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BROILER CONSTRUCTION

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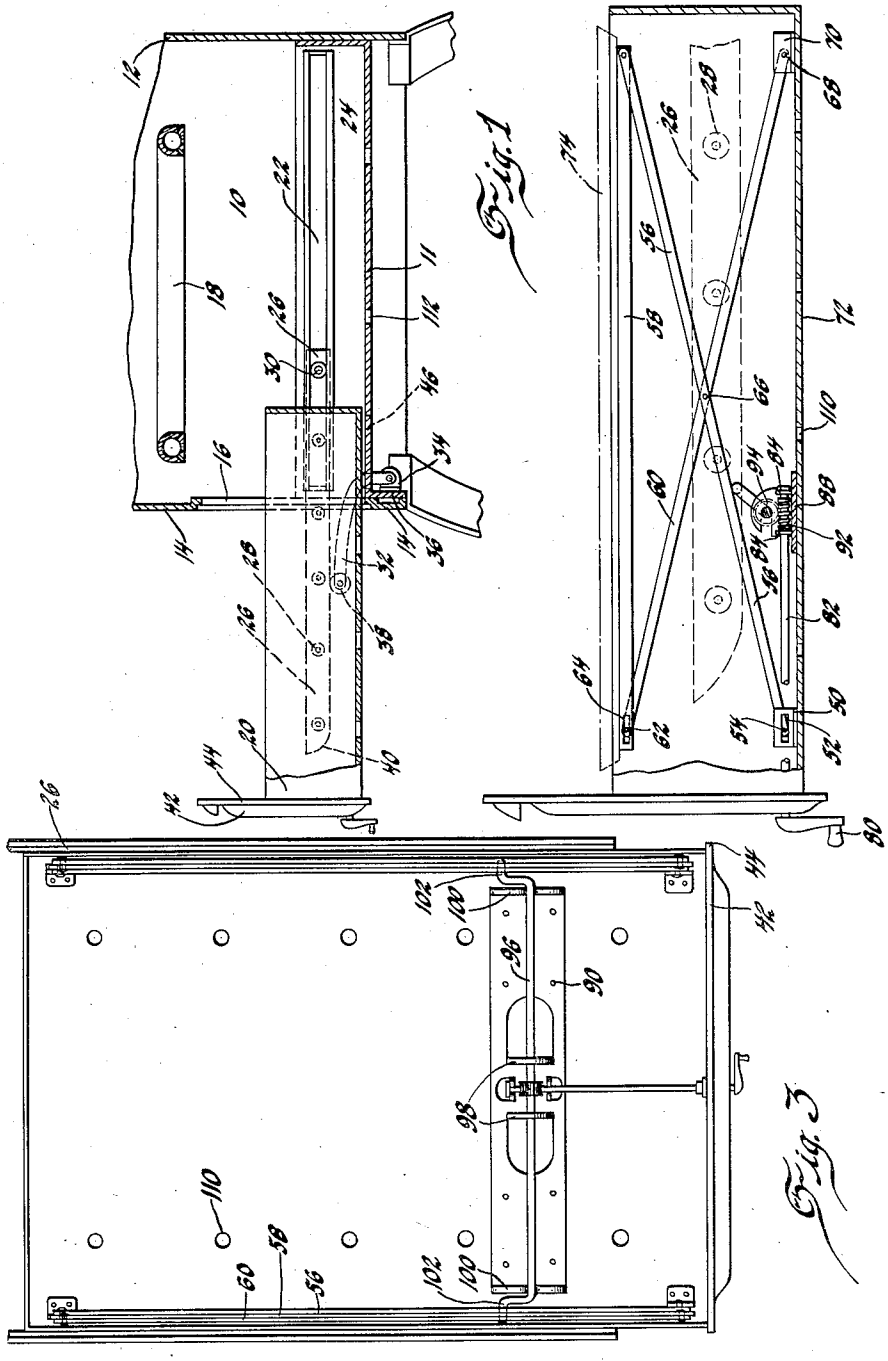


Fig. 1

Fig. 2

Fig. 3

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BROILER CONSTRUCTION

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This invention relates to broilers for gas stoves and more particularly to constructions employing a sliding drawer in which a broiler pan is mounted. The invention aims particularly to provide novel forms of slide mountings for the drawers, novel forms of means to raise and lower the broiler pan in the drawer to vary the distance between the pan and the broiling burner, and novel details of broiler drawer and broiler compartment constructions.

