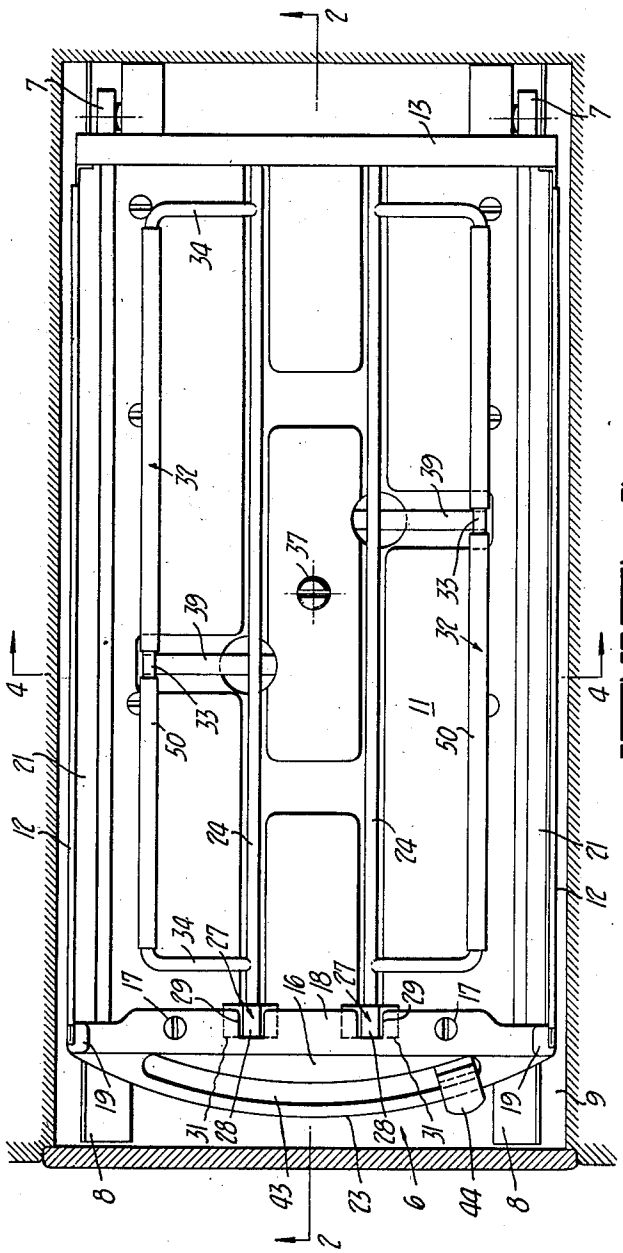
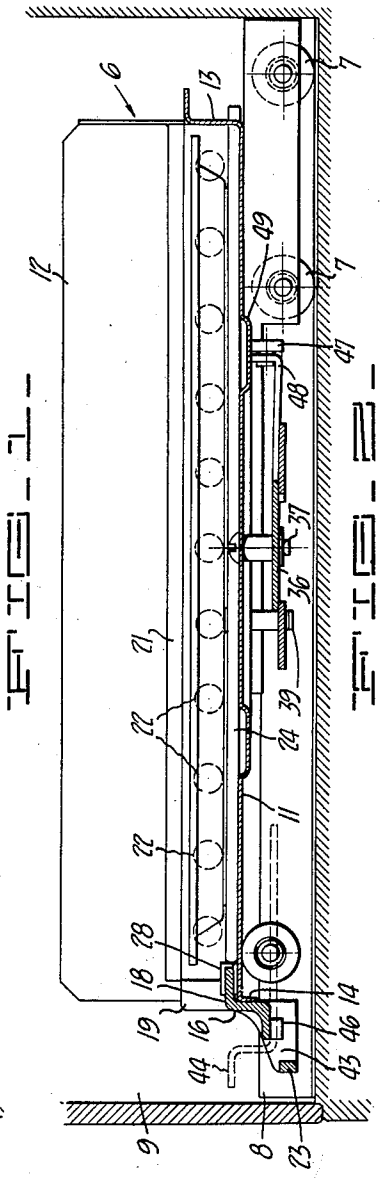
March 14, 1944. P. R. SAMWELL ET AL 2,344,174

