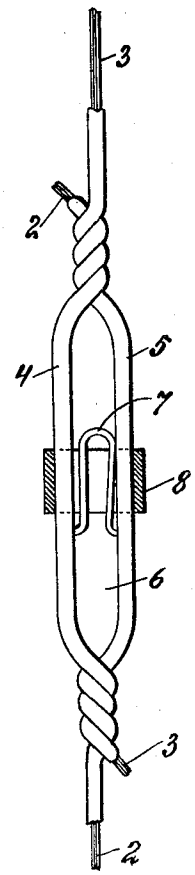
W. F. CALDWELL.

INDICATOR.

APPLICATION FILED OCT. 30, 1912.

1,139,486. Patented May 18, 1915.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM F. CALDWELL, OF HOT SPRINGS, ARKANSAS, ASSIGNOR OF ONE-HALF TO JOHN A. RIGGS, OF HOT SPRINGS, ARKANSAS.

INDICATOR.

1,139,486. Specification of Letters Patent. Patented May 18, 1915.

Application filed October 30, 1912. Serial No. 728,624.

To all whom it may concern:

Be it known that I, WILLIAM F. CALDWELL, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Indicators, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in electrical automatic fire alarm devices as hereinafter more fully described.

In the accompanying drawing I have illustrated the positive and negative wires of an electrical indicator or alarm circuit indicated by the reference characters 2 and 3 respectively. These wires are covered with the usual insulation 4 and 5 as shown and are twisted in such a manner as to provide a loop in the center indicated by the reference character 6. Within this loop is retained a substantially U-shaped electrical conductor such as 7 preferably of resilient material and around the outside of the loop is preferably retained the ring 8 adapted to hold the loop in the position shown against the resilient action or pressure of the U-shaped member 7.

At appropriate points along the various circuits of the indicator or alarm system the insulated conductors thereof are twisted as shown and are provided with the U-shaped member and ring 7 and 8 respectively and are short circuited by said U-shaped conductor by the heat of the flames when fire breaks out, the insulation yielding to the heat and allowing the offset points of the U-shaped member to contact with the conductors within the insulation.

From this it will be seen that it is only necessary to run a convenient number of branch circuits in multiple or parallel arrangement throughout the building or structure to be protected and by twisting portions of these circuits to form loops as shown in the drawing and by introducing the U-shaped conductor and ring thereupon as shown, an economical and efficient system of protection can be quickly and conveniently installed. Where the conductors 2 and 3 are of sufficient rigidity or cross section to make it unnecessary to provide the ring 8, the said ring may be eliminated. It will also be understood that it is not necessary that the U-shaped member 7 should be made in the form shown as long as it presses upon the insulation and will contact with the conductors when the same is burnt away. Furthermore the conductor 7 may be of any form and may be a non-resilient conductor providing the ring 8 is resilient or has a tendency to contract, thereby applying pressure upon the loop 6.

In fact various modifications may be made without departing from the spirit of the invention as set forth in the claims, the object of the invention being to provide tension between the conductors of the circuit and a conductor interposed between the same.

I claim:

1. An automatic electrical alarm device comprising insulating electrical conductors connected to both sides of an electrical circuit, a U-shaped resilient conducting member adapted to bear upon the insulation of and keep said conductors apart, and an outer ring adapted to limit the parting of said conductors, whereby when said insulation is burnt off said conductors are short circuited through said U-shaped member.

2. An automatic electrical alarm device comprising insulating electrical conductors connected to both sides of an electrical circuit, a U-shaped resilient conducting member adapted to bear upon the insulation of and keep said conductors apart, and an outer ring adapted to limit the parting of said conductors, whereby when said insulation is burnt off said conductors are short circuited through said U-shaped member, said U-shaped member having laterally projected contacting terminals.

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

WILLIAM F. CALDWELL.

Witnesses:
A. W. BUMPERS,
W. J. BURKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."