March 29, 1932. S. H. HOBSON 1,851,099

CONCEALED MANIFOLD GAS RANGE

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Fig. 1.

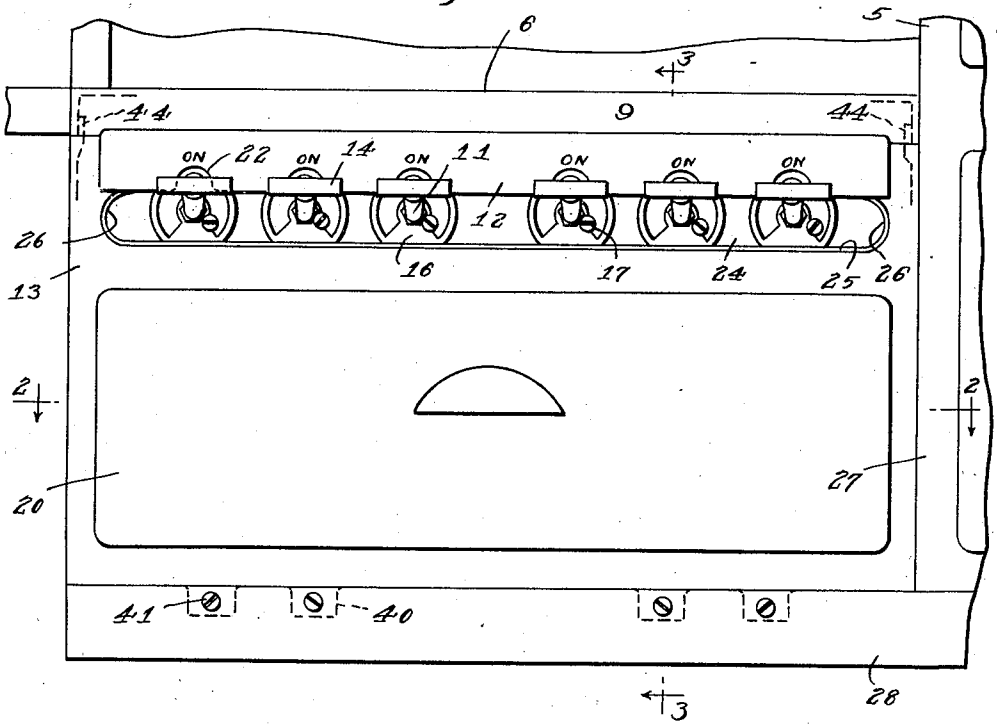

Fig. 2.

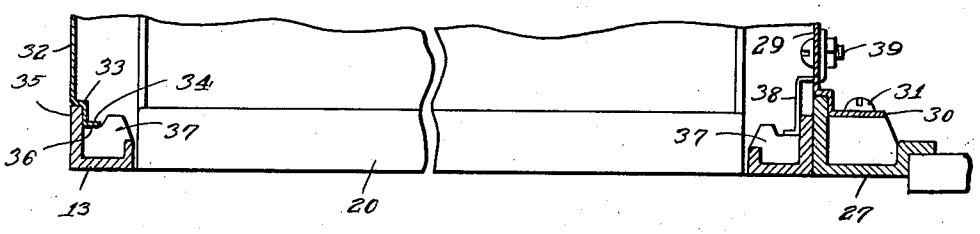

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Fig. 3.

