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RESISTANCE UNIT

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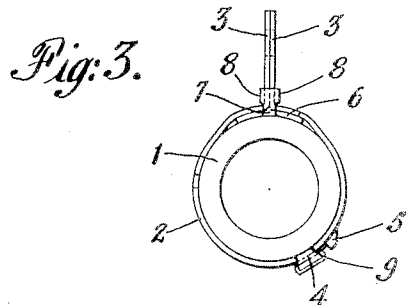
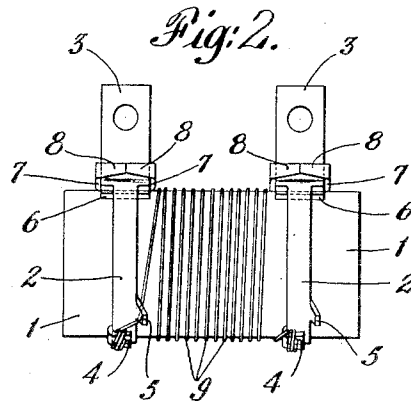
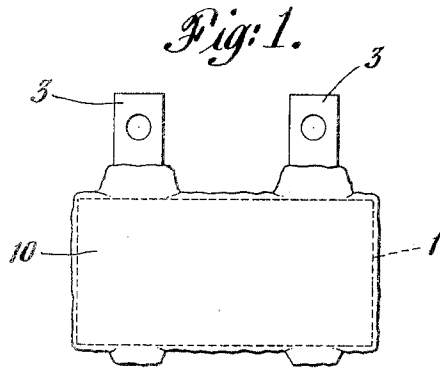
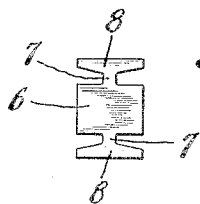
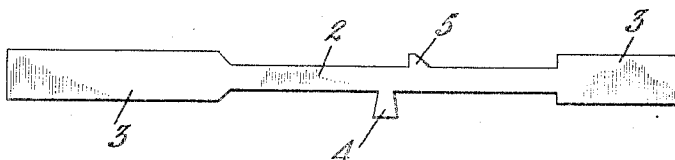


Fig: 4.



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RESISTANCE UNIT

Application filed January 30, 1928. Serial No. 250,361.

This invention relates to resistive units of the tubular type, wherein the resistive wires are wound upon an insulating tube.

The main object of this invention is to provide a terminal connection of a simple form of construction which may be made economically and which may be conveniently and quickly mounted in place on the insulating support. Another object is to provide a form of construction wherein the terminal portion to which the outside connection is made, may be repeatedly bent without breaking off the terminal at or near the insulating support thus causing the resistance unit to be rendered useless. Furthermore, in the form of resistance unit to which the present invention is particularly applicable, an insulating coating, such as vitreous enamel, covers the resistive conductor and terminals; and in this form of device any bending of the portion of the terminals near the insulating support is likely to crack or break the insulating coating and shorten the term of usefulness of the unit. A further object is to provide a form of re-enforcing means which shall be so related to the terminal that it serves also as a means for holding the ends of the terminal together and holds the terminal rigidly in place on the support, the re-enforcing means being likewise rigidly held in place by the terminal. This invention and advantageous features thereof will be understood from the following description and accompanying drawings.

Fig. 1 is a side view of a completed resistance unit; Fig. 2 is a side view showing the construction before application of the insulating coating; Fig. 3 is an end view of the structure shown in Fig. 2; Fig. 4 is a development of one of the terminal connections; and Fig. 5 is a plan view of the re-enforcing and clamping element.

The main support of the unit is shown as an insulating tube 1 of porcelain or other insulating material which carries the terminals 2. These are made in the form of sheet metal strips stamped in the particular form desired and are preferably made from sheet copper. In the particular form shown in Fig. 4 the strip has a central length of com-

paratively narrow width and wider elongated end portions 3. The narrower portion is shown as having a tongue 4, located near one of the end portions 3 and having a horn 5 on the opposite side of the strip but adjacent thereto.

The re-enforcing and clamping means is shown as having a central portion 6 of the same width as the end portions 3 of the terminal strip. From the opposite sides of the central portion 6 extend necks 7 which carry elongated ears 8 extending in the direction of the length of the element and from both sides of the neck 7. This re-enforcing and clamping element is adapted to be stamped from sheet metal and is preferably made from sheet iron or sheet steel for securing the necessary strength. When the terminal parts are assembled, the terminal strip encircles the unit to bring the end portions 3 together which are bent at right-angles so that the outer extending portions face each other and are in contact. The re-enforcing element is located so that the central portion 6 thereof is located on the tube and centrally between the joined ends of the conducting strip and the supporting tube. The necks 7 are bent at right-angles to extend outwardly and the opposite ends of each of the two ears 8 are bent at right-angles to embrace the outer faces of the meeting portions of the conducting strip. In this manner the terminal strips are firmly held in place on their support and the outwardly extending end portions cannot be bent at or near the tubular support owing to the rigid clamping and supporting of that portion of the terminal by the ears 8.

Moreover, the re-enforcing and clamping element is itself firmly held in position by the terminal strip, each of the parts in turn locking the other. Thus the clamping element can not be displaced or the clamping ears be permitted to be displaced.

When the terminals are positioned upon their support, the resistive conductor is connected to the tongue 4 by making a few turns around it after which the tongue is bent over and hammered down to insure a good electrical connection. The resistive conductor is then wound upon the tube until the desired

amount of resistance is included in the unit and then the remaining end of the conductor is passed under the horn 5 and connected to another tongue 4 as before described. Obviously, any desired location of the tongue 4 may be used for the convenient making of the unit and other means of connecting the resistive conductor to the terminal strip may be used. Likewise, any desired number of terminal strips may be provided on any unit to give intermediate connections to the resistive conductor according to particular requirements.

After the parts are completely assembled as above described, the unit is covered by an insulating coating 10 which is preferably a vitreous insulating enamel. This coating preferably covers all parts except the outer ends of the portions 3 forming the means for making external connections. These outer terminal portions may be drilled or punched after the unit is assembled, either before or after the application of the insulating coating.

Although one particular embodiment of this invention is described herein, modifications thereof may be made without departing from the scope thereof.

I claim:

1. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and means carried by said support for engaging the edges of the meeting ends of said terminal strip.

2. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and means located between said terminal strip and said support and having extensions embracing the edges of the meeting ends of said terminal strip.

3. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and means located between said terminal strip and said support and having portions extending outwardly therefrom on both sides of said terminal strip to embrace the edges of the meeting faces of said terminal strip.

4. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and a reenforcing and clamping element having one portion located between said strip and said support, outwardly extending portions on opposite sides of said portion, said outwardly extending portions each carrying extensions embracing the edges of the meeting portions of said terminal strip.

5. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and a reenforcing element embracing the edges of the meeting faces of said terminal

strip for clamping the end portions of said terminal strip together, said element being in turn clamped in position by said terminal strip.

6. A terminal for resistance units and the like comprising a support, a conducting strip enveloping said support, and an element for clamping together and re-enforcing the meeting portions of said strip, said element in turn being clamped between said support and said strip.

7. A terminal device for resistance units and the like comprising a support, a conducting terminal strip enveloping said support, and a re-enforcing and clamping element having one portion located between said strip and said support, outwardly extending necks on opposite sides of said portion, and said necks each carrying extensions embracing the edges of the meeting portions of said terminal strip.

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