

Aug. 5, 1958

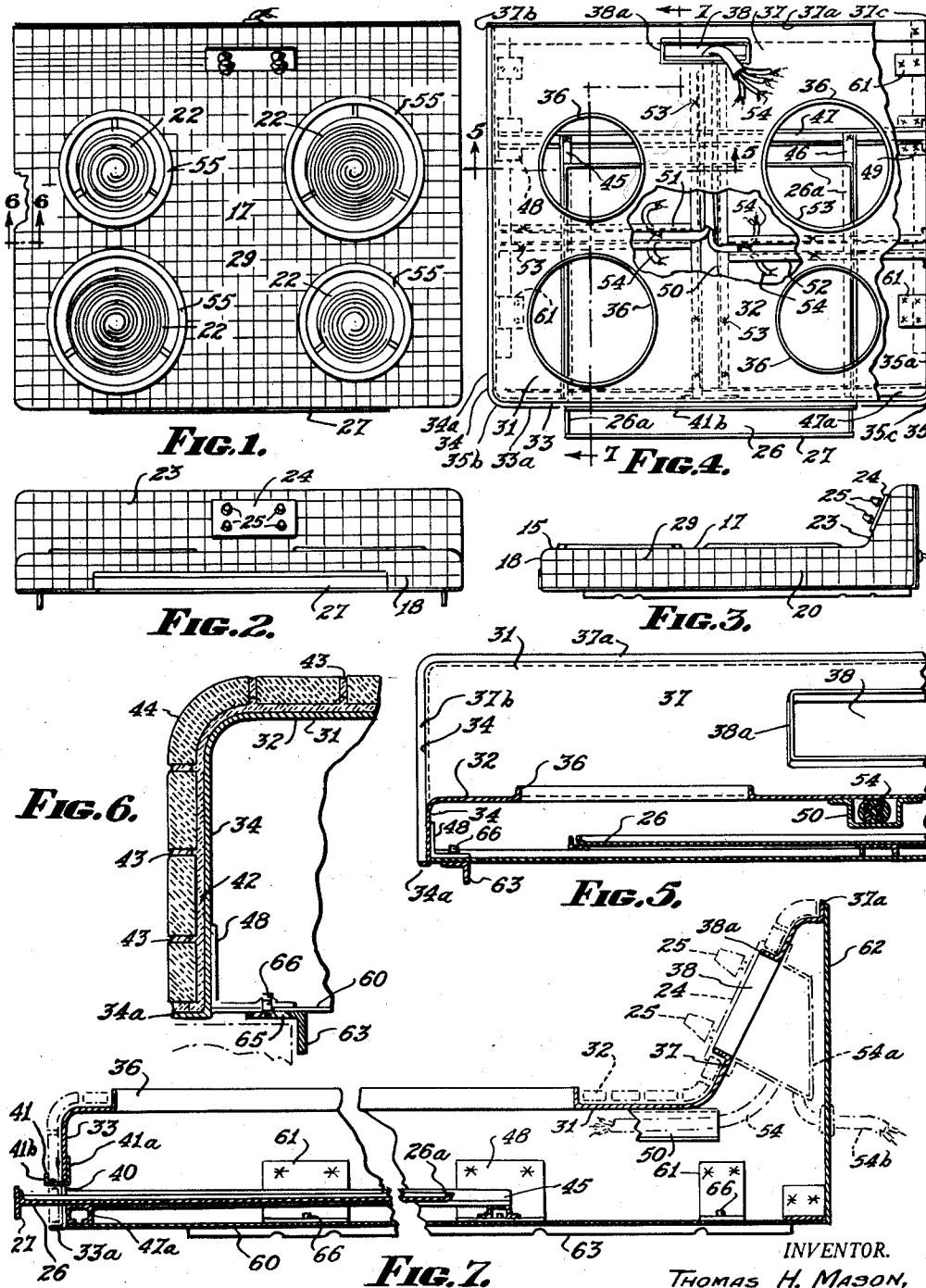
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2,846,558

CABINET TOP RANGE UNIT

Filed July 11, 1956

2 Sheets-Sheet 1



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FIG. 8.

