

T. E. MURRAY.
ELECTRIC CUT-OUT.
APPLICATION FILED NOV. 9, 1908.

922,801.

Patented May 25, 1909.

2 SHEETS—SHEET 1.

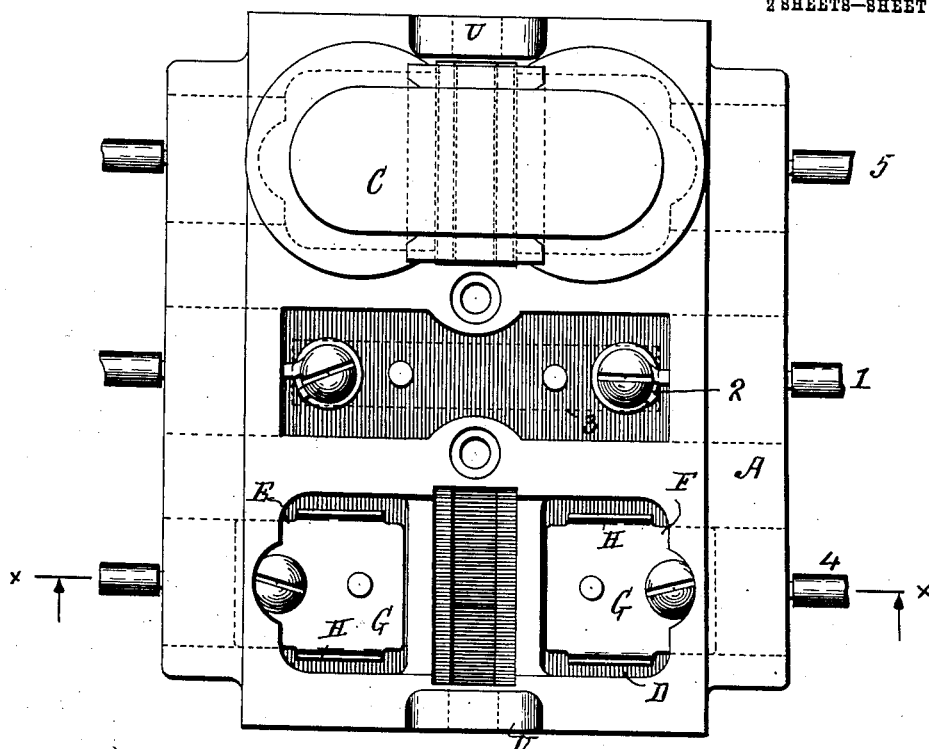


Fig. 1

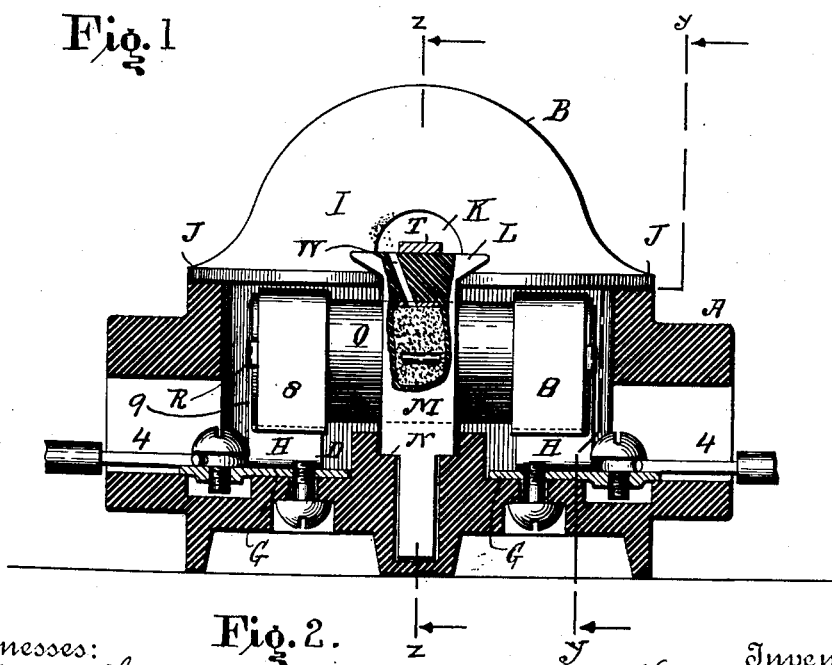


Fig. 2.

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Ruth Benjamin

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Fig. 3.

