Nov. 24, 1925. 1,562,984

T. E. MURRAY

INCASED FUSE

Filed April 4, 1921

Fig. 1,

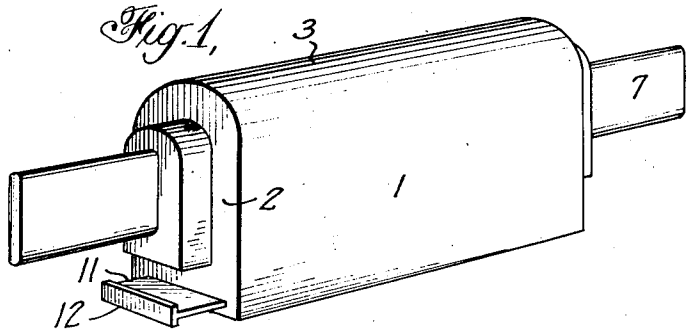


Fig. 2,

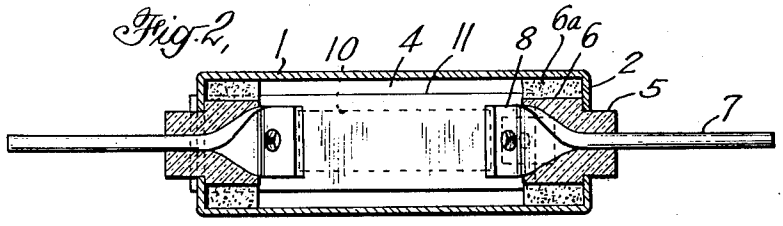


Fig. 3,

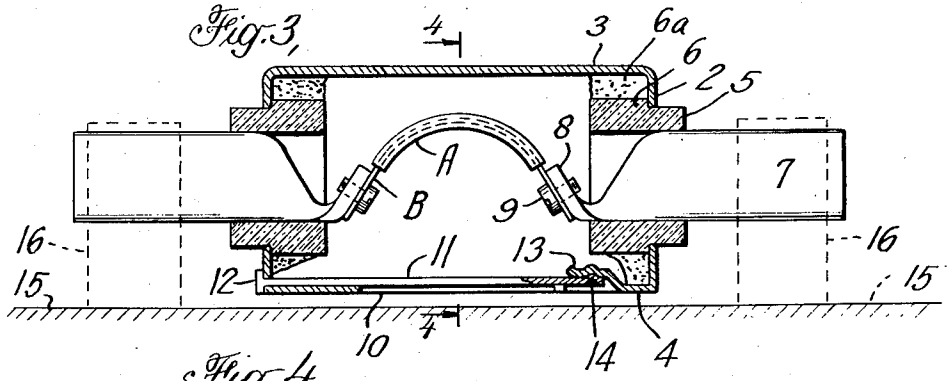
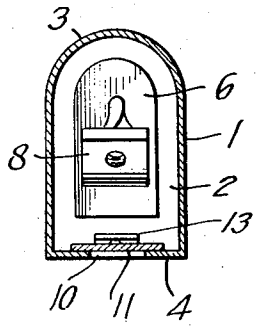


Fig. 4,



Inventor
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By his Attorneys,
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Patented Nov. 24, 1925. 1,562,984

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF BROOKLYN, NEW YORK.

INCASED FUSE.

Application filed April 4, 1921. Serial No. 458,353.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, and resident of Brooklyn, New York, have invented certain new and useful Improvements in Incased Fuses, of which the following is a specification.

My invention aims to provide an incased electric fuse which can be cheaply manufactured and which has other advantages referred to in detail hereinafter.

Fig. 1 is a perspective view of a complete incased fuse;

Fig. 2 is a horizontal section of the same with the fuse strip removed;

Fig. 3 is a vertical section with the fuse strip in place;

Fig. 4 is a transverse section on the line 4—4 of Fig. 3, with the fuse strip omitted.

The fuse proper which I have indicated at A may be of any usual or suitable type. It is preferably of the construction described in the patent of Murray and Murray, dated November 14th, 1922, No. 1,435,651. It consists of a strip of fusible metal with forked ends B for attachment to terminals and with the usual contracted central portion and an envelope of asbestos or other refractory insulating material extended over it continuously between its terminals. This covers the contracted portion at the center, where the fuse melts through in use, and prevents arcing or the passage of current from the broken end of the fuse outward and thus permits the use of a metal casing which would otherwise be dangerous.

The case consists of a metal box with sides 1, ends 2 and an arched top 3 and a flat bottom 4, the parts being put together by electric welding (as by drawing the top, sides and ends in one piece and welding the bottom on, or by forming two halves and welding them together on a central longitudinal plane) or in any other usual or suitable way. In the ends of the casing are porcelain insulating blocks 5 extending outward and inward beyond the metal and held against removal outward by shoulders 6 on the inside and cemented with plaster 6ª. Each block carries a conductor of copper extending outward in the form of a flat blade 7 adapted for easy insertion between the blade terminals of the line into which the fuse is to be inserted. Within the case the terminals have their ends 8 bent at an angle, as shown, and preferably in a plane transverse to the plane of the outer portions or blades 7, the inner ends 8 being threaded for screws 9 which fasten the terminals of the fuse strip with the latter in the arched position shown.

The bottom 4 of the box is provided with an opening 10 through which a screw driver may be inserted to operate the screws 9, the ends 8 of the terminals being set at such an angle as to facilitate this operation, and the opening 10 being large enough also to permit the passage of the fuse strip. The opening is normally covered by a plate 11 passing through a slot in the end of the box and having an enlarged head 12 by which it can be pressed in or can be pulled out to uncover the opening. A wedge 13 is provided, by bending up the bottom or as a separate piece, which engages the end of the cover when the latter is shoved inward. The cover is provided with a slight boss 14 which prevents its complete withdrawal through the slot in the end of the box and which also locks it in positively under the wedge 13, the latter forcing it down against the bottom of the box.

When a fuse burns out the entire case will be lifted out of the terminals and will be opened at the bottom and a new fuse inserted. While the fuse is in place the opening at the bottom is generally inaccessible because of its closeness to the plate 15 on which the line terminals, indicated in dotted lines at 16, are mounted. The entrance of the box is thus concealed and protected.

Though I have described with great particularity of detail certain specific embodiments of my invention, yet it is not to be understood that the invention is restricted to the particular embodiments disclosed. Various modifications in detail thereof may be made by those skilled in the art without departure from the invention as defined in the following claims.

What I claim is:—

1. A fuse casing carrying terminals passing through the opposite ends thereof in combination with an arched fuse strip within the casing, said casing having an opening on the concave side of the strip through which the latter may be removed or inserted.

2. A fuse casing comprising a metal box, insulating blocks carried in the ends thereof with a space surrounding them and a plastic filler within the casing between the insulating blocks and the metal.

In witness whereof, I have hereunto signed my name.

THOMAS E. MURRAY.