July 29, 1930. H. HUBBELL, JR 1,771,635

ATTACHMENT PLUG CAP

Filed May 3, 1928

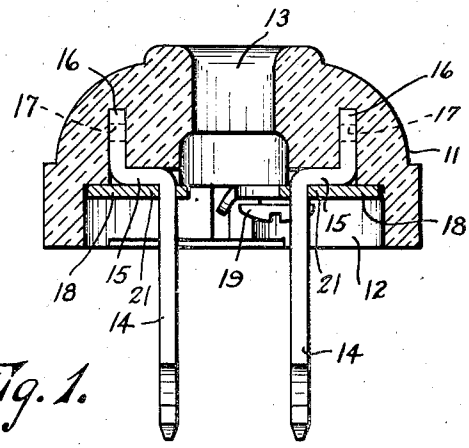


Fig. 1.

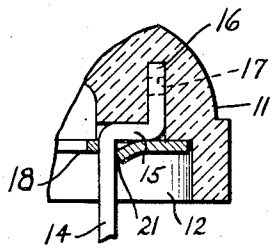


Fig. 3.

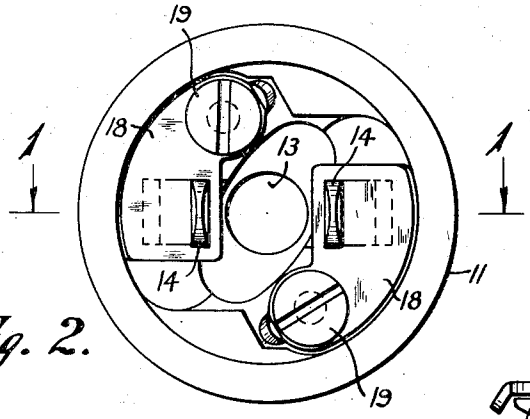


Fig. 2.

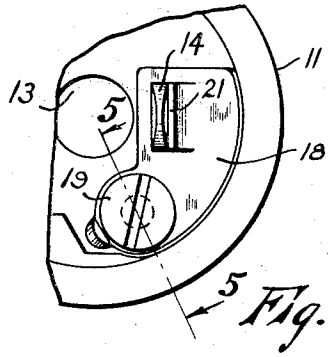


Fig. 4.



Fig. 8.

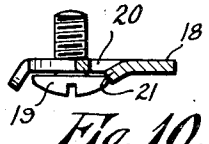


Fig. 10.

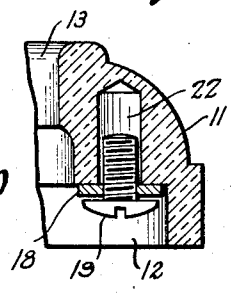


Fig. 5.

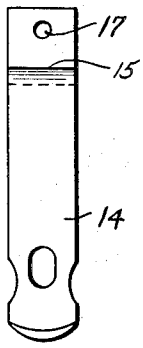


Fig. 6.

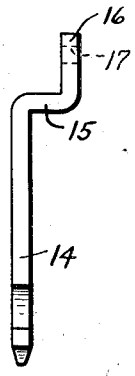


Fig. 7.

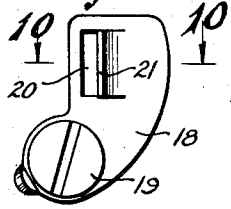


Fig. 9.

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1,771,635

UNITED STATES PATENT OFFICE

HARVEY HUBBELL, JR., OF BRIDGEPORT, CONNECTICUT

ATTACHMENT-PLUG CAP

Application filed May 3, 1928. Serial No. 274,893.

This invention relates to attachment plug caps such as are used on flexible lead wires from portable electrical devices and adapted to be inserted into outlet receptacles for supplying power to these devices from the house wiring system.

It has for an object to simplify the construction and assembly of these devices and to provide a more rigid and reliable mounting for the contacts in the insulating body of the cap.

With the foregoing and other objects in view, the invention consists in certain novel features of construction, combinations and arrangements of parts as will be more fully described, a construction illustrating one form of my invention being shown in the accompanying drawing. In this drawing,

Fig. 1 is a section through an attachment plug cap showing my invention applied thereto, the section being substantially on line 1—1 of Fig. 2 except that the contact blades are shown in elevation.

Fig. 2 is an end elevation of the device looking from the bottom of Fig. 1.

Fig. 3 is a detail section showing the means of securing the binding post plate to the contact blades.