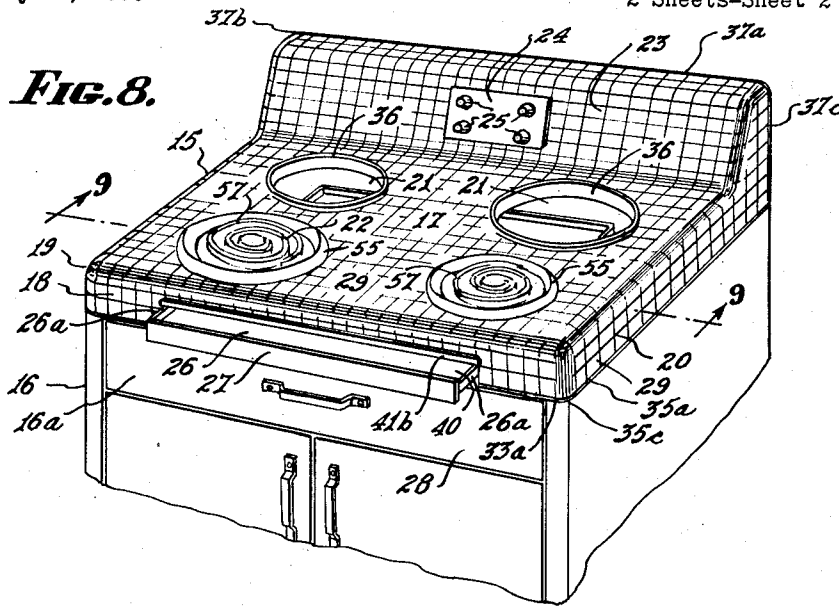


FIG. 9.

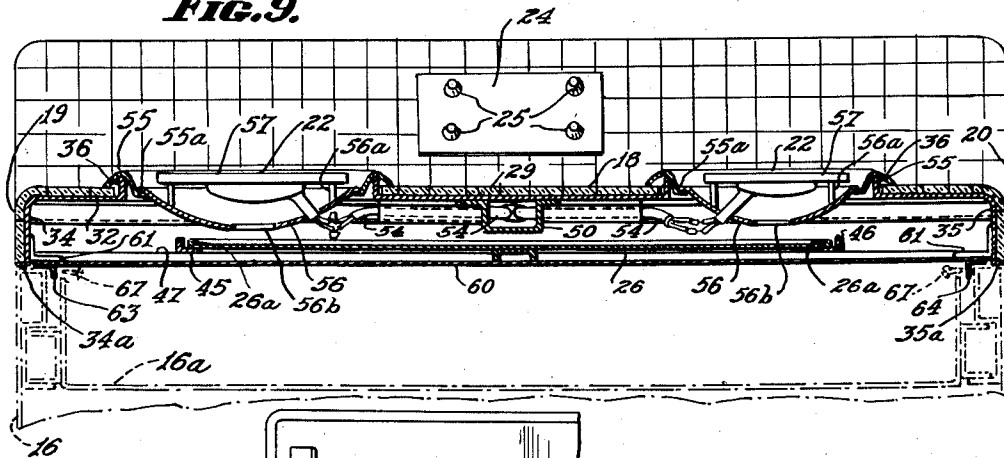
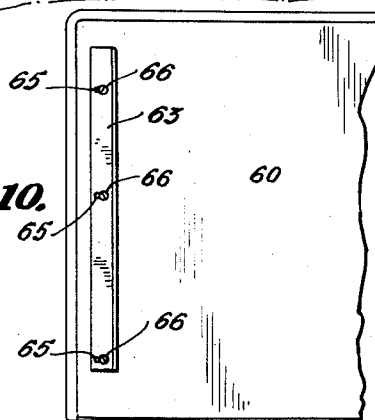


FIG. 10.



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CABINET TOP RANGE UNIT

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14 Claims. (Cl. 219—37)

This invention relates to range or burner units such as are commonly employed for household cooking purposes. More particularly, the invention relates to an improved range unit which, in accordance with recent trends in domestic kitchen equipment, is adapted to be used as a "table top" unit capable of being mounted upon a base cabinet or the like.