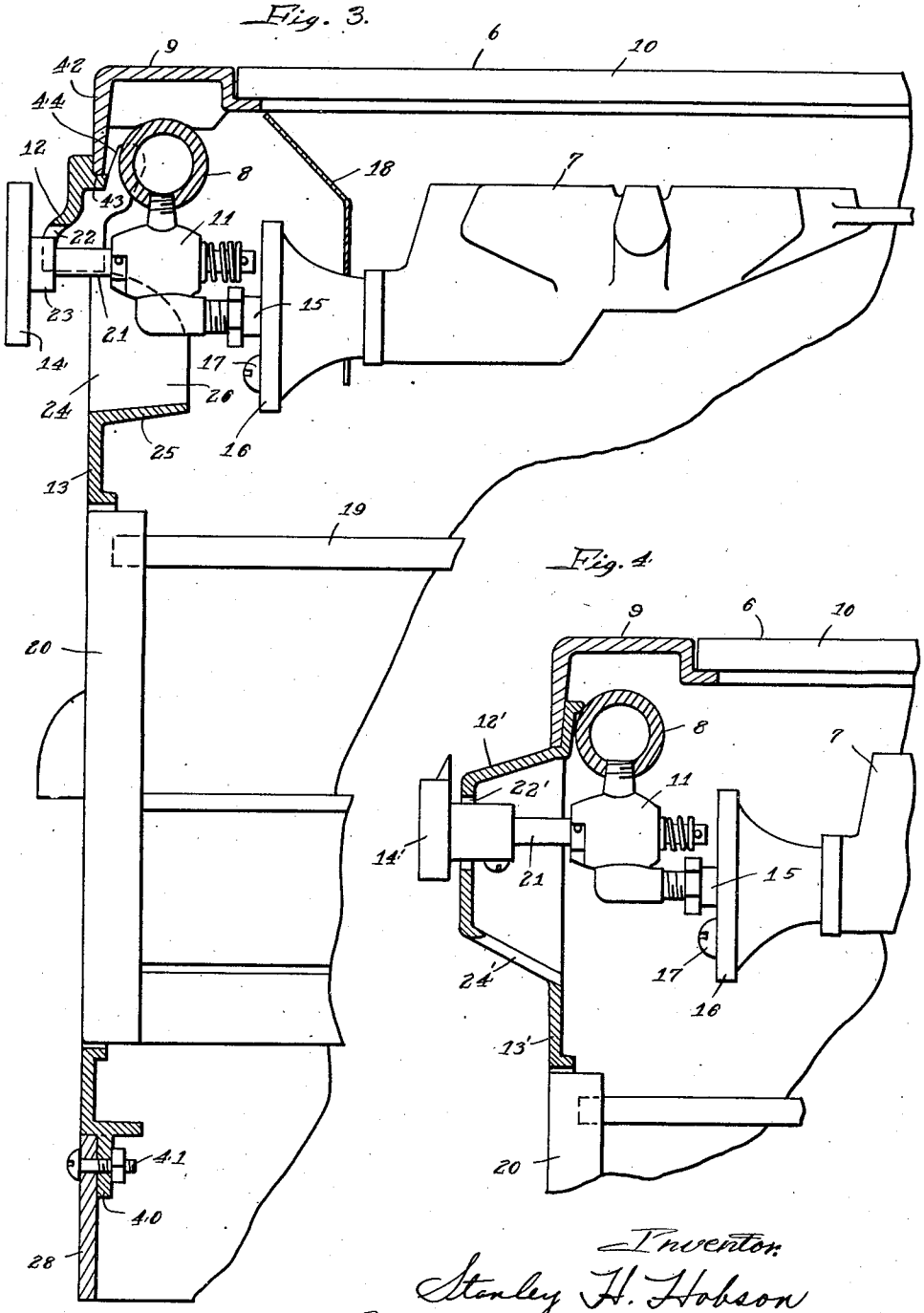

Fig. 4.

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UNITED STATES PATENT OFFICE

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CONCEALED MANIFOLD GAS RANGE

Application filed June 16, 1930. Serial No. 461,305.

This invention relates to a concealed manifold gas range.

The concealment of the manifold brought with it certain problems in the matters of construction and assembling. In many cases, a shield or apron covering the manifold is provided as a separate piece arranged to be fastened by screws, so as to permit access to the cocks and shutters by removing the apron. That, however, makes for unsightly exposed screws, and extra material and assembling costs. It is, therefore, the principal object of my invention to form a housing as an integral part of the burner box front for neater appearance, lower cost of production, and lower assembling cost, the said housing being, furthermore, provided of an open form with the opening therein so arranged that access to the cocks and shutters is permitted without removal of anything, although the cocks and shutters are, nevertheless, amply concealed from view from in front of the stove.

