April 25, 1939. J. R. HALEY 2,155,654

BROILER OVEN AND PULL-OUT DRAWER THEREOF

Filed Jan. 28, 1936 3 Sheets-Sheet 1

Fig. 1.

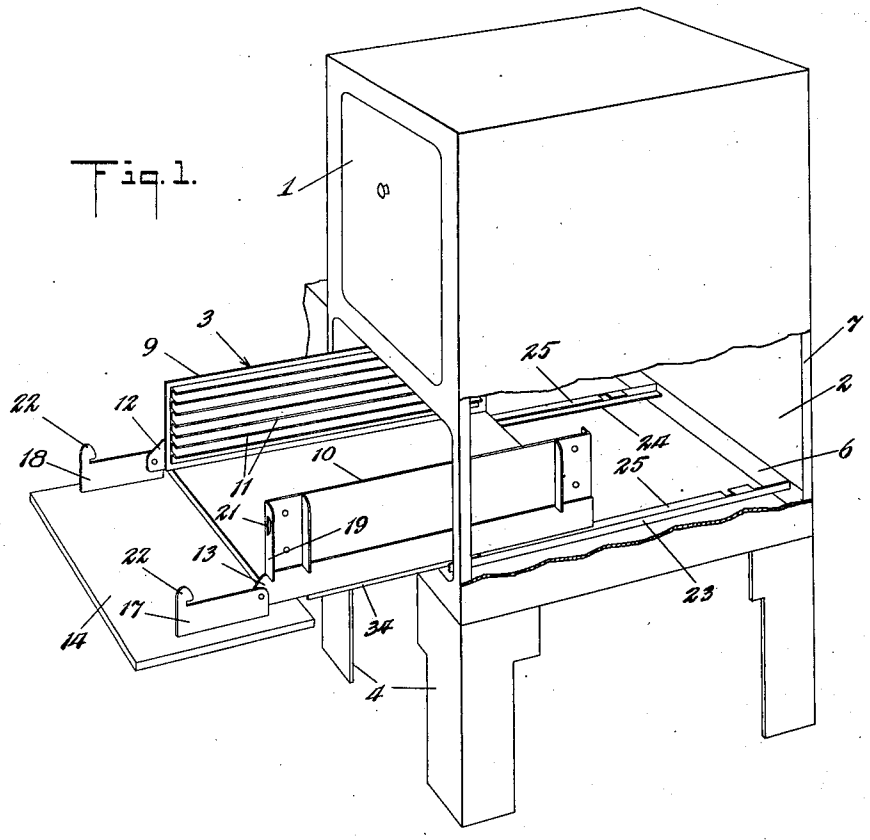


Fig. 4.

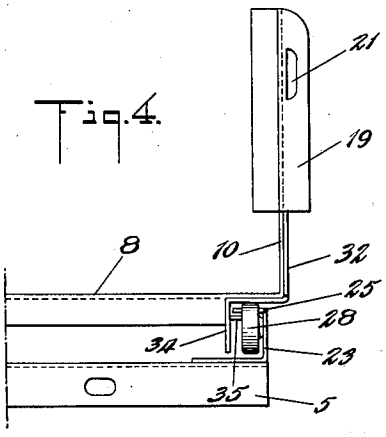
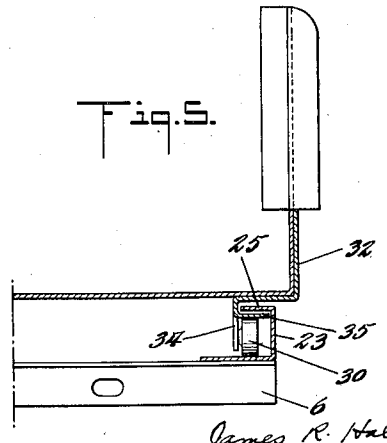


Fig. 5.



