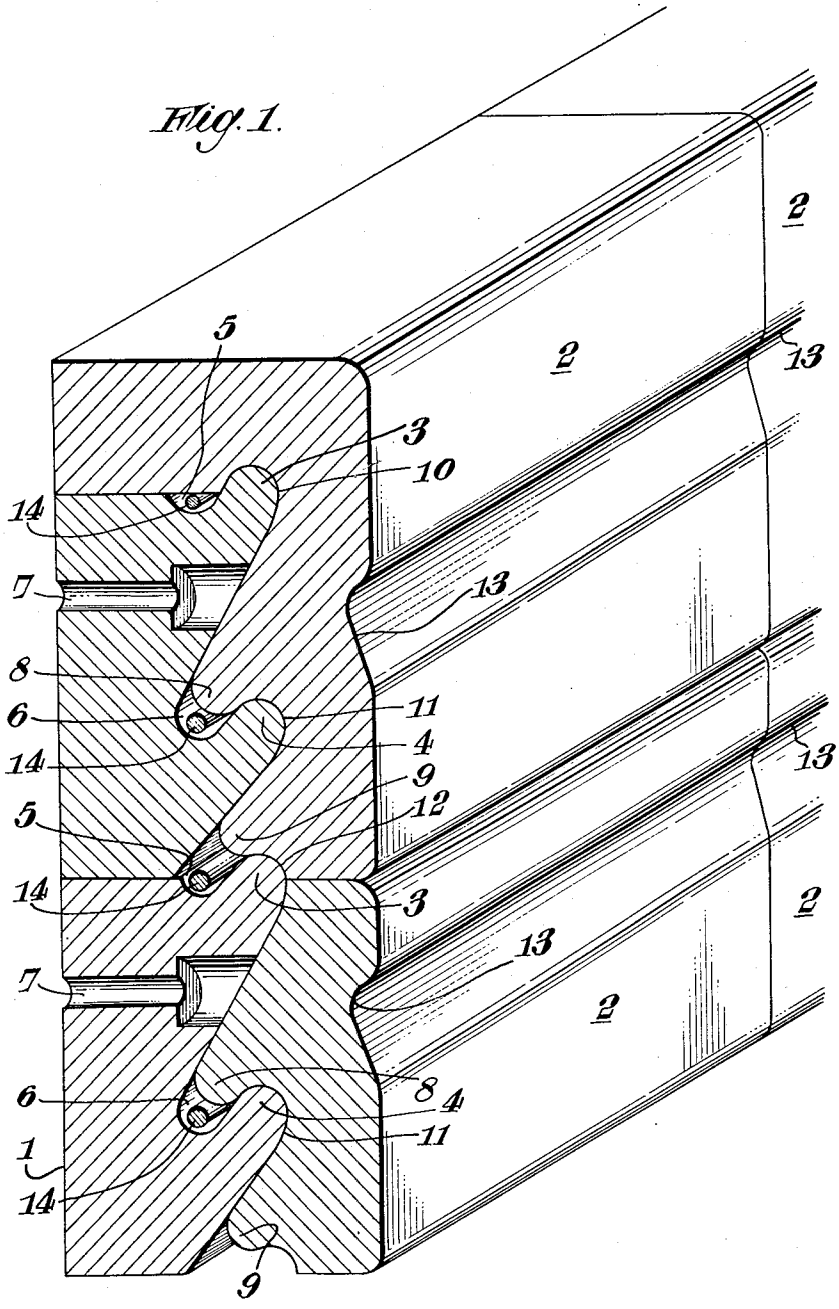
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ELECTRICAL HEATING APPARATUS

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Fig. 1.



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ELECTRICAL HEATING APPARATUS

