Feb. 11, 1936. C. J. ROGERS ET AL 2,030,540

STOVE CONSTRUCTION

Filed Aug. 24, 1934 4 Sheets-Sheet 1

Fig. 1.

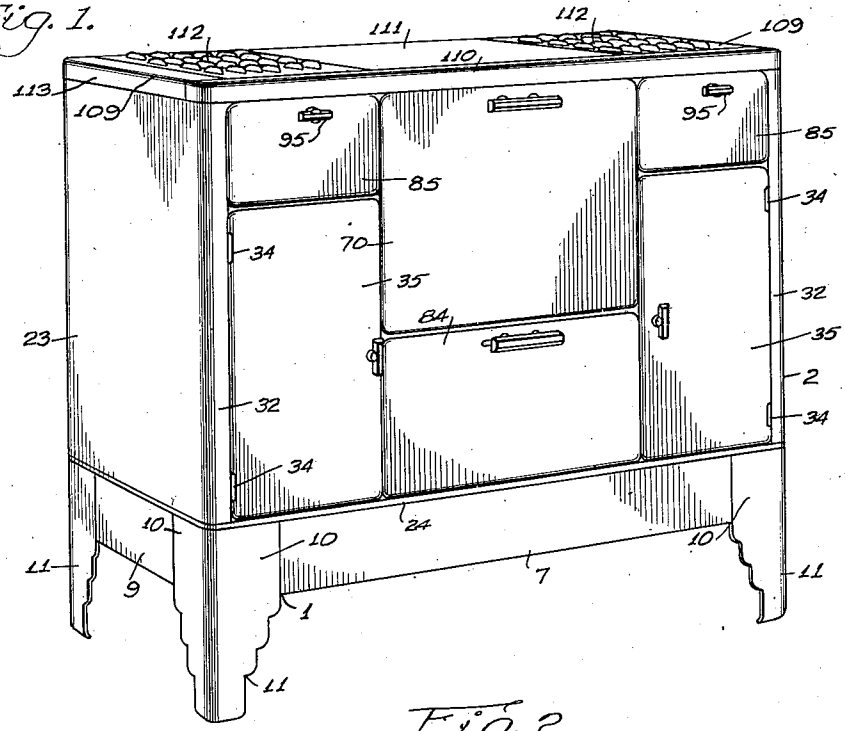


Fig. 2.

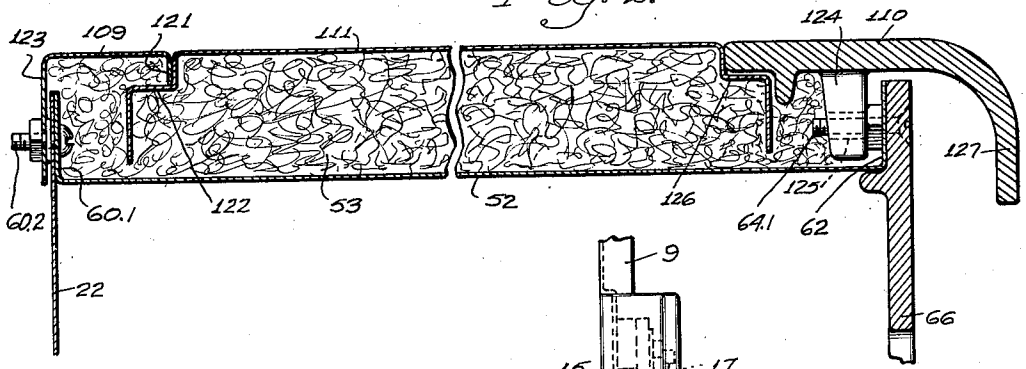


Fig. 3.