While table top range units are currently available, all of those of which I am aware are in the form of burner units which must be custom fitted to the supporting cabinet or work surface, it being necessary to cut one or more openings in the work surface of a size to receive the burner units, the units projecting downwardly beneath the work surface. If the work surface is supported on a base cabinet, it has been found that the upper drawer of the cabinet must be removed because of the downwardly projecting burner assemblies. In addition, range units of this character are generally formed from stainless steel or other similar materials which are relatively difficult to keep clean and require constant attention if they are to be maintained in bright and shiny condition.

In contradistinction to the range units currently available, it is a principal object of this invention to provide a range unit having a novel external surface composed of ceramic tile which, among its other advantages, is highly resistant to discoloration, is easily cleaned, and serves as a useful place for the housewife to set hot pans and the like which could not be placed on a conventional work surface.

Another object of the invention is the provision of a range unit formed from a relatively inexpensive metal stamping or shell to which the ceramic tile is secured in a novel manner, the metal shell providing a supporting band or flange extending around the perimeter of the tile surfaces so as to effectively support and protect the tile from damage, especially during shipping and installation of the range unit.

Another object of the invention is the provision of a range unit which is of novel and compact construction such that none of its parts project downwardly beneath the plane of its bottom mountings, thereby permitting the unit to be secured to a base cabinet without in any way interfering with the normal operation and use of the upper drawer of the base cabinet.

Still another object of the invention is to provide a range unit of the character set forth which includes within its confines a drip pan positioned beneath the heating elements and arranged to be conveniently removed from the unit to facilitate the cleaning thereof.

Still another object of the invention is the provision of a range unit formed from a unitary metal stamping to which bracing members are secured to increase the rigidity of the unit, the bracing members being so constructed and arranged to provide protective casings or conduits for the electrical wiring for the heating elements.

Still a further object of the invention is the provision of a range unit of the character set forth including bottom and rear fire walls contained within the confines of the

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unit, the fire walls being highly advantageous in event of accidental ignition of grease or the like to prevent the flames from spreading, particularly to the underlying cabinet.

Yet another object of the invention is the provision of a range unit of the character set forth in which the frame is provided with adjustable mounting elements by means of which the unit may be fitted to any standard size base cabinet unit irrespective of whether the cabinet is constructed of metal or wood.

The foregoing, together with other objects of the invention which will appear hereinafter or which will be apparent to the skilled worker in the art upon reading these specifications, I accomplish by that construction and arrangement of parts of which I shall now describe an exemplary embodiment.

Referring now to the several figures of the drawings wherein like parts are designated by like reference numerals throughout the various views:

Figure 1 is a plan view illustrating an exemplary embodiment of the invention.

Figure 2 is a front elevational view thereof.

Figure 3 is a side elevational view taken from the right of Figure 2.

Figure 4 is a plan view similar to the view of Figure 1 but having parts, including the tile surfacing, removed and with other parts broken away to facilitate detailed illustration of pertinent parts comprising the main frame or shell of the unit.

Figure 5 is a fragmentary sectional view taken along the line 5—5 of Figure 4, the view being on an enlarged scale.

Figure 6 is an enlarged detailed and fragmentary vertical sectional view taken along the line 6—6 of Figure 1.

Figure 7 is an enlarged vertical sectional view taken along the irregular line 7—7 of Figure 4.

Figure 8 is a perspective view illustrating the improved range unit as employed in conjunction with a conventional base cabinet.

Figure 9 is an enlarged vertical sectional view taken along the line 9—9 of Figure 8, the upper portion of the base cabinet being indicated by broken lines, and

Figure 10 is a fragmentary bottom view of the range unit illustrating an adjustable element which may be employed in affixing the unit upon a base cabinet.

Referring first to Figure 8 of the drawings, an exemplary range unit constructed in accordance with the invention is indicated generally at 15. The unit is mounted upon a conventional base cabinet 16 herein shown as having an upper drawer 16a. It will be understood, however, that other suitable supporting means may be readily substituted for the cabinet 16 and that various other arrangements serving to mount the range unit will readily occur to those skilled in the art without departing from the spirit and scope of the invention.

