Aug. 25, 1931. J. TELLER ET AL 1,820,849

GAS OR ELECTRIC COOKING RANGE

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Fig. 1.

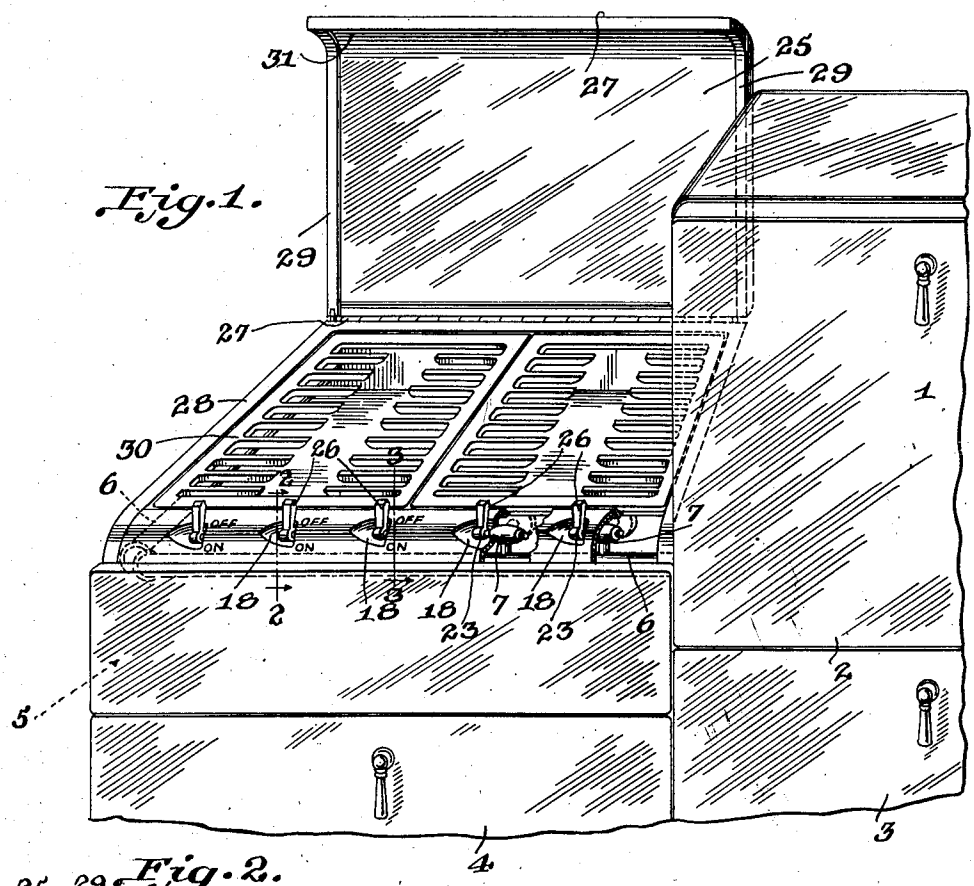


Fig. 2.

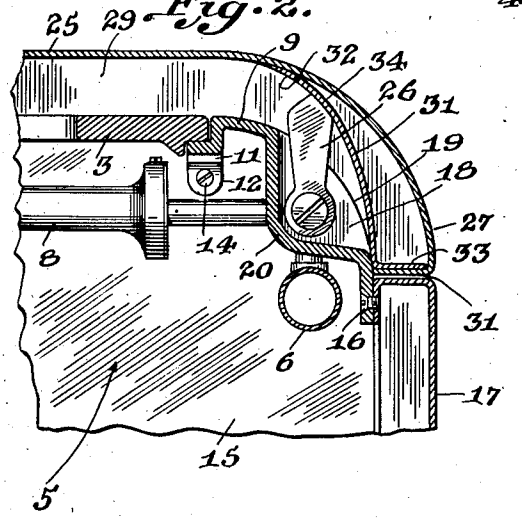
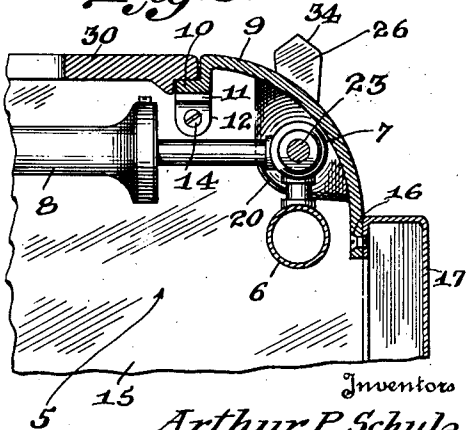


