March 25, 1924. 1,487,950

W. J. KIMMERLE

EXTENSION TRAY FOR OVENS

Filed Oct. 23, 1922

Fig. 1.

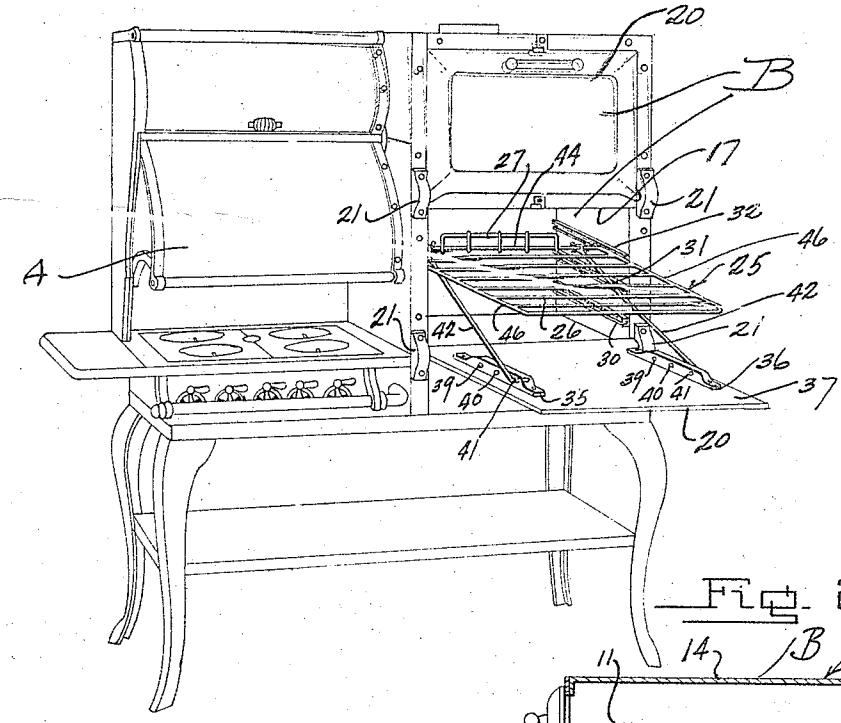


Fig. 2.

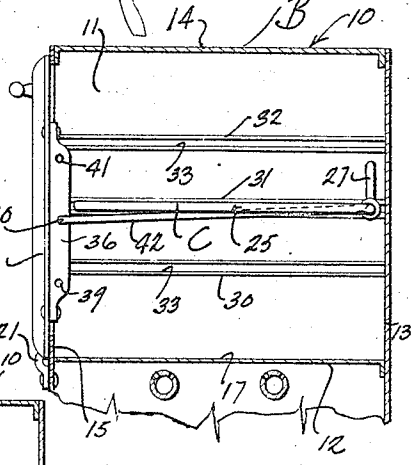


Fig. 4.

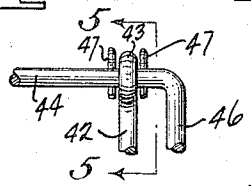


Fig. 5.

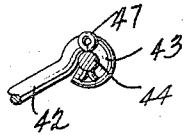
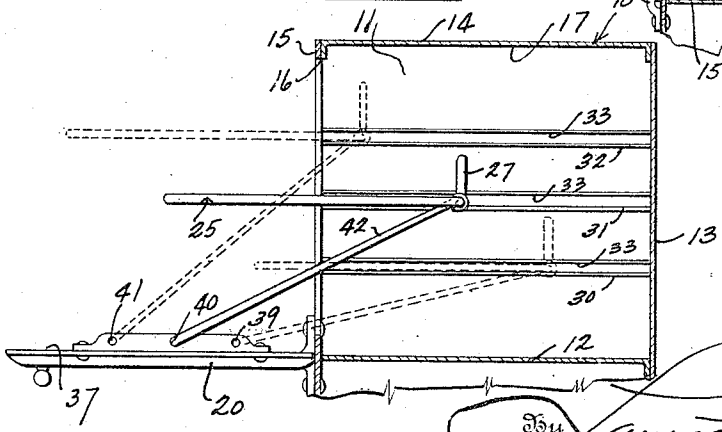


Fig. 3.