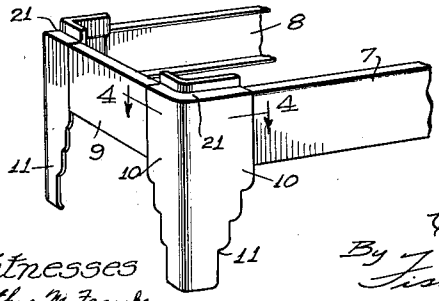
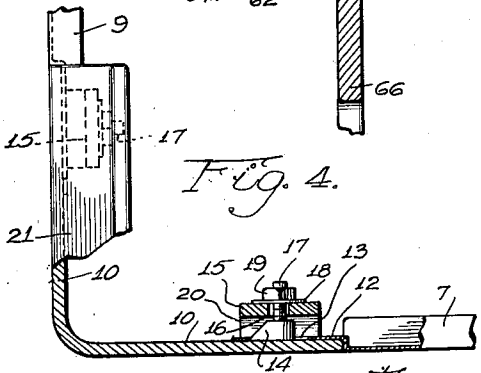


Fig. 4.



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STOVE CONSTRUCTION

Filed Aug. 24, 1934 4 Sheets-Sheet 2

Fig. 5.

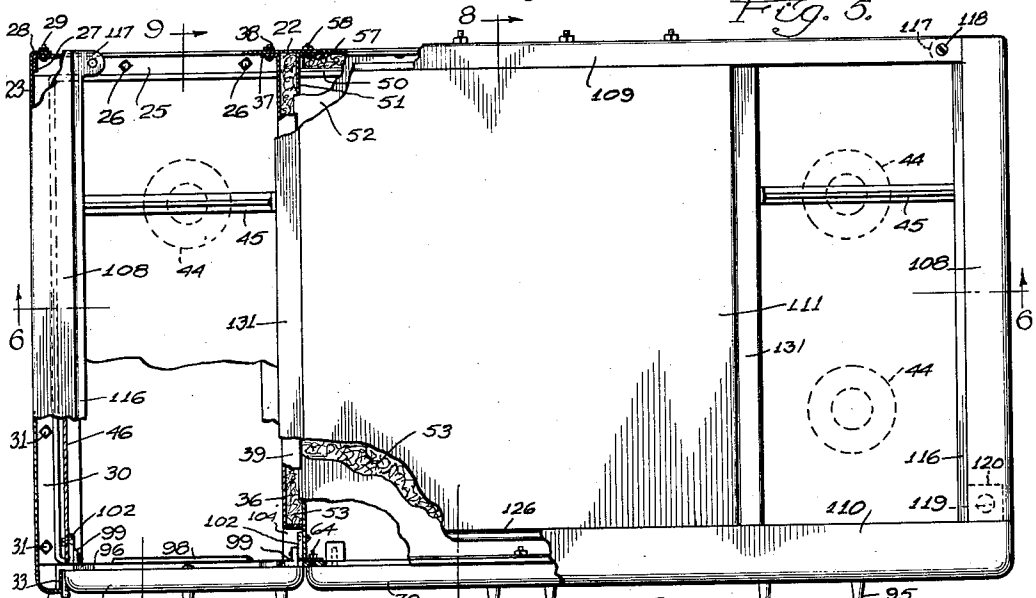


Fig. 6.

