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MOLDING APPARATUS

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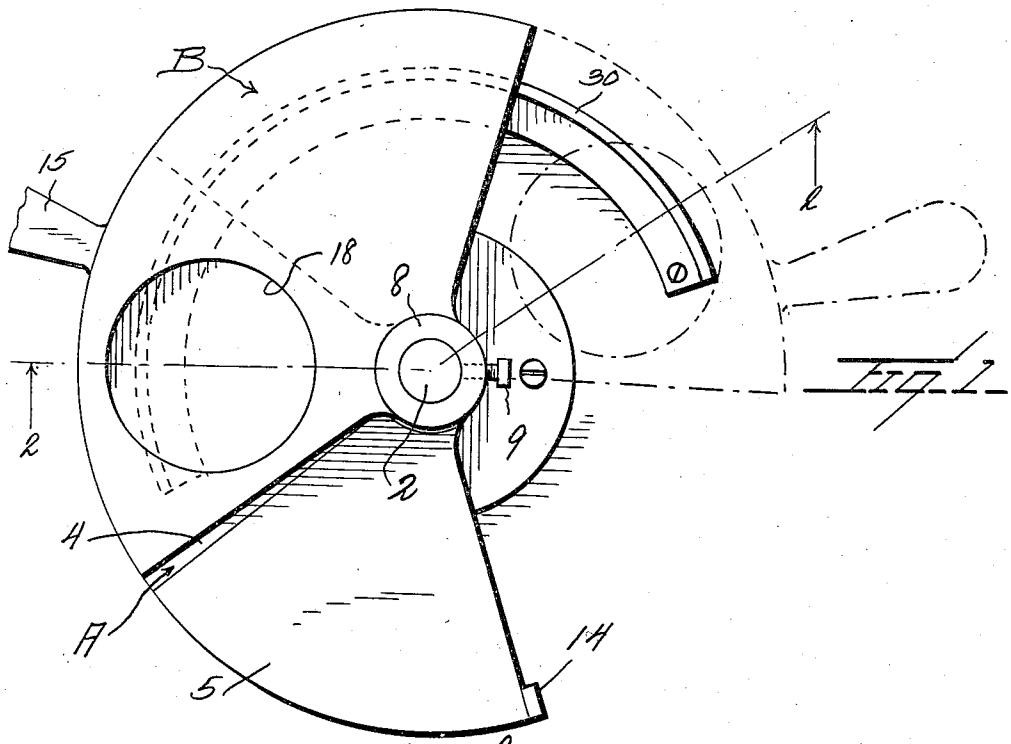

Fig. 1

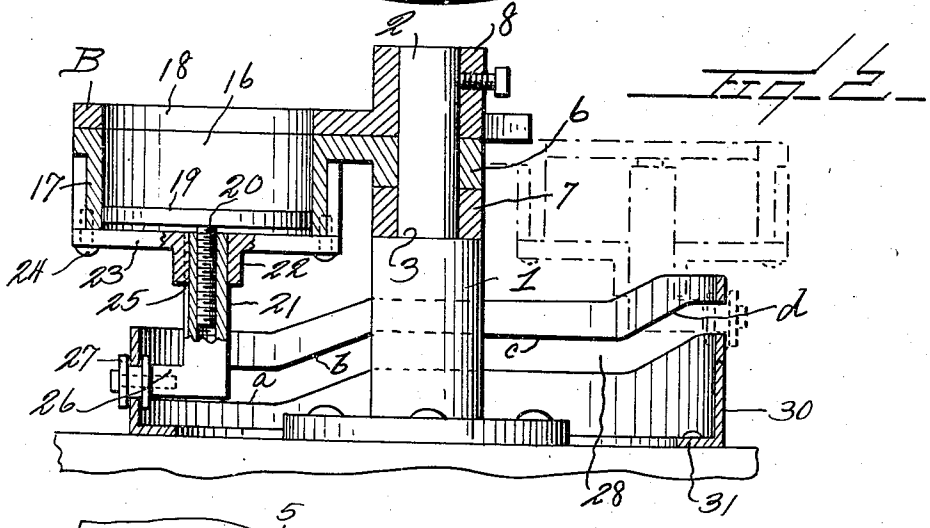

Fig. 2

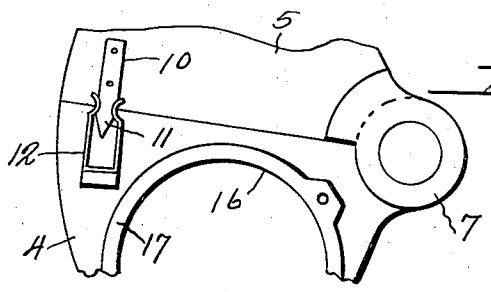

Fig. 3

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MOLDING APPARATUS

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3 Claims. (Cl. 107—8)

This invention relates to a molding apparatus and has relation more particularly to an apparatus for molding food patties such as hamburger and the like.

