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ELECTRICAL ATTACHMENT PLUG.

APPLICATION FILED APR. 1, 1918.

1,372,288. Patented Mar. 22, 1921.

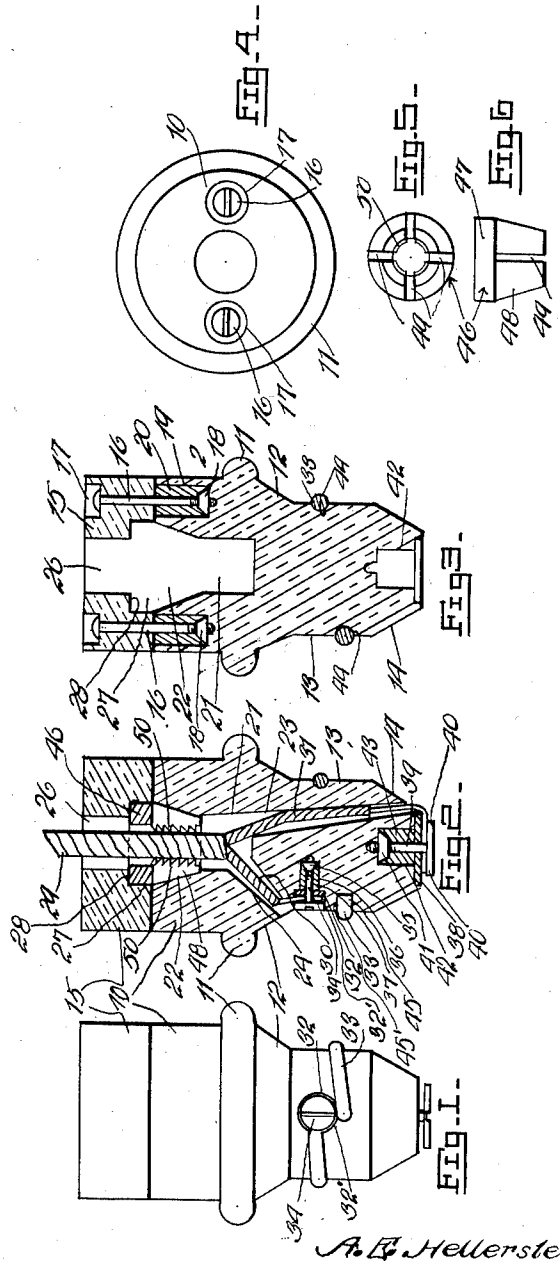


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 3.

Fig. 2.

Fig. 1.

Witness

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ELECTRICAL ATTACHMENT-PLUG.

1,372,288. Specification of Letters Patent. Patented Mar. 22, 1921.

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To all whom it may concern:

Be it known that I, AXEL EDWALD HELLERSTEDT, a citizen of the United States, residing at Great Falls, in the county of Cascade and State of Montana, have invented certain new and useful Improvements in Electrical Attachment-Plugs, of which the following is a specification.

My invention relates to electrical attachment plugs, adapted to be screwed into the ordinary electric socket, such as is used in connection with the electric bulb.

An important object of the invention is to provide a device of the above mentioned character, which is of simplified construction, cheap to manufacture, and convenient in use.

A further object of the invention is to provide means for clamping or binding the electric cord with the plug at a separate point from the attachment of the wires of the cord with the contact elements of the plug, thereby taking up strain from the wires at their points of attachment.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation of an attachment plug embodying my invention,

Fig. 2 is a central vertical longitudinal sectional view through the same,

Fig. 3 is a similar view taken at a right angle to the showing in Fig. 2, parts being omitted,

Fig. 4 is a plan view of the same,

Fig. 5 is a plan view of the clamping elements or bushing, and,

Fig. 6 is a side elevation of the same.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 10 designates the body portion of the attachment plug, which is preferably formed of insulating material, such as porcelain, glass or the like. This body portion is provided with an annular flange 11, to one side of which is a tapered portion 12, leading to a reduced portion 13. This reduced portion has a tapered portion 14, at the end thereof, as shown. Arranged upon the large end of the body portion 10 is a cap or end member 15, having openings for the reception of screws or bolts 16, the heads of which are disposed in recesses 17, as shown. These screws or bolts 16 engage with tapered nuts 18, arranged within recesses 19, and anchored therein by means of cement 20 or the like. Of course any other suitable means may be employed to hold the cap 15 upon the body portion 10.

