Jan. 2, 1951 R. B. ELMER 2,536,630

GRILL

Filed May 19, 1947 2 Sheets-Sheet 1

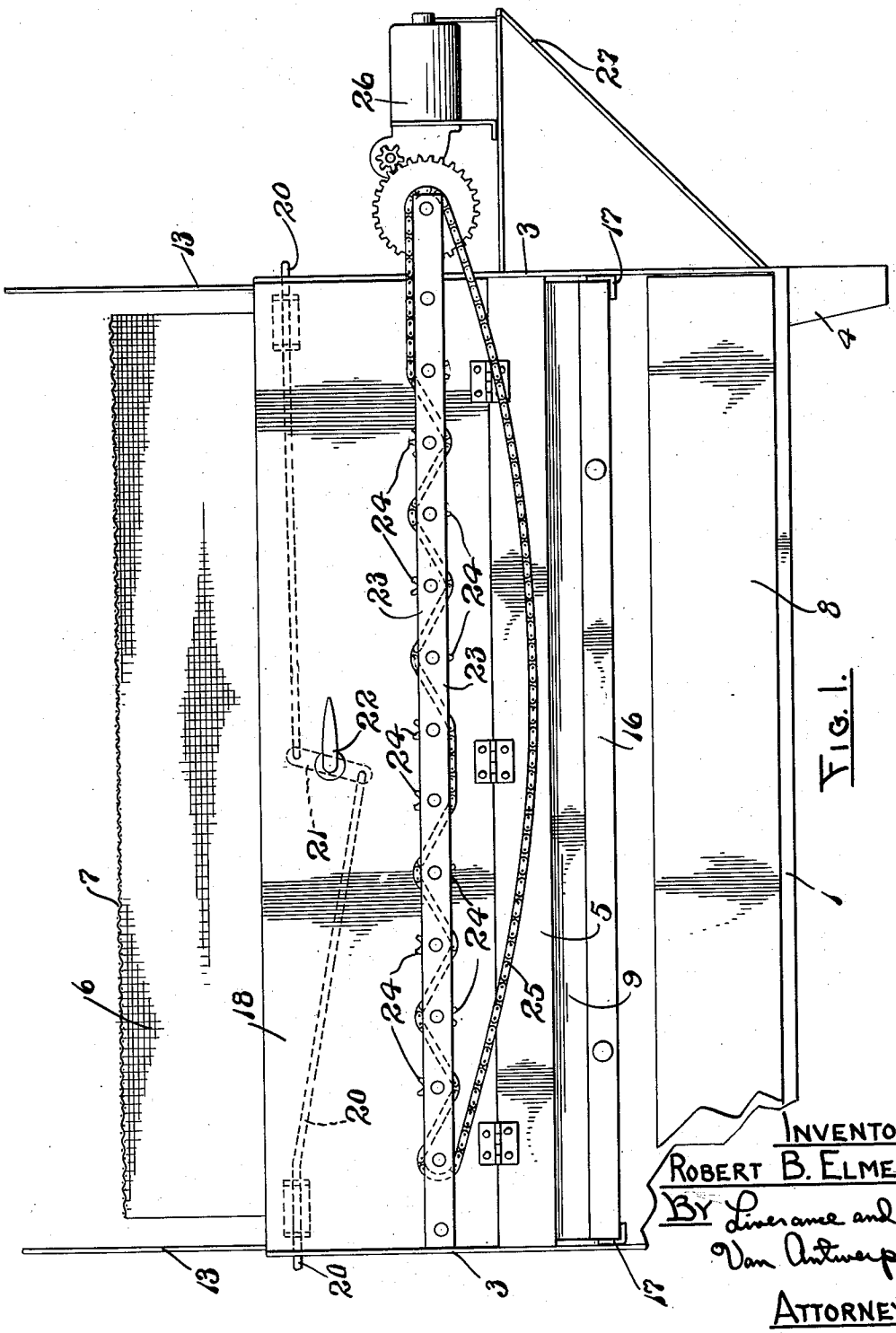


FIG. 1.

