March 31, 1953 E. S. SMITH 2,633,524

ELECTRICAL HEATING UNIT ASSEMBLY

Filed June 6, 1951 3 Sheets-Sheet 1

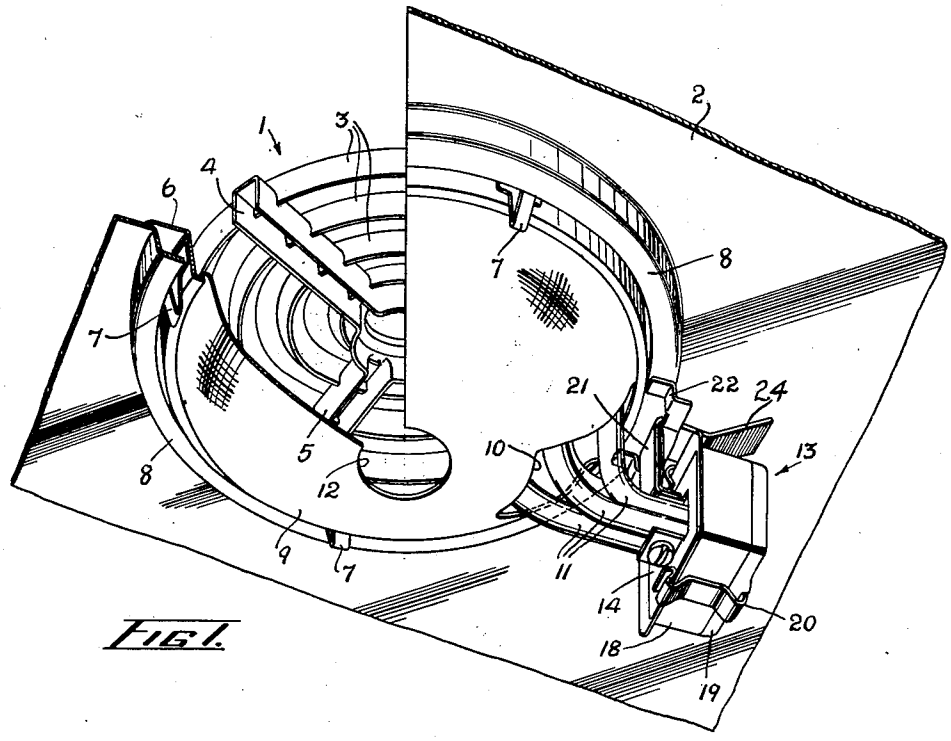



FIG. 1.

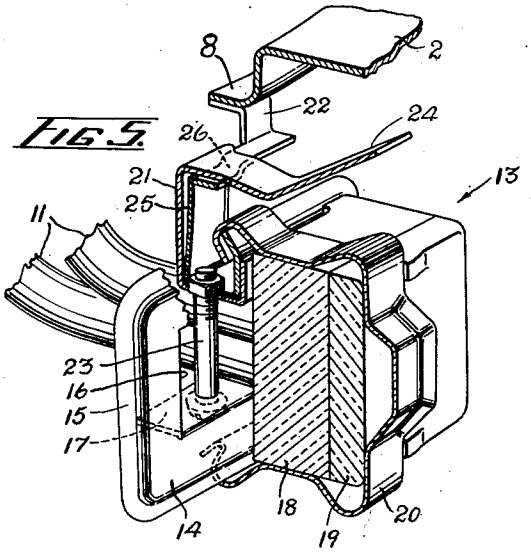



FIG. 3.

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ELECTRICAL HEATING UNIT ASSEMBLY

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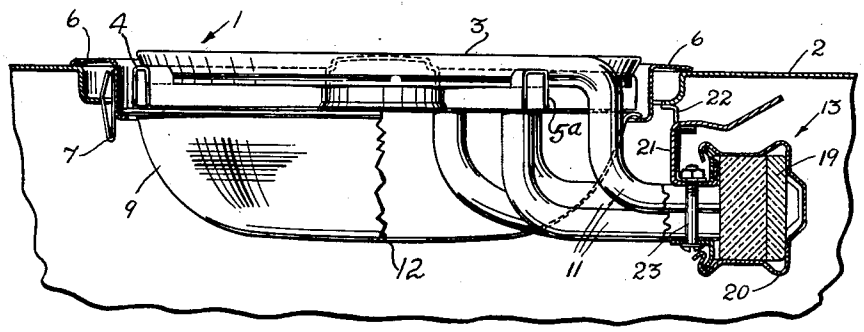



FIG 2.

