CONE COUPLING FOR ELECTRICAL CABLES

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

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This invention relates to a coupling for the terminals of electrical conductors and is directed to a permanently formed unit with which elements designed to be connected to the terminals of the electrical conductors are arranged to interlock to prevent separation.

The invention particularly includes a body of hollow form with a central transverse partition, the body beyond the partition being interriorly of conical formation toward the free ends. Ferrules of exterior conical formation are designed to be interfitted with the terminals of the electric conductors, these ferrules being adapted to be passed into the conical housings of the body and transversely expanded to prevent the ferrules and thereby the connected terminals from being withdrawn from the body.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a view in elevation of the ferrule used with the body.

Figure 2 is a longitudinal sectional view of the body, a ferrule with a connected electric terminal being shown as partly introduced into one of the conical housings.

Figure 3 is a similar view showing the ferrule in one housing in expanded relation and the ferrule in the other housing interlocked with the housing under endwise pull on the conductor.

Figure 4 is a longitudinal sectional view of the ferrule.

Figure 5 is an end view of the ferrule.

The improved coupling comprises a body 1 of hollow form divided by a transverse partition 2, which, as it serves merely as an abutment for the ferrules, may be of any desired form or relative size. The body 1 on each side of the partition forms a housing of interior conical form and of gradually reduced diameter from the partition to the open free end of the housing.

A ferrule 3 is provided for cooperation with the respective housings, this ferrule being of exterior conical form and having a longitudinal bore of uniform diameter throughout. The wall of the bore is serrated or formed with teeth 4 to insure a gripping cooperation with the conductor. The ferrule is longitudinally divided at 5 and is formed with additional slots 6 extending through the larger end of the ferrule and terminating short of the smaller end to thereby provide for the expansion and contraction of the ferrule, particularly at the larger end. It is to be noted that the smaller end of the ferrule constitutes practically a sharpened edge.

In use, the smaller end of the ferrule is introduced between the exterior covering 9 and the conductor 8 of the wire terminal and the ferrule and connected wire terminal are introduced into one of the housings. It is to be understood that the larger end of the ferrule is of such diameter relative to the diameter of the smaller or entrant end of the housing as to just permit the introduction of the ferrule therethrough. The ferrule and partially connected end of the conductor are introduced into the housing until the larger end of the ferrule engages the partition or stop 2, following which endwise pressure is continued on the conductor, serving by means of the external sheath and the spreading action of the ferrule incident to the difference in diameter of the conductor 8 and the normal interior diameter of the ferrule to so increase the exterior diameter of the ferrule, particularly at the larger end, that on endwise movement of the connected ferrule and conductor toward the reduced end of the housing, the ferrule is prevented from passing through the smaller end of the housing, thus constituting an interlock between the ferrule and housing. With a conductor introduced into each housing, the body 1 constitutes a coupling between the conductors, preventing their endwise separation and maintaining their electrical continuity.

Having now described and ascertained the nature of my said invention and the manner in which the same is to be performed, what I claim is:

In a coupling, a body having a central transverse partition and being formed beyond the partition to provide conical housings of permanent form with their larger ends next the partition and their smaller ends open, in combination with a conical ferrule divided longitudinally to permit expansion and formed with an interior bore...
of uniform diameter, the larger end of the conical ferrule being slightly less than the diameter of the opening leading to the housing, whereby the ferrule may be passed into the housing through said open end, said ferrule being designed to be introduced into a wire terminal between the wire and insulating covering while the ferrule is within the housing, the excess thickness provided by the insulation preventing the withdrawal of the ferrule through the opening of the housing.

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