April 12, 1949. C. L. HARDWICK 2,466,847

OVEN DOOR

Filed Jan. 20, 1947 2 Sheets-Sheet 1

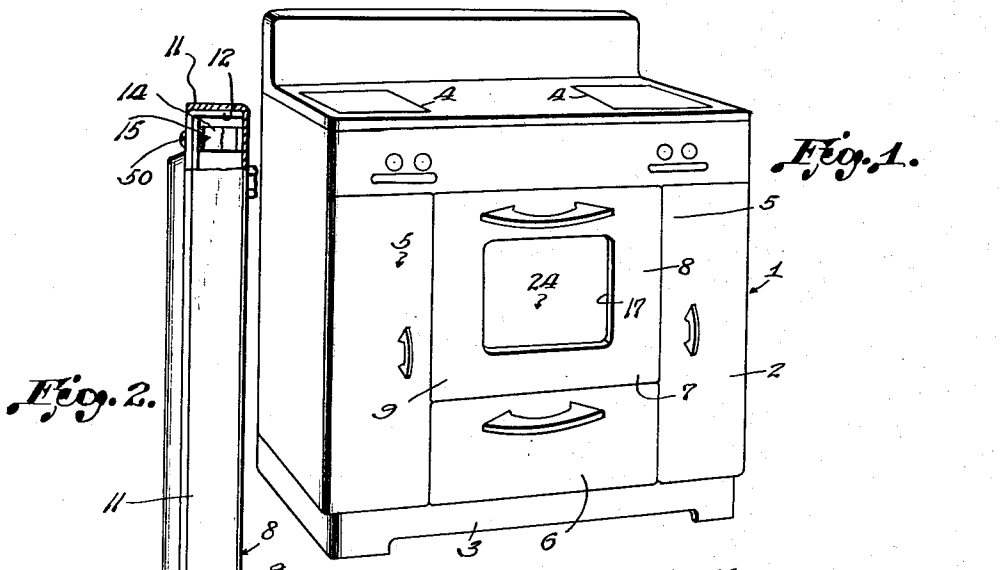


Fig. 1.

Fig. 2.

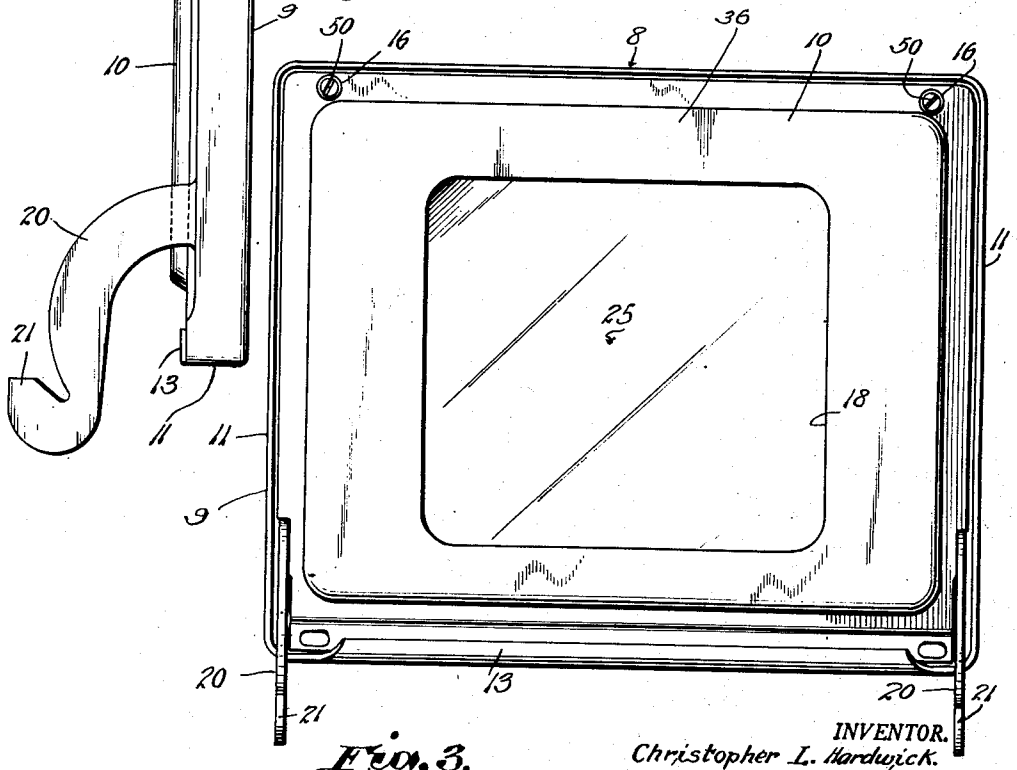


Fig. 3.