Another object is to provide special features of construction in connection with the burner box front to facilitate assembling thereof on the stove and avoid as much as possible the necessity for using screws or bolts exposed on the stove front, whereby to make for neater appearance and at the same time make a saving in material and assembling costs.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a portion of a gas range showing the housing provided as an integral part of the burner box front;

Fig. 2 is a horizontal section through the front taken on the line 2—2 of Figure 1;

Fig. 3 is a vertical section on the line 3—3 of Figure 1 on a larger scale, and

Fig. 4 is a fragmentary vertical section similar to Fig. 3, but showing a modified construction of the front.

Similar reference numerals are applied to corresponding parts throughout the views.

In Figure 1 a cabinet type gas range is illustrated having the usual double oven section 5 alongside the cooking top 6. The burner appearing at 7 in Fig. 3 is one of the front cooking top burners of a special construction suited for use with a concealed manifold 8, the distance between the manifold and the front burners being cut down in a concealed manifold range to such an extent that the ordinary front burners cannot be used, although no special construction is required in the case of the rear burners. The construction of the burner 7 is covered in a copending application of Peter I. Hollman, Serial No. 443,646, filed April 12, 1930. The main top frame 9 has the usual grates 10 fitting therein over the burners of the cooking top, and specially designed cocks 11 are provided for the burners projecting from the bottom of the manifold 8 inside a housing 12 provided as part of the burner box front 13. The stems of the cocks are equipped with suitable knobs 14. The cocks 11 have nipples 15 screwed onto the discharge ends thereof for delivering the gas into the burners along with primary air entering through the usual shutters 16. The shutters have the usual screws 17 arranged to be tightened to hold the same in adjusted position. 18 is a shield suitably stamped from sheet metal and interposed between the front burners and the manifold to prevent heating of the cocks when these burners are in use, so that the lubricant provided for the easy operation of the cocks will not be dried out so readily. The usual burner tray 19 is provided below the burners of the cooking top, and the drawer 20 may or may not be provided for the burner box compartment.

In accordance with my invention, the housing 12 is cast integral with the burner box front 13 and the same is horizontal, extending crosswise of the front of the stove, and projects forwardly in a neat ogee curve over the stems 21 of the cocks 11. The front wall of the housing has notches 22 in the lower edge thereof to accommodate the hub portions 23 of the knobs 14 which are detachably secured on the stems 21 in any suitable manner. The removal of the knob 14 makes it possible to unscrew the cock, the housing 12 projecting out far enough and having each of the notches 22 wide enough to afford clearance for the end of the stem to permit

turning of the cock, with the manifold 8 and burner box front 13 in their normal positions with respect to one another. The front wall of the housing 12 terminates at about the level of the stems 21 of the cocks and defines the top of an opening 24 extending crosswise of the front of the burner box, the bottom of the opening being defined by an inwardly projecting, slightly upwardly inclined, flange 25 cast integral with the burner box front 13. The flange 25 is arranged to catch any oil dripping from the cocks 11 incidental to the heating thereof, thus protecting the tray 19 and the contents of the drawer 20 while at the same time leaving the oil where it can be easily cleaned off. The ends of the opening 24 are neatly rounded, and the flange 25 is continued upwardly at the ends, as indicated at 26, up to the lower edge of the front wall of the housing. The exposed face of the flanges 25 and 26, as well as the front wall of the housing 12 and the rest of the frame 13, is enameled to match the enameling of the front of the drawer 20 and the oven front, as well as the top frame 9, so that one viewing the stove from in front sees everything enameled, the cocks 11 and shutters 16 being practically entirely invisible to a person of average height. The unenameled insides of the burner box are practically invisible as a result of this special construction of the burner box front; everything appears to have an enamel finish. The shutters 16 are accessible through the opening 24 for adjustment, the screws 17 being very easily loosened and tightened with a screw driver through said opening. The opening also is of ample size to insure admission of sufficient primary and secondary air to the burners. It is obvious that the elimination of screws and the absence of joints, such as go with a construction where the shield for the concealment of the manifold and its appurtenances is a separate part fastened to the burner box front, makes for the neatest possible appearance, the front being flush and devoid of places where grease and dirt can collect, so that it is very easy to keep the stove clean and polished. Aside from these advantages, that have a special appeal to the purchaser, the construction just described results in quite an appreciable saving in cost of production, as well as a saving in assembling cost, and it will presently appear how, by reason of the provision of certain other features of construction on the burner box front, the cost of production and assembling is still further reduced over what would otherwise be involved.

