T. E. MURRAY.

ELECTRIC FUSE PLUG.

APPLICATION FILED DEC. 29, 1916.

1,259,268.

Patented Mar. 12, 1918.

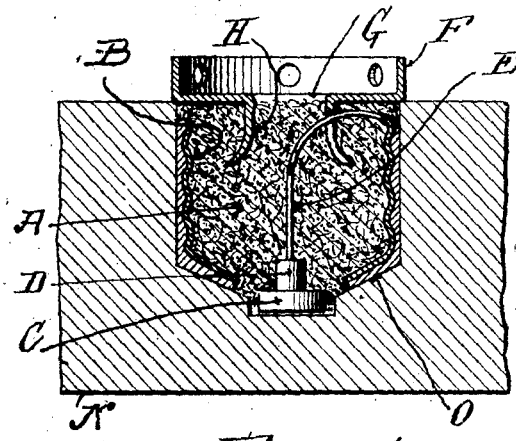

Fig. 1.

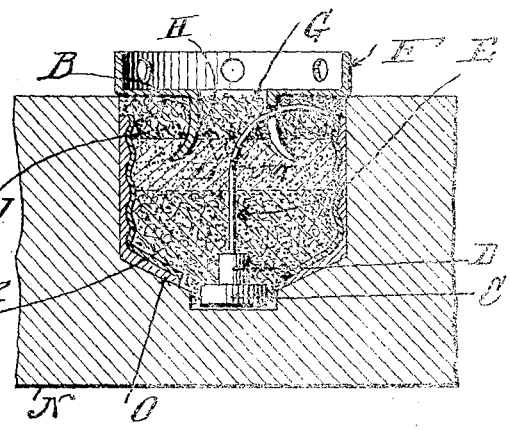

Fig. 2.

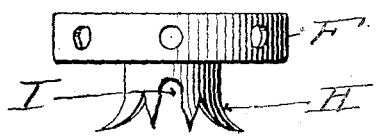

Fig. 3.

Inventor

Thomas E. Murray

By his Attorney

Carl Benjamin

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF NEW YORK, N. Y.

ELECTRIC FUSE-PLUG.

1,259,268. Specification of Letters Patent. Patented Mar. 12, 1918.

Application filed December 29, 1916. Serial No. 139,503.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Electric Fuse-Plugs, of which the following is a specification.

The invention is an electric fuse plug of the type wherein the contacts are respectively a threaded external shell and a plate at one end of said plug, and the fuse connecting said contacts is embedded in a mass of insulating material; and the said invention consists in the construction, more particularly hereinafter set forth, whereby the cap or cover of said plug is held in place, and the mode in which the fuse is embedded in the insulating mass.

In the accompanying drawings—

Figure 1 is a section of my fuse plug. Fig. 2 is a similar section of said plug, showing the insulating mass in two layers respectively of dense solid and dry comminuted materials. Fig. 3 is a side view of the metal cap.

Similar letters of reference indicate like parts.

A is a cylindrical core of insulating material—such, for example, as plaster of Paris. B is a shell of metal, preferably screw threaded, which incloses said core. C is a contact having a projection D. E is a fuse strip secured at one end to projection D, and at the other end to shell B. F is the cap or cover having a central opening G and a flange H around said opening. Said flange may be indented at its edge. The teeth thus formed are spread outwardly. There is a recess I, Fig. 3, in said flange through which the fuse strip E passes when the cap is in place.

The fuse strip E is wholly embedded in the core, and so also is the flange of cap F. The projection D is also embedded, together with a portion of the contact C. Between the upper edge of shell B and the bottom of cap F, and between the lower edge of shell B and contact C there are spaces which are filled with the material of the core A, said shell being thus insulated from said cap and said contact.

Instead of making the core A wholly of plaster or other solid insulating material, I may make the core in two sections, as shown in Fig. 2, the upper section J and the lower section K only being of plaster. Between said sections, I place a layer L of comminuted refractory insulating material, such as dry plaster, which section L incloses the blowing point M of the fuse strip, so that said comminuted material first receives the explosion and acts to dampen the shock thereof.

In making my fuse, I proceed as follows: In a block N of any suitable solid material, I form a recess approximating the shape of the plug. In said recess I place a lining O of metal internally threaded and conforming to the shape of shell B. I connect the fuse strip at its ends, as described, to the contact C and shell B, and place these parts in said recess. I then apply the cap F, which covers said recess and rests on the top of block N. I then prepare the material for the core in fluid form. In using plaster, I mix the dry material with water to make a freely flowing liquid which I pour into the recess through the opening G in cap F. Said liquid then fills said recess, and also the spaces or interstices between the ends of shell B and contact C and cap F. When the plaster has set and become hard, I remove the plug from the mold.

The flared flange H on cap F being embedded in the hardened plaster, holds said cap firmly in place and prevents its removal.

In making the modified form of fuse plug shown in Fig. 2, I place the contact C and shell B in the block recess, as already described, and then without applying the cap, I pour the liquid insulating material into the recess until the lower section K of suitable depth is formed. I then introduce the layer L of dry comminuted material, and affix the cap, pushing the flared flange H down into the comminuted mass until the cap rests on the block N. Finally, I pour in the liquid insulating material to form the upper section J of the core through the opening G in the cap.

I claim:

1. A fuse plug of the type wherein the contacts are respectively a threaded shell and a plate at one end of said plug, and the fuse connecting said contacts is embedded in a mass of insulating material, the combination of a cover cap for said plug having a central opening, and a flange around said opening, the said flange being embedded in said insulating mass.

2. A fuse plug, as in claim 1, the said flange being outwardly flared, and the said insulating mass being of a material hardened by setting around and engaging said flared flange to lock said cap in place on said plug.

3. A fuse plug, as in claim 1, the said flange being interposed between said contacts and having an opening for the passage of the fuse.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.