May 30, 1939. T. E. TAYLOR 2,160,765

TOP-FRONT PANEL STRUCTURE FOR RANGES

Filed Oct. 19, 1937 2 Sheets-Sheet 1

FIG. 1.

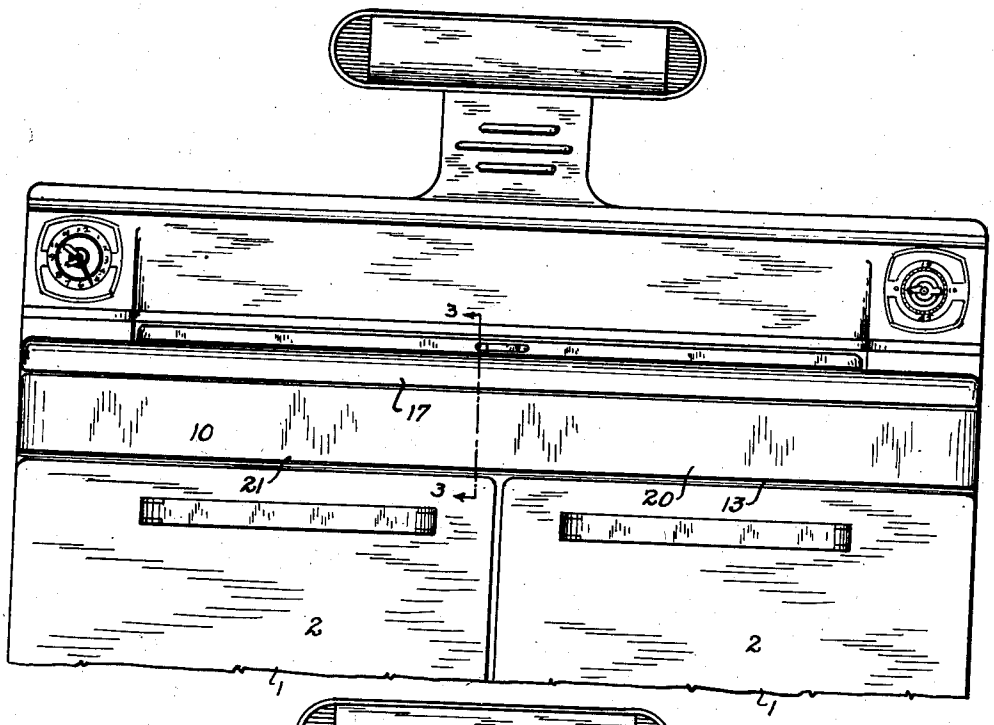
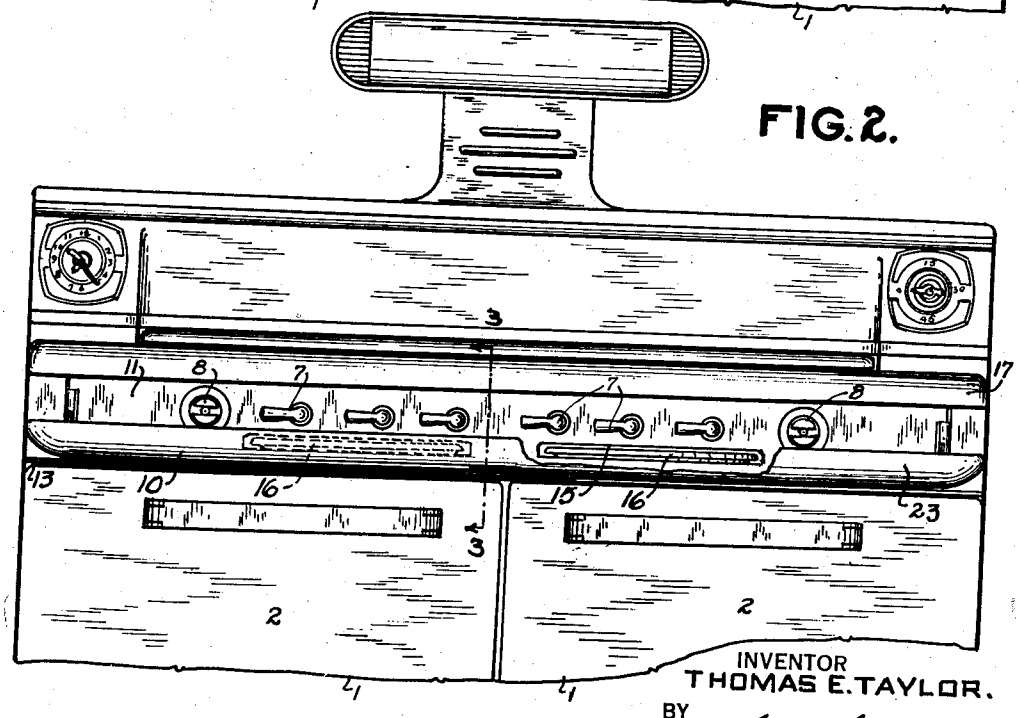


