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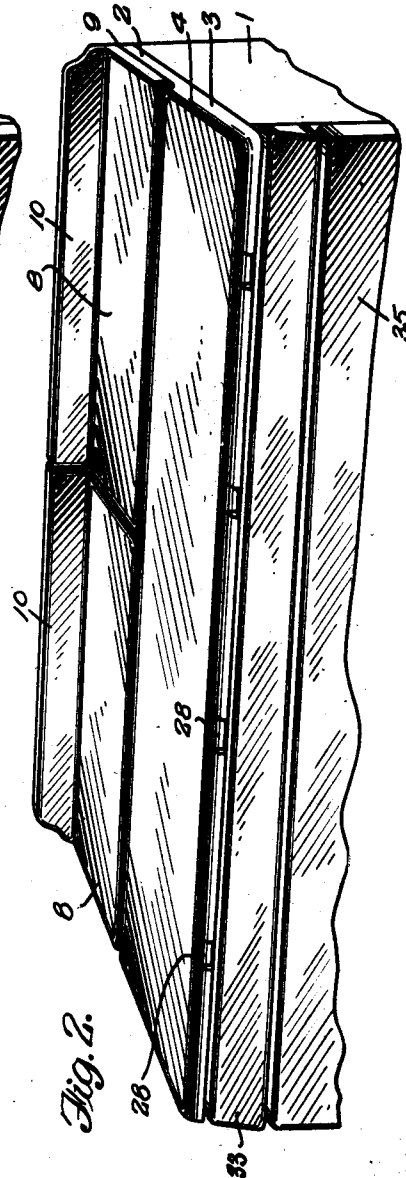
J. TELLER ET AL

1,981,084

GAS OR ELECTRIC COOKING STOVE AND RANGE

Filed Dec. 14, 1931

4 Sheets-Sheet 1



Inventors

Jacob Teller
and Arthur P. Schulz

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C. E. Wear.

Nov. 20, 1934.

J. TELLER ET AL

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4 Sheets-Sheet 2

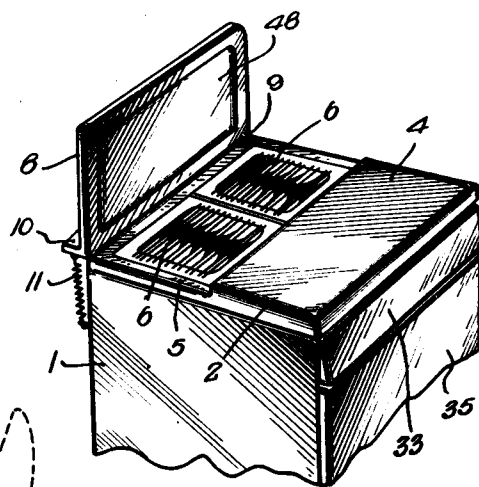
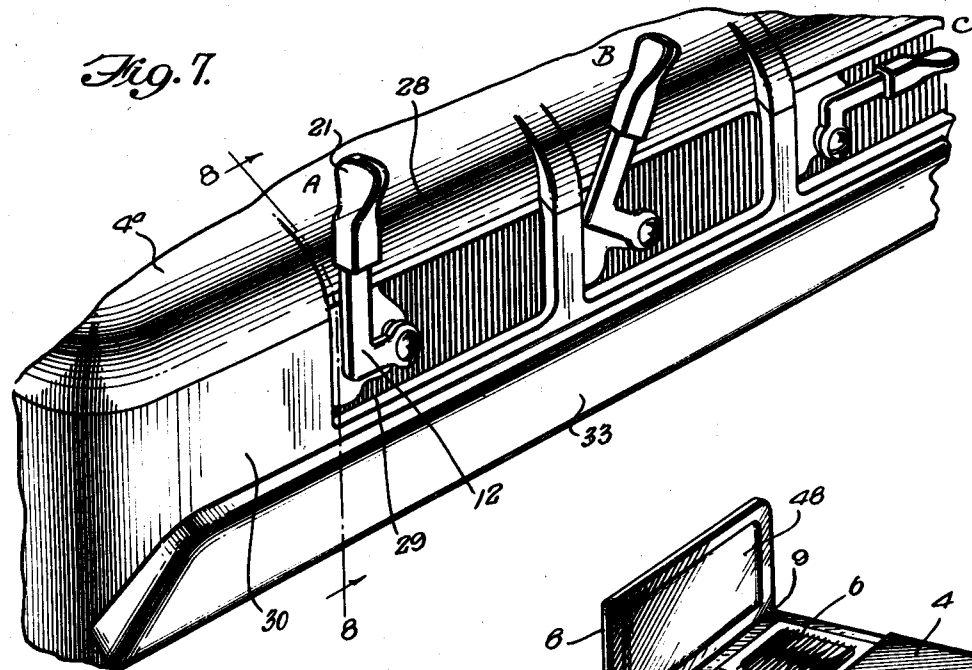
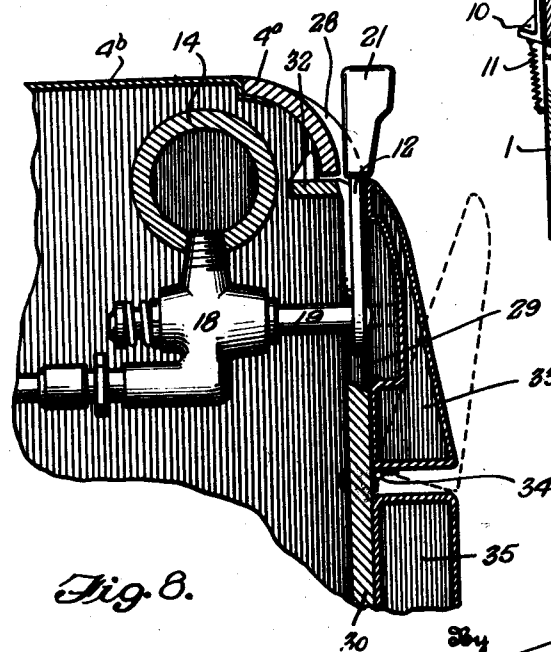


