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ELECTRICAL APPARATUS

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FIG. 1.

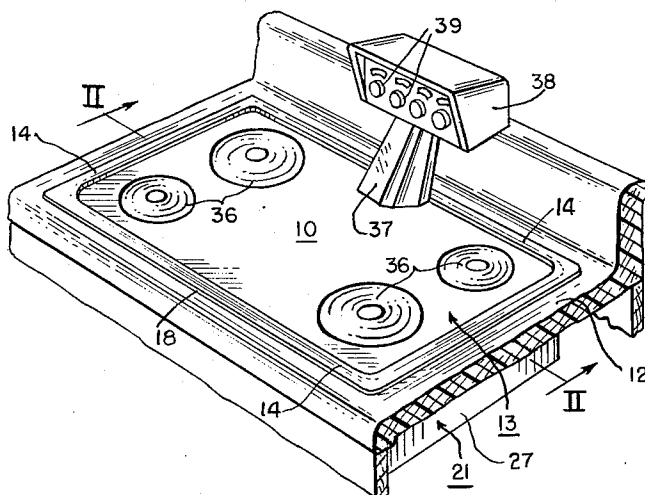


FIG. 2.

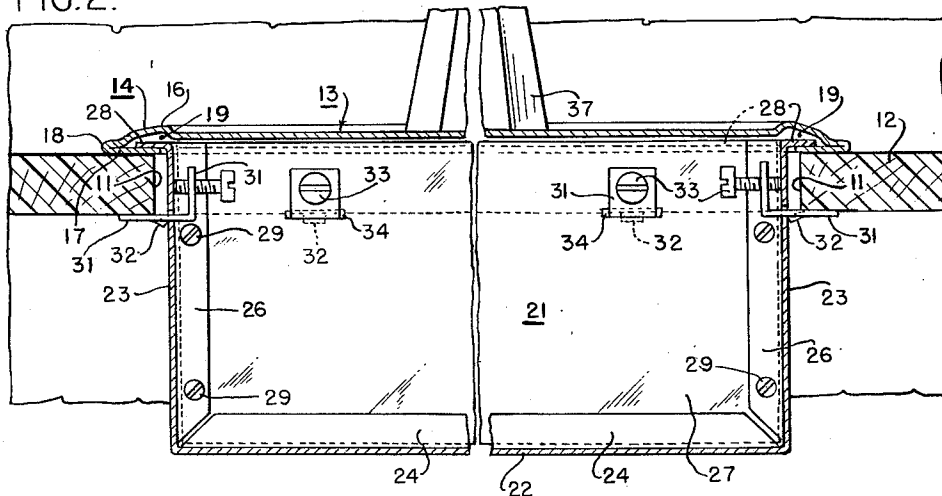
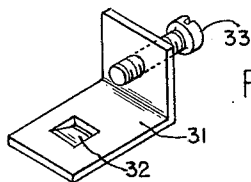


FIG. 3.



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This invention relates to ranges, more particularly to ranges of the "built-in" type where surface heater units are installed in groups in an existing counter top or cabinet.

The present invention provides a range platform utilizing a one-piece cover plate having a two layer peripheral rim or flange provided by doubling back the outer edge portion under the adjacent portion so that the two layers are joined at the outer edge of the flange by a U-bend. The two layers are formed into abutting relation throughout the outer portion of the flange while the inner portion of the upper layer is upwardly deformed to provide a space or pocket between the inner portions of the flange layers.

The abutting outer portion of the double layer cover plate flange provides an edge of minimum radius and hence a minimum crack between the cover plate and the counter top in which the range platform is installed.

The flange pocket receives outwardly-extending flanges at the upper edges of side and end walls of a heater box positioned beneath the cover plate, and simple screw-adjusted clamping lugs engage the lower surface of the counter top to clamp the heater box flanges and the lower layer of the cover plate flange against the upper surface of the counter top.

The present invention also locates the heater units adjacent the ends of the cover plate, thereby providing between the heater units sufficient space for a pedestal to carry the switches for the heaters. With this arrangement the mounting lugs for the pedestal are accessible by reaching through the heater openings in the cover plate. When the switches are of the presently popular infinite type, which utilize a small heater in the switch, the pedestal location for the switches is of particular advantage, as their previous location in the heater box subjected them to too high an ambient temperature, rendering them inaccurate and hence requiring a special heater box. The pedestal location of the switches eliminates this prior problem and expensive solution.

In the drawings:

FIG. 1 is a fragmentary perspective view of a range platform installed in a counter top and incorporating the present invention;

FIG. 2 is a sectional view, taken along the line II—II of FIG. 1, looking in the direction indicated by the arrows; and,

FIG. 3 is a perspective view of one of the clamping lugs, shown in operative position in FIG. 2.

Referring now to the drawings in greater detail, the reference character 10 indicates, in its entirety, a range platform installed in a rectangular opening 11 formed in a conventional kitchen counter top 12.

