T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED NOV. 30, 1908.

918,891. Patented Apr. 20, 1909.

2 SHEETS—SHEET 1.

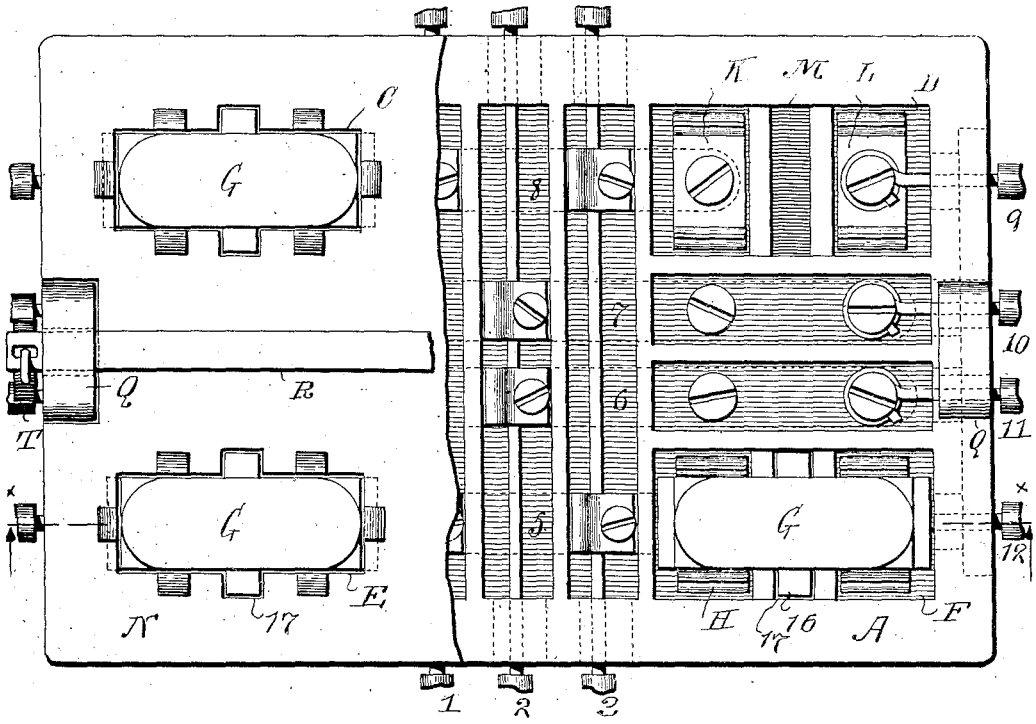

Fig. 1.

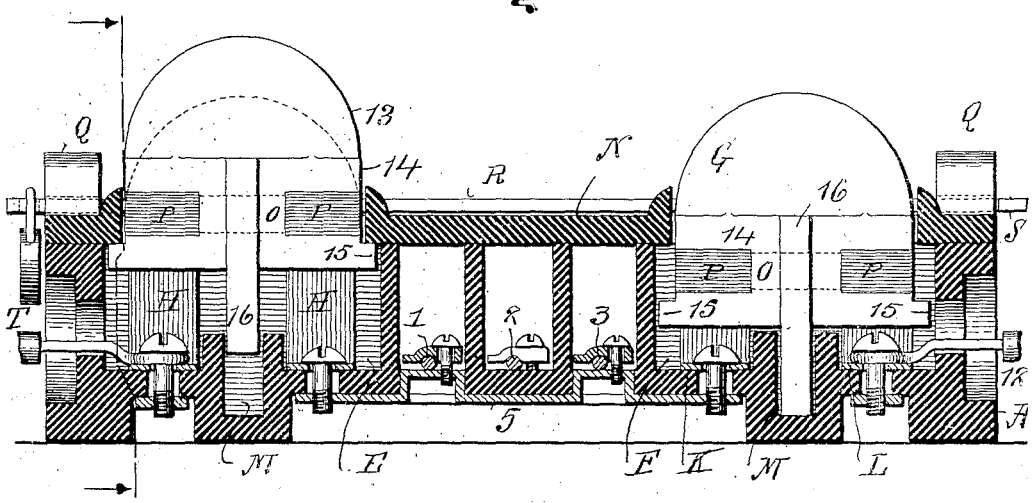

Fig. 2.

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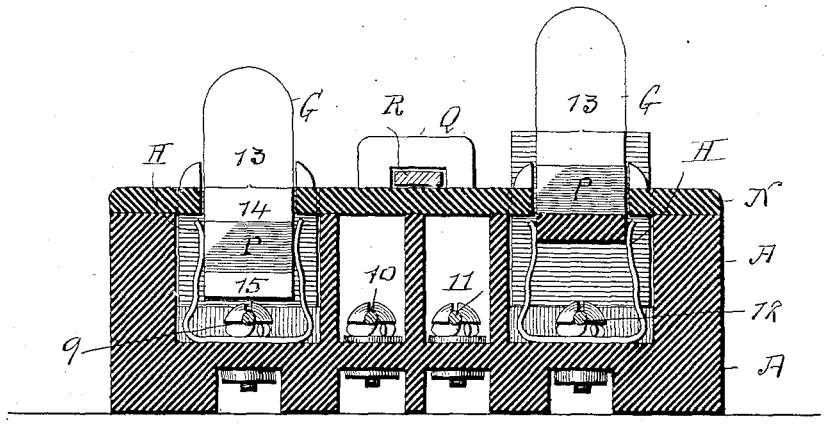

Fig. 3.