Fig. 3.



Inventors
Jacob Teller et al
Arthur P. Schutz

E. E. Wear
Attorney

Nov. 20, 1934.

J. TELLER ET AL

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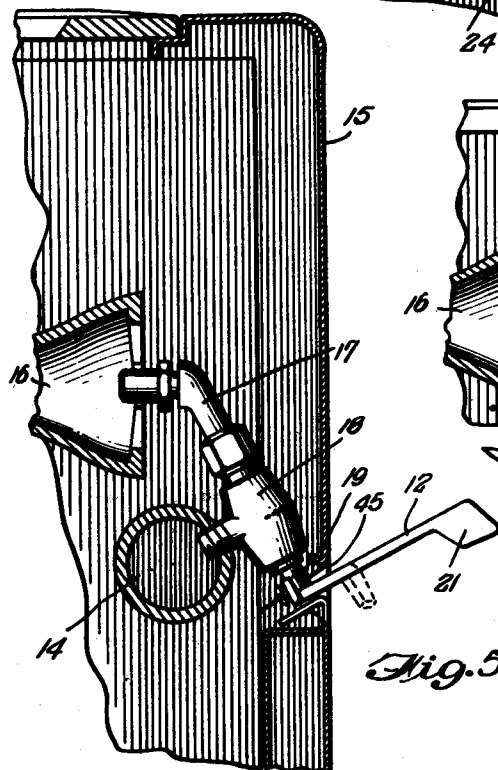
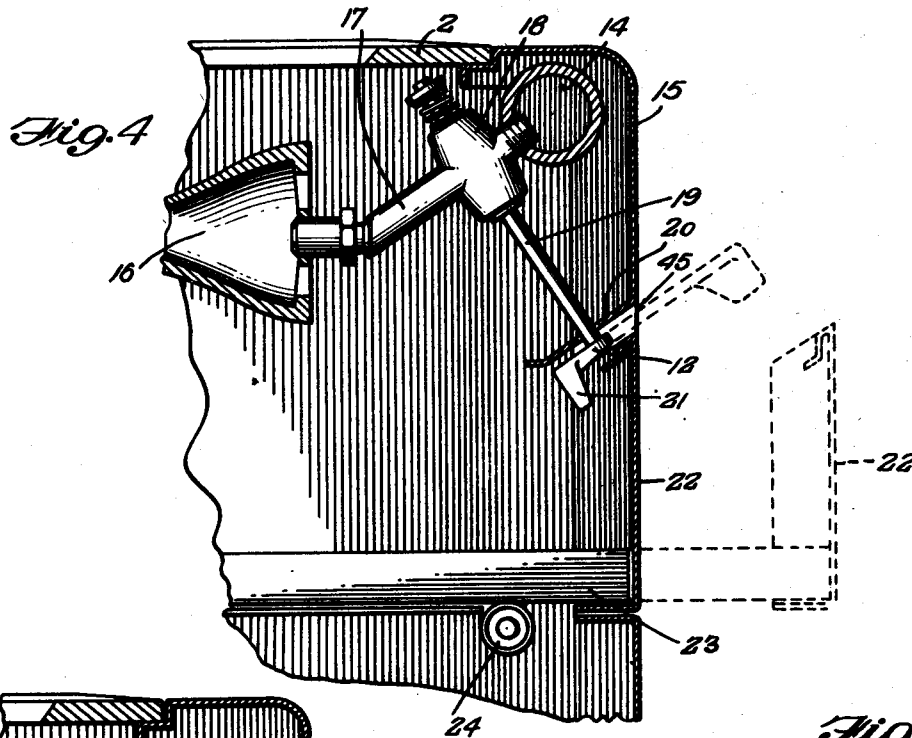
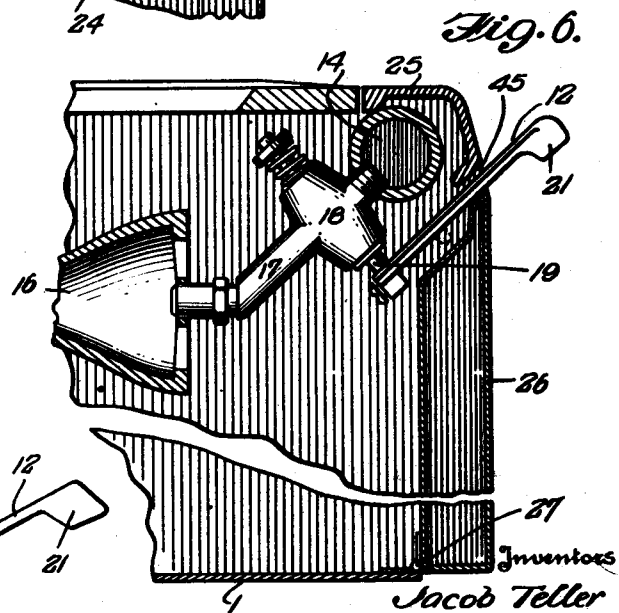


