaced relation.

2. A device constructed in accordance with claim 1 wherein the upper projecting ends of said contacting members are threaded, and binding nuts arranged on said threaded ends to secure lead wires thereto.

3. A device constructed in accordance with claim 1 wherein said combustible element is provided with reduced ends forming a pair of shoulders adapted to engage the ends of said conductor members to normally retain them in spaced relation.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. BIGGS.

Witnesses:

Z. A. BIGGS,

J. W. GEDULDIG.