

May 5, 1936.

J. M. SANDERS

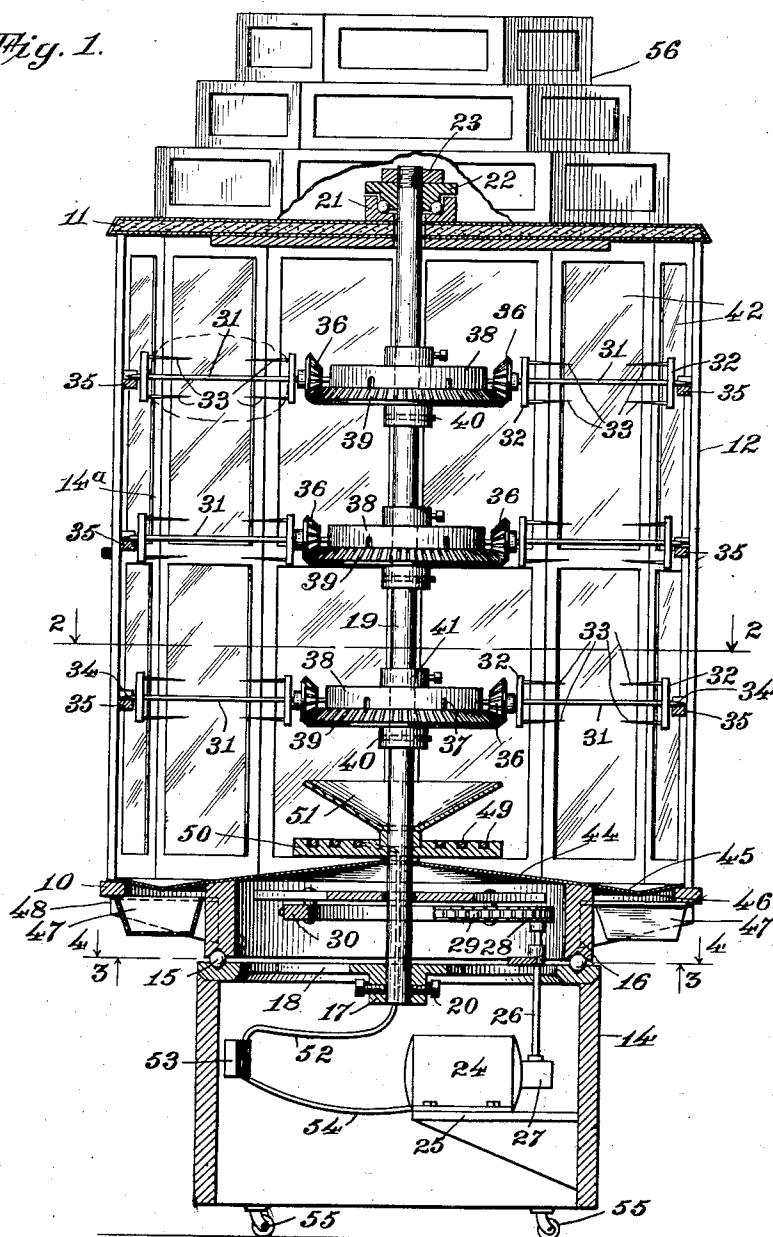
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ROTISSERIE

Filed May 15, 1934

3 Sheets-Sheet 1

Fig. 1.



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May 5, 1936.

