T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED MAY 20, 1912.

1,041,846.

Patented Oct. 22, 1912.

3 SHEETS—SHEET 1.

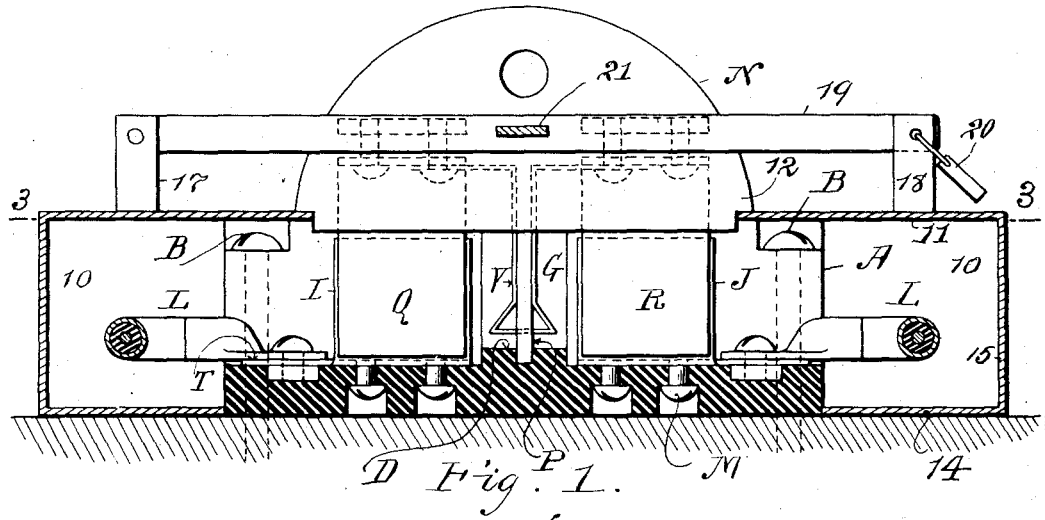

Fig. 1.

