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METHOD OF ASSEMBLING SHEET METAL RESISTANCE UNITS

Filed July 5, 1927

Fig. 1.

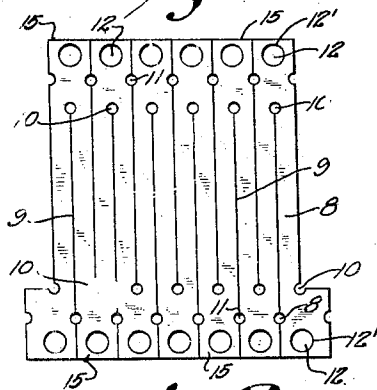


Fig. 2.

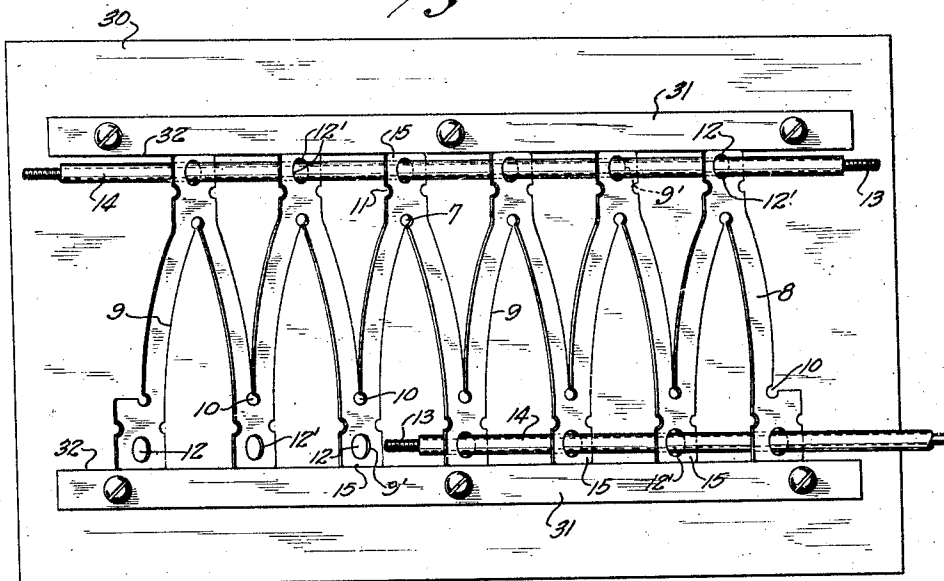
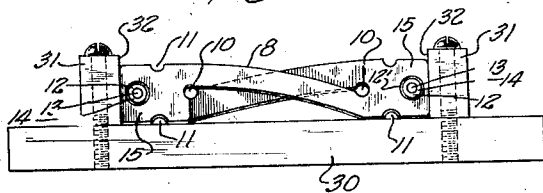


Fig. 3.



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METHOD OF ASSEMBLING SHEET-METAL RESISTANCE UNITS.

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This invention relates to improvements in and method of assembling sheet metal resistance units.

In sheet metal resistance units of the expandible type, it has been found very difficult to assemble the different portions of the units on their supporting means, due to the fact that it is necessary to expand portions of the metal and bend said portions at an angle to permit inserting supporting rods through openings formed therein. In inserting the rods, there is a tendency of the parts to bind and bite into the rods unless the unit portions are held firmly in spaced relation and at predetermined angles.

It is one of the objects of the present invention to overcome the before mentioned objectionable features, and provide a method of assembling sheet metal resistance units which will hold the units in a position to permit the supporting rods being easily extended through the openings formed in portions of the unit.

A further object of the invention is to provide a method of assembling sheet metal resistance units which is very simple, is easily carried out, and is well adapted for the purpose desired.

With the above and other objects in view, the invention consists of the improved method of assembling sheet metal resistance units and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawings in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a side view of one of the sheet metal resistance units shown before it is expanded for use;

Fig. 2 is a side view of the unit maintained in an expanded position by the improved method of assembling, the view also showing the insulated rods for holding the unit in expanded position; and

Fig. 3 is an end view of the parts shown in Fig. 2.