ADJUSTABLE BROILER GRID

Filed Sept. 30, 1939 2 Sheets-Sheet 1





INVENTORS
Philip R. Samwell
William A. Pentecost
BY
Joseph B. Gardner
ATTORNEY

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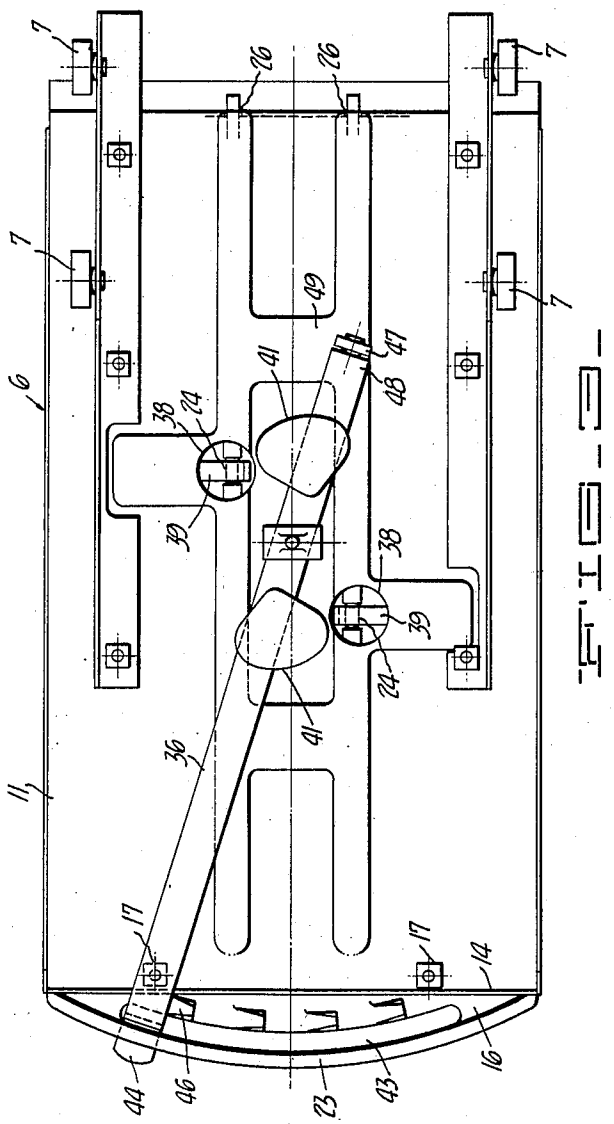


FIG. 3.

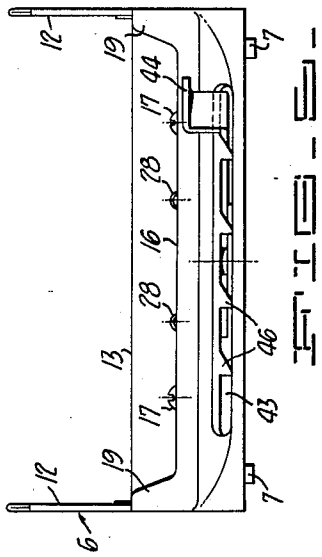


FIG. 5.

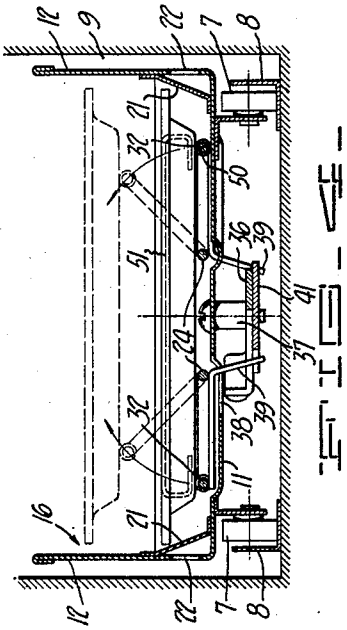


FIG. 4.

INVENTORS
Philip R. Samwell
William A. Pentecost
BY Joseph B. Gardner
ATTORNEY

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ADJUSTABLE BROILER GRID

Philip R. Samwell and William A. Pentecost, Oakland, Calif., assignors to Hammer-Bray Company, Ltd., Oakland, Calif., a corporation of Nevada

Application September 30, 1939, Serial No. 297,384

3 Claims. (Cl. 126—41)

The invention relates to a means positioned in a broiler compartment of a cooking stove, for supporting at different elevations therein, and for moving to such different elevations, the grid or pan or the rests upon which the grid or pan or other article supporting element is supported in the compartment.

In modern types of stoves all of the stove elements such as the oven and broiler compartment, are located below the cooking top which is usually of a table-top height. Generally, the broiler compartment is positioned below the oven and thus in view of its proximity to the floor is renderel less convenient for use than if in a more elevated position. In view of this, a broiler compartment has sometimes been provided in the stove at the side of the oven. This latter broiler is either exclusive or provided in addition to a broiler under the oven. Where the broiler is an auxiliary one, it is usually made of relatively narrow width so as to avoid undue over-all width of the stove as a whole. In many modern stoves the broiler is provided with some means for regulating the height of the broiler pan or grid in the broiler compartment and usually such means is incorporated with a drawer in which the pan or grid is supported. However, most of such devices do not lend themselves to effective operation in the more confined quarters, or will result in unduly restricting the space within the compartment and make difficult the easy cleaning of the compartment and the maintenance thereof in a sanitary condition.

