

July 12, 1938.

T. McKEE

2,123,309

ATTACHMENT PLUG

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Fig. 1.

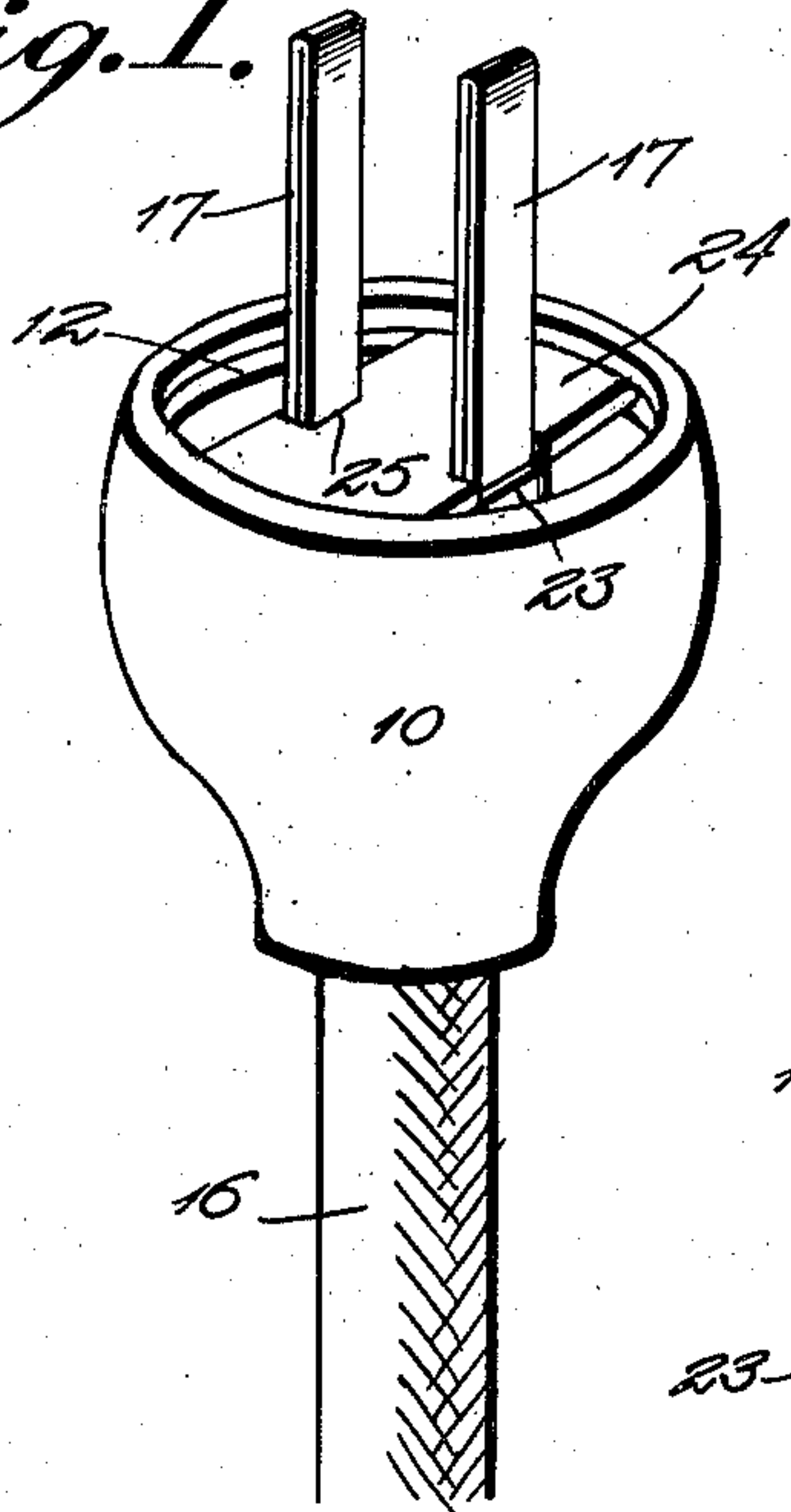


Fig. 2.