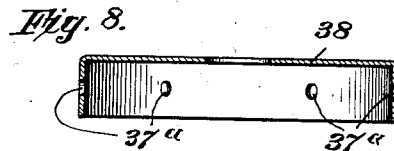
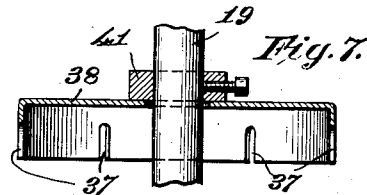
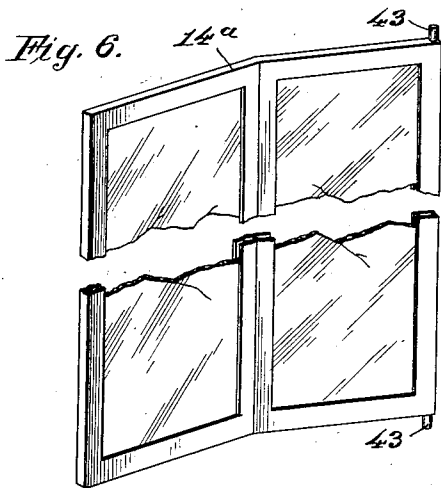
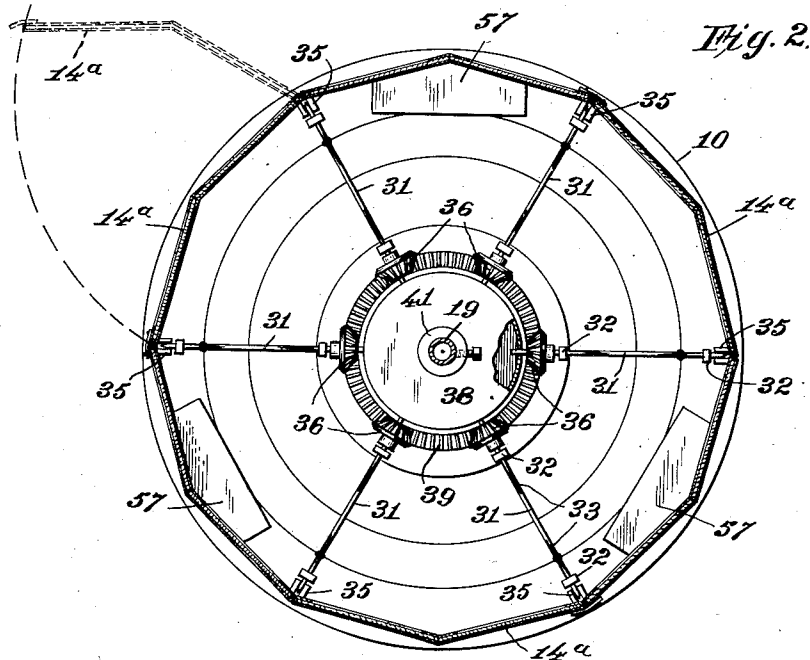
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ROTISSERIE

Filed May 15, 1934

3 Sheets-Sheet 2



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2,040,016

ROTISSERIE

Filed May 15, 1934

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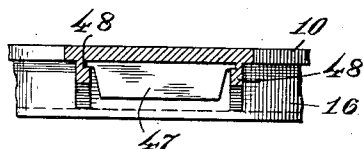
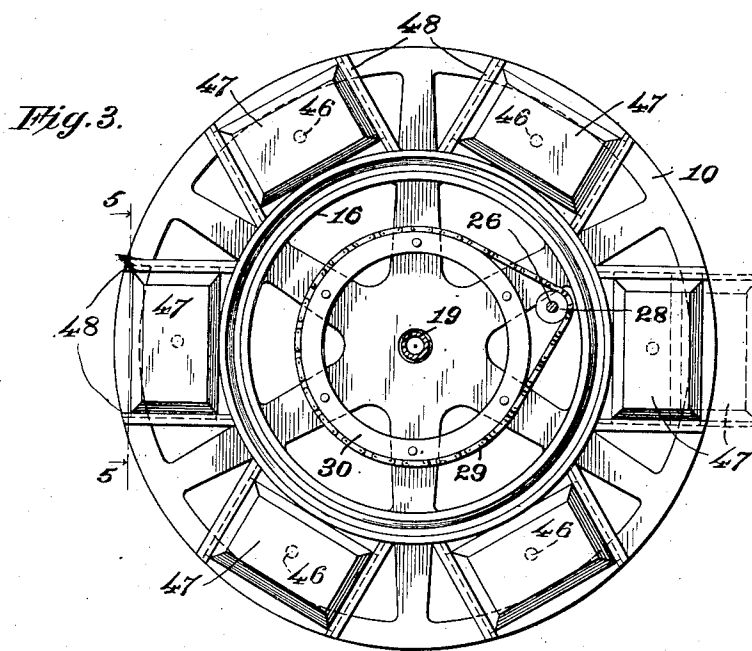


Fig. 5.

