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G. H. LANE

2,069,375

ATTACHMENT PLUG

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Fig. 2.

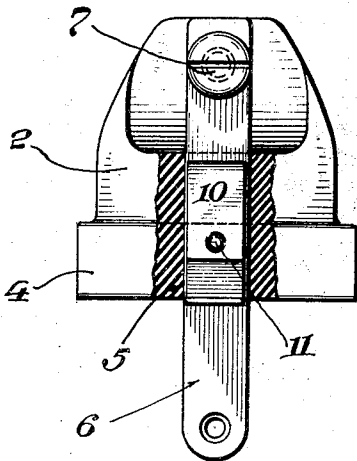


Fig. 1.

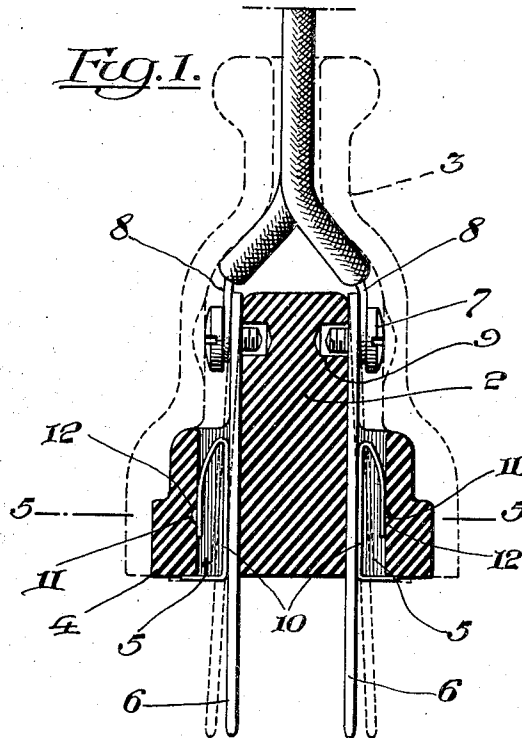
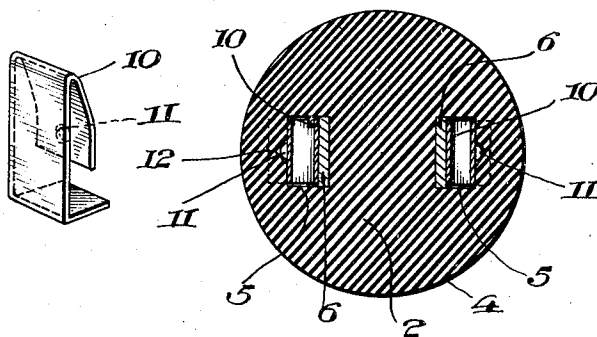
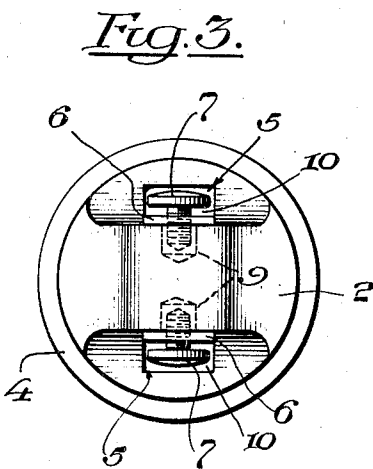


Fig. 5.

Fig. 4.



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ATTACHMENT PLUG

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4 Claims. (Cl. 173-361)

This invention relates to attachment plugs, particularly adapted for use with electrical appliances or utensils such as lamps, flat irons and other household appliances where a separable type attachment plug is used to effect electric contact with the main current supply and has for its object the provision of a plug of this type which will make a secure and efficient contact with the source of supply under all conditions.

10 A further object of the invention is the provision of an attachment plug simple and inexpensive to manufacture having means for insuring a tight contact with the source of supply by means of adjustable spring contact members without the necessity of bending such contacting members or in the event that the openings in the female member are not correctly spaced.

In the drawing accompanying and forming a part of this specification, Fig. 1 is a transverse vertical section on a medial line through the contact blades of this improved electrical attachment plug showing in dotted lines a conventional cover therefor;

Fig. 2 is a partial side elevation of Fig. 1, a portion being broken away to show the relative position of the spring clip in relation to one of the contact blades;

Fig. 3 is a plan view of Fig. 2;

Fig. 4 is a perspective view of one of the spring clips; and

Fig. 5 is a horizontal sectional view taken on the line 5-5 of Fig. 1.

Similar characters of reference indicate corresponding parts in the several views.

35 Before explaining in detail the present improvement and mode of operation thereof, I desire to have it understood that the invention is not limited to the details of construction and arrangement of parts which are illustrated in the accompanying drawing, since the invention is capable of other embodiments and that the phraseology which I employ is for the purpose of description and not of limitation.

