

L. J. MENGES

BACON PRESS

Filed Sept. 6, 1938

3 Sheets-Sheet 1



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Jan. 28, 1941.

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2,229,862

BACON PRESS

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3 Sheets-Sheet 2

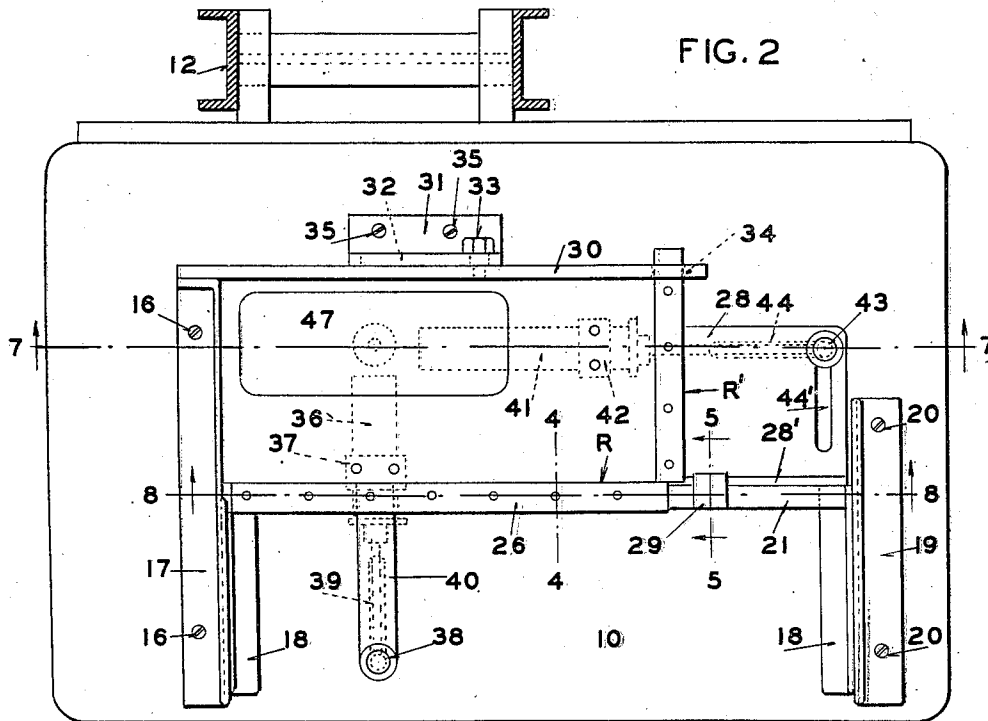


FIG. 3.

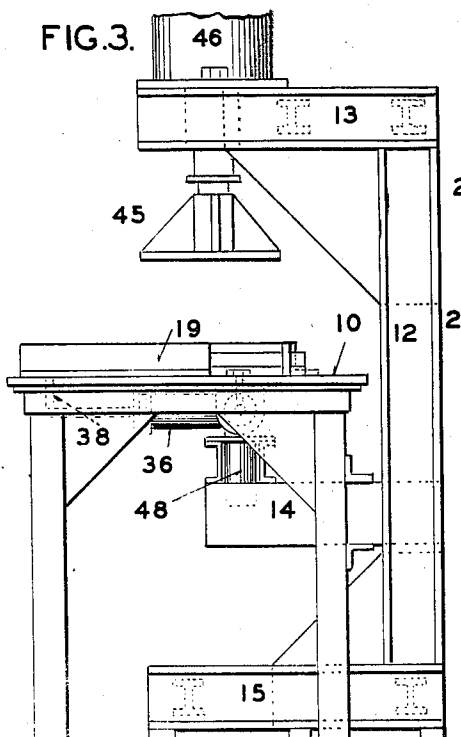


FIG. 4.