FIG. 2.



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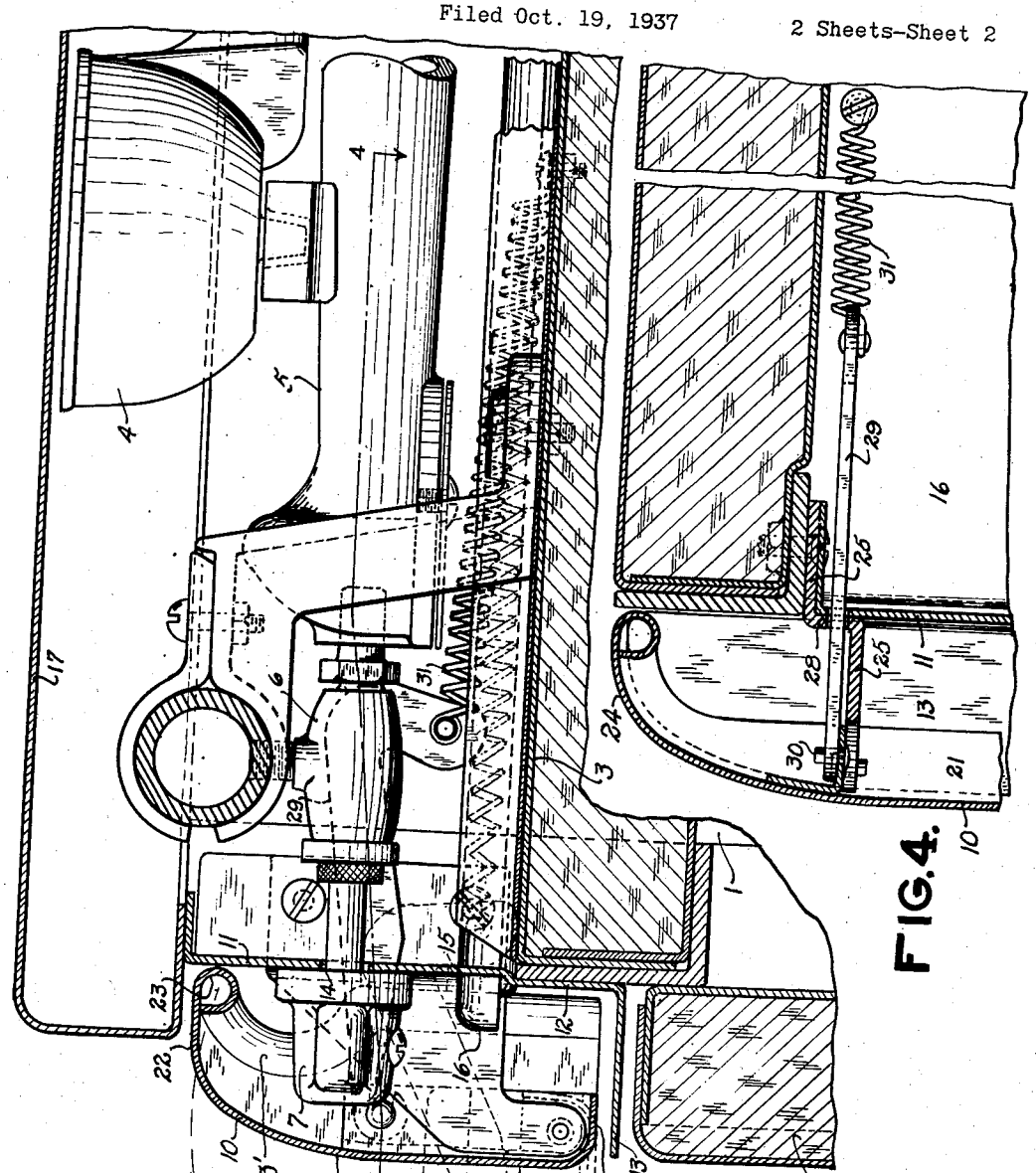