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Fig. 4.

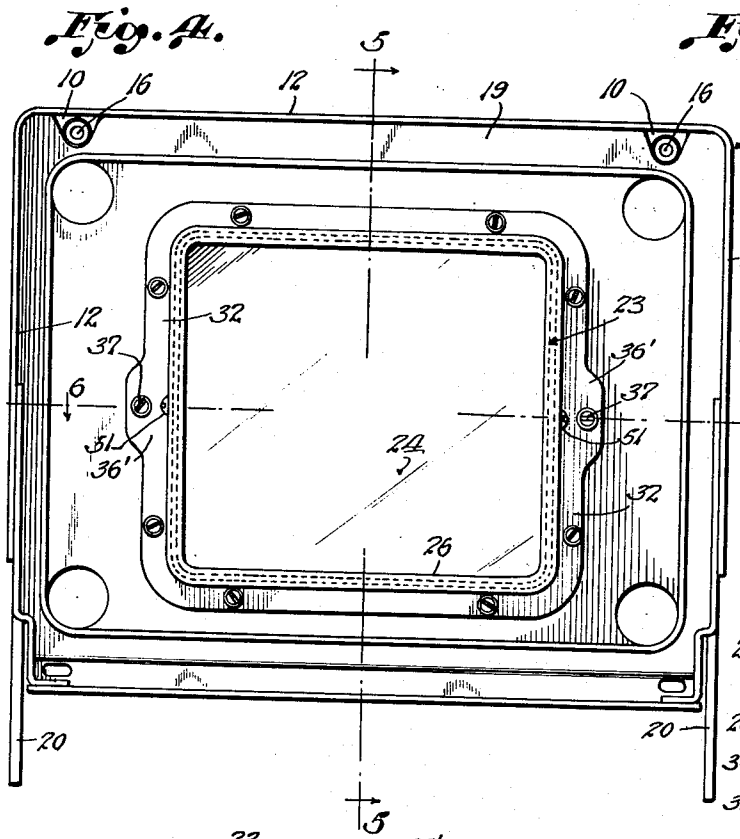
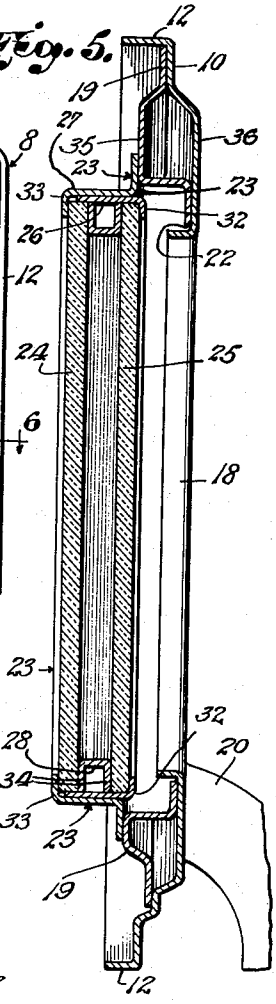


Fig. 5.



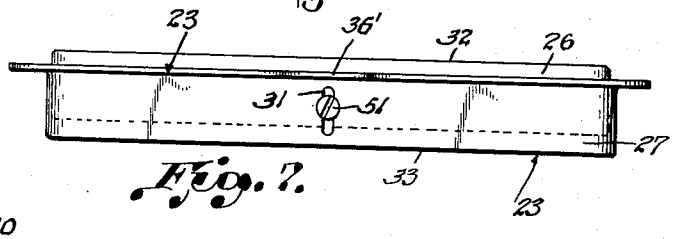


Fig. 7.

