Dec. 3, 1957 D. COLLINS 2,815,018

OVEN DOOR

Filed Sept. 7, 1954 3 Sheets-Sheet 1

Fig 1

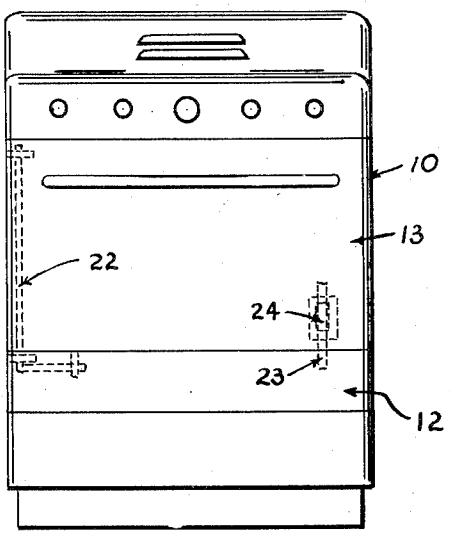


Fig 2

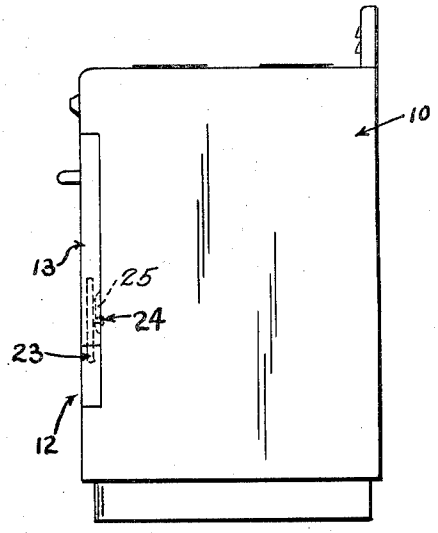
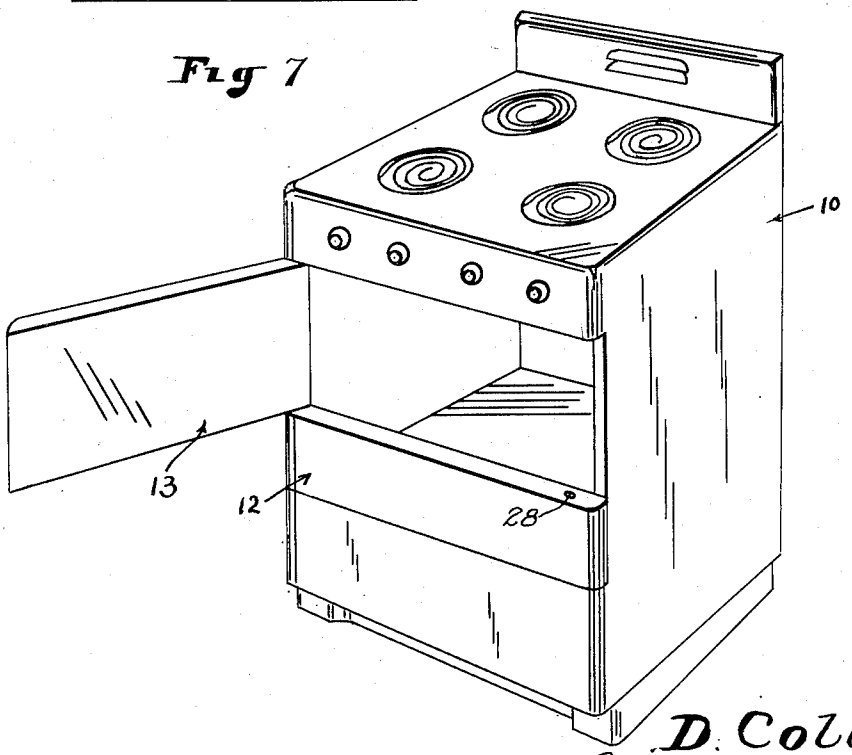