Accordingly, it is an object of the present invention to improve existing designs of such adjustable grid devices, so as to make same more effective and suitable for use with the narrower type of broiler compartment.

Another object of the invention is to re-design existing types of such devices so as to render them better adapted to insure proper support of the grid or pan in view of the restricted dimensions of the broiler compartment.

A further object of the invention is to provide a means of the character described which will be much more simple in design, construction and operation than devices heretofore used and at the same time be more adaptable to mass production.

A still further object of the invention is to improve the manipulating means for the adjusting mechanism, so that the operator will more easily and more naturally pursue the proper method of actuation.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adopted within the scope of the invention as set forth in the claims.

Referring to said drawings:

Figure 1 is a top view of a broiler drawer provided with the means of our invention.

Figure 2 is a longitudinal sectional view of the drawer.

Figure 3 is a bottom view of the drawer.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 2 and showing a part of the broiler compartment.

Figure 5 is a front elevation of the drawer.

In the drawings, the means of our invention is shown embodied in a drawer 6 which is provided with rollers 7 arranged for engagement with a suitable track or guide 8 provided in the broiler compartment 9, of the stove. The drawer is provided with a substantially flat bottom 11 and integral side walls 12 and a rear end wall 13. As here shown, no front wall is provided on the drawer, but as will be clear from Figure 2, the forward end of the bottom wall is provided with a downwardly extending flange 14 against which is positioned a frame member 16 which is secured to the bottom wall by means of bolts 17 extending through a flange 18 of the member. Desirably, short extensions 19 from the member 16 project upwardly against the inner side of the side walls of the broiler. A corner strip 21 is preferably secured to the bottom and side walls of the drawer, as by welding, and a series of hot air relief openings 22 are provided in the side walls back of the strips 21. The strips, as will be clear, not only provide a reinforcement for the drawer but prevent the accumulation of grease and foreign matter and necessity of cleaning along the otherwise acute junctures of the side and bottom walls of the drawer.

The frame piece 16 is formed with a segmental extension 23 at the front end thereof and such extension may serve as a handle by which the operator may readily move the drawer into and out of the compartment.

Positioned upon the upper side of the drawer bottom and extending from the frame member to the rear end wall of the drawer are a pair of rods 24. These rods are located relatively close to the center of the drawer and are mounted for

rotation in openings 26 of the rear wall and in bearings 27 at the front end of the drawer. The bearings include loop portions 28 which fit in recesses 29 in the frame 16 and are held in position by means of extensions 31 interposed between the flange 18 and the portion of the bottom wall thereunder. Secured to the rods 24 are wings 32, here shown in the form of rods 33 of preferably the same material as the rods 24 and having angularly disposed end portions 34 which are secured, as by welding, to the end portions of the rods 24. The rods 33 which are arranged to provide rests or supports for a broiler grid, pan, or other member upon which food or other articles are supported in the broiler, may be moved with the rods 24 so as to lie directly upon the drawer bottom or in a range of positions between such bottom and a point approaching vertical alignment with and above the rods 24. In all of such positions the rods 33 will overlie the portion of the drawer bottom between the rods 24 and the adjacent side wall of the drawer, and in the present embodiment the rods 33 are limited to a range of movement no more than 45° from the drawer bottom. In this manner the rods 33 will lie close to the side walls in all of the positions, and consequently the pan or grid which is usually almost as wide as the drawer, will be supported near its sides by the grid rests in each of the different elevated positions and during movement of the grid or pan from one position to another. This feature of providing for the support of the grid or pan adjacent its sides is quite important, since it insures against the grid or pan, and particularly the latter, becoming tipped while completely contained within the drawer or during movement thereof in and out of the drawer, it being also noted that the side walls of the drawer are relatively high and thus the grid or pan is prevented from slipping off either of the grid rests. Preferably, the bottom wall of the drawer is grooved along the portions underlying the rods 24 so that notwithstanding the fact that the rods are positioned practically upon the bottom wall, such portions thereof may be readily cleaned.

It is important to note that the only portions of our device which are exposed on the inside of the drawer are the four rods 24 and 33. In view of this, both in appearance and in the facility afforded for keeping the rests and the drawer clean, our device is the same as the well known removable broiler rack so commonly used. In fact, when the grid rods 33 are in their lowermost position, that is resting upon the drawer bottom and horizontally aligned with the rods 24, the full equivalent of the usual rack is provided.