Fig. 3.



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Fig. 4.

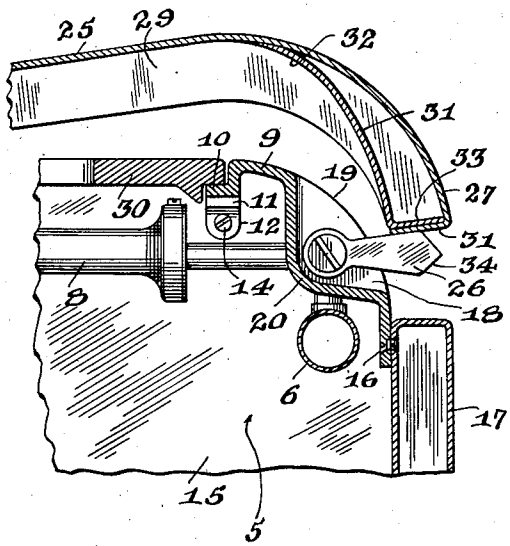


Fig. 5.

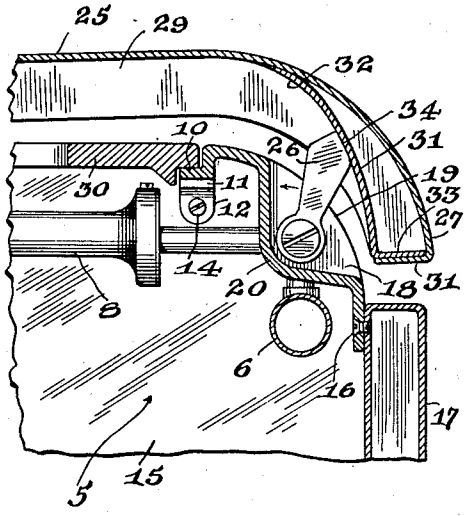
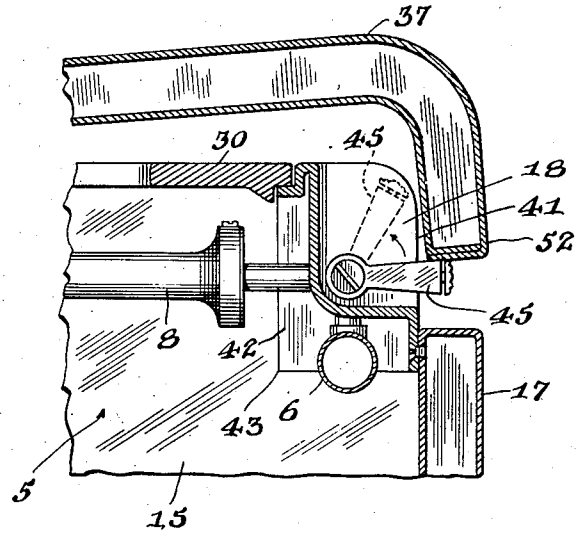


Fig. 9.



