



# UNITED STATES PATENT OFFICE.

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

ELECTRIC CUT-OUT.

961,308.

Specification of Letters Patent. Patented June 14, 1910.

Application filed April 1, 1910. Serial No. 552,759.

*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 certain new and useful Improvements in Electric Cut-Outs, of which the following is a specification.

In U. S. Letters Patent No. 905,905, granted to me December 8, 1908, I have described an electric cut-out and holder, in which I have set forth a fuse case in arched form, having its ends constructed to enter recesses in the holder and containing an arched fuse extending between said ends, the space around the fuse and within the case being filled with suitable inert refractory material in pulverized form. In said Letters Patent I have described the fuse case as made wholly of porcelain, or other refractory fictile insulating material, and I have found such material excellently adapted for the purpose under all ordinary conditions. When, however, the fuse is to be subjected to abnormally heavy currents, it is desirable to construct the case so as to withstand the disruptive effect incident in such circumstances to the blowing of the fuse, and also to surround the fuse strip at the blowing point with a body of solid refractory material designed to resist the immediate shock.

My invention, therefore, consists in the construction of a cut-out in which I include both the fuse case and the fuse therein, as more particularly recited in the claims.

In the accompanying drawings Figure 1 is a section on the line  $x x$  of Fig. 2. Fig. 2 is a section on the line  $y y$  of Fig. 1, the cover and pulverized filling being removed. Fig. 3 is a section on the line  $z z$  of Fig. 1, and Fig. 4 is a section on the line  $x' x'$  of Fig. 1.

Similar numbers of reference indicate like parts.

The base 1 is preferably formed integrally of refractory insulating material, such as porcelain. On its under side it has two projections 2 and 3, provided with metal caps 4 and 5. The fuse strip 6 is connected at its ends to said caps 4 and 5, which form terminals, and extends upwardly through openings 7, 8, in the base, and has an arched portion above said base extending through an opening 8 in a standard 9. The portion 10 of the fuse strip which is within the open-

ing is reduced in area so that the blowing of the fuse will occur within said opening, and the incident shock will therefore, in some measure, first come upon the solid body of the standard 9, before it is wholly transmitted to the refractory pulverized material 11 in which the fuse and standard are embedded. The standard 9 and projections 2 and 3 are preferably made integrally with the base, so that the whole forms a solid block of porcelain in which is provided the usual opening 12 for receiving the supporting bar (numbered 21 in my aforesaid patent), by means of which bar and suitable locking mechanism the cut-out, as described in said patent, is secured in place in the holder. The end edges of the base 1 are curved so that a semi-cylindrical cover 13 may fit over them. The sides of said cover rest against the flat longitudinal edges of said base. The cover 13 is to be made of metal, preferably steel, and may be stamped or drop forged from a single piece, or constructed in any other known way which will insure the maximum strength with proper lightness of weight. Said cover is secured in place by means of bolts 14, 15, passing through its sides and through the body of the base. If desired the cover may be provided internally with a lining of fiber or asbestos felting 16. In order to introduce the pulverized refractory material which forms the filling into the space included between the cover and the base, I provide recesses 17 in the ends of the base, through which, after the cover is in place, said filling may be inserted. These recesses are afterward filled with plaster, or like material, as shown at 18.

In operation, when the fuse is blown by reason of an abnormally heavy current, the shock comes upon the strong steel cover which cannot be disrupted thereby, nor can said cover be lifted off of the base because of its fastening bolts 14, 15.

I claim:—

1. The combination of a base of fictile refractory material, a standard of like material thereon, a fuse having a portion of reduced cross sectional area disposed in an opening in said standard and secured at its ends in said base, and a cover secured on said base and inclosing said base and standard.

2. The combination of a base of fictile re-

fractory material, a standard of like material thereon, an arched fuse extending through an opening in said standard and secured at its ends in said base, a cover of metal secured on said base and inclosing said fuse and standard, and a filling of pulverized refractory material within said cover.

3. The combination of a base of fictile refractory material, a standard of like material on one side thereof and integral therewith, integral projections on the opposite side of said base, contact plates on said projections, a fuse connected at its ends to said projections and extending through an opening in said standard, a cover of metal secured on said base and inclosing said fuse

and standard, and a filling of pulverized refractory material within said cover.

4. The combination of a base of fictile refractory material, a standard of like material thereon, an arched fuse extending through an opening in said standard and secured at its ends in said base, a semi-cylindrical cover formed integrally of metal receiving said base and inclosing said fuse and standard, and a filling of pulverized refractory material within said cover.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,  
MAY T. MCGARRY.