The front frame 27 of the oven section is arranged to be disposed alongside the burner box front 13, as appears in Fig. 2, and secured to the base band 28 in any suitable manner. The side wall 29 of the oven has an offset flanged front end 30 fastened to the front frame, as by means of screws 31 to form one side of the burner box compartment. The burner box end 32, forming the opposite side of the burner box compartment, has its front end bent offset, as at 33, and flanged as at 34 to fit over the edge of the rearwardly directed flange 35 of the burner box front 13 and into a recess 36 provided in several vertically spaced lugs 37 cast integral with the front frame 13 in the angle thereof, as clearly appears in Fig. 2, both sides of the frame, on opposite sides of the drawer opening, being provided with these lugs 37 so that the same frame can be used for a stove having a right or left hand oven. This interlocking of the burner box end 32 with the burner box front 13 makes it unnecessary to fasten the end 32 with screws at this point, it being sufficient to fasten the part 32 at the lower end to the base band 28 and at the upper end to the top frame 9, so that there is a saving in cost of materials and in assembling cost. One or more clips 38 are suitably provided extended from the inside of the oven through an opening in the wall 29 for engagement with the lugs 37 to draw the frames 13 and 27 snugly together, bolts 39 being provided to fasten the clips 38 to the wall 29, as shown.

The burner box front 13 has lugs 40 cast integral therewith on its lower edge offset inwardly from the plane of the front thereof, as appears in Fig. 3, so as to fit behind the base band 28 and make the front thereof flush with the front of the base band when bolts 41 are entered through the base band and through the lugs to fasten the front in place. In the assembling of the stove, the burner box front 13 is first fastened simply by means of its lugs 40 with the bolts 41. Later on, however, when the top frame 9 is being assembled, its downturned marginal flange 42 is arranged to drop down onto a shoulder 43 on the front 13, and upwardly projecting lugs 44 at opposite ends of the front 13 are arranged to project into the corners of the top frame 9, thereby providing an interlocking connection between the front 13 and top frame 9 and avoiding the necessity for fastening these parts together by means of screws. Here again, there is a saving in the cost of material and also a saving in assembling cost, and the stove presents a much neater appearance by virtue of the construction, there being no exposed screws to mar the appearance of the enameled front.

In Fig. 4 I have shown a slightly modified construction providing for more complete concealment of the cocks 11 and shutters 16 and still permitting good intake of primary and secondary air, and adjustment of the shutters from in front of the stove. In this construction, the burner box front 13′ has the housing 12′ cast integral therewith and projecting more abruptly and slightly farther out from the plane of the front than in the

other construction. Instead of notches, holes 22′ are provided in the front wall of the housing to receive the shanks of the knobs 14′ arranged to be fastened detachably on the stems 21 of the cocks 11. The opening 24′ in this construction is in the bottom of the housing so that it is practically unnoticeable from in front of the stove, and the cocks and shutters are entirely concealed. It is, nevertheless, possible to get at the shutters through the opening 24′ and to loosen and retighten the screws 17 with a screw driver through said opening.

It is believed the foregoing description is enough to convey a good understanding of the objects and advantages of my invention. The appended claims should be construed so as to cover not only the specific constructions disclosed but all legitimate modifications and adaptations.