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UNITED STATES PATENT OFFICE.

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EXTENSION TRAY FOR OVENS.

Application filed October 23, 1922. Serial No. 596,394.

To all whom it may concern:

Be it known that I, WILLIAM J. KIMMERLE, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Extension Trays for Ovens, of which the following is a specification.

This invention relates to an improved article supporting tray construction for ovens.

The primary object of this invention is the provision of an extensible tray for ovens which is operable by means of the oven closure member, so that the same will dispose an article which is carried thereon in a convenient and accessible position, upon opening of the oven door or closure member.

A further object of this invention is the provision of an improved sliding tray construction for ovens, and means for cooperatively positioning the same in the oven construction for cooperation with the oven door, in order that the same may be controlled for various degrees of extension from the oven upon opening of the oven door.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the drawing, wherein similar reference characters designate similar parts throughout the several views.

Figure 1 is a perspective view of a gas range or stove, embodying an oven construction which includes the improved sliding tray.

Figure 2 is a fragmentary view, partly in section, showing the oven closure member in set position and the cooperative relation of the sliding tray.

Figure 3 is a fragmentary view, partly in section, showing the oven closure member in open position, and the means by which the sliding tray is operated for extension from the oven chamber.

Figure 4 is a fragmentary plan view of a tray connection.

Figure 5 is a cross sectional view, taken substantially on the line 5—5 of Figure 4.

In the drawing, wherein for the purpose of illustration is shown but the preferred embodiment of this invention, the letter A generally designates a gas range or stove, which includes an oven B, within which a novel type of tray supporting and operating means C is provided.

Referring to the oven B, the same preferably includes the housing 10, embodying side walls 11; bottom 12; rear wall 13; top wall 14, and front wall 15, having the opening 16 by means of which access is had to the chamber or compartment 17 of the housing 10. The closure member or door 20 of the oven B is preferably of the vertical swinging type having pivotal connection at its lower corners in certain bearings 21, so that the door or closure member 20 swings vertically, as is well known in this type of oven construction.

The tray member 25 is preferably of reticulate or bar construction, including the article holding portion 26, which is to receive pots, pans or other devices to be supported within the oven. The rear end portion or edge of the tray 25 is upturned or flanged, as at 27, in any approved manner, in order to prevent the article which is supported by the body portion 26 from accidental displacement during sliding of the tray 25.

Lower, intermediate, and top channel shaped guide members 30, 31, and 32 are preferably carried by the inside surfaces of the oven side walls 11; the horizontally disposed grooves 33 of which channel members are adapted for slidably receiving the side portions of the tray body portion 26, so that said tray 25 may be horizontally slid from within the chamber 17 of oven B to extend through the opening 16; the ends of the channel members 30, 31 and 32, of course, being unobstructed to provide such sliding movement of said tray 25. It is apparent that the guide channels 30 have been provided for supporting the tray 25 in its lowermost position within the oven chamber 17, so that relatively tall pots, pans, and other articles to be supported on said tray may be accommodated in the oven chamber 17. Similarly, the tray 25 may be supported in planes above the lowermost plane, as by sliding in the channels 31, or 32.

In order to make the sliding of the tray automatic upon operation of the closure member or door 20, it is preferred to locate clamping cleats 35 and 36 upon the inside surface 37 of the door 28, said cleats extending longitudinally of said door and each provided with apertures 39, 40, and 41, transversely therethrough. Connecting rods or bars 42 are provided for each of the cleats, which rods are preferably provided with the apertured heads 43 upon an end of each

for pivotal connection to the rear bar 44 of the tray body 26. The connection of these rods 42 is adjacent the side bars 46 of the tray body 26; being retained in their pivotal location against sliding along the bar 44, as by cotter pins or like elements 47. The other ends of the connecting rods 42 are outturned at right angles for adjustable connection in any of the apertures 39, 40 and 41 of the cleats 35 and 36.