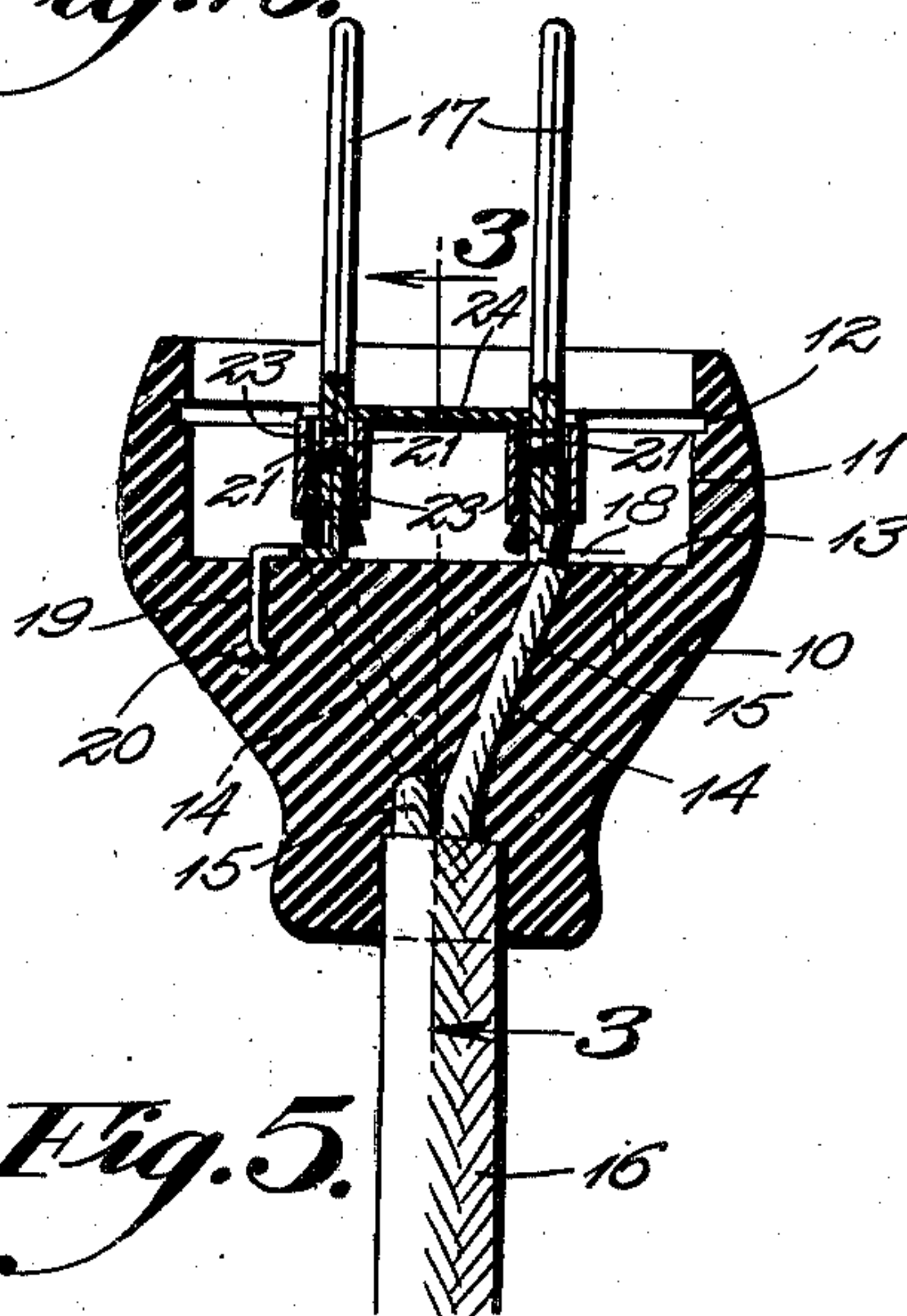


Fig. 5.