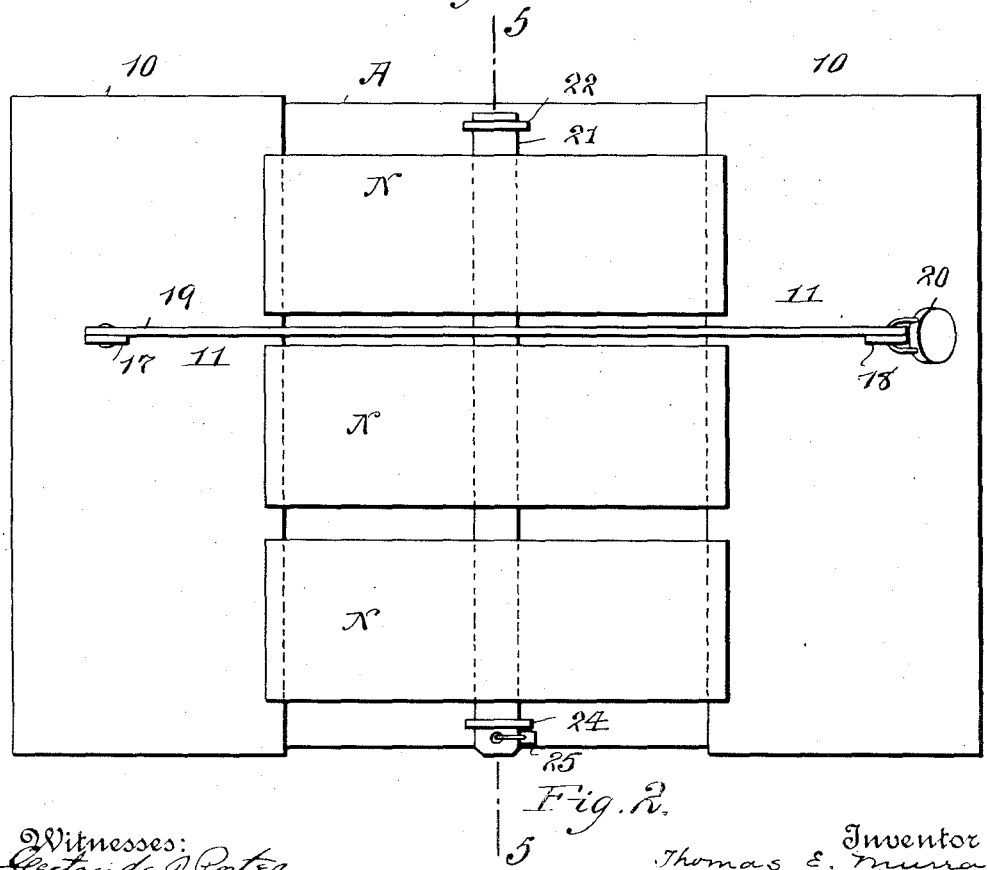

Fig. 2.

Witnesses:
Gertrude P. Porter.
May T. McGarry.

Inventor
Thomas E. Murray
By his Attorney
Sam Benjamin

T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED MAY 20, 1912.

1,041,846.

Patented Oct. 22, 1912.

3 SHEETS—SHEET 2.

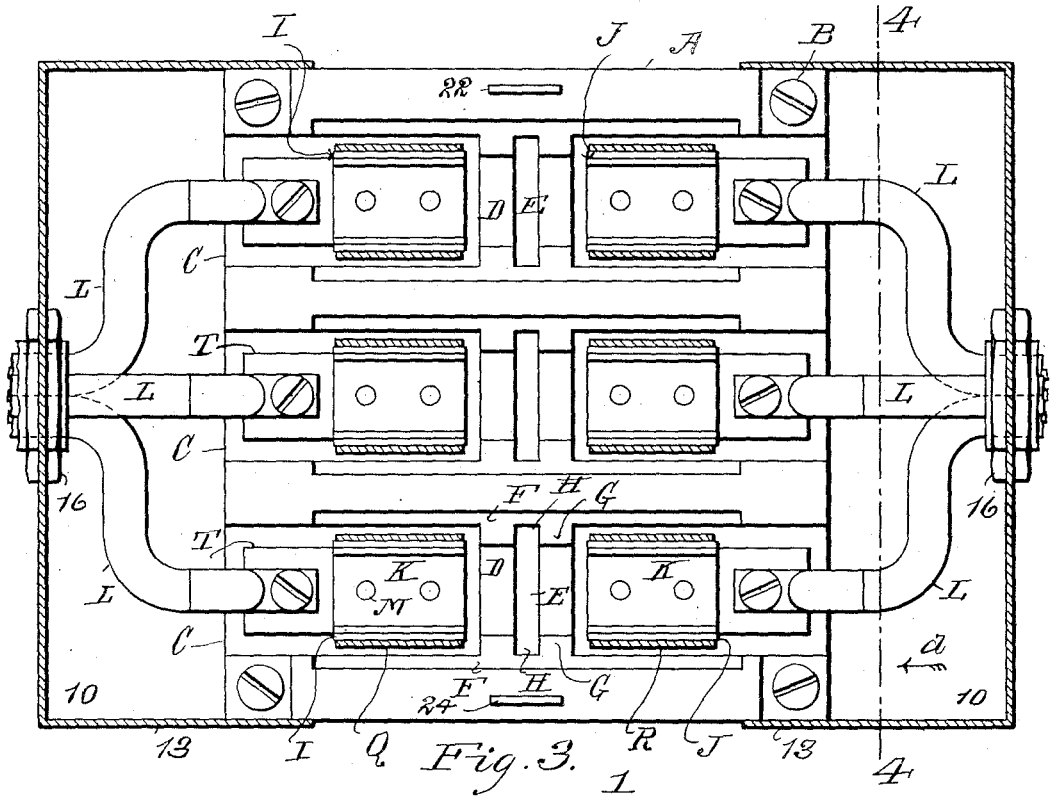

Fig. 3.