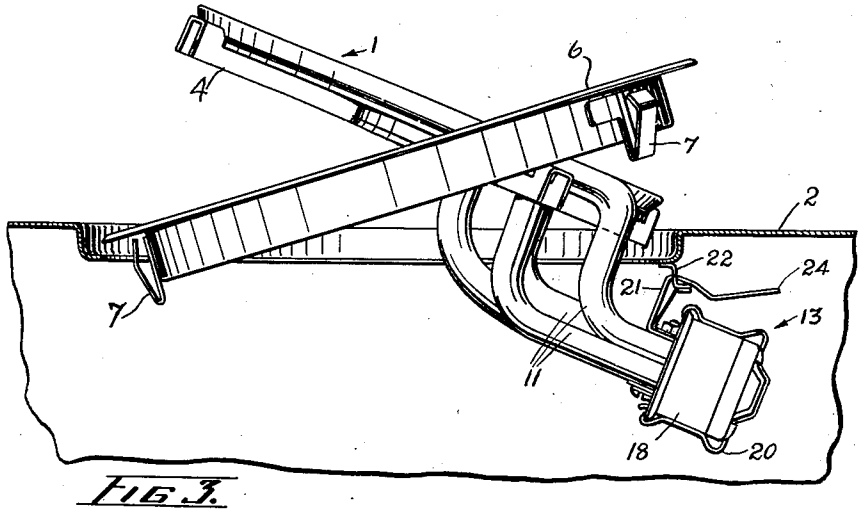



FIG 3.

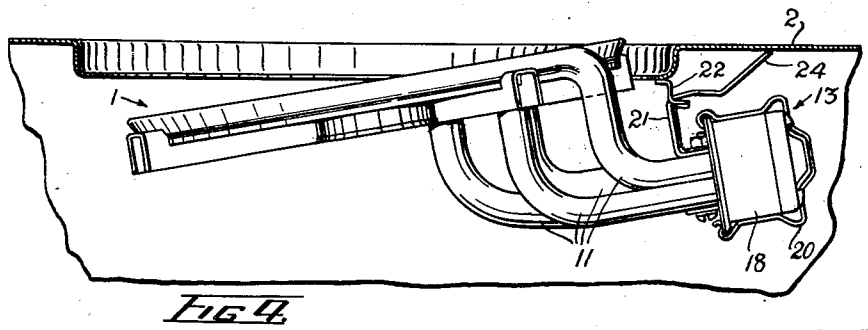



FIG 4.

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ELECTRICAL HEATING UNIT ASSEMBLY

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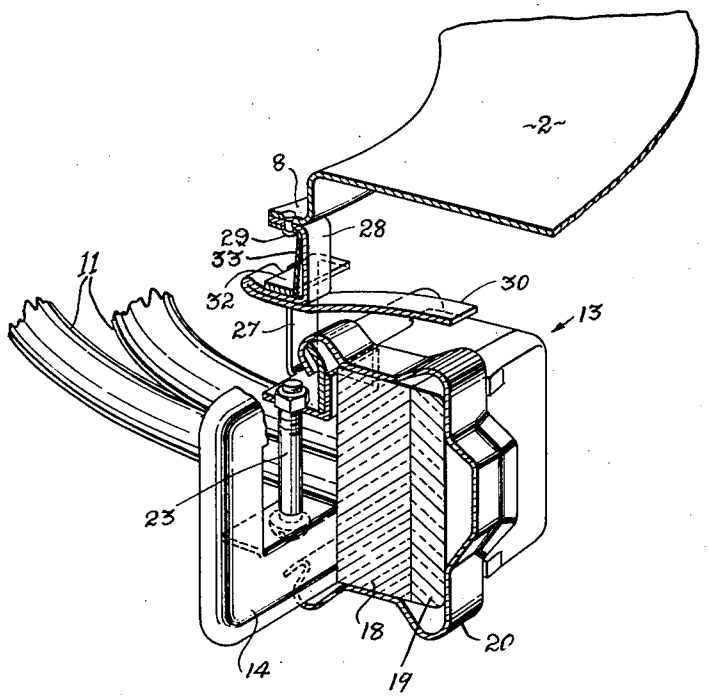



FIG. 6.