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GAS OR ELECTRIC COOKING RANGE

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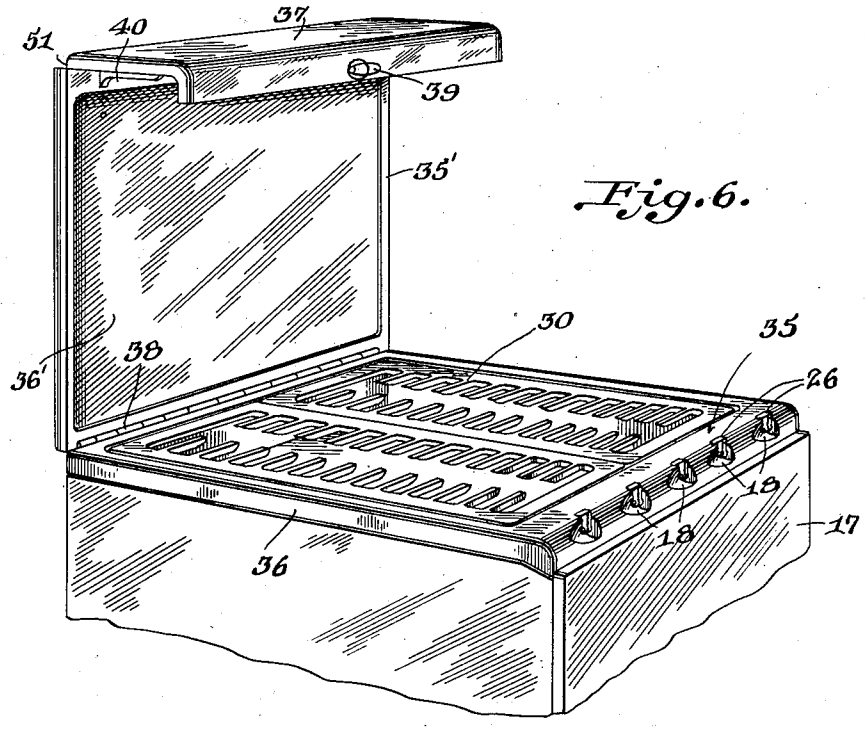


Fig. 6.

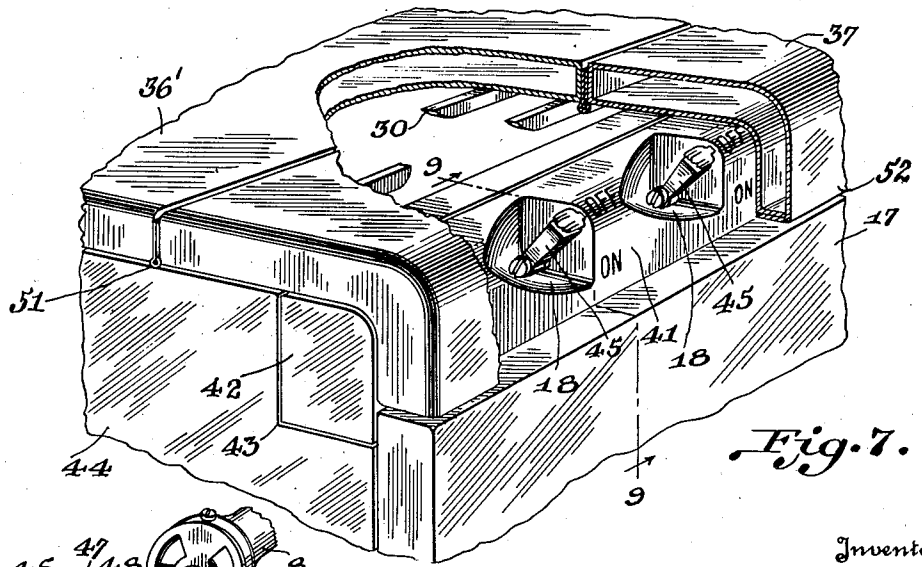


Fig. 7.

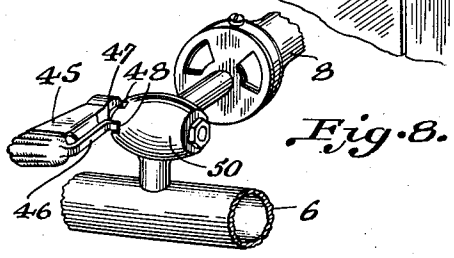


Fig. 8.

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UNITED STATES PATENT OFFICE

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GAS OR ELECTRIC COOKING RANGE

Application filed December 1, 1930. Serial No. 499,354.

