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I. L. ROBBLEE ET AL

2,058,721

FIRE ALARM CABLE

Filed March 25, 1935

Fig. 1.

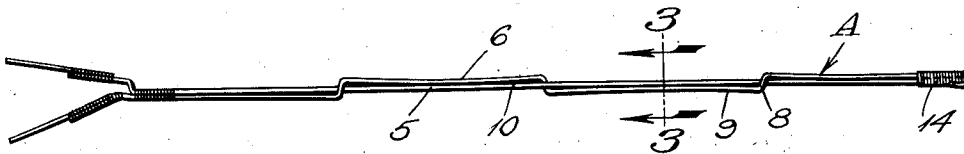


Fig. 2.

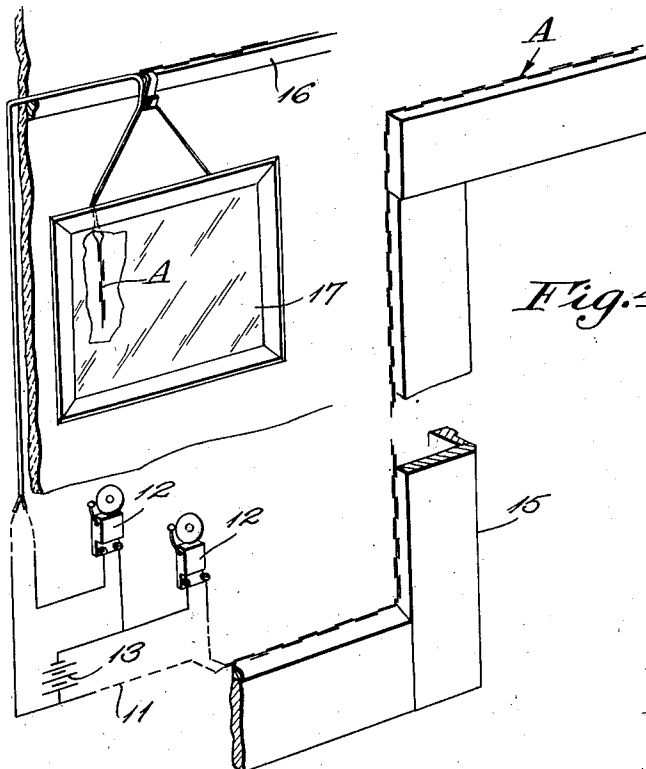
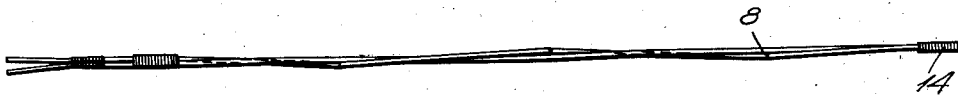


Fig. 4.

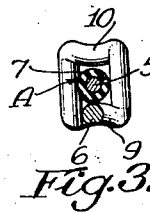


Fig. 3.

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FIRE ALARM CABLE

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1 Claim. (Cl. 200—143)

The invention relates to a cable-like circuit closer and more especially to a fire alarm cable.

The primary object of the invention is the provision of a cable of this character, wherein the same involves two wires, one being a rigid wire and insulated and the other being a spring wire or what might be termed a tensioning wire bent in such a manner as to cause a constant pressure on the insulated rigid wire so that when this cable is employed in a circuit with an alarm and fire attacks the insulation on the burning away of the latter the circuit is automatically closed to the alarm for the sounding or visibility of such alarm.

The pressure of the tensioning wire can be varied to meet diverse conditions by lengthening or shortening the bends therein. This is very important as temperatures vary greatly where this equipment may be installed. For instance; in a room where there is heating equipment it would be necessary to have the bends in the tensioning wire farther apart causing less pressure on the insulated wire, namely the rigid wire, which would require a higher temperature to operate the alarm. The operation is reversed for rooms of normal or colder temperature.

The fire alarm systems hereinbefore installed and in present day use are operated by room temperatures. In rooms of a certain construction where there are cold air drafts, etc., these systems are not sufficient due to the fact that one part of the room or building may get well underway by fire before the temperature at the unit would become hot enough to cause the alarm system to work.

Another object of the invention is the provision of a cable of this character, wherein the construction thereof eliminates the inefficiency of the present day alarm systems and is assured of a one hundred percent efficiency and also enables a very wide range of use and coverage as the cable can be installed between the partitions, remote and hazardous corners and along electrical lines within an edifice so that no matter where the fire begins an alarm is given immediately, or, in other words, the alarm operates instantly from the exact source of the fire and does not wait for a room to become hot.

A further object of the invention is the provision of a cable of this character, which is simple in its construction, thoroughly reliable and efficient in its purpose, durable, and may be installed to be invisible or tinted congruous with the color characteristics at places where installed and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention and pointed out in the claim hereinto appended.

In the accompanying drawing:

Figure 1 is a side elevation of a cable constructed in accordance with the invention.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view on the line 3—3 of Figure 1.

Figure 4 is a fragmentary pictorial view of portions of an enclosure showing diagrammatically an electric alarm including in its circuit the cable constructed in accordance with the invention.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, the cable A constituting the present invention comprises a pair of wires 5 and 6, respectively, the wire 5 being a rigid wire and carries an insulation 7, while the wire 6 is a tensioning wire and this has inherent resiliency and additionally to increase its tension is bent angularly at 8 at equi-distantly spaced intervals apart to provide alternate loop portions 9 and 10, respectively, these being reversely extended with respect to each other and has the wire 5 threaded in alternate fashion through the portions 9 and 10 so that the bends 8 will be alternately at opposite sides of the wire 5 and exerting a constant pressure thereon from opposite directions.

These wires 5 and 6 constitute the current wires for an electric circuit 11 of an alarm system including a signal device such as a bell 12 and in this instance a battery 13.

In the use of the wires 5 and 6 in their interlaced relation to each other there is provided a binding 14 which holds the wires assembled one with the other. The wires 5 and 6 in this assembled condition can be carried to many portions of a building or between the partitions, remote and hazardous corners and along electrical lines so that no matter where the fire begins on the disruption of the insulation 7 about the wire 5 the pressure of the wire 6 will effect a closing of the circuit 11 for the sounding of the alarm.

In Figure 4 of the drawing the wires 5 and 6 are displayed as following a doorway 15 and a wall moulding 16 as well as being located behind a picture 17 as hung from such moulding, this

being merely illustrative of a coverage of the wire cable in the use thereof.

What is claimed is:

- 5 A fire alarm cable comprising two wires, one of which is rigid and has an insulating covering, the second wire comprising a tensioning wire that has an inherent resiliency and which is bent at intervals apart to provide alternate loop portions which are reversely extended with respect to each

other and which loop portions have the insulated rigid wire threaded in alternate fashion there-through to arrange the bends alternately on the opposite sides of the rigid wire and to cause the loops and the connecting portions of the tension- 5 ing wire to exert a constant pressure in opposite directions upon the rigid wire.

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