M. A. POSSONS.

GAS RANGE DOOR.

APPLICATION FILED MAR. 3, 1915.

1,154,430. Patented Sept. 21, 1915.

Fig. 1.

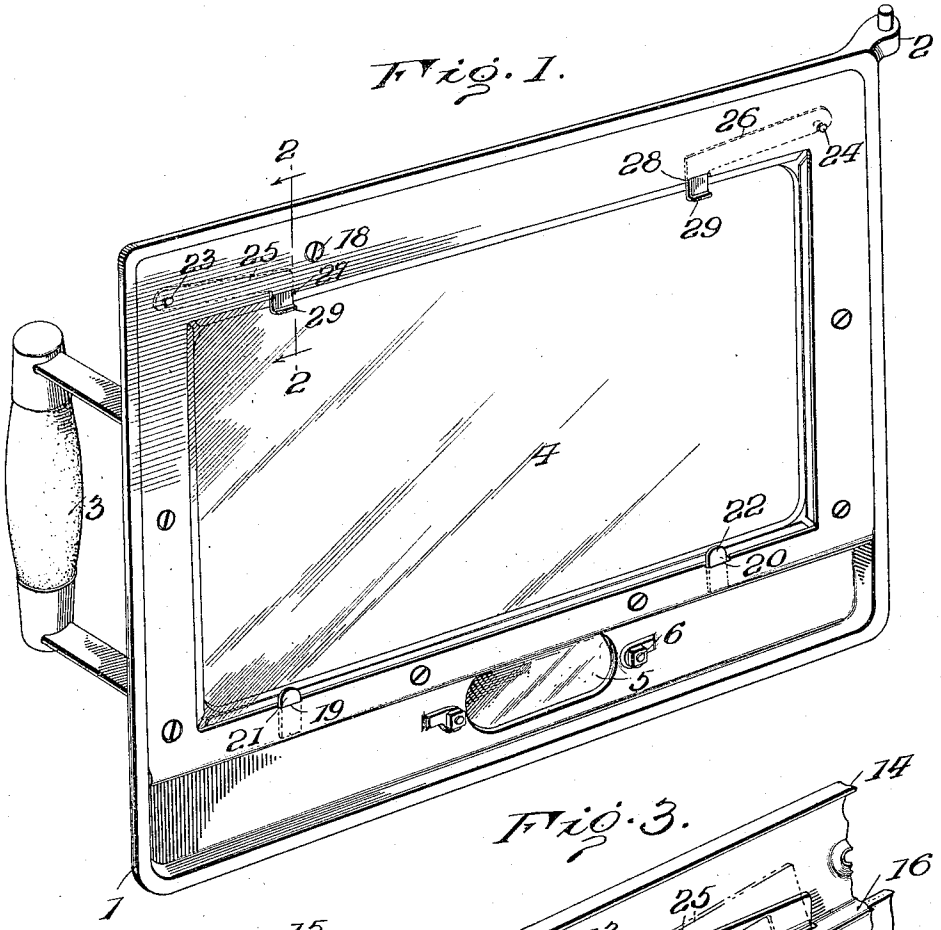


Fig. 2.

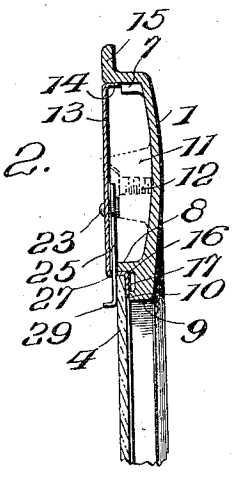
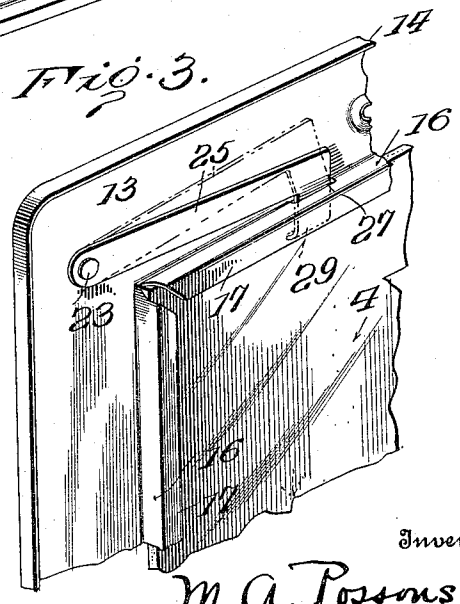


Fig. 3.