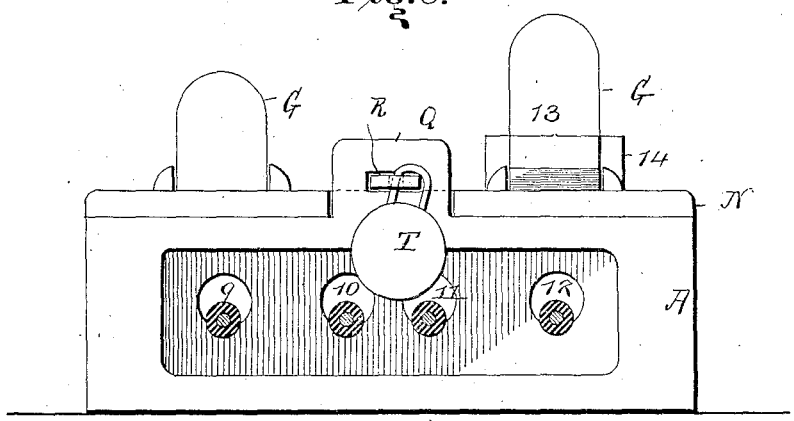

Fig. 4.

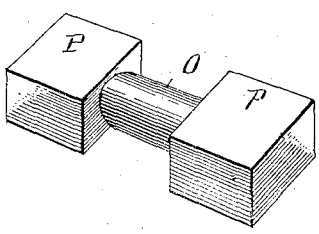

Fig. 5.

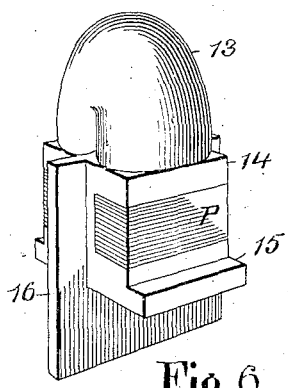

Fig. 6

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UNITED STATES PATENT OFFICE.

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

ELECTRIC CUT-OUT.

No. 918,891. Specification of Letters Patent. Patented April 20, 1909.

Application filed November 30, 1908. Serial No. 465,113.

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 Cut-Outs, of which the following is a specification.

The invention relates to electric cut outs and consists in the construction of the fuse case holder, in the combination of said holder and fuse case therein, with the base and with the cover, whereby circuit may be broken by withdrawing the fuse case from between terminals in a recess in the base; also in the various combinations more particularly recited in the claims.

In the accompanying drawings—Figure 1 is a plan view of my device with a portion of the cover broken away. Fig. 2 is a section on the line *x*, *x*, of Fig. 1, showing one of the fuse case holders in elevated position to break circuit through the fuse. Fig. 3 is a section on the line *y*, *y*, of Fig. 2. Fig. 4 is an end view. Fig. 5 shows one of the fuse cases, and Fig. 6, one of the fuse case holders separately and in perspective.

Similar letters and numbers of reference indicate like parts.

The base block A is preferably of porcelain and constructed to receive the main conductors 1, 2, 3. On the under side of said block are recesses in which are disposed, metal strips 5, 6, 7, 8. The conductors 1 and 3 are connected by bolts and clamping plates in the usual way to the strips 5, 8. The conductor 2 is similarly connected to the strips 6, 7.

In the base are four recesses C, D, E, F, which respectively receive the four fuse case holders G. In each recess is disposed two clips K, L having upwardly extending spring arms H, and between said clips, in the bottom of the recess, is formed a socket M. To the outer clips L of the several recesses are connected the terminals of the local conductors 9, 10, 11, 12. The strip 5 is connected at its ends to the clips K in recesses E, F, and the strip 8 is connected at its ends to the clips K in the recesses C, D. It will be obvious that in the particular form of my cut out here shown, four local circuits are provided for, and that in each is to be disposed a fuse case holder G. As the construction of all said holders and of their receiving recesses is the same, a description of one will serve for all.

