Aug. 22, 1939. C. W. DOREMUS 2,170,131

SHIELDED TELEPHONE PLUG

Filed July 2, 1938

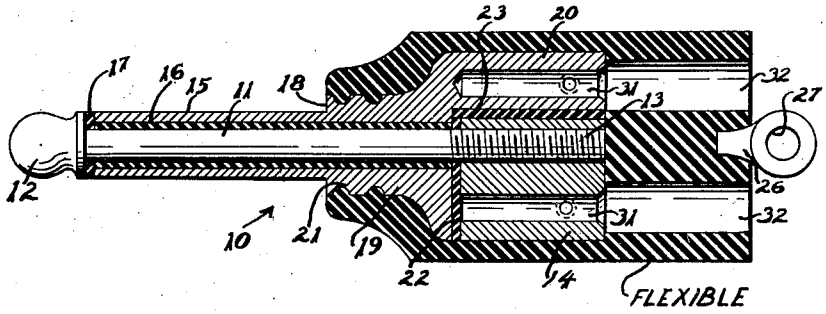


FIG. 1

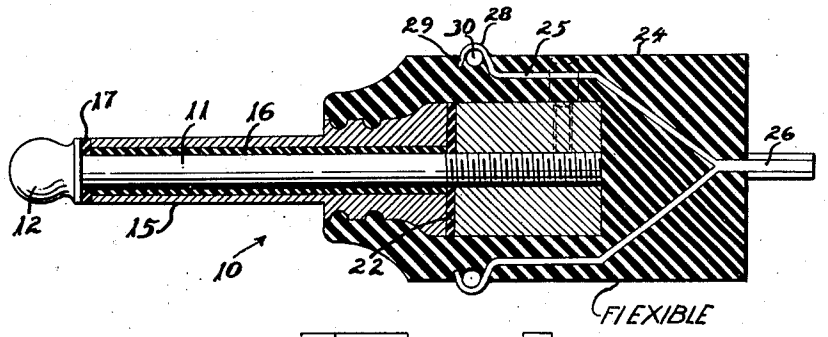


FIG. 2

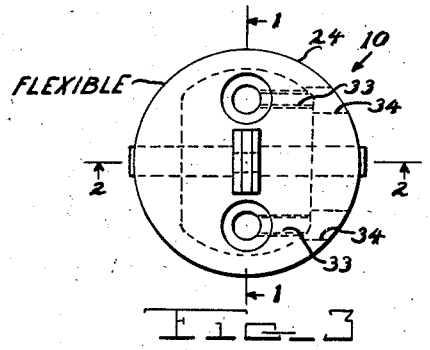


FIG. 3

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Patented Aug. 22, 1939 2,170,131

UNITED STATES PATENT OFFICE

2,170,131

SHIELDED TELEPHONE PLUG

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Application July 2, 1938, Serial No. 217,215

4 Claims. (Cl. 173—361)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This invention relates to a shielded telephone plug, and has for an object to provide a practically indestructible rubber covered telephone plug which can be manufactured more economically and will have a far longer useful life than the present known type of breakable telephone plugs.

A further object of this invention is to provide a telephone plug having its body made preferably of soft molded rubber, which hence cannot be easily broken, and, further which is provided with an efficient grounding medium for a shielded telephone cord, which grounding medium serves as a cord tie bracket when used with an unshielded telephone cord.

With the foregoing and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter described and illustrated in the drawing, in which,

Fig. 1 is a longitudinal sectional view of the plug of this invention on line 1—1 of Fig. 3;

Fig. 2 is a longitudinal sectional view at right angles to the view of Fig. 1, being on line 2—2 of Fig. 3; and

Fig. 3 is an end view of the telephone plug.

There is shown at 10 the telephone plug of this invention, which includes a stem 11, preferably made of brass, and having a ball head tip 12 at one end thereof, and is threaded as at 13 at its other end, whereby it is secured in a terminal 14. Surrounding the stem 11 is a barrel 15, likewise of brass. This barrel 15 is separated from the stem 11 by means of an insulating sleeve 16, preferably of rubber, and from the ball head 12 by means of an insulating washer 17. The other end of the barrel 15 is provided with a shoulder 18 separating it from an enlarged trunk 19, which finally ends at one side in a terminal 20. The trunk 19 is provided with a pair of recessed grooves 21. The trunk 19 is separated from the terminal 14 by rubber insulation 22 and the terminal 14 is similarly separated from the terminal 20 by rubber insulation 23.