Witnesses

L. L. Burket.

E. Rosenberg.

Inventor

M. A. Possons,

By A. S. Pattison.

Attorney

UNITED STATES PATENT OFFICE.

MINARD A. POSSONS, OF CLEVELAND, OHIO, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

GAS-RANGE DOOR.

1,154,430. Specification of Letters Patent. Patented Sept. 21, 1915.

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To all whom it may concern:

Be it known that I, MINARD A. POSSONS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gas-Range Doors, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in gas range doors.

The object of my invention is to provide a gas range door fitted with a glass panel in which the glass panel is so supported that, that portion of the panel which the heat strikes first is not covered with a binding, so that when the oven is lighted, the heat at once reflects upon the whole inner surface of the panel. This allows a perfectly even expansion of the glass and, therefore, it is less liable to break.

Another object of my invention is to provide a simple, cheap and effective lining for the door constructed and arranged to support the glass panel and at the same time providing means for attaching the panel fastening means.

A still further object of my invention is to provide a simple, cheap and effective door of this character having certain details of structure and operation hereinafter more fully set forth.

In the accompanying drawings: Figure 1 is a rear perspective view of an oven door embodying my invention. Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a perspective view partly broken away of the lining, showing the glass in position and looking from the opposite side from that shown in Fig. 1.

Referring to the drawings, 1 represents my improved oven door which is of the usual form having at one end the hinges 2, and at the opposite end the handle 3, all of which is of the usual structure and needs no further description, as this forms no part of my invention. The door 1 has its central portion cut away forming a large central opening nearly as large as the door and which is covered by the glass panel 4, by means of which the whole contents of the oven can be readily inspected. The lower edge of the door 1 is provided with a small glass panel 5, secured to the door by means of bolts 6 and which is so positioned on the door that the burners within the lower end of the oven may be readily inspected.

The door is practically cast and of a hollow form, as fully shown in Fig. 1 of the drawing. The outer edge of the hollow frame or form of which the door is constructed is provided with lugs 7 arranged at proper intervals around the frame adjacent its outer edge for the purpose later described. The frame is provided with a flange 8 extending therearound a short distance from its inner edge 9. Adjacent the inner edge 9 of the frame is a flange 10, which does not extend out as far as the flange 8, but allows for the thickness of the lining and the glass panel, as will be later described. The frame of the door is provided with inwardly extending bosses 11, intermediate the flanges 7 and 8, and these are arranged at the proper interval around the frame and are provided with screw-threaded openings into which screws 12 pass for fastening the lining to the frame of the door.

The lining 13 of the door is preferably made of sheet-metal and has at its outer edge the inwardly turned flange 14, which is of a width to engage the lugs 7 of the door-frame and bring the outer faces of the lining 13 flush with the inner face 15 of the door-frame. The central portion of the panel 13 is cut away and is turned inwardly at 16 and again turned at right angles thereto, as indicated at 17, which forms a ledge upon which the glass panel rests. The portion 16 abuts against the flange 8, while the portion 17 abuts against the flange 10, whereby the solid backing for the lining is provided. By this structure it will be seen that a receiving ledge is provided around the entire door-frame for receiving a glass panel 4. The lining 13 is provided with a number of openings through which the screws 18 pass and by means of which the lining is rigidly secured to the inner face of the oven door-frame.

The inwardly turned flange or portion 16 of the lining is provided with slots 19 and 20 at their lower ends through which extends the stationary lugs 21 and 22 carried by the inner face of the lining and which are adapted to overlap the glass panel and hold the same against inward movement. These lugs 21 and 22, as clearly

shown, are comparatively small and engage very little of the glass panel and thus allow the heat to engage practically the whole of the panel and thus prevent an uneven heating of a portion of the panel, which would result in the breaking of the glass panel.