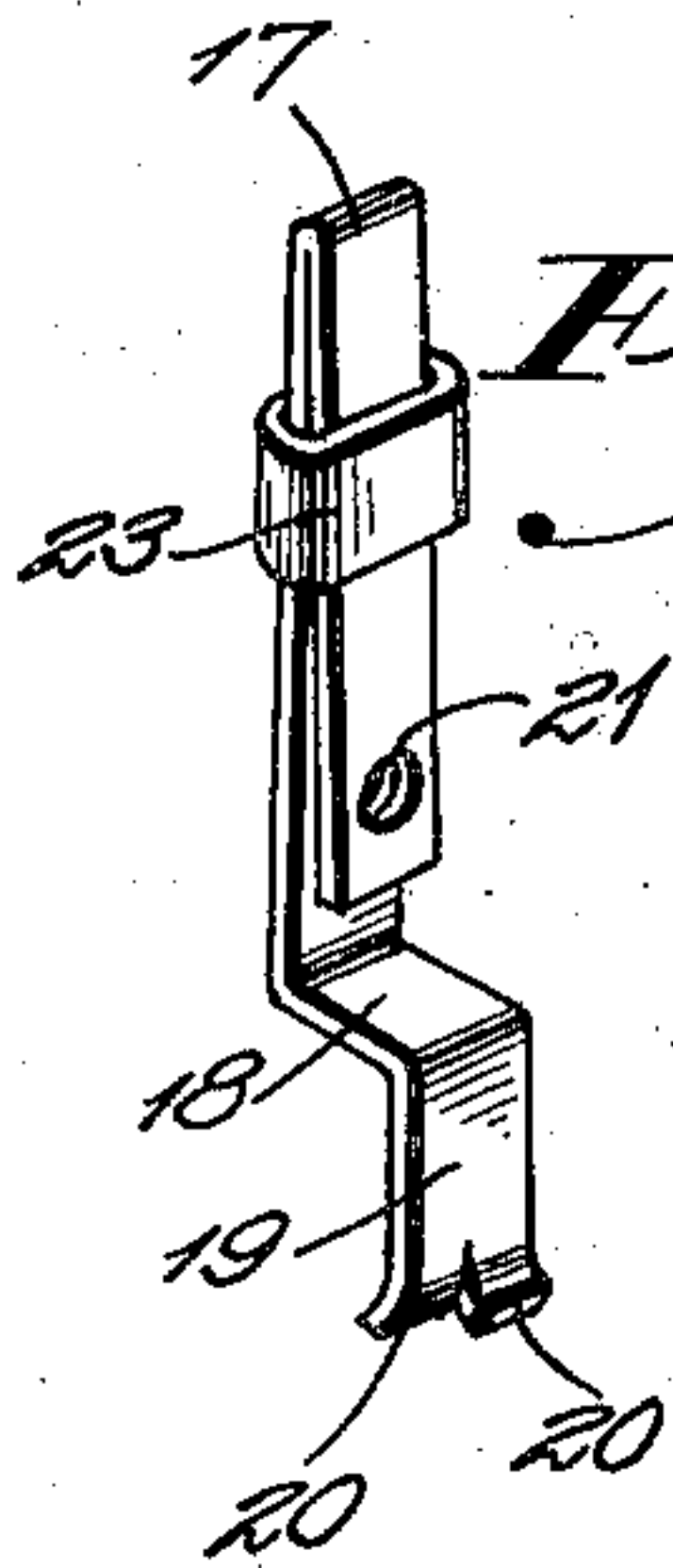