It is an object of the invention to provide an apparatus of this kind wherein the patties as molded are substantially uniform both as to size and weight and wherein the desired molding may be accomplished without waste.

Another object of the invention is to provide a device of this kind adapted to be mounted upon a counter or the like and which is adapted to be readily operated by an attendant.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved molding apparatus whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:

Figure 1 is a view in top plan of an apparatus constructed in accordance with an embodiment of my invention, a second position of certain of the parts being indicated by broken lines;

Figure 2 is a vertical sectional view taken substantially on the line 2—2 of Figure 1, a second position of certain of the parts being also diagrammatically indicated by broken lines;

Figure 3 is a fragmentary view in bottom plan of the movable table as herein employed and showing the means for locking the members of said table for unitary movement.

As disclosed in the accompanying drawing, 1 denotes a pedestal adapted to be suitably anchored upon a counter or other surface. The pedestal is formed to provide an upstanding post 2 circular in cross section. This post 2 is of a diameter less than the diameter of the pedestal 1 resulting in the provision of an upwardly facing shoulder 3.

In the present embodiment of my invention A denotes a table comprising two members 4 and 5 each constituting a sector of a circle of desired radii. These members 4 and 5 are substantially duplicate in construction except that the apex portion of the member 5 is downwardly offset with respect to the adjacent apex portion of the member 4. These apex portions of the members 4 and 5 are formed respectively to provide the bearings 6 and 7 which snugly engage the post 2 whereby the members 4 and 5 may readily swing around said post 2 either in unison or one independently of the other as will hereinafter be pointed out. The bearing 7 of the member 5 underlies the bearing 6 of the member 4 and, as is illustrated in Figure 2, the bearing 7 rests upon the shoulder 3 with the bearing 6 resting upon the bearing 7.

Superimposed upon the table A in close contact therewith is a fixed table B also in the form of a sector of a circle and which is of substantially the same dimensions as the table A. The apex portion of the table B is formed to provide a bearing 8 which snugly engages the post 2 above the bearing 6 and the bearing 8 is keyed to the post 2 by a set screw 9 or otherwise as may be preferred.

The under surface of the section 5 as herein disclosed carries a hasp 10 having a spear head 11 projecting beyond the end margin of the member 5 opposed to the member 4 of the table A. The under surface of the member 4 carries the spaced spring locking arms 12 between which the spear head 11 engages to connect the members 4 and 5 for unitary movement or rotation in one direction and when said sections 4 and 5 are in close contact as illustrated in Figures 1 and 3. The rear outer corner portion of the section 5 of the table A carries an upstanding lug 14 which contacts with the table B upon rotation of the table A a desired distance. With this lug 14 contacting the table B the rear section 5 of the table A will be held against further rotation as the section 4 is advanced. The section 4 has extending out from the periphery thereof a handle member 15 to be grasped by the attendant for rotating the table A as desired with respect to the table B.

The member 4 of the table A in the central portion thereof is provided with an opening 16 of desired radius and which is defined by a depending flange 17 resulting in the formation of a molding chamber of desired capacity. The forward end portion of the table B is provided with an opening 18 of the same radius as the opening 16 and with which the opening 16 is adapted to register when it is desired to mold a patty.

Snugly fitting within the molding chamber as afforded by the opening 16 and the flange 17 is a pressure head 19 and depending from the axial center of this head 19 is a shank 20 threading within a tubular stem 21. This stem 21 is slidably disposed through a sleeve 22 positioned at the axial center of the molding chamber below

the flange 17 and held in place by the arms 23. These arms 23, as herein disclosed, are integral with the sleeve 22 and are bolted, as at 24, or otherwise secured to the lower free end edge of the flange 17. The stem 21 and the sleeve 22 are interlocked, as at 25, to prevent the stem 21 from rotating within the sleeve 22 but allowing unhindered endwise movement of the stem 21 through the sleeve in either direction.

The lower end portion of the stem 21 is provided with a laterally disposed arm 26 which rotatably carries a grooved wheel 27 riding within a track slot 28 provided in an upstanding arcuate flange or plate 30. This flange or plate 30 is anchored, as at 31, to the counter or other surface to which the pedestal 1 is secured. This flange or plate 30 is also concentric to the axial center of the pedestal 1 or more particularly the post 2 and extends from below the forward end of the table B to a desired point beyond the rear end thereof.

The track slot 28 has a forward horizontal portion *a* of desired length and which is so positioned with respect to the lower margin of the flange or plate 30 to maintain the head 19 at its lowermost position within the molding chamber. This horizontal portion *a* is continued by an upwardly disposed straight portion *b* which provides a cam to move the head 19 upwardly a desired distance within the molding chamber as the table A is rotated rearwardly.