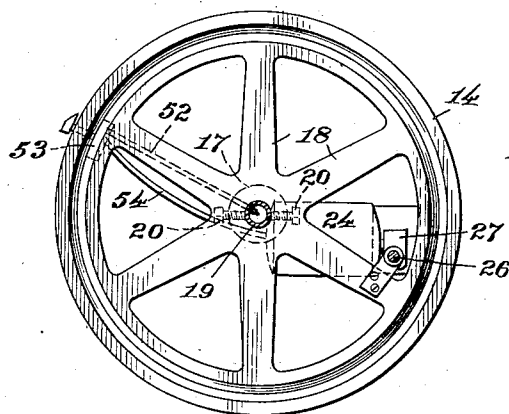


Fig. 4.

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UNITED STATES PATENT OFFICE

2,040,016

ROTISSERIE

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Application May 15, 1934, Serial No. 725,805

3 Claims. (Cl. 74—300)

The object of the invention is to provide a rotisserie having a multiplicity of spits each susceptible of supporting the food to be roasted, all of the spits bodily rotating around the central axis and each rotating on its own axis; to provide a rotisserie in which the several spits are enclosed in a transparent walled housing, so that the spits may be always visible during their bodily rotation; to provide a rotisserie in which the discharged grease from the food being cooked is directed to and deposited in removable containers from which it may be readily used for basting; to provide a rotisserie that incorporates means for the ready removal and reattachment of the spits, so that the meats may be easily mounted upon and removed from the spits; to provide a machine of the kind indicated in which the heat producing agent is electrical, so that convenience in regulation will be possible; and generally to provide a machine of the character described which is of comparatively simple form and therefore susceptible of cheap manufacture.

With this object in view, the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings, in which:

Figure 1 is a central vertical sectional view of the invention.

Figures 2, 3 and 4 are sectional views on the planes indicated by the lines 2—2, 3—3 and 4—4 respectively of Figure 1.

Figure 5 is a view partly in section and partly in elevation of a portion of a bottom member of a housing in the region of one of the grease pans.

Figure 6 is a perspective view of one of the swinging panels of the housing.

Figure 7 is a detail sectional view of one of the inner journal cylinders for the spit rods.

Figure 8 is a view similar to Figure 7 but illustrating a modified form of cylinder.

The housing which comprises a lower housing member or spider 10, a cap disk 11, and the intervening open frame work 12, is mounted for rotation on a hollow base 14 which on the upper end, is formed with an annular race carrying the series of balls 15. The spider 10 has a pendent annular flange 16, the lower end of which is correspondingly grooved to form a companion race for the balls. The base 14 carries a central hub 17 supported by inwardly directed arms 18 and this hub constitutes the means for attaching the central post 19 which serves as the axis of rotation of the housing, the post being secured in the hub by set screws 20 threaded radially through the hub and bearing upon the post.

The post extends through the cap disk 11 on the top of which is disposed the member 21 of an anti-friction bearing, this member being of cupped form to receive the companion member 22 secured to the post through the instrumentality of a nut 23 threaded to the post. This arrangement provides for free and easy rotation of the housing with the post as an axis.

The housing is designed to be rotated continuously during the operation of the device and this rotation is secured by means of the electric driving motor 24 which is housed in the base and supported on a shelf 25 in the latter. The motor is operatively connected with a vertically arranged shaft 26 through the medium of reduction gearing enclosed in the shell 27. At its upper end, the shaft 26 carries a sprocket 28 over which is trained a chain 29 which is also trained over a large sprocket 30 concentric with the post and secured to the arms of the spider 10. When the motor is rotating, the housing will also be rotated but at a comparatively slow speed due to the gear reduction.

