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APPLIANCE PROTECTOR

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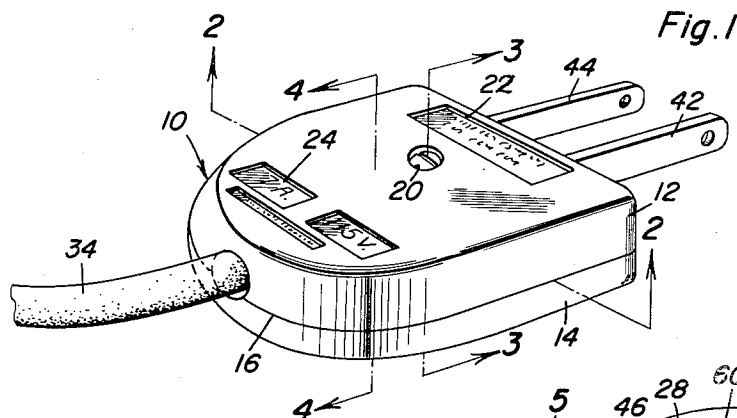


Fig. 1

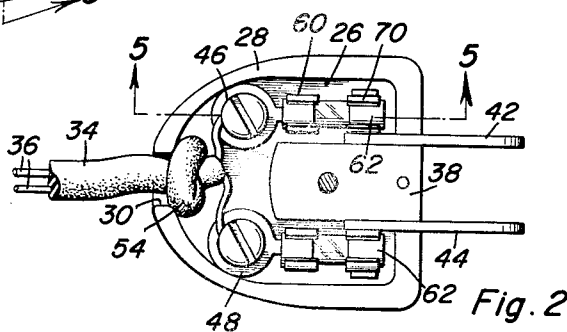


Fig. 2

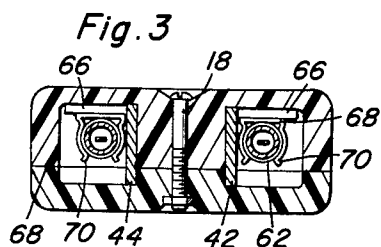


Fig. 3

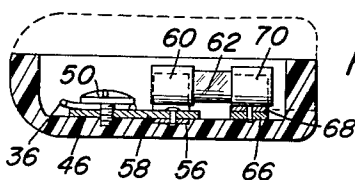


Fig. 5

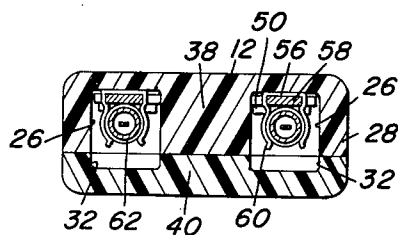


Fig. 4

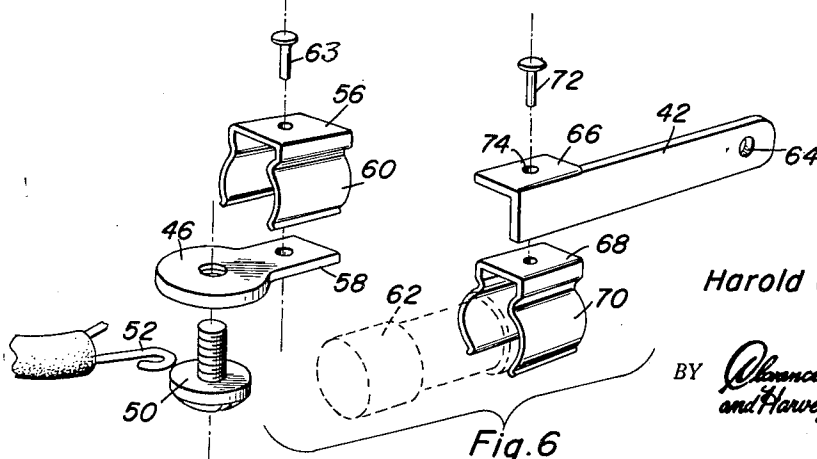


Fig. 6

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APPLIANCE PROTECTOR

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1 Claim. (Cl. 200—115.5)

This invention relates to an appliance protector, and more specifically provides a safety fused plug for immediately disconnecting an appliance from a power source.

In the customary house wiring, there are main fuses and branch line fuses, but usually each branch line furnishes a number of outlets so that a number of different electrical appliances can be plugged in on one service line. Therefore, it will be readily apparent that the fuses for the service lines are many times larger than the current carrying capacity of the individual electrical appliances that may be plugged into the line, thereby permitting damage to the appliance or some portion thereof before sufficient short circuit current is utilized to blow the service line fuses. Accordingly, it is a primary object of the present invention to provide an appliance protector in the nature of a fuse plug for each appliance so that the particular electrical appliance may be fused and will be protected thereby irrespective of the service line fuses.

Another object of the present invention is to provide an appliance protector in the nature of a generally flat and enlarged body constructed of separable body members that are detachably secured together and which house the entire mechanism for ready removal and replacement of the fuses.

A still further object of the present invention is to provide an appliance protector which may be adapted for various types of appliances wherein the designation of the particular current carrying capacity of the appliance protector may be designated on the outer surface thereof.