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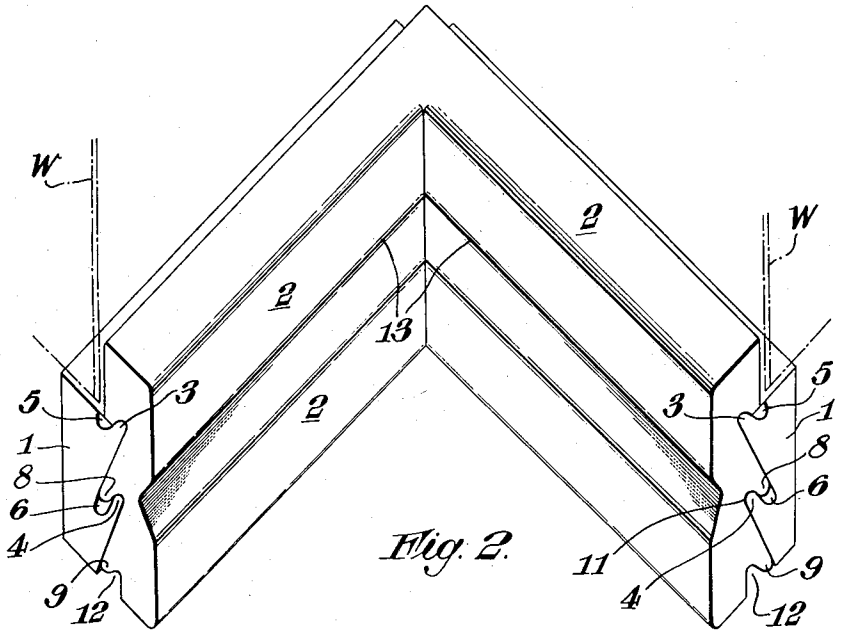


Fig. 2.

Fig. 3.

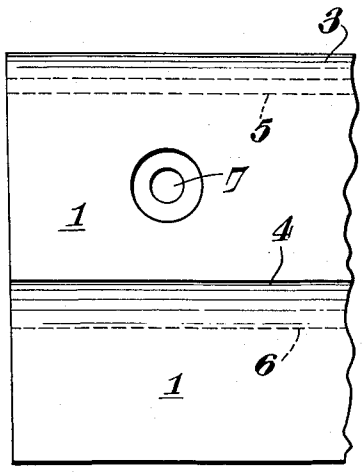
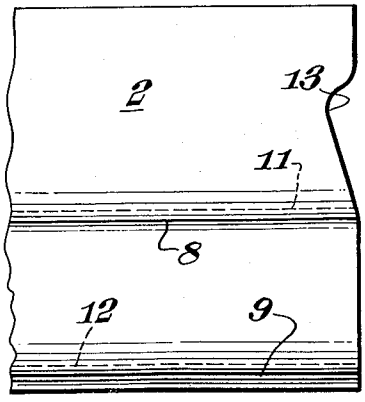


Fig. 4.



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3,012,128

ELECTRICAL HEATING APPARATUS

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3 Claims. (Cl. 219—34)

The invention relates to electrical heating apparatus intended for such purposes as the heating of rooms, corridors and similar or suitable places.

The object of the invention is to provide new or improved electrical heating apparatus of the semi-storage type which are adapted to be assembled or built up from correlated members to form identical units capable of being extended in either horizontal or vertical directions or both.

According to the invention the electrical heating apparatus comprises a refractory unit or units furnished with beads or moldings and troughs, and a detachable refractory cover unit or units provided with corresponding beads or moldings and troughs, whereby electrical heater elements may be located in the troughs of the carrier unit or units and thereafter concealed and retained in position by the cover unit or units whose beads and troughs are caused to co-act with the beads and troughs of the carrier unit or units.

The units may be arranged side-by-side or back-to-back and the cover units are preferably provided with hand grip means. Other features of the invention will be clarified in the following description.

In order that the invention may be fully and clearly comprehended the same will now be described with reference to the accompanying drawings, in which:

FIGURE 1 is a sectional perspective view of an arrangement of units to form electrical heating apparatus according to the invention.

FIGURE 2 is a perspective view of a modification of the invention.

FIGURE 3 is a front elevation of a fragment of one of the carrier units for heating apparatus, according to the invention.

FIGURE 4 is a rear elevation of another or cover unit for heating apparatus according to the invention.

In carrying the invention into effect according to one example there are provided identical units each composed of a pair of members **1** and **2** of refractory material such as fire clay, ceramic or the like, these clay and ceramic materials being insulating.

One of the members **1** hereinafter termed the element carrier, consists of a block of material whose bottom and rear faces are arranged at right angles, whose top is also at right angles to the rear and whose front is furnished with a pair of horizontal beads or moldings **3** and **4** arranged in spaced relationship. The said beads are of somewhat oval shape in cross-section the upper bead forming a nose which somewhat projects above the top edge of the block while a rounded trough **5** is formed behind the top bead, and a further trough **6** is formed behind the bottom bead. The nesting arrangement of the L-shaped cover element **2** and carrier element **1** is unique because of the reversed taper of the oval cross section tongue and the oval cross section grooves of interfitting complemental surfaces of carrier and cover, respectively to provide a spacing in the mating trough areas, which defines a trough or passageway **5** which is larger than the cross section of conductor **14** thereby concealing the conductor but without trapping it, e.g., without gripping or grabbing.

