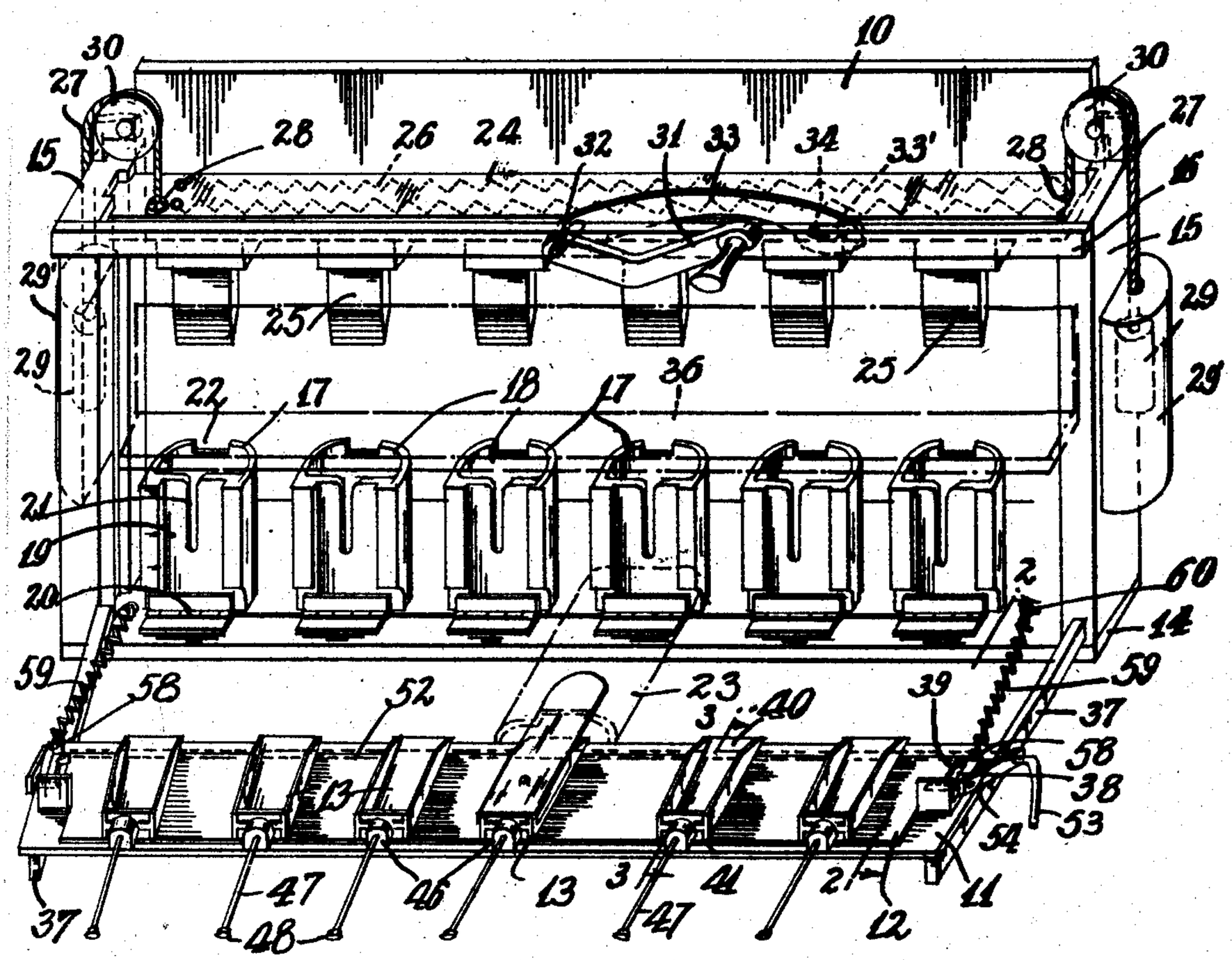
Oct. 7, 1930. D. ESTRIN 1,777,830

BREAD ROLL FILLING MACHINE

Filed May 31, 1930



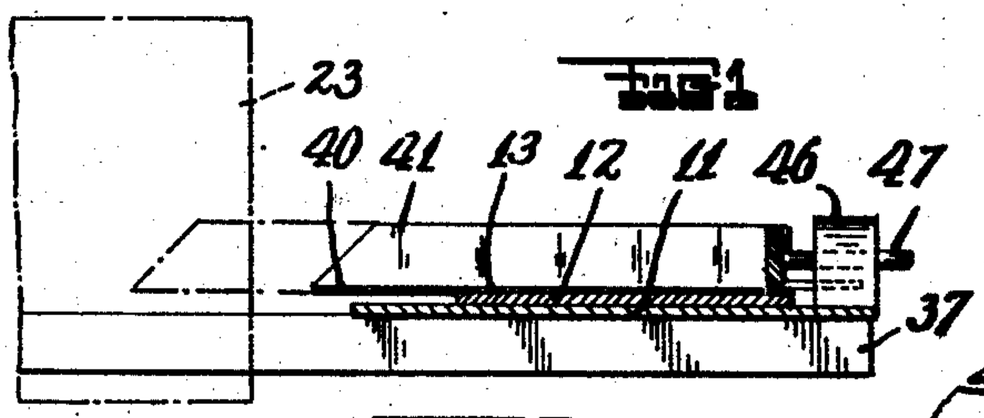


FIG. 3

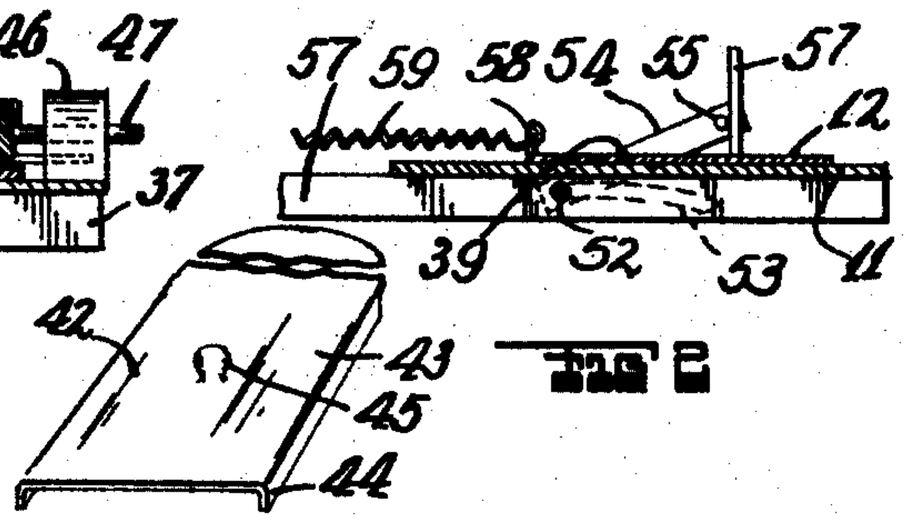


FIG. 6

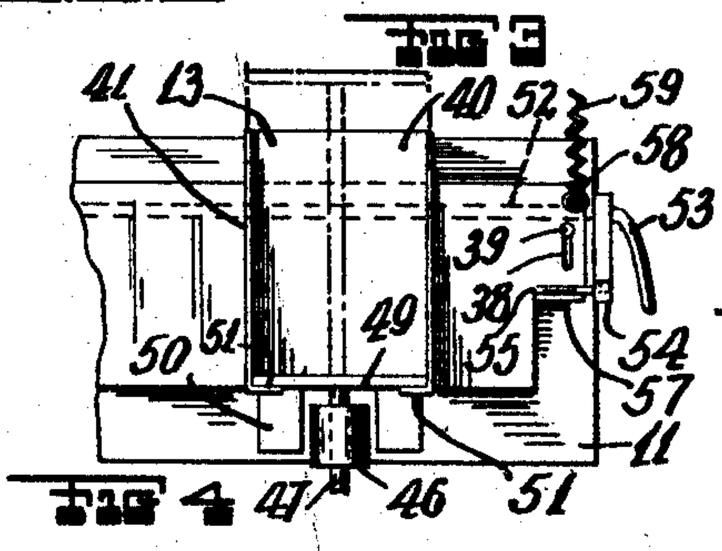


FIG. 4

FIG. 5

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Patented Oct. 7, 1930 1,777,830

UNITED STATES PATENT OFFICE

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BREAD-ROLL-FILLING MACHINE

Application filed May 31, 1930. Serial No. 457,748.

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

The invention has for an object 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 drawings, 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 transverse sectional view taken in the line 2—2 of Fig. 1.

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

Fig. 4 is a top view of a portion of Fig. 1.

Fig. 5 is a perspective view of a cover used in the device.

The bread roll slicing and filling machine consists of a slidable angle iron frame 10, hinged means for supporting the rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate 11 supported laterally to said frame, a slide 12 movably mounted on said plate, filling trays 13 attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means normally extending the trays, when said holding means is released, into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling.

The frame consists of a flat base 14 and vertical guides and horizontal cross support frame 16. The base plate 14 supports a plurality of cups 17 for containing rolls. These cups have openings 18 at the top so that rolls can be inserted. The cups are formed with flat front sides 19 and have a common hinge 20 at their bases so as to permit them to assume a combined horizontal or vertical position. The front sides 19 of these cups have vertical slots 21 to permit the insertion of a sharp instrument for removing the rolls. The back portion of the cups are formed with thumb cuts 22 so as to aid in removing the rolls.