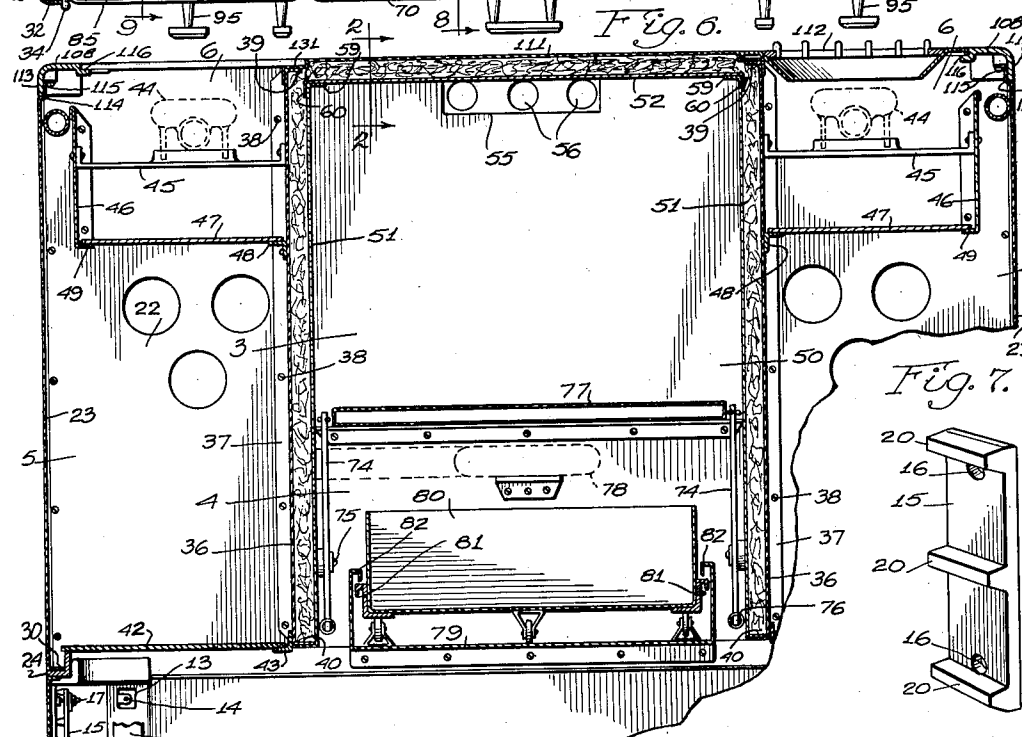


Fig. 7.

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STOVE CONSTRUCTION

Filed Aug. 24, 1934 4 Sheets-Sheet 3

Fig. 8.

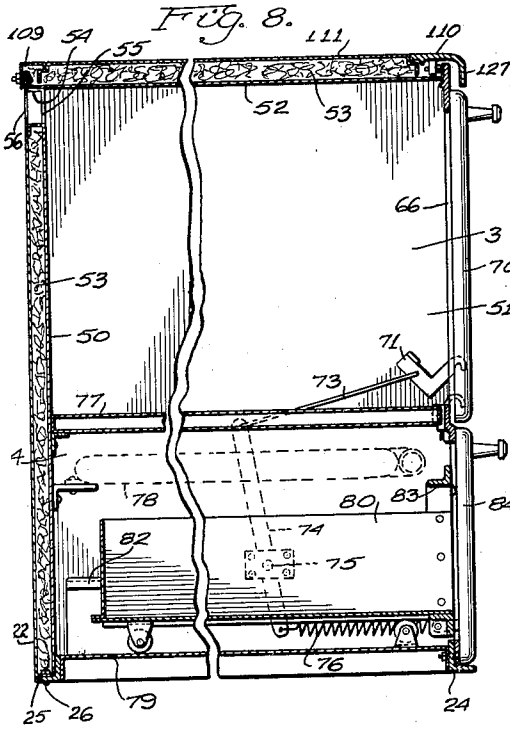


Fig. 9.

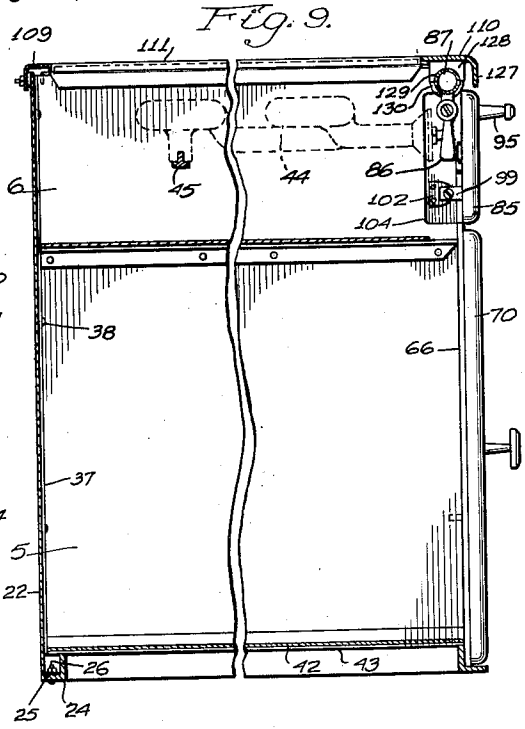


Fig. 10.