Spits are arranged in the housing one above the other and at uniform angular distances apart around the post and each consists of a spit rod 31, cross-heads 32 and spurs 33, the cross-heads being arranged at opposite ends of the spit rod and the spurs being arranged two on each cross-head and on diametrically opposite sides of the spit rod but in parallel relation with the latter. The spit rods, at their outer ends, project beyond the cross-heads and are tapered to points as indicated at 34, these outer ends being seated in journal blocks 35 formed with notches opening on the upper sides, thereby making it possible to disengage the rods from the blocks by raising them out of their slotted seats in the blocks. The journal blocks are secured to the frame work 12.

The inner ends of the spit rods likewise project beyond the cross-heads a sufficient distance to provide mountings for the bevel pinions 36, as well as journals which enter notches or slots 37 formed in the cylindrical wall of cylinders 38, the cylinders resting upon the upper sides of bevel gears 39 which are secured, as indicated at 40, to the post 19. The cylinders are unattached to the gears but are precluded from being raised from the latter because of collars 41 which abut them and which are locked to the post by set screws. The pinions 36 mesh with the gears 39, so that when the housing rotates the spits, while being carried bodily with the housing, will be rotated on their own axes, the cylinders maintaining the

pinions in mesh with the gears while being dragged around on the former by the bodily movement of the spits. The inner cross-heads are fixed to the spit rods but the outer cross-heads are only frictionally held on the spit rods so that they may be removed to permit the mounting of the meat to be roasted, being applied after such mounting to retain the meat in place. The form of outer bearing for the spit rods provides for the ready removal and replacement of the spits in the mounting and removal of the meats to be roasted.

The frame work 12 is designed to support the transparent panels 42 and sections of it, as indicated at 14^a, are made in the form of doors to provide access to the interior of the housing, these doors being provided with pivot pintles 43 on their upper and lower edges to engage in sockets formed in the cap disk and bottom spider respectively. By providing access to the interior of the casing, the doors provide for the ready handling of the spits and the meats mounted thereon.

A bottom plate 44 covers the bottom spider 10 and is inclined downwardly from the post, being depressed, as indicated at 45, to provide a channel into which the grease will be directed and from which it will flow through perforations 46 into pans 47 which are slidably mounted in guides 48 carried by the bottom spider 10. Any pan may thus be slid from the guides and the grease reused for basting.

Heat is provided through the instrumentality of a heating coil 49 laid in the channels of a plate 50, of suitable insulating material, formed with a central opening through which the post 19 passes, the plate being supported at the apex of the bottom plate 44. An inverted conical deflector 51 is supported on the post above the plate 50, so that the heat from the coil 49 is directed toward the outer walls of the casing, in order that the meats carried upon the spits will get the full benefit of it. The heating coil is fed through the conductors 52 passing from a switch box 53 through a bore in the post, the motor 24 being also

fed from the switch box 53 through the conductors 54.

In order that the apparatus may be readily moved from place to place, the base 14 is equipped with castors 55.

A stepped pyramidal paneled structure 56 surmounts the cap disk 11 to provide advertising space, or for decoration, whichever may be desired.

Shelves 57 are mounted on the frame work 12 to provide, when desired, roasting support for small fowls and the like.

The retaining cylinders for the inner ends of the spit rods instead of being in the form shown at 38, may be in the form shown at 38^a, in which form 15 holes or openings 37^a take the place of slots 37.

The invention having been described, what is claimed as new and useful is:

1. A device of the class described comprising a base, a vertically disposed post fixed to the base, a casing rotatable on the base and about the post and having bearings in its wall, gears fixed to the post, cylinders loosely mounted on the post and rotatable on the gears, rods having their outer ends journaled in the bearings of the casing wall and their inner ends journaled in the cylinders, and pinions fixed adjacent the inner ends of the rods and meshing with the gears to impart rotary movement to the rods during rotation of the casing.

2. A device as claimed in claim 1 wherein means are mounted on the post and engaged with the cylinders to prevent vertical movement of the cylinders on the post.

3. A device of the class described comprising a fixed post, a casing rotatable on the post, gears fixed on the post, members rotatable on the post and on the gears, rods having their outer ends journaled on the casing wall and their inner ends journaled in the members, and pinions on the inner ends of the rods and meshing with the gears to impart rotary movement to the rods during rotation of the casing.

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