Dec. 8, 1936. L. J. HAUSSER 2,063,376

STOVE CONSTRUCTION

Original Filed May 21, 1934

Fig. 1

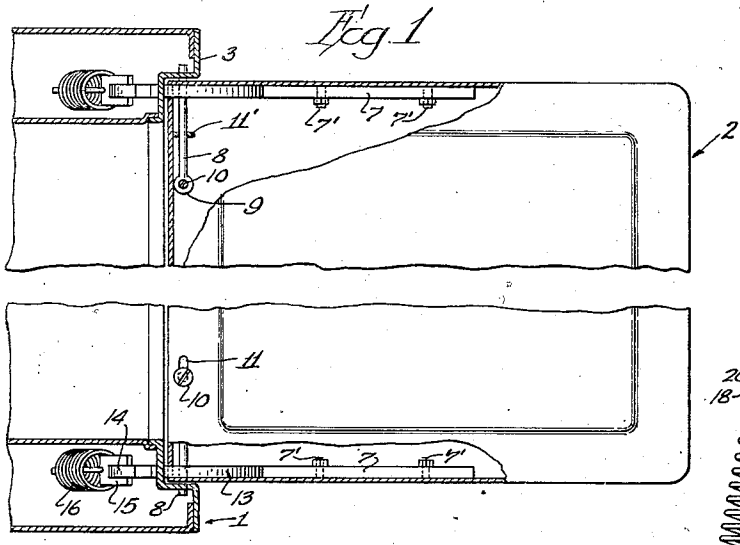
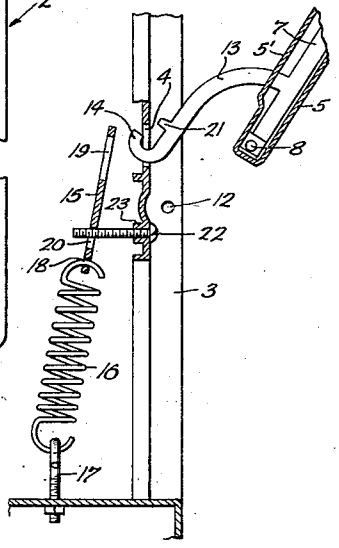


Fig. 3



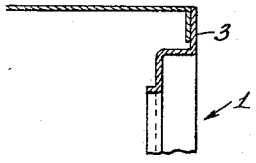


Fig. 2

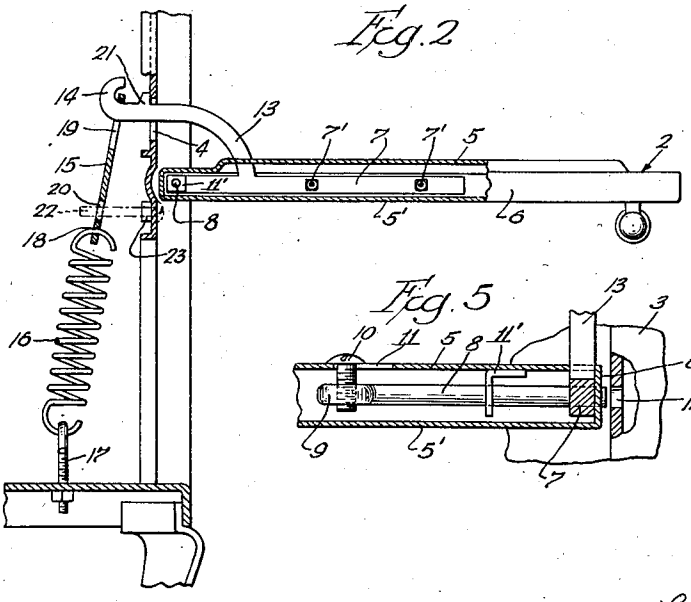


Fig. 4

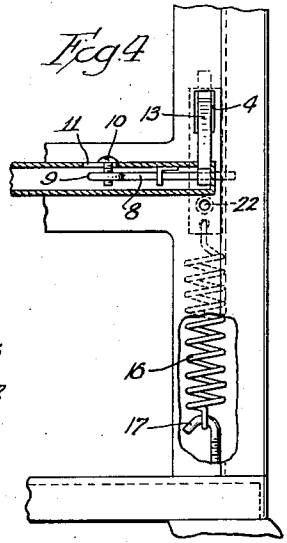


Fig. 5

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UNITED STATES PATENT OFFICE

2,063,376

STOVE CONSTRUCTION

Lawrence J. Hausser, Joliet, Ill.

Original application May 21, 1934, Serial No. 726,705. Divided and this application October 5, 1934, Serial No. 746,966

2 Claims. (Cl. 126—190)

This invention relates in general to stove construction and has more particular reference to improvements in the construction of doors for ovens, broilers, and stoves or ranges using any desired fuel. This application is a division of my co-pending application Serial No. 726,705, filed May 21, 1934.

A principal object of the invention is the provision of a door structure unit which may be readily assembled within or removed from a range or the like without disturbing the relationship of the counterbalancing means within the range or stove proper with respect to the door structure unit.

