Aug. 18, 1931. P. MATTIA 1,819,910

ELECTRICAL ATTACHMENT PLUG

Filed May 27, 1929

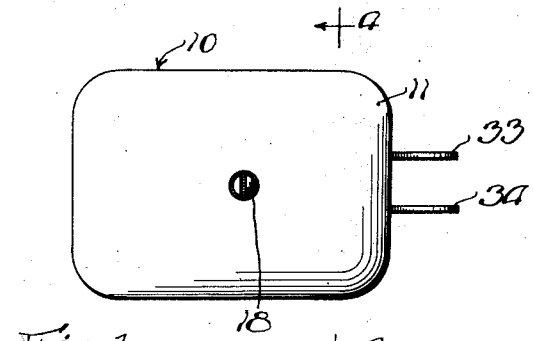


Fig. 1

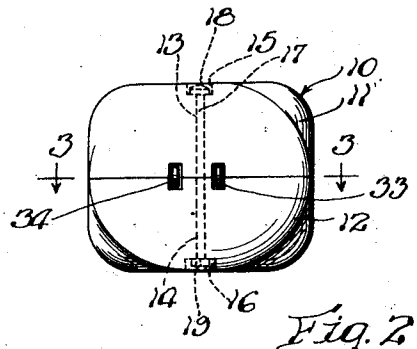


Fig. 2

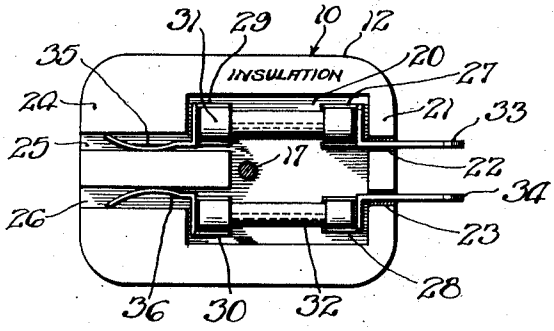
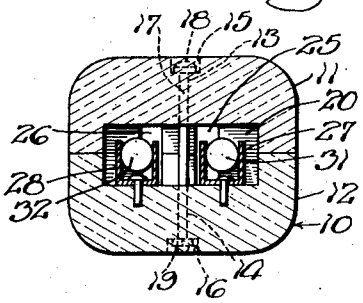


Fig. 3

Fig. 4



Philip Mattia INVENTOR

BY Victor J. Evans

HIS ATTORNEY

Patented Aug. 18, 1931

1,819,910

UNITED STATES PATENT OFFICE

PHILIP MATTIA, OF CHICAGO, ILLINOIS

ELECTRICAL ATTACHMENT PLUG

Application filed May 27, 1929. Serial No. 366,428.

This invention relates to certain novel improvements in electrical attachment plugs and has for its principal object the provision of an improved construction of this character which will be efficient in use and economical in manufacture.

It is the salient object of my invention to provide an attachment plug which will embody both a male and female connection which will have a construction arranged intermediate thereof which will permit the disposition of a protecting arrangement such as fuses intermediate the connections.

Another object of the invention is to provide a device of the above described character which will be arranged in a manner such that access to the protecting devices may be readily had so as to facilitate replacement thereof when so required.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings, showing the preferred form of construction and in which:

Fig. 1 is a top plan view of a preferred form of construction for my invention;

Fig. 2 is an end elevational view of the device as illustrated in Fig. 1;

Fig. 3 is a sectional view taken substantially on the line 3—3 on Fig. 2; and

Fig. 4 is a transverse sectional view taken substantially on the line 4—4 on Fig. 1.

In the accompanying drawings wherein I have illustrated a preferred form of construction for my invention 10 generically indicates my improved attachment plug which is preferably formed from insulating material and may be formed from a moldable insulating material such as so called bakelite or the like. My improved attachment plug is preferably formed in two sections that will be known hereinafter as the upper section 11 and the lower section 12. At substantially the midpoint of the section 11 a restricted opening 13 is provided. At substantially the midpoint in the section 12 a restricted opening 14 is provided and when the sections 11 and 12 are properly oriented with respect to each other the openings 13 and 14 are intended to be aligned. At the outer end of the opening 13 an enlarged recess 15 is provided and at the outer end of the opening 14 an enlarged recess 16 is provided. A bolt 17 is extended through the openings 13 and 14 and includes an enlarged head 18 that is disposed in the recess 15 and a nut 19 is disposed in the recess 16 into which the adjacent end of the bolt 17 is extended and in this manner the sections 11 and 12 are connected.

In the surface of the section 12 disposed toward the section 11 I provide a relatively enlarged recess 20 which is preferably disposed nearer one end of the section 12 than the other so that a flange 21 is provided intermediate the recess 20 and the end of the section 12. Extending through the flange 21 are two grooves 22 and 23. In the portion 24 of the section 12, and extending from the outer end thereof to the recess 20, I provide two grooves 25 and 26 which communicate with the recess 20 as do the grooves 22 and 23.

