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TOOL FOR APPLYING CUSHIONS TO PLUGS AND CORDS

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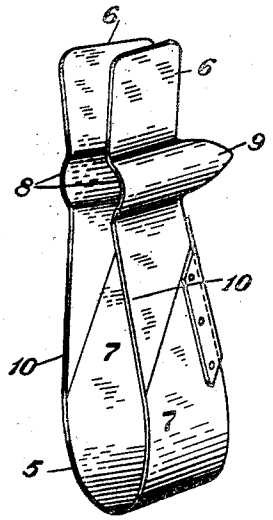


Fig. 1

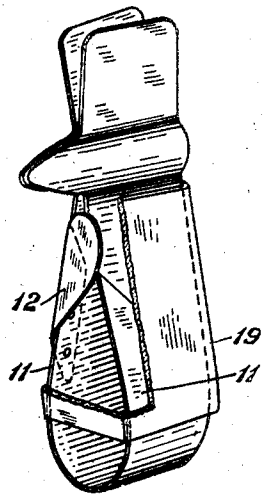


Fig. 2

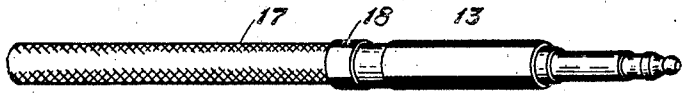


Fig. 3

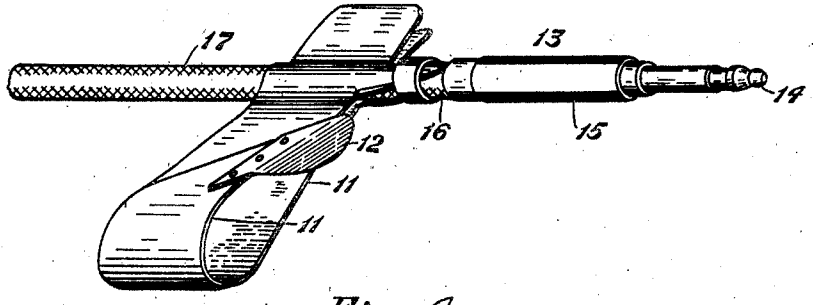


Fig. 4

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TOOL FOR APPLYING CUSHIONS TO PLUGS AND CORDS

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4 Claims. (Cl. 81—5.1)

This invention relates to devices for applying elastic annular cushions to plugs and cords or the like, and more particularly to the application of cushions of this type to telephone plugs and cords.

In accordance with well-established practice, telephone plugs normally rest in vertical positions upon seats in plug shelves. Openings extend through these seats and permit the passage of cords connected to the plugs so that when a plug is raised from its seat, the associated cord will be drawn upward through the seat opening, and when the plug is released the cord will be automatically drawn back through said opening to its normal position by means of a weight carried by the cord. Considerable noise is created and considerable wear which eventually may lead to circuit trouble by the impact and strain caused by the plugs when they are thus returned to their seats.

Accordingly, it is an object of this invention to eliminate the noise and improve the maintenance conditions by providing a tool for applying elastic annular cushions which will encircle and grip a cord to form a buffer to protect the plug and cord from such damage, and also prevent wear upon the plug shelf, as might come from the impact and strain created upon their return to normal after being lifted to a raised position.

A further object is to provide such a tool as one integral member which will apply a cushion to the plug and cord in a simple, neat and workmanlike manner.

These and further objects will be apparent from the following description, when considered in connection with the accompanying drawing, in which one embodiment of the invention is illustrated.

Referring to the drawing,

Figure 1 is a perspective view illustrating the tool as seen from one direction;

Fig. 2 is a perspective view, with an elastic shield applied thereto and partly broken away, showing the tool as viewed from a direction opposite that illustrated in Fig. 1;

Fig. 3 is an elevation of a plug showing the improved cushion in position thereon; and

Fig. 4 is a view showing the tool in the operation of applying a cushion to its buffer position at the base of a plug.

As previously stated, this invention is specifically directed to a tool for applying cushions or buffers to telephone plugs and cords and, for the purposes of description, the invention will be so confined. It will be understood, however, that the tool is equally applicable to other structures and equipment.