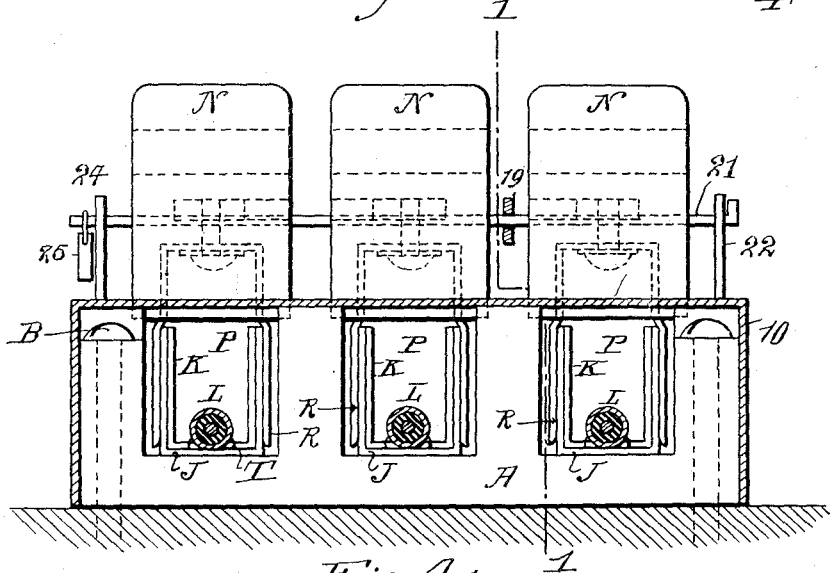

Fig. 4.

Witnesses:
Gertrude D. Bates.
May T. McHarry.

Inventor
Thomas E. Murray
By his Attorney
Paul Benjamin

T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED MAY 20, 1912.

1,041,846.

Patented Oct. 22, 1912.

3 SHEETS—SHEET 3.

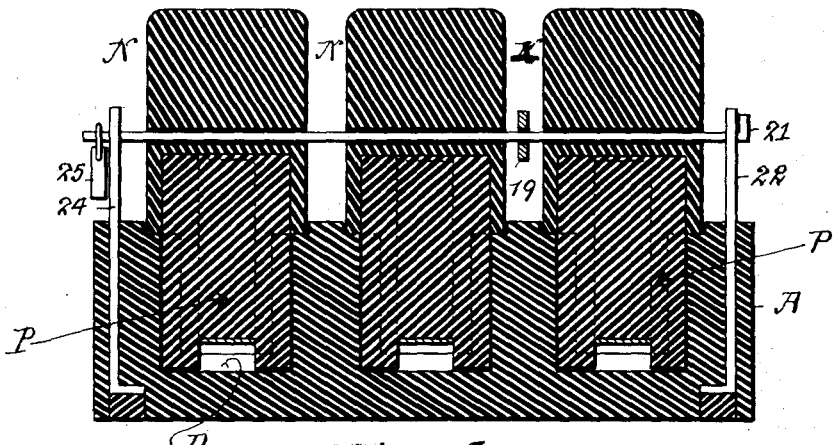

Fig. 5.

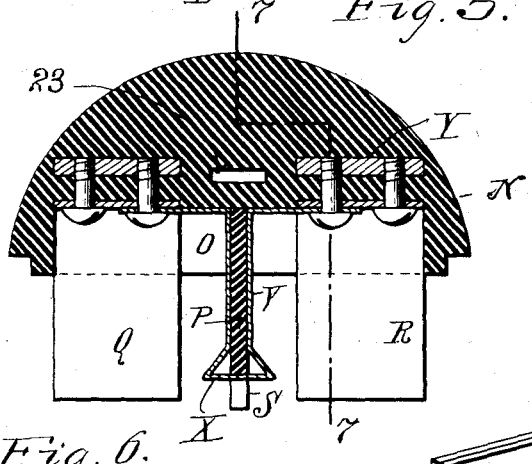

Fig. 6.

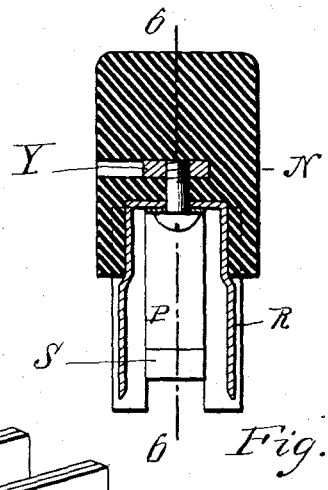

Fig. 7.

