Sept. 27, 1932. D. A. ESTRIN 1,879,146

FRANKFURTER ROLL SANDWICH MACHINE

Original Filed Nov. 18, 1930

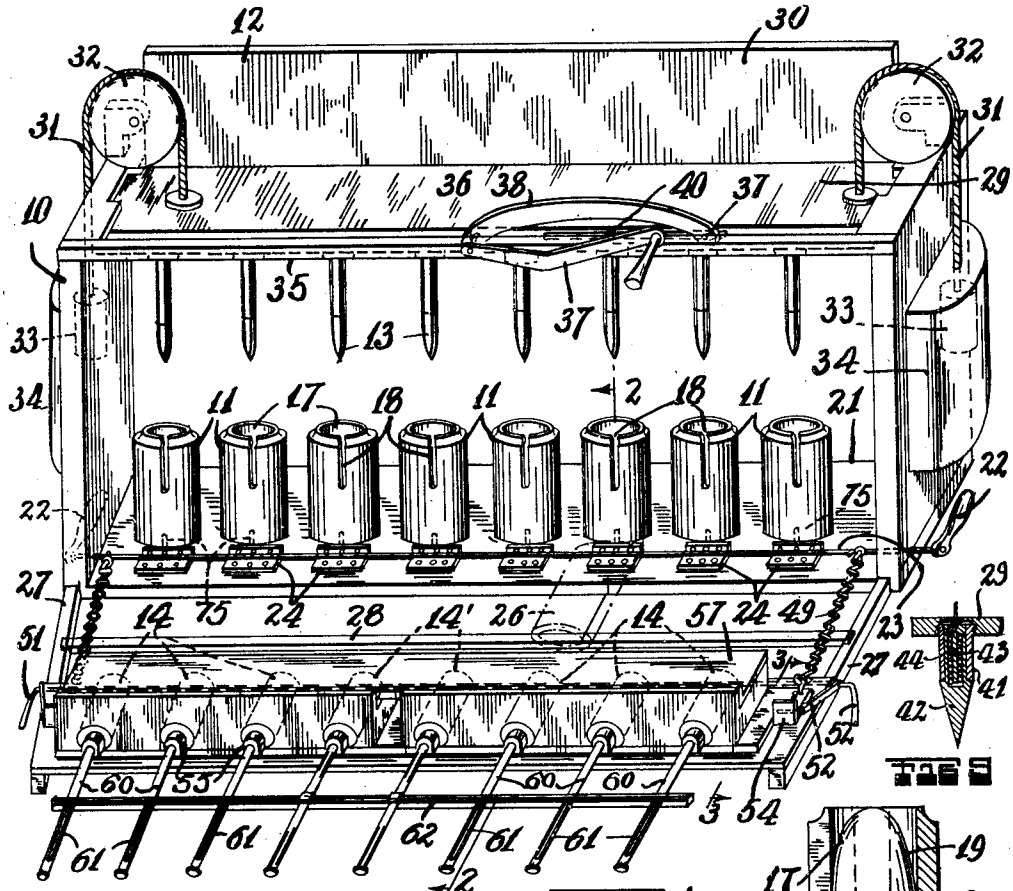

FIG 1

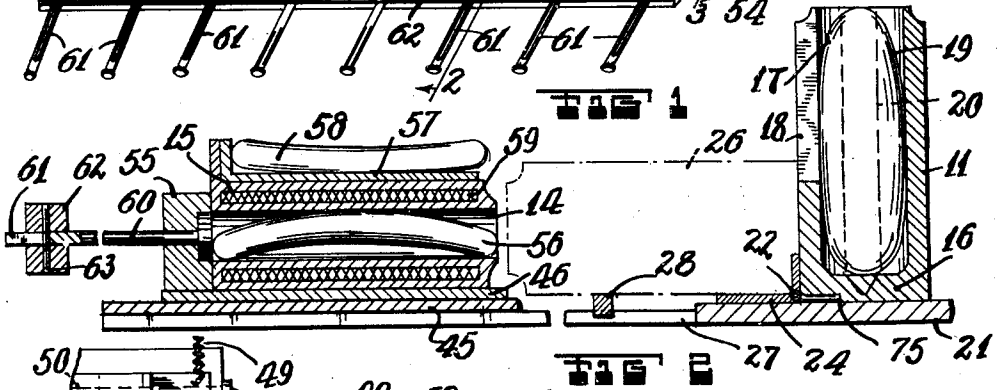

FIG 2

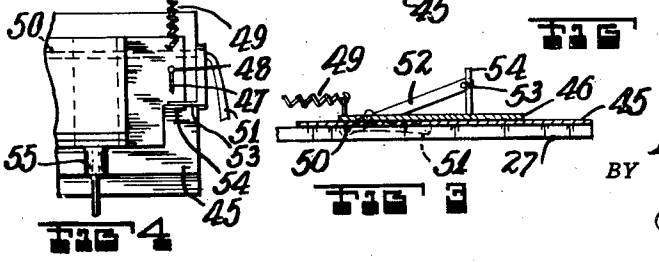

FIG 4

FIG 3

INVENTOR
David A. Estrin
BY Zoltan Polachek
ATTORNEY

Patented Sept. 27, 1932 1,879,146

UNITED STATES PATENT OFFICE

DAVID A. ESTRIN, OF BROOKLYN, NEW YORK

FRANKFURTER ROLL SANDWICH MACHINE

Application filed November 18, 1930, Serial No. 496,425. Renewed January 14, 1932.