Fig. 4 is a bottom plan view thereof looking toward the bottom of Fig. 3.

Fig. 5 is a detail section substantially on line 5—5 of Fig. 4.

Fig. 6 is a side elevation of the contact blades.

Fig. 7 is an edge view thereof.

Fig. 8 is an end view thereof looking toward the bottom of Fig. 6.

Fig. 9 is a plan view of the binding post plate, and

Fig. 10 is a transverse section thereof substantially on line 10—10 of Fig. 9.

At the present time a common construction for attachment plug caps is to form a binding post plate and its knife blade contact in one piece, the blade being bent laterally from one edge of the plate. Each element is mounted in the insulating body by means of an eyelet or insert molded in the body and passing through an opening in the plate with its free end spun over to thus secure the plate to the body. In this arrangement the eyelets or inserts must be very accurately positioned and the operations of assembling the plates on these eyelets and spinning over the eyelets are relatively expensive.

In my present construction I do away with these eyelets and the spinning over operation and mold the contact blades directly in the insulating body. The binding post plates are then mounted on these blades so that the blades are not only rigidly and securely mounted in the body, but they also serve as the means for securing the binding post plates to the body.

In the drawing numeral 11 represents the usual type of insulating body for these caps. It is recessed, as shown at 12, at its inner or lower side for the contact elements and has a longitudinal opening 13 for the lead wires, not shown, from a portable electrical device. The blade contacts 14 are of the usual shape, substantially rectangular in cross section, and are arranged in the usual parallel relation on opposite sides of the opening 13. In the present construction, however, they are offset, as shown at 15, to provide a shoulder and also to position the inner end portion 16 laterally outward from the projecting portion 14. These inner end portions 16 are molded directly in the insulating material of the body 11, and may be provided with suitable means to increase the gripping or holding effect of this material on the blades such as transverse openings 17 into which some of the insulating material will flow or be forced during the molding operation. It is preferred that these blades be molded in the material with the shoulder or offset portion 15 seated in a transverse recess in the wall at the bottom of the recess 12.

Binding post plates 18 are stamped from sheet metal as separate elements and carry the usual type of means for securing the lead wires to these plates, such as binding post screws 19, threaded into the plates. These plates also each have a rectangular opening 20 for one of the blade contacts 14. This opening is conveniently formed by cutting the plate with a three sided cut, as shown in

Fig. 9. The metal between the cuts is forced laterally to form a lug 21 integral with the plate. A portion of the free end of this lug is removed at the same time so as to shorten it somewhat. In assembling, the blade contact 14, which has already been molded in position in the insulating body 11, is inserted through the opening 20 permitting the plate 18 to rest on the wall or shoulder at the bottom of the recess 12. The elements are now in the position of Figs. 3 and 4. Then the free end of the lug 21 is forced inwardly to substantially the plane of the plate 18, and the lug is of such a length that when this operation is performed the contact blade 14 is firmly clamped between the free end of the lug 21 and the opposite side edge of the opening 20. The elements are now in the position of Figs. 1 and 2, and the plate 18 is firmly secured to the blade 14 and is, therefore, firmly mounted by this blade in position in the body of the cap. This makes a very rigid, simple construction, and one which may be easily and quickly assembled. The body 11 is molded with a pocket or recess 22 to receive the inner end of the binding screw.

Having thus set forth the nature of my invention, what I claim is:

1. In an attachment plug cap, an insulating body member, a contact blade mounted on the body with one end molded therein, a binding post plate having an opening therethrough for said blade and a lug at one side of said opening pressed against the blade to secure the plate to the blade, and means for connecting a lead wire to said plate.

2. In an attachment plug cap, an insulating body member, a blade contact offset laterally intermediate the ends thereof, said contact having one end thereof molded in the body with one side of said offset resting against the body, a binding post plate secured to the contact against the other side of the offset, and means for securing a lead wire to said plate.

3. In an attachment plug cap, an insulating body member, a contact blade having a lateral shoulder intermediate its ends and mounted on the body with one end molded therein, a plate having an opening therethrough for said blade and a lug at one side of said opening pressed against the blade to secure the plate to the blade, and means for connecting a lead wire to said plate.

4. In an attachment plug cap, an insulating body member, a blade contact molded at one end in said body, a plate having an opening therethrough to receive the contact and a lug at one side of said opening forced into substantially the plane of the plate to clamp the blade in the opening, and means for securing a lead wire to said plate.

In testimony whereof I affix my signature.

HARVEY HUBBELL, JR.