

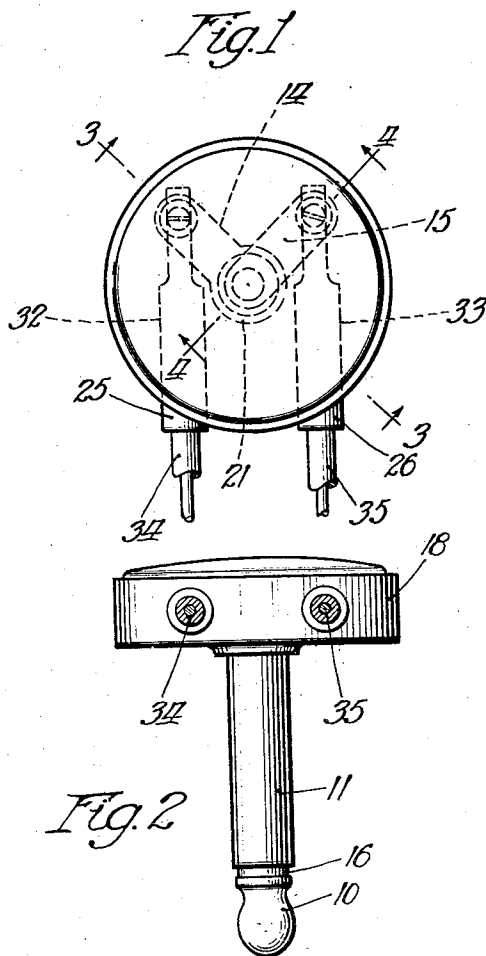
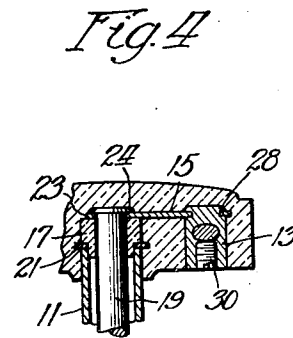
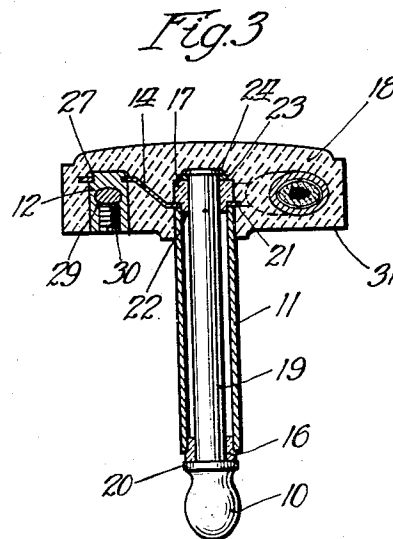
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A. J. CARTER

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RADIOPLUG

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Inventor
Alva J. Carter

Zabel & Banning Attys.

UNITED STATES PATENT OFFICE.

ALVA J. CARTER, OF CHICAGO, ILLINOIS, ASSIGNOR TO CARTER RADIO COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

RADIOPLUG.

Application filed August 2, 1926. Serial No. 126,536.

My invention relates to plugs and has for its object the provision of an improved plug which is used in connection with the interconnection of electric circuits.

5 My improved plug is utilized in connection with jacks or other similar interconnecting devices and is of particular utility in connection with apparatus used in connection with the radio, telephone and other purposes.

10 It is an object of my invention to provide a plug of this character which shall be very substantial in construction, which shall have the minimum number of parts and which is easy to assemble.

15 I will describe one form of plug constructed in accordance with my invention more particularly by referring to the accompanying drawing in which—

Fig. 1 is a bottom view of such a plug;

20 Fig. 2 is a side view thereof;

Fig. 3 is a sectional view on line 3—3 of Fig. 1; and

Fig. 4 is a sectional view on line 4—4 of Fig. 1.

25 My improved plug as shown in the drawings preferably consists of a self-contained structure which includes the tip element 10, the sleeve element 11, the two connectors 12 and 13 and the two connecting strips 14 and 15. This unitary structure which comprises 30 all of the operating elements of the plug with the exception of the two pieces of insulation 16 and 17 is then preferably molded into an insulating casing 18 which forms a disc-like handle. From this short description, the general idea of my invention will be understood, namely, that all of the necessary operating parts of the plug are substantially assembled into a unit and that there- 40 after this unit is molded into a handle or finger piece.