FIG. 4.

FIG. 3.

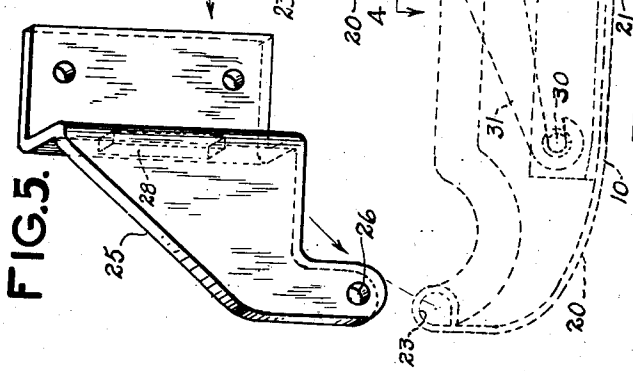


FIG. 5.

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UNITED STATES PATENT OFFICE

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TOP-FRONT PANEL STRUCTURE FOR RANGES

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6 Claims. (Cl. 126—214)

This invention relates to domestic cooking ranges and particularly to a top-front panel therefor. For the purposes of illustration, the invention will be described in connection with a gas range, its use in connection with electric ranges and other types of ranges being readily apparent from the exemplary description.

At present, in the range art, due to the demands of customers, it is desirable to provide ranges with various types of internal construction and burner arrangements, and the like. Economy in manufacture, however, requires that the external contour and panels of the range remain substantially unchanged so that the same dies and tools may be used to full advantage on numerous models.

Heretofore, the positions of the top service burners have determined the positions of the external fittings, such as the gas cock handles, thermostatic control dials and the like. The latter, in turn, have determined the position and structure of the front-top panels used in connection therewith for concealing the same. Changes in position of the front-top panel, however, necessitate changes in the size and shape of the oven doors and oven compartments themselves.

It is one of the principal objects of the present invention to provide a front-top panel for concealing the burner handles, dials, etc. which panel is coextensive endwise with the range and arranged so that, regardless of the position, endwise of the front wall of the range, of the various operating handles and the like, the external contour of the range, its appearance, and the size and shape of the ovens and doors, are preserved.

A correlative object is to provide a top-front panel arrangement which is in such relation to the ovens as to protect the operating handles, thermostatic control dials, and the like from the heat of the ovens when the oven doors are open.

Another object is to provide a front-top panel construction so related to the range that it conceals not only the operating handles, dials and the like, but also the usual drip pans which are placed beneath the top service burners.

Other objects and advantages will become apparent from the following specification, wherein reference is made to the drawings, in which

Fig. 1 is a fragmentary front elevation of a range with the front-top panel embodying the principles of the present invention incorporated therein and in closed position;

Fig. 2 is a fragmentary front elevation of the range with the front top panel in open position;

Fig. 3 is an enlarged fragmentary cross sectional view taken on a plane indicated by the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary, horizontal sectional view taken on a plane indicated by the line 4—4 in Fig. 3; and

Fig. 5 is a perspective view of the support for the front-top panel.