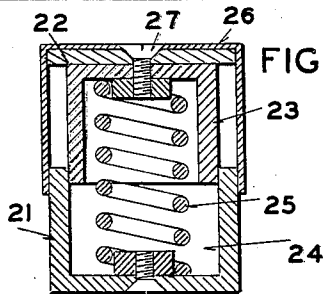
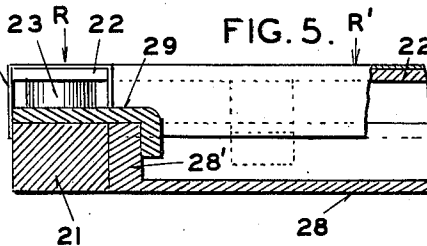


FIG. 5. R'



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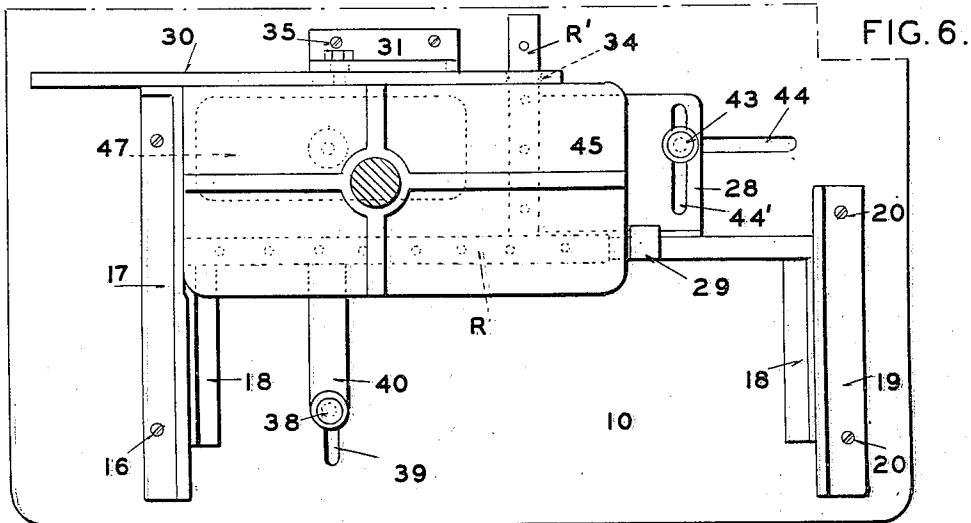
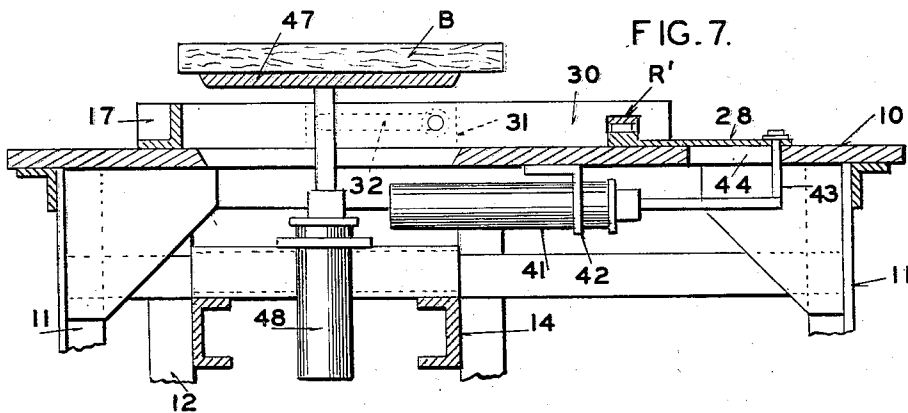
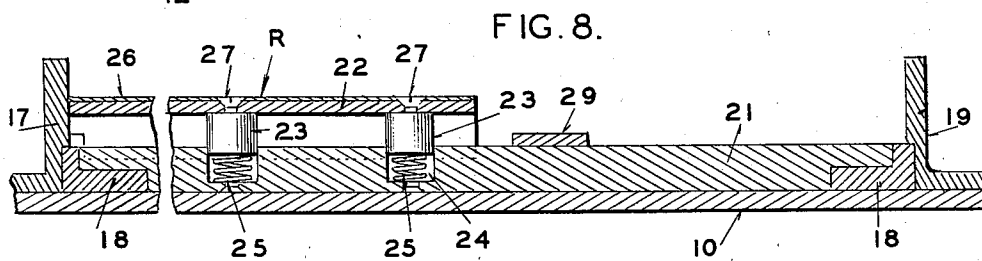
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3 Sheets-Sheet 3



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2,229,862

BACON PRESS

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Application September 6, 1938, Serial No. 228,517

4 Claims. (Cl. 100—57)

It has been found desirable in the meat packing art to provide means for shaping bacon into rectangular slabs of uniform thickness. This not only enables the bacon to be conveniently packed but especially places it in shape to be reduced to uniform strips by the slicing machines now in common use.