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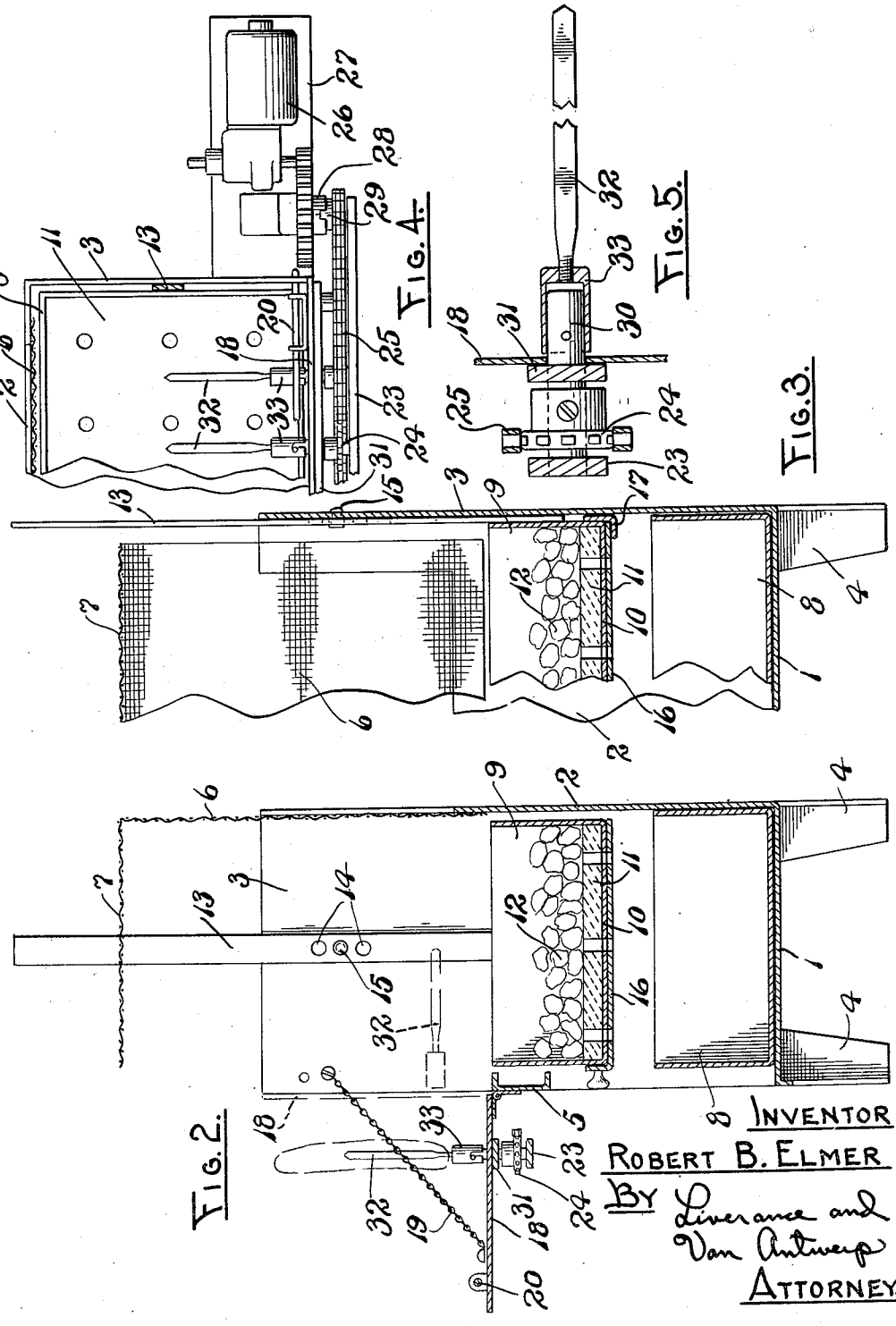


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

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5 Claims. (Cl. 99—421)

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The present invention is directed to a simple, practical, novel grill structure, for cooking wieners or frankfurters and the like.

