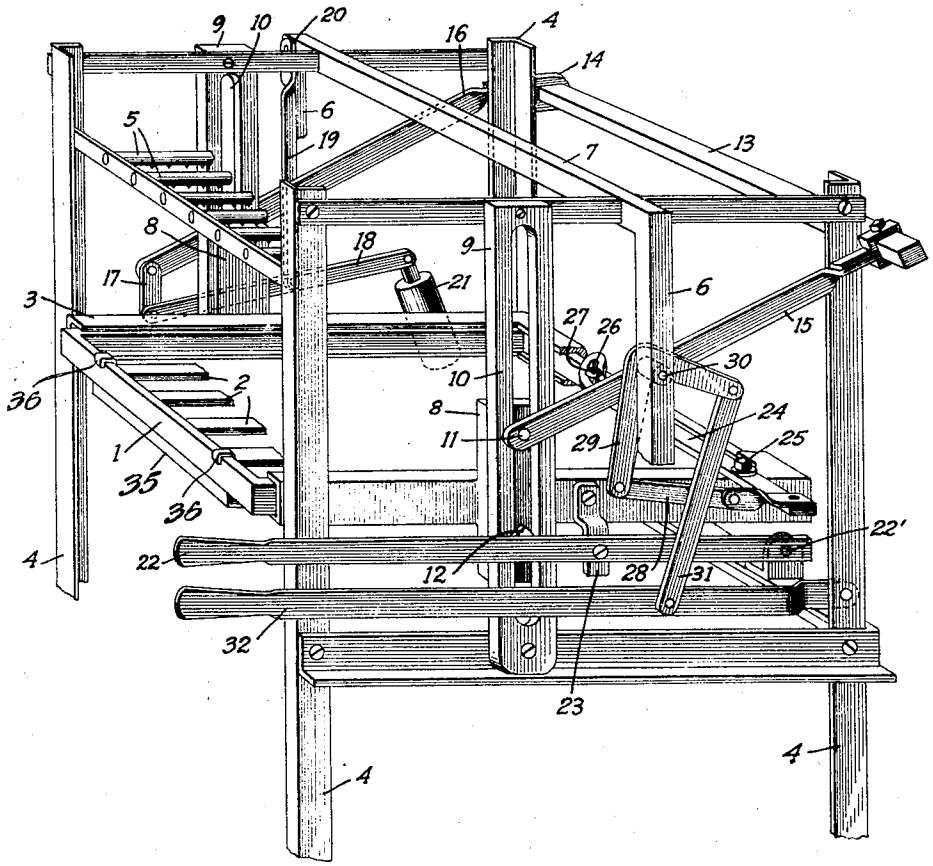
M. SCHEY.

ADJUSTABLE BROILER.

APPLICATION FILED DEC. 10, 1919.

1,409,203. Patented Mar. 14, 1922.



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ADJUSTABLE BROILER.

1,409,203. Specification of Letters Patent. Patented Mar. 14, 1922.

Application filed December 10, 1919. Serial No. 343,746.

To all whom it may concern:

Be it known that I, MAX SCHEY, a citizen of the United States, residing in the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Adjustable Broiler, of which the following is a specification.

This invention is an adjustable broiler of the general character described and claimed in my prior application Serial No. 194,832. The object of the invention is to simplify the prior construction, render it more efficient and more easily operable to adjustably move the broiling grid toward or away from a source of heat without effecting edgewise movement of the grid or to move the grid edgewise into or out of the oven without effecting movement thereon toward or away from the source of heat.

A further object of the invention is to effect these different movements of the grid through simple leverage action which may be operated from a point so removed from the source of heat as to remain relatively cool whereby the operator may manipulate the grid without any chance of burning his hands, as so frequently occurs when the grid is operated through the grasping of the same directly by the operator through the medium of handles mounted directly on the grid.

Another object of the invention is to mount the grid for vertical adjustment toward and away from the source of heat by a very simple construction embodying a minimum number of moving parts which co-act to include tilting of the grid when articles to be broiled are unequally disposed thereon.

Features of the invention, other than those specified, will be apparent from the hereinafter detailed description taken in conjunction with the accompanying drawings.

In the accompanying drawings I have illustrated one practical embodiment of the invention, but the construction therein shown is to be understood as illustrative only, and not as defining the limits of the invention.

The drawing shows in perspective, a broiler embodying the present invention, the usual sheet metal covering or oven construction being omitted in the interests of clearness.

