

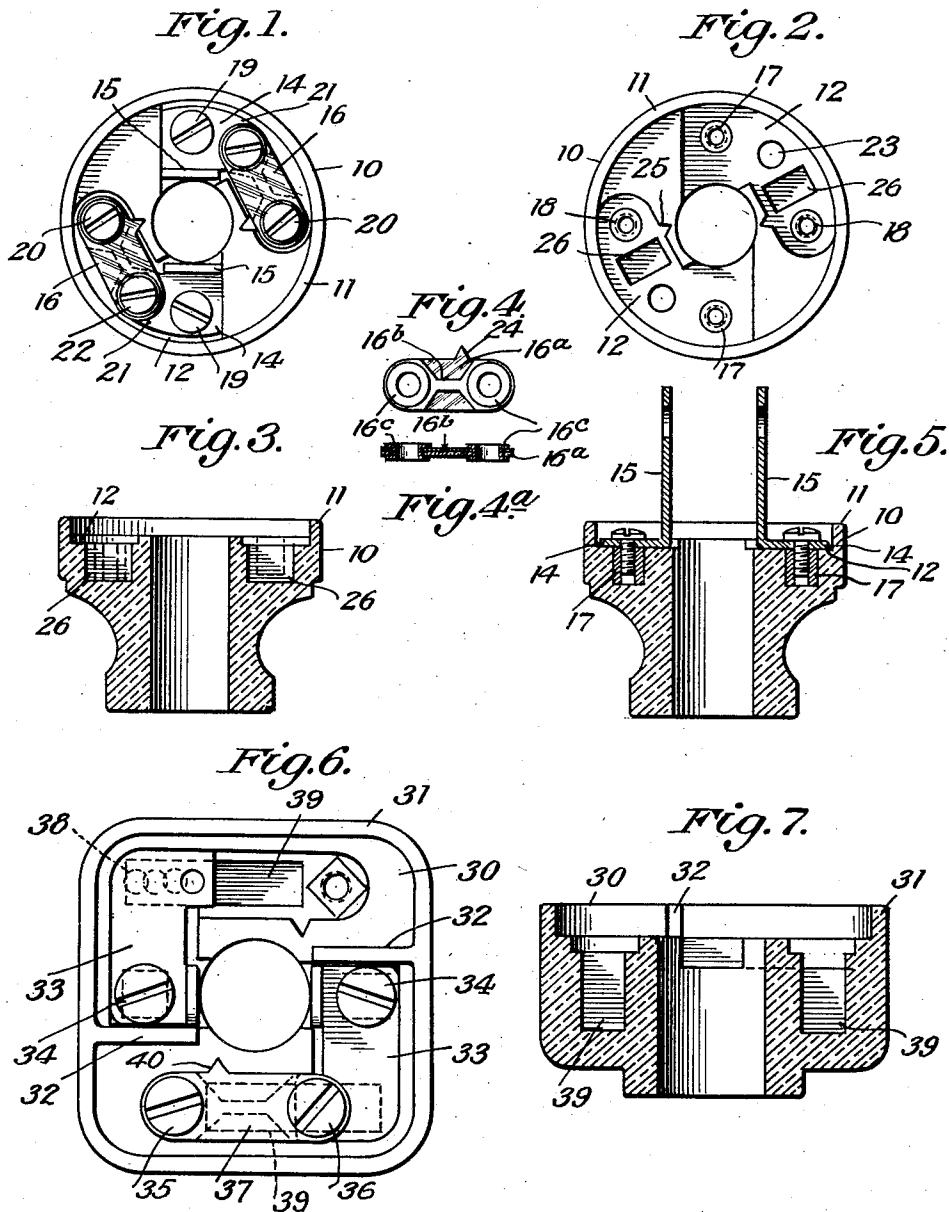
Nov. 14, 1933.

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1,935,525

FUSED ATTACHMENT PLUG FOR EXTENSION CORDS

Filed Jan. 29, 1932



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1,935,525

FUSED ATTACHMENT PLUG FOR
EXTENSION CORDS

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Application January 29, 1932. Serial No. 589,710

1 Claim. (Cl. 200—115.5)

The object of the invention is to provide a plug such as is used for extension cords for connecting lamps and electrical appliances of all kinds to current taps and receptacles and in which are incorporated fuses protecting both sides of the line from the receptacle to the appliance; to provide a plug of the kind indicated in which the fuse is readily renewable in case of being blown; to provide a fused plug in which rupture of the fuse by blowing can not result in fire by reason of the form of fuse and the manner of mounting; to provide a plug in which the replacement of the fuse is not attended with any damage to the latter by reason of the inexperience or lack of mechanical ability on the part of the person effecting the replacement; to provide a construction in which the proper position of the fuse is keyed, so that there may be no opportunity for wrongly attaching it in the refilling operation; to provide a construction which makes for visible indication of a ruptured fuse, so that that needing replacement is easily determined; to provide a plug construction which by reason of providing individual fusing of each appliance makes it possible to fuse for the load of that appliance alone; and generally to provide a plug of the kind indicated which is of simple form and therefore susceptible of cheap manufacture.

