T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED SEPT. 18, 1911.

1,021,550. Patented Mar. 26, 1912.

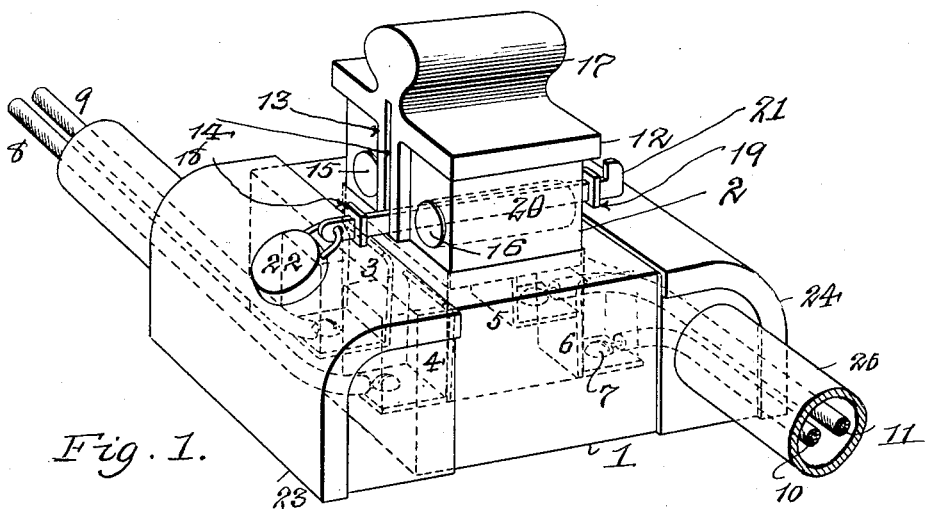


Fig. 1.

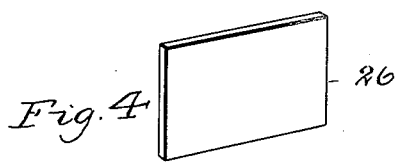
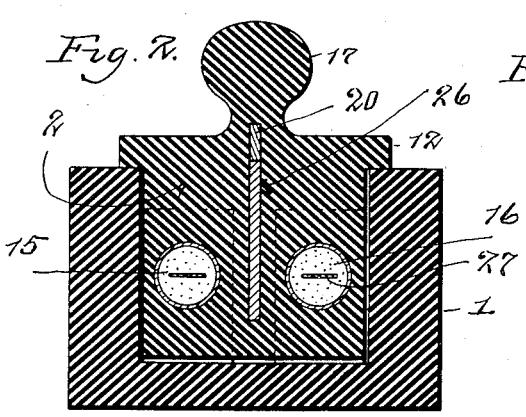
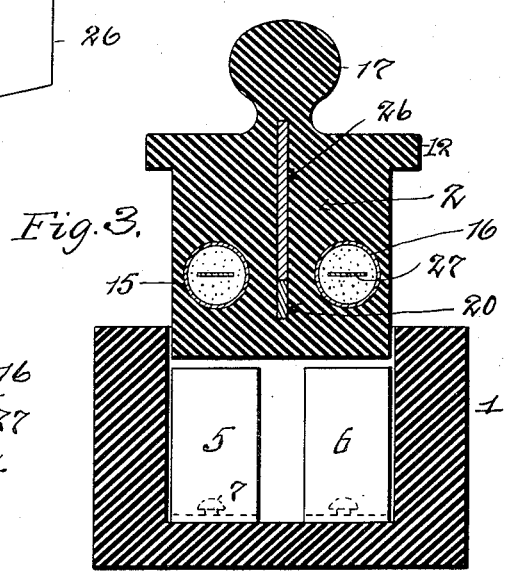


Fig. 4





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UNITED STATES PATENT OFFICE.

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ELECTRIC CUT-OUT.

1,021,550. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed September 18, 1911. Serial No. 649,872.

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 device so that the fuse therein may be inserted or removed without exposing the contacts on the base block, with which contacts said fuse closes circuit; and whereby the fuse carrier may be immovably locked in place, either while seated in the base block or while partly withdrawn therefrom, to afford access to the fuse.

In the accompanying drawings—Figure 1 is a perspective view of my cut-out, showing the shields for protecting the terminals of the circuit conductors in place. Fig. 2 is a cross section showing the fuse carrier seated and locked in the socket in the base block. Fig. 3 is a similar section showing the fuse carrier partly withdrawn from said socket and locked in that position, and Fig. 4 is a perspective view of the auxiliary locking piece for the fuse carrier.

Similar numbers of reference indicate like parts.