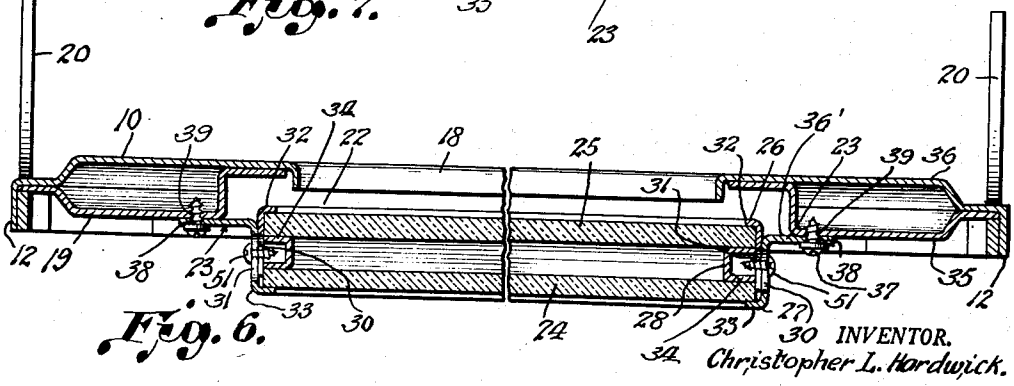


Fig. 6.

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UNITED STATES PATENT OFFICE

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OVEN DOOR

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2 Claims. (Cl. 126—200)

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My invention relates to stove doors and more particularly to that type of oven door which is provided with a covered opening or window therein, thus enabling the housewife to note the progress of the baking or roasting at any time desired without opening the door itself.

It has been the custom heretofore to cover the window opening in such doors with at least two spaced panes, the air space between them serving to reduce the escape of heat to a minimum. However, considerable trouble has been experienced due to the fact that the glasses could not be sealed tightly together and consequently, fumes and greasy odors from cooking would collect in the inaccessible space between them.

One of the principal objects of the present invention is to overcome the foregoing objections by providing adequate seals at both outer and inner faces of the panes.

Another and primary object of the invention is to provide a readily assembled and disassembled glass supporting unit the parts of which are adjustable to accommodate glass sheets of varying thickness.

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

Figure 1 is a perspective view of a stove showing my invention installed in the oven door thereof;

Figure 2 is a side elevation showing the door removed from the stove;

Figure 3 is a rear view of the door removed from the stove;

Figure 4 is a front face view of the lining plate and its brace member or plate disassembled from the front plate and showing the manner in which the window glass is attached in place;

Figure 5 is a section on line 5—5 of Figure 4;

Figure 6 is a section on line 6—6 of Figure 4; and

Figure 7 is an end view of the glass holding unit.

Referring more particularly to the drawings 1 denotes a cooking stove or range comprising a body 2 supported upon a base 3 and provided with top burner openings 4. The body 2 is also provided with side utility compartments 5, a single bottom utility compartment 6 and an oven compartment 7, all of conventional construction. The oven opening is normally closed by a door 8 hinged at its bottom edge in any desirable manner, not shown.

The oven door 8 consists of a front enameled rectangular sheet metal plate 9 and a back lining member or plate 10 also of sheet metal. The

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front plate 9 is formed with flange 11, projecting inwardly or rearwardly from its side, top and bottom edges and adapted to receive or fit snugly over corresponding flange 12, projecting outwardly or forwardly from the side, top and bottom edges of the lining plate 10. The bottom horizontally disposed portion of inwardly or rearwardly extending flange 11 is formed with an upwardly bent extension 13 which prevents separation of the plates 9 and 10 at their lower ends. The upper end of the lining plate 10 seats against a pair of spacing brackets 14, only one of which is shown, secured to and projecting rearwardly from the upper rear face of the front plate 9. These brackets are provided with apertures 15, which register with corresponding apertures 16 in the lining plate for a purpose presently described. By first inserting the lower end of the lining plate behind the extension 13 the lining plate member 10 can be readily moved into place within the confines of flange 11, and in position to be secured to the front plate 10. This is accomplished by means of headed screws 50, adapted to be inserted forwardly through apertures 16 and thence through apertures 15, in the order named. Any suitable means, not shown, is employed to hinge the lower end edge of the oven door 8 to the stove body 2, and curved arms 20 projecting rearwardly and downwardly from the sides of flange 12, are formed with hook shaped ends 21 adapted to be connected to conventional spring mechanism, not shown, for normally maintaining the door 8 in closed or open position. Both front plate 9 and lining plate 10 are provided with rectangular window openings 17 and 18 respectively.

