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A. J. LINDEMANN ET AL

1,940,259

GAS RANGE

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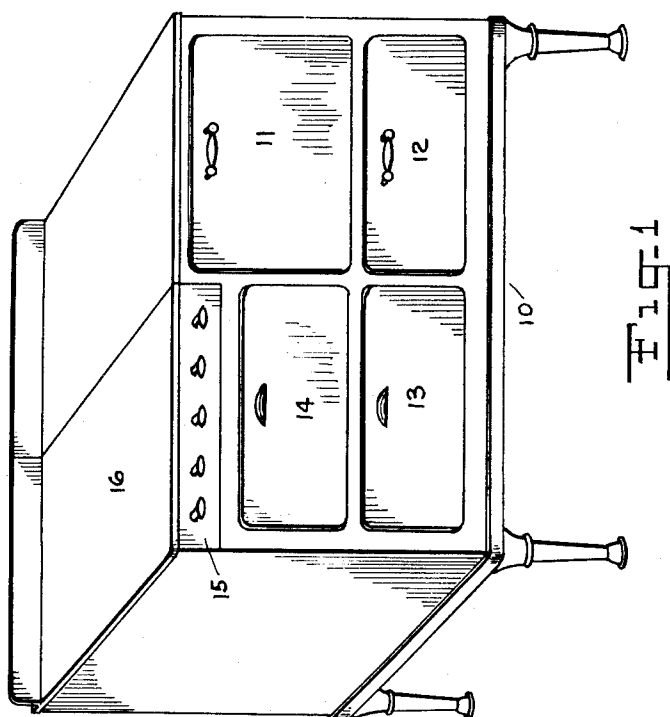
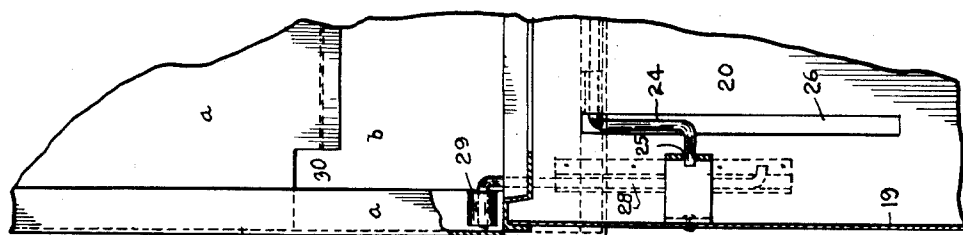
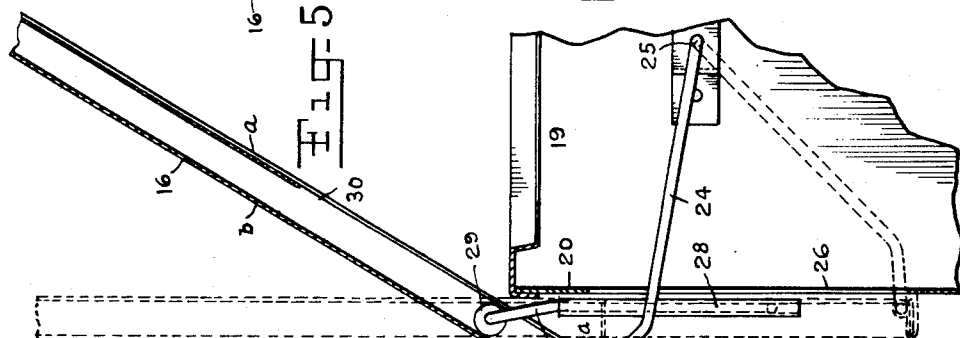