This invention relates to improvements in gas or electric ranges and particularly to a construction wherein the manifold, valves and other elements coincident thereto are concealed from view when a foldable and hinged cover is lowered. A further feature of the invention resides in a construction wherein the elements of safety is a consideration, said construction being of such nature that the cover cannot be entirely lowered until the valves are all closed. In connection with the safety feature, the arrangement is such that should the valves be partially closed, lowering of the cover into its extreme lowermost position automatically causes the complete closure of the several or any one of the valves accidentally left opened. A further valuable feature resides in the special construction of the valve and manifold shield and also in a modified construction, a novel arrangement of said cover wherein it is constructed to be used in part as a shelf or hood.

Further objects and advantages of the present construction will be apparent to those familiar with the stove art, upon reference to the following specification and accompanying drawings, in which:

Fig. 1 is a front perspective view of that portion of a range embodying one form of our invention;

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1, but showing in addition, the cover lowered to conceal the valves and grates.

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a vertical sectional view similar to Fig. 2, but illustrating the manner in which the forward portion of the cover rests upon the valve stems and is prevented from closing when any of the valves are in open position.

Fig. 5 is a view similar to Figs. 2 and 4, but illustrating the manner in which, should any of the valves be partially open, the guard plate of the cover will coact with the angular end portion of the valve stem to "cam" or force it into closed position, the valve handle moving at the time in the direction of the arrow.

Fig. 6 is a perspective view of the upper portion of a range embodying a modification of our invention.

Fig. 7 is an enlarged view, partly in elevation and partly in section of the front portion of the range.

Fig. 8 is a perspective view illustrating a novel form of valve lock, and

Fig. 9 is a sectional view on the line 9—9 of Fig. 7, illustrating the manner in which the forward portion of the hinged section of the cover rests upon the valve stems when any of the valves are open, thus visually indicating if any of said valves are open before lowering said cover.

With particular reference to the construction shown in Figs. 1 to 3, the range is designated generally by the numeral 1 and includes a top and lower oven 2 and 3 respectively, arranged at one side of the range, a lower side compartment 4, all closed by hinged doors, and a compartment 5 above the compartment 4, the latter being adapted to contain the manifold 6, valves 7 and mixing valves and burners 8.

For the purpose of shielding or concealing the valves, manifold and parts thereof, I provide a shield 9 substantially arcuate in cross section as shown particularly in Fig. 3, said shield extending entirely across the front of the burner compartment and being supported at its rear upper ends through the medium of integral flanges 10, which rest upon the shoulders 11 of brackets 12 suitably secured as by stove bolts 14 to the side walls or frame members 15 of the range body.

The shield 9 is supported at its forward lower edge by means of screws or other fastenings 16 to the upper rear edge of a cover plate 17 which closes the compartment 5.

This shield 9 is preferably formed by casting, and during which a series of recesses or pockets 18 shown more clearly in Fig. 2, are formed, each of said pockets having a vertical end wall 19 and a bottom wall 20, the convergent edges of which latter extend longitudinally of the shield 9 to a point

where the bottom wall merges into the plane of the upper face of said shield, the vertical wall 19 of each recess being provided with an opening 22 within which is received and operates, the stem 23 of the valve 7.

As shown in Fig. 1, there are a plurality of these valves 7, each being connected in suitable manner with the manifold 6 which lies to the rear of the shield 9.

It is one of the primary objects of this invention to so construct the range that the cover 25 cannot be closed so long as any of the valves are open, and to this end, the valve handles 26 are so arranged, and of such length that, when they are turned to open or partially open the valves the cover cannot be entirely closed. When any one of the valve handles is in the dotted line position shown in Fig. 2, it lies in the path of movement of the forward curved portion 27 of the cover, which prevents the latter being entirely closed, and thereby visibly indicates to an observer that said valve or valves are not closed.