A rubber body 24 of semi-soft rubber is molded about the trunk 19 and terminals 14 and 20, being anchored thereto by the recessed grooves 21. Embedded in the rubber body 24 is a grounding spring 25 shaped somewhat in the form of a Y, having its Y stem 26 extending at the end of the body 24 and formed into an eyelet 27. The ends of the Y legs extend outwardly of the cylindrical body 24 as at 28, having their tips 29 curved back into the body as shown, the body being cut away in an aperture 30 under the ends 28.

The terminals 14 and 20 are each provided with female plug receiving recesses 31, access to which are had for the telephone cord terminal tips by means of cylindrical passages 32 connecting thereto. Each female terminal 31 has a threaded aperture 33 extending through a side thereof for reception of a terminal holding screw which may be inserted and countersunk through apertures 34 in the side of the body 24.

In operation, the parts of the telephone plug are assembled as above described. If used with a shielded telephone cord, the shielding is connected to the eyelet 27 of the grounding spring 25. The plug 10 is placed in its jack in the usual manner with the sleeve 15 and ball head 12 serving as contacts as conventional, the shoulder 18 limiting the entrance of the plug into the jack to just the predetermined amount and likewise making a click sound as the plug is pushed home into the jack, thereby informing the user that the plug is properly in position within the jack.

The yieldable ends 28 of the grounding spring 25 make contacts with a suitably positioned grounding portion of the jack, and thus ground the shield of the shielded wire, preventing stray electrical impulses from interfering with the proper operation.

If used with an ordinary unshielded telephone cord, the eyelet 27 serves as a cord tie bracket to prevent the telephone tips from being accidentally withdrawn from the terminals 14 and 20. The telephone of this invention thus serves interchangeably for both shielded or unshielded telephone cords, and furthermore, will stand up under extreme service conditions, inasmuch as it has no easily frangible parts.

Other modifications and changes in the proportions and arrangements of the parts may be made by those skilled in the art without departing from the nature of the invention, within the scope of what is hereinafter claimed.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A telephone cord plug comprising a stem contact and a barrel contact encompassing said stem contact, an insulating sleeve between said barrel contact and said stem contact, an enlarged trunk extending from said barrel contact and a cord tip-receiving terminal extending from one side of said trunk, a second cord tip-receiving terminal, said stem being secured to said sec-

ond terminal, insulating means separating said second terminal from said trunk and said first terminal, a shoulder dividing said trunk from said barrel to limit the amount that the plug may be inserted in a jack, and a yieldable insulating material molded about said trunk and terminals in situ and having apertures allowing insertion of cord tips into said cord tip-receiving terminals, said trunk having a plurality of grooves thereabout to anchor the molded insulating material thereon, said molded insulating material comprising semi-soft rubber.

2. A telephone cord plug comprising a stem contact and a barrel contact encompassing said stem contact, an insulating sleeve between said barrel contact and said stem contact, an enlarged trunk extending from said barrel contact and a cord tip-receiving terminal extending from one side of said trunk, a second cord tip-receiving terminal, said stem being secured to said second terminal, insulating means separating said second terminal from said trunk and said first terminal, a yieldable insulating material molded about said trunk and terminals in situ and having apertures allowing insertion of cord tips into said cord tip-receiving terminals, and a cord shield grounding means extending through said molded insulating material.

3. A telephone cord plug comprising a stem contact and a barrel contact encompassing said stem contact, an insulating sleeve between said barrel contact and said stem contact, an enlarged trunk extending from said barrel contact and a cord tip-receiving terminal extending from one side of said trunk, a second cord tip-receiving terminal, said stem being secured to said second terminal, insulating means separating said second terminal from said trunk and said first terminal, a yieldable insulating material molded about said trunk and terminals and having apertures allowing insertion of cord tips into said cord tip-receiving terminals, a cord shield grounding means extending through said molded insulating material, said grounding means having an eyelet extending through an end of the molded insulating material for connection to a shield to be grounded, and a yieldable portion extending through a side of the insulating material to ground the same.

4. A telephone cord plug comprising a stem contact and a barrel contact encompassing said stem contact, an insulating sleeve between said barrel contact and said stem contact, an enlarged trunk extending from said barrel contact and a cord tip-receiving terminal extending from one side of said trunk, a second cord tip-receiving terminal, said stem being secured to said second terminal, insulating means separating said second terminal from said trunk and said first terminal, a yieldable insulating material molded about said trunk and terminals in situ and having apertures allowing insertion of cory tips into said cord tip-receiving terminals, a cord shield grounding means extending through said molded insulating material, said grounding means comprising a Y shaped spring having its Y legs extending outwardly through opposite sides of the molded insulating material and having its tips turned back inwardly to the material again to provide yieldable grounding contacts.

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