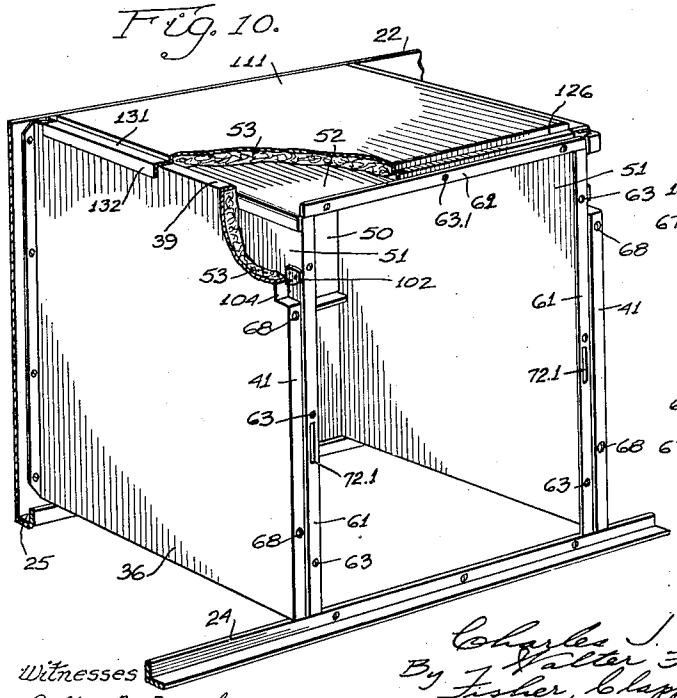
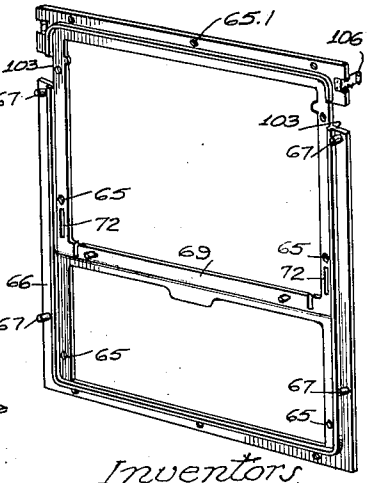


Fig. 11.



Witnesses
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STOVE CONSTRUCTION

Filed Aug. 24, 1934 4 Sheets-Sheet 4

Fig. 12.

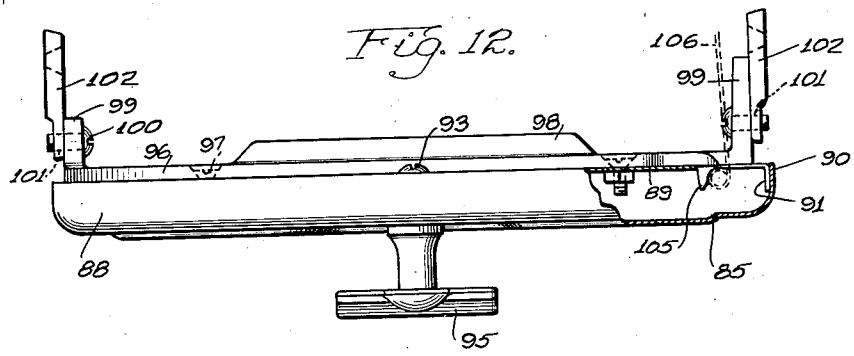


Fig. 13.