Transverse bores **7** of preferably two diameters are provided in the block **1** for accommodating fixing screws.

The other member **2** of the pair of members to form a unit, hereinafter termed the cover is of substantially inverted L shape in cross-section and is furnished on its inner face with two horizontal beads or moldings **8** and **9** and with three troughs **10**, **11** and **12**. The cover is furthermore provided with a hand grip or recess **13** formed in the front thereof.

In a simple arrangement of the invention a plurality of electrical element carriers **1** are laid in abutment on a floor with their rear sides in close proximity to the wall (see FIGURE 1 of the drawings) but with a sheet of insulation material interposed between carriers and wall and floor.

The carriers are then screwed to the wall by screws passing through the bores **7** whereupon a length of any suitable well known kind of electrical heating element **14** is laid or located in the troughs **5** and **6**. Covers **2** are afterwards placed in position so that the several beads and troughs register and co-act to retaiin the covers in position. The beads **8** and **9** on the covers are of such a size that sufficient space is allowed between them and the co-acting troughs **6** and **5** for accommodating the elements **14** without trapping the latter but at the same time concealing the elements.

Should it be desired to provide a multi-tiered assembly of modular units, any number of element carriers may be superposed one upon another, in which event the corresponding covers—apart from the top ones, are modified in cross-sectional shape accordingly, that is to say, they are not L-shaped (see bottom cover **1** in the arrangement illustrated in FIGURES 1 and 2).

If desired the units may be laid back-to-back in the same room or on opposite sides of a wall or partition. In such circumstances the top cover may be rebated or shortened at the top (see FIGURE 2) for accommodating a wall or partition W.

In the arrangement shown in FIGURE 2 the members **1** and **2** are of angular mitered shape to serve as quoins for corners. Alternatively of course they may be angled or curved in the opposite direction according to requirements.

The blocks may be glazed in any desired color or combination of colors.

With regard to the supply of electric current to the heater elements of the apparatus, this may be controlled in any preferred manner and may incorporate time switch means or thermostatic apparatus for use during off-peak hours.

It must be understood that the shape of the outer face of the covers **2** may be altered or modified and that they may be cemented in position if desired or merely rest detachably upon the carriers **1**. Also, when constructed of cement the element carriers **1** could be cast in situ.

I claim:

1. Electrical heating apparatus comprising modular units consisting of carrier refractory insulating body and refractory insulating cover body with nesting inner surfaces thereof and interposed electrical wire heater elements along the length of said units which are concealed between the nesting inner surfaces of said cover body and of carrier body, said modular units adapted for side-by-side and back-to-back abutment to build up a plurality of said correlated units in horizontal and vertical directions attached to a wall of an enclosure thereby serving for the heating of rooms and corridors, said cover body having an L shaped cross section with a longer vertical and a shorter horizontal outer edge of said L, the bottom and top rear surfaces of each of said carrier body and said cover body being squared at right angles to each other, the inner nesting surface of said carrier body being reversedly alternately tongued and grooved with said tongues having an oval cross section and projecting reversably in a direction towards the shorter horizontal outer edge of said L cross section, the inner nesting edge

of said cover body being likewise alternately tongued and grooved to complement the tongues and grooves of the inner surface of said carrier body with the cover body tongues being of oval cross section and projecting forwardly in a direction away from the shorter horizontal outer edge of the L cross section, said last named tongue projection of the cover body being shorter than said tongue projections of said carrier body thereby defining a channelway in nesting which is larger than said electrical wire heating elements and which conceals said elements without trapping them and fastening means to fasten said units to a wall.

2. Electrical heating apparatus as claimed in claim 1 wherein said fastening means comprises bores passing through said carrier body and cover body between the

node portions of the tongues of both and screw members passing through said unit for attachment to the wall of an enclosure.

3. Electrical heating apparatus as claimed in claim 2 comprising a plurality of said units having the side faces of each of said plurality mitered to fit into a corner of a room.

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