

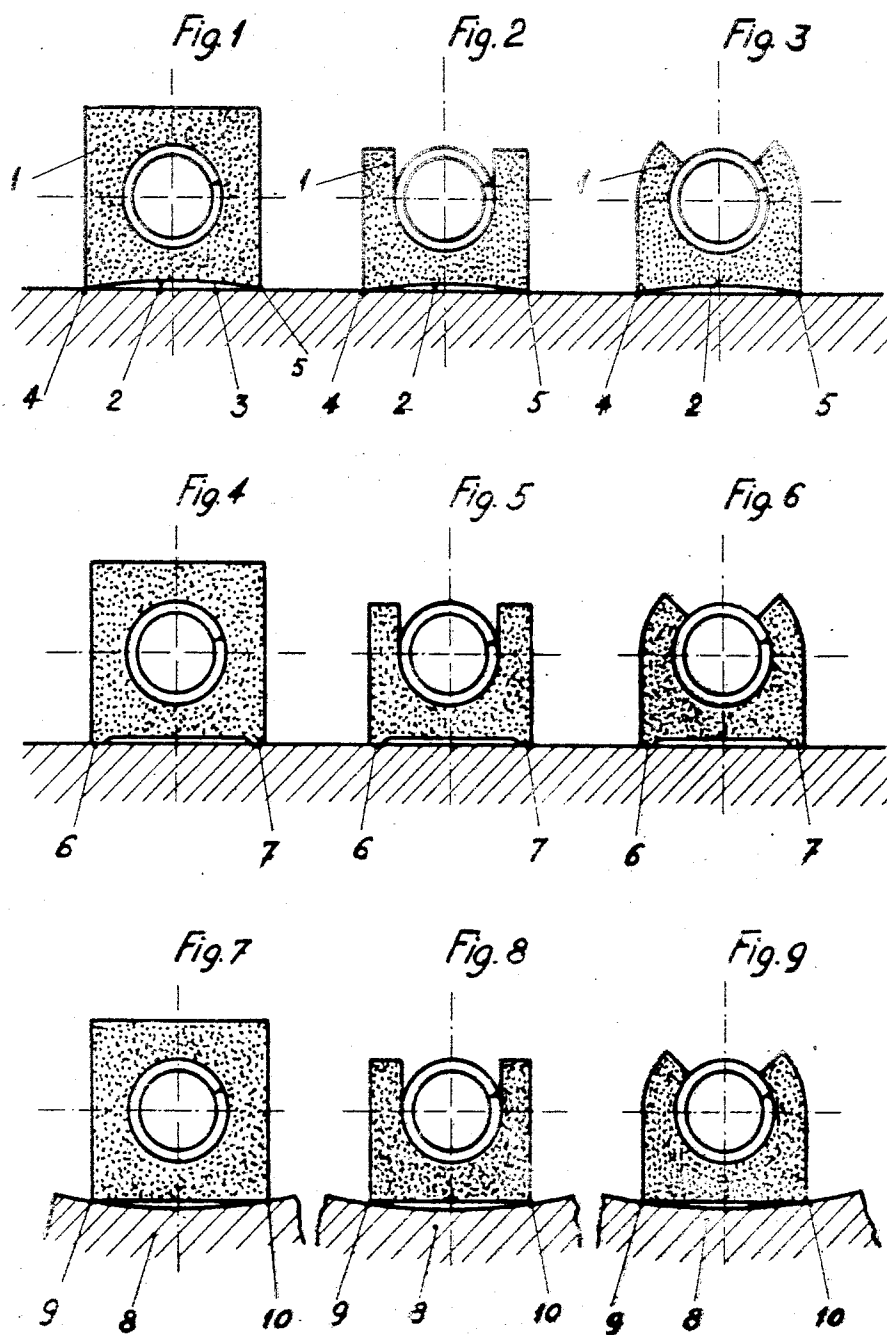
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ELECTRIC HEATING PLATE

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ELECTRIC HEATING PLATE

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3 Claims. (Cl. 219—37)

The insulating supports for electric heating resistances are constructed of pottery generally with a hollow housing for the resistance wire or coil, said supports sometimes being of solid ring-like form but more usually in the form of separate blocks placed end to end to make one or more rings. Between the bottom of the housing and the metal part to be heated is located the smallest thickness of insulating material which should be proportioned so as to offer a sufficient insulation when the plate is subjected in particular to a test at excess voltage. The high voltage and wattage, which are required in the present day system, moreover necessitate a fairly great thickness at this spot, thereby considerably hindering the transmission of heat.

The invention has for its object to eliminate this drawback by enabling an insulating support to be used of relatively small thickness at the bottom of the hollow of the housing of the resistance.

For this purpose the support is characterized in that opposite the bottom of the hollow of the housing of the resistance there is no contact between the insulating support and the plate to be heated but the interposition of a cushion of imprisoned air, the insulating material contacting with the plate to be heated along lines located towards the edges of the insulating member in the direction of the resistance and the said air being imprisoned between the support and the plate.

It ensues that the value of the insulation is increased in every direction. If the current attempts to reach the plate by the shortest distance it encounters the thickness of the bottom of the housing and then that of the air cushion. If it tries to pass in an oblique direction, through the insulating material alone to reach the plate, the length of the oblique line is obviously greater than the perpendicular line. Also the insulation is higher for the same thickness of insulating

material than if the insulating support touched the plate with the whole surface of its base.

Referring to the drawing:

Figs. 1 to 9 show transverse cross-section views of various embodiments of heating units according to this invention.

One form is shown in Figs. 1 to 3. The base of the insulating unit 1 is concave shape, so as to provide an air cushion 2 between the flat plate 3 and the edges 5 and 6 of the insulating unit.

A second form is shown in Figs. 4 to 6. The insulating unit in this form rests on two feet 6 and 7 running longitudinally along its outer edges.

A third form is shown in Figs. 7 to 9. The base of the insulating unit here is flat, while the surface of the heating plate 8 is curved concavely, to avoid contact other than at 9 and 10.

Other modifications within the scope of this invention will readily occur to those skilled in the art. The scope of the invention, therefore, is to be limited by the claims only.

I claim:

1. In an electric hot plate, a metallic supporting plate, a plurality of insulating members of substantially rectangular cross section supported by said plate and provided with recesses, a heating resistance lodged in said recesses and spaced from said plate, the bottom of said insulating members being dished to provide substantially line contact and insulating air space between said plate and said insulating members, said insulating members contacting said heating plate along two substantially parallel edges of said insulating members only.

2. A device according to claim 1, wherein the bottom of said insulating member is concavely curved.

3. A device according to claim 1, wherein two substantially parallel edges protrude from the bottom of said insulating member.

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