Fig 7



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Dec. 3, 1957 D. COLLINS 2,815,018

OVEN DOOR

Filed Sept. 7, 1954 3 Sheets-Sheet 2

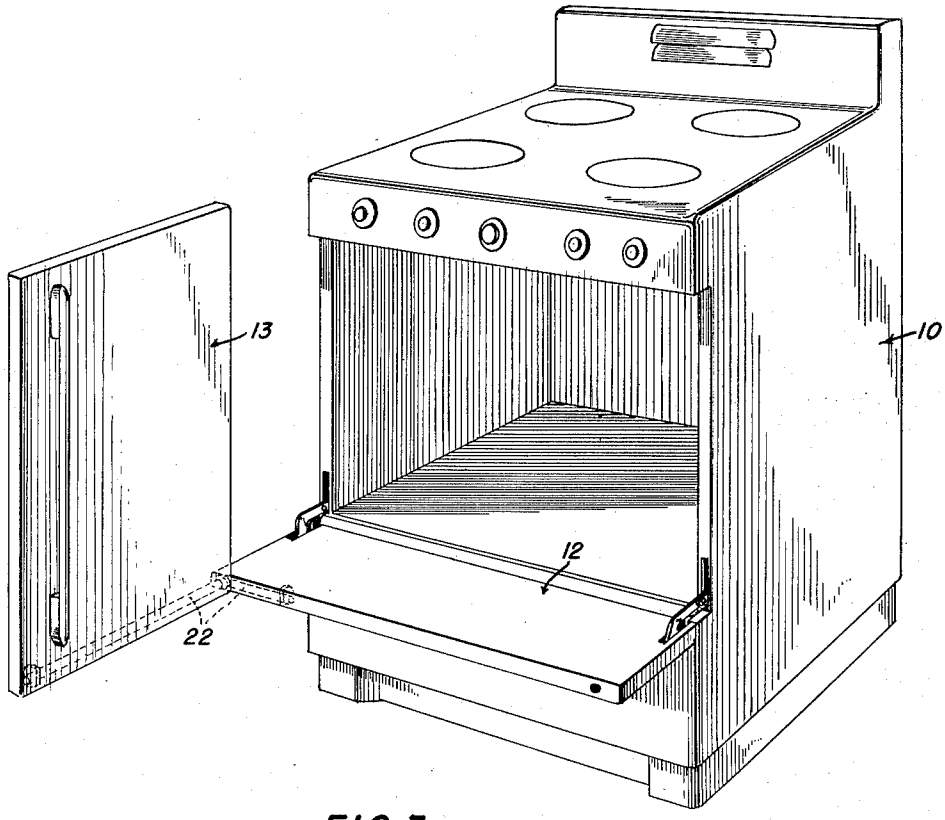


FIG. 3

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Dec. 3, 1957 D. COLLINS 2,815,018