It is an object and purpose of the invention to provide a very practical, useful and economical structure for cooking wieners or frankfurters, turning them continuously during cooking over a bed of coals or other heat source beneath, and to provide simple and effective means for continuously turning said wieners or frankfurters about their lengths located horizontally over the coals or other equivalent source of heat, which driving connection is instantly interrupted by moving the mounting means upon which the articles cooked are swung to a horizontal position for removal and replacement by others, the swinging of the mounting means back to operative position automatically connecting a driving motor with the rotating holding means which carries the articles which are to be cooked.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawings, in which:

Fig. 1 is an elevation of the grill structure of my invention,

Fig. 2 is a transverse vertical section therethrough,

Fig. 3 is a fragmentary longitudinal vertical section,

Fig. 4 is a fragmentary plan view and horizontal section at one end of the machine, and

Fig. 5 is an enlarged horizontal section through the frankfurter or wiener holding blade showing the way that it is mounted for rotation.

Like reference characters refer to like parts in the different figures of the drawings.

In the construction illustrating a preferred form of my invention, a bottom plate 1 of rectangular form of sheet metal, at what may be called its front edge, is bent upwardly at right angles to provide a front 2. Vertical ends 3, also of sheet metal, extend above the upper edge of the front 2. The body structure thus described is supported above the floor at its corners by legs 4. The back is open, except for a horizontal crossbar 5 of channel form which extends between the ends 3 substantially midway between their upper and lower edges.

A relatively heavy wire screen 6, connected at its lower edge with the front 2, extends upwardly above the ends 3 and is then turned to the rear to make a horizontal top section 7 as shown.

A receptacle 8 for retaining ashes is placed above the bottom 1. A basket 9, having vertical sides and ends and a horizontal bottom 10, is located above the ash receptacle 8. Over the bottom 10 a lining 11 of fire resistant material is placed, above which charcoal 12 which may be burned is carried. Said bottom liner 11 and the bottom 10 of the basket have vertical openings in conjunction with each other for supplying air to the burning fuel.

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The basket is suspended by vertical flat bars 13, connected one at each end and extending upwardly at the inner side of each end 3 of the body structure, each of the bars 13 having a number of vertical spaced openings 14, through selected ones of which pins 15 may be passed, the pins being carried by the ends 3 of the body. In this manner the basket may be adjusted vertically to different positions to bring the heat from the burning fuel closer to or farther away from the food articles which are being cooked. The draft of air through the openings in the bottom 10 and liner 11 is controlled by a horizontal draft plate 16, located underneath the bottom 10 and slidably held at its ends by angle bars 17 secured to the basket. Said draft plate 16 has openings which in one position of the plate (Fig. 2) aline with the openings through the bottom 10 of the basket and its liner 11. Then by moving the plate 16 to different positions the area of passage for air may be decreased to any desired extent below the full area passage shown in Fig. 2.

A back plate 18 of flat metal, rectangular in form, is hingedly connected at its lower edge to the bar 5. It may be swung downwardly to a horizontal position (Fig. 2) and supported by chains, as at 19. It may be turned to a vertical position, shown in dashed lines in Fig. 2, and releasably latched therein by latching rods 20, best shown in Fig. 1, which at their outer end portions pass through openings in the ends 3 of the body structure, and at their inner ends are pivotally connected to a rocker bar 21, which is manually rocked by a handle 22 to withdraw the latching rods when the plate 18 is to be turned from vertical to horizontal position, and to project the rods when the plate 18 has been turned back to upper position.

On the hinged back plate 18, a number of wiener or frankfurter carriers are mounted, spaced from each other. A horizontal bar 23 is secured at the outer side of and spaced from the back plate 18 within which a number of spaced sprockets 24 are located and rotatably mounted, operatively connected with which is an endless chain 25 which, when driven, rotates all of the sprockets continuously. The bar 23 at one end extends beyond the adjacent end 3 of the body,

at which end an electric motor 26 is mounted on a support 27, and through suitable reduction gearing, drives a clutch member 28 adapted to connect with a cooperating clutch member 29 with which the adjacent end sprocket is connected. When the back plate 18 is turned to vertical position, the clutch members 28 and 29 are connected together as in Fig. 4, whereupon, with the motor 26 running, all of the sprockets are simultaneously driven. When the back plate 18 is turned to horizontal position, as shown in Fig. 2, there is a disconnection of the clutch members 28 and 29.