In general, the range unit 15 comprises a generally rectangular work surface or top surface 17 terminating outwardly in downwardly extending aprons or side surfaces 18, 19 and 20 which form the front and sides of the unit, respectively. The top surface 17 has a plurality of circular openings therein, generally indicated at 21, which are adapted to receive heating elements in the form of conventional electrical heating units of a character well known in the art. Two of these heating elements are generally indicated at 22.

The top surface 17 terminates rearwardly in an up-standing back wall portion 23 provided with a suitable opening to receive a control panel 24 having switch knobs or the like 25 for controlling the operation of the heating elements 22. The front wall surface 18 of the unit has an elongated opening therein adapted to receive a shallow drip pan 26 having a front wall 27, the drip pan

being arranged to slidably enter the unit and being illustrated in partly withdrawn position. The pan 26 may consist merely of a flat sheet of metal or, preferably, the pan will have upturned edges indicated at 26a.

The external surfaces of the range units are composed of ceramic tile generally indicated at 29 throughout the drawings. It will be apparent that various colors and patterns of tile may be employed to enhance the appearance of the unit. Similarly, the tile may be of various sizes and shapes, although in a preferred embodiment the tile is generally in the form of one inch squares with suitably contoured edge pieces.

Referring now to Figures 4 through 7 of the drawings, the frame for the unit comprises a metal stamping or shell 31 having a top panel 32 joined by integral downwardly extending aprons or side panels 33, 34 and 35 which, respectively, form the front and sides of the shell. These panels provide supporting surfaces for the tile surfaces 17, 18, 19 and 20 referred to hereinbefore.

The top panel 32 of the shell is formed with upwardly turned annular flanges 36 defining the periphery of the heating element receiving openings 21. These flanges serve the dual function of providing a protective edging for the tile and to form a collar or ring on which the heating elements are seated. In similar fashion, the side panels 33, 34 and 35 are formed with outwardly turned flanges 33a, 34a, and 35a which are continuously joined together at the corners 35b and 35c, as seen in Figure 4.

The top panel 32 of the shell terminates rearwardly in an integral back wall portion 37 which supports the tile panel 23, the wall portion 37 terminating upwardly in an upstanding flange 37a joined at its ends by outwardly projecting flange portions 37b and 37c which define the rearmost edges of the side panels 34 and 35, respectively. The panel 37 also has an opening 38 therein of a size to receive the control panel 24, this opening also being defined by an outwardly projecting annular flange 38a which also serves the dual function of protecting the tile and forming a collar or sleeve of a size to receive the control panel.

Again, with reference to Figures 4 and 7 of the drawings, the front panel 33 of the shell is cut away, as at 40, to provide an opening of a size to receive the drip pan 26. A channel shaped member 41 having an elongated leg 41a is spot welded or otherwise fixedly secured to the inner surface of the panel 33, thereby again providing a protective flange having an upturned portion 41b against which the front wall 27 of the drip pan is adapted to abut.

The various flange elements just described form a continuous protective metal edging for the tile surfaces; and to this end the width of the flanges will be equal to or slightly in excess of the thickness of the tile. In addition to protecting the edges of the tile, the flanges also serve as supporting surfaces to which the edges of the tile blocks may be secured. Thus the flanges will additionally serve to assist in the proper alignment and registry of the blocks.

The application of tile to the metal shell may be accomplished in conventional manner, the tile being secured by means of a suitable cement, mastic, or other compound for the purpose, such cementing substance being generally indicated at 42 in Figure 6. Subsequent to affixing the tile to the shell, grouting, which is generally indicated at 43, is applied to fill the spaces between the adjacent blocks. It will be understood that the tile blocks, properly interspaced to later receive the grouting, may be detachably affixed to a carrier web, such as a sheet of kraft paper, and applied to the shell in strip form, as will be readily understood by the skilled worker in the art.

As shown throughout the drawings the intersecting edges of the various plane tile surfaces are of rounded form, such edge pieces being indicated at 44 in Figure 6. However, it is to be understood that other arrangements providing various treatments of the intersecting edges

may be employed without departing from the spirit and scope of the invention.