Fig. 4

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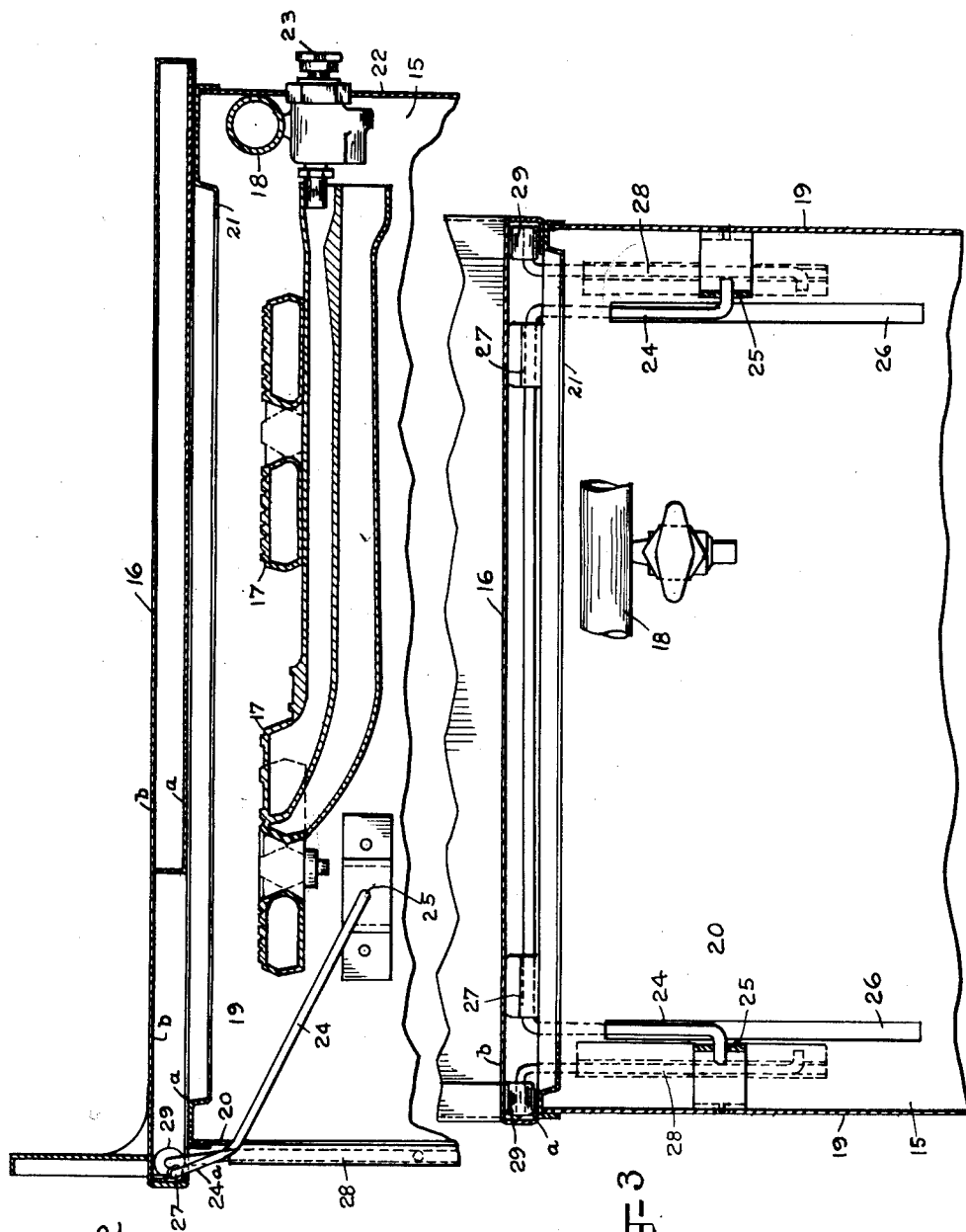


Fig. 2

Fig. 3

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UNITED STATES PATENT OFFICE

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GAS RANGE

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Serial No. 502,043

6 Claims. (Cl. 126—214)

The present improvements relate, in general, to gas ranges and more particularly to a novel burner compartment construction therefor.

A primary object, among others, is to provide an improved burner box structure wherein the burners may be concealed or exposed at will. A further object is to provide an improved closure for a burner box which converts the associated range into a table.

Another object of the improvements is to provide an improved closure of the type indicated which is movable with little effort. In carrying out these objects, a novel hinge mechanism has been devised, which constitutes a further feature of the improvements.

Other objects and advantages will be apparent to those skilled in the art upon reference to the accompanying specification and drawings, in which—

Fig. 1 is a perspective view of a range embodying one form of the present improvements;

Fig. 2 is an enlarged sectional view of the improved burner box;

Fig. 3 is an interior front view of the burner box with the burners and front wall removed, the manifold being broken away;

Fig. 4 is a fragmentary side section of a rear corner of the improved construction;

Fig. 5 is a front view of the structure illustrated in Fig. 4.

Referring to the drawings, the range 10 comprises the oven 11, broiler drawer 12, utility drawers 13 and 14 and burner box or compartment 15. Any suitable arrangement of these elements may be provided as desired. As illustrated in Fig. 1 the cover or closure 16 conceals the burners, is flush with the smooth top of the oven and the whole may be given any desired finish, as for example, porcelain enamel. The structure thus presents a neat appearance and is serviceable as a table top for various purposes.

The closure 16 is readily removable for exposing the burners as will be apparent upon reference to Figs. 2-5. The burner box or compartment 15, which houses burners 17, manifold 18, etc., comprises side walls 19, rear wall 20, grate support 21 and front wall 22 through which valve handles 23 protrude for convenient operation.

Arms or levers 24, are pivoted at 25 to the interior of the compartment and extend through slots 26 in the rear wall. As seen in Fig. 2, these arms may be bent for providing upwardly extending portions 24^a which are hinged at 27

along the lower rear edge of the cover or closure 16. In the present embodiment, the arms 24 are integral with each other, being connected along the rear of the cover thus forming a bail, but it is understood that separate arms may be provided if desired. In the illustrated structure additional strength and rigidity along the rear of the cover 16 is provided, thereby preventing twisting or binding of the parts during movement.

