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L. G. PACENT

TELEPHONE PLUG

Filed Feb. 17, 1925

Fig. 1.

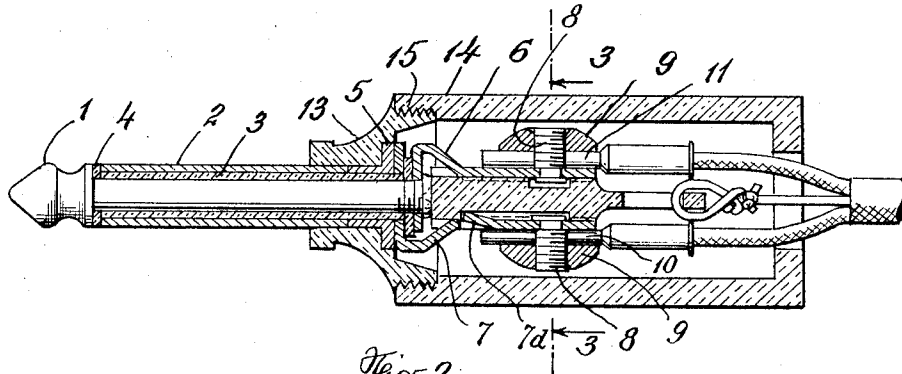


Fig. 2.

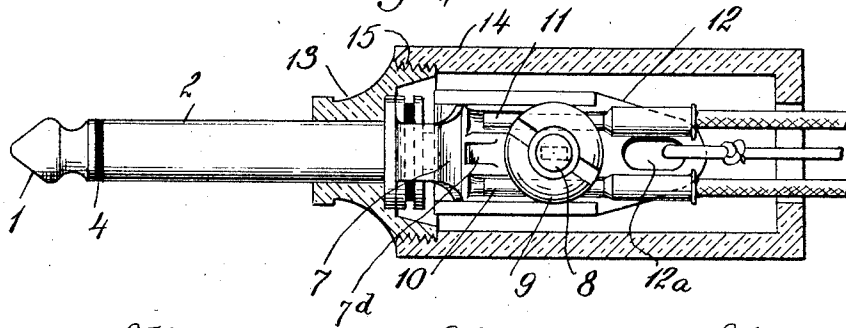


Fig. 3.

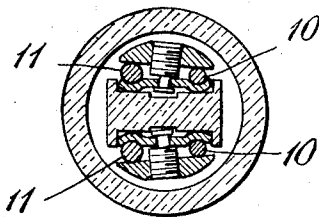


Fig. 4.

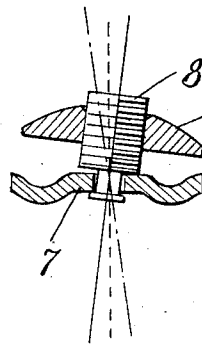
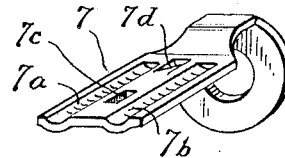


Fig. 5.



Fig. 6.



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TELEPHONE PLUG.

Application filed February 17, 1925. Serial No. 9,726.

This invention relates to telephone plugs and especially to a plug structure intended for connection to the cord terminals of radio telephone headsets. The invention is particularly directed to a telephone plug designed to accommodate two radio telephone headsets in parallel.

The pin-type cord tips, commonly used as cord terminals on radio telephone headsets, vary considerably in diameter and this condition increases the difficulty of producing a low-priced plug to which any two headsets may be connected in parallel as will be presently shown.

The object of the present invention is to provide a plug, which can be produced at low cost, to which the cord tips of two telephone headsets may be connected in parallel, even though there is a very substantial difference in the diameters of the cord tips.

The principal novel feature of this invention, whereby the stated object is accomplished, resides in the provision of self-adjusting clamps adapted to grip the cord tips and to automatically adjust themselves, to compensate for any differences in the diameters of the several cord tips, so that each of them may be equally gripped.

Additional novel features consist in certain details of construction which materially contribute to reducing the cost of production.