Fig. 5.



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Inventors
Jacob Teller
and Arthur P. Schulz
By *E. J. Hearn*
Attorney

Nov. 20, 1934.

J. TELLER ET AL

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4 Sheets-Sheet 4

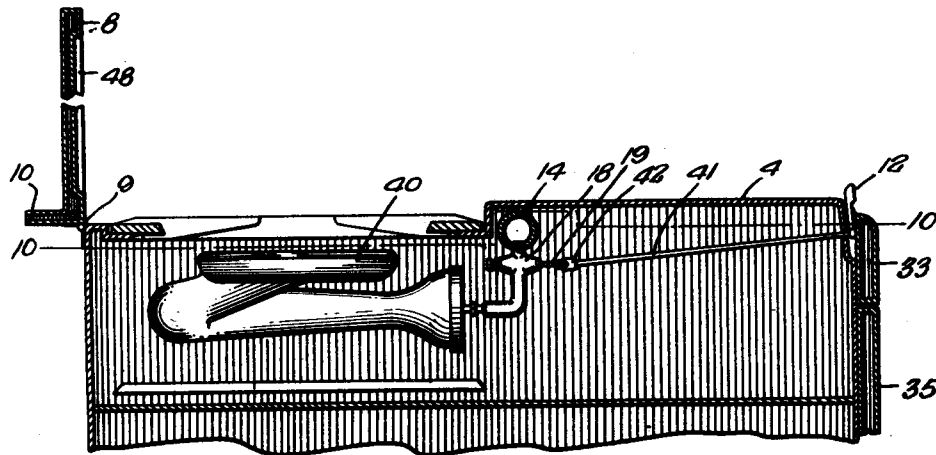


Fig. 9.