It is the object of my invention to provide an improved form of press for accomplishing the shaping above referred to.

More particularly one of the objects of my invention is to provide a press having the minimum number of moving parts not only to lower the cost of manufacture but to reduce the number of crevices, recesses or the like into which the liquid fat expressed from the bacon during the shaping process might enter, thus rendering the necessary cleaning processes more difficult.

Another object of my invention is to provide means for raising the shaped slab from its mould or form into position to be readily removed by the operator.

Still another object of my invention is to provide means for controlling the relative movement of the plungers so that the best results may be secured under any given conditions.

My invention also consists in various improvements in details of construction all of which are described in the following specification and pointed out in the claims.

In the accompanying drawings which illustrate one form of bacon press made in accordance with my invention Figure 1 is a front elevation; Figure 2 is a section taken on the line 2—2 of Figure 1; Figure 3 is an end view; Figure 4 is an enlarged section taken on the line 4—4 of Figure 2; Figure 5 is an enlarged section taken on the line 5—5 of Figure 2; Figure 6 is a view similar to Figure 2 but showing the parts in different position; Figure 7 is a section taken on the line 7—7 of Figure 2; Figure 8 is an enlarged fragmentary section taken on the line 8—8 of Figure 2; and Figure 9 is a schematic view illustrating the fluid pressure operating means for the moving parts.

The framework of the press includes a table 10 supported on legs 11 and an upright 12 positioned at the rear of the table. The upright is provided with a forwardly projecting arm 13 for supporting the platen operating cylinder, an intermediate arm 14 for supporting the slab raising cylinder and a foot piece or support 15. All these parts are preferably formed of angle irons, channel bars and gusset plates welded together in the form shown. The specific form of frame-

work is not essential to the invention and hence is not described in detail.

Secured to the table near one end thereof by screws or bolts 16 is the fixed end plate 17 which forms one element of the mould or matrix in which the slab of bacon is shaped. The forward end of this plate is provided with a groove engaging with one of the guide bars 18 of the lateral movable rail R. The other bar 18 engages with a groove in a guide plate 19 secured to the table adjacent its opposite end by screws 20. The movable and compressible side rail comprises a base bar 21 secured to the forward ends of the guide bars 18 and a top plate 22 of less length than the bar 21. Carried by the plate 22 are a number of inverted cup-shaped members 23 (Figures 4 and 8) adapted to telescope with openings 24 in the bar 21. The rail is normally held in its expanded position by coil springs 25 situated in the cups and openings. The rail is provided with a channel-shaped cover 26 of thin metal, preferably stainless steel. This cover is secured to plate 22 by screws 27 which also secure the members 23 to the rail. A movable and compressible end rail R' of the same construction as the rail R is carried on a plate 28 having an upturned flange 23' engaged by an L-shaped guide 29 welded to the bar 21 of the rail R. The rails R and R' when in their expanded condition are of appreciably less height than the fixed end plate 17 and a rear side plate 30 which forms the fourth side of the mould or matrix. This plate 30 slides longitudinally but is held flush with the end of plate 17 by a bracket 31 provided with a slot 32 through which a bolt 33 extends into plate 30. The end of rail R' extends through a notch 34 in the lower edge of plate 30 so that the latter is moved longitudinally within the rail when it is moved to press the bacon as hereinafter described. Bracket 31 is secured to the table by screws 35.

To move the side rail R toward side plate 30 to compress the bacon laterally, I provide a cylinder 36 mounted on the lower face of the table by means of a bracket 37. The end of the piston rod of this cylinder is provided with a pin 38 extending upwardly through a slot 39 in the table and engaging with an arm 40 carried by the rail R. To move the rail R' toward plate 17 to compress the bacon longitudinally, I provide a cylinder 41 mounted on the lower face of the table by a bracket 42. The end of the piston rod of this cylinder is provided with a pin 43 projecting up through a slot 44 in the table to move the plate 28 carrying the rail R'. 55

The pin 43 is not rigidly attached to plate 28 but passes through a transverse slot 44' therein to permit the necessary cross movement of the plate. The pins 38 and 43 are preferably made detachable so that by removing said pins as well as screws 16, 20 and 35, the parts forming the mould and its guides may be dismantled for the purpose of cleaning.