The cover 25, which is hinged at its rear edge as at 27' to the rear upper edge of the top frame 28, is provided upon each side with a flange 29 which, when the cover is closed rests upon the side members of said top frame 28, forming thereby a substantial air circulating space above the burner grates 30, permitting cooling thereof when the burners 8 have been extinguished and the cover 25 closed.

The forward portion of the cover is provided on its under side with a transverse curved guard-plate 31, attached at its upper edge to the under face of the cover by any suitable means, such as spot-welding or brazing, the lower edge being spaced away from the cover and provided with a flange 33 suitably connected with a cooperating inturned flange 31 on the lower edge of said cover, as shown in Fig. 2. The width of this flange 31 is coextensive to the flange at the upper edge of the plate 17, so that, when the cover is fully closed as shown in Fig. 2, a smooth or flush stove front is provided free from any obstructing flanges, ledges or other extensions.

Should it happen that any valve or valves be left partially open the guard-plate 31 of the cover will engage an angular end 34 of the valve handle 26 and "cam" it into fully closed or vertical position, as in Fig. 2.

Referring now to Figs. 6 and 7 of the drawings which represent a modification of the present invention, the body of the range is substantially similar to that of Fig. 1. With particular reference to Fig. 6, the shield 35 which covers the manifold and valves, is formed as an integral part of the upper range frame 36 which supports the usual grates 30, said shield being provided with the pockets or recesses 18 within which operate the valve handles 26 and stems 23. One of the particular features of the present form is that providing the cover 35' in two sections 36' and 37 hinged together at 51, the former 36' constituting, when in lowered position, the main cover, while the latter 37 in such position constitutes the cover for the valve handles and associated parts.

The section 37 of the cover, as illustrated in Fig. 6 serves a double function:—first, that of providing a hood which will serve to catch vaporized grease arising from cooking vessels on the rear burners, and second that of providing a shelf which will serve such purposes as attachments of the general character are utilized. The entire cover which is hinged at 38, to the rear upper edge of the top frame 36, when closed entirely covers the top of the range and entirely conceals every operating element, raising and lowering of the cover being permitted by an operating handle 39. To the under face of the hinged section 36' is suitably attached a brace or bracket 40, so that when the cover is in the position shown in Fig. 6, the upper hinged hood or shelf will be properly supported.

In Fig. 7 I have shown a slightly modified form of a manifold shield 41. In this arrangement, the shield is closed at its ends by plates 42, the lower rear corners of which are substantially rectangular and are seated within correspondingly shaped cut-away recesses 43 in the side plates 44 of the range. The shield is supported in the manner shown in Figs. 2 and 3 with relation to the associated stove parts, and the cover construction being substantially the same as in Fig. 6.

A further difference in the construction shown by this figure resides in the peculiar guard plate in transverse section. In this arrangement the outer face of the guard plate does not describe a true arc, the greatest radius from the axis of the valve stem being substantially midway of outer edge of the end wall 19 of the recess 18, at which point it is substantially co-extensive with the length of the valve stem 23, and therefore clear of the forward downwardly extending portion of the cover as shown in Fig. 7, the valve at such position of the handle being closed and permitting the cover to be lowered into its fully closed position.

As shown by Fig. 9 when the handle is moved downwardly to horizontal or "on" position, the downwardly extending forward portion of the cover will rest on the handles, thus indicating that a valve is open.

In Fig. 8 I have illustrated a form of safety valve lock in which a valve handle 45 is provided with a spring arm 46, the

inner end of which is provided with a tongue 47 cooperating with either of a pair of notches 48 formed in the valve body 50. The handle 45 may be manipulated from off to on position, or vice versa only when the tongue 47 of the spring 46 has been moved from the notch in the valve body in which it lies.

In the form shown in Figs. 6, and 7, the cover is constructed of a pair of spaced plates, as distinguished from the form shown in Figs. 1 and 2. As shown by the full line position of the valve handle 45 in Fig. 9, the forward hinged section 37 of the cover cannot be fully closed when any of the valves are in "on" position. If an attempt were made to close the cover under such conditions, the forward edge 52 of the section 37 would rest upon the valve handles and indicate that the valves were turned on.