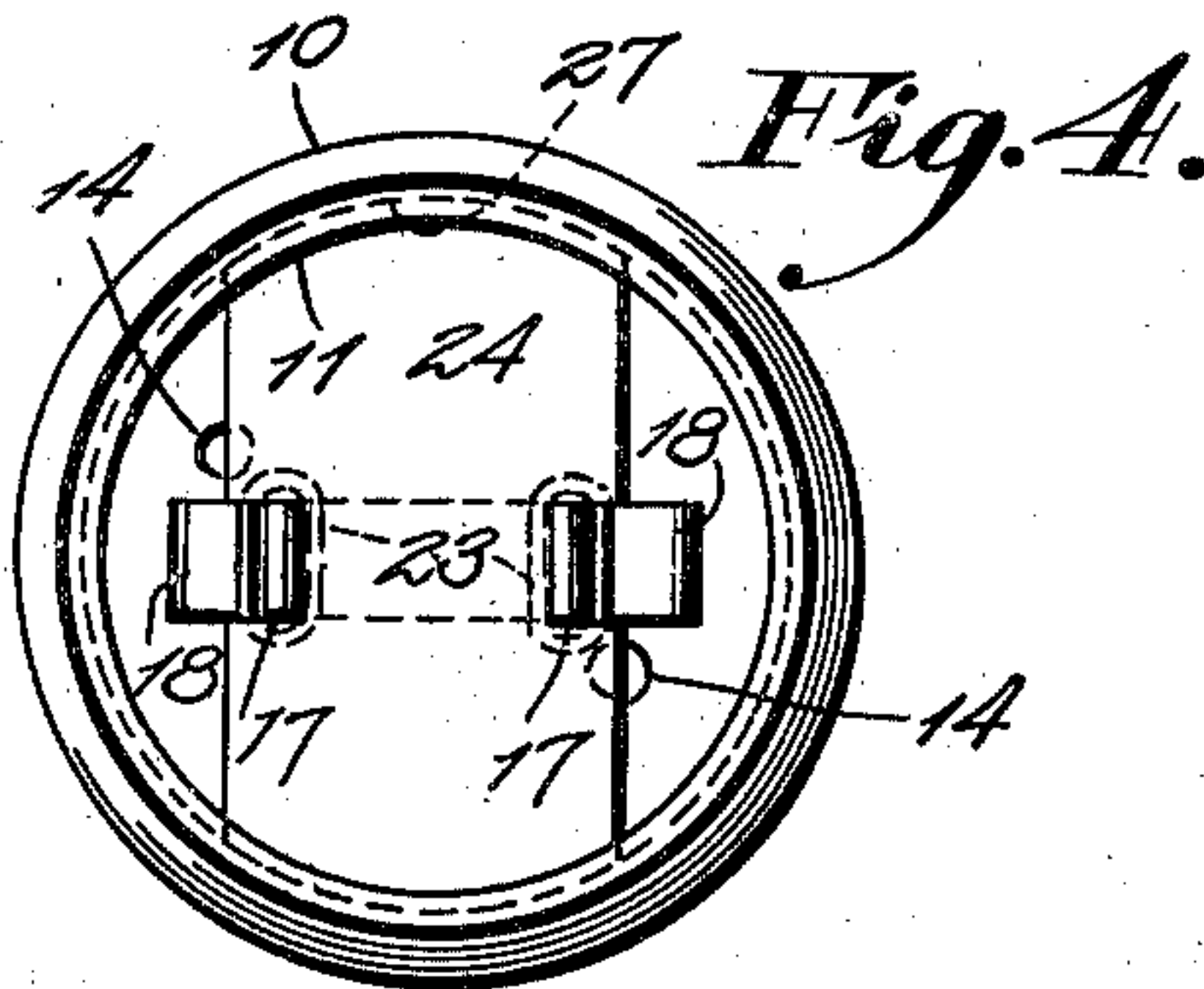