Referring to the drawings, the range has oven compartments, indicated generally at 1, which are closed by suitable drop doors 2, respectively. The oven compartments are provided with an insulated top wall 3. Supported by suitable brackets upon the top wall 3 are service burners 4, each of which has a mixing tube 5 into which gas is introduced from a suitable stop cock 6 controlled by a handle 7. The usual oven thermostatic controls are provided and are settable by suitable dials 8.

In order that the operator of the stove may be afforded convenient access to the handles 7 and dials 8, the handles and dials are arranged to extend forwardly and be exposed at the top front portion of the range, the handles usually being directly in line with their respective burners. Thus, if the burners are arranged toward the mid-portion of the top of the range in the so-called "center burner" type of range, the handles 7 will be located at the mid-portion of the top front of the range, as illustrated. On the other hand, if it is desired to produce the so-called "split top" range, in which the burners are arranged in pairs, one pair at each end of the range, the handles 7 would necessarily have to be positioned adjacent the ends of the top front of the range, unless, of course, very expensive lever connections were provided between the handles and the stop cocks. Thus, each change in the position of the burners 4 necessitates a change in the position of the handles 7 endwise of the range.

Heretofore, in some instances, front-top panels, which were arranged to overlie and conceal the operating handles of the burners, have been provided but such were substantially coextensive in length with the row of handles and were shifted in position, depending upon the position of the handles. In such a construction, each change in the location of the top service burners 4 necessitates a change in the top front panel, and this, in turn, necessitates a change in the oven doors and the like. Accordingly, in order to eliminate the necessity of these changes,

while maintaining the proper external appearance and lines of the range, the top-front panel 10 of the present invention is provided.

Mounted on the top front portion of the ranges is an auxiliary top-front panel 11 which is preferably in the form of a piece of sheet metal extending above the top wall 3 of the ovens. The panel 11 has a portion overlying the front of the wall 3 for a part of its height, as indicated at 12, and has a lower deflecting flange portion 13 which extends forwardly, normal to the front wall of the oven and range, so as to be substantially coextensive fore and aft of the range with the oven doors 2. The member 11 preferably extends the full length of the range and the portion 13 acts as a baffle to prevent hot gases which are discharged through the open oven door from passing upwardly against the stop cock handles 7 and control dials 8. The operating stems of the stop cocks extend through suitable apertures 14 in the auxiliary panel 11, and the handles 7 are connected to the stems on the outside of the auxiliary panels 11 so that they occupy a space fore and aft of the range slightly less than the thickness of the oven doors 2. The most forward portions of the handles 7 and dials 8 lie rearwardly of the front plane of the oven door 2.

Near the level of the top wall 3 of the oven, the auxiliary panel 11 is provided with openings 15 through which are received the usual drip trays 16 which underlie the service burners 4. The drip trays are slidable fore and aft of the range in suitable channels, as illustrated, and are removable from the front of the range through openings 15 of the auxiliary panel 11. The compartment defined by the oven top wall 3 and the auxiliary panel 11, and the side and rear walls of the range, is closed at the top by the usual top panel 17.