In the patent to G. D. Wilkinson, No. 1,614,167, Jan. 11, 1927, there is disclosed a sliding drawer broiler construction wherein the slide mounting includes a member, slidably mounted in stationary guides, and upon which the drawer itself may be slid. In other words, the member is full floating in its movement.

In the construction disclosed in the present application the member, which corresponds to the slide member of the Wilkinson patent, is anchored to the drawer itself so that it moves with the drawer and not independently thereof. Further, auxiliary supporting means, which operate automatically to support the drawer when the drawer is pulled outwardly, are provided in the present construction and an object of the invention includes such means.

It will further be noted that in the Wilkinson patent the broiler pan is adjustably mounted in the drawer, the adjustable mounting including crimps projecting from the front and rear wall of the drawer and upon selected ones of which the broiler pan may be disposed. The drawer is not provided with side walls and the broiler pan is laterally removable thru the space which would normally be occupied by such walls.

In the patented construction raising and lowering of the pan is not possible without the touching thereof by the hands of the person who is supervising the broiling, and further it may not be raised or lowered until the drawer has been moved to its full outward position.

In the construction of the present invention, the same is not true since the broiler pan may be raised or lowered by means entirely operable by a handle outside of the drawer, the handle projecting forwardly from the front of the drawer.

Further, the operating means is so constructed that the pan may be raised or lowered at will regardless of the position of the drawer and, therefore, the drawer need not be pulled out when raising or lowering of the broiler pan is desired.

Further, the broiler pan may be raised or lowered without being touched by the hands of the cook.

Therefore, an object of this invention is a novel form of means to raise and lower a broiler pan in a drawer type broiler construction.

A further object is a drawer type broiler construction wherein apertures or perforations in the bottom of the drawer or the bottom of the compartment are provided to permit of the flow to the broiler compartment of a much larger quantity of air than would be the case if such apertures were not provided, the increased quantity being desirable to permit of much more efficient combustion of the gases.

Further objects will readily occur to those skilled in the art upon reference to the following description and the accompanying drawings in which

Fig. 1 is a side section view showing the slide mounting, embodying the invention.

Fig. 2 is a side section view of the drawer per se, showing the broiler pan adjusting means.

Fig. 3 is a top plan view of the drawer per se, with the broiler pan removed.

Referring to the drawings, it will be seen that the stove is provided with a broiler or lower compartment 10 having a bottom 11,

back 12, and a front plate 14, provided with an opening 16 thru which may be had access into the broiler compartment. The compartment is further provided with a broiler burner 18 and a drawer 20, slidably mounted therein so as to present that which is being broiled to the burner or to the person supervising the broiling, as desired.

The construction thus far described forms no part of the present invention, which concerns itself mainly with the novel and specific details of the slide mounting for the drawer, of the means for raising and lowering the broiler pan in the drawer, and of the construction of the drawer.

The slide mounting for the drawer includes a pair of channeled C-section guides 22, secured to opposite inner walls 24 of the compartment 10, the guides receiving bars 26 fixed to the sides of the drawer 20 by fastening rivets, screws, etc. 28, and having near their inner ends, rollers 30 which engage the edges of the channeled guides to reduce the friction between the bars 26 and the guides 22. It will be seen that the parts are so proportioned that the drawer in its extreme outer position is entirely outside of the compartment being supported in this position by the bars 26 in the guides 22, and by auxiliary supporting means which will now be described.