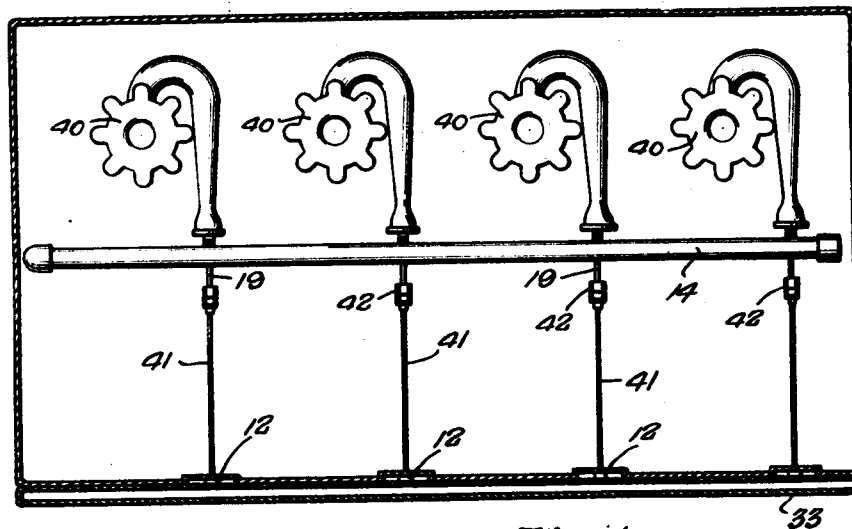


Fig. 10.

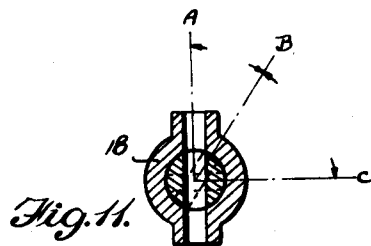


Fig. 11.

Inventors
Jacob Teller
and Arthur P. Schulz

By

E. E. Weara

Attorney

UNITED STATES PATENT OFFICE

1,981,084

GAS OR ELECTRIC COOKING STOVE AND RANGE

Jacob Teller, New Rochelle, and Arthur P. Schulz,
New York, N. Y., assignors to Teller Stove
Designing Corporation, New York, N. Y., a cor-
poration of New York

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8 Claims. (Cl. 126—39)

This invention relates to gas range and stove construction, and particularly to that type which we term "table-top" ranges, in which the cooking top is constructed to provide a surface which includes the burners or in which the top may be rearranged to provide a table top for such uses as that to which ordinary kitchen tables are put.

The invention further proposes a construction in which the range top may be used simultaneously as a cooking top and a table top, without either interfering with the functioning of the other.

The invention further provides a construction in which the valves and associated parts may be concealed when not in use, behind a movable panel; and further in an arrangement wherein the said valves and their associated parts will be concealed entirely, with the major portion of the valve handles, should the operator wish the burners only partially turned "on".

In the construction such as we propose, we combine not only a feature of safety, but that of providing a range or stove in which the operating parts of the valve and mechanism are wholly or partially concealed from view, thus presenting a cooking apparatus free from the usual unsightly operating elements.

The safety features reside in part in the movable panel valve and valve handle covering and protecting plate, and in part in the arrangement wherein the valve handles are visible by their extension beyond the cover panel when they are open or partly open.

In the accompanying drawings:—

Fig. 1 is a top perspective view of the range with the burner covers raised and the valve concealing panel open to permit operation of the valves;

Fig. 2 is a similar view with the cover and panel closed;

Fig. 3 is a top perspective view of a slightly different form of range;

Fig. 4 is a transverse section taken through one form of range embodying our invention;

Fig. 5 is a similar view showing another form of the invention;

Fig. 6 is a similar view showing a still further form of our invention;

Fig. 7 is a detail perspective view of the front portion of the form of invention shown in Figures 1, 2 and 3;

Fig. 8 is a detail sectional view taken on the line 8—8 of Figure 7;

Fig. 9 is a sectional view taken through another embodiment of the invention shown in Figures 1, 2 and 3;

Fig. 10 is a horizontal section taken on the line 10—10 of Figure 9; and

Fig. 11 is a detail sectional view of the valve.