The fuse case holder, as shown separately in Fig. 6, is preferably formed integrally of porcelain. It has an upper or handle portion 13, preferably arched over a cubical portion 14 having horizontal end flanges or shoulders 15, and a web 16 projecting from each side of said cubical portion 14, and below the bottom thereof. When the cover N is removed from the base block A, the holder G may be inserted into its recess, the lower portion of the web 16 then entering the socket M, Fig. 2. When the cover N is in place, the vertical side portions of the web are received in side recesses 17 in the opening in said cover. The length of the cover opening is, however, such that its edges overlap the shoulders 15 of the holder, as shown on the right of Fig. 2, so that when the holder is raised, the said shoulders meet said edges, as shown on the left of Fig. 2, and hence, said holder cannot be completely removed from its recess unless the cover N is first taken off of the base.

In the cubical portion 14 of the holder is made an opening to receive the fuse case O, Fig. 5. Said fuse case may be of porcelain or other fictile material, and is to contain a fuse of any suitable construction, connected at its ends to the metal cap pieces P of said case. Said cap pieces are shown as cubical blocks, but they may be of any suitable shape and construction for the purposes hereinafter explained. The opening in the portion 14 may consist of two recesses, each receiving one of the cap pieces P, so that the vertical sides of said pieces are exposed and a connecting cylindrical passage to receive the cylindrical case O. In inserting the fuse case in the holder, one of the caps is removed, and applied after the case and remaining cap have been seated in the opening.

When the holder containing the fuse case is seated in its recess in the base to close circuit, as shown on the left of Fig. 3, and on the right of Fig. 2, the arms of clips K, L become forced apart and so make close contact with the exposed sides of the cap pieces P, thus establishing circuit through the fuse. When it is desired to cut the fuse out of circuit, the holder is lifted, as shown on the right of Fig. 3, and on the left of Fig. 2, and

remains held in that position by the resiliency of said spring arms, the shoulders 15 then abutting on the under side of the cover. It will be seen from Fig. 3 that the part of the porcelain holder then grasped by said arms is that which lies below the cap pieces P, and also that said cap pieces P have been raised sufficiently far above the upper ends of the arms, as to bring them above or within the cover opening. In this way, any possible jumping of sparks between the spring arms and cap pieces is prevented, when the holder is in the lifted position.

In order to secure the cover N in place, I provide on the base, two upwardly extending lugs Q which are received in recesses in the edges of the cover. A locking bar R having a head S at one end and an opening at the other end, is passed over the cover through apertures in said lugs, and removal of said bar is prevented by inserting the shackle of any suitable seal fastening T through said opening S.

It will be apparent, that by my present construction, the fuse holders are not necessarily removed from their recesses while the device is in service, and that they cannot be wholly removed without breaking the seal fastening T, in order to free the bar R and so releasing the cover. In order to break any one of the four local circuits by cutting out its fuse, it is simply requisite to grasp the handle portion 13 of the holder selected, and lift said holder until its shoulders 15 meet the under side of the cover. In its upward movement, the holder is guided by the vertical side portions of the web 16 moving in the recesses 17 of the cover opening. The web 16 is not moved out of its socket M, and hence, always forms a partition of insulating material interposed between the clips K, L.

I claim:

1. The combination of a block of insulating material having a transverse opening for the reception of a fuse case, flanges on two opposite sides of said block, below said opening, and a vertical web projecting from the remaining sides of said block and extending across and below the bottom thereof.

2. The combination with a base having a recess and circuit terminals therein, of a holder constructed to enter said recess, a fuse case in said holder having terminals constructed to make contact with said recess terminals when said holder is seated in said recess, a cover for said base, and means on said holder and within said recess for engaging said cover and thereby preventing removal of said holder from said recess.

3. The combination with a base having a recess, two pairs of spring arms therein and circuit terminals connected respectively to each pair of arms, of a holder constructed to enter between said pairs of arms, a fuse case in said holder constructed to close circuit between said pairs of arms, and means for preventing removal of said holder from said arms.

4. The combination with a base having a recess and circuit terminals therein, of a holder constructed to enter said recess, a fuse case in said holder having terminals constructed to make contact with said recess terminals when said holder is seated in said recess: the said holder being removable in said recess to break contact between said fuse terminals and said recess terminals, and means for preventing complete withdrawal of said holder from said recess.

5. The combination in an electric cut out, of a base having a recess, circuit terminals in said recess, a cover having an opening over said recess, a fuse holder disposed and movable in said recess and extending through said cover opening, and provided with shoulders preventing its withdrawal through said cover opening, and a fuse in said holder constructed to close circuit between said circuit terminals.

6. The combination in an electric cut out, of a base having a recess, circuit terminals in said recess, a cover having an opening over said recess, a fuse holder of insulating material disposed and movable in said recess and extending through said cover opening, and means for preventing withdrawal of said fuse holder through said cover opening.

7. The combination in an electric cut out, of a base having a recess, circuit terminals in said recess, a cover having an opening over said recess, a fuse holder of insulating material disposed and movable in said recess and extending through said cover opening, means for preventing withdrawal of said fuse holder through said cover opening, and means for locking said cover on said base.

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

THOMAS E. MURRAY.

Witnesses:
GERTRUDE T. PORTER,
MAY T. MCGARRY.