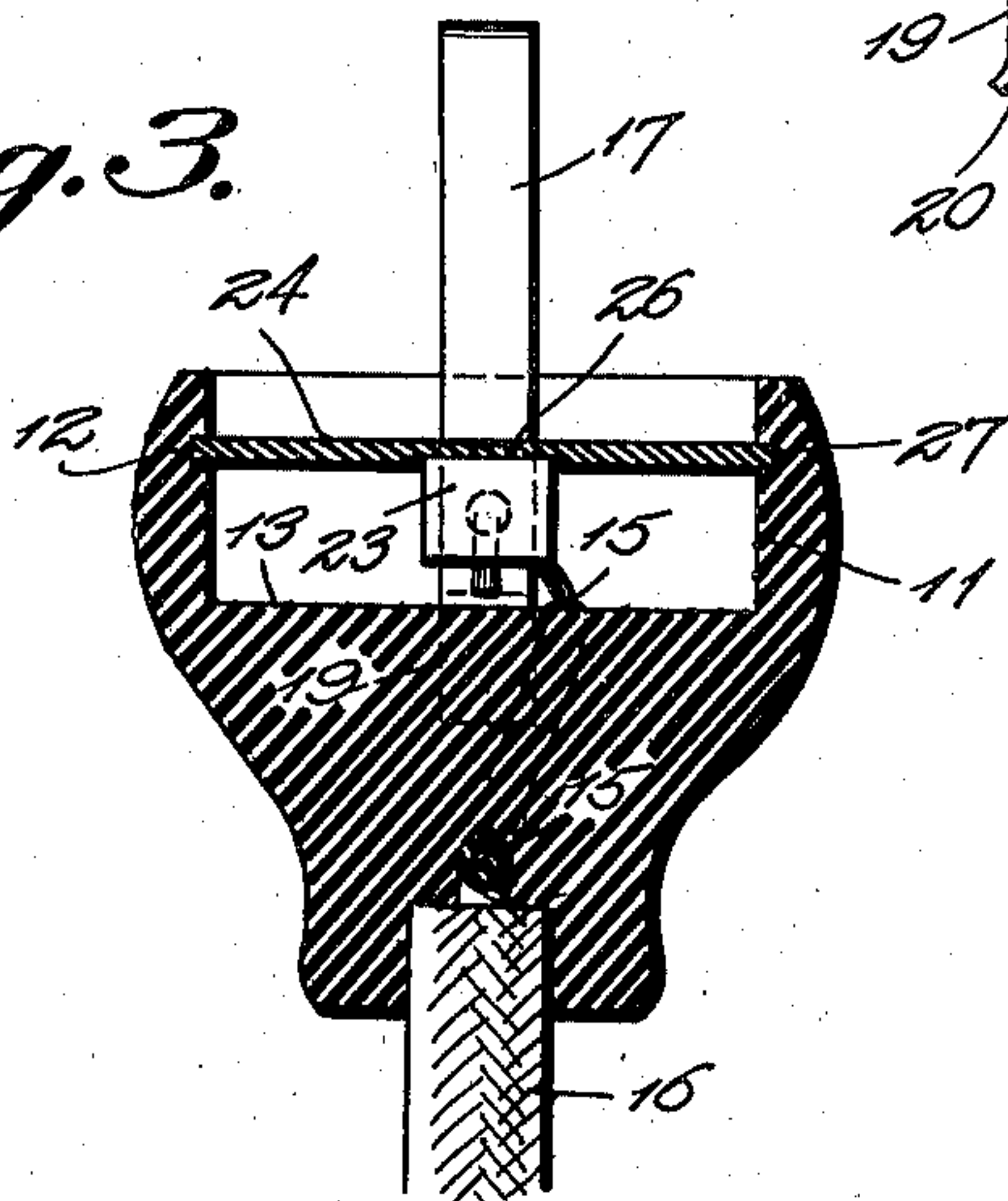


