July 3, 1928. 1,675,637

W. P. BRIGGS

ADAPTER AND PLUG FOR CUT-OUTS

Filed Aug. 4, 1926

Fig. 1.

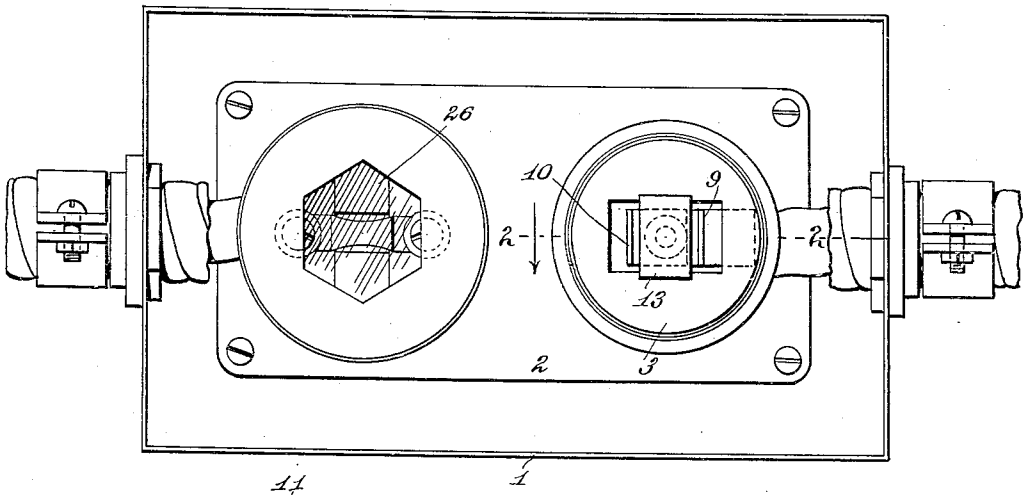


Fig. 2.

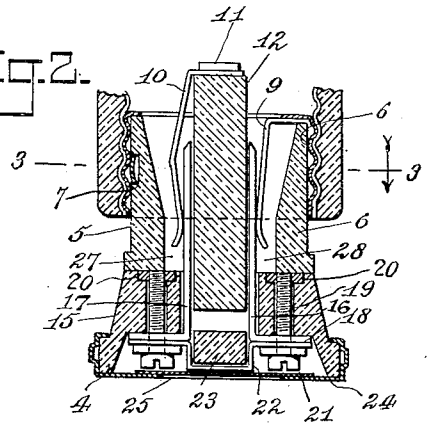


Fig. 3.

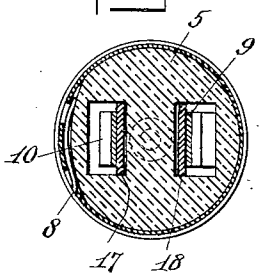


Fig. 4

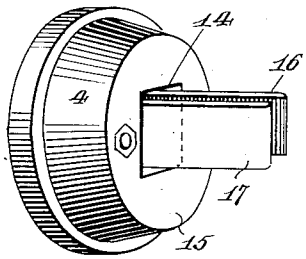


Fig. 5.

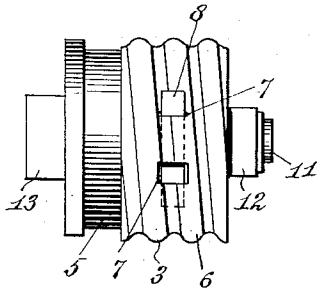
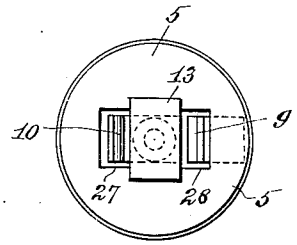


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

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ADAPTER AND PLUG FOR CUT-OUTS.

Application filed August 4, 1926. Serial No. 127,132.

This invention relates to adapters and fuse plugs for cut-outs and has for an object to provide an improved construction wherein a specially prepared fuse plug may be used in an ordinary screw socket.

Another object of the invention is to provide an improved adapter and fuse plug wherein the parts are made so as to prevent a wrong size plug from being used while the device may be readily applied to the socket of an ordinary cut-out now in common use.

A still further object, more specifically, is to provide an adapter plug for an ordinary cut-out socket, the adapter plug being formed with contacts and with a spacing wall so formed as to receive a certain size fuse plug constructed in a specified manner.

In the accompanying drawing—

Figure 1 is an elevation of a cut-out box and associated parts including an adapter fuse plug constructed according to the present invention.

Figure 2 is a fragmentary sectional view through Figure 1 on line 2—2.

Figure 3 is a transverse sectional view through Figure 2 on line 3—3.

Figure 4 is a perspective view of the inner or operating end of the fuse plug shown in Figure 1.

Figure 5 is a side view of the adapter shown in Figures 1 and 2.

Figure 6 is a plan view of the adapter shown in Figure 5.

Referring to the accompanying drawing by numerals, 1 indicates an ordinary box adapted to receive a cut-out structure 2 which is of the usual construction and provided with screw sockets into which well known types of fuse plugs are adapted to be screwed. In the use of ordinary fuse plugs which are screwed in place, it is well known that the fuses are of different strength while the plugs are of the same size. If a given socket is adapted to carry a certain current, a certain fuse plug may be applied. However, it occurs many times that fuse plugs carrying extra strong fuses are inserted and, consequently, the line is caused to supply more current than designed which is very objectionable and often causes fires. To prevent this occurring, a special plug and adapter is disclosed in the accompanying drawing.