The upper or high point of the portion *b* is continued by a second horizontal portion *c* of a length to maintain the plunger in its initially raised position for a predetermined period of time and until the opening 16 has passed rearwardly beyond the table B. The horizontal portion *c* is then continued by a second upwardly inclined portion *d* which serves to provide means for raising the head 19 substantially flush with the top of the table A or more particularly the member 4 thereof so that the molded patty can be readily removed. Upon reversed rotation of the table A or more particularly the member 4 thereof the head 19 will be returned to its lowermost position. By raising or lowering the head 19 as may be readily done by rotating this head 19, the thickness of the molded patty may be regulated as preferred.

In practice the openings 16 and 18 are brought into register whereupon the desired material to be formed into a patty, such as hamburger, is placed within the molding chamber through the opening 18 and the table A swung rearwardly.

As the table A swings rearwardly the wall of the opening 18 will serve as a means to even or smooth off the material within the molding chamber and as the table A continues to move rearwardly the head 19 will be forced upwardly as the wheel 27 rides in the portion *b* of the track groove 28 and such pressure will be continued to be imposed upon the material within the molding chamber as the member 4 of the table A travels rearwardly under the portion of the table B rearwardly of the opening 18. This extent of movement is such as to permit the patty to be given proper formation.

As the member A continues to move rearwardly and just as soon as the opening 16 is positioned beyond the rear edge of the table B, the wheel 27 will ride upwardly within the portion *d* of the track groove and further raise the head 19 so that the formed patty can be readily removed. As the table A passes rearwardly and about the time the member 5 of said table A has passed under the forward portion of the table B to close the opening 18, the lug 14 will contact the forward end of the table B and thereby holding the member 5 against further rearward movement but allowing the member A to continue its rearward movement. With the member 5 below the opening 18 the retention of excess material is had.

When the member 4 is swung forwardly to again bring the opening 16 into register with the opening 18, said member 4 will contact with the member 5 and move the same forwardly to its initial position. At the time of this contact the spear head 11 will have proper locking engagement between the spring arms 12.

Upon loosening the screw 9 the table B may be rotatably adjusted about the post 2 and particularly with respect to the portion *b* of the track groove 28. This is of advantage because by varying the time the opening 16 passes completely beyond the opening 18 with respect to the upward movement of the head 19, the pressure of the head 19 on the material to be molded can be regulated. In other words, if at the time the plunger 24 reaches the top of its upward stroke there is a relatively large portion of the opening 18 unclosed, the pressure of the head 19 upon the material within the molding chamber will be correspondingly reduced. As the table B is adjusted to restrict this unclosed portion of the opening 18 as the head 19 reaches its top, pressure of the head 19 upon the material will be correspondingly increased.

From the foregoing description it is thought to be obvious that a molding apparatus constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. An apparatus for molding food patties comprising an upstanding post, a stationary table mounted on said post, said table having an opening, a second table underlying the stationary table and rotatably engaged with the post, said second table having an opening for register with the opening in the first table, a flange depending from the second table and defining the opening therein to provide a molding chamber, a pressure head within the molding chamber, means carried by the second table for rotating the same about the post, means operatively engaged with the pressure head for moving the pressure head upwardly within the molding chamber when the second table is turned in one direction, said second table comprising two separable members, releasable coacting means carried by said members for connecting the same for unitary rotation about the post, one of said members being provided with an opening, and means carried by the second member for contact with the first table for holding said member against movement with the first member when said second member underlies and closes the opening in the first table.

2. An apparatus for molding food patties comprising an upstanding post, a stationary table mounted on said post, said table having an opening, a second table underlying the stationary

table and rotatably engaged with the post, said second table having an opening for register with the opening in the first table, a flange depending from the second table and defining the opening therein to provide a molding chamber, a pressure head within the molding chamber, means carried by the second table for rotating the same about the post, means operatively engaged with the pressure head for moving the pressure head upwardly within the molding chamber when the second table is turned in one direction, said second table comprising two separable members, and releasable coacting means carried by said members for connecting the same for unitary rotation about the post, one of said members being provided with an opening.

3. An apparatus for molding food patties comprising a fixed table, a movable table, means for supporting said movable table below the first table and in close proximity thereto, both of the tables having openings therethrough adapted to register one with the other, means carried by the movable table for moving the same, a depending flange defining the opening in the movable table to provide a molding chamber, a pressure head within the molding chamber for movement toward or from the fixed table, a sleeve operatively supported by the flange below the head and at substantially the axial center of the head, a stem slidably disposed through the sleeve, a shank depending from the head and threading from above into the sleeve to provide means for adjusting the position of the head within the molding chamber independently of the stem, and means for raising the stem of the head upon movement of the movable table in one direction to compress the material within the molding chamber, said means operating to further raise the stem and head in such direction after the opening in the movable table has passed beyond the fixed table to eject molded material from within the chamber.

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