The tool as shown in the drawing includes a strip of metal of suitable dimensions to be easily grasped by the hand. This strip is made of somewhat resilient material which is bent upon itself, and a loop **5** is formed at one end. The other end has parallel co-terminating edges **6**, **6** and between the ends **5** and **6** a handle portion is formed by side walls **7**, **7**. The side walls **7**, **7** are deformed by pressing the material outwardly as shown in Figs. 1 and 2 to provide parallel arcuate shoulder portions **8**, **8**. These portions lie in a transverse position with respect to the vertical side walls **7**, **7** and co-operate to form a somewhat circular opening. Extensions or prongs **9**, **9** protrude from the ends of the shoulders **8**, **8** at one side of the handle and are of generally similar contour to said shoulders. The extensions form yieldable or resilient jaws which have somewhat pointed extremities. These extremities lie in rather close proximity to each other, and the portions of the jaws extending inwardly from these extremities and the connecting arcuate shoulders **8**, **8** are flared. The jaws and shoulders are thus formed in accordance with the general shape of the tip and sleeve of the plug to facilitate the passage of the plug through the tool at this point. This flared condition and the conical opening between the jaws and shoulders facilitate the positioning of the plug within the tool prior to the operation which stretches or distends the annular cushion over the plug when the plug is passed through the tool. A finger-piece **12**, carried by one of the side walls, extends over the edge of the opposite side wall and covers the space between these walls, as shown in Fig. 2. This finger-piece eliminates any possibility of injury which may be caused to the fingers by the edges of the side walls while manipulating the tool, and it also facilitates the operation of the tool. To further protect the fingers of an operator a rubber shield or guard **19** may be placed over the handle portion as shown in Fig. 2.

This device is particularly adapted for use in connection with an instrumentality such as a plug **13**. This plug includes a tip **14**, a sleeve **15** and a base **16** through which a cord **17** extends. The conductors of this cord are connected to terminals in side the plug **13** in a well-known manner. The annular elastic cushion **18** is applied to the base of the plug **13** as shown in Fig. 3 where it acts as a buffer to prevent noise

and damage due to the impact between the plug seat and the plug when the plug and cord are automatically returned to their normal positions.

In the application of the cushion to its position on the base of the plug 13 the pointed ends of the jaws 9, 9 are inserted into the interior wall of the cushion 18. It will be noted that the ends of the jaws 9, 9 are normally of such size that they extend within the confines of the cushion 18 when it is in normal and unexpanded formation. The tip 14 and sleeve 15 of the plug are now inserted through the opening between the flared arcuate shoulders 8, 8 and through the pointed end portions of the jaws 9, 9. The passage of the plug through the jaws 9, 9 when so engaged will cause the jaws to spread, which will in turn cause the annular cushion to expand to a greater diameter than it normally possesses. When thus expanded, the plug is passed completely through the cushion to the position indicated in Fig. 4 where the cushion lies about the butt of the plug. The tool or applicator is then disengaged, after which the annular cushion contracts and tightly grips the cord in the position shown in Fig. 4 and provides a buffer as previously outlined.

What is claimed is:

1. A tool for applying elastic annular cushions at junction points of plugs and cords, said tool including a handle having two arms resiliently connected at one end, and a plug-engaging element integral with and adjacent the other end of said handle and having portions extending perpendicular to the handle for carrying a cushion to be applied, said element being yieldable upon the passage of a plug therethrough to cause the expansion of said cushion so that it will pass over the plug for engagement with the cord at the junction point of the plug and cord.

2. A tool for applying elastic annular cushions at junction points of plugs and cords, said tool including a handle having two arms resiliently connected at one end, and a plug-engaging element integral with and adjacent the other end of the handle, and having jaws extending perpendicular to the handle and provided with cushion-carrying terminals yieldable upon the passage of a plug therethrough to expand said cushion so that it will pass over the plug for engagement with the cord at the junction point of the plug and cord.

3. A tool for applying elastic annular cushions at junction points of plugs and cords, said tool including a handle having two arms resiliently connected at one end, and a plug-engaging elements adjacent the other end of the handle having tapering jaws extending perpendicular to the handle and on one end of which may be carried a cushion to be applied, said jaws being yieldable upon the passage of a plug therethrough to expand said cushion to a sufficient diameter to permit the passage of the plug and said jaws upon being withdrawn from the cushion permitting its contraction so that it may grip the plug and cord at a predetermined point.

4. A tool for applying elastic annular cushions at junction points of plugs and cords, said tool including a handle and a plug-engaging element adjacent one end and integral with the handle, said handle comprising a strip of metal bent upon itself to form adjacent portions extending in the same direction, said plug-engaging element including jaws having terminals for carrying cushions to be applied, said jaws and terminals being yieldable upon the passage of a plug therethrough to cause the expansion of said cushion so that it will pass over the plug for engagement with the cord at the junction point of the plug and cord.

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