

T. E. MURRAY.

ELECTRIC CUT-OUT.

APPLICATION FILED JAN. 13, 1909.

923,439.

Patented June 1, 1909.

2 SHEETS—SHEET 1.

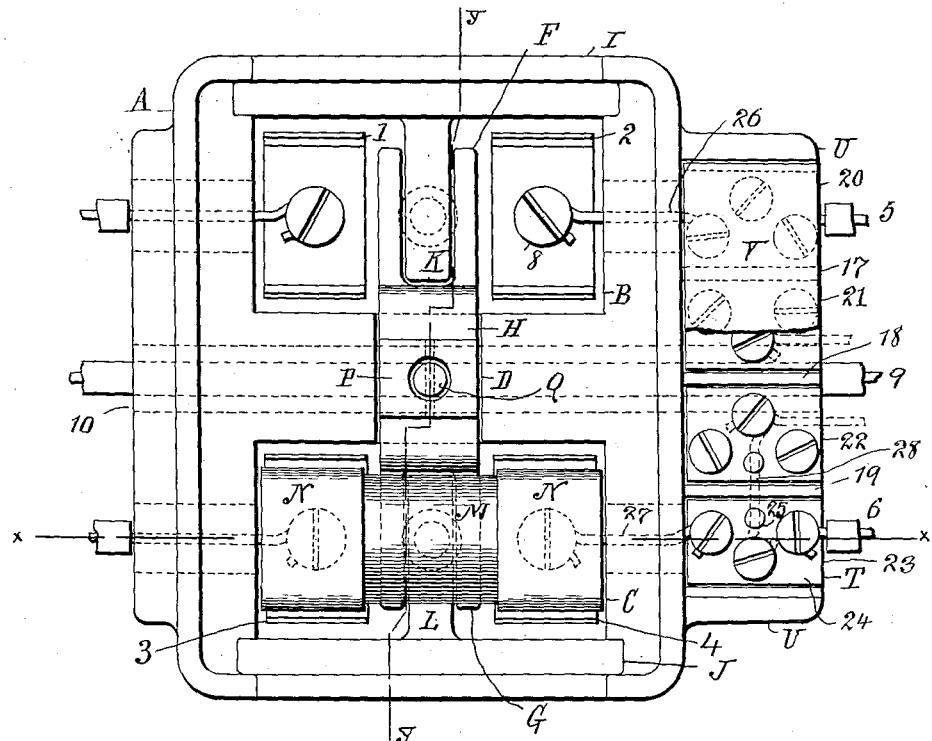


Fig. 1.

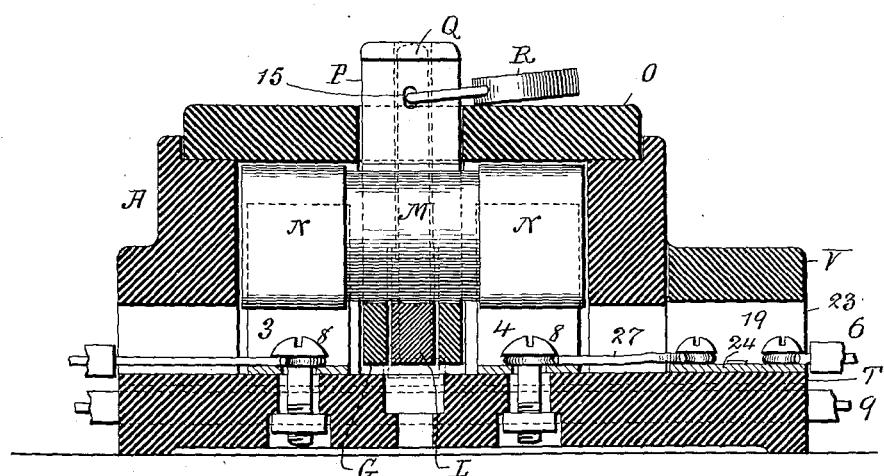


Fig. 2.

Witnesses:

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May J. Mc Garry.

Inventor
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By his Attorney
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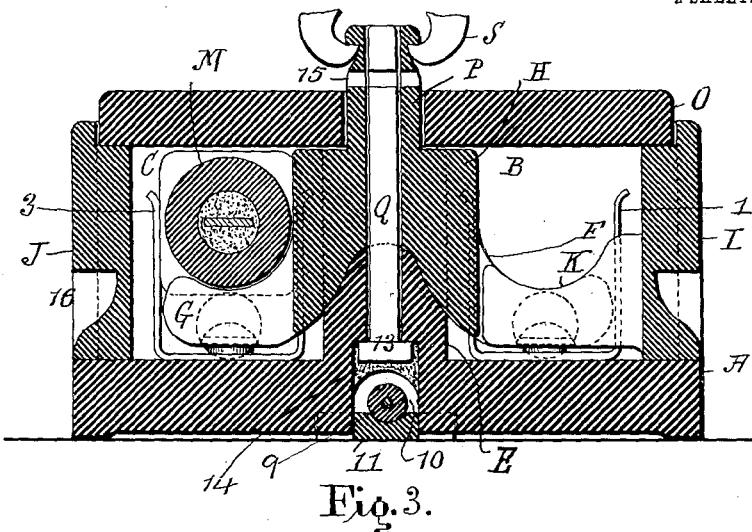


Fig. 3.