I claim:

1. In a stove construction, the combination of an oven front frame, a burner box front disposed alongside and in abutment with said front frame, the said burner box front having a rearwardly projecting flange on the side thereof abutting the side of the oven front frame, a sheet metal side wall for the oven fastened to the oven front frame, a clip passed through an opening in said wall from the inside of the oven, the outer portion of said clip having the free end thereof overlapping a portion of the rearwardly projecting flange of said burner box front, the inner portion of said clip being arranged to come into abutment with the inside of said oven wall, and fastening means passed through the oven wall and the inner portion of said clip for holding the clip in position so as to hold the burner box front in snug abutment with the oven front frame.

2. A gas stove comprising a front wall, the upper edge of which has a shoulder to support the cooking top frame, a top frame having a depending front flange resting on said shoulder, said front wall being formed to provide a horizontal outwardly projecting housing below said shoulder, the housing being defined by an outwardly projecting top wall and a downwardly projecting front wall, the bottom of said housing being open so as to afford easy access to the inside of the housing and the space behind said front wall, a manifold concealed in said space by said housing, a gas cock threaded into the bottom of said manifold and depending therefrom having an operating stem projecting forwardly therefrom into the housing, and a discharge nipple projecting rearwardly for connection with a burner, the front wall of said housing having an opening therein for the operation of the stem therethrough, the manifold being disposed high enough to support the cock with its stem at the level of said opening and being further disposed back of the front wall far enough to permit the end of the stem to clear the front wall of the housing in threading or unthreading the cock on the manifold, and a handle for said stem operable in said opening, the same being detachable from the stem to permit turning the cock relative to the manifold.

3. A gas stove comprising a top frame for a cooking top, a front wall below the top frame having a horizontal outwardly projecting housing at the upper end thereof formed integral therewith, the front wall of said housing having a handle opening in the lower edge thereof, the bottom of the housing being open to admit primary and secondary air, and the front wall having a horizontal opening below the housing as a continuation of the open bottom of the housing to permit easy access to the inside of the housing and the space behind the front wall, a manifold concealed in said space by said housing, a gas cock threaded into the bottom of said manifold and depending therefrom, having an operating stem projecting forwardly therefrom into the housing and a discharge nipple projecting rearwardly therefrom toward the burner compartment beneath the top frame, there being a burner having the usual shutter for connection with the aforesaid nipple, the manifold being disposed high enough to support the cock with its stem at the level of the opening in the front wall of the housing and so that the cock is concealed by said housing, and being further disposed back of the front wall far enough to permit the end of the stem to clear the front wall of the housing in threading or unthreading the cock on the manifold, the said cock being accessible for threading or unthreading from outside the housing and the shutter being similarly accessible for adjustment thereof through the aforesaid combined opening, and a handle for said stem operable in the opening in the front wall of the housing, the same being detachable from the stem to permit turning of the cock relative to the manifold.

4. A gas stove as set forth in claim 3 including an inwardly projecting flange integral with the front wall and defining the bottom of the horizontal opening in the front wall, the said flange projecting inwardly below the cock substantially as and for the purpose described.

5. A gas stove as set forth in claim 3 including a burner tray beneath the cock and burner, and an inwardly projecting flange integral with the front wall and defining the bottom of the horizontal opening in the front wall, the said flange projecting inwardly below the cock above the burner tray substantially as and for the purpose described.

6. In a stove construction, the combination of a burner box front, the said burner

box front having a rearwardly projecting flange on the both sides thereof, either one of which is adapted for abutment with the side of an oven front frame, lugs formed on the inside of said flanges defining recesses behind the same, an oven front frame for abutment with one of the rearwardly projecting flanges, a sheet metal side wall for the oven fastened to the oven front frame, a clip passed through an opening in said wall from the inside of the oven, the outer portion of said clip having the free end thereof overlapping a portion of the rearwardly projecting flange of said burner box front and fitting in the recess behind the same, the inner portion of said clip being arranged to come into abutment with the inside of the oven wall and fastening means passed through the oven wall and the inner portion of said clip for holding the clip in position so as to hold the burner box front in snug abutment with the oven front frame, the other rearwardly projecting flange of the burner box front being arranged to have a burner box end wall cooperate therewith for entry in the recess provided behind the same.

In witness of the foregoing I affix my signature.

STANLEY H. HOBSON.