Referring to the drawing 1 is a grid which may be of any suitable construction but is formed in the shape of a rectangular frame carrying suitable grid bars 2 on which meat or other articles to be broiled is laid. The grid 1 is slid into a three sided frame or carrier 3 formed of channel section metal to receive and guide the lateral edges of the grid and the whole is supported within the frame of a stove as shown. The frame is shown as embodying four corner posts 4 of angle iron section suitably braced by horizontal ties and said frame is, in practice, covered with sheet metal to encase the grid 1 within an oven in the upper part of which is positioned a plurality of burners 5 which constitute the source of heat. Besides the four corner posts 4, two additional uprights 6 are provided which are spaced apart by a cross member 7 and these structural elements assist in supporting the operating parts of the broiler as well as the sheet metal casing enveloping the same.

Positioned at each lateral side of the carrier 3 is an upstanding guide shoe 8 which shoes co-operate with upright guides 9 fixed at the opposite sides of the frame and provided with vertical slots 10. Bolts 11 and 12 pass through the shoes and through the slots and serve to guide the carrier 3 for vertical movement within the frame and at the same time preclude forward or backward tilting of the carrier or the grid which it supports.

In order to support the grid at any desired altitude and in consequent adjacent or remote relation to the burners 5, a rock shaft 13 extends transversely across the back of the frame and is pivoted in bearings or brackets 14, that portion of the shaft which passes through the brackets being rounded to permit of oscillating movement of the shaft within the brackets. One end of said rock shaft carries an arm 15 which is fixed to the bracket against relative rotation, while through the other end of said arm the bolt 11 passes. At the other end of the rock shaft 13, a similar arm 16 is affixed thereto, which arm extends forwardly, is secured by a similar bolt 11 to the other shoe 8 and projects forwardly from said shoe with its free end secured by a link 17 to a lever 18. The lever 18 is fulcrumed intermediate its ends, on the lower end of a depending strap 19, the upper end of which is secured to the cross member 7 at 20. The free end of the lever 18 carries a weight 21 of sufficient

ponderosity to counterbalance the weight of the grid 1, its carrier 3 and the associated operating parts. With this construction, the grid will be counterbalanced in all of the different vertical positions which it may be made to assume and will remain in any position in which it is put.

In order that the grid may be adjusted to different heights, there is pivoted to the frame at 22′, a hand lever 22, the front end of which is formed into a suitable handle by means of which it may be operated and intermediate its ends it is secured by a link 23 to one side of the carrier 3. By raising or lowering the handle of lever 22, corresponding movement is imparted to the grid for the purpose of moving it into greater or less proximity to the burners 5.

As heretofore stated, the grid is slidable edgewise in its carrier 3 and, according to the present invention, this sliding of the grid may be accomplished mechanically and without necessitating the grasping of the hot grid directly by the operator. To this end, there is pivoted near one lateral edge of the carrier 3 a lever 24 fulcrumed at 25 and provided at its inner end with an arcuate slot 26 through which a pin or trunnion 27, on the rear of the grid 1, extends. The outer end of the lever 24 is secured by a link 28 to one arm of a bell crank 29 fulcrumed at 30 on one of the uprights 6. The other arm of the bell crank 29 is connected by a link 31 to an operating lever 32 similar to the lever 22. The rear end of the lever 32 is pivoted to one of the uprights 4 of the frame, while its forward end is provided with a suitable handle to allow of its ready manipulation. By raising or lowering the handle of the lever 32, the bell crank 29 is oscillated and the lever 24 operated to slide the grid edgewise into or out of its carrier 3.

It appears from the foregoing description that through the manipulation of the handles of the levers 22 and 32 the grid may be readily moved toward or away from the source of heat or may be slid into or out of the oven to position the articles on or remove them from the grid. The handles of these levers are so far removed from the fire that they remain cool and there is no tendency of the chef to burn his hands when manipulating the device. The present invention has been particularly shown as adapted to gas broilers but is equally adaptable to stoves wherein other fuels are employed, such for example, as coal.

An important feature of the present invention resides in the employment of handle levers for adjusting the grid vertically and horizontally through entirely different trains of mechanism which are greatly simplified over the construction of my prior patent. These handle levers extend into convenient positions where they will remain cool at all times so that the chef may grasp either handle to manipulate the grid as desired without fear of burning his hands. The construction is unusually compact and there are no projections which seriously interfere with the movement of the chef about the kitchen in which the device is set up.

