No. 733,184. PATENTED JULY 7, 1903.

J. D. GOULD.

THERMOSTAT.

APPLICATION FILED FEB. 7, 1902.

NO MODEL.

Fig. 1,

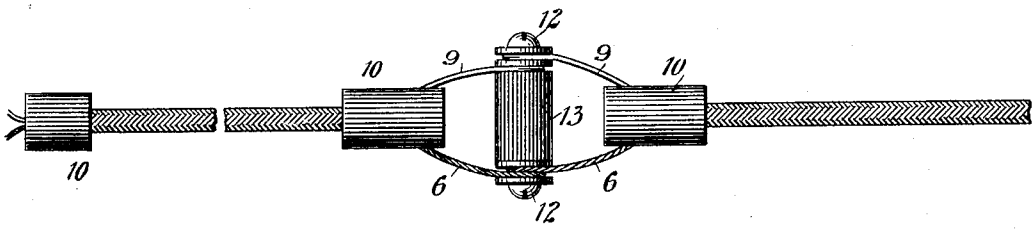


Fig. 2,

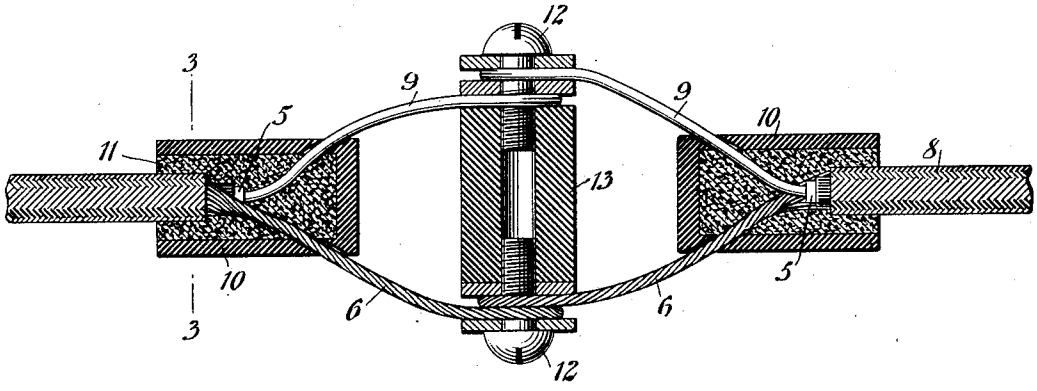
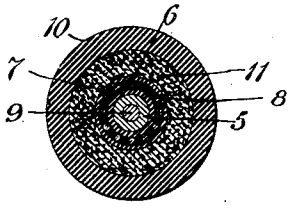


Fig. 3.



WITNESSES:

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No. 733,184. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

JOHN D. GOULD, OF NEW YORK, N. Y.

THERMOSTAT.

SPECIFICATION forming part of Letters Patent No. 733,184, dated July 7, 1903.

Application filed February 7, 1902. Serial No. 92,959. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. GOULD, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Thermostat, of which the following is a full, clear, and exact description.

This invention relates to improvements in thermostats in fire-alarm electric circuits.

In my invention I employ a thermostatic conductor—that is, a conductor having a fusible lead and a copper or other similar lead insulated from each other and designed to become fused by heat, thus closing the alarm-circuit.

In the practical wiring of a building comparatively short lengths of cable are used, and when the ends are left uncovered or open the soft fusible wire when melted is apt to flow out at the end without closing the circuit.

It is the object of my invention, therefore, to provide protecting or sealing coverings for the ends of the thermostatic sections which will prevent the outflow, as above mentioned, and thus insure the fusion of the conductors between the ends.

I will describe a thermostat embodying my invention and then point out the novel features in the appended claims.

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

Figure 1 is a side view of a thermostat embodying my invention. Fig. 2 is a longitudinal section thereof, and Fig. 3 is a section on the line 3 3 of Fig. 2.

Each section of the thermostat comprises a core 5, of a metal fusible at a comparatively low temperature, and an outer conductor 6, of strands of wire or of a single wire. These conductors 5 and 6 are insulated one from the other by means of paper 7 or the like, covering the fusible conductor, and the whole has an insulating-cover 8. For the purpose of giving proper strength and possibly a better conductivity I make the fusible conductor 5 tubular and extend through the same a wire conductor 9. Practically, however, the two parts 5 and 9 form a single conductor. Engaged over the end or ends of a section are sealing devices consisting of caps 10, of suitable insulating material—such, for instance, as hard rubber or porcelain—and placed within the same is a sealing material 11, of wax, shellac, or the like. As clearly shown in Figs. 1 and 2, the several sections are connected together by means of clamping-screws 12, engaging in a block 13 of insulating material. The caps 10 are provided with openings, either at the sides or at the ends, through which portions of the wires may extend. By this arrangement it will be seen that in case of fire attacking the wire or a section of the thermostat the heat will be practically confined between the ends or cap-pieces and as the fusible wire melts it will fuse or contact with the conductor 6, thus closing the circuit.

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

1. A thermostat comprising two conductors insulated one from the other, a covering for the two conductors, one conductor being fusible, and a sealing device of insulating material for the end of a thermostatic section, substantially as specified.

2. A thermostat comprising two conductors, insulated from each other, a covering for the two conductors, one conductor being fusible, and caps of insulating material for engaging over the ends of the conductors, substantially as specified.

3. A thermostat comprising two conductors insulated from each other, a covering for the two conductors, one conductor being fusible, caps for engaging over the ends of the conductors, and sealing material in the caps, substantially as specified.

4. A sectional thermostat, each section comprising two conductors insulated one from the other, a covering for the two conductors, one conductor being fusible, caps of insulating material engaged over the ends of the sections, the said caps having openings through which the conductors may pass, and a sealing material in the caps, substantially as specified.

5. A sectional thermostat, comprising sections of cables, each section including conductors, one of which is fusible, and a suit-

able covering, caps of insulating material on the ends of the cables, the said caps having openings through which the conductors pass, sealing material in the caps, and insulating-blocks between the adjacent caps to separate the conductors, substantially as specified.

6. The combination with a thermostatic cable, comprising two conductive members, an insulating material interposed between them, and a fusible material normally in contact with one of the said members and separated from contact with the other member by said insulation, of means connected with the opposite ends of the said thermostatic cable for preventing movement of the fusible material under heat longitudinally of the conducting member with which it is in contact and to effect movement of the fusible material laterally with relation to said conducting member to effect the connection between the said conducting members, for the purpose specified.

7. The combination with a thermostatic cable having a fusible member, of pieces or blocks of insulating material covering the ends of the thermostatic cable to prevent movement of the fusible member in the direction of the length of the wire under the influence of heat, substantially as and for the purpose specified.

8. The combination with a thermostatic cable having a fusible member, of a device composed of insulating material for closing the ends of the cable against longitudinal movement of the fusible member under the influence of heat, substantially as described.

9. The combination with a thermostatic cable having a fusible member, of devices at the ends of said cable for closing the ends of the cable against longitudinal movement of the fusible metal, and terminals to which said thermostatic cable is electrically connected, for the purpose specified.

10. The combination with a thermostatic cable having a fusible member, of means extraneous to the cable for preventing movement of the fusible member longitudinally of the cable under the influence of heat, for the purpose specified.

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

JOHN D. GOULD.

Witnesses:
JNO. M. RITTER,
C. R. FERGUSON.