Referring now to the drawings by numerals of reference, and at this time particularly to Figure 1, we show a table-top straight-line range in which the body is illustrated at 1, the upper portion only being shown, since the lower cabinet and oven sections may be of any approved form, or preferably of the nature embodied in other of our copending applications.

The cooking top preferably comprises a stamped metal sheet 2, having flanged front, end and side portions 3 which permit it to be set upon the top of the range body against displacement. Since the particular means whereby this cooking top is secured upon the range body forms no part of this feature of our invention, it need not be further discussed.

The cooking top has a forward longitudinal plane section 4 and a rear burner top section 5, the latter carrying the burner grids 6, arranged in a straight line throughout said rear section 5. It will be seen, upon reference to Figs. 1 and 2 that the burner grid section is approximately one-half the thickness of the forward or working top section, one of the principal features of this construction being that it permits the cover members 8, hinged at 9 to the rear edge of the cooking top proper, when folded down over the burner grids, as shown clearly in Fig. 2, to present a plane unobstructed surface, which may be employed as a table in kitchen use, it of course being understood that the depth of the recessed portion which constitutes the burner grid top section is always substantially equal to the thickness of the covers 8.

We preferably provide the cover members as two as distinguished from one cover member for two reasons, the first being that, in the case of four burners arranged in a straight line, a single cover may be too heavy for convenient raising and lowering, while in the second place, dividing the cover into two sections, permits coverage of half of the burner grids should they not be in use, and thus allowing for three quarters of table top use upon such occasions. Each of the covers may be counterbalanced by means of a spring 11 as shown in Figure 3, or by any other suitable means.

In Figure 3, we have shown the present idea embodied in a range with two burners arranged in a rear straight line, and capable of being covered by a single cover plate 8.

Referring now to the constructions shown in

Figs. 4, 5 and 6, we have illustrated several embodiments of the safety gas valve arrangements, wherein provision is made for either concealing the handles 12 or for indicating their position in other than full "off" condition.

In Figure 4, the manifold 14 is located under and toward the front of a front panel 15 which supports the forward portion of the cooking top 2, as shown. A mixer 16 arranged below the cooking top, is connected with the manifold 14 by an upwardly extending fitting 17 which includes the valve 18, the valve stem 19 of which is rather elongated and extends downwardly and forwardly at an angle of approximately 45 degrees to the front panel 15, and its lower end is provided with an operating handle 12 of substantially L shape, as shown more clearly in Figure 7, the said valve stem toward its lower end, extending through an inwardly and downwardly extending flange 20, formed at the lower edge of the panel 15.

As shown in full lines in Fig. 4, this handle has been swung to close the valve, and with the finger piece 21 is wholly disposed to the rear of the front plane of the range or stove. Cooperating with the front panel 15, to provide a combined flush front appearance, and at the same time, a safety device, is a sliding closure 23 including a vertical panel and a supporting and horizontally movable carrying frame 23, the latter slidable on anti-friction guide rollers 24 suitably journaled in the frame of the stove or range. It is obvious that, referring to said Fig. 4, the valve handles cannot be operated to open the valves until the slidable panel is moved outwardly as shown in dotted lines; further, that the panel may be closed when the valve handles are in open position as shown in dotted lines, and still further, that the valve handles when once open, and the panel closed, cannot of themselves be closed to shut off the gas fully until the said panel is moved outwardly to permit the handles to be swung behind it. The invention, therefore, among other features, combines at once, a valve and valve handle concealing and a safety device, the latter visually indicating the condition of the valves; that is, whether they are closed, fully open or partly open.

