

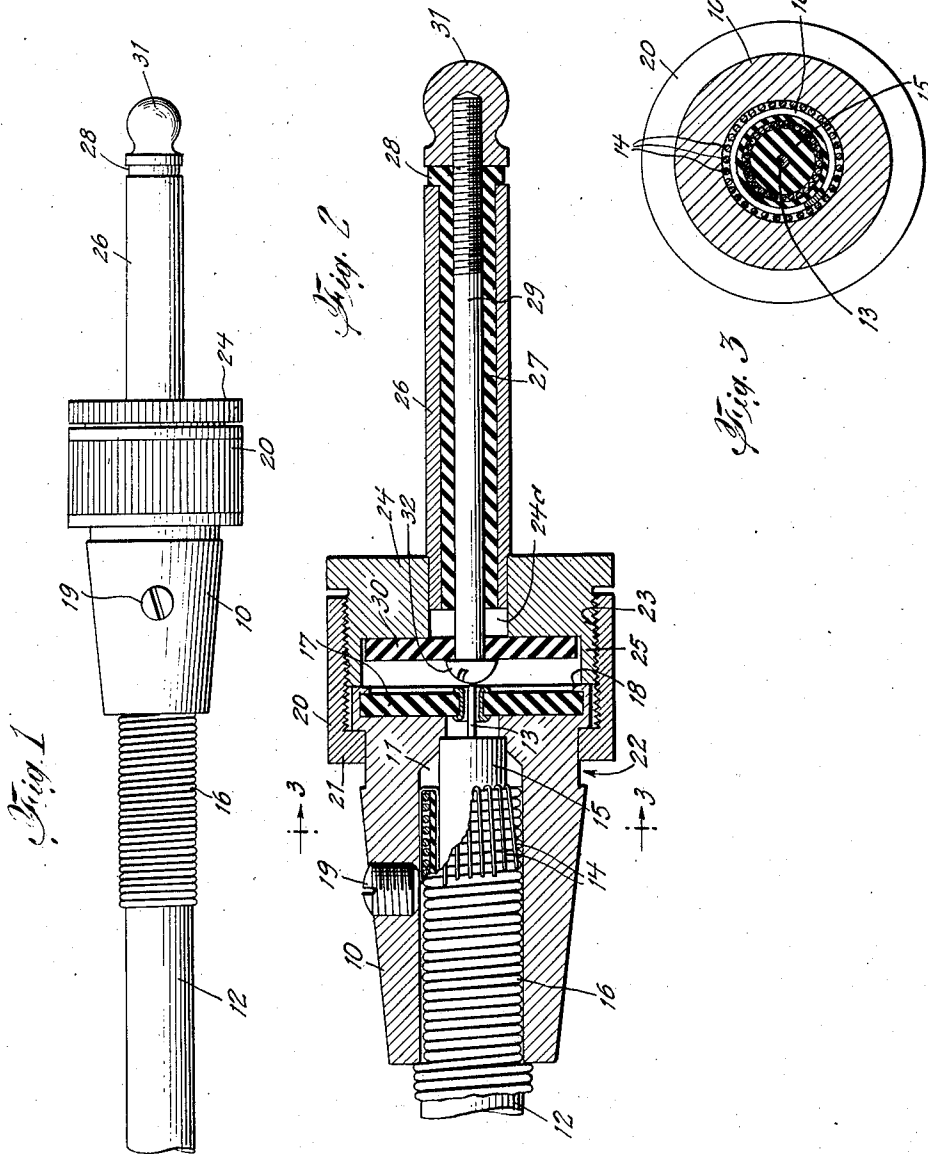
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CONNECTOR PLUG

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CONNECTOR PLUG

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1 Claim. (Cl. 173—361)

This invention relates to electric connector plugs, and aims to provide a novel and practical as well as simple and inexpensive plug comprising essentially two separable parts or members. The plug is particularly useful for flexible coaxial or shielded wire cables.

The above and other objects will become apparent in the following description, reference being had to the accompanying drawing wherein one method of working out the invention is illustrated.

Referring briefly to the drawing, Figure 1 is a side view of the plug, showing a broken off length of cable extending therefrom.

Figure 2 is a longitudinal cross-sectional view through Figure 1.

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

Referring in detail to the drawing, the numeral 10 indicates a tubular body having its external wall tapering, as shown, the central opening 11 therethrough being adapted to have the end of a cable 12 anchored therein. The cable 12 illustrated is of the co-axial or shielded type, the axial conductor being shown at 13 and the coaxial shield at 14, the insulation 15 being provided between them. A flexible helix 16 is wound about the end of the cable 12 to prevent excessive bending of the cable at the edge of the body 10, and the ends of the coaxial winding 14 are held between this helix and the insulation 15 after being bent or doubled back, as shown, whereby the shield 14 is grounded to the body 10.

An insulating washer 17 is set against the open face of the body 10, and the conductor 13 projects through the central opening therethrough. A peripheral flange 18 projecting from the body 10, locks this washer in place. A set screw 19 locks the cable end within the body 10. A knurled ring 20 is rotatably anchored on the face end of the body 10 by means of its flange 21 registering loosely in a groove 22 on the body 10. The inner wall 23 of the ring 20 is threaded.

The plug tip comprises, first, a head 24 having a central opening 24a therethrough and provided with an externally threaded flange 25 adapted to be screwed into the ring 20 until the edge of the flange 25 meets the body flange 18. A metal stem 26, having its outer wall slightly reduced in thickness near one end, has that end inserted into the opening 24a. The stem 26 is hollow and open at both ends; a tube of fiber or other insulating material registers therein, at 27, this tube having a flange 28 which registers against the

outer end of the stem 26. A long screw 29 is passed first through the washer 30 of insulating material which lies against the inner wall of the head 24, then through the tube 27, and has a ball tip 31 screwed on the end thereof. The screw head 32 is thus brought, upon tightening of the ring 20, into contact with the conductor 13. The stem 26, which is obviously insulated from the ball 31, is thus in contact with the body 10 and in circuit with the cable shield 14.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

1 In combination, a connector plug and a single conductor insulated cable having a metallic shield enveloping the same, said plug comprising a metallic body having a central cylindrical opening therethrough, said body having a flat face at right angles to said opening and having an insulating washer against said face, a metallic flange on said body locking said washer in place, said body having a peripheral groove, a knurled metallic ring surrounding said face end of said body and having a flange registering loosely in said groove, a metallic head adapted to register in said ring, said ring being internally threaded and said head being externally threaded, said head having a central opening therethrough in alignment with said body opening, a hollow metallic stem having one end reduced and secured at one end in said head opening, a tube of insulating material in said stem and having a flange at its outer end registering against the outer end of said stem, an insulating washer positioned against the inner face of said head, a metallic screw passing through said last-named washer and said tube, and a metallic ball secured on the end of said screw against said tube flange, the outer surface of said body tapering away from said face end, one end of said shielded cable being positioned in said body opening with the exposed end of said conductor extending through said body washer and contacting the other end of said screw, a threaded opening through said body into said cylindrical opening, a portion of the shield at said end of the cable being doubled back outward upon itself, a screw threaded into said threaded opening against said doubled back shield portion to lock said cable in said body and simultaneously ground said shield thereon and in circuit with said head and stem.

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