R. C. COLE.

CUT-OUT BLOCK.

APPLICATION FILED NOV. 29, 1915.

1,203,584.

Patented Nov. 7, 1916.

Fig. 1.

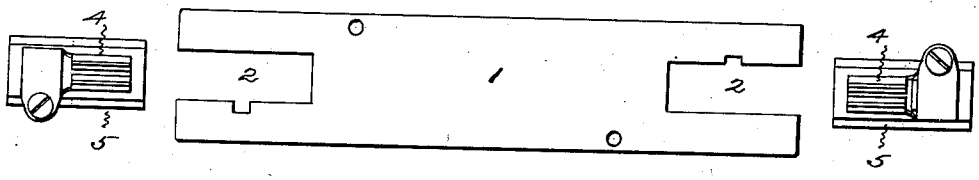


Fig. 3

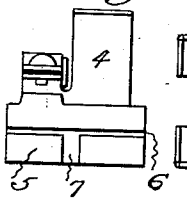


Fig. 2.

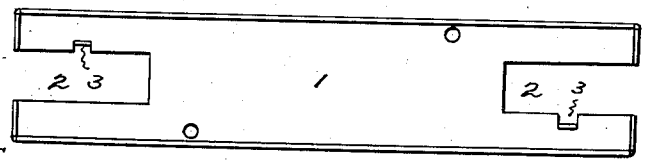


Fig. 4.

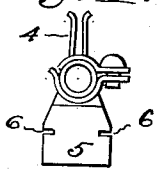


Fig. 7.

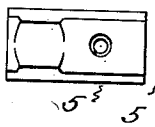


Fig. 5.

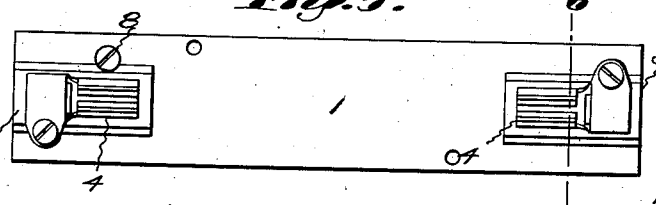


Fig. 6.

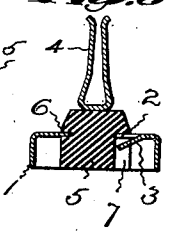


Fig. 8.

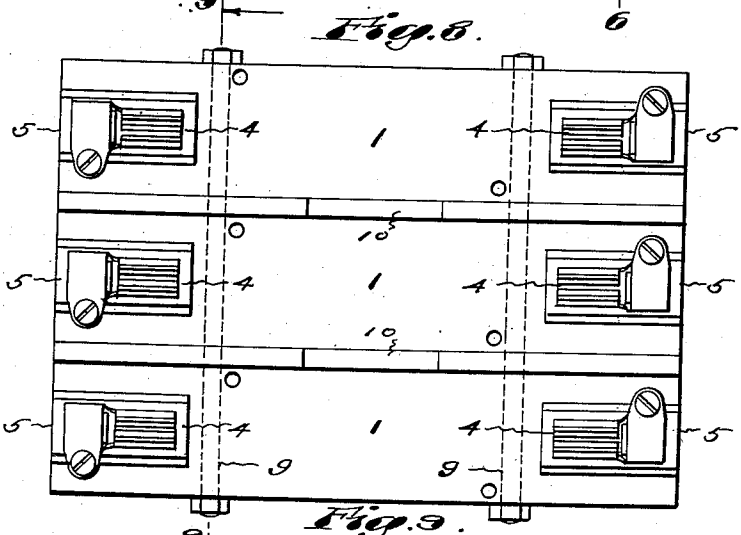
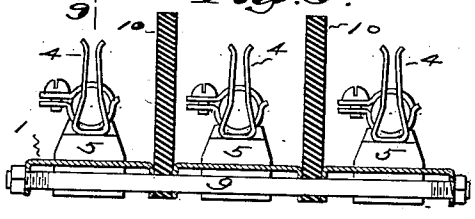


Fig. 9.



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UNITED STATES PATENT OFFICE.

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CUT-OUT BLOCK.

1,203,584. Specification of Letters Patent. Patented Nov. 7, 1916.

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To all whom it may concern:

Be it known that I, ROBERT C. COLE, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Cut-Out Blocks, of which the following is a specification.

This invention relates to those blocks which are provided with clips for receiving the terminals of inclosed fuses of the knife blade and ferrule type.

The object of the invention is to, without decreasing the electrical efficiency of the structure, greatly reduce the cost of manufacture, transportation and installation, by so designing the parts that they may be made of strong and durable material which can be cheaply purchased and easily formed and is light in weight, and that can be shipped disassembled and readily put together to meet the required voltage and circuit conditions by any one at any time without the aid of special tools. This object is attained by stamping the base of sheet metal, which is cheaper, lighter and not as easily broken as porcelain or slate, and mounting the fuse clips upon small insulating blocks, that insure the necessary insulation, and which are shaped so that they are merely slipped upon the ends of the metal base of the desired size where they are retained somewhat loosely but securely the required distance apart by simple means in such a manner that the clips will aline themselves to the fuse terminals and thus make good electrical contact.