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Patented Mar. 31, 1953

2,633,524

# UNITED STATES PATENT OFFICE

2,633,524

## ELECTRICAL HEATING UNIT ASSEMBLY

Elmore Stanley Smith, North York Township, York County, Ontario, Canada, assignor to Moffats Limited, Weston, Ontario, Canada, a corporation

Application June 6, 1951, Serial No. 230,103
In Great Britain June 9, 1950

15 Claims. (Cl. 219—37)

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This invention relates generally to heater unit assemblies for electric ranges or cookers, and more particularly to such assemblies wherein the heater unit is a sheathed resistance element coiled into a flat grid and mounted in an opening, to lie substantially flush with or slightly above the surface of the range.

The more modern types of conventional electric ranges are provided with a top panel defining a cooking surface area, and having one or more circular openings each of which receives an electrical heater unit. The heater unit comprises a sheathed resistance element coiled into some form of grid, for instance a spiral whereof the turns are held in spaced alignment by means of radial supports fastened together to constitute a spider. Under the heater unit is positioned a reflector in the form of a dished pan which serves to redirect upwards the heat radiated downwardly from the resistance element. The reflector may be provided integrally with an outwardly turned flange around its top edge which serves to secure it in the opening. In such case, the flange is usually polished in order to enhance the appearance of the unit. Alternatively, a separate polished metal ring may be provided, in which case the reflector may be suspended from an inwardly turned flange on the ring. The heater unit is commonly provided with downwardly and outwardly turned terminal ends on the resistance elements, and these are directed through an opening provided for them in the reflector and are suitably connected to the electrical wiring inside the range cabinet.

For better heating efficiency and for general tidiness, it is most desirable that the reflector be kept clean and polished. However the spillage of food through the elements and onto the reflector is unavoidable, and foods are also spilled onto the ring; due to the proximity of the heating element to the reflector and to the ring, such spilled foods have a tendency to bake thereon, giving these parts an unsightly appearance.

In view of the conditions just described, it is highly desirable that the heater unit be so constructed and mounted in the range opening as to permit convenient removal of the reflector, or of the ring and reflector where separate parts are used, in order that they may be cleaned. Provision should also be made for supporting the heater element in the opening when the ring and reflector are removed in order to facilitate reassembly. From a commercial point of view it is necessary that the above characteristics be achieved by means of a relatively simple and

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economical structure which can be readily assembled during manufacture, and which may likewise be readily disassembled to permit repairs when necessary.

The object of the present invention is to provide an improved heater unit assembly for electric ranges, which will meet the above mentioned criteria of desirability.

A more specific object of the invention is to provide an electrical heater unit assembly comprising an improved hinge device permitting convenient removal of the ring and reflector, and adapted to maintain the unit in a readily accessible position within the range opening when those parts are removed.

Yet another object of the invention is to provide a heater unit and hinge construction having the qualities previously described, and which will furthermore assure firm seating of the heater unit within the ring or reflector in the range opening and eliminate play in the mounting, that is, wobbling or movement of the heater unit in the range opening.

In general, the invention accomplishes its objects by providing a heater unit construction comprising hinging means pivotally securing the heater unit directly to the top panel and allowing it to be tilted upwardly out of the opening in order to permit removal of the reflector from thereunder. Thus, both the ring and the reflector may be removed very conveniently. In addition, means are provided to limit the downward tilting of the heater unit into the opening when the ring and reflector are removed, such means taking the form of inter-engaging portions on the heater unit and on the top panel.

The hinging means may be constituted by a hinge device comprising a hook member and a loop member engaging each other transversely. If desired, one of the hinge members may have an extended wing for limiting the downward tilting of the heater unit into the range opening, as previously mentioned, by engaging some other portion.

In a preferred embodiment, the hook member is in the form of a C, and is fastened to the topside of a downward lateral extension of the resistance elements, and with its bight facing away from the opening. The loop member is in the form of a U depending from the underside of the top panel and located close to the edge of the range opening with its plane tangential to it. The ring and reflector may then be removed by tilting the heater unit upwardly. The upper leg of the C-shaped member is elongated in a direction away

from the opening and inclined slightly upwardly to constitute the previously mentioned wing. The downward tilting of the heater unit into the range opening when the ring and reflector are removed, is then limited by the abutment of the wing against the underside of the top panel. In addition, an upstanding spring blade is positioned within the bight of the C-shaped member and normally bears against the transverse portion of the U-shaped member; this tends to throw the heater unit forward into the opening and assures its firm seating in the ring.