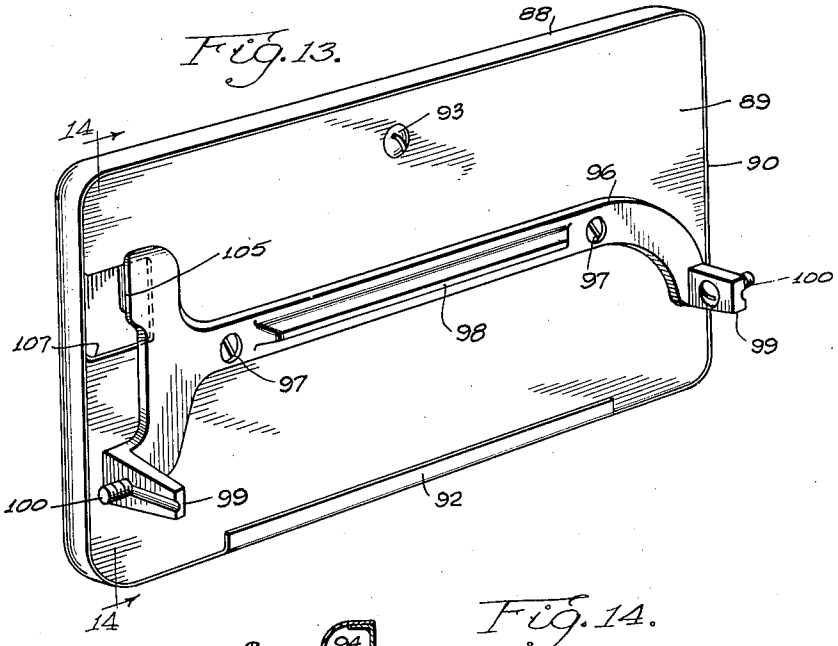
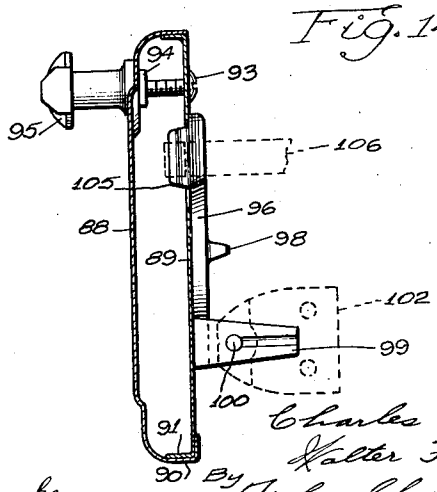


Fig. 14.



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UNITED STATES PATENT OFFICE

2,030,540

STOVE CONSTRUCTION

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Application August 24, 1934, Serial No. 741,190

5 Claims. (Cl. 126—39)

This invention relates to stoves and ranges, and more particularly to those of the cabinet type.

The main objects of this invention are to provide a stove construction wherein the various walls, panels and frame members may be readily assembled and dismantled so as to minimize the labor involved in manufacturing the stove and also in making repairs to any part thereof; to provide a stove construction of this kind wherein the assembly fastening means are invisible from the front and ends of the stove so as to enhance the appearance of the stove; and to provide a cabinet stove of low cost which is sturdy in construction and ornamental in appearance.

An illustrative embodiment of this invention is shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view of an improved stove.

Figure 2 is an enlarged fragmentary section of the top of the bake oven, the view being taken on the line 2—2 of Figure 6.

Figure 3 is a perspective view of one end of the improved base frame.

Figure 4 is an enlarged fragmentary section taken on the line 4—4 of Figure 3 and showing the method of attaching each leg to the side and end panels of the base frame.

Figure 5 is a top plan of the stove, certain parts being broken away.

Figure 6 is a vertical section taken on the line 6—6 of Figure 5, portions also being broken away.

Figure 7 is an enlarged perspective view of one of the clamping plates used for detachably securing the legs to the side and end panels of the base frame.

Figures 8 and 9 are vertical sections taken on the lines 8—8 and 9—9 respectively, of Figure 5.

Figure 10 is a fragmentary perspective view showing the top, side and rear panels of the oven structure.

Figure 11 is a perspective view of the front frame of the oven structure.

Figure 12 is a top plan partly broken away showing one of the improved safety doors for concealing the gas valves.

Figure 13 is a perspective view of the same.

Figure 14 is a section taken on the line 14—14 of Figure 13.

In the construction herein shown, the improved stove comprises a base frame 1 on which is supported the body 2 which comprises a plurality of walls and panels arranged to define a centrally located bake oven 3 and broiler oven 4 located between a pair of end storage compartments 5 and burner compartments 6.