Referring again to Figures 4 and 5 of the drawings, the drip pan 26 is slidably received on a pair of guide rails composed of angle bars 45 and 46, the bars being affixed at their inner ends to a transverse supporting rail 47 which, at its opposite ends, is affixed to the side panels 34 and 35 of the shell. This may be conveniently done by means of brackets 48 and 49 spot welded or otherwise secured to the shell. At their front ends the guide rails 45 and 46 may be affixed to a transverse channel member 47a, as seen in Figures 4 and 7 of the drawings, the channel bar also being secured at its ends to the shell.

The rigidity of the shell, particularly the top panel 32 thereof, is substantially increased by means of channel members 50, 51 and 52 affixed to the undersurface of the panel 32 by spot welding, as indicated at 53 (Figure 4). In addition to strengthening the shell, the channel members 50, 51 and 52 also serve as protective casings or conduits for the electrical wiring or cables 54 for supplying electrical current to the heating elements 22. As will be clear from Figure 4, the wiring will be housed in the channel 50 from which it will branch outwardly to the several units through the channels 51 and 52. A suitable switch box, indicated at 54a (Figure 7), will serve to receive the wiring and effect its connection to the switch panel 24. A primary supply cable for supplying electrical current to the unit is indicated at 54b.

As best seen in Figures 8 and 9, each of the heating elements 22 comprises an annular fitting or rim 55 of a size to be received by the annular flanges 36a of the shell, the rim 55 also providing inwardly disposed annular front flanges 55a upon which the heat reflector 56 is received. The reflectors mount upstanding bracket elements 56a which in turn support the heating coils or elements 57. The reflectors are generally of dish-shape and have bottom openings 56b through which spilled grease or the like will drain onto the drip pan 26 which underlies the several heating elements.

A fire wall and bottom closure for the unit is provided by a metal sheet 60 underlying the drip pan 26. While the sheet 60 may be affixed to the shell in various ways, it may be conveniently mounted by means of angle brackets 61 which are spot welded to the sides of the shell. To the rear of the unit, a metal sheet 62 serves as a rear fire wall and as a closure for the back of the unit, the sheet 62 also being secured to the shell by bracket means and spot welding, or by other means such as screws or the like.

Referring now to Figures 9 and 10 of the drawings, the under side of the unit will be provided with adjustable mounting brackets herein shown as including angle bars 63 and 64 by means of which the unit may be secured to a base cabinet or other support. As best seen in Figure 10, the bracket 63 may have elongated perforations 65 by means of which the bar is adjustably affixed to the unit by means of threaded screws 66. It will be understood that the bar 64 is similarly arranged and that suitable fastening means, indicated in Figure 9 by the reference numeral 67, may be readily used to fasten the downwardly disposed portions of the angle bars 63 and 64 to supporting members.

It will be evident from the foregoing description that, by virtue of the compact arrangement of parts, the range unit has no parts which protrude downwardly beneath the plane of the fire wall other than the mounting brackets themselves. Thus the unit may be readily fitted on a base cabinet and, when so fitted, will in no way interfere with the normal use of the upper drawer thereof.

Modifications may, of course, be made in my invention without departing from the spirit and purpose of it. Having, however, described my invention in an exemplary embodiment, what I desire to protect and secure by Letters Patent is:

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1. In a cabinet top range unit, a metal shell defining the top, front and side panels of said unit, said shell having a plurality of openings in the top panel thereof to receive burner units, said openings being defined by upstanding annular flanges, outturned flanges extending along the lower edges of said front and side panels, and tiles secured to the outer surfaces of said top, front and side panels to form tile surfaces, certain of said tiles abutting against said annular flanges and others abutting against said outturned flanges, said flanges being substantially as wide as said tiles are thick, whereby to support and protect the otherwise exposed end edges of the said abutting tiles.

2. In a cabinet top range unit, a metal shell defining the top, front and side panels of said unit, said shell having a plurality of openings in the top panel thereof to receive burner units, said openings being defined by upstanding annular flanges, an elongated, relatively narrow drip pan opening in said front panel, an outturned flange extending along the upper edge at least of said elongated opening, and outturned flanges extending along the lower edges of said front and side panels, and tiles secured to the outer surfaces of said top, front and side panels to form tile surfaces for said unit, certain of said tiles abutting against the said annular and outturned flanges, said flanges being substantially as wide as said tiles are thick, whereby to support and protect the otherwise exposed end edges of said tiles.