Pivotally secured to the inner face of the lining 13, at 23 and 24, are the panel locking members 25 and 26, which extend outwardly through openings 27 and 28 and frictionally engage the inner face of the glass panel for holding it in the frame. The outer ends of the pivoted members 25 and 26 are turned laterally at 29, which form means whereby the said locking members may be forced inwardly and drawn outwardly when it is desired to remove the glass panel. The locking members 25 and 26 are of small area so that they will cover a very small portion of the glass panel and thus prevent the same from being cracked, or otherwise injured by the heat, as heretofore stated in respect to the lugs 21 and 22. By this arrangement it will be seen that the members 25 and 26 are moved inwardly when it is desired to remove the glass panel 4 for cleaning or any other purpose and the upper end forced inwardly and then raised outwardly from behind the lugs 21 and 22.

I am aware that glass panels have been secured in oven doors by strips of metal, as shown in Patent No. 1,108,810, and in such cases the glass in the rear of the strips is not heated as rapidly as the unexposed portion of the glass panel and, therefore, the panel is often cracked. While arranging the panel, as shown in the drawings and heretofore set forth, the entire glass panel is exposed and receives the heat directly from the oven and will not crack.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with an oven door having a central opening, a ledge surrounding the opening, a glass panel resting upon the ledge, stationary lugs carried by one side of the door and extending through the ledge and movable members carried by the opposite side of the door and adapted to extend over the panel, substantially as shown and described.

2. The combination with an oven door having a central opening, a ledge surrounding the opening on the inner face, inwardly extending lugs carried by the door and extending over the ledge on one side of the opening and movable members carried by the door and extending over the ledge on the opposite side of the opening.

3. The combination with an oven door having a lining formed of sheet-metal and having a ledge formed thereon for supporting a glass panel and lugs carried by the inner face of the lining and extending over the ledge for securing the panel within the ledge in the lining.

4. The combination with an oven door, of a sheet metal lining secured to the inner face of the door and having a ledge formed therein for receiving a glass panel, stationary lugs carried by the inner face of the lining and extending over the ledge on one side of the opening and pivoted members carried by the lining and adapted to swing outwardly over the ledge on the opposite side of the opening.

5. The combination with an oven door having a central opening, a sheet metal lining stamped from a single sheet and having a ledge formed on the inside of the opening in the door, a glass panel resting within the ledge, stationary lugs carried by the inner face of the lining and extending over the ledge on one side of the opening and pivoted lugs carried by the lining and extending over the opening on the opposite side thereof.

6. The combination of an oven door, of a sheet-metal lining formed of a single sheet and having a ledge turned inwardly and extending within the door of the oven to bring the outer faces of the lining flush with the inner faces of the door, said lining having a central opening and the metal of the lining bent inwardly forming a ledge around the opening, a glass panel fitting within said ledge, stationary lugs carried by the lining and extending over the ledge on one side of the opening, and pivoted L-shaped members carried by the lining and extending over the ledge on the opposite side of the opening.

7. The combination with an oven door-frame of a hollow form and having a central opening, a lining formed of a sheet of metal and having an opening corresponding to that in the door-frame and having a ledge formed by the metal of the said sheet around the opening, a glass panel within the opening and resting upon the ledge of the lining, lugs carried by the inner face of the lining and extending through openings in the ledge for overlapping the glass panel.

8. The combination with an oven door having a central opening, a sheet metal lining stamped from a single sheet and having a ledge formed on the inside of the opening in the door, a glass panel resting within the ledge, stationary lugs carried by the inner face of the lining and extending through openings in the lining, and over the inner face of the glass panel, and pivoted lugs carried by the inner face of the lining and extending through openings and over the inner face of the glass panel, substantially as shown and described.

9. The combination with an oven having a central opening, a sheet metal lining for the door and having a ledge formed on the

inside of the opening of the door, a glass panel resting within the ledge, stationary lugs carried by the inner face of the lining and extending through openings in the lining over the ledge on one side of the door, and pivoted lugs carried in the lining over the glass panel on the opposite side of the door.

10. The combination with an oven having a central opening, of a sheet metal lining formed of a single sheet and having a ledge turned inwardly and extending within the door of the oven to bring the outer face of the lining flush with the inner face of the door, said lining having a central opening and the metal of the lining bent inwardly forming a ledge around the opening, a glass panel fitting within said ledge, stationary lugs carried by the inner face of the lining and extending through openings in the lining over the ledge on one side, and pivoted L-shaped members carried by the inner face of the lining and extending through openings in the lining over the ledge on the opposite side of the opening, substantially as shown and described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

MINARD A. POSSONS.

Witnesses:
A. J. BLACKFORD,
F. T. BATCHELOR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."