Of the accompanying drawings Figure 1 shows a plan of a single pole base and the two insulating blocks and fuse clips before they are applied to the base. Fig. 2 is a view looking at the underside of the base. Fig. 3 shows a side of one of the insulating blocks and the fuse clip mounted thereon. Fig. 4 shows an end view of the block and clip. Fig. 5 shows a plan of the structure with the clips and base assembled. Fig. 6 shows a section on the plane indicated by the dotted line 6—6 on Fig. 5. Fig. 7 shows a plan of the insulating block. Fig. 8 shows a plan of three of the structures put together. Fig. 9 shows a section on the plane indicated by the dotted line 9—9 on Fig. 8.

The base 1 is stamped to shape of sheet metal, preferably thin steel, with its edges turned down to stiffen the structure and form the side walls. These bases are of varying lengths depending upon the voltages of the circuits with which they are to be used. In each end of the base is a mortise 2, and desirably from one wall of each of these mortises a lug 3 is turned down.

The fuse clips 4, the fingers of which are bent to the necessary shape to receive the desired type of fuse and which are provided with the usual means for securing the ends of the circuit wires, are mounted upon small blocks 5 of insulating material, preferably porcelain. These blocks have longitudinal grooves 6 in their side edges and a vertical groove 7 in one side edge. The longitudinal grooves are of such width and depth that the blocks may be slipped into the mortises in the ends of the sheet metal base, the walls of the base at the side edges of the mortises fitting in the longitudinal grooves in the sides of the blocks and holding the blocks in place. After a block has been slipped into a mortise the lug 3 on the base may, by any kind of a tool, be bent into the vertical groove 7 in the block (as shown in Fig. 6) so as to keep the block from slipping endwise out of the mortise in the base. If desired, instead of using a lug for retaining the block, a screw 8 (Fig. 5) may be turned into the base so as to engage the side wall of the block to keep the block from sliding out of the mortise in the base. The ends of the mortises are the required distance apart to hold the blocks and clips separated the necessary distance. For instance, the blocks could, of course, be closer together if the structure were to be used for a 250 v. fuse than they would be if the structure were to be used for a 600 v. fuse. The blocks, when assembled in this way, are slightly loose, although they cannot move out of the mortise, so that the clip fingers will aline themselves and make close contact with the terminals of the fuse. Any one at any time can slip the blocks with the fuse clips into the bases and secure them without any special tools. The bases and the blocks with the fuse clips may be made up in large quantities and shipped separately to be assembled as desired for use, and the blocks with the fuse clips may be put in bases for either 250 v. or 600 v. fuses, as the conditions require.

The bases may be arranged for a single wire circuit or a plurality of circuits, and when assembled, for instance as shown in

Fig. 3, the bases may be fastened together by tie bolts 9 and put in place of use, and the three sets of blocks and clips applied when it is desired to wire up the electrical apparatus. When the bases are secured together in this way barriers 10 of insulating material may be fastened between the bases, as shown in Fig. 9, and if desired, when the block is used for a single wire, barriers may be placed on each side of the block, as illustrated by the middle section in Fig. 9.

Bases made of sheet metal do not become broken, as do porcelain and slate bases. The clips being mounted on porcelain blocks a maximum insulation is secured. As the blocks have a slight movement the clips aline themselves to the fuse terminals. This construction permits shipping before the fuse clips are assembled, thereby saving space, and as the metal bases are lighter than porcelain, freight is saved. The bases may be arranged for single, two, three or more circuits, and the blocks applied at any time after the bases have been secured in the place where they are to be used. The blocks are interchangeable for different voltages. Any type of clip may be used, and any form of attachment for the ends of the circuit wires may be employed.

The invention claimed is:

1. A fuse cut-out block consisting of a stamped sheet metal base having openings at its ends, blocks of insulation having portions fitting said openings and retained in operative position by portions of the walls of said openings in the metallic base, and fuse terminal clips mounted on the insulating blocks.

2. A fuse cut-out block consisting of a stamped sheet metal base, insulating blocks slidably mounted on and having portions fitting and retained by portions of the base, means for preventing the accidental sliding of the blocks from the base, and fuse terminal clips mounted on said blocks.

3. A fuse cut-out block consisting of a sheet metal base having a slot that begins at and extends inward from each end, insulating blocks having portions fitting and retained from upward and downward displacement and from movement toward each other by the walls of said slots, and fuse terminal clips mounted on the blocks.

4. A fuse cut-out block consisting of a sheet metal base having mortises extending inward longitudinally at each end, insulating blocks with longitudinal grooves in their sides, said blocks being slidably mounted on the base with the edges of said mortises in the base fitting the grooves in the blocks, and fuse terminal clips mounted on said blocks.

5. A fuse cut-out block consisting of a sheet metal base with insulating blocks bearing spring clips slidably mounted on the base, said blocks having portions engaged and retained by portions of said base, and means for holding the blocks from sliding along the base.

6. A fuse cut-out block having a sheet metal base with mortises near each end and lugs projecting from the base adjacent to the walls of the mortises, insulating blocks fitting said mortises, said blocks having recesses for receiving said lugs, and fuse terminal clips mounted on the blocks.

ROBERT C. COLE.