OVEN DOOR

Filed Sept. 7, 1954 3 Sheets-Sheet 3

Fig 4

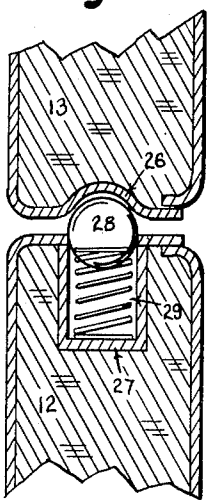


Fig 5

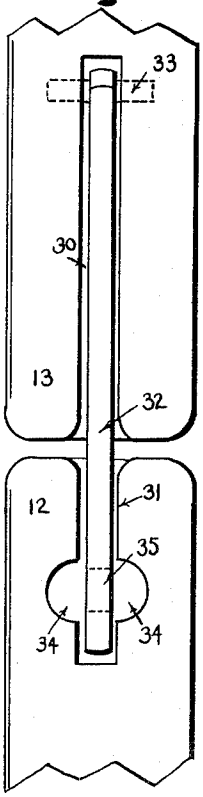
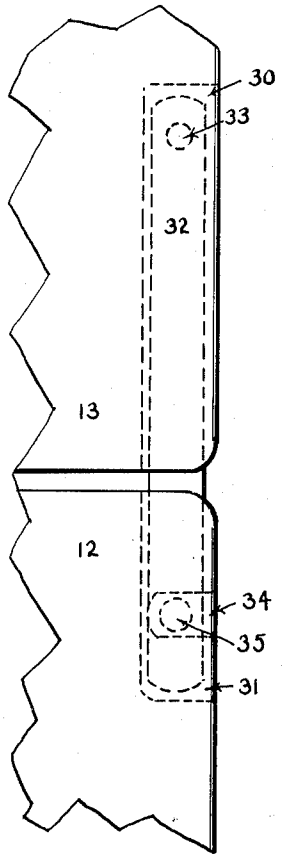


Fig 6



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United States Patent Office 2,815,018 Patented Dec. 3, 1957

2,815,018

OVEN DOOR

Douglas Collins, Salisbury, N. C.

Application September 7, 1954, Serial No. 454,367

6 Claims. (Cl. 126—190)

This invention relates to cooking stoves and more especially to doors for the baking and roasting oven of such stoves.

Oven doors on cook stoves are conventionally some fifteen inches in height and are pivoted at the bottom so that when open, a shelf is presented on which the contents of the oven may be placed while "dishing up." The oven itself is conventionally in the neighborhood of twenty inches deep on small stoves. It is apparent therefore that when it becomes necessary to clean the oven it is difficult to reach the back of the oven. This condition results in inadequate cleaning or, in order to reach the rear of the oven, the housewife must lean on the door, which is not designed to sustain the weight thus put on it, with the result that the hinge is sprung and the door ceases to operate properly.

An object of my invention is to cure these defects by making it possible to have access to the interior of the oven while the door is in vertical position and the upper portion of the door is swung to one side.

Other and further objects of my invention will be apparent from the following specification when taken with the accompanying drawings, in which:

Fig. 1 is a front elevation of a stove embodying my invention;

Fig. 2 is a side elevation of the embodiment of Fig. 1;

Fig. 3 is a perspective view of the embodiment of Fig. 1 with the oven door open and with the top panel swung up out of the way;

Fig. 4 is a detail showing one form of detent that may be used to hold the door in operative position;

Figs. 5 and 6 are details of still further forms of detents that may be used to hold the door in operative position;

Figure 7 is a perspective view of the embodiment of Figure 1 with the upper door panel swung out of normal position.

Referring now to the drawing, in Fig. 1 a cooking stove **10** is provided with an oven door comprising two rectangular panels or segments set edge to edge; a minor panel **12** forms the bottom portion of the door and a major panel segment **13** forms the upper part of the door. The lower or minor panel segment **12** is hinged along its bottom edge to the front of the stove by a hinge (not shown) and is normally biased by a spring to closed or vertical position. This hinge may be of any conventional type having the characteristic of normally resiliently holding the oven door closed, but also, through the use of a dead center or other arrangement, capable of supporting the door in its horizontal open position while placing food in, or withdrawing it from, the oven and, when the door is in the horizontal open position, it may be used as a shelf to support a pot or platter when "dishing up."

As seen in Fig. 1, shown in dotted lines, there is rigidly mounted in one end of panel **12** a vertical pivot bar **22**. Panel **13** forming the major portion of the door is mounted for swinging movement on this pivot. At the other end

of the door there is a detent or bolt **23**, mounted preferably in the panel **13**, and normally projecting downwardly into an aperture in panel **12**. From Figures 2 and 7, taken with Figure 1, it will be seen that it is only necessary to open the oven door sufficiently wide to reach down to handle **24** of the bolt **23** and lift it, to free the panel **13** to swing about pivot bar **22**. As soon as the bolt is drawn the lower panel **12** can, and will assume the closed position under the influence of the spring hinge along its bottom edge and the upper panel **13** will swing outwardly to the position shown in Figure 7. An alternative manner of use is to open the door into horizontal open position, release the bolt and the upper panel **13** can be swung about the now horizontal pivot bar **22** into a vertical position as seen in Figure 3. Figs. 4, 5 and 6 show other detents that may be used. One requirement of such a detent is that it be of such a nature as not to release inadvertently since such an inadvertent release might cause spillage of hot material from a roasting pan, for instance, that had been placed on the door in its horizontal open position.