The rear wall of the compartment is provided with fixed supports 28, which carry bearings or rollers 29 at their upper ends. These rollers are engaged by the interior of the closure 16. As illustrated, this member has upper and lower surfaces *a* and *b* providing a track on each side thereof which freely accommodates the rollers 29 therebetween.

Upon reference to Figs. 2 and 4 it is seen that supports 28 have their upper portions inclined slightly from the rear face of the compartment and that these portions extend slightly above the top face thereof. This refinement of construction permits the rollers or bearings 29 to be disposed in spaced relation to the upper rear edge of the compartment.

The relation of the parts with the closure 16 in horizontal position is seen in Fig. 2. To remove the closure and thus expose the burners for use, the forward edge is lifted, whereby the closure moves about hinges 27. In the initial stages of this movement, the closure is entirely clear of the top of the burner box and is supported by rollers 29, due to their spaced position. Accordingly the closure is free to descend rearwardly by shifting movement as soon as the weight thereof overcomes the friction between same and the rollers. Obviously this frictional resistance is negligible in comparison to the weight of the closure so that the bodily translation or shifting thereof to the rear is almost instantaneous. Accordingly, a very slight lifting of the closure will start its rearward travel, thereby causing the operator little exertion and in fact rendering unnecessary any pushing on his part.

As the closure drops back, it is guided in its arcuate travel by arms 24 which serve to direct it to vertical position as it swings about rollers 29. The closure thus assumes the dotted line position in Fig. 4, where it is out of the way, permitting free access to the burners. In this position, the upper portions of supports 28 are disposed in recesses 30 cut in cover surface *a*. In this relation these elements cooperate to

steady the cover in vertical position, and lock it against lateral movement. If desired the cover portion *a* may extend completely to the rear edge, in which event recesses 30 would be extended to form slots for accommodating supports 28.

Upon returning the closure from such position it is merely necessary to pull the closure forward, whence the improved hinge and guiding mechanism cause lifting of the closure during its travel to horizontal position. That no lifting force is necessary on the part of the operator is apparent. The force applied forwardly to the closure causes it to swing about rollers 29 which movement in turn lifts the lower rear edge which is guided by the arms 24 which are freely pivoted at 25.

The improved mechanism accordingly provides a hinged cover which is easy for a woman to move in either direction with little effort.

The ease with which the improvements may be manipulated is attributed to the provision and location of the hinges and rollers as well as to the novel location of the arms. It is to be noted that the arms 24 are pivoted at 25 which is at a substantial distance from the top and rear faces of the compartment and from the rollers 29. These factors provide an improved leverage with a plurality of fulcrums thereby affording a very great mechanical advantage. It is notable that the arms, slots, tracks and rollers all serve as guide means contributing to the efficient movement of the closure in proper aligned position. The present construction furthermore permits advancement and retraction of the closure within a minimum space to the rear of the range.

Various modifications within the scope of the improvements may occur to those skilled in the art and may be made without departing from the purview of the invention.

We claim:

1. In a gas range, an open top burner compartment, a closure for said compartment, hinge mechanism connecting the aforementioned ele-

ments including arms having spaced pivotal connections with said closure and compartment respectively, said arms having bent portions, and guide means for said arms.

2. In a gas range, an open top burner compartment, a closure for said compartment, a bail having a portion pivoted to said closure and a portion pivoted to said compartment beneath the top thereof and means for guiding said closure.

3. In a gas range, a burner compartment, a cover therefor, an arm pivoted to the rear portion of said cover, said arm extending downwardly and forwardly, and being also pivoted to said compartment, and a bearing on said compartment engaging said cover.

4. In a gas range, a burner compartment, a cover therefor, arms pivoted to the rear portion of said cover, said arms extending downwardly and forwardly and being also pivoted to said compartment, said cover having bearing tracks, and bearings on said compartment engaging said tracks.

5. In a gas range, a burner compartment having rear and side walls, a cover for said compartment, vertically disposed slots in said rear wall, an arm extending through each slot and having one end pivoted to the rear of said cover and the other end pivoted to a side wall of the compartment, rollers mounted adjacent the upper rear edge of said compartment and means on said cover engaging said rollers during shifting movement of said cover.

6. In a gas range having a burner box and movable cover therefor, a cover guiding mechanism comprising fixed rollers at the rear of said box engaging said cover, a pair of levers pivoted to the rear portion of said cover and located to the rear of said rollers, said levers extending downwardly and forwardly into the interior of said box and being pivoted thereto in advance of said rollers and at a substantial distance from the top and rear faces of the box.

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