I will now describe more specifically how the various parts of the plug are assembled. The tip element 10 is used as a base element and a small sleeve of insulation 16 is mounted 45 upon the shank portion 19 of the tip element so that it rests against the shoulder portion 20. This insulating sleeve 16 preferably has an offset portion as shown more clearly in Fig. 3, that is, a portion of reduced diameter and this accommodates the sleeve portion 11 which is fitted thereon. This insulating sleeve 16 thus brings about the necessary separation between the elements 11 and 10 55 and at the same time holds them at one of

their extremities in their allotted positions. A connecting strip 14 has an annular portion 21 which abuts the sleeve 11 as shown more clearly in Fig. 3. Another insulating sleeve 17 is then placed in position to abut the flat 60 face of the annular portion 21 and this insulating sleeve 17 has a portion 22 of restricted diameter which fits the interior of the sleeve 11 and thereby maintains the proper separation between the tip and sleeve 65 elements 10 and 11 respectively.

The other connecting strip 15 having an annular portion 23, then abuts the outer face of the insulating sleeve 17 and snugly fits the protruding extremity of the shank 19 of the 70 tip element 10. The extremity of the tip element is then upset as shown at 24 to firmly hold all of these parts together, these parts including the tip element 10, the sleeve element 11, the insulating sleeves 16 and 17 and 75 the connecting strips 14 and 15. The connecting strips 14 and 15 are preferably angularly displaced as more clearly shown in Fig. 1 so that access to the plug connections may preferably be made by two parallelly arranged 80 pin connectors 25 and 26 as will presently be explained. The connecting strips 14 and 15 are electrically connected at their extremities with socket connectors 12 and 13. These connectors 12 and 13 are provided with reduced 85 portions at one of their extremities over which the annular extremities of the elements 14 and 15 fit. These connectors 12 and 13 then have the protruding extremities upset as shown at 27 and 28 respectively, so as to 90 fasten them securely to their respective connectors 14 and 15.

Each of the connectors has a hole 29 there-through through which hole the extremity of a pin type connector such as the connector 25 95 may be inserted into place. The connectors are then each provided with a screw 30 which screws may be operated from the exterior of the plug, the connectors having their outer surfaces flush with the outer surface 31 of the 100 insulating covering 18. The parts thus described with the exception of the connectors 25 and 26 are then properly placed in a mold and a suitable handle portion 12 cast about these parts, preferably forming a disc-like 105 handle portion as illustrated, it being understood, of course, that holes 32 and 33 are left in the insulating handle so as to accommodate the pin type connectors 25 and 26. The connectors 25 and 26 may be readily inserted 110

into place and then held in position by adjusting the screws 30. Similarly, if the pressure of the screws 30 is released, these connectors may be withdrawn. The extreme simplicity of this structure will be thus apparent from what has been described. It might be added that the pin type connectors 25 and 26 have projecting flexible cords 44 and 45.

10 From what has been described, the nature of my invention will be readily apparent to those skilled in the art and having thus described one form which my invention may take, what I claim as new and desire to secure by Letters Patent is:

15 A plug of the character described comprising a tip element, a sleeve element surrounding said tip element intermediate its ends, a connecting element electrically connected with said tip element and projecting radially therefrom, a connecting element electrically connected with said sleeve element and projecting radially therefrom, said connecting

elements extending in different directions from said tip and sleeve, insulating means 25 maintaining electrical separation of said tip and sleeve and their respective connecting elements, means at the extremity of said tip element for holding all of said parts together as a unit, a terminal connector secured to the free end of each connector element, and a handle into which all of said aforesaid parts with the exception of protruding tip and sleeve portions are molded, said handle having a pair of apertures therein lying in a plane perpendicular to the axis of said tip element on opposite sides thereof and extending to said terminal connectors whereby terminal elements may be inserted therein, and said terminal connectors having means operable from the exterior of said handle to secure terminal elements thereto. 30 35 40

In witness whereof, I hereunto subscribe my name this 1st day of July A. D. 1926.

ALVA J. CARTER.