3. In a cabinet top range unit, a metal shell defining the top, front and side panels of said unit, said top panel terminating rearwardly in an upstanding back wall having top and side portions, a plurality of openings in said top panel to receive burner units, said openings being defined by upstanding annular flanges, at least one opening in said upstanding back wall defined by an outwardly projecting annular flange, and outturned flanges extending along the free edges of said front and side panels and the top and side portions of said upstanding back wall, and a plurality of tiles secured to the outer surfaces of said shell to form a tile covering therefor, certain of said tiles abutting against said annular flanges and the said outturned flanges, said flanges all being substantially as wide as said tiles are thick, whereby to protect and support the otherwise exposed end edges of the said abutting tiles.

4. In a cabinet top range unit, a metal shell defining the top, front and side panels of said unit, said shell having a plurality of openings in the top panel thereof to receive burner units, said openings being defined by upstanding annular flanges, outturned flanges extending along the lower edges of said front and side panels, a plurality of tiles secured to said shell to define the outer surfaces of said unit, certain of said tiles abutting against the said flanges, said flanges being substantially as wide as said tiles are thick so as to protect and support the otherwise exposed end edges of the abutting tiles, and adjustable attachment means secured to the lowermost edges of said shell for securing said shell to a base cabinet, said shell being characterized in that no portion of said range unit projects downwardly beyond said shell excepting said mounting means.

5. In a cabinet top range unit, a metal shell defining the top, front and side panels of said unit, said shell including an upstanding back wall having side portions in continuation of said side panel, a plurality of openings in the top panel of said shell to receive burner units, said openings being defined by upstanding annular flanges, outturned flanges extending along the free edges of said

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front and side wall panels, said back wall and said side portions, and reinforcing channels secured to the under surface of said top panel, one of said channels extending centrally of said top panel from front to rear, and additional channels extending between said first named channel and the opposite side panels of said shell, said channels defining interconnecting passageways in which electrical wiring for said unit may be contained.

6. The structure claimed in claim 5 including an elongated, narrow opening in said front panel, a flange projecting outwardly from the upper edge of said elongated opening, track forming members projecting rearwardly from the opposite ends of said elongated opening, and a relatively flat drip pan inserted in said elongated opening and slidable on said tracks.

7. The structure claimed in claim 6 wherein the flange extending along the upper edge of said elongated opening includes an upturned edge portion, said drip pan having a front wall adapted to abut against said last named upturned portion.

8. The structure claimed in claim 7 including a sheet metal member extending between the lower edges of said front and side panels to provide a bottom fire wall for said unit.

9. The structure claimed in claim 8 including a second sheet metal member extending between the upper edge of said back wall and said side portions to define a rear fire wall for said unit.

10. The structure claimed in claim 9 including adjustable mounting brackets projecting downwardly from said bottom fire wall for mounting said unit on a base cabinet.

11. A range unit composed essentially of a metal shell having ceramic tiles secured to the outer surface of said shell, said shell including a top panel, front and side panels projecting downwardly from said top panel, and a rear panel projecting upwardly from said top panel, flange members projecting outwardly at substantially right angles from the free edges of said front, side and rear panels to define tile supporting and protecting ledges, said ledges having a width substantially equal to the thickness of said tiles, openings in said top panel, said openings being defined by upstanding annular flanges, and burner units positioned in said openings and seated against said annular flanges.

12. The structure claimed in claim 11 wherein said burner units are electric units, and wherein control means for said units are mounted on the rear panel of said shell.

13. The structure claimed in claim 12 including a centrally disposed reinforcing channel secured to the under surface of said top panel and projecting from front to rear, said channel member defining a conduit for the electrical wiring for said burner units.

14. The structure claimed in claim 13 including an imperforate fire wall extending between the lower edges of said front and side walls, said fire wall serving to establish the lowermost extremity of said unit, whereby said unit may be seated upon the upper edges of a base cabinet including an upper drawer without interfering with the normal operation of the upper drawer.

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