With this object in view, the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawing but to which the invention is not to be restricted further than any limitations appearing in the appended claim.

In the drawing:

Figure 1 is a plan view of a plug incorporating the invention.

Figure 2 is a similar view of the molded plug body with the metal parts removed.

Figure 3 is a central vertical sectional view of the structure of Figure 2.

Figure 4 is a plan view of the fuse.

Figure 4A is a central longitudinal sectional view of the fuse.

Figure 5 is a central vertical sectional view of the structure of Figure 1.

Figure 6 is a plan view of a modified form of plug.

Figure 7 is a central vertical sectional view of the molded body of the structure shown in Figure 6.

The molded body 10 of the plug is made according to the conventional practice as to size, con-

tour, etc., the rear or receptacle engaging face being bounded with a peripheral flange 11.

The rear face within the boundary of the flange is cut out as indicated at 12 to provide recesses in which are disposed the flanges 14 and the prongs 15, as well as the fuses 16, so that the fuses and prong flanges or feet may be substantially flush with the rear face. Metallic inserts internally threaded, are provided, as indicated at 17 and 18, the former receiving the screws 19 by which the feet or flanges of the prongs 15 are secured in place and the latter receiving the screws 20 which constitute the binding screws for the extension cord employed as well as the retaining screws for the one end of the fuses. The feet 15 of the prongs are provided with lateral extensions 21, tapped and threaded for the reception of the screws 22 by which the remaining terminals of the fuses are secured, the screws 22 passing into the clearance holes 23 when the screws are turned home.

By this construction, the prongs are retained in the plug body by means of the screws 19, while the conducting wires constituting the extension cord for the appliance with which the device is used, being secured under the screws 20 which, entering the inserts 19, tightly hold the conducting wires and the one end of each fuse in tight engagement. Electrical continuity between the prongs and the conductor connecting screws 20 is secured by reason of the remaining terminals of the fuses being secured to the ears or extensions of the feet of the prongs.

The fuse employed is of laminar form consisting of a strip of insulating material 16^a superimposed on top of the fuse link 16^b, to which it is secured by means of hollow rivets 16^c.

A lateral extension 24 formed on the insulating strip to one side of the longitudinal center of the fuse registers with and enters a corresponding recess 25 formed in the rear face of the plug at the zone where it is cut out, when the fuse is in proper position and this is when the metal link is on the under side and the insulating strip on the top side. Preferably the insulating strip consists of mica, so that when the fuse blows, the fact may be visibly indicated by reason of the transparency of the mica strip.

Directly below the fusible portions of the fuse links, recesses 26 are formed in the plug body constituting wells into which the arc resulting from the blowing of the fuse may discharge, so that there is no danger of rupture of the insulating strip with its attendant fire hazard.

In that form of the invention shown in Figures

6 and 7, the plug body 30 is of a generally square form, the rear face being bounded with a flange 31 and the two prong receiving zones defined by flanges 32. In this form of plug, the body is cut out on the rear face to receive the prong feet 33 which are secured in place by means of screws 34 entering tapped inserts as in the form shown in Figure 1. The screws 35 enter similar inserts constituting anchoring means for the fuses at one end and also as attaching means for the extension cord, the other securing means for the fuses consisting of screws 36 engaged in tapped holes in the feet 33 of the prongs. The fuse 37 in this form of the invention is of the same form as that employed in the form shown in Figure 1, but different capacity fuses are made of different lengths and accordingly the feet 33 have the screw receiving holes for the fuse formed at different points, as shown in dotted lines at 38 in Figure 6 of the drawing, so that one plug may be adapted only for a certain capacity of fuse, depending on the receptacle with which it is employed. This avoids the possibility of either overfusing or underfus-

ing the appliance with which the plug is employed.

The molded body portion of the plug is formed with spark discharge wells 39 to function when a fuse is blown and the fuses are keyed, as indicated at 40, to ensure them being disposed in proper position when being attached.

The invention having been described, what is claimed as new and useful is:

An attachment plug comprising an insulating body, metallic receptacle engaging prongs mounted on said body, conductor receiving binding posts mounted on said body, and replaceable fuse elements connecting said binding posts with said prongs, the body being formed with wells directly below said fuses and the latter comprising laminar elements of which the lower lamina is a fuse link and the upper lamina is a strip of transparent insulating material, said fuses being set in depressions in said body and having lateral extensions engageable in recesses formed in the edge walls of said depressions.

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