A cover plate 13, of a size and shape to completely cover the counter top opening, is formed of a single sheet of metal and has a peripheral rim or flange 14 integral therewith, formed with upper and lower layers 16 and 17, respectively, joined at the periphery of the flange 14 by a U-bend 18. In the outer portion of the flange the two layers 16 and 17 are in abutting relation, preferably for a radial distance of about one quarter inch. This abutting layer construction of the outer portion of the flange permits manufacturing control of the flange diameter to close tolerances and also effects minimum radius at the U-bend with resulting minimum crack

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between the flange 14 and the counter top on which it rests.

The flange bottom layer 17 is in a horizontal plane and hence in full contact with the horizontal surface of the counter top, so that when clamped thereagainst in a manner to be described later, the clamping forces are transmitted through the bottom layer directly to the counter top rather than into bending forces that would tend to open up the flange, thereby rendering practical the use of porcelain enamel on the entire exposed surface of the cover plate, including its flange. If the construction were such as to produce bending forces, the porcelain enamel would tend to chip at the periphery of the flange. The flange upper layer 16 is formed upwardly throughout its inner portion to provide a pocket 19 between it and the lower layer 17.

A heater box 21 is disposed beneath, and assembled with, the cover plate 13, and comprises a rectangular box having a bottom wall 22 and end walls 23 formed from a single sheet of material. The bottom wall 22 has side flanges 24 for stiffening the structure, and the end walls 23 have edge flanges 26 for attachment of heater box front and rear side walls 27.

The end walls 23 and side walls 27 have outwardly-extending flanges 28 lying in a common horizontal plane and resting on the cover plate flange lower layer 17, within the flange pocket 19. In assembling the heater box 21 with the cover plate 13, the flanges 28 of the heater box end walls 23 are positioned in the flange pocket 19 by flexing the end walls toward each other, prior to attachment of the side walls 27. After the end wall flanges are in place, the side walls 27 are positioned with their flanges in the pocket 19, after which the side walls are secured to the end wall flanges 26 by suitable means, such as screws 29.

L-shaped clamping lugs 31 (FIG. 3), having a locking tab 32 struck out from one leg, and a tightening screw 33 threaded through the other leg, are mounted in slots 34 provided at appropriate heights in the heater box side and end walls. The leg with the locking tab 32 engages the under surface of the counter top with the tab abutting the outer surface of the heater box wall. When the screw 33 is tightened against the inner surface of the heater box wall, the lug 31 tends to pivot about its point of contact with the under surface of the counter top, thereby forcing the heater box and its top flanges 28 downwardly to clamp the cover plate flange against the upper surface of the counter top. Mounting of the clamping lugs 31 and tightening of the screws 33 are effected by reaching through the cover plate openings for the burners 36. Preferably, the clamping lug 31 and the heater box walls are constructed of a material which is weaker than the material of which the cover plate is constructed, so that if the installer of the range platform screws the clamping lugs too tightly these parts will deform rather than the cover plate, thereby avoiding chipping of the porcelain enamel coating on the cover plate.

As best shown in FIG. 1, the range platform 10 includes two pairs of heaters 36, the pairs being located in the two end portions of the cover plate. This arrangement provides, intermediate the two pairs of heaters, a relatively wide intermediate portion, near the rear of which is located a pedestal 37 carrying a housing 38 for switches 39 which control the heaters 36.

Since on present electric ranges infinite switches are popular and such switches incorporate a small heater whose operation would be adversely affected by temperatures existing in the heater box were the switches located there, it is desirable to mount the switches above the range platform in the manner illustrated.

While the invention has been shown in but one form,

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it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof.

What is claimed is:

1. A range platform adapted for installation in a rectangular opening in a counter top or the like; said platform comprising a porcelain enameled cover plate having a peripheral flange including upper and lower layers of cover plate material joined at the flange outer periphery by a U-bend, said flange upper and lower layers being spaced from each other throughout the inner portion of said flange to provide an inwardly opening pocket and being in surface contact with each other throughout the remaining portion of said flange; a heater box having a bottom wall and side and end walls and being open at the top, said side and end walls having at their upper edges outwardly-extending flanges lying in a common horizontal plane and being disposed in the pocket between said upper and lower layers of the cover plate flange, said cover plate being adapted, when overlying the rectangular opening in said counter top or the like, to cover said opening with the peripheral flange lower layer resting on said counter top adjacent the edge of said opening; and means adapted to bias said heater box downwardly, whereby its flanges clamp said peripheral flange lower layer against said counter top.

2. A range platform adapted for installation in an opening in a counter top or the like: said platform comprising a cover plate having a peripheral flange including two layers of said cover plate joined at the flange outer periphery by a U-bend, said flange layers being in surface contact with each other throughout an outer portion of the flange and being spaced from each other throughout the remaining portion of the flange to provide an inwardly opening pocket; a heater box having a bottom

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wall and side wall structure and being open at the top, said side wall structure having at its upper edge outwardly-extending flange structure lying in a horizontal plane and being disposed in the pocket between said upper and lower layers of the cover plate flange, said cover plate being adapted, when overlying the opening in said counter top or the like, to cover said opening with the peripheral flange lower layer resting flat on said counter top adjacent the edge of said opening; and means for biasing said horizontal heater box flange structure downwardly, whereby the latter clamps said peripheral flange lower layer against said counter top.

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