The body portion 10 is provided centrally thereof with a longitudinal opening including an inner portion 21, which is cylindrical, and an outer portion 22 which is tapered, and decreases in diameter inwardly. As more clearly shown in Fig. 2, a longitudinal passage 23 is formed through the body portion 10 and leads into the inner end of the opening portion 21. The opening 23 extends through the tapered portion 14, as shown. The body portion 10 is further provided with a laterally extending opening or passage 24, extending through the tapered portion 12 and leading into the opening portion 21, as shown. The cap 15 has a longitudinally extending cylindrical opening 26 having its inner end counterbored, as shown at 27, forming a shoulder 28, as clearly shown in Fig. 3.

The numeral 29 designates an electrical cord, suitably wrapped with insulating material, as is customary, and embodying insulated wires 30 and 31, which pass through the openings 24 and 23 respectively, as shown. The wire 30 has electrical engagement with a head 32, formed upon a spiral contact element 33. The head 32 is apertured for the passage of a screw 34, engaging a tapered nut 35, anchored in the recess 36, by means of cement 37 or the like. The head of the screw 34 is countersunk, to be substantially flush with the periphery of the portion 14, the head 32 fitting in a recess 32′. The wire 31 is clamped to a metallic plate 38 by means of a screw 39, having a large flat head 40, serving as a terminal. The screw 39 has screw-threaded engagement with a tapered nut 41, anchored within a recess 42 by means of cement 43. It is thus apparent that the spiral contact element 33 and the head 40 of the screw function as the terminal elements of the attachment plug. The spiral contact element 33 is formed of metal and is partly sunk within a spiral groove 44, formed upon the portion 13. The free end of the element 33 is bent inwardly at a right angle, as shown at 45 and extends into a radial re-

cess 45′, thereby attaching such free end to the portion 13.

In order that all strain may be taken off of the wires 30 and 31 at their points of attachment with the contact elements I provide a clamping device or bushing 46, including a cylindrical body portion 47, to engage within the counterbore 27 and a tapered expansible portion 48 to engage within the tapered opening portion 22. The tapered portion 48 has longitudinal slots 49 and is further provided upon its interior with teeth 50. It is obvious that by moving the bushing 46 inwardly the tapered portion 48 is contracted and the teeth 50 thereof contact with the cord 29, in a manner to prevent the cord being moved outwardly with relation thereto.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

In an electrical plug attachment, the combination with a plug embodying a body portion having an inwardly tapered longitudinal bore near its outer end, of a cap mounted at the outer end of the body portion and having a central longitudinal bore in alinement with the bore in said body portion adapted to receive a conduit, the bore being reduced near the outer end of said cap to provide an annular shoulder, means for attaching said cap to the body portion of the plug, and a unitary bushing comprising a cylindrical portion received in the inner bore of said cap and held in position by said shoulder, and having a conical portion received in the tapered bore of said body portion, said bushing being provided with a central longitudinal opening for the passage of said conduit, the conical section of said bushing being provided with a plurality of radial slots extending to and terminating at the lower extremity of the cylindrical portion of the bushing, the lower portion of the bore of said bushing being provided with teeth projecting inwardly beyond the bore of the upper portion of the bushing and adapted to grip said conduit to prevent longitudinal movement thereof with respect to the body portion.

In testimony whereof I affix my signature in presence of two witnesses.

ALEX EDWALD HELLERSTEDT.

Witnesses:
A. W. POLAND,
ARTHUR ROSENBURY.