The slab of bacon is pressed in the direction of its thickness by a platen 45 carried on the lower end of the piston rod of a cylinder 46 mounted on arm 13. The left-hand and rear edges of this platen are positioned to coincide with the inner faces of the plates 17 and 30, respectively, and the platen is of such area as to overlap rails R and R' when they are in their retracted position. Set into the main table 10 so as to be flush with the upper face thereof is a small lifting table 47 carried on the upper end of the piston rod of a cylinder 48, which cylinder is mounted on the arm 14 of the upright 12.

In Figure 9 I have shown diagrammatically the connections for operating the cylinders. The main pressure line 49 is connected through spring return remote control valve 50 with supply pipe 51 and exhaust pipe 52. The supply pipe 51 communicates with the upper end of cylinder 46 and with the forward ends of cylinders 36 and 41 so that when fluid under pressure is admitted to the supply pipe by the remote control valve, cylinder 46 will be actuated to lower the platen, cylinder 36 to move rail R rearwardly, and cylinder 41 to move rail R' toward the left. In the supply pipe are arranged three speed control valves 53, one for each of the above named cylinders, so that the relative rate of operation of the cylinder may be regulated. The remote control valve 50 is supplied with operating pressure from a pipe 54 which for purposes of safety is provided with two button valves 55. These valves are preferably mounted on the front edge of the table at a distance apart greater than the width of the operator's body so that it will be impossible for him to accidentally lean against both valves and thus prematurely operate the cylinders. The main pressure line 49 is also connected through a second spring return remote control valve 56 with the supply pipe 57 and exhaust pipe 58 of the lifting cylinder 48. Remote control valve 56 is supplied with operating pressure from pipe 59 including a valve 60 preferably of the pedal type arranged to be actuated by the operator's foot. The auxiliary pipes 54 and 59 may be supplied from the same source as the main pressure line 49 or from another as desired.

The operation of my press is briefly as follows: The side of bacon to be pressed is deposited on the table within the mould or matrix formed by the plates 17 and 30 and the rails R and R'. The two valves 55 are now actuated to admit fluid pressure into the supply pipe 51. This will cause cylinder 36 to move rail R rearwardly and cylinder 41 to move rail R' to the left and also to cause cylinder 46 to lower the platen. By means of the timing valves 53 either of the rails R or R' may be caused to move in advance of

the other as desired. In any case the timing valves should be so set as to insure the completion of the movement of the rails before the platen has reached the end of its stroke. Valves 55 are now released to permit the parts to return to normal position and pedal valve 60 is actuated to cause cylinder 48 to raise the lifting table 47 to elevate the pressed slab of bacon B (Figure 7) above the mould so that it may be readily grasped and removed by the operator.

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

1. A bacon press including a table having a plain flat top, a pair of guide plates secured on said top, one of said plates forming a stationary stop, a compressible side rail sliding in said guide plates, a compressible end rail slidably carried by said side rail, a longitudinally movable side plate carried by said slidable end rail, and power-actuated means for moving said compressible side and end rails.

2. A bacon press including a table having a plain flat top, a pair of guide plates secured on said top, one of said plates forming a stationary stop, a compressible side rail sliding in said guide plates, a compressible end rail slidably carried by said side rail, a longitudinally movable side plate having a notch in its under side receiving the end rail, whereby the end rail may move laterally relative to the side plate but carries the latter with it in longitudinal movement, and power-actuated means for moving said compressible side and end rails.

3. A bacon press including a table having a plain flat top, a pair of guide plates secured on said top, one of said plates forming a stationary stop, a compressible side rail sliding in said guide plates, a compressible end rail, a slotted supporting plate carrying said end rail and having sliding connection with said side rail, a longitudinally movable side plate carried by said slidable end rail, power-actuated means positioned below the top, a slot in said top at right angles to the slot in the supporting plate, a connection extending from said power-actuated means through the slot in the top and engaging the slot in the supporting plate, and means for moving the side rail.

4. A bacon press including a table having a plain flat top, a pair of guide plates secured on said top, one of said plates forming a stationary stop, a compressible side rail provided at its ends with guide bars engaging said guide plates, an arm on said side rail intermediate said guide bars, a slot in the top, power-operated means positioned below the top and having a connection extending through said slot and engaging the arm to move the side rail, a longitudinally movable side plate, a compressible end rail movable with said side rail in one direction only, a longitudinally movable plate rigidly secured to the slidable end rail, and means acting through the last named plate for moving the compressible end rail toward the stationary end stop.

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