Fig. 3.



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WITNESS

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ATTACHMENT PLUG

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2 Claims. (Cl. 173—361)

This invention relates to an attachment plug and has for an object to provide an electrical connector of this type having U-shaped terminal prongs or bars provided with registering openings through which the end of a circuit wire may be passed and bent back to lie along the bar and be clamped thereto by a sliding sleeve, the sleeve being adapted to be held in place by a spring plate of insulating material engaged in a groove in the wall of the plug body so that a terminal wire may be quickly applied or removed by an inexperienced person without unscrewing any of the parts or using tools.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification,

Figure 1 is a detail perspective view of an attachment plug constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view of the plug shown in Figure 1.

Figure 3 is a longitudinal sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a top plan view of the plug.

Figure 5 is a detail perspective view of one of the U-shaped terminal bars and showing the wire receiving openings and the clamp sleeve.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, 10 designates the body of the plug the same being formed of insulating material and being provided with a cylindrical opening 11 of less diameter than the largest diameter of the shell or body 10. An annular groove 12 is formed in the wall of the opening parallel with the bottom 13 of the opening. Channels 14 are formed in the body 10 to receive circuit wires 15 of an electric cord or cable 16, these channels opening through the bottom 13 of the body.

Each terminal of the plug comprises a U-shaped bar 17 of spring metal one of the legs of the bar being bent at an angle to provide a foot 18 which extends along the bottom 13 of the plug body and is terminally bent downwardly to provide an anchoring prong 19 which is imbedded in the material of the body and is severed and bent at opposite directions at the tip to provide anchoring lugs 20.

The legs of the U-shaped terminal are provided with registering openings 21 to receive the bared end of a circuit wire which end is bent reversely after being passed through openings as best shown in Figure 2. A clamp sleeve 23, formed from a continuous band of metal, is slidably fitted on the legs of the U-shaped terminal and is adapted to be slid over the bent end of the conductor wire, as best shown in Figure 2, and rigidly clamp the conductor wire to the terminal so that a good electrical connection is maintained under the most severe conditions of service.

For anchoring the clamps 21 of the terminals in place a lock plate 24 formed of resilient insulating material is provided at diametrically opposite points in its longitudinal edges with notches 25, best shown in Figure 1, to receive the terminals 17. The plate 24 is also cut away to provide recesses 26 adjacent the notches to receive the top edges of the clamp sleeves 23, as best shown in Figure 2. The ends of the lock plate 24 are rounded as shown at 27 in Figure 4 to permit the lock plate being sprung into the groove 12, as best shown in Figures 2 and 3 to hold the clamp sleeves firmly in operative position.

By simply inserting the fingers along the longitudinal edges of the plate 24 the plate may be sprung out of the groove 12 to expose the clamp sleeves 23 either of which may be slid longitudinally of the respective terminal 17 to permit application or removal of a circuit wire by an inexperienced person without the use of tools.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

1. An attachment plug comprising a body formed of insulating material and provided in one end with a cylindrical opening of less diameter than the body, there being an annular groove formed in the wall of the opening parallel with the bottom of the opening, there being channels formed in the body receiving circuit wires and a pair of electric terminals, each terminal comprising a U-shaped bar of spring metal, one of the legs of the bar being bent at an angle to provide an attaching foot embedded in the material of the body, the legs of the bar being provided with registering openings to receive the bared reversely bent end of a circuit wire, a metal clamp sleeve slidably fitted on the legs of the bar and adapted to be slid over the bent end of the circuit wire to rigidly clamp the wire to the bar and maintain good electrical connection, and a resili-

ent lock plate of insulating material adapted to be sprung at the ends into said groove and to bear upon the clamp sleeves of said pair of terminals for releasably holding the clamp sleeves in operative position.

5 2. An attachment plug comprising a body of insulating material provided with a cylindrical opening of less diameter than the body, an annular groove formed concentrically in the wall
10 of the opening, channels formed in the body to receive circuit wires and a pair of electric terminals, each terminal comprising a U-shaped bar of spring metal projecting from the open end of the body and having one of the legs bent at an
15 angle to provide an attaching foot anchoring the

bar to the bottom of said opening, both legs of the bar being provided with registering openings near the bottom of the first named opening adapted to receive the bared reversely bent end of a circuit wire, a metal clamp sleeve slidably
5 fitted on the legs and adapted to be slid over the bent end of the wire for rigidly clamping the wire to the bar, and a resilient plate of insulating material having rounded ends releasably engaged
10 in said groove, there being notches in the edges of the plate receiving said pair of terminals, the underneath face of the plate engaging the clamp sleeves of said pair of terminals and holding the
clamp sleeves in operative position.

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