The improved base frame 1 comprises four channel bars disposed edgewise vertically to form the front 7, rear 8, and ends 9 of the base. These bars are connected at their ends to the flanges 10 of corner legs 11 and, for this purpose, the ends of the channel bars are offset inwardly as shown in Fig. 4 to form tongues 12 which are provided with apertures 13 to receive bosses 14 on the inner faces of the flanges 10. The outer faces of the flanges 10 are flush with the outer faces of the channel bars.

The tongues 12 of the channel bars are clamped to the legs by clamping plates 15 such as shown in Fig. 7. These plates are provided with apertures 16 for receiving bolts 17 which are mounted on the bosses 14 and which are provided with washers 18 and nuts 19 for clamping the plates in position, as shown in Fig. 4. Each plate has a plurality of ribs 20 which bear against the tongues 12.

The upper ends of the legs are offset inwardly to form seats 21 which are flush with the upper edges of the channel bars for supporting the stove body.

In the construction shown, the stove body includes an outer shell comprising a rear wall 22 and a pair of end walls 23 mounted on a rectangular angle-iron frame 24 which rests on the seats 21 and on the upper edges of the channel bars 7, 8 and 9.

Extending along the lower edge of the rear wall 22, is a forwardly projecting flange 25 (Figs. 8 and 9) which is secured to the angle-iron frame 24 by bolts 26. The side edges of the rear wall 22 are reinforced by forwardly extending flanges 27 (Fig. 5).

The rear edges of the end walls 23 are bent inwardly to form flanges 28 (Fig. 5) which engage the rear face of the wall 22 and which are detachably secured to the rear wall by bolts 29. Extending along the lower edges of the end walls, are inwardly projecting flanges 30 which are fastened to the angle-iron frame by bolts 31 (Figs. 5 and 6). The forward edges of the end walls are bent to form curved corner panels 32, and rearwardly projecting flanges 33 (Figs. 1 and 5) to which are fastened hinges 34 which support doors 35 for the storage compartments 5.

The inner side walls of the storage compartments are formed by panels 36 (Fig. 6) which are provided with outwardly extending flanges 37 at their rear edges which are detachably secured to the rear wall 22 by bolts 38. The top, bottom, and

front edges of the panels 36 are bent toward the ovens to form peripheral flanges 39, 40 and 41, respectively (Figs. 6 and 10).

The storage compartments have removable bottom plates 42 resting upon the frame 24 and upon angle-irons 43 which may be secured to the panels 36.

In each of the burner compartments 6, are suitable burners 44 (Fig. 6) supported on brackets 45 which are bolted to the panels 36 and to plates 46. Below the burners of each compartment, is a removable drip pan 47 supported on an angle-iron 48 secured to the panel 36 and on a flange 49 formed on the lower edge of the plate 46.

The two ovens, best shown in Figs. 6, 8 and 10, are formed by an inner shell comprising a rear panel 50, spaced from the rear wall 22, a pair of side panels 51 spaced from the panels 36, and a top panel 52 resting upon the side panels 51. These panels of the inner shell are lined with suitable insulating material 53.

The lower edge of the rear panel 50 rests on the rear strip of the angle-iron frame 24, and its upper edge is bent rearwardly to form a flange 54 which abuts against the rear wall 22. The bake oven communicates with a flue, not shown, through an opening 55 in the panel 50 and openings 56 in the wall 22.

The rear edges of the side panels 51 are bent to form flanges 57 (Fig. 5) which are detachably secured to the rear wall 22 by bolts 58. The upper edges of the panels 51 are bent to form flanges 59 (Fig. 6) which support the top panel 52 and the side edges of the top panel are bent downwardly to form flanges 60 which embrace the side panels 51.

The rear edge of the panel 52 is bent upwardly to form a flange 60.1 (Fig. 2) which is detachably secured to the rear wall 22 by bolts 60.2.