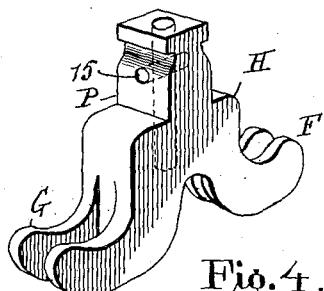


Fig. 4.

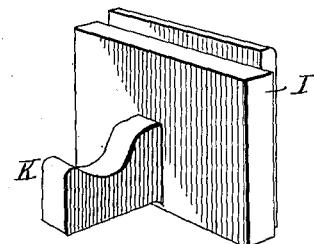


Fig. 5.

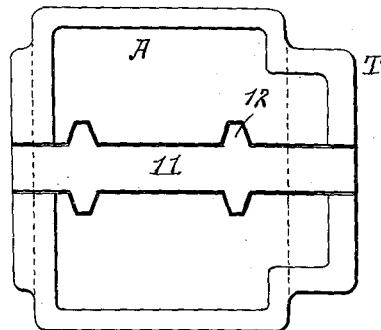


Fig. 6.

Witnesses:
C. H. Berthoff
May 1, 1909.
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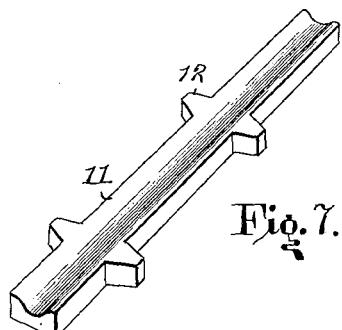


Fig. 7.

Inventor
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UNITED STATES PATENT OFFICE.

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

ELECTRIC CUT-OUT.

No. 923,439.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed January 13, 1909. Serial No. 472,002.

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 5 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, 10 and consists in the construction, whereby after the locking seal is released, the fuse cases separately inclosed in recesses in a base of porcelain or other incombustible material may both be removed simultaneously from 15 said recesses, or separately without one disturbing the other: also in the arrangement of the locking device and movable partition between said recesses: also in the connections for applying testing or measuring instruments to the circuit conductors entering 20 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 cut out with the cover 25 removed. Fig. 2 is a section on the line *x*, *x*, and Fig. 3 is a section on the line *y*, *y*, of Fig. 1. Fig. 4 shows separately and in perspective one of the fuse case supports. Fig. 5 is a similar view of one of the removable plates, 30 which form part of the side walls of the base. Fig. 6 is a bottom view of the base showing the arrangement of the grooved strip for supporting the neutral conductor, and Fig. 7 shows said strip in perspective.

Similar letters and numbers of reference 35 indicate like parts.

A is the base block preferably made of porcelain or other incombustible material. In said block are two longitudinal recesses *B*, *C*, 40 connected by a transverse opening *D*. In the recess *B* are two metal clips 1 and 2 having upwardly extending arms, and in the recess *C* are similar clips 3 and 4. The clips 1 and 2 are connected, as hereinafter described, to a circuit conductor 5, and the clips 3 and 4 to a circuit conductor 6 by means of binding screws 8. Said conductors are the plus and minus conductors of a three-wire system of which 9 is the neutral conductor. Said neutral conductor extends 50 through a recess 10 in the under side of the base block *A* and is supported by a bar 11, Fig. 7, grooved on its upper surface and provided with offsets 12 on its sides, which off- 55 sets enter corresponding indentations in the

walls of the recess 10 when said bar is inserted in said recess, as shown in Fig. 6.

Below the opening *D* and between the two recesses *B*, *C*, is a partition *E*, curved on its upper side to enter and fit between the pairs 60 of arms *F*, *G* of a removable forked carrier of porcelain *H*, which carrier, when in place upon the partition *E*, forms a wall between the recesses *B*, *C*, completely separating one recess from the other. The pair of arms *F* 65 extends into recess *B* between clips 1 and 2, and the pair *G* extends into recess *C* between clips 3 and 4.

