April 1, 1930. H. I. BEARDSLEY ET AL 1,752,585

CORD FASTENER

Filed March 31, 1926

Fig.1.

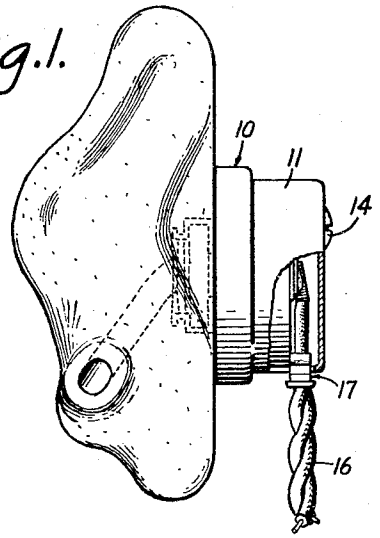


Fig.2.

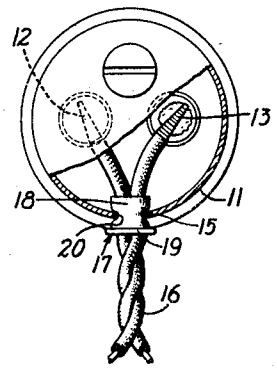


Fig.3.

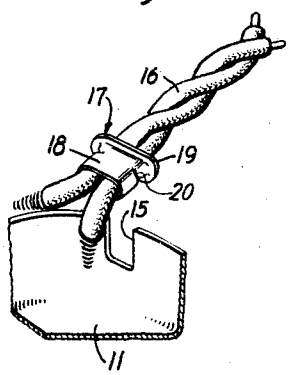


Fig.4

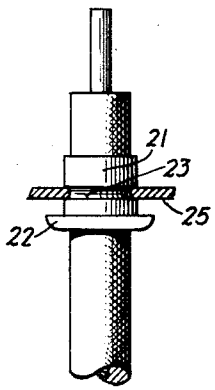
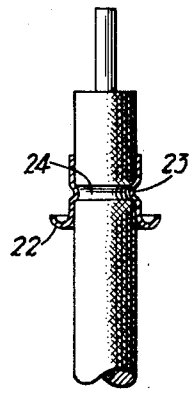


Fig.5



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Patented Apr. 1, 1930 1,752,585

UNITED STATES PATENT OFFICE

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CORD FASTENER

Application filed March 31, 1926. Serial No. 98,644.

This invention relates to improvements in fastening means for telephone cords and the like and its principal object is to provide a simple, small and efficient means for securing a cord to a housing in such a manner that any pull on the cord is transmitted to the housing thus relieving the conductors from strain at the terminals.

Another object of the invention is to so protect the cord, at the point of entrance into a housing, as to prevent chafing and consequent deterioration of the insulation from contact with the walls of the housing.

Heretofore it has been the practice to provide a stay cord which serves to attach the main portion of the cord to the instrument to which the conductors are to be fastened, this stay cord being usually tied or otherwise fastened to an eye or similar retaining means carried by the instrument. In some instances it has been found that such an arrangement occupies too much room and furthermore that in assembling, the proper tying of the stay cord is overlooked so that any pull on the conductors will be transmitted directly to the conductor terminals thus subjecting them to undue strain which may eventually cause breakage or create an improper contact.

To overcome these difficulties and in accordance with the features of this invention, there is provided a bushing or eyelet which fits closely about the conductor cord adjacent its terminals, and is crimped intermediate its ends so as to grip the cord. This crimped portion also provides recesses which register with the side walls of the opening through which the cord is introduced into the instrument, thus providing a firm and secure fastening means for retaining the cord in position and relieving the conductors of strain.

These and other features of the invention will become more apparent as the description proceeds, by referring to the accompanying drawing in which:

Fig. 1 is a side view showing a telephone receiver such as is commonly used in conjunction with an audiphone, a portion of the shell being broken away to more clearly illustrate the method of attaching the conductors thereto,

Fig. 2 is an end view of the receiver element illustrated in Fig. 1, showing a portion of the shell broken away to illustrate the method of introduction of the conductors,

Fig. 3 is a fragmentary perspective view of the receiver shell showing a cord about to be positioned therein,

Fig. 4 is a side view of a modified form of fastening means used in conjunction with a single conductor cord, and

Fig. 5 is a longitudinal view in partial section through the bushing of Fig. 4.

Referring to the drawings in detail the numeral 10 designates in its entirety a receiver constituting one element of an audiphone which is a device adapted to aid persons hard of hearing. This receiver is provided with a shell 11, which encloses the conductor terminals 12 and 13 and is retained in place, on the receiver, by any suitable means such as a retaining screw 14. Formed in the side wall of the shell is a slot 15, which enters from the open side of the shell and extends to a point near the outer wall thereof, substantially as shown in Fig. 3.

Fitted around the cord 16 near the terminals 12 and 13 is a bushing designated in its entirety by the numeral 17. This bushing comprises an oval body 18 formed at one end with an annular flange 19 to provide a smooth rounded opening through which the cord is introduced into the opening 15 of the shell 11. In order to retain the bushing in place on the cord, it is crimped at diametrically opposite points as at 20, to firmly clamp the cord and prevent any possibility of movement thereof with relation to the bushing. The crimps thus formed provide guide ways for the reception of the side walls of the opening 15 and it will thus be seen that upon securing the terminals 12 and 13 in place on the receiver and sliding the shell 11 into position the edges of the wall forming the opening 15 will enter the guides formed by the crimping of the bushing thereby establishing a firm connection directly between the cover and the cord so as to relieve the terminals of any strain.

In the modification illustrated in Figs. 4 and 5, the bushing comprises a tubular body 21 which fits around the insulation of a single conductor cord. One end of this bushing is provided with an out-turned annular flange 22, which forms a smooth surface at the entrance point of the cord into a housing, thus effectively preventing chafing and fraying of the insulating covering.

In order to firmly lock the bushing onto the cord and to provide a groove for holding the bushing in place in a housing, an inwardly crimped portion 23 is formed in the bushing after placing the same in position on the cord, and at the same time a groove 24 is formed in the insulation on the cord, and receives the inwardly extending annular rib formed by the crimping of the bushing. In this manner any relative movement of the bushing and cord is overcome and an annular groove is formed in the bushing for receiving the edges of the walls of a recess formed in a shell or like wall 25.

It is to be understood that if so desired both ends of the bushing may be provided with out-turned flanges without departing from the spirit and scope of the invention.

What is claimed is:

The combination with a housing having a slot therein of a bushing surrounding an insulated conductor and secured thereto by means of crimped portions extending at diametrically opposite sides into the insulation of said conductor and providing guide ways which register with the side walls of the slot in the housing.

In witness whereof, we hereunto subscribe our names this 24th day of March, A. D., 1926.

HARRY I. BEARDSLEY.
HARRY R. CLARKE.