Referring to the drawing, the numeral 8 indicates a plate of sheet metal having suitable resistance qualities, which is formed with transverse slits 9 extending alternately inwardly from the opposite side edges to the stop apertures or holes 10. The plate 8 is

also provided with slit intersecting apertures or holes 11 and larger end openings 12 for receiving supporting bars 13 when the plate is expanded as shown in Fig. 2. The bars 13 are covered with tubes of suitable insulating material 14 to electrically insulate the staggered end portions 15 from each other when assembled on the bars. The end portions of the bars are adapted to be connected to a support in any manner desired. In order to insert the bars, it is necessary to expand the metal plate in the manner shown in Fig. 2, and to hold the plate in expanded position while inserting the rods. To accomplish this in a simple manner, a mounting member 30 having spaced strips 31 upon one side is provided. These strips form shoulders 32 which are spaced apart a distance slightly less than the opposite end portions of the expanded plate, so that when expanded and placed between the shoulders and then released, the said end portions will impinge against the shoulders and the plate and will be maintained in expanded position with the end openings 12 substantially in alinement. When thus arranged, the insulated rods 13 are extended through the aligned openings 12 as shown in Figs. 2 and 3, and the plate may then be expanded slightly to permit easy removal from the mounting member. When removed from the mounting member, the expanded portions of the plate will straighten slightly and the edge portions 12' forming the openings 12 will firmly grip the end portions 15 in spaced relation and also reinforce the plate.

From the foregoing description, it will be seen that the method of assembling sheet metal resistance units permits the units being expanded and placed between the shoulders of the mounting member, so that the insulating rods can be easily threaded through the end portions of the units to support, maintain and reinforce said end portions in spaced relation. It will be further seen that the method of assembling is very simple and is well adapted for the purpose desired.

What I claim as my invention is:

1. Method of assembling sheet metal resistance units, which consists in lengthwise expanding a sheet of metal having trans-

verse slits to form opposite end portions and to slightly shorten the distance between said end portions, said end portions having openings, then providing a form member with
5 spaced shoulders and placing the expanded sheet on the form and with the end portions between and engaging the shoulders to aline the openings in the end portions of the sheet, then inserting insulating members through
10 the alined openings of the opposite end portions, and then removing the sheet of metal from the form to permit the end portions to straighten out slightly and to firmly engage the insulating members.
15 2. Method of assembling sheet metal resistance units, which consists in lengthwise expanding a sheet of metal having transverse slits to form opposite end portions and to slightly shorten the distance between said
20 end portions, said end portions having openings, then providing a form member with spaced parallel shoulders and placing the expanded sheet on the form with the end portions between and engaging the shoulders
25 to hold the end portions in angular formation with relation to the form but parallel with relation to each other, said formation alining the end openings, then inserting insulating members through the alined open-
30 ings of the opposite end portions, and then

removing the sheet of metal from the form to permit the end portions to straighten out slightly and to firmly engage the insulating members.

3. Method of assembling resistance units 35
formed of a single sheet of comparatively thin metal having alternate transverse slits to form opposite end portions and said end portions provided with openings, which consists in lengthwise expanding the sheet to 40
space the end portions in zig-zag formation with the opposite end portions closer together, then providing a form member with spaced parallel strips to form shoulders and placing the expanded sheet metal on the 45
form with the end portions between and engaging the shoulders to hold the end portions in angular formation with relation to the form but parallel with relation to each other, said formation alining the end open- 50
ings, then inserting metal rods enclosed within insulating sleeves through the alined openings of opposite end portions, and then removing the sheet of metal from the form to 55
permit the end portions to straighten out slightly and to firmly engage the insulating sleeves.

In testimony whereof I affix my signature.

HARRY E. CAMPBELL.