Referring next in detail to the top-front panel 10, with which the present invention is particularly concerned, the top-front panel 10 is preferably formed of sheet metal having an upright forward portion 20, a bottom flange portion 21, and a top flange portion 22, the free end of the top flange portion being folded in the form of a rounded bead 23. The top-front panel has end wall portions 24 so that the top-front panel 10 is in the form of a casing which is open toward the range. As shown in Figs. 3 and 4, the rounded bead 23 extends downwardly along the rear edges of the end wall portions 24 and is relatively indented as at 23' (Fig. 3) to form smooth finger openings on the end walls whereby to assist the user in swinging the top-front panel 10 to open position. The relative indentations at 23' also serve as ventilator openings, particularly as air outlets. Preferably the lower flange 21 of the top-front panel 10 is spaced from the flange 13 of the auxiliary panel portion 12 sufficiently to provide an air inlet all along the bottom edge of the top-front panel 10. This inlet cooperates with the openings afforded by the relatively indented portions 23' of the end walls 24 in ventilating the interior of the casing afforded by the top-front panel when closed, thereby to maintain the operating handles 7 relatively cool. The panel 10 is coextensive endwise with the range and of such depth that the portion 20 lies substantially in the plane of the front wall of the oven door 2.

Near its ends, the panel 10 is mounted on suitable brackets 25 having eyes 26 through which it is pivotally connected to the brackets, the pivotal axes of the connection between the panel 10 and the bracket 25 being positioned as closely as possible to the front wall 20 of the top-front panel and near the bottom margin thereof. The bracket 25 is provided with an aperture 28 through which extends a suitable rod 29 which is pivotally connected at its outer end by a pivot 30 to the top-front panel 10 and which is connected at its inner end to a suitable spring 31. The spring, in turn, is secured to another wall of the range. As illustrated, the spring is so disposed relative to the pivotal axis that it and the rod 29 swing the top-front panel 10 to an upright closed position. The panel 10 is hollow, as described, and sufficient to accommodate the handles 7 and operating dials 8 so as to conceal and protect the same and also to overlie and conceal the drip trays and, in fact, the entire auxiliary panel 11.

As illustrated in Fig. 3, when the top front panel 10 is in the open position shown in dotted lines, it, in combination with the flange 13, deflects the hot gases from the oven outwardly forwardly of the range beyond the handles 7 and dials 8. When it is swung to an upright position by the spring 31, the entire front of the range defines substantially a single unbroken plane surface, regardless of the lengthwise position of the stop cock handles 7, dials 8 and the drip pans. Thus, the internal structure of the range, the arrangement of the burners, drip pans and the like, may be changed considerably without requiring any change in the external configuration of the range. Furthermore, since the panel 10 does not have to be changed because of changes in the burners, drip pans, and control equipment, the oven doors and the like need not be altered because of variations in the locations of the burners, drip pans and the like.

Having thus described my invention, I claim:

1. In a cooking range having oven compartments, forwardly opening doors for said compartments, said doors having their forwardly exposed surfaces in a common upright plane, said range having a top wall for said compartments, top service heating elements on said top wall and having operating handles extending forwardly of the range, said compartment top wall being below the level of the top of the range and substantially coextensive endwise and laterally with the range, an auxiliary front panel defining a service heating element compartment with said compartment top wall and the side, end and top walls of the range, said auxiliary panel being spaced rearwardly from the said common plane and having apertures therein, said operating handles being disposed along the forward face of the auxiliary panel, means extending through said apertures and operatively connecting the handles to the heating elements, a hollow top-front panel connected at its lower margin to the range for swinging downwardly to a horizontal open position and upwardly to a vertical closed position, said top-front panel being coextensive endwise with the range and arranged for accommodating and concealing the operating handles when the top-front panel is in closed position and for uncovering and affording access to the handles when the top-front panel is in open position.

2. In a gas range having oven compartments, doors for said compartments and having their forwardly exposed surfaces in a common upright plane, said doors being arranged to swing downwardly and outwardly about their lower mar-

gins to an open position, said range having a top wall for said compartments, top service burners over said top wall and having operating handles extending forwardly of the range, a hollow top-front panel connected at its lower margin to the range for swinging downwardly to a horizontal open position and upwardly to a vertical closed position, said panel being coextensive endwise with the range and arranged for accommodating and concealing the operating handles when the panel is in closed position and for uncovering and affording access to the handles when the panel is in open position, and said panel being arranged with its forwardly exposed face substantially in the said common plane of the doors when the doors and panel are in closed position, and said top-front panel having openings affording passage of air around the handles when the top-front panel is closed, and baffle means interposed beneath the bottom of the top-front panel and top of the doors and cooperable with the top-front panel for deflecting heated media escaping from the opens when the oven doors are opened forwardly beyond the handles.