Another important object of the invention is the provision of a door structure of this character in which the pivot pins for the doors are readily adjustable and removable from operative position to permit the entire door to be removed from its position with a minimum amount of effort.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, when taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

On the drawing,

Figure 1 is a horizontal sectional view through the frame and door, showing the door in open position;

Fig. 2 is a vertical sectional view, partly in elevation;

Fig. 3 is a view similar to Fig. 2 showing the parts in position ready for assembly;

Fig. 4 is a fragmentary sectional view, partly in elevation, of the door and the hinges for the same; and

Fig. 5 is a fragmentary sectional view showing a hinge pin for the door and its mounting.

For the purpose of illustrating my invention, I have shown on the drawing an oven or stove, indicated generally by reference character 1, provided with a compartment which is accessible by a door 2. The door opening is surrounded by a frame 3 which closes the space between two panels of which the double walls of the oven are made. The frame is of angular cross-section and is provided adjacent the lower portion of the door opening at both sides with slots 4. These slots are covered by the door when the latter is closed.

The door structure 2 comprises an inner panel 5 and an outer panel 5' united along their circumferential edges by a flange 6, and a bar 7 is secured to the exterior flange or framework of the door by screws or other suitable fastening means 7'.

Pivot pins 8 are mounted adjacent the lower edge of the door structure in the interior thereof in the position shown in Fig. 5. The pivot pin is provided at one end with an eye 9 for the reception of a screw 10 which extends therethrough and which also extends through a slot 11 provided in the inner panel 5 of the door structure.

In the space between the two panels 5, 5' adjacent the circumferential flange, an angular bracket 11' is secured which serves to guide the pivot pin 8 for rectilinear movement. Each pivot pin 8 is of sufficient length to project through the reinforcing bar 7 and the flange 6 of the door structure even when the adjusting means 10 is shifted to the inner end of the slot 11. Upon slidably advancing the pivot pin 8, the free end thereof extends through an opening 12 in the frame 3 of the door opening. In this position the pins 8 pivotally support the entire door structure on the frame, and upon withdrawal of the pins the entire door structure may be withdrawn from the frame, as indicated in Fig. 5.

Means are provided for permitting the door structure to be connected with a counterbalancing element and for this purpose the door is equipped with an arm 13 projecting from the bar 7 through a suitable opening in the inner panel 5 of the door and adapted to extend through the slot 4 of the frame into the space between the panels of the double wall of the stove (Fig. 1).

This arm 13 is rigidly connected at one end with the door structure and at the other end terminates in a hook 14 to which the counterbalancing means may be attached. For this purpose, a connector element or plate 15 is interposed between the door structure 2 and the counterbalancing means 16. This counterbalancing means in the present instance comprises a helical spring having its lower end inserted in the hook of a bolt 17 which passes through the bottom plate of the stove, and having its upper end inserted through an opening 18 in the connector 15.

The connector element 15 has near its upper end an elongated slot 19 to facilitate its attachment to the hook 14 of the arm 13, and is equipped with an additional slot 20 intermediate its ends and above the opening 18. The arm 13, extending from the bar 7 of the door structure, is provided intermediate its ends with a projecting finger 21 adapted to engage the inner face of the frame 3 and serves as a stop when the door 2 has been moved to completely open position (Fig. 2).

The spring 16 exerts a strong pull on the door structure but when the door is fully opened the weight of the door holds it against inadvertent closing.

In order to maintain the counterbalancing means and its connector plate in position when the door is removed, a screw 22 is inserted from the front of the frame 3 through a threaded boss 23 on the inside of the stove frame. This screw is of sufficient length to project through the slot 20 in the connector plate 15.

When it is desired to remove the door entirely from the stove, the door is brought to a full open position (see Fig. 2). As the door assumes this open position the spring 16 is extended to its maximum length through the pull exerted by the hook 14 upon the connector plate 15, and the screw 22 is then inserted through the slot 20. The pivot pins 8 are then slid out of the openings 12 and the door is removed as shown in Fig. 3. It will be apparent that the screw 22 thus holds the counterbalancing spring and its connector plate firmly against any longitudinal displacement while the door is removed from position.

When it is desired to assemble the door with the stove or oven, the door is positioned properly, the hooks 14 are inserted in the slots 19 of the connector plates, the pivot pins 8 are then inserted in the openings 12 in the frame. The door is now in operative position with respect to the counterbalancing means and the screw 22 may be removed.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being a preferred embodiment thereof.

I claim:

1. An oven door adapted to close an opening in the frame of a stove, comprising a panel, a circumferential flange for the panel, a pivot pin adapted to slidably project through said flange to engage an aperture in said frame to form a pivotal support for the door, a guiding bracket secured to the panel and through which said pin slidably extends, and means inserted in the pin and projecting from the panel for effecting longitudinal adjustment of said pin.

2. In an oven door adapted to close an opening in the frame of a stove and having front and rear panels spaced from each other, a guide bracket secured to said door between said panels, a hinge pin slidably mounted in said bracket for movement between retracted position and extended position wherein a portion of the pin protrudes exteriorly of said panels and is adapted to engage an aperture in said frame to form a pivotal support for the door, and a member extending through one of said panels and engaging said pin for effecting movement of said pin between extended and retracted positions and for maintaining said pin in adjusted position.

LAWRENCE J. HAUSSER.