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2,302,767

TERMINAL FOR ELECTRICAL CONDUCTORS

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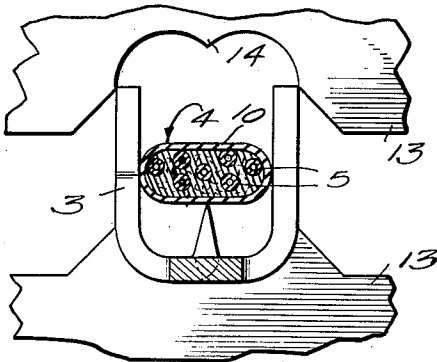


Fig. 1.

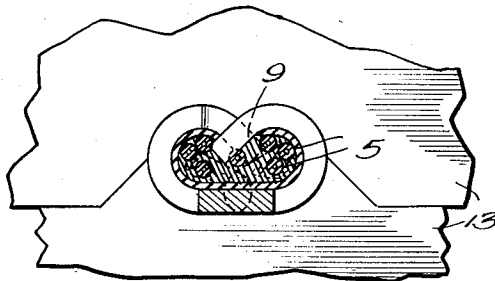


Fig. 2.

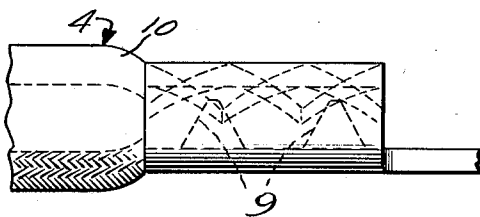


Fig. 3.

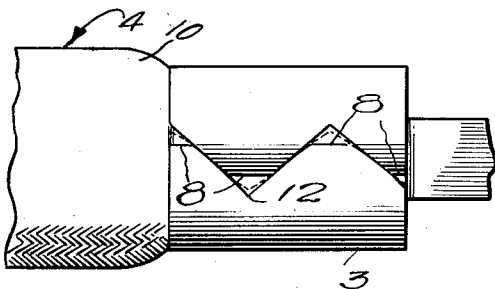


Fig. 4.

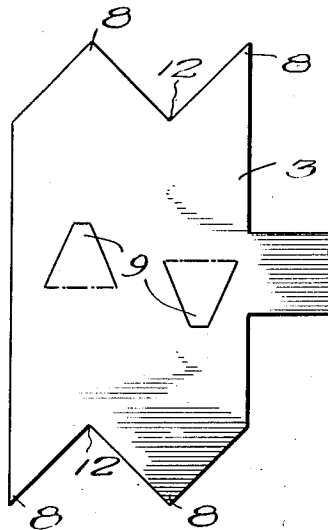


Fig. 5.

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TERMINAL FOR ELECTRICAL CONDUCTORS

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3 Claims. (Cl. 173-269)

This invention relates to terminals for electrical conductors and more particularly to terminals for insulated multi-strand cords.

In attaching terminals to insulated cords having multiple strand conductors in the past it has been the practice in many instances to attach the terminals without removing the insulation, contact being made with the conductor by a prong or prongs on the terminals piercing the insulation. However, in many cases a satisfactory contact did not result.

An object of the present invention is to provide a terminal for an insulated conductor providing effective electrical contact with the conductor.

In accordance with one embodiment of the invention a terminal is provided having, in addition to a prong, overformed serrations which also pierce the insulation and insure a satisfactory electrical contact.

A complete understanding of the invention may be had by reference to the following description taken in conjunction with the accompanying drawing, in which

Fig. 1 is a fragmentary end view of a die in position to attach a terminal member to a multiple strand tinsel conductor cord;

Fig. 2 is a similar view showing the terminal member formed about the conductor cord;

Fig. 3 is a side view of a conductor cord with the terminal attached;

Fig. 4 is a plan view of a terminal as shown in Fig. 3; and

Fig. 5 is a terminal blank.

Referring now more particularly to the drawing, Fig. 5 shows a terminal blank 3 in a plan development. Prior to attaching the terminal member to a cord the blank is formed into a U-shape as shown in Fig. 1, and prongs 9 are bent upwardly at right angles to the portion of the blank from which they are stamped. The function of the prongs 9 is to pierce the insulation 10 on the cord and also the insulation on the individual multiple strands of the conductor and make electrical contact with the strands of the conductor as the terminal member is attached to the cord by means of a die. However, in many cases the electrical contact thus made has not been satisfactory. An unattached terminal member is provided with V-shaped projections 8 which alternate with similar indentations 12. In attaching a terminal member to a multiple strand conductor cord covered with insulation the terminal member is placed in upper and lower die members 13 and a cord 4 is placed between the arms of the U-shaped terminal member. The upper die member is provided with a plurality of downward projections 14 correspond-

ing to the number of V-shaped projections 8 on the terminal member. As the upper die member 13 is brought down, it is preceded by a resilient member not shown which forces the cord into the open arms of the U-shaped terminal member and causes the prongs 9 to pierce the insulation. Upon further movement of the upper die, the U-shaped arms are formed around the cord and the projections 14 in the upper die member overform the projections 8 of the terminal member causing these projections to also pierce the insulation and make contact with the strands themselves. It will be seen as shown in Fig. 2 that the overformed projections 8 also contact the prongs 9 and cause the prongs to more positively engage the strands of the conductor to make a good electrical contact therewith. In this manner dependable and effective contact may be made between the terminal member and a conductor in a cord without previously removing the insulation from the end of the conductor or the cord.

It will be understood that the nature and embodiment of the invention herein disclosed is merely illustrative and that many changes and modifications may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. The combination of an insulated conductor and a split tubular sheet metal terminal member surrounding an insulated portion of said conductor, projecting portions on the adjoining edges of said member, the projecting portions being overformed and penetrating the insulation of the conductor to make electrical contact with the conductor.

2. The combination of an insulated conductor and a split tubular sheet metal terminal member surrounding an insulated portion of said conductor, the adjoining edges of said member having complementary V-shaped projections and recesses, said V-shaped projections piercing the insulation of the conductor and being in electrical contact with the conductor.

3. The combination of an insulated conductor and a split tubular sheet metal terminal member surrounding an insulated portion of said conductor, upstanding prongs projecting from the central portion of said member and piercing the insulation of said conductor to make electrical contact with the conductor, the adjoining edges of the member having complementary V-shaped projections and recesses, the V-shaped projections extending through the insulation and into electrical contact with the conductor.

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