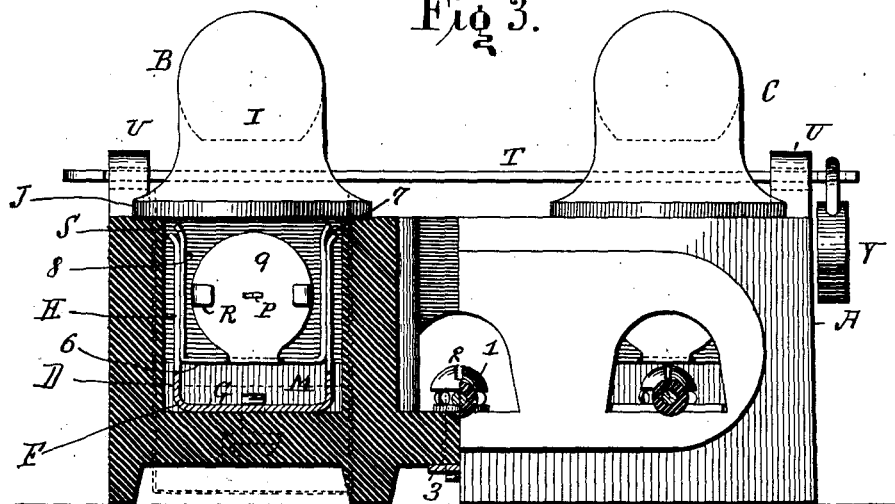


Fig. 4.

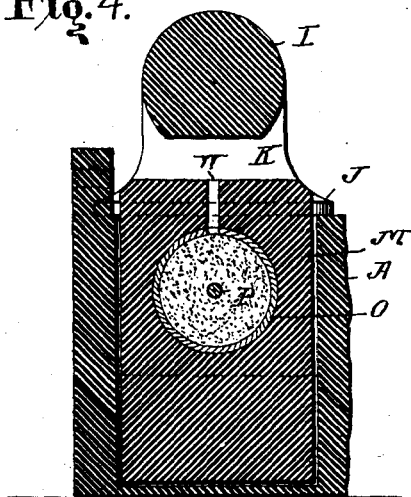


Fig. 5.

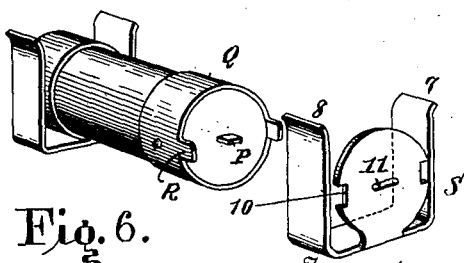
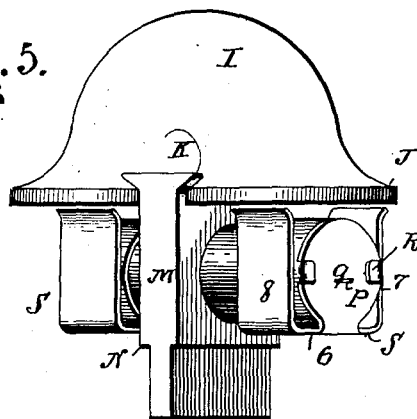


Fig. 6.

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UNITED STATES PATENT OFFICE.

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

ELECTRIC CUT-OUT.

No. 922,801.

Specification of Letters Patent.

Patented May 25, 1909.

Application filed November 9, 1908. Serial No. 461,650.

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 broadly in the construction of the fuse case holder, in the combination of the said holder and base block, in the construction of the fuse case, and in the means for indicating blowing of the fuse, all as more particularly set forth and pointed out in the claims.

In the accompanying drawings—Figure 1 is a plan view of my device. Fig. 2 is a cross section on the line *x, x*, of Fig. 1. Fig. 3 is a cross section on the line *y, y*, of Fig. 2. Fig. 4 is a cross section on the line *z, z*, of Fig. 2. Fig. 5 is a perspective view of the fuse case holder with the fuse in place. Fig. 6 is a perspective view of the cylindrical fuse case showing one end piece with its parts separated.

Similar letters and numbers of reference indicate like parts.

A is the base block preferably of porcelain and constructed to receive the terminals of the conductors of a three wire system. The terminals of the neutral conductor 1 are connected by bolts 2 to the metal strip 3, on the under side of the base block. There are two fuse case holders B, C, disposed in the base block, and when they are in place, one fuse is located between the terminals of the positive conductor 4, and the other fuse between the terminals of the negative conductor 5. As the construction of these fuse case holders, and their arrangement in the base block is the same, a description of one will serve for both.

In the base block A is formed a recess D, at each end of which is secured a metal clip E, F. Each clip comprises a flat bottom plate G and two side plates H, preferably integral with the bottom plate and bent upward. The terminals of the conductor 4 are connected by screws to extensions of said bottom plates G.

The fuse case holder which forms a cover for the recess D comprises an upper arched member I, provided with flanges J and having an opening K above the flanges. In the sides of this opening are grooves to receive

the side flanges on the head L of a separable partition M of porcelain, which depends downwardly and is shouldered at N, to enter a correspondingly formed socket in the bottom of the recess D. The flanges on the head L, of the partition M, are slid into the grooves in the sides of the opening K, and in this way the partition M and arched upper member I are detachably connected together.