In the side walls of the base are openings which respectively receive the shouldered 70 plates *I*, *J* of porcelain. On the inner side of each plate is a projection. When the plate *I* is in place, the projection *K* thereon enters between the members of the pair of arms *F*, and when the plate *J* is in place, the projection *L* thereon enters between the members 75 of the pair of arms *G*. The upper sides of the arms *F* and projection *K* are made correspondingly concave to receive the cylindrical body portion *M* of a cartridge fuse, the metal 80 cap pieces *N* on the ends of which are received in the clips 1 and 2. Similarly the upper sides of the arms *G* and projection *L*, 85 are formed to receive the body portion of another fuse, the cap pieces of which are received in the clips 3, 4. The carrier *H* with its arms *F*, *G* thus forms a support for the fuse cases which is supplemented by the projections *K*, *L* on plates *I*, *J*.

The upper edge of the base *A* is rabbeted 90 to receive a porcelain cover *O*, through an opening in which passes a projection *P* which extends upwardly from carrier *H*. A rod *Q* passes up through partition *E*, carrier *H* and projection *P* thereon. Said rod has a head 95 13 at its lower end and may be secured in place by cement 14, disposed in recess 10 and embedding said head. Through the projection *P* and rod *Q*, above the cover *O*, is a transverse opening 15 which receives the 100 shackle of any suitable seal fastening *R*, by which means all of the assembled parts are locked in place.

The advantages of this construction are chiefly as follows: The exterior of the device 105 presents the appearance of a solid block of porcelain, with only the single projection *P* protruding from the cover. The fuse cases are completely inclosed in non-combustible material, each in a separate recess. The seal 110

fastening being removed and the cover raised, both fuse cases may be simultaneously lifted out of their recesses by means of the forked carrier H. For convenience in doing this, the projection P may be notched near its upper end so as to be grasped by a pliers S. The seal fastening being removed and the cover raised, either fuse case may be lifted out of its recess without disturbing the other fuse by means of the plate I or J, the projection on said plate then engaging with the under side of the fuse case. For convenience in lifting said plates, finger notches 16 may be made in their outer faces.

15 It is frequently desirable to apply testing or measuring instruments to the circuit conductors of cut outs and without disturbing the fuse cases or internal connections therein. This I provide for in my present device, and 20 the same expedient is applicable to any apparatus of the same general type, in the following way: The base block is extended beyond one of its end walls, as shown at T, and on its upper side are three partitions 17, 18, 19, 25 whereby four compartments 20, 21, 22, 23 are formed. On the bottom of each compartment is a metal plate 24 secured by a bolt 25, and on each plate are three binding screws. In the compartment 20, one binding screw is connected by a wire 26 to the metal clip 2, and another binding screw to the entering circuit conductor 5. In compartment 23, one binding screw is united by a wire 27 to the metal clip 4, and another binding screw to the entering circuit conductor 6. The middle binding screws in compartments 20, 23 are respectively connected by wires 28 to the middle binding screws in compartments 22, 21, and to either 30 pair, or both pairs of the remaining binding screws in compartments 22, 21, the testing or measuring instruments may be connected. Thus to a pair of binding screws respectively in compartments 22, 21 a voltmeter, for example, may be connected, and to the remaining pair an ammeter may be connected, the current passing to these instruments directly from the main conductors by way of plates 24 and connecting wires 28, and hence, without 35 passing through the fuses in the base. The edge walls U of the projection T are rabbed to receive a cover V which rests upon the tops of the partitions 17, 18, 19, which are not so high as said edge walls.

40 5 I claim:

1. In an electric cut out, a base having two recesses and circuit connections therein, fuse cases in said recesses, a cover for said base, a movable partition disposed between 45 said recesses and extending through said cover, and a locking device engaging with said partition outside of said cover.

2. In an electric cut out, a base having two recesses and circuit connections therein, 50 fuse cases in said recesses, a cover for said

base, a removable partition disposed between said recesses and separate from said cover, a rod secured in said base and extending through said partition and cover, and a sealing device connected to said rod outside 70 of said cover.

3. In an electric cut out, a base having two recesses and circuit connections therein, 75 fuse cases in said recesses, a cover for said base, a movable partition disposed between said recesses and extending through said cover, a rod secured in said base and extending through said partition, and a sealing device connected to said rod and partition outside of said cover.

4. In an electric cut out, a base having two recesses, fuse cases, and circuit connections in said recesses, means for engaging and removing both of said fuse cases simultaneously from said recesses, and means independent of said first named means for engaging and removing either of said fuse cases from its recess.

5. In an electric cut out, a base having two recesses, fuse cases, and circuit connections in said recesses, and means disposed in an opening between and extending into said recesses for engaging and removing both of said fuse cases simultaneously from said recesses.

6. In an electric cut out, a base having a recess, a removable fuse case and circuit connections in said recess, and a separate removable carrier block in said base having an arm extending under and receiving said fuse case.

7. In an electric cut out, a base having a recess, a removable fuse case and circuit connections in said recess, a cover, a separate removable carrier block having a vertical 105 shank portion passing through an opening in said cover, and within said base, an arm extending under and receiving said fuse case.

