May 2, 1939. M. OFFNER 2,157,007

CONDUCTOR TERMINAL

Filed July 12, 1935

FIG.1.

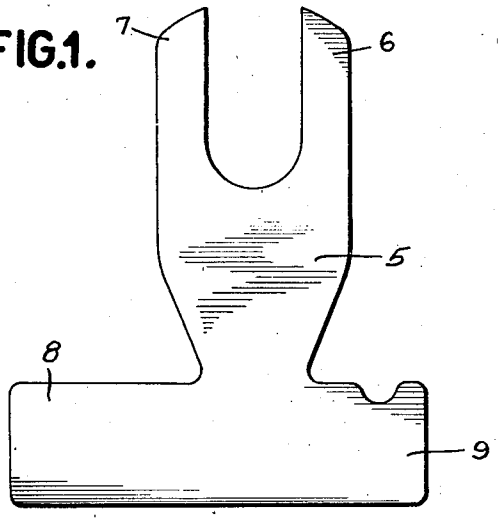


FIG.2.

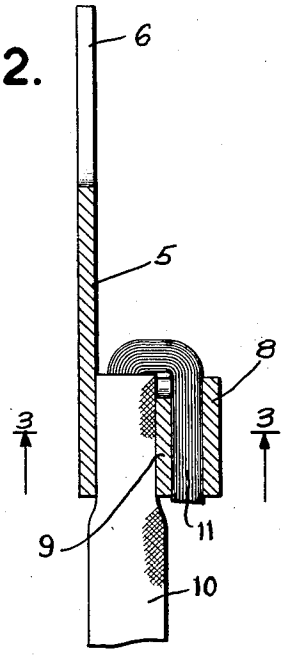
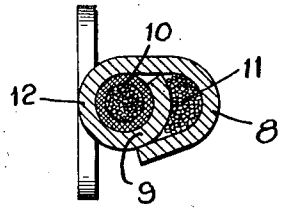


FIG.3.



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CONDUCTOR TERMINAL

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4 Claims. (Cl. 173—269)

This invention relates to terminals for electric conductors or leads, and has for its object to provide such a device which shall furnish good contact between the conductor and the terminal, protect the end of the insulation from raveling and other wear, in addition thereto, be simple and inexpensive to manufacture, yet affording great strength to the connection between the conductor and terminal, and providing a means of connection without the use of solder.

It has been common practice to attach the ends of wires or cables to terminals or the terminal connection by soldering the wires thereto.

It has been found by experience that due to vibration of various devices or apparatus upon which the terminal connections are used, there is a tendency for the wire or cable conductor to break at the point of attachment to the terminal connection.

An object of the present improvement is to provide a terminal connection for wire or cable conductors, which will overcome this difficulty, whereby the conductor may be caused to vibrate without causing the same to break.

Heretofore, various types of solderless terminals have been suggested whereby the terminal tips have extension tongues which are instrumental in clamping the conductors and affording contact to the terminal tips. It has been found, however, that these and similar devices available at present are impractical, due to costs of manufacture and application.

It is a further object of the present invention to provide a terminal simple and inexpensive in construction and differing from the above mentioned solderless types, to overcome the last mentioned objections and yet afford a stronger connection between the conductor and the terminal.

Various other objects and advantages of the invention will be obvious from the following particular description of one form of mechanism embodying the invention or from an inspection of the accompanying drawing; and the invention also constitutes certain new and useful features of construction and combination of parts hereinafter set forth and claimed.

In the drawing:

Fig. 1 is a plan view of the blank from which the terminal is formed.

Fig. 2 is a longitudinal section showing the conductor in place and secured to be ready for use.

Fig. 3 is a sectional view along the line 3—3 of Fig. 2.

Referring now to the drawing, the terminal may be made from any suitable sheet metal of good electric conductivity and comprises a body portion 5 having a suitable contact head, one form of which is illustrated, being bifurcated and the furcations 6 and 7 thereof arranged parallel and in the same plane for connection with a suitable binding post or the like.

The body portion 5 is also provided with wings or ears 8 and 9 which are unequal in length and shown in Fig. 1.

In applying the device, the insulation is cut away from the end of the lead 10, exposing a short portion of the conductor 11. The lead 10 is placed upon the upper surface of the base 12 to extend longitudinally of said base which may be curved to conform to the size of the wires desired to be used, but need not necessarily be formed in this manner, and the shorter wing or ear 9 bent over the insulated lead 10 as shown in Figs. 2 and 3 clamping the lead in this position.

It is to be noted that the length of the shorter ear 9 is such that when it is bent to clamp the insulated lead 10 it provides a contact surface for the conductor 11 which is bent back over the positioned ear 9. With the conductor in this position, the longer ear 8 is then bent over the conductor 11 and preferably of such length so as to overlap and engage the surface of the shorter ear 9. It is seen that the ear 8 holds the conductor 11 firmly against the shorter ear 9, in this manner insuring a good connection between the conductor and the terminal tip, and also insuring greater strength in the connection therebetween. By this arrangement, it is obvious that the shorter ear 8 not only clamps the lead to the terminal preventing its removal from the terminal but also prevents the end of the insulation from being stripped farther along the wire.

While there has been shown and described and pointed out the fundamental novel features of the invention as applied to a single modification, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention. It is the intention therefore to be limited only as indicated by the scope of the following claims.

What is claimed is as follows:

1. In combination, a conductor and connector therefor, said connector comprising a body portion and means extending therefrom for connection with electrical apparatus, the said body portion comprising a single pair of wings of unequal

length and diametrically opposite each other, the conductor being disposed longitudinally along the body portion of the connector, the shorter wing being formed around the conductor and in engagement therewith the end of the conductor being doubled back over the said shorter wing, the longer wing being formed about the end of the conductor doubled back over the said shorter wing thereby engaging and holding the end of the conductor firmly in contact with the shorter wing.

2. In combination, a conductor and connector therefor, said connector comprising a body portion having means extending therefrom for connection with electrical apparatus and in addition thereto including a single pair of wings, diametrically opposite each other and one wing substantially twice the length of the other, the said conductor being disposed longitudinally along the body portion of the connector, the shorter wing being formed around the conductor and in engagement therewith, the end of the conductor being doubled back over the shorter wing, the longer wing being formed about the end of the conductor doubled back over the shorter wing thereby engaging and holding the end of the conductor firmly in contact with the shorter wing.

3. The method of connecting a double winged electrical connector to an electrical conductor, comprising first disposing the conductor longitudinally along the body portion of the connector and then forming one wing of the connector around the conductor firmly embracing the conductor, then doubling back the conductor over the formed wing, and then forming another wing of the connector, which is diametrically opposite the first mentioned wing, around the portion of the conductor doubled back over the first-mentioned wing, thereby engaging and holding the conductor firmly in contact with the connector.

4. The method of connecting a double winged electrical connector to an insulated conductor having an uninsulated portion, comprising first disposing the conductor longitudinally along the body portion of the connector and then forming one wing of the connector around the insulated portion of the conductor, then doubling back the uninsulated portion of the conductor over the formed wing and then forming another wing of the connector, which is diametrically opposite the first mentioned wing, around the uninsulated portion of the conductor thereby engaging and holding the conductor firmly in contact with the connector.

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