

C. CUNO.  
 TERMINAL CONNECTOR CONSTRUCTION.  
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937,052.

Patented Oct. 19, 1909.

Fig. 1.

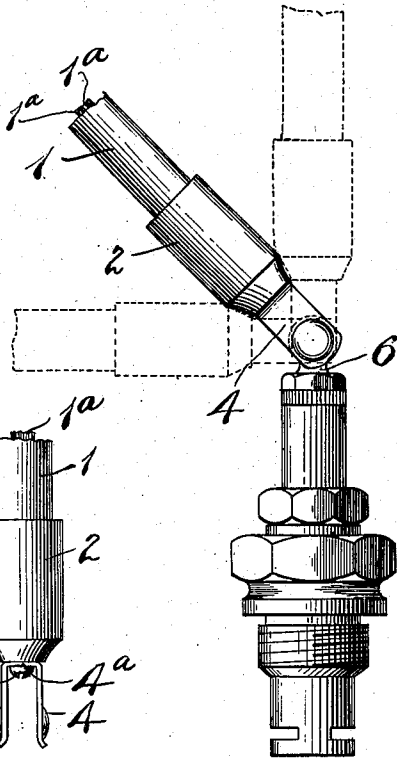


Fig. 2.

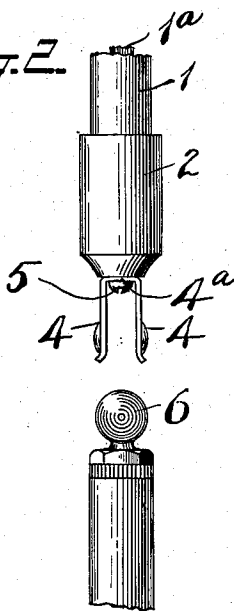
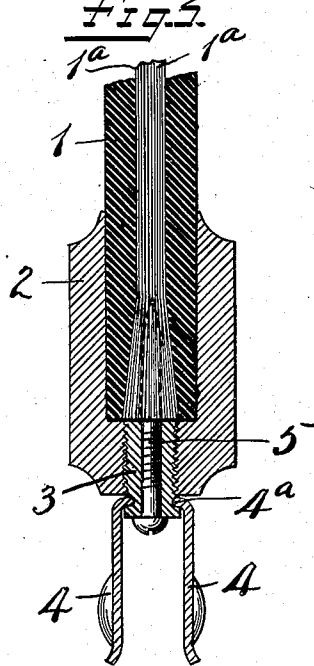


Fig. 3.



Witnesses:  
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 CHARLES CUNO  
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# UNITED STATES PATENT OFFICE.

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## TERMINAL-CONNECTOR CONSTRUCTION.

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Patented Oct. 19, 1909.

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*To all whom it may concern:*

Be it known that I, CHARLES CUNO, a citizen of the United States, residing at Meriden, county of New Haven, State of Connecticut, have invented certain new and useful Improvements in Terminal-Connector Construction, of which the following is a full, clear, and exact description.

My invention relates to a new and improved terminal connector, the invention relating particularly to the construction thereof.

The object of the invention is to provide a simple yet durable and effective construction, whereby the various parts of the connector may be secured together very strongly, and whereby in use, when the connector is slipped on and off, all danger of breaking the electrical connection of the connector and the wire carried thereby is avoided.

In the drawings, Figure 1 is a side elevation of my improved connector applied to a "spark plug", so-called, said connector being shown in position for use. Fig. 2 is a view of the connector detached from its companion part. Fig. 3 is a relatively enlarged sectional view showing the construction.

1 represents an electric wire heavily insulated, the wire core being preferably made up of a plurality of strands 1<sup>a</sup>.

2 represents a handle in the form of a sleeve preferably of insulating material surrounding the end of the insulated wire 1, the cavity in the end of the handle 2 being of such a size as to snugly receive the same. The forward end of the handle 2 is centrally bored in line with the wire and its internal wall is threaded or otherwise suitably shaped for detachable connection with the sleeve 3. The sleeve 3 in the present form has a central longitudinal screw passage and its external wall (save at its extreme end) is threaded to receive the handle 2.

4—4 are the clip arms connected by a bridging member 4<sup>a</sup>. This bridging member is secured to the sleeve 3 in any desired manner, as by reducing the outer end of the sleeve to receive the bridge 4<sup>a</sup>, after which

the extreme edge of the sleeve may be upset or expanded as shown to hold the bridge 4<sup>a</sup> and spring arms 4—4 rigidly to the sleeve 3. Obviously, this method of connection is merely preferential and may be modified in a variety of ways.

5 is a screw having a suitable head. As shown, this screw passes through the central bore of the sleeve while its pointed inner end is screwed into the end of the insulated wire, whereby it performs the double function of electrically connecting the clip blades 4—4 with strands 1<sup>a</sup> of the wire, and of holding all the parts securely to the end of said wire. The presence of the inner end of the screw in the insulated wire 1 tends to expand or wedge the surrounding insulation causing it to hug the inner wall of the handle 2, thus augmenting the holding action of said screw by the frictional engagement thus attained between the outer wall of the wire insulation and the inner wall of the handle 2. The sleeve 3 operates not only as a connector between the handle 2 and the clip blades 4—4 but it also serves as a guide to guarantee the proper centering of the screw in the wire end.

6 is a terminal with which the clips 4—4 are to be connected.

As will now be seen, rough usage by the operator in attaching and detaching the connector to the terminal 6 will not endanger the separation of the clip from the wire 1 since the handle 2 and clip arms 4—4 are securely connected together by a means which relieves the wire 1 of the necessity of contributing to that function. The clip construction may of course be changed as desired but the form shown is very much to be preferred.

What I claim is:

1. In a terminal connector for wire ends, a connector clip, a handle therefor, means for connecting said clip to said handle, a screw for connecting said parts to the wire end, said parts having an elongated smooth bored guide passage for said screw said screw passing freely therethrough.

2. In a terminal connector for wire ends,

a connector clip, a tubular handle arranged to receive a wire end within one end thereof, a sleeve secured to said connector clip, and means to secure said sleeve within said handle, said sleeve having a central elongated guide passage arranged in line with the bore of that end of the handle arranged to re-

ceive the wire end and a screw threaded at its forward end and slidably fitting said guide passage.

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Witnesses:

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