April 17, 1934. E. P. VELING 1,955,695

TERMINAL LUG AND LUG ATTACHING TOOL

Filed July 15, 1932

Fig. 1.

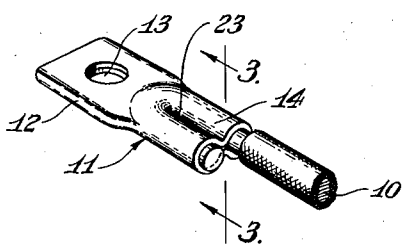


Fig. 2.

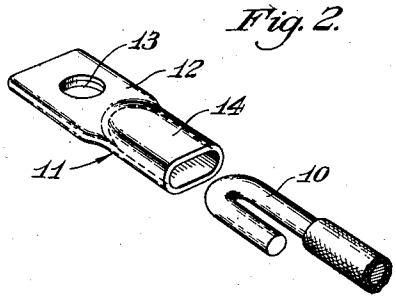


Fig. 3.

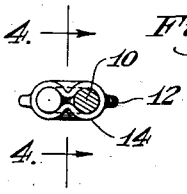


Fig. 4.

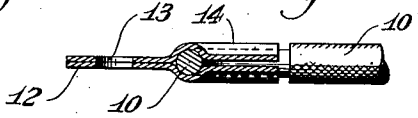


Fig. 5.

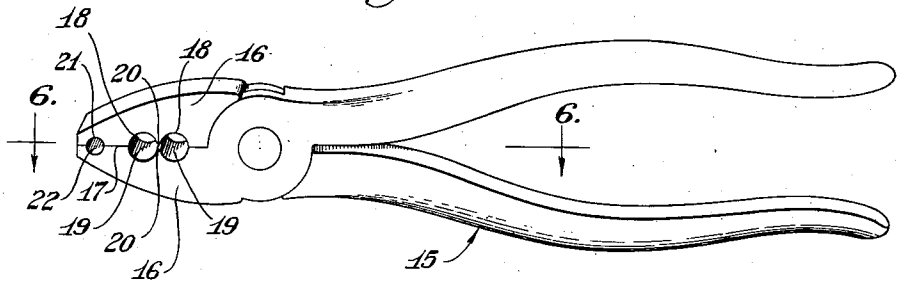
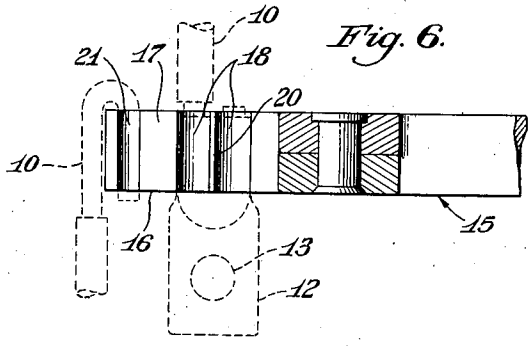


Fig. 6.



Edward Peter Veling.
INVENTOR

BY Victor J. Evans & Co.

HIS ATTORNEYS

Patented Apr. 17, 1934 1,955,695

UNITED STATES PATENT OFFICE

1,955,695

TERMINAL LUG AND LUG-ATTACHING TOOL

Edward Peter Veling, Beaver Dam, Wis.

Application July 15, 1932, Serial No. 622,753

2 Claims. (Cl. 173—269)

This invention relates to certain novel improvements in a terminal lug and lug-attaching tool, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

Among the objects of this invention are: to provide a new, efficient, simple, and relatively inexpensive terminal lug for attachment to an electrical conductor; and to provide a new, simple, and relatively inexpensive tool for attaching said lug to an electrical conductor.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing, showing the preferred form of construction and in which:

Fig. 1 is a perspective view illustrating a preferred form of the new lug attached to an electrical conductor;

Fig. 2 is a perspective view showing the lug and conductor before the attaching operation;

Fig. 3 is a sectional view on line 3—3 on Fig. 1;

Fig. 4 is a sectional view on line 4—4 in Fig. 3;

Fig. 5 is a perspective view of a preferred form of the new lug-attaching tool; and

Fig. 6 is a sectional view on line 6—6 in Fig. 5, illustrating diagrammatically the lug-attaching operation.

In the drawing 10 indicates an electrical conductor and 11 generally indicates the new terminal lug. The new lug 11 may be made of any suitable kind of electrically conductive material or metal and comprises a relatively flat portion 12 provided with an aperture 13 for the reception of a binding post or the like. The lug 11 also includes a tubular portion 14 of relatively soft conductive metal that is integral with the flat portion 12 and substantially oval-shaped in cross section.

Indicated generally at 15 is the new lug-attaching or crimping tool and the same comprises a pair of plier-connected jaws 16 in the meeting edges of which are formed spaced concavities or recesses 18. These concavities or recesses 18 are substantially semi-circular in cross section and cooperate with each other to form in the jaws 16 a pair of openings 19, that are spaced or separated by ridges 20.

Provided in each of the jaws 16 toward the outer ends thereof is a concavity or recess 21. These recesses 21 are substantially semi-circular in cross section and cooperate with each other to provide an opening 22 spaced from the openings 19 by the portion 17.

The end portion of the conductor 10 is bent into U-shape before insertion into the tubular portion 14 of the lug. This bending of the end portion of the conductor may be done, as illustrated diagrammatically in Fig. 6, by inserting the end portion of the conductor 10 into the opening 22, closing the jaws 16 upon each other, and then bending the conductor back upon itself to form a U therein.

The U-shaped end portion of the conductor is then inserted into the tubular lug portion 14, and the lug portion 14 having the U-shaped conductor end portion therein, is then placed between the jaws 16 so that the ridges 20 extend parallel to the longitudinal midline or center of the tubular portion 14. The jaws 16 are then closed upon each other and the tubular portion 14 of the lug is thus crimped by the ridges 20, down its longitudinal center 23, thereby attaching the U-shaped end portion of the conductor to the lug portion 14 and making an effective, permanent electrical connection between the conductor and lug.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. A terminal structure comprising a tubular member having an end portion flattened and provided with an opening for the reception of a binding post, and an electrical conductor having a U-shaped end positioned within the other end of the tubular member, said tubular member being crimped to press a portion of the member between the legs of the U-shaped conductor, to connect the conductor with the tubular member.

2. A terminal structure comprising a tubular member having an end flattened and provided with an opening for the reception of a binding post, the opposite end of said tubular member being slightly flattened to provide a socket, and a conductor having a U-shaped end arranged to be inserted in the socket, the inner end of the socket being shaped to conform to the curvature of the end of the U-shaped structure, and said socket being crimped between the legs of the U, to connect the conductor with said socket.

EDWARD PETER VELING.