Dec. 27, 1927. 1,654,338

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SUPPORTING MEANS FOR ELECTRICAL CONDUCTORS

Filed Dec. 29, 1923

Fig. 1.

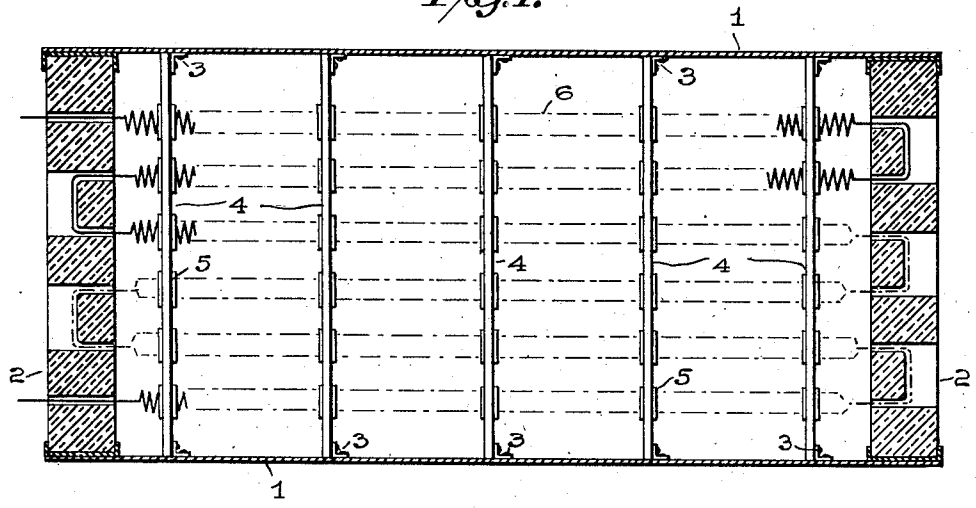


Fig. 2.

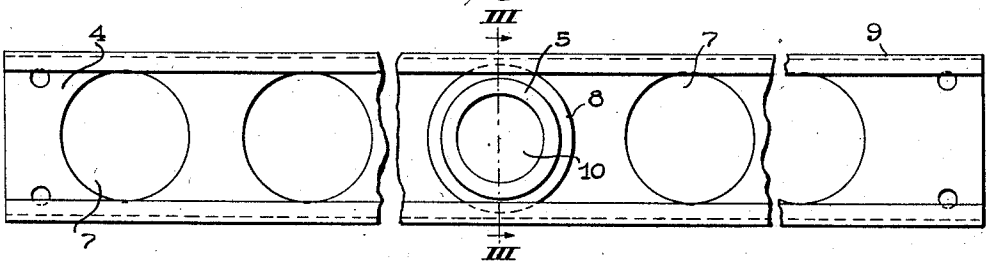
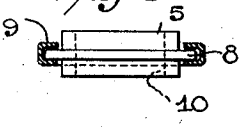


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALLIS M. MacFARLAND, OF WILKINSBURG, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

SUPPORTING MEANS FOR ELECTRICAL CONDUCTORS.

Application filed December 29, 1923. Serial No. 683,401.

My invention relates to supports for electric conductors and particularly for electric conductors embodied in resistance units and electric heaters.

One object of my invention is to provide a supporting means of the above-indicated character in which a minimum amount of material is employed, and another object is to provide a supporting means the parts of which may be manufactured and assembled in an economical and inexpensive manner.

My invention comprises a strip or sheet of material provided with perforations in which insulators are placed and retained in position by means of bent-over flanges of the sheet material.

In the accompanying drawings, constituting a part hereof, and in which like reference characters indicate like parts,

Figure 1 is a sectional plan view of a resistance box in which my invention is employed.

Fig. 2 is a side view of my conductor-supporting means, and,

Fig. 3 is a sectional view of my supporting means taken through the line III—III of Fig. 2.

In Fig. 1, I have shown a resistance box or frame having metal sides 1 and insulating ends 2. At proper intervals along each of the sides 1 are located vertical angle irons 3, to which are suitably attached my supporting means comprising perforated strips 4 in which are located hollow insulators 5. A plurality of electric conductors or resistors 6 are shown as secured to the ends 2 and threaded through the respective sets of alined insulators 5.

My improved support for electric conductors comprises a strip or sheet of material 4, preferably of metal, that is provided with a number of perforations 7, in which the insulators 5 are seated or located. Each of the insulators 5 is provided with an enlarged middle portion or flange 8 which bears against, or rests upon, the strip member 4 and aids in securing the insulator in position. The member 4 is provided with bent-over flanges 9 which enclose, or bear against the outer sides of the enlarged middle portions 8 of the insulators 5, thereby securely fastening the insulators in position in the perforations 7 of the member 4.

The insulator employed in my device may be composed of any suitable insulating material, such as clay, glass, etc., and is provided with a central hole 10, through which the corresponding resistor or electric conductor 6 may be threaded.

In constructing my invention, a strip or sheet of material is first provided with suitable perforations and its edges are then partially bent over to form flanges. Insulators are then placed in the perforations and the flanges are bent over farther so that they bear snugly against the enlarged middle portions of the insulators and hold them securely in position in the perforations.

Although I have shown and described a preferred embodiment of my invention it will be understood that changes in, or substitution for, various parts, as well as other arrangements and cooperation may be effected within the scope of the invention, as set forth in the appended claims.

I claim as my invention:

1. A support for electric conductors comprising an insulator having an enlarged middle portion, and a rigid member provided with a perforation in which the insulator is located, a straight edge of said member constituting a bent-over flange that bears against the middle portion of the insulator to retain it in position in the perforation.

2. A support for electric conductors comprising insulators having enlarged middle portions, and a strip provided with perforations in which the insulators are located, each edge of said strip constituting a single bent-over flange that bears against the middle portions of the insulators to retain them in position in the perforations.

3. A support for electric conductors comprising an insulator having an enlarged middle portion, and a sheet member provided with a perforation in which the insulator is located, each edge of said member constituting a single bent-over flange that bears against the middle portion of the insulator to retain it in position in the perforation.

In testimony whereof, I have hereunto subscribed my name this 26th day of December, 1923.

ALLIS M. MacFARLAND.