For further objects and advantages of the invention, attention is now directed to the following description and accompanying drawings. The features of the invention believed to be novel will be more particularly pointed out in the appended claims.

In the drawings:

Fig. 1 is a perspective view of a heater unit assembly with a hinge device embodying the invention, as seen from below when positioned in the opening in the top panel of an electric range;

Fig. 2 is a side elevation view of the heater unit in the range opening and with the ring and the hinge device sectioned;

Figs. 3 and 4 are views similar to Fig. 2 and showing respectively the heater unit tilted up for removal of the ring and reflector, and then tilted down to a limited extent only, when the ring is removed;

Fig. 5 is a fragmentary perspective view showing the details of the hinge device in the preferred embodiment of the invention, the device being sectioned along a medial plane for greater clarity; and

Fig. 6 is a fragmentary perspective view of an alternative construction of a hinge device embodying the invention, the device being sectioned again as in Fig. 5.

Referring to the drawings generally, and more particularly to Fig. 1, there is shown a heater unit 1 positioned in a circular opening within a top panel 2 of an electric range, a fragment only of the panel being illustrated. The heater unit may be made of any of several types of sheathed resistance elements coiled to provide a grid in the form of a spiral, whereof the turns 3 are held in spaced alignment by means of a spider the radial arms of which may be seen at 4, 5 and 5a. The resistance element comprises a coiled resistance conductor mounted in a metallic sheath, and supported within the sheath by a compacted heat conducting and electrically insulating material such as powdered magnesium oxide. As an example only, the resistance element may be of the type described in U. S. Patent No. 2,272,136 to E. S. Smith and assigned to the same assignee as the present invention. It will be understood that the sheath only of the resistance element is shown in the drawings, the actual resistance conductor being inside the sheath.

The heater unit is supported within the opening by means of a ring 6 which is preferably of polished metal in order to enhance the appearance of the assembly. The ring is nested in the opening and supported by its outwardly directed upper flange which bears on the top panel. A number of spring clips 7 are attached to the outer periphery of the vertical wall of the ring, and bear against the dropped inner lip or flange 8 of the top panel to assure the firm seating or nesting of the ring within the opening. Supported by the inwardly directed lower flange of the ring is a reflector 9 having at its upper edge an outwardly directed narrow flange which bears on the inwardly directed lower flange of the ring. The reflector is provided with a lateral cut-out or opening 10 on its side complementary to the downwardly and outwardly extended ends 11 of the resistance elements, for enabling them to pass through beyond the opening and under the top panel. The central circular opening 12 in the reflector allows spilled foods to fall through into a suitable receptacle which may be located in the range cabinet. The ends of the radial arms such as 4 and 5 which support the turns of the heater unit, bear on the outwardly directed flange of the reflector 9 and are supported thereby, and are of course indirectly supported by the inwardly directed flange of the ring. It will thus be appreciated that in accordance with one aspect of the invention the ring and reflector combined can be considered as constituting a dished pan which is nested within the opening in the top panel of the range, and which normally supports the heater unit within the opening.



The ends 11 of the resistance elements are extended outwardly beyond the opening and under the top panel, as shown in the drawings, in order that the terminal block assembly indicated at 13 be located at a place where it is at all times protected from spilled foods and other foreign matter. It will be realized that it is very important that the electrical supply connections at the terminal block be guarded against corrosion, as would occur in the event of foods being spilled on them.

The terminal block assembly 13 comprises a rectangular plate 14 having forwardly flanged edges 15 as may be seen in greater detail in Fig. 5. The plate is provided with a rectangular aperture 16 which is made by punching out and bending normally thereto the metal to provide a fastening lip 17. To the rear face of the plate is secured a porcelain terminal block 18, and the terminal ends 11 of the resistance elements enter the block through the aperture 16 in the plate, and are fastened therein. It will be realized that there are two terminal ends for each resistance element, and that the four illustrated in the drawings correspond to a heater unit containing two resistance elements, but that a greater or lesser number of them may be provided to suit. Within the terminal block, the ends of the resistance conductors are projected beyond their sheaths in well known manner, so as to permit connection to electrical supply wires. The block is closed by a cover plate 19, likewise of insulating material, the two being pressed together by a spring clip 20 having lipped ends which engage the edges 15 of plate 14.