The sections 11 and 12 are preferably formed from a moldable material such as bakelite or the like. Clips such as 27 and 28 are preferably arranged in the recess 20 in the section 12 on opposite sides of the longitudinal center line extending through the section 12. These clips 27 and 28 may be retained in position in any desired manner but in the present instance I show rivets as being extended through openings in these clips and these rivets are molded into the material of the section 12, said section 12 being molded as above set forth. The clips 27 and 28 are preferably disposed adjacent to the shoulder 21. Aligned with the clips 27 and 28 at the inner end of the recess 20 are clips 29 and 30. These clips 29 and 30 are retained in position in the same manner as the clips 27 and 28. It is to be understood that in place of the rivets set forth as retaining these clips in position portions might be struck therefrom which would be molded into the material in the same manner as the rivets. These clips 27, 28, 29, and 30 are of the type known in the art into

which so called cartridge fuses are intended to be inserted. A typical cartridge fuse is indicated by 31 in the accompanying drawings and it is intended to be removably disposed in the clips 27 and 29. A similar cartridge fuse 32 is disposed in the clips 28 and 30. A substantially L-shaped member 33 has the base portion thereof secured to the clip structure 27 and the stem portion thereof is extended out through the groove 22. A substantially L-shaped member 34 is provided which has the base portion thereof connected to the clip structure 28 and the stem portion thereof extends out through the groove 23. The stem portions of the L-shaped members 33 and 34 are preferably arranged to extend parallel to each other and project from the end of the section 12 in an amount sufficient to provide connecting members that may be inserted into the usual female electrical connecting member.

A substantially L-shaped member 35 has the base portion thereof secured to the clip structure 29 and the stem portion thereof is disposed in the groove 25 and embodies a bow configuration so that the intermediate portion thereof will engage one side wall of the groove 25 while the end portion thereof is preferably disposed in engagement with the opposite side wall. A substantially L-shaped member 36 has the base portion thereof secured to the clip 30 and the stem portion thereof is disposed in the groove 26 substantially similar to the manner in which the stem portion of the L-shaped member 35 is disposed in the groove 25. The stem portions of the L-shaped members 35 and 36 cooperate with the grooves 25 and 26 to provide a female electrical connection into which a male connection similar to that provided by the stem portions of the L-shaped members 33 and 34 may be inserted.

In the surface of the section 11 disposed toward the section 12 a recess substantially similar to the recess 20 is provided and grooves similar to the grooves 22 and 23, and 25 and 26 are provided in this named surface of the section 11. The members which have been described as being mounted in the various recesses and grooves in the section 12 extend above the surface of this section 12 and, therefore, when the section 11 is superimposed on this section 12 and connected thereto in the manner set forth these portions of these devices project into the corresponding recesses and grooves in the section 11.

In use the projecting portions of the L-shaped members 33 and 34 will be disposed in a female connecting member that is arranged in a suitable current supplying circuit. A male connecting member will be inserted into the grooves 25 and 26 and will engage the stem portions of the L-shaped members 35 and 36. A circuit will be closed between the L-shaped members 33 and 35 through the fuse 31. A circuit will be closed between the L-shaped members 34 and 36 through the fuse 32. Therefore, in the event of any trouble developing in the current consuming member to which the male connecting member inserted into the grooves 25 and 26 is connected it is apparent that either the fuse 31 or 32 will be melted or, as it is called, "blown" which will open the circuit to the current consuming member. This device will also protect against over loads and it is obvious that by providing low amperage fuses interiorly of the attachment plug 10 that these fuses will function to open the circuit prior to the time the fuses protecting the circuit into which the stem portions of the L-shaped members 33 and 34 are extended function.

It is apparent that I have provided a very simple and effective construction which will effectively protect current consuming devices such as so called electrical appliances, as for example irons, toasters and the like. It is also manifest that I have provided a construction which will be such that an entire circuit will not be rendered inoperative in the event of a defect in such appliances.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

A receptacle for cartridge fuses, comprising a body of insulating material formed from cooperating upper and lower sections, said sections having cooperating recesses formed in the abutting surfaces thereof, the greater portion of said recesses being disposed rearwardly of the middle of said body thereby defining cooperating flanges at the rear of said sections, the lower of said flanges having a pair of aligned grooves formed therein opening exteriorly and communicating with said recesses, substantially U-shaped clip members mounted in the recess in the lower of said sections in spaced apart relation, said U-shaped members having the bight portions thereof secured to said lower section and having the arms thereof directed upwardly, substantially L-shaped contact members, said L-shaped members having the stem portions thereof disposed in said grooves and extending exteriorly of said body to provide male connecting elements, the foot portions of said L-shaped members being secured to

said U-shaped members, the lower of said sections having grooves therein aligned with said first named grooves but exending in the opposite direction from said recesses, a second pair of substantially U-shaped clip members mounted in said lower section adjacent the inner ends of said last named grooves, said second named U-shaped clip members having the bight portions thereof secured to said lower section and having the arms thereof directed upwardly parallel to the arms of said first named clip members, a second pair of substantially L-shaped members, said second named L-shaped members having arcuated resilient stem portions disposed in said second named grooves to provide female connecting elements, the foot portions of said second named L-shaped members being secured to said second named U-shaped members, and means for detachably interconnecting said sections, said clip members being adapted to releasably hold the end portions of cartridge fuses.

In testimony whereof I affix my signature.

PHILIP MATTIA.