SAFETY APPLIANCE FOR GAS OR ELECTRIC RANGES

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3 Claims.

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This invention relates to gas ranges and more particularly to a safety valve whereby the valves are automatically closed through the operation of a cover plate or safety door which conceals the valve handles and manifold when the stove is not in use.

A further feature of the invention resides in the adaption of the valve and manifold concealing device as an extension shelf for the cooking top.

With the device as covered by the present invention as applied to gas stoves and ranges, the valves are not only concealed when the stove is not in use, but the safety door or cover, when closing engages and moves the handles from an "on" or open position, to a completely closed or "off" position. In brief, closing the door of the valve and manifold compartment compels the actuation of the valve handles from their open position to their fully closed position.

In the drawings,

Figure 1 is a perspective view of the upper portion of a gas range embodying one form of this invention and showing the safety door closed.

Figure 2 is a similar view illustrating the cover of the valve compartment raised to form an extension shelf, and afford access to the valve handles.

Figure 3 is a sectional view taken through the upper front portion of the stove substantially on the line 3—3 of Figure 2, but illustrating the safety door midway between its full-open and full-closed position, and engaging the valve handle to move it to its closed position as illustrated in dotted lines.

Figure 4 is a view similar to Figure 1, but illustrating a modified form of the invention.

Figure 5 illustrates the stove shown in Figure 4, with the cover plate or safety door raised, and Figure 6 is a sectional view through the stove on the line 6—6 of Figure 4.

Referring more particularly to the drawings, and at present to Figures 1, 2 and 3, the numeral 1 designates generally a gas range having an oven closed by a flush door 2, controlled by a handle 3, and an upper burner and valve compartment 4, said range having the usual cooking top 5, the compartment 4 being also provided with the usual sliding drip-pan 6.

At its upper portion, the front wall 7 which is provided with a rectangular opening 8 which affords access to the valve, is upwardly and rearwardly curved substantially in the arc of a circle, and forms a hood 9 which not only covers the manifold, but also cooperates with the movable safety door or cover plate 14 to completely house the valve parts.

The gas manifold 10 shown in Figure 3 supports a plurality of valves 11, each of which is controlled by a vertically movable handle 12. When the handle is in the full-line position shown in Figure 3, the valve is open to permit gas to flow to the burner which it controls, while in the dotted line position the valve is completely closed.

For the purpose of covering the valves and valve compartment, and at the same time providing an operating means which will positively move the valve handles from an open position to a completely closed position, we provide a swinging safety door 14, said door being provided at its upper portion, at each end thereof with a pair of rearwardly directed arms 15, the inner ends being provided with suitable bearings 16 in the upper forward portion of the side walls of the stove, the bearing being arranged on the axis of the arc of the hood 9, so that the inner upper edge of the swinging door 14 in its movements from the position shown in Figure 1 to that shown in Figure 2, follows the contour of the outer face of said hood, and substantially forms a sealing joint.

When the door 14 is closed, its rear face first engages the outer end of the valve handle 12, as shown in Figure 3 in full lines, and then, in continuing its closing movement, forces said handle downwardly into the dotted line position, and in which position the valve is completely closed. The door may be secured in closed position by means of a latch 18 cooperating with a keeper 19.

In the construction shown in Figures 4, 5 and 6, wherein a modified form of the invention is illustrated, the body of the stove is substantially identical with that illustrated in the first embodiment. However, in the present arrangement, the upper front portion of the stove, above the oven door 2 is provided with an upwardly and rearwardly inclined panel 20, said panel being provided with a plurality of recesses 21 adapted to receive the valve handles 22. The recesses 21 are of such depth that the valve handles when closed will, as shown in Figure 6, be entirely below the plane of the outer face of the panel 21, so that, when a door 23, comprising space plates 24 and 25, and hinged at 26, is moved to closed position as shown, the inner face of the cover 23 lies flat against the panel 21. As shown in dotted lines in Figure 6, the cover 23 engages the outer end of the valve handle in the manner shown in Figure 3 and will move it, or in fact...
any of the handles which happen to be in open position to the fully closed full line position as illustrated.

With either of the constructions shown in the two forms, the person operating the stove will, when she has finished cooking, move the cover 14 or 23 from its position shown respectively in Figures 2 and 5 to that shown in Figures 1 and 4, in which latter positions, the movable door will have engaged any valve handle which they happen to have been open and moved it into its completely closed position shown in dotted lines in Figure 3 or full lines in Figure 6.

For the purpose of maintaining the cover 14 in Figs. 1, 2 and 3, or cover 23 in Figures 4, 5 and 6 in raised position as shown by Figures 2 and 5 respectively, we provide a brace 30, suitably pivoted at its upper end at 31 to the inner side of the cover, the lower end of the brace being provided with a shoulder 32 to engage the rim of the opening 33 in the front wall or panel of the stove, and in which opening, the brace slides as the cover is raised or lowered.

What we claim as our invention is:

1. In a gas range, a range body, having a compartment, a plate provided at the forward end of said compartment, a manifold in said compartment and concealed by said plate, valves, handles for said valves arranged and movable outwardly and in front of said plate to open and close said valves, a safety door on said body, movable over said plate, whereby when said door is closed it will engage and automatically move and close said valve handles within said compartment to close the valves and cover the plate.

2. In a gas range, a range body having a compartment, a closure plate for said compartment having a plurality of recesses, a manifold having valves in said compartment in the rear of said plate, valve handles for said valves receivable in said recesses and movable beyond the front plane of said closure plate to open the valves, a safety cover mounted on said body and movable to cover and uncover said plate, said cover being adapted to engage said handles when the latter extend beyond the plane of the front face of said plate and automatically move them into said recesses to close the valves.

3. In a gas range, a range body having a burner top, an upper compartment, a front frame for said compartment, a manifold and valves within said compartment, handles for said valves movable beyond the front plane of said compartment, and a safety door hingedly secured to said frame along its upper portion and movable into the plane of the burner top when in open position, and engageable with the valve handles when moved to closed position.

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