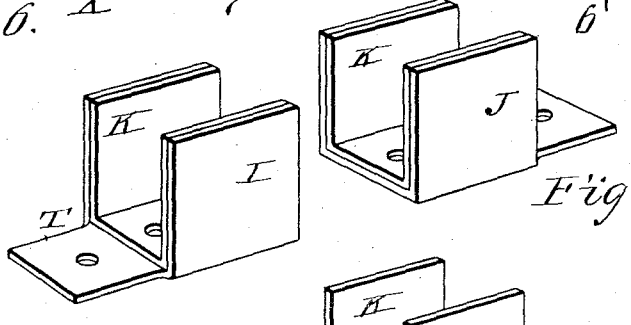

Fig. 8.

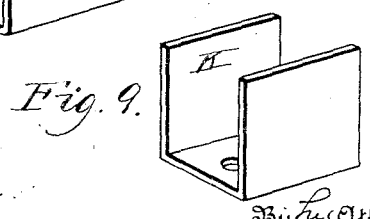

Fig. 9.

Witnesses:
Gertrude I. Porter
May T. McGarry.

Inventor
Thomas E. Murray
By his Attorney
Carl Benjamin

UNITED STATES PATENT OFFICE.

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

ELECTRIC CUT-OUT.

1,041,846. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed May 20, 1912. Serial No. 698,397.

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 hereinafter set forth, whereby the contacts on the movable switch member or plug which coöperate with base contacts are connected by a connection or fuse strip looped over a support on the exterior of said member, which support forms an insulating partition between the contacts when the plug is in place on the base block.

In the accompanying drawings—Figure 1 is a longitudinal section of my cut-out on the line 1, 1 of Fig. 3. Fig. 2 is a top view. Fig. 3 is a horizontal section on the line 3, 3 of Fig. 1. Fig. 4 is a transverse vertical section on the line 4, 4 of Fig. 3 in the direction of the arrow *a*. Fig. 5 is a similar section on the line 5, 5 of Fig. 2. Fig. 6 is a section of one of the fuse plugs on the line 6, 6 of Fig. 7. Fig. 7 is a section of one of the fuse plugs on the line 7, 7 of Fig. 6. Fig. 8 is a perspective view of two of the contact clips, showing the insulating linings in place. Fig. 9 is a perspective view of one of said insulating linings.

Similar letters and numbers of reference indicate like parts.

A is the base block of porcelain or other refractory insulating material, which may be secured in place on any suitable support by the bolts B. The block, as here shown, receives three switch members—here fuse plugs—respectively interposed in the conductors of a three-wire circuit. As these members are alike, a description of one and its coöperating parts on the base block applies to all.

Extending longitudinally across the block are three recesses C. Midway in each recess and on the bottom thereof is a raised portion D, Fig. 1, in which is a groove E, Fig. 3. The walls on each side of recess C are recessed to receive inserted plates F, on which are projections G which meet the ends of raised portion D. Said projections G have grooves H which register with groove E to form a continuous groove. The plates F are all alike, and their object is to simplify the construction, since it is cheaper and easier to mold these plates separately and insert them in the shallow recesses in the case walls, than to mold the required projections integrally with the walls themselves.

In the recess C and on each side of the raised portion D is secured a pair of spring contact clips I, J, preferably formed by bending a plate of metal in stirrup shape. Within each stirrup-shaped clip is placed a stirrup-shaped lining K, Fig. 9, of insulating material in order to prevent sparking between said clips. The clip and linings are jointly secured to the base by screws M, Fig. 1. To extensions T on the clips are attached the terminals of the circuit leads L.

The fuse plugs N, Figs. 6 and 7, also of refractory insulating material, are alike, and respectively coact with the pairs of clips I, J in the several recesses C. The upper side of the plug is preferably arched. In the under side is a recess O. A partition P extends downwardly in this recess, and protrudes beyond the bottom of the plug. When the plug is seated in the base, this partition P enters the groove E in the channel bottom and the grooves H in the inserted plates F, and so divides the recess C into two compartments.

Within the plug recess are secured downwardly depending pairs of contact clips Q, R, which when the plug is in place extend over and make contact with the outer faces of the clips I, J. A looped connection V, which may be a fuse strip, is attached at one end to clip Q, extends along and in contact with one side of partition P, through an opening S at the bottom of said partition, along and in contact with the opposite side of said partition, and at its other end is secured to clip R. Said fuse strip is bent outwardly near the bottom of the partition, as shown at X, Fig. 6. In the body of the plug are inserted metal plates Y which receive the screws Z which secure clips Q, R and fuse strip V in place.