8. In an electric cut out, a base having a recess, a fuse case and circuit connections in 110 said recess, a cover, a movable carrier in said base having an arm extending under and receiving said fuse case, a shank passing through an opening in said cover, a rod secured to said base and disposed in said 115 shank, and means for locking said rod and said shank outside of said cover.

9. In an electric cut out, a base having two recesses, fuse cases and circuit connections in said recesses, and a removable carrier disposed in an opening between said recesses and having arms extending into said recesses below said fuse cases and receiving 120 said fuse cases.

10. In an electric cut out, a base having two recesses, fuse cases, and circuit connections in said recesses, a cover, a removable carrier disposed in an opening between said recesses and passing through said cover, and having arms extending into said recesses 125 130

below said fuse cases and receiving said fuse cases, and means for locking said carrier to said base.

11. In an electric cut out, a base having two recesses, fuse cases, and circuit connections in said recesses, a cover, a removable carrier disposed in an opening between said recesses and passing through said cover, and having arms extending into said recesses below said fuse cases and receiving said fuse cases, and means for locking said carrier and said cover to said base. 70

12. In an electric cut out, a base having two recesses and circuit connections therein, 15 fuse cases in said recesses, a removable partition between said recesses and arms on said partition extending into said recesses below said fuse cases.

13. In an electric cut out, a base having two recesses and circuit connections therein, 20 fuse cases in said recesses, a removable partition between said recesses, arms on said partition extending into said recesses below said fuse cases, a cover, and means for locking said partition and cover to said base.

14. In an electric cut out, a base having a recess, a removable plate disposed in an opening in a side wall of said recess, circuit connections in said recess, and a fuse case in 30 said recess supported on said removable wall section.

15. In an electric cut out, a base having a recess, a removable plate disposed in an opening in a side wall of said recess, a fuse 35 case, and circuit connections in said recess, and an arm extending from said removable plate under said fuse case and receiving the same.

16. In an electric cut out, a base having a recess, a fuse case, and circuit connections in said recess, a removable support on each side of said fuse, and arms on said supports 40 extending under and receiving said fuse case.

17. In an electric cut out, a base having a recess, a fuse case, and circuit connections in said recess, a removable carrier in said base, a plate disposed opposite to said carrier and in an opening in a side wall of said 45 recess, and arms on said carrier and said plate extending under and receiving said fuse case.

18. In an electric cut out, a base having two recesses and circuit connections therein, 55 fuse cases in said recesses, a partial partition between said recesses, and a removable carrier having a concavity on its lower side to receive the upper edge of said partition and having arms extending into said recesses below said fuse cases and receiving the same. 60

19. In an electric cut out, a base having a recess, a fuse case, and circuit connections in said recess, a removable carrier on said base, arms on said carrier extending under 65 and receiving said fuse case, a plate disposed

opposite to said carrier and in an opening in a side wall of said recess, and an arm on said plate extending between said carrier arms and under said fuse case and receiving the same. 70

20. In an electric cut out, a base having a recess, a cover, a fuse case, and circuit connections in said recess, a removable plate disposed in a side wall of said recess, an arm on said plate extending under and receiving 75 said fuse case, and means for locking said cover and plate in place.

21. In an electric cut out, a base having two recesses, fuse cases and circuit connections wholly inclosed therein, a cover countersunk in said base and extending over the partition between said recesses, and means for locking said cover to said partition. 80

22. In an electric cut out, a base having on its under side a channel to receive a circuit conductor and provided with indentations in its side walls, and a removable grooved strip received in said channel and having lateral projections entering said indentations. 90

23. In an electric cut-out, a base and on the exterior thereof, a support, two metallic plates thereon, a bridge connecting said plates, means for connecting a terminal of an external conductor to one of said plates, and on the other plate, means for connecting thereto the terminals of a conductor entering said base. 95

24. In an electric cut-out, a base block having openings in its walls for the reception of the positive and negative conductors of a three wire system and a channel in its under side for the reception of the neutral conductor, fuse plugs in said block interposed in said positive and negative conductors, and means for supporting said neutral conductor in said channel. 100

25. In an electric cut out, a base having a horizontal projecting portion at one end, divided into two compartments, a conducting plate in each compartment, means in one compartment for connecting the plate therein to circuit terminals and to the conducting plate in the other compartment, and means for connecting an external conductor to said 110 last named plate.

26. In an electric cut out constructed to receive the conductors of a three wire system, a base block having a transverse channel on its under side, an unbroken neutral line 120 conductor extending through said channel, and a removable filling piece disposed in said channel below and supporting said conductor.

In testimony whereof I have affixed my 125 signature in presence of two witnesses.

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,
MAY T. McGARRY.