In operation, assuming the tray 25 to be slidably mounted in the intermediate guide channels 31, the connecting rods 42 will then be pivotally connected in the intermediate apertures 40 of the cleats 35 and 36. The door 20 being closed, the sliding tray 25 is of course, disposed within the chamber 17 of the oven B and in horizontal position for supporting any article which it may be desired to retain in the oven. As the door 20 is lowered to expose the front wall opening 16, the connecting rods 42, incident to weight of the door 20 and any force which an operator might put thereon, will slide the tray 25 forwardly through the opening 16 or in its guide members 31. Thus, the tray 25 will be extended from the oven chamber 17 and whereby access to the same may be easily had, without necessity of reaching within the oven chamber. In like manner, the sliding tray 25 may be horizontally slidably positioned in the lower or upper guide channels 30 or 32, as is indicated in the dotted lines in Figure 3 of the drawings, and in which instances, the adjustable ends of the connecting rods 42 will be respectively disposed in the apertures 39 and 41 of the cleats 35 and 36. Various degrees of extension of the tray 25 may be had, by the selective disposition of the same in the guide channels. Thus, if the same is placed in the lowermost guide channels, the tray will be automatically extended by opening of the closure member 20 for but a short distance of its length. The greatest extension of the tray 25 from the oven chamber 17 may be had by slidably disposing the same within its upper guide channels 32, and with the connecting rod 42 engaging in the cleat openings 41.

From the foregoing description of this invention, it can readily be understood that the tray and oven closure member are so associated, that the tray may be selectively located, to obtain the best results, in the most facile manner, according to the particular cooking operation. The extensible tray eliminates the necessity of burning one's hand by reaching into the oven chamber while the same is heated and permits a vision of the article retained upon the tray 25.

Various changes in the shape, size and arrangement of parts, may be made to the form of invention herein shown and described, without departing from the spirit of this invention or the scope of the claims.

I claim:

1. In a device of the class described, the combination of an oven including an opening a door for said opening, a tray, and means adjustably connecting the tray and door to selectively permit various degrees of extension of the tray from said oven upon opening of the door.

2. In a device of the class described, the combination with an oven including a door, of a tray, means for slidably disposing the tray in various planes of elevation within the oven, and means for adjustably connecting the tray with said door to permit extension of said tray from the oven upon opening of the door for various degrees of extension from the oven according to its elevation within the oven.

3. In a device of the class described, the combination with an oven having an opening therein, of a door for said opening, a tray, means slidably mounting the tray in the oven, and a connecting rod pivoted at one end to said tray and at the other end adapted for adjustable engagement along said door to selectively permit various degrees of extension of the tray from the oven chamber upon opening of the door.

4. In a device of the class described, the combination with an oven having an opening therein and provided with a vertical swinging door for said opening, of a tray, means for selectively disposing said tray for horizontally sliding in various planes of elevation within said oven, and connecting rods for said tray adapted for adjustable connection to said door, whereby upon opening of said door, said tray may be extended from said oven in degree regulated by the sliding plane of elevation of the same.

5. In an automatic extensible tray for ovens, the combination of an oven housing having an opening in a wall thereof, a door member for said housing pivotally connected at its lower end for vertical swinging with respect to said housing, a plurality of channel guide members horizontally mounted on each side wall within said housing, a tray adapted for slidable positioning in selective manner within said channel guide members, cleat members for the inside surface of said oven door each having a plurality of transverse openings therein, and connecting rods for adjustable engagement with any of the openings in said cleat members and being pivotally connected at their opposite ends to the rear of said sliding tray, whereby upon opening of the oven door, the tray will be automatically extended from the opening of said housing, in degree consistent with the plane of elevation of said tray.

WILLIAM J. KIMMERLE.