This invention relates to new and useful improvements in a bread roll filling machine.

The invention has for an object to provide in a machine of the class mentioned a carriage supporting roll cutting tools, and heating windings individually within each of the tools.

Another object of this invention is to provide a roll holder beneath each of the above mentioned tools which is selectively pivotal laterally for receiving filling and then vertically, and means for simultaneously pivoting said roll holders.

A still further object of this invention is the provision of a heating grid with a plurality of discharging compartments individually heated.

A still further object of this invention is the arrangement of the compartments and gangs and each gang to include one master compartment, means for individually discharging the contents of all the compartments except the master, and for simultaneously discharging all of the compartments upon discharge of the master.

A still further object of this invention is the provision of a device of the class mentioned which is of simple durable construction, dependable in use and efficient in action, and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a perspective view of a device constructed according to this invention.

Fig. 2 is a fragmentary enlarged sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary plan view of a portion of Fig. 1 in the vicinity of the line 3—3.

Fig. 5 is a fragmentary sectional view of one of the heating tools.

The bread roll filling machine comprises a frame 10, a plurality of roll holders 11 pivotally mounted on said frame for assuming vertical positions and movable to the horizontal, a carriage 12 movably mounted on the frame 10 and supporting roll halving tools 13 for engaging into rolls in the said rollers 11 when the latter elements are in the vertical, a gang of compartments 14 on said frame 10 associated with pistons 15 to discharge food from the compartments into rolls in said roll holders 11 in the horizontal positions of the latter elements, one of said compartments being a master and indicated by reference numeral 14′, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master.

Each of the roll holders 11 comprises a tubular member which is closed at the bottom 16 and opened at the top 17. A longitudinal slot 18 extends from the top down substantially half way so that an implement may be inscerted to pry a roll out from the holder. In Fig. 2 a roll 19 has been shown within the holder, and within the roll there is a Frankfurter 20. The frame 10 is provided with a base plate 21 upon which the roll holders 11 are mounted. The mounting consists in a transverse rod 22 extending completely across the device and out from both sides and terminating at the ends in handles 23. Hinges 24 are connected between the base plate 21 and each of the holders 11 and are arranged upon the rod 22. Fingers 25 project from the rod 22 beneath each of the holders 11 so that when the handle 23 is rotated though an angle of substantially 90°, these fingers cause all of the roll holders to move to the horizontal. The horizontal position is indicated in Fig. 1, and also by dot and dash lines 26. The frame 10 is provided with side bars 27 supporting a transverse bar 28 which serves as a rest to limit the downward pivoting of the roll holders to the horizontal.

The carriage 12 is in the form of an angle iron having a horizontal frame 29 and a vertical arm 30. The movable mounting of the

carriage is accomplished by cables 31 attached upon the horizontal arm 29 at both of its ends and extended over idler pulleys 32 rotatively supported upon the frame 10, Counterweights 33 are attached upon the other ends of the cables 32 so as to counterbalance the carriage. Covers 34 are attached upon the side of the frame 10 and cover the counterweights 33. The frame 10 also includes a cross bar 35 arranged across the front of the carriage 12 at the top of the frame. A pin 36 pivotally engages through the bar 35 and at one end rigidly connects with a handle 37, while at the other end rigidly connects with a lever 38. Another pin 39 projects from the free end of the lever 38 and works in a slot 40 formed in the horizontal arm 29 of the carriage 12. When the handle 37 is moved downwards, the lever 38 will move correspondingly and cause the carriage 12 to be forced down.

The roll cutting tools 13 are arranged directly over the roll holders 11 and are correspondingly spaced and of the same number so that there is one cover for each of the holders. Each of these cutting tools includes a heating element. The construction comprises a shell 41 threadedly engaged within the horizontal arm 29 of the carriage and holding a pointed hollow member 42. A stem 43 is supported within the shell 41 and has a reduced portion presenting a space between the interior of the pointer member 42. A heating winding 43 is arranged upon the stem and within this space. Each of the heating tools may be removed and repaired whenever necessary.

