

G. EGLY.  
HEATING BAR TERMINAL.  
APPLICATION FILED OCT. 21, 1920.

1,418,633.

Patented June 6, 1922.

Fig. 1

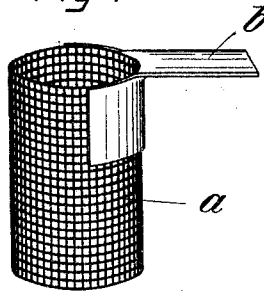


Fig. 2

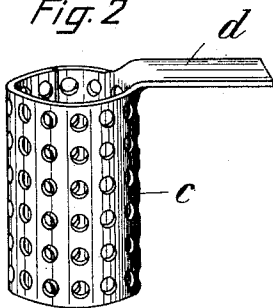
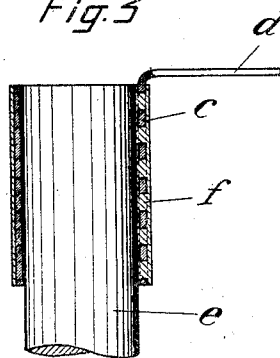


Fig. 3



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# UNITED STATES PATENT OFFICE.

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## HEATING-BAR TERMINAL.

1,418,633.

Specification of Letters Patent. Patented June 6, 1922.

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*To all whom it may concern:*

Be it known that I, GEORG EGLY, a citizen of the German Empire, residing at Berlin-Treptow, Germany, have invented certain new and useful Improvements in Heating-Bar Terminals, of which the following is a specification.

My invention relates to means for connecting conductors to electrical heating bars for instance those, which substantially consist of silicon-carbide, and which are termed in the art shortly as "silite" bars. I am aware that it is old to connect conductors to electrical heating bars of the kind specified, by winding wire on the portion of the bar at which the terminal or conductor is to be attached, and then providing this portion with a metallic coating by means of the metal spraying method. This method of manufacture cannot be carried out except by aid of skilled labour, for the bars easily break during the winding, specially in cases where thin bars are employed and a comparatively stout wire has to be used for the winding. In contradistinction to this prior method I employ, in accordance with my invention, a metal body ready made in advance, having the shape of a tube and provided with a plurality of holes. This perforated metal tube is placed over the bar, and then given a metallic coating, preferably by spraying on metal. The said coating must be made in such a manner that it will be able to enter through the perforations formed in the tube into intimate connection with the heating bar lodged underneath. Thus, for example, a tube of wire-gauze may be used, though I have found it to better advantage to make the tube out of suitably pressed sheet metal. In that case the current-carrying member, which consists of a strip of sheet metal, may be made integral with the tube. However, the current-carrying member may also be connected to the metal body by soldering, tinning, or in any other suitable manner. If deemed preferable, the tube may be so constructed as to allow it to resiliently enclose the heating bar.

Wherever it is a question of employing the heating bars for high temperatures, it will generally be found expedient to increase the cross-sectional area of the places of connection of the bar. In order to improve the contact, the place of connection may likewise be provided with a thin metal coating, preferably

silver plating, before the metal body is secured in its place. The metal body as well as the coating applied thereto by spraying may consist of any kind of metal whatsoever, for instance, also of iron.

However I have found that the use of aluminum for this purpose involves considerable advantages over that of other metals. For apart from its light weight, aluminum possesses a most remarkable power of resistance to the mechanical, thermic and chemical influences here entering into consideration. If, for example (other conditions prevailing being entirely the same) use be made, on the one hand, of terminals made of iron, copper, or the like, and, on the other hand, of terminals made of aluminum, it will be found that the aluminum terminal will still be almost entirely intact when the copper or iron terminal has already been completely burned away.

Aluminum may be easily applied by spraying and it affords a permanently good combination with the material of the heating body.

Several terminals embodying my invention are shown in the drawing annexed to this specification and forming part thereof.

Fig. 1 is a perspective view of one type of terminal tube,

Fig. 2 a similar view of a modified form of construction, and

Fig. 3 is a longitudinal sectional view of the tube shown in Fig. 2.

Referring to the drawings, the terminal tube *a* (Fig. 1) is made of wire-gauze, the current-carrying member *b* being fixed thereto by soldering or a similar process.

The terminal tube *c* (Fig. 2) is made of suitably pressed sheet metal, the current-carrying member *d* being integral therewith. The tube is mounted in the customary manner on the heating bar *e* and provided with the metallic coating *f* which serves to establish the connection.

I claim:

1. Means for attaching conductors to electric heating bars comprising a perforated tubular body and a metallic coating on said body extending through said perforations.

2. Means for attaching conductors to electric heating bars comprising a wire gauze tube and a metallic coating thereon extending through the openings thereof.

3. Means for attaching conductors to elec-

tric heating bars comprising a perforated aluminum tube and a metallic coating, extending through said perforations.

4. Means for attaching conductors to electric heating bars comprising a perforated aluminum tube and an aluminum coating, extending through said perforations.

5. The method producing conductor terminals for heating bars which consists in placing a perforated sheet metal tube on the

bar and spraying metal on said tube so as to cause said metal to enter said perforations.

6. The method producing conductor terminals for heating bars which consists in coating part of a heating bar with metal surrounding said portion by a perforated metal tube and spraying thereon metal so as to unite said tube with said coating.

In testimony whereof I affix my signature.

GEORG EGLY.