In the partition M is a circular opening in which is inserted a cylindrical fuse case of the cartridge type. Said case is constructed in the following manner: O is the inclosing cylinder in which is disposed the fuse strip P, embedded in powdered non-combustible material. On each end of the cylinder O is secured a ring Q of metal having on its outer rim, lugs R. S is a removable end piece formed integrally of sheet metal, and having a bottom plate 6, two upwardly turned side plates 7, 8, and a circular end plate 9, having edge recesses 10, and a central opening 11 which receives the extremity of the fuse strip P. The end piece S is applied to the extremity of the fuse cylinder O, so that the lugs R on ring Q enter the recesses 10, after which said lugs are bent over, as shown, thus securing said end piece in place. As the cylinder O fits in the opening in partition M, one end of ring Q is not applied to said cylinder until after said cylinder has been inserted through and seated in said opening. The fuse case holder, with the fuse case and partition M in place, as shown in Fig. 5, is then inserted in the recess D of the base block, the shouldered portion N of the partition M entering the socket in the bottom of said recess. The end pieces S then make contact with the clips E, F, thus connecting the fuse strip P in circuit.

In order to lock the fuse case holders in the base block, I provide a headed rod T which passes through openings in lugs U on the base block, and also through the openings K in said holders. At the extremity of said rod is made an aperture to receive the shackle of a seal V, whereby withdrawal of the rod is prevented.

In order to provide means for conveniently showing the fact that a fuse has blown, I make a downwardly inclined passage W in the head of partition M, the lower extremity of which registers with a small opening in the fuse case O. The explosion products resulting from the blowing of the fuse then escape

through said passage and produce a dark patch on the immediately adjacent surface of the upper member B, as shown in Fig. 2.

Attention is called to the fact that each fuse case with its circuit connections is disposed in a separate recess in the base, which base is made preferably of porcelain or other fictile material, and that said recess is completely closed by the cover of like material. Hence, each fuse case is enveloped and protected on all sides by the incombustible walls of said material, so that not only is access to the fuse case and connections prevented, but in case of explosion, the effects thereof are localized to the particular recess in which the exploding fuse is situated.

I claim:

1. The combination in a fuse case holder of an upper member, a depending member independently and detachably secured to said upper member and having a transverse opening, and a removable fuse case seated in and extending through said opening.

2. In an electric cut-out, a base block having a recess and circuit terminals therein, an upper member on said base block, a depending member independently secured to said upper member, and a fuse case seated in and extending through said depending member making contact with said base terminals.

3. In an electric cut-out, a base block having a recess and circuit terminals therein, an arched upper member having oppositely disposed grooves in the arch wall, a depending member having, at one end, flanges constructed to enter said grooves, and a fuse case seated in and extending through said depending member and making contact with said base terminals.

4. The combination in a fuse case holder, of an arched upper member having grooves in the arch walls, a depending member having at one end, flanges constructed to enter said grooves, and provided below said flanges with a transverse opening, and a fuse case seated in and extending through said transverse opening, and a passage in said fuse case and depending member for leading explosion products from said fuse to and against the under surface of said arch.

5. In an electric cut-out, a base block having a recess, circuit terminals, each consisting of a pair of spring clips, within said recess, an upper member on said base block, a depending member secured to said upper member and entering said recess between said terminals, and a fuse case seated in and extending through said depending member

and received at its ends in said terminal clips. 60

6. In an electric cut-out, a base block having a recess and circuit terminals therein, a removable cover for said recess, a downwardly extending plate independently secured to the under side of said cover, and a fuse case removably seated in and extending through said plate and making contact at its ends with said base terminals. 65

7. In an electric cut out, a base block having a recess and circuit terminals at opposite ends thereof, a removable cover for said recess, a partition secured on the under side of said cover and entering said recess between said terminals and having a transverse opening and a fuse case seated in and extending through said opening and making contact with said terminals. 70 75

8. In an electric cut out, a base block having a recess and circuit terminals therein, a removable cover for said recess, and, secured on the under side of said cover, a fuse case constructed to enter said recess and make contact with said terminals, and means for indicating on the exterior of said cover, the blowing out of said fuse. 80 85

9. In an electric cut out, a base block having a recess and circuit terminals therein, a removable cover for said recess, and, secured on the under side of said cover, a fuse case constructed to enter said recess and make contact with said terminals, and a passage for leading explosion products from said fuse case to and against an exposed surface on the exterior of said cover. 90

10. In an electric fuse case, the combination with a fuse strip and filling, of a tubular envelop, a detachable end piece of conducting material comprising two resilient side plates and an end plate, and means for detachably securing said end plate to the end of said tubular envelop. 95 100

11. In an electric fuse case, the combination of a tubular envelop, a metal ring secured at one end thereof and having outwardly projecting lugs, and an end piece comprising integrally two side plates, a bottom plate and an end plate; the said end plate being constructed to close the end of said envelop and to be held in place by engagement with said lugs. 105 110

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,
MAY T. MCGARRY.