T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED MAR. 28, 1914.

1,120,225. Patented Dec. 8, 1914.

Fig. 1

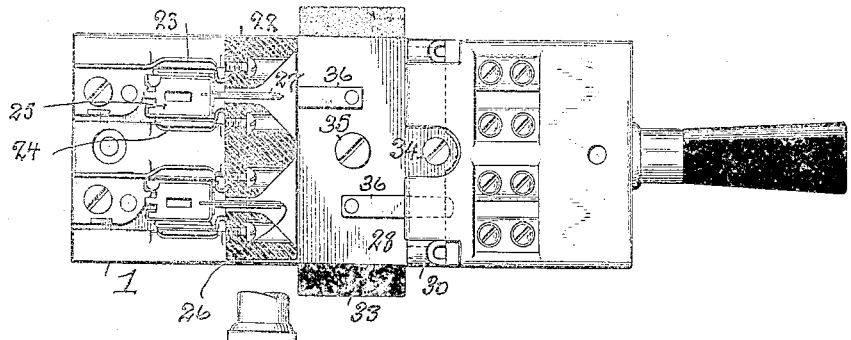


Fig. 2.

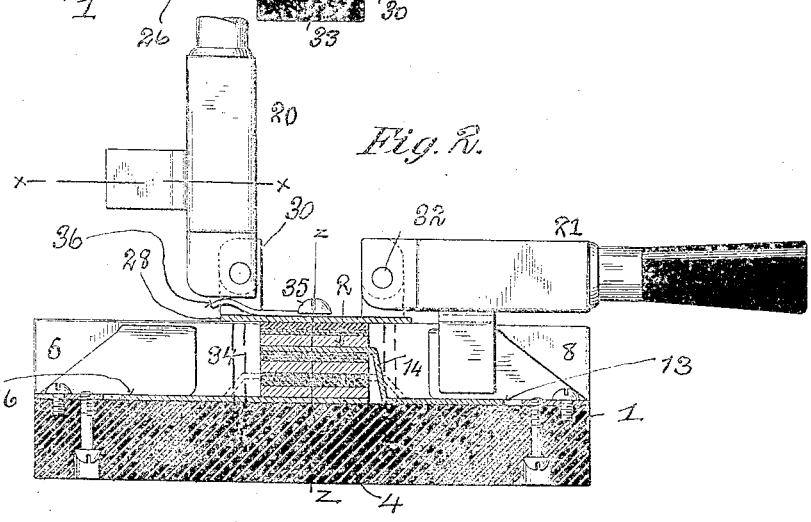


Fig. 3.

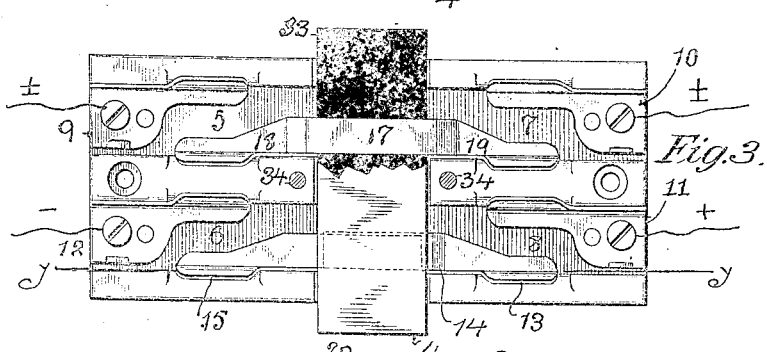
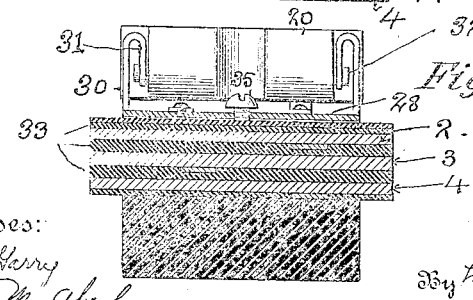


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ELECTRIC CUT-OUT.

1,120,225. Specification of Letters Patent. Patented Dec. 8, 1914.

Application filed March 28, 1914. Serial No. 827,860.

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 is an electric cut-out of the type wherein circuit terminals on a base block coöperate with fuse plugs carried by swinging levers.

The object of the invention is to simplify and cheapen the mode of connecting the switch levers to the block and of clamping the superposed bus-bars thereon in a device for clamping the bus-bars together and upon the block, forming also a support for said plug-carrying levers, which device may be readily removed in order to separate said bus-bars or for other purposes. In my present embodiment, the said device comprises a plate disposed upon the superposed bus-bars, having upward and preferably integral projections in which said levers are journaled, and provided with means of attachment to the base block and for clamping the superposed bus-bars together.

In the accompanying drawings—Figure 1 is a plan view of my cut-out, showing one of the switch levers open and in section on the line x, x of Fig. 2, the other of said levers being closed. Fig. 2 is a section on the line y, y of Fig. 3, the fuse plugs being omitted. Fig. 3 is a plan view, part of the plate being broken away. Fig. 4 is a section on line z, z of Fig. 2.

Similar numbers of reference indicate like parts.