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BROILER OVEN AND PULL-OUT DRAWER THEREOF

Filed Jan. 28, 1936 3 Sheets-Sheet 2

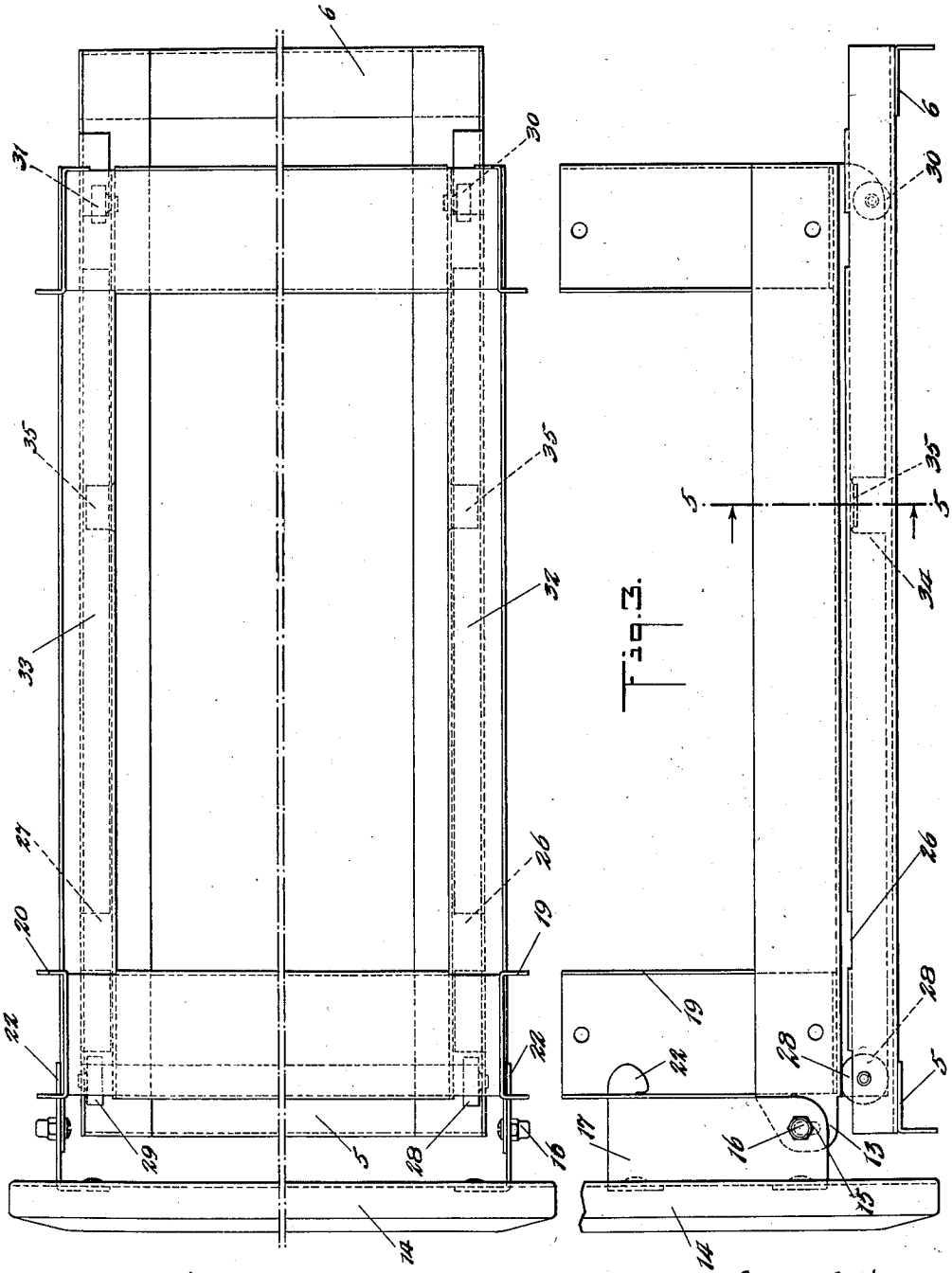


Fig. 3.

Fig. 4.

