Nov. 12, 1935. R. A. BELL 2,020,819

TERMINAL CONNECTER

Filed July 25, 1933

Fig. 1.

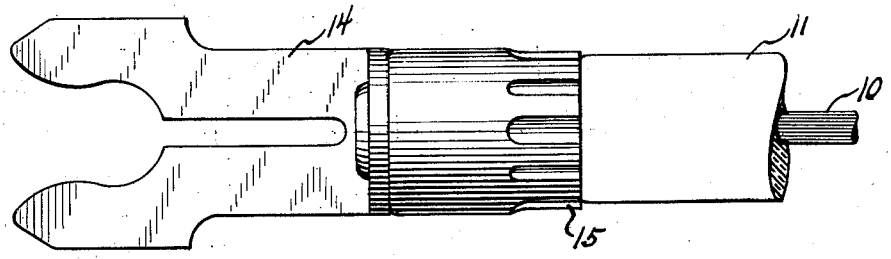
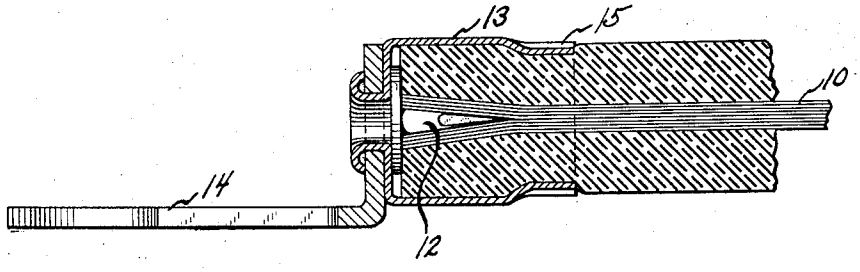


Fig. 2.



INVENTOR
ROBERT A. BELL
BY Howell & Spencer & Sifford
ATTORNEY

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TERMINAL CONNECTER

Robert A. Bell, Montclair, N. J., assignor to The Rajah Company, Bloomfield, N. J., a corporation of New Jersey

Application July 25, 1933, Serial No. 682,076

1 Claim. (Cl. 173—269)

This invention relates to a terminal for electrical conductors. More specifically, the invention relates to a means and method of making an electrical contact between the central conductor of a heavily insulated wire and a terminal secured thereto. Prior to my invention, it had been customary to strip the insulation back for a substantial distance from the end of the wire, so as to expose a substantial length of the central conductor, and to bend this exposed portion of the conductor back over the end of the wire so that it comes in contact with the terminal when placed over the wire. It has also been suggested to secure a terminal onto a cylinder wire, and at the same time to make connection therewith by inserting a wood screw through the terminal into the central conductor so that its head holds the terminal in place on the wire. This suggestion has never proven satisfactory, because the screw is not adequately held by the wire, and tends to loosen and rattle out, thereby releasing the wire from the terminal, and breaking the electrical connection between the terminal and the central conductor.

According to my present invention, the electrical connection between the central conductor and the terminal is made by means of a copper tack, nail, screw, etc., which is readily inserted into the end of the wire in contact with the conductor before the terminal is put in place, and the terminal is held onto the wire independently of the contact member, whether nail, screw, or other form. I prefer, for this, to secure the terminal to the conductor by crimping the end of a ferrule, as has been commonly practiced prior to my invention.

By inserting the contact member only part way into the wire, and leaving its head spaced a little from the end of the wire, a tight contact will be made between the head of said member and the inside of the terminal when the latter is pressed into position on the wire, even though the wire should not be pressed completely into the terminal ferrule. Furthermore, since the head of the contact member is within the terminal, any amount of shaking or jarring or working of the wire can not work the contact member out of its connecting position, and as a consequence a substantially perfect electrical contact will always be made between the central conductor and the terminal.

In the accompanying drawing, Fig. 1 shows a terminal in position on the end of an insulated wire, such, for example, as is used in high tension electrical ignition on internal combustion motors;

Fig. 2 is a longitudinal section taken along the center line of Fig. 1.

Referring to Fig. 1, I have shown a high tension cable having a central conductor 10 and a heavy insulation 11. The end of this cable is cut off substantially square, leaving the conductor 10 and the insulation 11 substantially flush on the end. A copper tack 12 is inserted into the end of the wire, with its point in contact with the central conductor 10 and the ferrule 13 of the terminal 14 is then pressed over the end of the cable, and crimped onto the insulation as shown at 15. The crimping holds the terminal securely to the end of the cable, while the contact 12 makes a perfect electrical connection between the terminal and the central conductor 10.

Although I have shown in the accompanying drawing, and described above, a preferred embodiment of my invention, it is to be understood that contact may be made between the central conductor of an insulated wire and a terminal secured thereto in accordance with the present invention, although both wire and the terminal may be of entirely different form, and likewise the particular contact member used may be made of various shapes and materials without departing from the scope of my invention.

What I claim is:

The combination, adapted for making electrical connection with a terminal, which comprises a stranded wire conductor, a resiliently stretchable insulating sheath thereon extending substantially to the end of the stranded conductor, a contact member having a head extending laterally over the end of the insulating sheath and a shank tapered from said head extending into the stranded conductor between the wires thereof and being at least in part of sufficient diameter to stretch the insulating sheath whereby said sheath exerts a resilient radial pressure on the tapered shank which tends to extrude the contact member from the conductor, and a terminal connecter having a cup-shaped ferrule with an electrically conducting portion in its bottom connected to the terminal portion and against which the head of said contact member is pressed by its extrusion from the conductor, the inside of said ferrule being of sufficient size to readily admit the conductor and its insulating sheath with the contact member inserted therein and being secured to the insulating sheath.

ROBERT A. BELL.