In Figure 5 the adapter 3 is shown in elevation, said adapter being adapted to be screwed into the various sockets of the cut-out 2. After this has been done the fuse plug 4 is applied thereto and the circuit is then complete at this point. The adapter 3 is provided with a body 5 of insulating material carrying a threaded sleeve 6 whereby the adapter may be screwed into the socket in the cut-out. The metallic sleeve 6 is provided with slots or cut-out portions 7 whereby a flat spring 8 may be inserted, the end of said spring projecting beyond the sleeve 6 an appreciable distance. When the adapter 3 is screwed into a socket, the spring 8 merely slides along but in case it is desired to unscrew the adapter 3, the end of spring 8 will pinch or dig into the walls of the socket and prevent any unscrewing of the adapter. This is a simple and effective method of locking the adapter in place so that only a proper fuse plug 4 can be used.

As indicated in Figure 2, the adapter 3 is provided with a contact 9 connected with the shell 6 and with a contact 10 connected with a central contact 11 carried on post 12. The post or partition 12 is preferably integral with the body 5 and projects a short distance therebeyond at the inner end and also a short distance therebeyond at the outer end. The outer end or abutment 13 is adapted to project into the aperture 14 formed in the body 15 of plug 4 while the contact prongs 16 and 17 straddle the wall or post 12. Contacts 9 and 10 are resilient and, consequently, when the prongs 16 and 17 move to their inner position as shown in Figure 2, they will assume a sliding engagement with the contacts 9 and 10. Each of the prongs 16 and 17 is provided with a turned over end 18 and each turned over end 18 is provided with a screw 19 held in place by nut 20 with the opposite enlarged end 21 clamping an end of the fuse 22 in place. The fuse 22 is substantially U-shaped and extends over the bridge 23 formed integral with the body 15. A suitable covering or cap 24 is clamped onto the body 15, said cap having an opening 25 provided with a transparent member 26 presenting a window. The member 26 may be isinglass or other substantially fire-proof material. The prongs 16 and 17 are intended to enter the openings or passage-ways 27 and 28 formed in body 5 and these passage-ways are made of a proper size to receive the prongs 16 and 17.

When a predetermined size set of prongs

16 and 17 is used, as for instance, the size shown in Figure 4, the prongs properly fit the passage-ways 27 and 28 and have a fuse 22 connected therewith formed of a desired strength, as for instance, a proper fuse for carrying ten amperes. All of the prongs 16 and 17 of the plug 4 carrying more amperage would be wider and would not, therefore, enter into the passage-ways 27 and 28. However, if a fuse plug designed for less amperage was used it might be freely inserted. In this way the construction bars against the use of a fuse stronger than that designed for the particular cut-out. Also, by reason of the fact that the end 13 projects beyond the body 5, the adapter 3 could not be easily tampered with for closing the circuit as the plug would not fit into place if a wire or other piece of metal was inserted in the passage-ways 27 and 28.

What I claim is:

1. A fuse plug and adapter for screw sockets of cut-outs, comprising an adapter formed with a body having a pair of openings extending entirely therethrough and a post extending outwardly from that part of the body between said openings, a screw contact shell secured to the outer part of said body, an end contact secured to the inner end of that part of the body between said openings, a resilient contact member extending from said shell into one of said openings, a second resilient contact member extending from said end contact into the other of said openings and a fuse plug co-acting with said adapter, said fuse plug having a pair of spaced prong contacts adapted to extend into said openings and into engagement with the contact members in said openings, said fuse plug being formed with an opening for receiving said post, and means for securing the respective ends of a fuse to said prong contacts.

2. A fuse plug and adapter for screw sockets of cut-outs, comprising a fuse plug body and an adapter body, one of said bodies having an opening and the other a post adapted to substantially fit said opening, said adapter body being provided with spaced passage-ways extending entirely therethrough in a direction substantially parallel with the axis of the adapter body, a screw shell mounted on the exterior of said adapter body, an end contact mounted centrally on the inner end of said adapter body, a flat spring contact member extending from said shell into one of said passage-ways, a flat spring contact extending from said end contact into the other of said passage-ways, said fuse plug having a pair of prong contacts extending through the plug body into said passage-ways and into engagement with said flat spring contacts, and means for securing the respective ends of a fuse to the outer ends of said prong contacts.

3. A cut-out and plug comprising a cut-out body formed with a receptacle having a pair of openings with a raised portion therebetween, a plug formed with a pair of prongs straddling said raised portion, said plug being formed with a body having a recess closed on all sides except one between the prongs for receiving said raised portion whereby the body of the plug will fit snugly against the cut-out body and said raised portion will fit into the body of the plug between said contacts, and a fuse member in the plug connecting said contacts at a point spaced from said raised portion.

4. In a cut-out and plug, a cut-out structure formed with prong receiving passage-ways and a plug having a pair of prongs fitting in said passage-ways, said plug having a body formed with a recess between the prongs, said recess being closed on all but one side, a bridge wall, and a socket substantially surrounding the bridge wall, a pair of contact prongs connected to said body in said socket formed in the plug and extending through said recess and beyond said body, and a fuse member extending over said bridge and connected at its ends to the respective prongs.

5. In a device of the character described, a fuse plug having a body with a comparatively large passage-way extending entirely therethrough and merging at the outer end of the body into a recess, means formed integral with the body presenting a bridge positioned opposite said pasasge-way but of less width than the passage-way, said bridge dividing the exit of the passage-way into two openings, a pair of contact prongs extending through the respective openings and through said passage-way, means for securing one end of the respective prongs to said body near said bridge, and a fuse member extending across said bridge, said fuse member being connected to the prongs adjacent the respective ends.

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