An improved means is provided for rotating the rods 24 so as to move the rods 33 from one position to another. This means in general is somewhat similar to that shown in Patent No. 2,135,309 which was granted to Joseph E. Leonard on November 1, 1938, but is of an improved design and construction particularly from a standpoint of facilitating mass production. As will be particularly clear from Figures 2 and 3, such means includes a lever 36 which is positioned under the drawer and fulcrumed to the center of the drawer bottom about a bolt 37 for oscillation horizontally. Connecting the rods 24 and 33 and having a portion extending through an opening 38 in the bottom wall, is an arm 39. One arm is provided with each set of rods and the respective arms are arranged to engage cam portions 41 fixedly associated with the lever at opposite sides of the bolt. As will be clear from Figure 4, the arms are retained in engagement with the cams by reason of the weight of the grid rests, thus eliminating the need for springs, links, or other mechanical means for keeping the arms and lever in cooperative relation. It will be evident that as the lever is moved in one direction or the other, the grid rests will be raised or lowered. To permit ready grasping of the lever, the front end thereof is arranged to project through an arcuate slot 43 formed in the frame member 16, and such end is bent upwardly and outwardly to provide a handle 44. In order to retain the lever in any of a plurality of positions so as to correspondingly hold the grid rests at different elevations, a plurality of stops 46 are provided along the bottom of the portion of the frame member traversed by the lever during oscillation thereof. The lever is formed of a resilient material and is held against the frame member with the assistance of a roller 47, which is secured to the frame end 48 of the lever and bears against the under surface 49 of the bottom wall of the drawer. As will be clear from Figure 2, by merely depressing the handle portion 44 the lever can be released from the stops and oscillation permitted to effect the raising or lowering of the grid rests. Preferably, one side of each of the stops 46 are inclined so that while movement of the grid rests to a lower elevation may be effected only by first depressing the lever handle, raising of the grid rests may be accomplished by practically direct sidewise movement of the lever. It will thus be seen that the device of our invention can be operated in an easy and natural manner.

In order to eliminate friction between the grid rests and the bottom of the pan or grid during the raising or lowering action, tubular roller sections 50 are rotatably mounted on the rods 33. To enable the top of the sections to be horizontally coplanar with the corresponding portion of the rods 24, the drawer bottom is suitably indented.

A grill 51 or the like may be placed in or upon the pan and it will be understood that the term grid or pan as herein used is intended to include any element upon which the article to be broiled is supported.

We claim:

1. An elevating mechanism for an adjustable grid for a broiler having a supporting unit in the broiler compartment defining a horizontal partition, with a substantially unobstructed front; comprising, a pair of parallel rods pivotally supported upon said unit and extending longitudinally of the compartment adjacent the center thereof, rods extending parallel to and connected with said first rods and movable therewith from substantially horizontal to substantially vertical alignment thereto, said second mentioned rods being maintained in horizontal alignment in all positions and arranged when horizontally aligned with said first rods to rest upon the upper side of said unit and provide with said first rods grid rests at the central and side portions of the compartment, and means carried by said partition and mounted between said first rods for rotating said last named rods.

2. An elevating mechanism for an adjustable grid for a broiler having an elongated supporting unit providing a horizontal partition; comprising, a pair of parallel rods pivotally supported on and adjacent to the upper side of the par-

tition and extending lengthwise of the unit at the center portion thereof, rods fixed to said first mentioned rods and providing grid rests substantially coextensive with said first rods, arms fixed to said first rods extending through openings in said partition immediately adjacent said rods, a lever on the under side of said partition fulcrumed thereto between said rods, and having cam portions engaging said arms whereby upon movement of said lever said first rods will be rotated and said second rods raised or lowered to position same respectively over the first rods or at the side edges of the partition, the arrangement of said rods and lever being such that said arms will be maintained in engagement with said cam portions by the weight of said second rods, and means to hold said lever in different positions.

3. An elevating mechanism for an adjustable broiler grid of the character described comprising, adjacent substantially parallel rods, means for supporting said rods for rotation, a rod extending parallel to and spaced from and connected to each of said first rods and being individually swung about the axes of said first rods upon rotation of the latter whereby said second rods may be caused to assume horizontal positions elevated over said first rods, and means connected to and operative to rotate said first rods jointly and correspondingly but in opposite directions whereby said second rods will be maintained in horizontal alignment in all elevated positions thereof.

PHILIP R. SAMWELL.
WILLIAM A. PENTECOST.