Aug. 30, 1938. M. S. GAGLE 2,128,813

ELECTRIC SOCKET PLUG

Filed Oct. 28, 1933

Fig. 1.

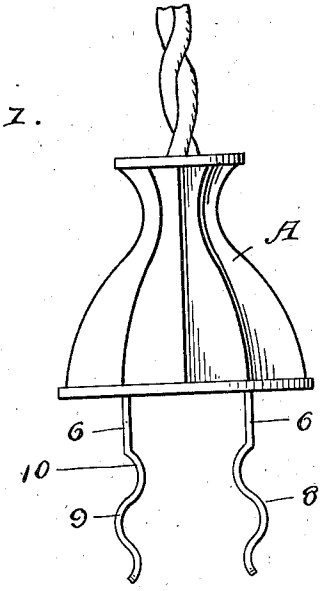


Fig. 2.

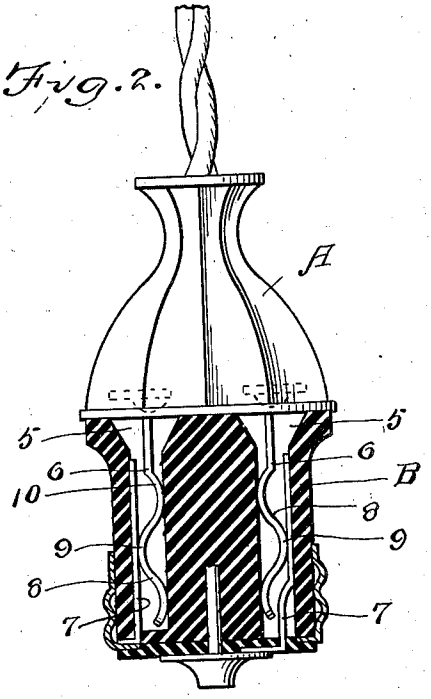
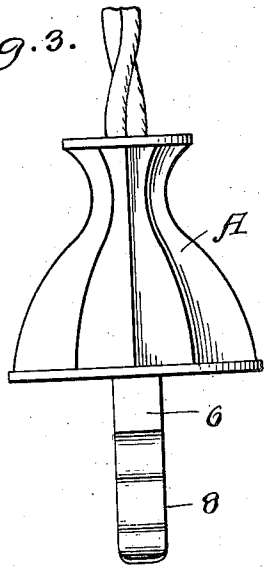


Fig. 3.



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ELECTRIC SOCKET PLUG

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Application October 28, 1933, Serial No. 695,679

1 Claim. (Cl. 173—343)

The invention relates to an electric socket plug and more especially to separable attachment plugs.

The primary object of the invention is the provision of a plug of this character, wherein the prongs constituting the contacts of the male member of the plug are so distorted as to make a positive connection with the female member and to frictionally hold these parts interfitted with each other without any possibility of the diminishing of contact through long or hard usage of such plug, the male and female members being readily separable from each other.

A further object of the invention is the provision of a plug of this character which is extremely simple in construction, thoroughly reliable and effective in its purpose, strong, durable, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is an elevation of the male member of a separable attachment plug.

Figure 2 is an elevation partly in section of the male and female members of the plug interfitted with each other.

Figure 3 is a view similar to Figure 1 looking at right angles thereto.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally the plug member and B the socket member of a separable attachment plug. This socket member, in its body, is provided with the recesses 5 for the reception of the contact prongs 6 of the plug member A, and within these recesses are the fingers 7 to be engaged by said prongs 6 and in this manner the members A and B are separably electrically connected.

The contact prongs, which are spaced according to the spacing between the centers of the recesses, are straight, as indicated at 6, where they connect with the plug member, but from the straight portions to their extremities, they are reversely curved, as indicated at 8, providing bight portions 9 and 10 and terminal bight portions formed by relatively outwardly directed terminals. The several bight portions extend equal distances on opposite sides of the lines constituting extensions of the axes of the straight portions 6 and their curvatures are of such degree that parallel lines tangent to their peaks are separated a greater distance than the thicknesses of the recesses 5 as defined by the inner faces of the fingers 7 and the opposite walls of the recesses.

Thus it will be noted that when the members A and B are connected together the bight 9 of each prong 6 will make positive contact with its companion finger 7, while the bight 10 and the terminal bight portion will make contact with the wall of the recess 5 and in this fashion dual frictional holding will be had.

The formation of the intermediate and terminal bights of the prongs, as above described, requires a slight pressure for the insertion of the prongs in the recesses when attaching the plug member to the socket member, since the effect is to slightly elongate the prongs, giving each not less than three points of contact within its respective recess of which at least one is with the contact finger and this without any lateral deflection of the straight portion 6 which, in the inserted position of the prong stands spaced from the contact finger and the opposite wall of the recess.

What is claimed is:

In a separable plug, a socket member having spaced parallel recesses flared at their outer ends and provided with opposed straight walls, a contact finger permanently mounted in each recess and disposed against one wall thereof, a plug member, and contact prongs carried by the plug member and guided into the recesses by the flared outer ends thereof, said prongs having straight portions where they connect with the plug member and being reversely curved from said straight portions to their extremities to provide at least three succeeding bight portions, the bight portions extending equal distances on opposite sides of the lines constituting extensions of the axes of the straight portions and their curvatures being of such degree that when the plug member is unconnected with the socket member parallel lines tangent to the peaks of the curvatures are separated a greater distance than the thicknesses of the recesses as defined by the prong contacting faces of the fingers and the opposite walls of the recesses, so that said curvatures are spread upon insertion of the prongs in the recesses to give each at least a three point contact in its recess of which at least one point of contact is with the contact finger, the straight portions of the prongs being so spaced relatively as to be out of contact with the walls of the recesses and contact fingers when positioned in said recesses.

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