Referring now to the form shown in Fig. 5, the principal distinction between it and the form shown in Fig. 4, is that the fitting 17 is downwardly and forwardly extended at an angle of approximately 45 degrees to the vertical plane of the stove front panel, which in this instance is of greater vertical width than that in the other figure. At its lower end, the fitting 17 through its valve 18 connects with the manifold and the valve stem 19 is considerably shorter. The structure of the valve handle is the same as in Fig. 4 and operates in the same manner. In this form, the movable panel may either be slidable or may swing downwardly upon a hinge, although its particular manner of mounting is not material, so long as it is movable to permit operation of the valve handle 12.

In the form shown in Fig. 6 in the main, it is quite similar to that of Fig. 4, the principal difference being that the valve stem 19 is shortened to permit of the handle 12 operating quite close to the top of the range or stove, and beneath a cover plate 25 at the forward front edge of the cooking top, which houses and conceals the manifold. In this form, the closure member is in the form of a door 26 hinged at 27 to the body 1 of the stove or range. In other respects the construction and

operation is generally similar to those shown in Figs. 4 and 5.

Referring now to Figs. 7 and 8 which show detail front perspective and sectional views respectively of the front of the range illustrated in Figs. 1 and 2, the front portion of the plane top section indicated at 4, is provided with a series of recesses 28, cooperating with openings 29 in a front panel 30 to receive the valve handles 12 of the form shown in Figs. 4, 5 and 6. Although the front table top section may be, and is preferably formed as an integral unit, it may be provided to comprise a front curved portion 4a and an upper portion 4b, as shown in Fig. 8. However, the particular construction may be that found preferable by the manufacturer. As shown in this figure, the portion 4a may rest upon a flange 32 formed at the upper edge of the panel 30.

As shown in Fig. 8, we provide the usual manifold 14 and valve 18, the stem 19 of which is horizontal, and at its outer end, is provided with the operating handle with finger piece 21. Since this form of the invention also is intended to provide a feature of safety, as in Figs. 4, 5 and 6, we arrange that the handle may be accessible and operable in the same manner and only as that shown and described in said figures. To this end, we provide the upper portion of the range with a front panel 33 hinged at 34 to the panel 30, the width of the swinging panel being coextensive with that of a door or panel 35, above which panel 33 is mounted to present a flat or plane range front. The position of the swinging panel 33 when it is moved to permit operation of the various valve handles is shown in dotted lines.

Referring back to Fig. 7, three positions of the valve handle 12 are shown, respectively, "A", "B", "C". In Fig. 8 the handle is in position "A" with the gas turned fully on. "B" position indicates the gas turned, partly "on", and "C" position indicates the gas fully "off". Obviously, with the panel 33 swung downwardly, or as in Fig. 7, the several valves may be operated from one extreme of movement to the other, as in Figs. 4, 5 and 6. With the valve handle open, either "full" or "partial" as in positions "A" and "B", the safety panel 33 may be closed, but the fact that the finger pieces 21 are exposed at this time, indicates to a person using the stove that the gas is still "on" to a certain extent, and it is only when the valve handles are entirely concealed behind said panel that the operator knows that all the valves are fully closed.

The swinging panel is provided with a series of recesses in its rear face corresponding in number and cooperating with the valve handles, for the purpose of receiving the finger pieces 21 when the panel is closed. The particular L shape of the valve handles has a peculiar function in the present invention, namely, that of permitting of a movement of the valves to almost fully "off" position during closed position of the swinging panel 33. Were the handle straight, its extent of movement prior to fully closing the valve it controls would be very much more limited, it being understood that such movement would take place while the panel 33 was closed against the fixed panel 30.

In Fig. 9 we have shown one of the features of the present invention embodied in a range top construction wherein the manifold 14, valve 18 which connects with the burner 40 are remotely controlled, that is to say, the manifold and valve are positioned toward the rear of and below the cooking top, and Fig. 10 is a view of the burners

and associated parts with the top section removed.

In Fig. 11 we have shown a section through one of the valves to illustrate positions "A", "B" and "C", described earlier in this specification. In Figs. 9 and 10, the valve handles control the valves 18 through valve rod 41, connected by universal joints 42 with the valve stems.