The auxiliary supporting means includes arms 32 pivotally mounted on lugs 34 fixedly secured to a frame part 36 of the stove, the lugs being outside of the compartment. The arms are more or less J shaped, as shown in Fig. 1, one end of each arm being secured to a lug 34 and the other end bearing a roller or wheel 38 upon which the under surface of a bar 26 may ride. The bars are cut away, as at 40, so that the arms may be disposed in the space between the end 40 and the front 42 of the drawer. When the drawer is pulled outwardly, the arms, which were more or less vertically disposed, are engaged by the bar ends 40 and moved to their horizontal positions, shown in Fig. 1, whereupon they support the drawer. When the drawer is being pushed inwardly, the outwardly extending parts 44 of the front 42 engage the roller ends of the arms, swinging them upon their pivotal lugs 34, as will be obvious.

The bottom 11 of the compartment is provided with slots 46 in which the arms 32 may move without being engaged by the surrounding parts of the compartment bottom.

The broiler pan adjusting means includes a pair of fixed lugs 50 having slots 52 in which may slide pins 54 secured to the lower ends of links 56. The upper ends of the links 56 are connected by links 58, with the upper ends of links 60, the slide-pivotal connections including pins 62 slidable in slots 64 cut in the ends of links 58. Links 56 and 60 are pivotally secured to one another by pivot pins 66, and the lower ends of links 60 are connected by pivot pins 68 to lugs 70, which, together with lugs 50, are secured to the bottom 72 of the drawer 20.

The usual broiler pan 74 is supported on the upper ends of links 56 and 60, and on links 58, as shown in Fig. 2, which happens to show the linkage in such a position that the broiler pan 74 is between its uppermost and lowermost positions.

Means are provided to operate on the linkage, from outside the drawer, so that the position of the broiler pan may be varied, and such means will now be described. A handle 80, outside of and in front of the drawer front 42, is rigidly connected to a shaft 82 extending into the drawer near the bottom 72 thereof, the inner end of the shaft being supported on spaced lugs 84 bent up from a plate 88 which is secured to the bottom 74 of the drawer by rivets or screws 90. The inner end of the shaft is provided with a worm 92 which cooperates with a gear 94 on the transverse shaft 96, the latter being supported on lugs 98 and 100 bent up from the plate 88. The ends of shaft 96 are formed to provide cranks or cams 102 which engage under links 56 to swing them on their pivots and to raise or lower the broiler pan 74, as will be obvious.

It will be observed that the broiler pan when once raised will not lower itself by causing reverse movement of the linkage, the latter being supported in all its positions by the cams 102 which are locked by means of the worm and gear construction 92—94.

In order to permit of the flow of a large quantity of air to the burner 18 when the drawer is closed, the bottom 72 of the drawer 20, and the bottom 11 of the compartment are perforated, as at 110—112, these perforations being normally out of alignment to prevent too free a flow of air thru the compartment.

Now having described the invention and the preferred embodiment thereof, it is to be understood that the said invention is to be limited, not to the specific details herein set forth, but only by the scope of the claim which follows.

I claim:—

In combination with a broiler compartment of a range or stove, and a burner located in the upper portion of said compartment, a drawer slidably mounted in said compartment, the mounting being such that the drawer can be removed substantially, completely from the compartment, a broiler pan adjustably mounted in said drawer, and means operable from the front of the drawer to vary the position of the boiler pan with respect to the burner, the operating part for said means being accessible from outside of the drawer, even when the drawer is in the compartment, said means including a plurality of links pivotally mounted so as to

move to and from various positions thereof, a cam for moving said links, a transversely disposed cam shaft therefor, a gear on said cam shaft, an operating shaft extending from said cam shaft and thru the front of the drawer and operatively connected to said cam shaft by a worm engaging said gear to rotate the latter and the cam shaft so that the cam can move the linkage to raise or lower the broiler pan, the free end of the operating shaft having a crank handle thereon.

In testimony whereof, I sign this specification.

HENRY C. MAUL.