The preferred embodiment of this invention is described in detail hereinafter, and illustrated in the accompanying drawings, wherein

Fig. 1 is a longitudinal section of a telephone plug,

Fig. 2 is a longitudinal view of the same plug taken at right angles to the view shown in Fig. 1 and with the handle portion shown in section,

Fig. 3 is a cross-sectional view taken along the line 3—3 of Fig. 1,

Fig. 4 is an enlarged cross-sectional view of the cord tip clamping device, and

Figs. 5 and 6 are perspective views showing details of construction.

The plug structure comprises a tip 1 and sleeve 2, insulated from each other by means of a bushing 3 and washer 4 of insulating material. The sleeve 2 is in abutting contact with a metal bushing 5 which is also insulated from the tip structure by bushing 3.

A pair of specially shaped metal stampings 6 and 7, one of which is shown in perspective in Fig. 6 and connected respectively to the tip and sleeve conductors, constituting a part of the assembled unit comprising the elements 1 to 5, inclusive. Each metal stamping 6, 7 is formed with a pair of parallel grooves 7^a, 7^b, the radius of which is large enough to accommodate pin-type cord tips of the largest diameter commercially used. Each stamping 7 has a rectangular aperture 7^c through which the rectangular end portion 8^a of a threaded stud 8 extends. The rectangular end portion 8^a of each stud 8 is headed over after being assembled in its stamping 7 as is clearly shown in Figs. 1, 3 and 4. There is a considerable clearance provided between the sides of the apertures 7^c and the rectangular portion 8^a as is most clearly shown in Fig. 4. This clearance provides for a considerable lateral freedom of movement for the stud 8—this being indicated in Fig. 4 by three center lines, denoting different positions which the stud 8 may take with respect to the metal stamping. The studs 8 are, in effect, pivotally attached to the respective metal stampings. Stud 8 are each provided with a slotted nut 9.

Fig. 3 shows in cross-section two pairs of pin-type cord tips of different diameters connected to the plug. The cord-tips designated by reference numeral 10 constitute one pair, while those designated by reference numeral 11 constitute the other pair. Clearly, if the studs 8 were rigidly secured to the metal stampings 6 and 7 and the nuts 9 were closely fitted to the studs 8, it would be very difficult to grip cord-tips of considerably different diameter, but the pivotal movement of studs 8 compensates for these differences as illustrated in Fig. 3. The cord-tips gripped between one stamping 6 and its associated nut 9 are both electrically connected to the tip conductor, while the other two cord-tips are both electrically connected to the sleeve conductor.

A molded insulating member 12 having an elongated aperture 12^a to which the tie cord forming a part of the telephone conductor cord is connected is held between the two stampings 7 and anchored in place by means of a spring finger 7^b, which is integral with the stamping 7 and which projects into a recess formed in one side of the member 12.

By reason of the spring finger 17 the member 12 cannot be withdrawn by any tension which may be applied to the tie cord.

5 The plug is provided with a two-part handle comprising members 13 and 14, both of which are preferably of insulating material and are screwed together at 15. The member 13 is preferably a tight fit on the sleeve conductor 2 and bushing 5.

10 In order to attach or detach the conductor cord to and from the plug, the handle member 14 is detached from its complementary member 13 thus permitting access to the otherwise enclosed parts.

15 The novel features of this invention which have been pointed out may be considerably modified within the scope and tenor of the invention and the appended claim should be construed accordingly.

20 I claim:

A telephone plug comprising tip and sleeve conducting members adapted to be inserted in a jack, an electrical connector

associated with each of said conducting members, each of said connectors comprising a substantially flat member having two grooves therein adapted to receive electrical conductors, a threaded member pivotally mounted between said grooves having a nut thereon of substantial size adapted to engage the conductors lying in said grooves, whereby, due to the pivotal mounting, conductors of substantially different size may be securely retained, said connectors being positioned so that the flat faces are substantially parallel, an insulating member between said connectors having a recess therein adapted to hold said insulating member in position by cooperating with an upset lug on one of said connectors, said insulating member having means thereon to which a tie member may be secured for taking the strain from the electrical conductors held by said connectors.

In testimony whereof I affix my signature.

LOUIS G. PACENT.