The lower edge of the front panel 15, as in Figures 4 and 5, or the manifold cover plate or panel 25, as in Fig. 6, is provided with a plurality of recesses 45 and 46 respectively, so that even when the front panels 23 and 26 respectively are closed, and the handles 12 of the valves in a position beyond the front face of the range, said handles may still be capable of movement through a range from full open to a substantially, but not completely closed position.

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

1. In a cooking stove, a stove body, a cooking top therefor having a fixed front member with a plane upper surface, a rear series of burners arranged in a straight line parallel with said front member, and a cover for said burners, hinged to said cooking top along a line parallel with the rear portion of said top and with the front plane upper surface member, and adapted to be folded downwardly over said burners, said cover when closed having its upper face substantially flush with that of the fixed front member.

2. In a cooking stove or range, a stove body, a one piece cooking top having a forward longitudinal plane upper surface arranged at one elevation, a series of burner grids parallel with and to the rear of said forward longitudinal portion of the cooking top, said grid portion of the cooking top being arranged in a plane below that of the top plane of the forward portion thereof, a cover for said grid portion movably supported by the stove body, and hinged to said body along a line parallel with said forward longitudinal plane upper surface member, said cover when closed over said grids having its upper surface in a plane substantially with that of the forward plane surface portion.

3. In a cooking range, a range body, a cooking top, a stationary panel extending across the range body at the front thereof, said panel having a plurality of recesses in its face, gas valves arranged to the rear of said panel and having valve stems extending into said recesses, a panel hinged along the edge of said stationary panel, handles for said stems movable in a plane parallel with the stationary panel and to the rear of the front plane thereof, said hinged panel being movable over said stationary panel and said handles to conceal the same when said hinged panel is closed against the said stationary panel.

4. In a cooking stove, a stove body, a cooking top having a stationary panel extending across the front of said body near the top thereof, valves having valve stems arranged to the rear of said panel, said panel having a series of recesses therein, valve handles on said stems movable in a plane substantially parallel with the stationary panel, a movable panel hinged along the front of said stationary panel and adapted to be moved toward and from the same, said

handles having end portions capable of extension above the upper edge of said movable panel when the latter is closed, whereby said handles may have a limited swinging movement when said movable panel is closed.

5. In a cooking range, a range body, a cooking top, a stationary panel extending across the upper portion of said body, said cooking top at its forward portion being provided with a series of recesses, and said stationary panel having a series of openings merging with said recesses, a manifold to the rear of said panel and having a series of valves, one for each of said recesses, said valves having each a stem with a handle thereon movable within its respective opening, and an operating extension on the end of each valve stem movable through a portion of its movement within the said recess, and a panel hinged to said stationary panel and adapted to close over said stationary panel when said valve handles are in a position to open the valves, or when said handles are moved within the openings in the stationary panel in a position to fully close said valves.

6. In a cooking range, a range body, a front portion having a plurality of recesses, a movable panel hinged to said front portion and movable thereagainst to provide a plurality of slots between said panel and said front portion, a manifold having a plurality of valves to the rear of said front section, handles for said valves movable in said slots when the hinged panel is closed, through an initial portion of their valve closing action, whereby partial operation of said valves is permitted when the hinged panel is closed, and complete movement is permitted when said panel is open.

7. In a cooking range, a range body having an upper forward portion provided with openings merging into recesses at their top, a plurality of valves behind said upper forward portion, said valves having handles movable in a plane coincident with the front plane of the range body, in said recesses, and a panel hinged to the front of said range body, and movable over said openings only, whereby said recesses, when said hinged panel is closed form with the latter, a plurality of handle slots along the front upper portion of the range.

8. In a cooking range, a stove body having a cooking top and a front stationary panel, a manifold behind said panel, and having a series of valves carried thereby, valve stems for said valves extending forwardly of said range and at an angle to the front stationary panel, and terminating in the rear thereof, a valve handle for each of said valves movable from the rear of to beyond the front face of said panel, a movable panel below said stationary panel cooperating with the latter when the former is closed, to present a flush range front, and one of said panels being provided with a plurality of recesses, which cooperate with the adjacent edge of the other panel, whereby, when said movable panel is closed, there is provided a plurality of slots in the range front, in which the handles of the several valves are adapted to move to control the valves.

JACOB TELLER.
ARTHUR P. SCHULZ.