The forward edges of the panels 51 and 52 are bent to form flanges 61 and 62 respectively (Fig. 10), having apertures 63, 63.1, for receiving bolts 64, 64.1 (Figs. 5 and 2), which are mounted in apertures 65, 65.1 of an oven door frame 66 (Fig. 11) which forms the front wall of the ovens and is bolted to the front strip of the angle-iron frame 24. This frame 66 also has dowels 67 which engage apertures 68 in the flanges 41 of the panels 36.

The frame 66 has an intermediate bar 69 on which is hinged an upper oven door 70 connected to a pair of arms 71 (Fig. 8) which slide through slots 72 in the frame 66 and slots 72.1 in the flanges 61 and which are connected to links 73. The rear ends of the links 73 are connected to the upper ends of a pair of levers 74 which are pivotally secured to the panels 51 by pins 75. The lower ends of these levers are connected to springs 76 which are arranged to yieldably retain the oven door in closed position.

A partition 77 (Figs. 6 and 8) separates the two oven compartments and below this partition is mounted a burner 78.

In the broiler compartment 4, is mounted a channel-shaped tray 79 (Figs. 6 and 8) in which is mounted a broiler drawer 80 having side rails 81 positioned below a pair of guide rails 82 on the sides of the tray 79. This broiler drawer is preferably of the construction shown in the patent of Walter F. Rogers and John C. Rogers, No. 1,865,212, issued June 28, 1932. It has a front frame 83 to the lower limb of which is hinged a door 84 adapted to close the lower opening of the frame 66 when the door is closed.

Mounted in the forward end of each burner compartment is an improved safety door 85, shown in detail in Figs. 12, 13 and 14. These doors when closed conceal gas valve handles 86 (Fig. 9) which are suspended from manifolds 87 for controlling the burners 44 and 78.

As shown in Figs. 12, 13 and 14, each of the doors 85, comprises a pair of dished plates 88, 89 having interfitting peripheral flanges 90, 91, respectively. At the bottom of the plate 88, is also a flange 92 engaging the rear face of the plate 89. The two plates are clamped together by a bolt 93 which extends through the plate 89 and which is secured to the shank 94 of a handle 95 projecting through the plate 88.

Extending across the rear of the door 85, is a bar 96 which is secured to the plate 89 by bolts 97. This bar has a ridge 98 adapted to engage the gas valve handles 86 to insure closing of the gas valves when the doors 85 are closed. At the ends of the bar 96 are formed lugs 99 having screws 100 which serve as hinge pins. These screws are supported in apertures 101 of ears 102 which are fastened to the oven side panels 51 and to the plates 46, as shown in Fig. 5. The oven door frame 66 is notched, as shown at 103 (Fig. 11), and the panels 36 are notched as shown at 104 (Fig. 5) so as to permit the lower edge of each of the doors 85 to swing inwardly.

Integrally formed on the bar 96, is a lug 105 adapted to engage a resilient keeper 106 mounted on the door frame 66. The rear plate 89 has a recess 107 adjacent the lug 105 for receiving the keeper. With this improved construction, the single bar 96 performs several functions. It reinforces the door and also forms the hinge support, locking device, and valve stop.

The improved top of the stove comprises a rim having a pair of end sections 108, rear section 109, and front section 110, within which is mounted a central finishing panel 111 and a pair of burner tops 112.

The end sections 108 have depending flanges 113 which rest in recesses 114 (Fig. 6) formed in the upper edges of the side walls 23 so that the outer faces of the flanges are flush with the side walls. The sections 108 are detachably secured to the side walls by bolts 115.

At the inner edge of each section 108, is a ledge 116 for supporting one edge of the adjacent burner top. At the rear end of the ledge 116, is a lug 117 (Fig. 5) which is bolted to the rear section 109 by a bolt 118. The front end of each section 108 is detachably connected to the front section 110 by a bolt 119 passing through a rearwardly extending lug 120 formed on the front section.

The rear section 109 is of substantially inverted channel shape as shown in Fig. 2, having a narrow flange 121 engaging a recess 122 in the top panel 111, and having a wider flange 123 connected to the bolts 60.2.