Other important objects of the present invention will reside in its simplicity of construction, ease of operation, effectiveness for its particular purposes, and its relatively inexpensive manufacturing costs.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the appliance protector of the present invention;

Figure 2 is a plan sectional view taken substantially upon a plane passing along section line 2—2 of Figure 1, illustrating the construction of the upper body member;

Figure 3 is a transverse, vertical sectional view taken substantially upon a plane passing along section line 3—3 of Figure 1 illustrating the construction of the body members together with the relationship of the recesses in the abutting surfaces thereof;

Figure 4 is a transverse, vertical sectional view taken substantially upon a plane passing along section line 4—4 of Figure 1 illustrating further structural details of the appliance protector of the present invention;

Figure 5 is a longitudinal sectional view taken substantially upon a plane passing along section line 5—5 of Figure 2 illustrating the details of construction of a

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pair of the aligned spring clips together with the fuse positioned therein and the means for attaching the spring clips to the terminal and prong contacts, respectively; and

Figure 6 is a group perspective view illustrating one of the terminals and the prong contact together with the spring clips and the manner in which they are assembled.

Referring now specifically to the drawings, it will be seen that the numeral 10 generally designates the appliance protector of the present invention in the form of a safety fuse plug having an upper body member 12 and a lower body member 14 separated by a line of division 16 and secured together by a fastening screw 18 having the ends thereof received in countersunk sockets 20 thereby providing relatively large flat upper and lower surfaces on the appliance protector 10. The upper surface of the upper body member 12 is provided with a plurality of indentations or recesses 22 for receiving indicia 24 which will designate the amperage and voltage and other pertinent data in connection with the appliance protector 10.

The upper body member 12 is provided with an enlarged recess 26 on its inner surface which is formed by a peripheral marginal wall 28 which is provided with an opening 30 in the rear end thereof. The lower body member 14 is provided with a similar recess 32 and the openings 30 permit passage of an electrical conduit 34 having a pair of electrical conductors 36 embedded therein wherein the conduit 34 may be of any conventional construction and may be constructed with any type of insulating material. Positioned centrally within the recess 26 is an enlarged central projecting area 38 and the lower body member 14 is also provided with an inwardly extending central portion 40 wherein the upper body member 12 and the lower body member 14 will engage in abutting relation and will be retained in this relation by the fastening screw 18.

Projecting forwardly from the upper body member 12 is a pair of contact prongs 42 and 44 which are disposed against opposite edges of the central portion 38 and project alongside the central portion 40 on the lower body member 14.

Positioned in the recess 26 at opposite rear side edges thereof, is a pair of terminals 46 and 48 each of which is provided with a screw threaded fastening member 50 for receiving the hooked end 52 of one of the electrical conductors 36 thereby securing the conductor to the terminals 46 and 48, respectively. Also, it is pointed out that the electrical conduit 34 is split into two portions and tied into a knot, as designated by the numeral 54, thereby preventing stress upon the fastening members 50 and the contacts 46 and 48, respectively, if the electrical conduit 34 is accidentally pulled rather than the appliance protector plug 10. A U-shaped spring member 56 is secured to a laterally projecting portion 58 of the terminals 46 and 48, respectively, with the bight portion of the U-shaped clip 56 underlying the laterally offset portion 58. The spring clip 56 is provided with arcuated inherently resilient upstanding leg members 60 for receiving one end of a fuse cartridge 62. The bight portion of the spring clip 56 is secured to the laterally offset portion 58 by a suitable rivet 63 or any other suitable fastening means.

The contact prongs 42 and 44 are provided with openings 64 adjacent the outer end thereof and are provided with a laterally offset upper edge 66 at the inner end thereof. Secured to the surface of the laterally offset edge 66 is a U-shaped spring clip 68 having bowed and inherently resilient leg members 70 for receiving the other end of the fuse cartridge 62. A fastening rivet 72 is inserted through aligned apertures 74 in the spring clip 68, and the laterally offset portion 66 for securing the prong contacts 42 to the spring clips 68. It will be noted that

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the spring clips 56 and 68 are positioned in alignment on each side of the central portion 38 of the upper body member 12 whereby the fuse cartridge 62 may be inserted therein and removed therefrom. In the event the appliance receiving electrical energy by use of the electrical conduit 34 becomes shorted, one of the fuses 62 will be blown, and the fuse may be removed and replaced by removing the screw threaded fastener 18. Also, the size of the fuse cartridges 62 may be changed to permit a greater current carrying capacity for the appliance protectors 10, and the indicia 24 may be altered to agree with the altered fuse cartridges.

It will be understood that the device may be constructed of any suitable insulative material and may be colored in any desired decorative color. Also, the relatively thin and wide flat surfaces of the appliance protector 10 permit the easy insertion and removal of the contact prongs from any suitable electrical outlet.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

A fused electrical plug for the protection of appliances comprising a casing having an upper body member, a lower body member, and fastening means detachably securing the body members in overlying position, the facing surfaces of said members being hollow and having peripheral walls in abutting engagement, said facing surfaces of the body members having enlarged central areas disposed in abutting engagement thereby forming a gen-

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erally U-shaped hollow interior, a pair of contact prongs extending through said walls in parallel relation with the prongs being disposed against the walls of the central areas, the inner end of each prong having a laterally offset portion on the upper edge thereof, an inverted U-shaped clip mounted on the offset portion of each prong, said clips opening downwardly and being disposed alongside the adjacent prong, the peripheral walls having facing notches therein remote from the prongs for receiving a pair of electrical conductors with the electrical conductors being secured together in the bight portion of the hollow interior of the casing for providing a strain relief, a pair of terminal plates mounted in the upper end of the hollow interior of the casing, said electrical conductors being connected electrically to said terminal plates, an offset portion on each terminal plate, and a U-shaped clip mounted on each offset portion of the terminal plates, each of said clips having a bight portion overlying the offset portion with the legs thereof extending downwardly in alignment with the clips mounted on said prongs, and a cartridge type fuse interconnecting each pair of aligned clips with the legs of the clips having concave facing surface for surface engagement with the cartridge fuse, the outer surfaces of the body members being flat with one surface having recesses for receiving indicia designating the size of the fuse.

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