In these devices it frequently happens that the projecting prongs or contact members carried by the plug do not accurately fit within the openings of the socket for various reasons and thus an inefficient contact results. Therefore, it is the object of the present invention to provide means which will enable the projecting prongs to adjust themselves to make proper contact and this without the necessity of bending the projecting prongs which frequently is poorly done.

This improved plug in the preferred form thereof comprises a body portion 2, of any suit-

able material such as hard rubber and a removable cover portion 3 made of similar material or any non-conductive material which may be flexible if desired.

In the form shown, the body member 2 has an enlarged base 4 having openings 5 therethrough and is provided with a pair of contact members or blades 6 spaced apart and projecting beyond the body for electrical contact with the usual light or wall socket having the usual openings for the reception of the blades or prongs. Located at the inner or top ends of these blades is a pair of screws 7 for the attachment of the usual wire 8 and which also serve to prevent longitudinal movement of the blades relative to the plug. These screws 7 project into enlarged transverse openings 9 in the smaller end of the plug. Thus the body 2 is so constructed that the screws 7 have endwise play in the openings 9 and this permits lateral movement of the blades. They are so fitted, however, that detachment of the blades in a longitudinal direction is prevented, as will be more clearly noted in Figs. 1 and 3.

The openings 5 in the lower or base portion of the body through which the blades 6 pass are considerably wider than the thickness of the blades so that the blades may readily move inwardly and outwardly owing to the loose fit of the contact screws.

On one side of each of the contact blades 6 within the openings 5 is a resilient member shown as a spring clip 10 inserted to hold the blade against movement in a lateral direction unless automatically shifted or adjusted when inserted in the socket. These clips have small knobs 11 pressed thereon for engagement with corresponding depressions 12 in the body member 2 to hold them in place.

The operation of the present improvement is very simple. The blades are held in toward the center by the springs inserted on the outside although this may be reversed if desired, the springs being on the inside. When the attachment plug is inserted into the socket the blades are forced against the spring clips the necessary amount to insure a tight positive contact with the electrical source.

In the form shown the blades are shown as straight but they may be bent over if so desired and the body member is of two piece construction but the common one piece construction could readily be employed by using an insulated ring member to position the clips.

It is to be understood that by describing in detail herein any particular form, structure or ar-

rangement, it is not intended to limit the invention beyond the terms of the several claims or the requirements of the prior art.

Having thus explained the nature of my said invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made, or all of the modes of its use, I claim:

1. An attachment plug comprising a body having portions of different transverse cross-sectional areas, the larger portion having openings extending therethrough and located beyond the opposite sides of the smaller portion, a pair of terminal members extending along the outer sides of said smaller portion and through and of less thickness than said openings whereby they are shiftable therein, a connection between the terminals and the smaller end of the plug to permit lateral movement of the terminals without the bending thereof on the shifting of the lower contact ends of the terminals, and resilient means located in said openings and frictionally held therein to permit the terminals to automatically adjust themselves to insure a tight contact.

2. An attachment plug comprising a body having portions of different transverse cross-sectional areas, the larger portion having openings extending therethrough and located beyond the opposite sides of the smaller portion, a pair of terminal members extending along the outer sides of said smaller portion and through and of less thickness than said openings whereby they are shiftable therein, a connection between the terminals and the smaller end of the plug to permit lateral movement of the terminals without the bending thereof on the shifting of the lower contact ends of the terminals, and resilient means located in said openings and frictionally held therein to permit the terminals to automatically adjust themselves to insure a tight contact, said

resilient means comprising spring clips each bent upon itself.

3. An attachment plug comprising a body having portions of different transverse cross-sectional areas, the larger portion having openings extending therethrough and located beyond the opposite sides of the smaller portion, a pair of terminal members extending along the outer sides of said smaller portion and through and of less thickness than said openings whereby they are shiftable therein, a connection between the terminals and the smaller end of the plug to permit lateral movement of the terminals without the bending thereof on the shifting of the lower contact ends of the terminals, and resilient means located in said openings and frictionally held therein to permit the terminals to automatically adjust themselves to insure a tight contact, said resilient means comprising spring clips each bent upon itself and having ends extending beyond the end of the body.

4. An attachment plug comprising a body having portions of different transverse cross-sectional areas, the larger portion having openings extending therethrough and located beyond the opposite sides of the smaller portion, a pair of terminal members extending along the outer sides of said smaller portion and through and of less thickness than said openings whereby they are shiftable therein, a connection between the terminals and the smaller end of the plug to permit lateral movement of the terminals without the bending thereof on the shifting of the lower contact ends of the terminals, and resilient means located in said openings and frictionally held therein to permit the terminals automatically to adjust themselves to insure a tight contact, the connections of the terminals at the smaller end of the plug comprising projections and recesses of larger diameter than said projections.

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