The front section 110 has depending lugs 124 (Fig. 2) provided with apertures 125 for receiving the rear ends of the bolts 64.1. The rear edge of the front section 110 engages a recess 126 in the forward end of the panel 111. The forward edge of the section 110 is curved downwardly to form a front flange 127 which is flush with the doors, as shown in Figs. 8 and 9. Depending from the section 110, are lugs 128 (Fig. 9) having semi-circular seats 129 to which the manifolds 87 are secured by straps 130.

The central finishing panel 111 is recessed at its side edges to form seats 131 (Figs. 6 and 10) for the adjacent edges of the burner tops

112, these seats being supported on the flanges 39 of the panels 36, and its side edges are bent downwardly to form flanges 132 which overlap the top edges of the panels 36.

With this improved construction of stove, all of the fastening means are hidden from view so that the stove presents a very neat appearance. Furthermore, the parts are all held in assembled relation by detachable means which permits any part of the stove to be quickly removed and replaced when repairs are necessary.

Although but one specific embodiment of this invention has been herein shown and described it will be understood that certain details of the construction shown may be altered without departing from the spirit of the invention as defined by the following claims.

We claim:

1. In a device of the class described, a stove body having front, rear and end walls, and a removable top comprising a front rim section detachably connected to said front wall, a rear rim section detachably connected to said rear wall, a pair of end rim sections detachably connected to said end walls, an intermediate panel having downwardly offset portions thereof underlying said front and rear rim sections, and burner tops between and supported by said intermediate panel and said end rim sections, said rear rim section and the rear ends of said end rim sections having overlapping parts detachably connected together, and said front rim section and the front ends of said end rim sections having overlapping parts detachably connected together.

2. In a device of the class described a stove oven comprising a rear wall, a door frame, a pair of inner side linings, a top lining supported on said side linings, a pair of outer side panels spaced from said side linings, a top finishing panel located above said top lining and resting on said side panels, insulating material housed between said panels and said linings, the rear ends of said side linings and side panels being bolted to said rear wall, the forward ends of said side linings being bolted to said door frame, dowel pins on said door frame engaging apertures in said side panels, doors supported on said frame, and a stove top rim having a removable front section attached to said door frame with its rear portion overlying the forward end of said top finishing panel, said rim section having a depending flange substantially flush with the outer faces of said doors.

3. In a device of the class described a stove oven comprising a rear wall, a door frame, a pair of inner side linings, a top lining supported on said side linings, a pair of outer side panels spaced from said side linings, a top finishing panel located above said top lining and resting on said side panels, insulating material housed between said panels and said linings, the rear ends of said side linings and side panels being bolted to said rear wall, the forward ends of said side linings being bolted to said door frame, dowel pins on said door frame engaging apertures in said side panels, doors supported on said frame, and a stove top rim having a removable front section overlying the forward end of said top finishing panel, said rim section having a depending flange substantially flush with the outer faces of said doors, and said rim having a rear section overlying the rear end of said top finishing panel and bolted to said rear wall.

4. In a device of the class described a stove comprising front, rear and end walls, a removable top rim comprising a front section detachably secured to said front wall, a rear section detachably secured to said rear wall, a pair of end sections supported on and detachably secured to said end walls and detachably secured to said front and rear rim sections, a centrally located finishing panel within said rim formed with downwardly offset portions underlying said front and rear rim sections, and a pair of burner tops located on respectively opposite sides of said finishing panel and directly supported by said finishing panel and said end rim sections.

5. In a device of the class described a stove oven comprising a rear wall, a door frame, a pair of inner side linings, a top lining supported on said side linings, a pair of outer side panels spaced from said side linings, a top finishing panel located above said top lining and resting on said side panels, insulating material housed between said panels and said linings, the rear ends of said side linings and side panels being bolted to said rear wall, the forward ends of said side linings being bolted to said door frame, dowel pins on said door frame engaging apertures in said side panels, doors supported on said frame, and a stove top rim having a removable front section attached to said door frame with its rear portion overlying the forward end of said top finishing panel, said door frame having rearwardly extending pins engaging apertured lugs on said rim section, and said rim section having a depending flange substantially flush with the outer faces of said doors.

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