Bolt **23** may be operated by a knob **24** which, due to depression **25** in the interior surface of the door panel **13**, lies within the panel **13** so as to present a flush inner surface.

As seen in Fig. 4 the detent means may comprise a concavity **26** in the lower edge of panel **13** in alignment with a cylindrical housing **27** in panel **12**. A spherical detent element **28** supported by a strong spring **29** normally projects almost half its diameter from housing **27**, and into concavity **26** to retain the two panels **12** and **13** in alignment. The sphere may be moved into and out of engagement with concavity **26** by a strong push or pull on panel **13**. In using the detent of Figure 4 it is necessary only to give the right hand end of the handle on the oven door a relatively sharp tug and the ball **28** will snap out of recess **26** and panel **13** will swing into the position shown in Figure 7.

The detent shown in Figs. 5 and 6 may be used in locations where the vertical edge of the oven door is normally hidden from view. This detent comprises a vertical slot **30** in panel **13** aligned with a vertical slot **31** in panel **12**. A latch bar **32** is pivoted at **33** to the panel **13** and normally lies vertically in slots **30, 31** to hold the panels **12** and **13** in alignment. In the edges of slot **31** near the end of latch bar **32** finger grooves **34** are provided and latch bar **32** may be provided with an aperture **35** to receive a hook by which the latch may be lifted in case it becomes jammed.

Normally the two panels **12** and **13** are locked in position as shown in Figs. 1 and 2 to operate as a unit to form the door of an oven that operates in every respect like the present conventional oven door. When, however, it becomes necessary to clean the oven the detent is released and panel **13** is swung about pivot bar **22** as seen in Figure 3 or 7 so that the housewife may readily reach the furthest portions of the oven.

It will be apparent to those skilled in the art that modifications and changes can be made in the specific exemplifications of the invention shown in the drawings and described hereabove, without departing from the scope of the invention as defined by the appended claims.

I claim:

1. A door for a cooking stove oven of the type comprising a top and a bottom surface and three vertical side surfaces, the fourth vertical side forming an oven opening, said door comprising two rectangular panels set edge to edge, one normally above the other to close said fourth side, said panels being of a width to extend across said fourth side and of a combined height to close said fourth side, the lower of said panels being narrow and being hingedly mounted along the edge of said bottom surface

at said fourth side, the upper of said panels being of a height complementary to said lower panel to complete said door and means for normally holding said segments in edge to edge relationship with said lower panel including a pivot lying in the plane of said panels near one end of said panels and a detent near the other end of said panels.

2. The oven door of claim 1, in which said pivot comprises a rod rigidly secured to said lower panel and extending parallel to the ends of said panels.

3. The door of claim 1, in which said detent comprises a spring pressed ball in one of said panels fitting into a depression in the other of said panels whereby said detent may be disengaged without moving said narrow panel.

4. The door of claim 1, in which the said detent comprises a bolt operable upon partial opening of said oven door.

5. The door of claim 1, in which the detent comprises a latch pivoted to one of said panels and releasably engaged in a slot in the other of said panels.

6. A segmental door for a cooking stove oven of the type comprising a top and a bottom surface and three vertical side surfaces, the fourth vertical side forming an oven opening, said door comprising a lower and an upper

segment set edge to edge, one normally above the other to close said fourth side, said segments being of a horizontal dimension to extend across said fourth side and of a combined height when in normal position to close said fourth side, said lower segment being substantially narrower than said upper segment and being hingedly mounted along the edge of said bottom surface at said fourth side, means for securing said segments together including a pivot and a detent whereby said segments are normally held edge to edge to form a door and whereby, upon release of said detent said upper segment may be turned on said pivot out of its normal position.

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