A preferred construction for a hinge device in accordance with the invention is illustrated in Fig. 5 and comprises the C-shaped metal strip 21, and the U-shaped strip 22. The former is fastened to the uppermost surfaces of the terminal ends 11 by means of a bolt 23 engaged in the lip 17 of the metal plate 14, the arrangement serving also to clamp the terminal ends together. The U-shaped strip 22 is fastened in dependent fashion to the underside of the top panel near the edge of the range opening, the fastening being achieved here by spot welding to the dropped flange 8 of the panel. The member 21 thus constitutes a hook with its bight or opening facing rearwardly, that is, away from the range opening, whereas the member 22 constitutes a

loop disposed in a plane substantially tangential to the range opening. The members engage each other transversely and permit pivotal movement of the heater unit in the range opening. The upper leg of the C-shaped member is substantially horizontal at the point where it engages the transverse portion of the U-shaped member; thereafter it dips down slightly and then it extends upwardly at a slight angle to the horizontal to provide a wing portion 24. The wing abuts against the underside of the top panel when the heater unit is tilted down and thereby limits the downward tilting into the range opening.

The steps to be followed in removing the ring and the reflector from the range opening are illustrated through Figs. 2 to 4. In Fig. 2, the heater unit 1 along with the ring 6 and reflector 9, are located in their normal positions within the range opening, the ring being supported in the opening by its upper flange, and both the heater unit and the reflector being supported by the lower flange of the ring. The members 21 and 22 of the hinge device are transversely engaged, but the heater unit is supported substantially through the ring and not through the hinge.

In order to remove the ring and reflector, the heater unit 1 is first tilted upwardly about its hinge as illustrated in Fig. 3, and the reflector and ring are slipped out from thereunder. When the heater unit is subsequently released, its downward tilting into the range opening is limited to a near horizontal position by reason of the abutment of the wing 24 of the C-shaped member 21 against the underside of the top panel as may be seen in Fig. 4. Thus the heater unit is conveniently supported in an accessible location within the range opening, and there is no need to provide external means for supporting it during the time when the ring is removed, as when it is being cleaned for instance. Moreover the hinge device is separable, thereby facilitating assembly during manufacture, and also disassembly for repair purposes when needed.

In accordance with a further feature of the invention, there is provided within the bight of the C-shaped member 21, a spring blade 25, as may be seen most readily in Fig. 5. The lower end of the blade may be held under the bolt 23 as illustrated, and its upper end bears against the transverse portion 26 of U-shaped member 22, exerting a pressure against it. The result of this arrangement is to push the heater unit forward so that the radial members 4 and 5 press against the vertical wall of the ring. This assures the firm seating of the heater unit in the ring and prevents play therein; in other words, it eliminates undesirable movement or wobbling of the heater unit in the range opening when in use.

Referring to Fig. 6, there is shown another construction of a hinge device for a heater unit embodying the invention. This construction might be termed an inversion of the construction shown in Fig. 5. The same terminal block assembly comprising rectangular plate 14, porcelain block 18, cover 19 and spring clip 20 is utilized, the terminal ends 11 of the heater unit being fastened in the same manner. The hinge device however is constituted by a rectangular metal frame or inverted U-shaped member 27 serving as the loop member, and a C-shaped metal strip 28 serving as the hook member. The frame member is fastened to the extended terminal ends 11 of the resistance elements, being held by the bolt 23, and corresponds in effect to the U-shaped member previously considered with respect to the embodiment illustrated in Fig. 5, except that now it is inverted and fastened to the heater unit instead of to the top panel. The C-shaped member 28 is fastened to the underside of the top panel near the edge of the range opening and with its bight facing inwardly toward it. As shown in the drawing, the fastening is effected through a rivet 29 to the flange 8 of the range opening. The lower leg of member 28 is bent back on itself and extended rearwardly away from the range opening, forming the wing 30. The pivoting of the heater unit now occurs with the transverse portion 32 of member 27 rolling within the bight of member 28, and the downward tilting of the heater unit into the range opening is limited by the abutment of the terminal block, or more accurately, of the clip 20 thereon, against the underside of wing 30.

The previously considered additional feature whereby the heater unit is pushed forward into the range opening to assure its firm seating in the ring, may be effected by mounting a spring blade 33 within the bight of the C-shaped member 28. As shown in the drawing, blade 33 is caught and held in place by the rivet 29, so that it presses against the rear side of the transverse portion 32 of member 27. The force exerted thereby causes radial members 4 and 5 of the heater unit to bear against the vertical wall of the ring and prevents play in the heater unit mounting.