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BROILER OVEN AND PULL-OUT DRAWER THEREOF

Filed Jan. 28, 1936 3 Sheets-Sheet 3

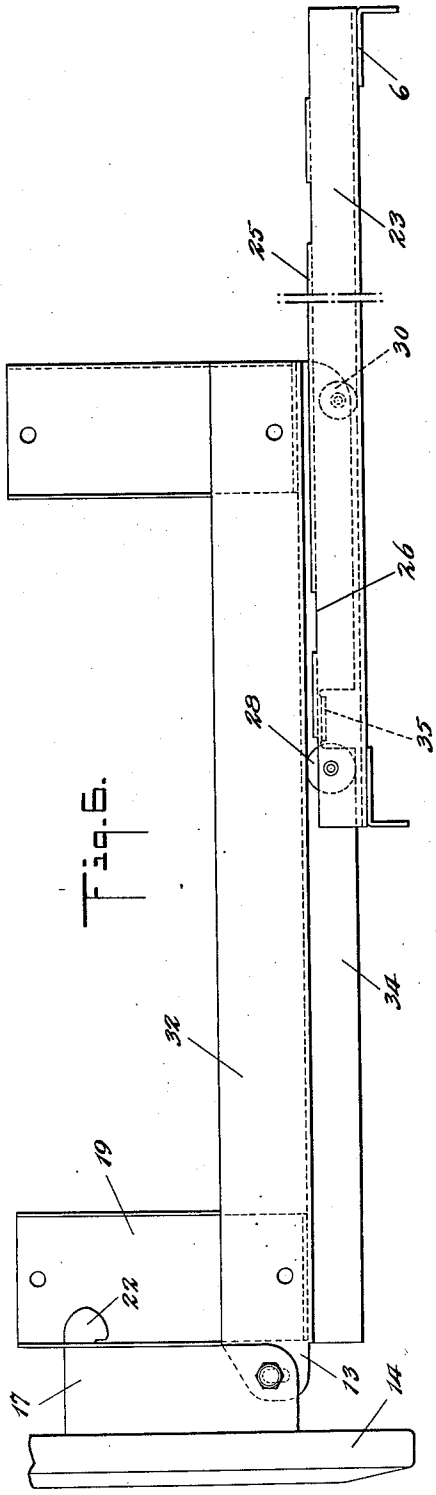


Fig. 6.

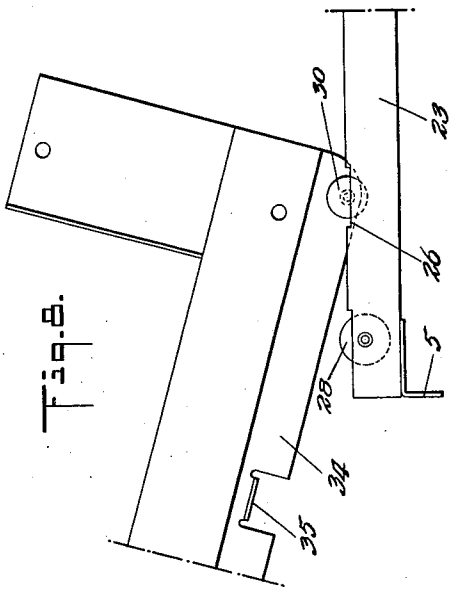


Fig. 4.

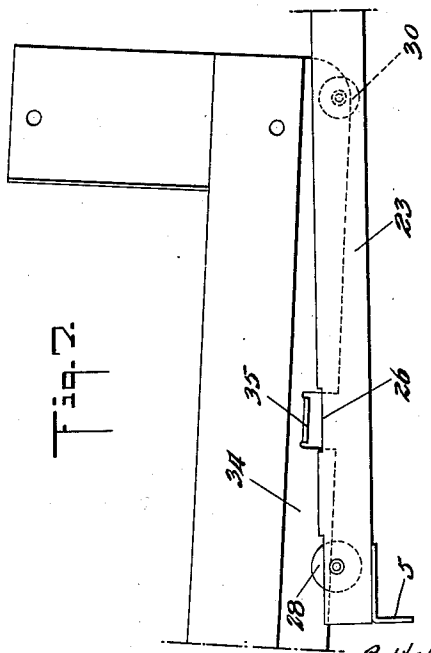


Fig. 2.