Secured snugly to the lining plate in any suitable manner, as by welding contacting areas, is a brace member or plate 19, conforming in general outline and shape with plate 10, and serving to brace and reinforce the lining member or plate 10. This brace member is formed with a rectangular window opening 22 which, generally speaking, registers with the window openings 17 and 18 in plates 9 and 10, just described, and the intermediate portion of the brace member is bellied forwardly, as at 35, from the correspondingly rearwardly bent or bellied adjacent portion 36, of the lining plate 10, for a purpose presently described.

The window openings 17, 18 and 22 previously described are normally closed by a readily assembled and disassembled glass holding unit or member 23 in which spaced front and rear glass members 24 and 25 are respectively supported. The

unit 23 comprises inner and outer rectangular frame members 26 and 27 and a U-shaped rectangular spacing member 28, of narrow thin sheet metal.

The body portion of the inner frame member 26 telescopes snugly within the body portion of the outer frame member and they are secured tightly but adjustably together by means of screws 51, which pass through registering slots 30 and 31 formed in the respective body portions of the members 26 and 27. The rear edge of the body portion of the inner member 26 is bent inwardly at right angles to the body portion thereof to provide a continuous flange 32 against which the rear edge face of the rear glass 25 is tightly forced by the action of spacing member 28. The rear edge of the body portion of outer member 27, like the forward edge of the inner member 26, is bent inwardly to form a flange 33, parallel to flange 32, and adapted to provide a seat against which the front edge face of front glass 24 snugly seats.

An integral flange 36' bent outwardly at right angles from the rear edge of the body portion of the outer member 27 is adapted to be snugly and securely attached to the bellied portion 35 of brace plate 19, by means of screws 37, which pass through openings 38 in the flange 36', and thence through aligned threaded openings 39 formed in the brace member or plate 19. When the parts are thus assembled the flanges 34 of U-shaped spacing member 28 crowd the glass sheets into tight sealing contact with the flanges 32 and 33, while at the same time the free end edges of the flanges 34 seat tightly against the body portion of inner frame member 26. This prevents fumes or greasy products from gaining access to the dead air space between the panes.

The unit 23 can readily be assembled at the factory or at a point remote therefrom, and subsequently incorporated in the stove as a separate unit. It will also be apparent that this construction permits of ready disassembly, for replacing glass when broken, without interfering with the desired seal when reassembled. The oven compartment 7 is preferably provided with an electric bulb, not shown, for illuminating the interior of this compartment.

By virtue of the construction just described, it is possible to slidably adjust the frame members 26 and 27 of the unit 23, toward or away from each other in order to accommodate glass sheets which, due to defect in manufacture or for other reason, may vary slightly in thickness.

Having thus described my invention what I claim is:

1. An oven door for stoves comprising a front plate and a lining plate therefor, said plates having window openings registering with each other, inner and outer frame members for supporting spaced inner and outer glass sheets, said inner and outer frame members each having a body portion and an inwardly extending flange, the body portion of the inner frame member telescopically received within the body portion of the outer frame member, inner and outer glass sheets having their peripheral edges in close contact with the body portion of said inner frame member and one side edge face adjacent said peripheral edges in close contact with one of said inwardly extending flanges, a U-shaped spacer member in close contact with the other side edge face of said glass sheets, an outwardly extending flange formed on the inner edge of the body portion of said outer frame member and means for detachably connecting said outwardly extending flange with the lining plate for supporting said glass sheets in line with said window openings.

2. A oven door for stoves comprising a front plate and a lining plate therefor, said plates having window openings registering with each other, inner and outer frame members for supporting spaced inner and outer glass sheets, said inner and outer frame members each having a body portion and an inwardly extending flange, the body portion of the inner frame member telescopically received within the body portion of the outer frame member, inner and outer glass sheets having their peripheral edges in close contact with the body portion of said inner frame member and one side edge face adjacent said peripheral edges in close contact with one of said inwardly extending flanges, a U-shaped spacer member in close contact with the other side edge face of said glass sheets, an outwardly extending flange formed on the inner edges of the body portion of said outer frame member and means for detachably connecting said outwardly extending flange with the lining plate for supporting said glass sheets in line with said window openings, and means for adjustably connecting said frame members for bodily movement toward and away from each other.

CHRISTOPHER L. HARDWICK.

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