While certain specific embodiments of the invention have been shown and described, they are to be considered as illustrative and not as limiting examples, and it will be understood that various changes in the shape, size and arrangement of the parts may be resorted to without departing from the spirit and scope of the invention.

What I claim as my invention is:

1. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a dished pan nested in the opening and supporting the heater unit, said pan having a lateral cut-out complementary to said extended portion for allowing it to pass through; a separable hinge device comprising a loop member and a hook member engaging in the loop member transversely, one of said members being fastened to said extended portion of the heater unit and the other being fastened to the underside of the top panel for allowing pivotal movement of the heater unit within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit into the opening when the pan is removed therefrom.

2. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a ring nesting in said opening and having an inwardly turned lower flange supporting the heater unit; a reflector depending on said flange and having a lateral cut-out complementary to said extended portion for allowing it to pass through; a separable hinge de-

vice comprising a loop member and a hook member engaging in the loop member transversely, one of said members being fastened to said extended portion of the heater unit and the other being fastened to the underside of the top panel for allowing pivotal movement of the heater unit within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit it tilted down, thereby to limit the downward tilting of the heater unit into the opening when the ring and reflector are removed therefrom.

3. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a dished pan nested in the opening and supporting the heater unit, said pan having a lateral cut-out complementary to said extended portion for allowing it to pass through; a separable hinge device comprising a loop member and a hook member engaging in the loop member transversely, the hook member being fastened to said extended portion of the heater unit and the loop member being fastened to the underside of the top panel for allowing pivotal movement of the heater unit within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit into the opening when the pan is removed therefrom.

4. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a dished pan nested in the opening and supporting the heater unit, said pan having a lateral cut-out complementary to said extended portion for allowing it to pass through; a separable hinge device comprising a loop member and a hook member engaging in the loop member transversely, the hook member being fastened to the underside of the top panel and the loop member being fastened to said extended portion of the heater unit for allowing it to pivot within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit into the opening when the pan is removed therefrom.

5. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a ring nesting in said opening and having an inwardly turned lower flange supporting the heater unit; a reflector depending on said flange and having a lateral cut-out complementary to said extended portion for allowing it to pass through, a separable hinge device comprising a loop member and a hook member engaging in the loop member transversely, the hook member being fastened to said extended portion of the heater unit and the loop member being fastened to the underside of the top panel for allowing pivotal movement of the heater unit within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit into the opening when the ring and reflector are removed therefrom.



6. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a dished pan nested in the opening and supporting the heater unit, said pan having a lateral cut-out complementary to said extended portion for allowing it to pass through; a separable hinge device comprising a loop member and a hook member engaging in the loop member transversely, one of said members being fastened to said extended portion of the heater unit and the other being fastened to the underside of the top panel near the edge of said opening, the members being positioned to interengage through lateral displacement of the heater unit towards said edge of the opening, and additionally, to allow pivotal movement to the heater unit within the opening; and an extended wing on one of said members for abutting against the part to which the other member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit into the opening when the pan is removed therefrom.

7. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a reflector nested in the opening and supporting the heater unit, said reflector having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, one of said members being fastened to said extended portion of the heater unit and the other being fastened to the underside of the top panel for allowing pivotal movement of the heater unit in the opening, said C-shaped member having one of its legs elongated for abutting against the part to which the U-shaped member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the reflector is removed from the opening.

8. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a ring nesting in said opening and having an inwardly turned lower flange supporting the heater unit; a reflector depending on said flange and having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, one of said members being fastened to said extended portion of the heater unit and the other being fastened to the underside of the top panel for allowing pivotal movement of the heater unit in the opening, said C-shaped member having one of its legs elongated for abutting against the part to which the U-shaped member is fastened when the heater unit is tilted down, thereby to limit the downward tilting of

the heater unit when the ring and reflector are removed from the opening.

9. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a reflector nested in the opening and supporting the heater unit, said reflector having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to said extended portion of the heater unit and the U-shaped member being fastened to the underside of the top panel for allowing pivotal movement of the heater unit in said opening, said C-shaped member having its upper leg elongated for abutting against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the reflector is removed from the opening.

10. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a reflector nested in the opening and supporting the heater unit, said reflector having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to the underside of the top panel and the U-shaped member being fastened to said extended portion of the heater unit for allowing it to pivot in said opening, said C-shaped member having its lower leg elongated rearwardly for abutting against said extended portion when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the reflector is removed from the opening.

11. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a reflector nested in the opening and supporting the heater unit, said reflector having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to the topside of said extended portion of the heater unit and with its bight facing away from said opening, the U-shaped member being fastened to the underside of the top panel and with the plane of its loop generally parallel to the side of said opening adjacent to it, said C-shaped member having its upper leg elongated in a direction away from said opening in order to abut against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the reflector is removed from the opening.

12. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a ring nesting in said opening and having an inwardly turned lower flange supporting the heater unit; a reflector depending on said flange and having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to the topside of said extended portion of the heater unit and with its bight facing away from said opening, the U-shaped member being fastened to the underside of the top panel and with the plane of its loop generally parallel to the side of said opening adjacent to it, said C-shaped member having its upper leg elongated in a direction away from said opening in order to abut against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the ring and reflector are removed from the opening.

13. In an electric range, the combination of a top panel having an opening therein; a heater unit positioned within the opening and having a laterally extended portion projecting under the top panel beyond the opening for receiving electrical connections; a reflector nested in the opening and supporting the heater unit, said reflector having a lateral cut-out complementary to said extended portion for allowing it to pass through; and a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to the topside of said extended portion of the heater unit and with its bight facing away from said opening, the U-shaped member being fastened to the underside of the top panel and with the plane of its loop generally parallel to the side of said opening adjacent to it, said C-shaped member having its upper leg elongated in a direction away from said opening in order to abut against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit when the reflector is removed from the opening, and an upstanding spring blade fastened to said C-shaped member and positioned within its bight in a manner to press against the transverse portion of the U-shaped member thereby to press the heater unit resiliently against the side of the reflector remote from said hinge device in order to assure the firm seating thereof.

14. In an electric range, the combination of a top panel having a substantially circular opening therein; a ring having an outwardly directed upper flange engaging the top panel at the periphery of the opening for supporting the ring in said opening, a dependent wall and an inwardly directed lower flange; a heater unit comprising a generally spirally formed sheathed resistance element held in a plane by radial grid members, said unit being normally supported on said lower flange whereon the ends of said radial members rest, the terminal ends of said resistance element being extended together laterally and downwardly under the top panel beyond said opening onto a terminal block for receiving electrical connections; a reflector positioned below said heater unit and supported by said lower flange, said reflector having a lateral cut-out complementary to the extended ends of said resistance element for allowing them to pass through; and a separable hinge device compris-

ing a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to said terminal ends with its bight facing away from the heater unit, the U-shaped member being fastened to the underside of said top panel near the edge of said opening and with the plane of its loop tangential to the opening, said C-shaped member having its upper leg elongated in a direction away from the heater unit and inclined upwardly in order to abut against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit and maintain the C-shaped and the U-shaped members of the hinge in engagement when the ring and reflector are removed from the opening.

15. In an electric range, the combination of a top panel having a substantially circular opening therein; a ring having an outwardly directed upper flange engaging the top panel at the periphery of the opening for supporting the ring in said opening, a dependent wall and in inwardly directed lower flange; a heater unit comprising a generally spirally formed sheathed resistance element held in a plane by radial grid members, said unit being normally supported on said lower flange whereon the ends of said radial members rest, the terminal ends of said resistance element being extended together laterally and downwardly under the top panel beyond said opening onto a terminal block for receiving electrical connections; a reflector positioned below said heater unit and supported by said lower flange, said reflector having a lateral cut-out complementary to the extended ends of said resistance element for allowing them to pass through; a separable hinge device comprising a C-shaped member and a U-shaped member engaging each other transversely, the C-shaped member being fastened to said terminal ends with its bight facing away from the heater unit, the



U-shaped member being fastened to the underside of said top panel near the edge of said opening and with the plane of its loop tangential to the opening, said C-shaped member having its upper leg elongated in a direction away from the heater unit and inclined upwardly in order to abut against the underside of the top panel when the heater unit is tilted down, thereby to limit the downward tilting of the heater unit and maintain the C-shaped and the U-shaped members of the hinge in engagement when the ring and reflector are removed from the opening, and an upstanding spring blade fastened to said C-shaped member and positioned within its bight in a manner to bear against the transverse portion of the U-shaped member engaged within it, thereby to apply a lateral force to said heater unit causing the grid members to press against the dependent wall of the ring on the opposite side from the said hinge device in order to assure firm seating of the heater unit.

ELMORE STANLEY SMITH.


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