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UNITED STATES PATENT OFFICE

2,155,654

BROILER OVEN AND PULL-OUT DRAWER THEREOF

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Application January 28, 1936, Serial No. 61,119

4 Claims. (Cl. 45—77)

This invention relates to broiler ovens for gas or electric ranges, and more particularly to an improved broiler pull-out drawer.

An object of the invention is to provide an improved tracking arrangement for the pull-out drawer of a range.

Another object is to provide improved arrangements for supporting the pull-out drawer of a broiler oven.

A further object is to provide an improved drawer stop arrangement to prevent accidental withdrawal or tilting of the pull-out drawer.

A still further object is to provide a supporting and tracking arrangement for a broiler pull-out drawer whereby the drawer may be readily assembled and removed from the oven when desired.

A feature of the invention relates to the novel organization, arrangement and relative location of parts which go to make up an improved broiler oven for ranges.

While the invention will be described herein as embodied in one particular kind of range it will be understood that this is done merely for explanatory purposes and not by way of limitation to the particular embodiment illustrated. Accordingly in the drawings,

Fig. 1 is a perspective view of part of a gas range embodying the invention.

Fig. 2 is a top plan view of the tracking arrangement and pull-out drawer according to the invention.

Fig. 3 is a front elevational view of Fig. 2.

Fig. 4 is a front elevational view of part of the oven and drawer structure shown in Fig. 1.

Fig. 5 is a sectional view taken along the line 5—5 of Fig. 3.

Fig. 6 is a side elevational view similar to that of Fig. 3 but with the drawer in its extreme forward position.

Fig. 7 is a detailed view to explain the manner of assembling or removing the drawer from the guiding track.

Fig. 8 is a view similar to that of Fig. 7 showing the relation of the drawer roller and the track just as the drawer is about to be removed from the oven.

Referring more particularly to Fig. 1, there is shown in generalized form, the oven section of any well-known form of gas range and for the sake of simplicity in the drawings, the usual gas piping, burners and related parts are omitted. This oven section may comprise for example an upper oven 1 and a lower or broiler oven 2. Mounted for sliding movement within the broiler oven 2 is a broiler drawer designated generally by the numeral 3, the range as a whole being supported on suitable legs or standards 4. The bottom wall of the range may be suitably fastened to the framework constituted for example of front and rear metal strips 5 and 6 respectively and similar side members. Likewise the side, top and rear walls may be suitably fastened to the vertical metal uprights 7.

The pull-out drawer is comprised of a bottom 8 and side walls 9, 10 to the latter of which are attached the usual tray supports 11. The side walls of the drawer are provided with forwardly extending lugs 12, 13 to which is pivotally attached the door 14, and while any well-known means may be employed for latching the door in closed posiiton it is preferred to employ the arrangement shown in detail in Figs. 1, 2 and 3. As shown in Fig. 3, the lugs 12, 13 are provided with vertical slots 15 to receive the pivot pins 16, and the door 14 has fastened thereto arms 17, 18 by means of which the door is pivotally coupled to the drawer. Fastened to the forward ends of the side walls 9, 10 are metal channels 19, 20 and the forward flanges of members 19 and 20 are provided with slots 21 to receive the latch ends 22, it being understood that when the door is in closed position its weight causes a latching engagement between members 22 and the associated slots 21. In order to open the door it is necessary therefore to raise the door slightly to effect an unlatching thereof.

For the purpose of enabling the drawer to be pulled out of the broiler oven there is provided a special form of track and roller arrangement which constitutes an important feature of the invention. As shown clearly in Fig. 1, there are welded or otherwise fastened to the front and rear metal members 5 and 6, a pair of guide members 23, 24. Each of these members may consist of a sheet metal strip bent to substantial U-shaped formation to provide a horizontal guiding rail 25 which has cut-out portions 26, 27 to enable the drawer to be assembled and removed as will be described below. The forward end of the rails 25 are also foreshortened with respect to the portion 23 and rotatably fastened to the portions 23 are the rollers 28, 29 which are preferably of such a diameter as to project slightly above the rails 25. Likewise rotatably attached to the rear end of the drawer are rollers 30, 31 which have a diameter slightly smaller than the distance between the horizontal flanges of the guide rails. Attached to the longitudinal corners of the drawer are metal strips 32, 33 each having