The base block 1 is preferably of refractory insulating material, and has a socket to receive the fuse carrier 2, which fits therein. On each of the opposite sides of said socket are spring contact plates 3, 4 and 5, 6, having lateral extensions secured in openings in the walls of said base by screws 7, which screws also here serve for the connection of the circuit conductors 8, 9 and 10, 11 to said plates. The fuse carrier 2, also of refractory insulating material, is provided with a flange 12, which when said carrier is seated in the socket extends over the edges thereof and prevents the insertion of any instrument between said fuse carrier and base block. On opposite sides of the carrier and integral therewith are ribs 13, which enter grooves in the socket, and extending through said ribs and the body of the carrier is a slot 14. In the carrier and on opposite sides of the ribs 13 are openings to receive fuse cases 15, 16, containing the usual fuse strips 27, Figs. 2 and 3, and having end terminals which project slightly beyond the faces of the carrier, so that when said carrier is seated in the socket, said end terminals meet the spring contact plates 3, 4—5, 6. The fuse cases 15, 16 are to be removable at will from the carrier. The upper portion of the carrier above the flange 12 is suitably shaped to form a handle 17.

On the upper side of the base block are fixed lugs 18, 19, having openings which are in line with the slot 14, so that a metal locking bar 20, having a head 21 at one end and provided with an opening near the other end, may be inserted through said lugs and slot, and secured in place by a seal fastening 22, the shackle of which is passed through the opening in said bar.

In order to prevent access to the places of connection of the conductors 8, 9, 10, 11, to the contact plates 3, 4, 5, 6, metal box-shaped shields 23, 24 may be provided, each having an open side into which the base block is inserted. In the cover plate of each shield is an opening to receive one of the lugs 18 or 19, so that the locking bar 20 also serves to secure the shields in place on the base block. In a wall of each shield is secured a metal sleeve 25 through which the conductors pass. The construction of the aforesaid shields forms no part of my present invention, and is substantially disclosed in my prior Letters Patent No. 925,823, June 22, 1909, and No. 979,544, Dec. 27, 1910.

When it is desired to insert a fuse case, or fuse cases, into or remove the same from the fuse carrier, said carrier is lifted from the socket until its further movement is prevented by the bottom of the slot 14 meeting the locking bar 20. The fuse case openings in the carrier then come above the upper surface of the base block, so that the fuse cases 15, 16 may easily be inserted or removed from said openings. At the same time it is to be noted that the lower part of the carrier remains in the socket, thus continuing to close the same and preventing access to the contact plates 3, 4, 5, 6; so that it is impossible to make unauthorized connections to said plates while the fuse cases are being put in place or removed. If it be desired to retain the fuse carrier temporarily in raised position, the auxiliary locking piece 26, here shown in the form of a plate, Fig. 4, may be inserted in the slot 14 above the locking bar 20, as shown in Fig. 3. If it be desired to prevent any raising of the fuse carrier without first destroying the seal fastening and taking out

the locking bar, said locking bar is first removed, the locking piece is inserted so as to rest on the bottom of slot 14, the carrier 2 is seated in the block, and the locking bar is reinserted through the space in slot 14, above said plate 26, and then secured by the seal fastening and lugs, as already described. (See Fig. 2.)

I claim:

1. An electric cut-out, comprising a base block, having a socket, a fuse carrier in said socket and partially withdrawable therefrom, means for preventing complete withdrawal of said fuse carrier from said socket, and means for locking said fuse carrier in either seated or partially withdrawn position.

2. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier entering said socket, a fuse in said carrier making contact with said terminals, means on said block engaging said carrier and permitting only a partial withdrawal thereof from said socket sufficient to afford access to said fuse, and means coöperating with said engaging means for supporting said carrier in partly withdrawn position.

3. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier entering said socket, a fuse in said carrier making contact with said terminals, means on said block engaging said carrier and permitting only a partial withdrawal thereof from said socket sufficient to afford access to said fuse, and means coöperating with said engaging means for locking said carrier in seated position in said socket.

4. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier in said socket having a slot, a fuse in said carrier making contact with circuit terminals, and a locking device comprising a slot in said carrier, and a bar secured to said base and passing through said slot: the said locking device permitting the carrier to be moved into the socket sufficiently to cause the fuse to bridge said terminals and to be withdrawn only far enough to remove the fuse.

5. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier in said socket having a slot, a fuse in said carrier making contact with circuit terminals, a bar secured on said base and passing through said slot and preventing complete withdrawal of said carrier from said socket, and a separate locking piece entering said slot and preventing movement of said carrier upon said bar.

6. An electric cut-out, comprising a base block, having a socket, circuit terminals in said socket, a fuse carrier in said socket provided with ribs engaging with grooves in the sides of said socket, a fuse in said carrier making contact at its end terminals with said circuit terminals, and a locking device comprising a slot in said carrier, and a bar secured to said base and passing through said slot: the said locking device permitting the carrier to be moved into the socket sufficiently to cause the fuse to bridge said terminals and to be withdrawn only far enough to remove the fuse.

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

THOMAS E. MURRAY.

Witnesses:
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