The base block 1, of porcelain or other refractory insulating material, is here made with a transverse middle channel, in which are seated the bus-bars or feeders 2, 3, 4, superposed and mutually insulated. On each side of the middle channel are two longitudinal channels 5, 6, 7, 8, in each of which is a pair of contact clips. Clip member 9 in channel 5 and clip member 10 in channel 7 are connected to terminals of the neutral lead of a three-wire system. Clip member 11 in channel 8 and clip member 12 in channel 6 are respectively connected to the positive and negative leads. Clip member 13 in channel 8 is connected by a bent metal strip 14 with bus-bar 2. Clip member 15 in channel 6 is connected by a flat metal strip 16 with bus-bar 4. A bridge strip 17 in contact with bus-bar 3 is connected at its ends to clip members 18 and 19 respectively in channels 5, 7. When fuse plugs are inserted in the several contact clips, circuit is established through them in the three leads.

The two switch levers 20, 21 are alike. Each consists of a bar 22 of insulating material, to the under face of which are secured two metal clips 23, 24. Each clip receives a fuse plug of known construction, such as described in my Patents Nos. 1,079,018, dated November 18, 1913, or 1,084,706, dated January 20, 1914, said plug embodying a body portion 25, Fig. 1, a thin plate 26 extending therefrom, and a fuse strip 27 doubled over the edge of said plate and extending along the sides of said body portion and plate, so that when said plug is inserted between the members of a clip 23 or 24, said members contact with the fuse strip. The bar 22 has openings to receive the plate 26. In order to attach the levers to the base block, I provide a rectangular metal plate 28, having four upwardly extending projections 30, two on each side of said bar. Each projection is bent over at its upper end, as shown in Fig. 4, and in said bent over portions 31 are openings to receive journals 32, formed on the switch lever bars. In this way, said bars are pivoted in said projections, and therefore may be turned down, as shown on the right of Fig. 2, to bring the fuse plugs into coöperation with the clips in the channels of the base block, thus closing circuit through the leads, or, as shown on the left of Fig. 2, to raise said fuse plugs out of said clips, to break circuit in said leads.

The bus-bars 2, 3, 4 and their intervening layers 33 of insulating material are placed one above the other and are secured in place by the screw bolts 34 which pass through the plate 28 and enter the base block. The plate 28 and the clamping screws 34 together form a clamping device, whereby the said bus-bars and intervening layers 33 are held down upon the base block. After said bolts have been set up, a screw 35 passing through plate 28 and bearing on the uppermost insulation layer 33 may be used to apply still further pressure on said bars. In order to hold the switch levers in raised position, I provide leaf springs 36, attached to the upper side of plate 28 and bearing on the flat end faces of said levers, as shown on the left of Fig. 2. By taking out bolts 34,

the plate 28, with the attached levers, may be removed from the base block, thus exposing the bus-bars, insulating layers and connections to the circuit terminals. As said parts simply lie one upon the other, they can be readily separated for examination or repair, or for the addition or removal of bus-bars to adapt the device to different arrangements of circuit terminals or leads.

I claim:

1. An electric cut-out, comprising a base block, a bus-bar on said block, terminals on said block respectively connected to said bus-bar and to a circuit lead, a device for clamping said bar upon said block, a fuse plug coöperating with said circuit terminals, and a lever pivoted to said clamping device and carrying said fuse plugs.

2. An electric cut-out, comprising a base block, circuit terminals thereon, superposed mutually insulated bus-bars on said block connected to said terminals, a device for clamping said bars together and for securing the same to said block, fuse plugs coöperating with said circuit terminals, and levers journaled upon said clamping device and carrying said fuse plugs.

3. An electric cut-out, comprising a base block, circuit lead terminals and bus-bar terminals thereon, superposed mutually insulated bus-bars connected to said last-named terminals, a plate on said bus-bars, upward projections on said plate, levers journaled in said projections, fuse plugs carried by said levers and coöperating with said circuit lead and bus-bar terminals, and means for securing said plate to said base block.

4. An electric cut-out, comprising a base block, circuit lead terminals and bus-bar terminals thereon, superposed mutually insulated bus-bars connected to said last-named terminals, a plate on said bus-bars, upward projections integrally formed on said plate and having bent over ends, switch levers journaled in said bent over ends, fuse plugs carried by said levers and coöperating with said circuit lead and bus-bar terminals, and means for securing said plate to said base block.

5. An electric cut-out, comprising a base block, circuit lead terminals and bus-bar terminals thereon, superposed mutually insulated bus-bars connected to said last-named terminals, a plate on said bus-bars, upward projections on said plate, levers journaled in said projections, fuse plugs carried by said levers and coöperating with said circuit lead and bus-bar terminals, and clamping screws extending through said plate and entering said base block.

6. An electric cut-out, comprising a base block, circuit lead terminals and bus-bar terminals thereon, superposed mutually insulated bus-bars connected to said last-named terminals, a plate on said bus-bars, upward projections on said plate, levers journaled in said projections, fuse plugs carried by said levers and coöperating with said circuit lead and bus-bar terminals, means for securing said plate to said base block, and means independent of said securing means applying pressure to said bars.

7. An electric cut-out, comprising a base block, circuit lead terminals and bus-bar terminals thereon, superposed mutually insulated bus-bars connected to said last-named terminals, a plate on said bus-bars, upward projections on said plate, levers journaled in said projections, fuse plugs carried by said levers and coöperating with said circuit lead and bus-bar terminals, clamping screws extending through said plate and entering said base block, and a pressure screw for said bus-bars extending through said plate.

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

THOMAS E. MURRAY.

Witnesses:
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