Having thus described this invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a cooking range, a cooking top embodying a rectangular frame for supporting the burner grates, a manifold extending across the front of said range, a guard plate extending across the front of said frame over said manifold and provided with a series of recesses, a series of valves beneath said guard plate connected with said manifold, the axes of said valves being arranged parallel with the axis of the said manifold, a valve stem for each of said valves extending into each of said recesses, a valve handle on each stem adapted to swing in a plane transverse to the axis of said manifold from substantially vertical to horizontal position, a cover for said cooking top hinged to the rear of said frame, and having a forward downwardly turned extension for covering said guard plate and valve parts when said valve handles are in vertical position, and said handles when in horizontal position lying in the path of the lower flange of said extension, whereby said cover is prevented from being entirely closed when said valves are in open position.

2. In a cooking range, an upper rectangular frame having a cooking top, heating elements supported in cooking relation to said top, a source of supply for said heating elements beneath said cooking top and having a series of control devices connected with said heating elements and said source of supply, a guard plate supported at the forward portion of said frame and provided with a series of recesses, operating handles for said control devices within said recesses and movable in a plane transversely of said guard plate, a cover hingedly secured to the rear of the upper frame and adapted when in closed position to cover said heating top and guard plate, said control handles when in horizontal position extending beyond the outer face of said guard plate and having their outer ends lying in the path of movement of the forward portion of said cover, to prevent closing of the latter when said handles are in horizontal or "on" position.

3. In a cooking range, an upper rectangular frame for supporting the cooking top, a manifold extending across the forward portion of said range, a guard plate extending across the forward portion of said frame and adapted to cover said manifold, said guard plate having a series of recesses, valves connected with said manifold, each of said valves having a stem extending into one of said recesses, a handle on each stem swingable in a vertical plane transversely of said guard plate, from a vertical to a horizontal position, a cover hinged to the rear of the frame member, and having a forward, downwardly extending guard-plate cover and a handle engaging portion adapted to engage the outer ends of said handles when in horizontal position but to clear said handles when the later are in vertical position.

4. In a cooking range according to claim 3, the forward, downwardly extending portion of said cover plate having on its under side, means for moving the valve handles to a vertical position from a point intermediate the vertical and horizontal positions, upon closing of said cover.

5. In a cooking range, an upper rectangular frame, a guard plate supported at the forward portion of said frame, said guard plate having a series of pockets, each provided with a vertical end wall and a bottom wall, the sides of which are convergent in the direction of the longitudinal axis of said guard plate, a manifold having valves beneath the guard plate, said valves each having a stem passing through the vertical wall of each recess, a handle for each stem operating within its respective recess, and having a portion extending beyond the outer plane of the guard plate, a hinged cover having a forward downwardly extending guard-plate cover, the lower forward portion of said extension being adapted to contact with said valve handles when the latter are in horizontal position.

6. In a cooking range, an upper rectangular frame, a manifold having a series of valves positioned below said frame, a guard plate extending across the forward portion of said frame and over said manifold and valves, said manifold having a series of recesses in the face thereof, valve operating handles located in said recesses and swingable transversely of said guard plate from a vertical to a horizontal position, a cover hinged to the rear of said frame and having a forward downwardly extending guard plate portion, and means on said portion for moving said handles from a point inter-

mediate their vertical and horizontal positions to a vertical position, when said cover is closed.

7. In a cooking range, a cooking top including a rectangular frame, a manifold guard plate extending across the front of said frame, a cover hinged at the rear of said frame, said cover being formed in sections, the main section of said cover when closed being adapted to overlie the cooking top while the auxiliary section is adapted to cover said manifold guard plate.

8. In a cooking range, a cooking top including a rectangular frame, a manifold guard plate extending across the front of said frame, a cover hinged at the rear of said frame, said cover being formed in hinged sections, a main and an auxiliary section, the main section of said cover when closed being adapted to overlie the cooking top, while the auxiliary section is adapted to cover said manifold guard plate.