a downwardly depending flange 34 to the rear ends of which are attached the rollers 30, 31. Each of the flanges 34 is provided with a struck-up tongue 35 which is bent back to a horizontal position but in spaced relation to the horizontal portion of the strips 32 thus defining the guiding slots or recesses which cooperate with the horizontal rails 25 to prevent the drawer becoming accidentally dislodged. The struck-up tongues 35 are disposed in such a position that when the drawer is pulled outwardly to its extreme forward position as shown in Fig. 6, they engage the rollers 28, 29 to prevent the drawer being pulled out entirely. It is to be noted that when the drawer is in its extreme forward position, the tongues 35 are still in telescopic arrangement with the horizontal rails 25, thus preventing the drawer tilting downwardly at its forward end. Furthermore should the drawer be in a partially pulled-out position such for example as where the tongues 35 are in registry with the cut-out portions 26 in the rail 25, the drawer is still prevented from tilting because of the engagement between the rollers 30, 31 and the under face of rails 25. With this arrangement therefore the drawer can be pulled out to any position without danger of its tilting and the sliding movement of the drawer is accurately controlled by the telescopic engagement between the tongues 35 and rails 25 thus preventing the drawer swaying from side to side during its sliding movement.

On the other hand the particular tracking and guiding arrangement as described does not interfere with the ready removal and assembly of the drawer, if its is desired to remove it bodily from the oven. The manner of assembly or removal of the drawer is diagrammatically illustrated in Figs. 7 and 8. In order to assemble the drawer it is inclined slightly as shown in Fig. 8 and the rollers 30, 31 are inserted into the corresponding cut-out portions 26, 27 of the rails 25. The drawer is then pushed into the oven until the tongues 35 register with the cut-out portions 26, 27 whereupon these tongues may be telescoped with the rails 25 and the weight of the forward end of the drawer is carried by the rollers 28, 29. The drawer may then be moved into and out of the oven without danger of its tilting or being accidentally dislodged from its tracks.

While one specific embodiment of the invention has been described herein, it will be understood that various changes and modifications may be made therein without departing from the spirit and scope of the invention.

What I claim is:

1. A pull-out drawer arrangement comprising a pair of fixed guide rails having horizontal flanges, a pair of downwardly depending guide flanges fastened to opposite sides of the drawer, a pair of rollers mounted adjacent the forward end of the rails to provide a roller bearing support for the drawer, each of said downwardly depending flanges having a tongue extending horizontally therefrom and extending outwardly beneath the underface of said horizontal flanges and engaging the under face of said horizontal flange when the drawer is in a forward position, said tongues also engaging said rollers to limit the forward movement of the drawer, and a pair of rollers carried by the drawer to support the rear of the drawer, the last mentioned rollers being disposed beneath said horizontal flanges.

2. A pull-out drawer arrangement comprising a pair of fixed guide rails each having a horizontal flange, a pair of downwardly depending flanges fastened to said drawer and extending longitudinally thereof, each of said depending flanges being provided with a horizontal tongue disposed beneath the horizontal flange of the associated guide rail, a pair of rollers mounted on the drawer adjacent the rear thereof said rollers being arranged to roll beneath the horizontal flanges on said guide rails, each horizontal flange having a cut-out portion to allow the drawer rollers to be inserted thereunder, said tongues engaging the under faces of said horizontal flanges when the drawer is in a forward position to limit the downward tilting of the drawer.

3. A pull-out drawer according to claim 2 in which the forward ends of horizontal flanges are cut out and a pair of rollers are mounted with part of their peripheries disposed above the flanges to act as roller bearings beneath the drawer and on which the drawer rests.

4. A pull-out drawer according to claim 2 in which each horizontal flange is provided with a cut-out intermediate the ends thereof to receive the associated one of said tongues in the assembly of the drawer on the rails, and a pair of rollers are mounted at the front ends of said rails and having part of their peripheries disposed above said flanges to act as roller bearing supports for the drawer, said tongues engaging said rollers to limit the forward movement of the drawer.

JAMES R. HALEY.