E. JOHNSON.

AUTOMATIC ELECTRIC FIRE ALARM.

APPLICATION FILED APR. 7, 1908.

916,711. Patented Mar. 30, 1909.

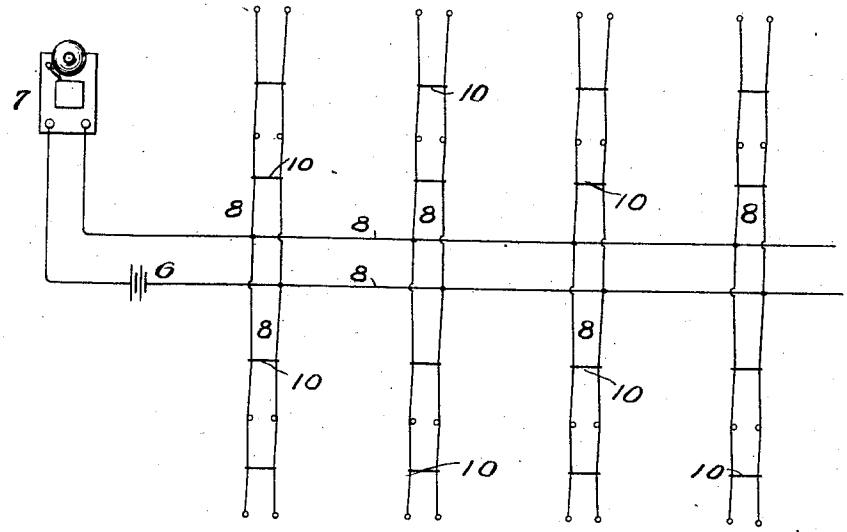


Fig. 1.

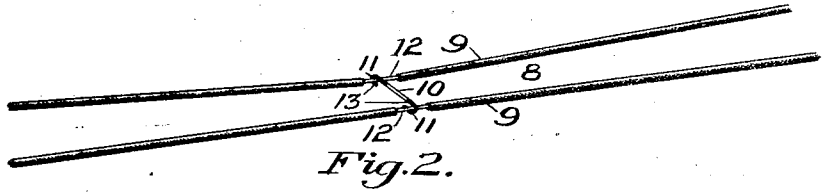


Fig. 2.

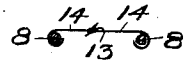


Fig. 5.

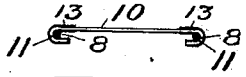


Fig. 3.

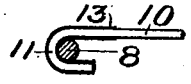


Fig. 4.

WITNESSES

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AUTOMATIC ELECTRIC FIRE-ALARM.

No. 916,711. Specification of Letters Patent. Patented March 30, 1909.

Application filed April 7, 1908. Serial No. 425,587.

To all whom it may concern:

Be it known that I, ENOS JOHNSON, a citizen of the United States, resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Automatic Electric Fire-Alarms; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention appertains to an electrical fire alarm, and has for its object an arrangement whereby the generation of heat of an undesirable degree or such as might develop combustion in proximity with my arrangement will effect the electrical announcement of the fact, the particular object being to announce fire in obscure or closed confines wherein my invention may be located.

In the accompanying drawings, Figure 1 is a diagrammatic view of my invention. Fig. 2 is a perspective view of a portion of Fig. 1. Fig. 3 is an elevation in cross section. Fig. 4 is an enlarged view of a portion of Fig. 3. Fig. 5 is a modified construction of my invention.

The reference numerals in the specification refer to similar reference numerals in the drawings in which is an electric battery 6 and an alarm bell 7 to which the main lead wires 8 having insulation 9 are suitably connected. Contact wires 10 are adapted to engage the main lead wires 8 by means of the hooks 11 formed thereon and hold said lead wires under tension. At the points where the hooked ends of the contact wires are placed over the main lead wires 8 the insulation 9, will be removed as at 12, (Fig. 2) and for the purpose of insulating the contact wire and effecting the purpose of my invention I form an insulating compound 13 consisting of a mixture of beeswax and resin, which in their preparation are fused and allowed to cool, after which the mixture is pulled or worked until its color is a chestnut brown. The mixture is then reheated until it is soft enough to adhere to the contact wires 10, the ends of which may then be dipped into the mixture and covered with the same and, after cooling, the contact wires 10 are then properly insulated and ready to be placed on the lead wires 8. The proportions of bees-wax and resin to be used may be varied so as to give greater or less consistency to the mixture under different conditions, but generally the proportions of one (1) part bees-wax to three (3) parts resin will be satisfactory.

Instead of making the contact wire in the form of the hook 10, it may be made as shown in Fig. 5 wherein the contact consists of the parts 14 secured on the main lead wires 8 over which they are bent so as to give a spring tension to the said parts 14 when they are held normally open by the insulation 13 which, when made malleable by heat, will be displaced by the tension of the parts 14 which will form a circuit.

The operation of my invention is as follows: The development of heat in proximity with the insulation 13 such as has become sufficient to cause combustion in the surroundings, will soften the insulation and allow the wires to displace said insulation by reason of the tension under which they are held against the same and thereby connect with the contact 10 to effect a circuit and ring the alarm bell 7. It will be understood that any suitable form of annunciator may be used, and that my invention is applicable to other than electrically operated devices.

What I claim as my invention is:

1. In an electrically operated fire alarm signal circuit, main lead wires, a contact wire exercising a transverse strain on the main lead wires, and easily fused insulating material between said contact and lead wires to maintain the circuit normally open.

2. An electrically operated fire alarm comprising main lead wires, a series of contact wires having hooked ends provided with an easily fused insulating material and exercising a transverse strain on the main lead wires so that on the fusing of the insulating the main lead wires will penetrate said insulating and form an electric contact with the contact wire thus closing the electric circuit to operate a suitable signal.

In testimony whereof, I the said ENOS JOHNSON have hereunto set my hand.

ENOS JOHNSON.

Witnesses:

J. L. TREFALLER, Jr.,

WALTER FAMARISS.