9. In a cooking range, a cooking top including a top frame, a manifold guard plate extending across the front of said frame, a cover hinged at the rear of said frame, said cover being formed in hinged sections, a main section of said cover being adapted to provide a closure over the cooking top, and an auxiliary hinged section adapted when said cover is raised, to form a combined hood and shelf, and when the cover is lowered, to conceal the manifold guard plate.

10. In a cooking range, a cooking top including a rectangular frame, a manifold guard plate extending across the front of said frame, a cover hinged at the rear of said frame and provided with side flanges adapted to rest upon the side members of said rectangular frame when said cover is lowered to provide a space between said cover and said cooking top, said cover having a forward downwardly extending portion adapted to overlie and conceal the said manifold guard plate.

11. In a cooking range, a cooking top including a rectangular frame, a valve manifold at the front of said range and below the cooking top, a manifold guard plate over said manifold and extending across the front of said frame and formed integrally therewith, and a cover hinged at the rear of said frame and adapted when lowered to cover said cooking top and guard plate, the forward portion of said cover being downwardly curved and conforming to the transverse contour of said guard plate.

12. In a cooking range, an upper compartment, gas burners and a manifold within said compartment, a stationary panel extending across said range and covering the front of said compartment, an upper rectangular frame and a cooking top, a manifold guard plate at the front of said frame and elevated above said stationary panel and to the rear thereof, a cover hinged at the rear of said rectangular frame and having a forward downwardly extending portion adapted when lowered to cover said guard plate, and cooperate with said panel to provide a closed flush front for said stove.

13. In a cooking range, a cooking top including a rectangular top frame, a manifold guard plate extending across said top frame at its front portion, said guard plate having a curved upper face and being provided with a series of facial pockets, a valve manifold beneath said guard plate, valve handles operable within said pockets in a vertical plane transverse to said guard plate, a cover plate hinged at the rear of said frame and having a forward downwardly curved portion conforming to the curvature of said guard plate and adapted when closed to cover the latter.

14. In a cooking range, a cooking top including a top rectangular frame, a cover for said cooking top hinged at the rear of said frame, said cover embodying a main body section and an outer hinged section, and means for supporting said outer hinged section perpendicular to said main body section when the latter is raised to uncover the cooking top.

15. In a cooking range, a cooking top, an upper frame having a manifold guard plate at its front portion, a manifold beneath said guard plate, said guard plate having a series of recesses, a valve handle for each of said valves within each recess and operable in a vertical plane transverse of said guard plate into vertical and horizontal position, and adapted when in horizontal position to extend beyond the lower front face of the said guard plate, a cover for said cooking top hinged at the rear of said range, said cover having a guard plate covering portion adapted when closed to lie adjacent the lower edge of said guard plate, and adapted when said handles are in horizontal position to rest on the outer ends thereof, whereby said cover is prevented from fully closing when any of said valves are open.

16. In a cooking range, an upper frame having a cooking top, heating elements supported in cooking relation to said top, a source of supply for said heating elements beneath said cooking top, and having a series of control devices connected with said heating elements, a guard plate supported at the forward portion of said frame and provided with a recess in its front face, an operating handle for a control device within said recess and movable beyond the front edge thereof, a cover hingedly secured at the rear of said range and adapted when in a closed position to cover said cooking top and guard plate, said operating handle when moved in one position to open said source of supply lying in the path of movement

of the forward edge of said cover to prevent closing of the latter.

17. In a cooking range, an upper rectangular frame for supporting a cooking top, a manifold extending across the forward portion of said range, a guard plate extending across the forward portion of said frame and adapted to cover said manifold, said guard plate having a series of recesses, valves connected with said manifold, each of said valves having a stem extending into one of said recesses, a handle on each stem movable in one position beyond the lower front edge of said guard plate, a cover hinged to the rear of said range, and having a forward downwardly extending guard plate cover and handle engaging portion adapted to engage the outer ends of said handles when in the aforesaid position.

In testimony whereof we affix our signatures.

JACOB TELLER.
ARTHUR P. SCHULZ.