In operation, when the plug is in position, circuit is established from clip I on base A, to plug clip Q, through fuse V to plug clip R and to base clip J.

In order to prevent access to the circuit connections at the ends of recesses C and removal of the base block from its support, I provide box-shaped metal shields 10 at each end of the base. The top walls 11 of said

shields extend over the top of said base, and below shoulders 12 on the ends of the fuse plug N, and prevent access to the fastening bolts B. The end walls 13, Fig. 3, overlap, and the bottom walls 14 meet the faces of the base block. In the walls 15 of the shields, bushings 16 are provided, through which pass the circuit leads L.

On each shield is a standard 17, 18. A bar 19 is pivoted at one end to standard 17, and, at the other end, has an opening which registers with a similar opening in standard 18 to receive the shackle of a seal fastening 20. In bar 19 is an opening, through which passes a locking bar 21. Said bar 21 is bent at one end, extends through an opening in a fixed standard 22 on the base block, through openings 23, Fig. 6, in the plugs N, and through an opening in a fixed standard 24, also on the base block. Beyond the standard 24, bar 21 has a hole to receive the shackle of a seal fastening 25, whereby its withdrawal from standards 22, 24 is prevented.

The partition P forms a support for the looped fuse strip V and a means for holding said loop at a suitable distance from the contact clips to prevent injury thereto due to the blowing of the fuse. It also divides the recess containing said clips into two compartments, with one set of coöperating clips in each, thus forming a barrier against any sparking or current leakage between the clips. When the strip is passed, as herein shown, through an opening or notch in the fuse, any sparking through this opening is stopped by the insulating linings K.

I claim:

1. An electric cut-out, comprising a base, having a recess, contacts in said recess, a plug, contacts on said plug coöperating with said base contacts, a partition on said plug entering said base recess and dividing the same into compartments, and a fuse strip on said plug connected to said plug contacts and looped around said projection.

2. An electric cut-out, comprising an insulating base, having a longitudinal recess, the said recess having a groove in its bottom and side walls, contacts in said recess on opposite sides of said groove, a plug, a partition on said plug entering said groove, and connected contacts on said plug on opposite sides of said partition coöperating with said base contacts.

3. An electric cut-out, comprising an insulating base, having a longitudinal recess, the said recess having a groove in its bottom and side walls, contacts in said recess on opposite sides of said groove, a plug, a partition on said plug entering said groove, contacts on said plug on opposite sides of said partition coöperating with said base contacts, and a fuse strip connected to said plug contacts and looped around said partition.

4. An electric cut-out, comprising an insulating base, having a longitudinal recess, the said recess having a groove in its bottom and side walls, contacts in said recess on opposite sides of said groove, a plug, a partition on said plug entering said groove, contacts on said plug on opposite sides of said partition coöperating with said base contacts, and a fuse strip connected to said plug contacts and extending through an opening in said partition.

5. An electric cut-out, comprising an insulating base, having a longitudinal recess, an upward projection on the bottom of said recess having a transverse groove, plates seated in the walls of said recess in contact with the ends of said projection and having vertical grooves, grooves registering with the ends of said transverse groove, contacts in said recess on opposite sides of said projection, a plug, a partition on said plug entering said grooves, and connected contacts on said plug on opposite sides of said partition coöperating with said base contacts.

6. An electric cut-out, comprising an insulating base, having a longitudinal recess, two stirrup-shaped contact plates on said recess, an insulating lining in each contact plate, a plug, and connected inverted stirrup-shaped contact plates on said plug cooperating with said base contact plates.

7. An electric cut-out, comprising an insulating base, having a longitudinal recess, two stirrup-shaped contact plates on said recess, an insulating lining in each contact plate, a plug, inverted stirrup-shaped contact plates on said plug coöperating with said base contact plates, a support protruding from said plug between said plug contact plates, and a looped fuse strip connected at its ends to said plug contact plates and passing through an opening in said support.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER.

MAY T. MCGARRY.