Another feature of the invention is the drip pan 35 which is hooked on the side of the grid by means of hooks 36 formed on the drip pan, and which is adapted at all times, irrespective of the position of the grid, to catch the grease which drips from the broil. This is a distinctly novel feature and is not known by the prior art.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the class described embodying a frame provided at either side thereof with vertical guides, shoes slidably mounted for reciprocation vertically on side guides, a carrier rigid with said shoes and supported thereby for vertical movement and against tilting, a grid mounted for edgewise sliding movement on the carrier, a rock shaft extending transversely of the frame and having arms fixed thereon and secured to the shoes which support the carrier, for synchronizing the movement of the shoes and maintaining the shoes at corresponding heights, a lever pivoted to one of said arms and weighted to counterbalance the weights of the grid and its adjuncts, and an operating lever pivotally associated with the carrier for raising and lowering the same, in combination with a lever pivoted on the carrier and having a driving connection with the grid, an operating handle, and link and lever connections between the operating handle and the grid lever for translating the movements of the operating handle into sliding movement of the gird relative to its carrier.

2. A device of the class described embodying a frame, vertical guides fixed at the opposite side of the frame, shoes associated with each guide for vertical sliding movement thereon, a carrier rigid with the shoes for sliding movement between the guides and against tilting movement thereon, means connecting said shoes for simultaneous vertical movement only to maintain them at corresponding heights at all times, a grid mounted for sliding movement on the carrier, means for counterbalancing the grid and its adjuncts, and an operating handle pivotally associated with the carrier for raising and lowering the same between the fixed guides of the frame, in combination with means for sliding the grid edgewise with respect to the carrier, and a second operating handle for actuating the grid sliding means, whereby the grid may be raised

and lowered without imparting edgewise movement thereto or slid edgewise without imparting vertical movement thereto.

3. A device of the class described embodying a frame provided at the opposite lateral sides thereof with vertical guides, a carrier positioned within said frame, shoes rigid with the carrier and co-operating with the vertical guides for the purpose of supporting the carrier for vertical adjustment and to preclude tilting of the carrier, a grid slidably supported by said carrier, operative counterbalancing connections between the shoes at the opposite sides of the carrier for rendering said shoes simultaneously movable in corresponding positions and counterbalancing the weight of the grid and its adjuncts, and a lever pivotally associated with the carrier and having one of its ends projecting into accessible position, for raising and lowering the grid, in combination with operating link and lever connections associated with the grid and extending into accessible position for sliding the grid edgewise with respect to the carrier, whereby the grid may be vertically adjusted without imparting edgewise movement thereto or moved edgewise on the carrier without imparting vertical movement thereto.

4. A device of the class described embodying a frame, slotted guides at the opposite sides of the frame, a carrier positioned within the frame and provided with shoes co-operating with the slotted guides, for mounting the carrier for vertical adjustment in the frame against tilting, a grid slidably supported by the carrier, and means extending into accessible position for raising and lowering the carrier, in combination with means entirely independent of the carrier raising and lowering means, and projecting into accessible position for sliding the grid edgewise with respect to its carrier, whereby the grid may be raised and lowered without effecting sliding movement thereof or slid with respect to the carrier without effecting vertical movement thereof.

5. A device of the class described embodying a supporting frame provided at each side thereof with a vertical guide, a shoe associated with each guide for vertical sliding movement thereon, a carrier provided with parallel sides, to the opposite sides of which carrier the shoes are rigidly secured so that with vertical movement of the shoes the carrier may be bodily raised or lowered while maintained horizontally, a rock shaft mounted for oscillation on the frame, arms rigid with the rock shaft and connected to both shoes for the purpose of impelling the shoes to corresponding movement to maintain the carrier against lateral tilting, a grid slidably mounted on the carrier, means for counterbalancing the grid and the carrier, and a lever pivoted to the frame, operatively connected with the carrier and extending into accessible position, said lever being operable to vertically shift the shoes for the purpose of adjusting the grid to different slides, in combination with a second manually operable lever extending into a convenient position, and operative connections between said second lever and the grid, for effecting edge-wise sliding movement of the grid on the carrier.

6. A device of the character described embodying a grid, a carrier on which the grid is mounted for sliding movement, means for bodily raising and lowering the carrier, and means for sliding the grid on the carrier, in combination with a drip pan mounted to underlie the grid at all times and movable therewith so that the drip pan will be juxtaposed with the grid at all times, irrespective of the movement of the grid.

7. A device of the character described embodying a grid, a carrier on which the grid is mounted for sliding movement, means for bodily raising and lowering the carrier, and means for sliding the grid on the carrier, in combination with a drip pan supported on and carried by the grid at all times, irrespective of the position of the grid.

In testimony whereof, I have signed my name to this specification.

MAX SCHEY.