Each of the sprockets is mounted upon a stud shaft 30, which at one end is mounted in the bar 23 and passes through a second bar 31 parallel thereto and against the plate 18, and through said plate, as in Fig. 5. At the projecting end of each stud shaft 30, a holder for a wiener or frankfurter is detachably connected. The holder consists of a pointed elongated blade or spit 32, which is secured to the closed end of a sleeve 33 provided with a bayonet slot (Fig. 2) for connecting with a pin extending outwardly from its associated shaft 30.

The wiener or frankfurter food article is impaled upon the blade or spit 32 when the back plate 18 has been turned to horizontal position, as shown in Fig. 2. When all, or as many as wanted of the blades or spits 32 have been supplied, the back plate 18 is turned to and secured in vertical position. The motor 26 is operated and there is a continuous rotation, at a desired low speed, of the wieners or frankfurters over the bed of coals at 12. Preferably burning charcoal is used as a source of fuel, but of course any other available equivalent heat source may be used. In the structure shown, the burning of the fuel may be increased or diminished by regulating the draft plate 16, and the bed of burning charcoal may be moved toward or away from the longitudinally turning food articles above. When the wieners or frankfurters have been sufficiently cooked the back plate 18 is turned to the horizontal position, as in Fig. 2, and they may be removed and replaced by others. The detachable connection of the sleeve socket 33 to a stud shaft 30 is so that the spits may be removed for cleaning.

The grill structure in use may be located back of a window so that passers-by may readily see the operations performed, looking through the screen 6. The horizontal screen section 7 is a convenient place to put buns to be warmed while the wieners or frankfurters are being cooked. An attractive showing is provided.

The structure described is very practical, useful, readily and easily operated, and has proven exceptionally satisfactory in use.

The invention is defined in the appended claims, and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a structure as described, a supporting body having vertical ends spaced from each other, a vertical front and an open back, a plate hingedly connected at the open back between the upper and lower edges of said ends to swing from horizontal to vertical positions and vice versa, said plate closing the upper portion of the open back when in vertical position, a plurality of short shafts rotatably mounted on said plate a distance from its hinged edge, wheels connected one with each of said shafts, an endless belt connected to all of said wheels for simultaneously turning them and their shafts, means for driving the belt, and means connected at the inner end portion of each of said shafts, including an elongated spit, extending in substantial alinement with the axis of rotation of its shaft for piercing food, combined with means located below said spits when the plate is in vertical position for subjecting food articles on said spits to heat and high temperature.

2. A construction as defined in claim 1, said means for driving said belt comprising a motor, a clutch member driven by said motor, a second clutch member connected with an adjacent end shaft of said plurality of short shafts, which is automatically brought into connection with the first clutch member on turning the plate to vertical position, and disconnected therefrom on turning said back plate to horizontal position.

3. A construction as defined in claim 1, and manually operable latching means mounted on said back plate for releasable engagement with the ends of said body to releasably hold the plate in vertical position, and flexible elongated members between said plate and the ends of the body for holding said back plate in horizontal position when moved thereto.

4. A construction as defined in claim 1, said means for supplying heat comprising, a receptacle having a horizontal bottom and vertical sides and ends, a vertical bar connected to each end thereof extending upwardly within the ends of said body, means adjustably connecting said bars to said ends of the body for locating said receptacle in different vertical positions, the bottom of said receptacle at its upper side including a high temperature resistant material, and means for obtaining an upward passage of air through the bottom of said receptacle and for regulating its quantity.

5. In a structure as described, a horizontal fire bed, a plate hinged to an edge of the fire bed and movable to vertical position adjacent the fire bed or to a substantially horizontal position away from the fire bed, a plurality of food carrying means rotatably mounted on said plate and projecting over the fire bed when the plate is vertical, means mounted on said plate including a clutch member for simultaneously rotating said food carrying means, a motor having a corresponding clutch member mounted on said bed, both of said clutch members being in engagement when the plate is in vertical position and are separated when the plate is in other than vertical position.

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