3. In a gas range having oven compartments with forwardly swinging doors with their forwardly exposed surfaces in a common upright plane, and having a top wall for said compartments, top service burners on said top wall and control means having operating handles extending forwardly of the range, drip pans beneath said burners and arranged for removal by sliding forwardly of the range, an auxiliary top-front panel between the top level of the oven doors and the top of the range and having apertures therein affording passage for the drip pans and control means, a hollow top-front panel connected at its lower margin to the range for swinging downwardly to a horizontal open position and upwardly to a vertical closed position, said top-front panel being coextensive endwise with the range and having a front wall which extends upwardly beyond the operating handles and downwardly beyond the lowermost horizontal plane of the drip pans in the closed position of the top-front panel and arranged for accommodating and concealing the operating handles and drip pans when the top-front panel is in said closed position and for uncovering and affording access to the handles and drip pans when the top-front panel is in open position.

4. In a cooking range having compartments arranged side by side, a common top wall for the compartments, forwardly opening doors for the compartments, said range having a top panel spaced above said top wall and providing therewith a top service heating element compartment, heating elements in said compartment having operating handles extending forwardly of the range, an auxiliary panel closing the front of the said heating element compartment and having apertures through which the handles extend, said auxiliary panel being coextensive endwise with the range and lying substantially in the plane of the inner faces of said doors and having a depending forwardly extending flange portion extending forwardly of the range and in closely spaced relation above the doors, and terminating forwardly close to the plane of the forwardly exposed surfaces of the doors, a hollow top-front panel connected at its lower margin to the range above the said flange for swinging downwardly to a horizontal open position and upwardly to a vertical closed position, said top-front panel being coextensive endwise with the range and in alignment forwardly of the range with the auxiliary panel, and arranged for accommodating and concealing the operating handles and auxiliary panel when the top-front panel is in closed position and for uncovering and affording access to the handles when the top-front panel is in open position.

5. In a gas range having oven compartments, doors for said compartments and having their forwardly exposed surfaces in a common upright plane, said doors being arranged to swing downwardly and outwardly about their lower margins to an open position, said range having a top wall for said compartments, top service burners over said top wall and having operating handles extending forwardly of the range, a hollow top-front panel having end walls, a top wall and a front wall, said panel being connected at its lower margin to the range for swinging downwardly to a horizontal open position and upwardly to a vertical closed position, said panel being arranged for accommodating and concealing the operating handles when the panel is in closed position and for uncovering and affording access to the handles when the panel is in open position, said top-front panel having the lower edge of its front wall spaced from adjacent portions of the range in the closed position of the top-front panel to provide an air inlet passage and having its end walls relatively indented adjacent the front of the range, said indentations forming air outlet passages when the top-front panel is closed.

6. In a gas range having front and side walls and an oven which is accessible through an opening in the front wall, which opening is closed by a door engageable with the front wall, a top wall for the oven extending rearwardly from said front wall, service burners above the top wall, operating handle members for the service burners extending forwardly to a position above said oven door, an upright panel having openings through which stem portions of the handle members extend, a hollow top-front panel having end walls, a top wall and a front wall, said top-front panel being movably arranged substantially to enclose the portions of the handle members which lie forwardly of said upright panel, and said end and top walls of the top-front panel being arranged substantially to abut the forward face of said upright panel in the closed position of the top-front panel, said end walls and top wall of the top-front panel having their rear edges curled inwardly to form a continuous bead, bead portions on the end walls being diverted away from the forward face of the upright panel in the closed position of the top-front panel to provide finger holes enabling the top-front panel to be withdrawn from closed position against said upright panel.

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