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J. W. BARKER

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CONCEALED HINGE

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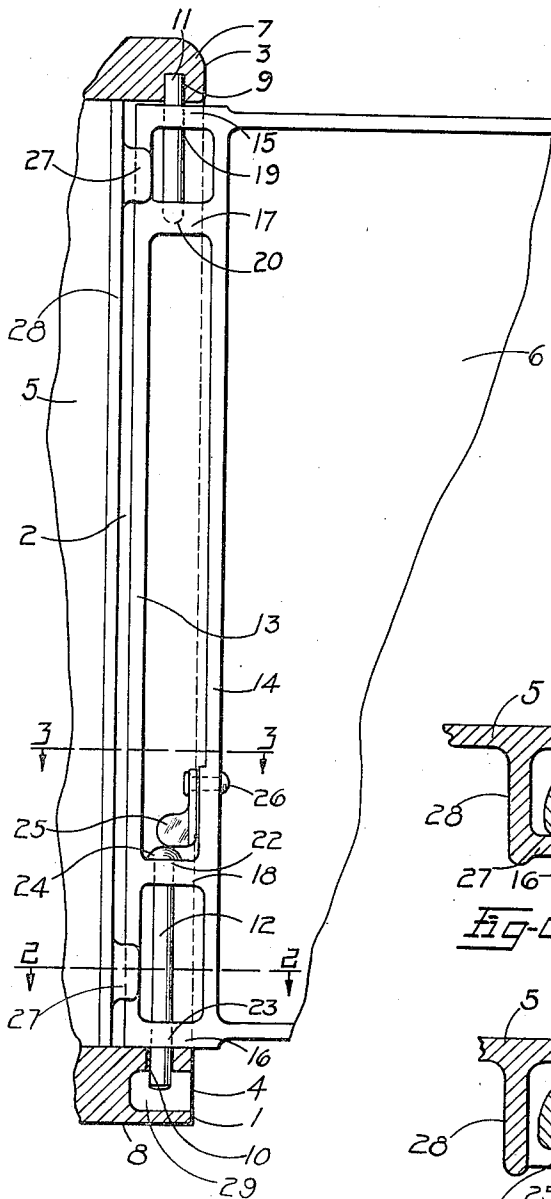


Fig-1

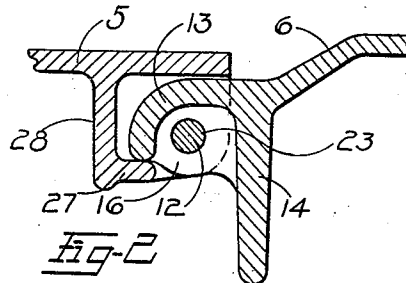


Fig-2

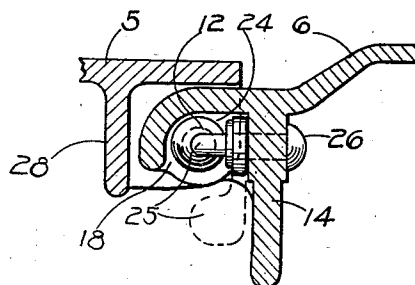


Fig-3

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## UNITED STATES PATENT OFFICE

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## CONCEALED HINGE

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## 1 Claim. (Cl. 126—194)

This invention relates to improvements in concealed hinge stove doors.

One object of the invention is to provide a concealed hinge stove or range door that can be manufactured cheaply and can be easily assembled and disassembled.

Other objects and advantages of the invention will be apparent as the description is considered in connection with the accompanying drawing, in which:

Figure 1 is a fragmentary view partly in section showing the door in open position;

Figure 2 is a section taken on the line 2—2 of Figure 1; and

Figure 3 is a section taken on the line 3—3 of Figure 1.

Referring more particularly to the drawing 1 denotes the front frame of a stove, having the usual door opening 2 leading to an oven or other compartment, not shown. The frame 1, which in the present embodiment is cast, comprises upper and lower horizontal members 3 and 4 respectively and side members 5, all of substantially T-shaped cross section. The opening 2 is adapted to be closed by a hinged door 6. The forwardly projecting horizontally disposed flanges 7 and 8 of the upper and lower members 3 and 4, of the door frame 1, are formed with apertures 9 and 10 for receiving upper and lower hinge pins 11 and 12, hereinafter described.

The oven door 6, which is also preferably of cast construction, is formed at the hinged side with an inwardly or rearwardly curved edge portion 13, and a rearwardly extending flange 14, spaced from said curved portion and substantially at right angles to the door 6. Apertured webs 15 and 16 formed on the top and bottom of the door, at the hinged side thereof, together with a top and a bottom intermediate web 17 and 18 respectively, span the space between the edge portion 13 and the flange 14 for cooperation with the flanges 7 and 8 of the frame 1, in providing mountings for the hinge pins. Thus the upper hinge pin 11 is loosely inserted downwardly through an aperture 19 formed in the web 15, and loosely seats at its lower extremity in a shallow recess 20, formed in the upper face of the web 17, the upper end of this pin being loosely received in the aperture 9 formed in the upper member 3 of front frame 1. The bottom headed hinge pin 12 is loosely received in registering apertures 22 and 23 formed in the webs 16 and 18 respectively and is prevented from dropping through these apertures by its head 24.

The extended lower end of this hinge pin 12 is

loosely received within the aperture 10 of the door frame. A button 25 pivotally mounted on a pivot pin 26, extending through the flange 14, normally engages the upper headed end of hinge pin 12 and lockingly retains said pin in operative position in the apertures 22 and 23.

The rearwardly projecting vertically disposed flange 14, which is of considerably greater depth than the curved portion or lip 13 of the door 6, serves the double purpose of providing a support for the button 25 and a guard for concealing the button and the hinge pins from view, when the door is in open position. The curved lip portion 13, conceals the hinge pins from view when the door is closed and also cooperates with stop members 27, formed on the outer face of the inwardly projecting flange 28 of one of the side members 5 of the front frame 1, to prevent chipping of the enameled face of the door or that portion of the frame to which the door is hinged. Thus when the door is opened a full 90 degrees the edge of the lip 13 engages the stop 27 and the outward movement of the door is halted before it has moved sufficiently far to contact with the door frame.

In order to remove the door it is merely necessary to turn the button 25 to inoperative position and thus permit of the bottom pin 12 being removed. The lower end of the door can then be pulled outwardly until it clears the frame 1, whereupon the door will drop of its own weight until the upper end of pin 11 is withdrawn from the aperture 9. The pin 11 can then be easily removed if desired, however it will be noted that it is impossible for this readily removable pin to fall out accidentally. The recess 20 in the web or bridge 17, affords a seat for the pin. To assure a nice fit and to overcome any tendency to wobble, the lower end of the pin 11, as well as the bottom of the recess 20 is rounded. A finger hole or opening 29 formed in the lower horizontal member 4 of the frame, enables the workman to conveniently push the lower pin out of the aperture 10.

Having thus described my invention:

What I claim is:

In a hinge connection for gas range doors, comprising a door frame comprising top, bottom and side members forming a door opening, laterally extending flanges carried by said members in beyond the outer edges thereof, two opposite members having pin receiving apertures therein, a door having a rearwardly curved portion along one entire side and having its ends provided with webs having pin receiving openings arranged

therein to receive pins within the first mentioned openings and arranged concentric with the curve of the outer face of the curved side portion of the door, the lateral flanges adjacent the openings at the ends provided with an outwardly extending lug adapted to be engaged by the edge

of the curved portion of the door, to form a stop to limit the outward movement of the door whereby the outer face of the curved portion closely fits the inner face of the side members in all positions of the door.

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