A plate 45 is attached across the side bars 27 and supports a slidable base plate 46. The base plate 46 is provided with transverse slots 47 through which pins 48 from the plate 45 extend so as to limit movement of these parts. Springs 49 act between the base plate 46 and the plate 21 of the frame for normally urging the slidable plate 46 towards the roll holders 11. A means is provided for holding the slidable plate 46 away from the roll holders and comprises a rod 50 rotatively mounted through the side members 27 and terminating at the ends in handles 51. Radial arms 52 are rigidly attached upon the rod 50 and carry pins 53 capable of acting against lugs 54 projecting from the slidable plate 46. When the pins engage against these lugs, they restrain the springs 49 from moving the plate towards the holders 11. When the handles 51 are raised, the springs 49 are free to move the plate.

Each of the compartments 14 is in the form of a cylinder having both ends open. This is very clearly shown in Fig. 2. A cover 55 engages over the cylinders 14 and closes their outer ends. The pistons 15 are arranged within the cover 54 so as to be capable of discharging Frankfurters 56 or other food from within the compartments 14 when the pistons are moved forward. A griddle 57 is mounted across the tops of the cylinders 14 so that a Frankfurter such as 58 or more may be rested thereon. Each of the cylinders 14 are provided with a heating unit 59 in the form of a heating winding arranged around the cylinder. Heat from this winding also reaches the grid 57 for keeping the Frankfurters 58 or other food warm.

The cylinders 14 are arranged in gangs, and as illustrated in Fig. 1 there are two gangs, four in each. The master cylinders 14′ are shown adjacent each other and the remaining members of the same gang are on opposite sides of these. The means for discharging the contents of all of the compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master comprises stems 60 attached upon the pistons 15 and projecting from the cover 55. The stems of all of the compartments except the master is formed with longitudinal slots 61, and a cross bar 62 is provided which is rigidly attached upon the stem of the master and carries pins 63 extending through the slots 61 of the other stems. The bar 62 is also shown connected across the second gang of compartments so that when either of the master stems are moved, all of the compartments will discharge.

The operation of the device may be traced by assuming it in the condition as shown in Fig. 1. Frankfurters or other food should be engaged within the compartments 14, and rolls should be arranged within the roll holders 11. Then the handle 37 should be moved for causing the carriage 12 to descend and the cutting tools 13 to enter and form incisions in the rolls. The cutting tools should be allowed to remain a short period of time within the rolls so as to toast the interiors. Then the handle 37 should be moved to again raise the carriage.

Next handle 23 should be moved to move all of the holders 11 to the horizontal. Then the handle 51 should be moved so as to release the plate 46 and allow the plate to slide forward to bring the compartments 14 into close contact with the ends of the roll holders 11. Then the various stems 61 may be selectively depressed for discharging individually any of the compartments into the rolls, or the stems of the master compartments may be depressed for simultaneously discharging all of the compartments into all of the rolls. The plate 46 should then next be moved back into its position and thus held by the pins 53. Next the roll holders 11 should be moved to the vertical and the rolls with the contents removed. In this manner they should be sold.

It is to be understood that the roll holders 11 may be of any suitable shape also they

may be joined or made of one single member which contain a plurality of cavities for receiving the rolls.

It is also to be understood that the roll cutting tools may be so arranged that instead of moving same in a vertical direction, they may be moved horizontally by a suitable mechanism.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master.

2. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into the rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, each of said cutting tools being provided with an individual heating winding.

3. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, each of said cutting tools comprising a shell threadedly engaged within the bottom of said carriage and supporting a hollow pointed member, a stem within said shell and forming the core of a winding within said hollow.

4. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, and a means for simultaneously moving all of the roll holders from the vertical to the horizontal.

5. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, said compartments being in the form of cylinders and each being provided with an individual heating winding.

6. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from

the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, said compartments being in the form of cylinders mounted upon a plate slidably supported on said frame, a means being provided for holding said plate in a rear position, springs for urging said plate forwards, stems projecting from the pistons associated with said compartments, and a bar fixed upon the stems of the master compartment and carrying pins engaging in slots in the stems of the other compartments.

7. A bread roll filling machine, comprising a frame, a plurality of roll holders pivotally mounted on said frame for assuming vertical positions and movable to horizontal positions, a carriage movably mounted on said frame and supporting roll cutting tools for engaging into rolls in said roll holders when the latter elements are in the vertical, a gang of compartments on said frame associated with pistons to discharge food from the compartments into rolls in said roll holders in the horizontal positions of the latter elements, one of said compartments being a master compartment, and means for discharging the contents of all compartments simultaneously with discharging of the master and for discharging each compartment selectively except said master, comprising stems attached upon said pistons, a bar attached upon the stem of the master compartment, and pins projecting from said bar and engaging in slots in the stems of the other compartments.

In testimony whereof I have affixed my signature.

DAVID A. ESTRIN.