No. 888,355. PATENTED MAY 19, 1908.

E. SCHATTNER.

FUSE.

APPLICATION FILED JUNE 10, 1905

Fig. 1.

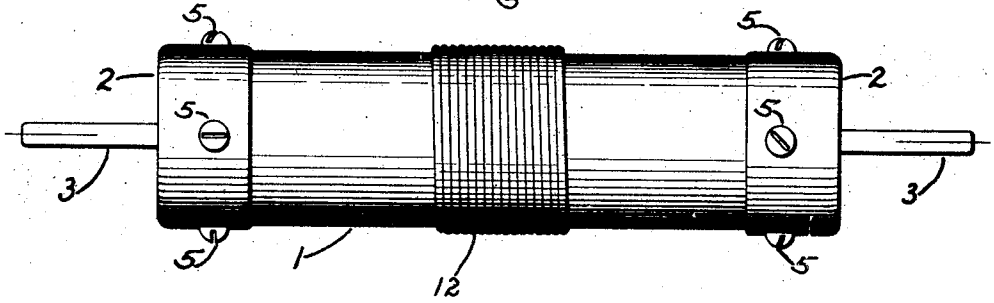


Fig. 2.

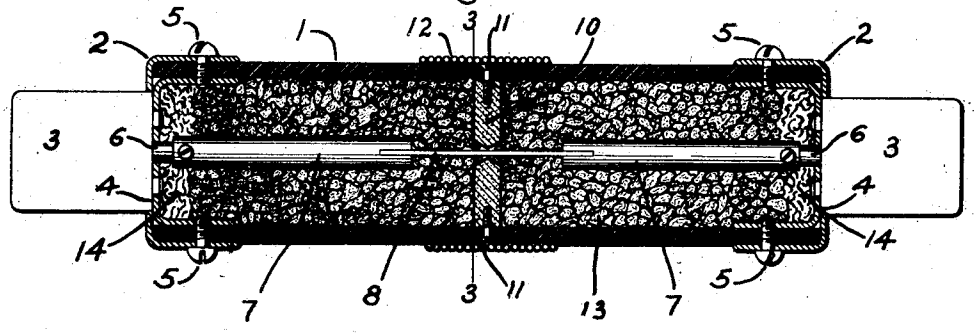
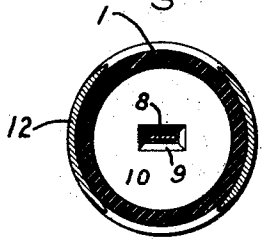


Fig. 3.



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UNITED STATES PATENT OFFICE.

ERNEST SCHATTNER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

FUSE.

No. 888,355. Specification of Letters Patent. Patented May 19, 1908.

Application filed June 10, 1905. Serial No. 264,585.

To all whom it may concern:

Be it known that I, ERNEST SCHATTNER, a subject of the King of England, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Fuses, of which the following is a specification.

This invention relates to thermal cut-outs, and its object is to avoid some of the difficulties that have been experienced with inclosed fuses.

When a fuse is inclosed in a granulated mixture of plaster of paris and sand or lime, or the like, the heat of the arc at the time the fuse blows melts the grains and fuses them into a solid mass which at the high temperature prevailing at the instant becomes conductive, and maintains the current. This fusing effect has proved quite troublesome, and my invention aims to overcome it. To this end I provide the shell which incloses the fuse with a partition or barrier disk having a small hole through which the fuse passes. The partition divides the granulated material into separate and distinct sections so that even if the fusing effect does occur in these sections, there is no continuous mass of conducting material, and thus the current is not maintained.

In the accompanying drawing, Figure 1 is a side elevation of an inclosed fuse embodying my invention; Fig. 2 is a longitudinal section of the same; and Fig. 3 is a cross section at the line 3—3, Fig. 2.

The shell 1 is of fiber or other suitable insulating material. Over each end is slipped a metal cap 2 having a slot for the terminal blade 3 which is secured to a yoke 4 placed inside the shell and secured by the screws 5 which pass through the cap, shell and yoke. Each blade has a short shank 6 to which is fastened a copper rod 7 which extends into the shell and supports one end of the fuse strip 8. This strip passes through a small slot 9 in a barrier disk 10 of fiber or asbestos or other heat-resisting material. The slot is narrow at its middle and flares out in both directions. The barrier disk is arranged transversely in the shell and is secured thereto in any suitable manner, as by the screws 11. If desired, the shell may be wrapped with wire 12 at this point to reinforce it. The shell is filled with granulated material 13, such as sand or plaster of paris and lime, and at each end is a wad of asbestos wool 14.

The operation is as follows: When the fuse blows, the gases expel the arc in both directions from the flaring slot, and even if the granular material is melted there can be no fusing effect owing to the fact that the barrier disk separates the said material into two distinct parts, which prevents any continuity of the fused mass and thus prevents any maintenance of the current thereby.

I do not desire to restrict myself to the particular form or arrangement of parts herein shown and described, since it is apparent that they may be changed and modified without departing from my invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is,—

In an inclosed fuse, the combination with the shell, of a barrier disk therein having a slot for the fuse, said slot flaring both ways, and absorbent material surrounding the fuse member and divided by said barrier.

In witness whereof I have hereunto set my hand this 8th day of June, 1905.

ERNEST SCHATTNER.

Witnesses:
BENJAMIN B. HULL,
HELEN ORFORD.