Dot and dash lines 23 indicate the assumed horizontal position of the cups. The horizontal portion 24 of angle iron 10 supports a plurality of vertical knives 25 which are aligned with the openings 18 in the cups. A heating element 26 is arranged upon the horizontal portion 24 of the slidable angle iron and is intended for connection with some source of electrical energy for providing heat for heating the knives 25 so that when the knives are engaged within the rolls, the incisions are slightly toasted so as to remain open after the extraction of the knife.

The means for counterbalancing the angle iron 10 consists of a pair of ropes 27 which are secured to the horizontal portion 24 of the angle iron 10 at 28 and the other ends of the ropes 27 are secured to a pair of counterweights 29 located in a pair of weight boxes 29′. The ropes 27 pass over pulleys 30. The means of moving the angle iron consists of a hand lever 31 pivotally mounted on the cross support frame 16 by pin 32 and one end of an inner arm 33 is fixed on the said pin 32 and in the other arm an elongated slot 33′ engages a pin 34 secured to the horizontal portion 24 of angle iron 10.

Arms 37 are attached on the base plate 14 and extend in a horizontal outwardly direction. The plate 11 is supported between the outer ends of these arms 37. The slide 12 is movably mounted on the plate 11. Slots 38 are formed in the side portions of the slide and engage rivets 39 attached through the bottom plate 11 so as to permit the sliding of said slide 12. These slots 38 limit the extended positions of the filling trays 13. The filling trays are attached on the slide member 12 and are parallel to each other at spaced

distances. These filling trays align individually with the roll supporting cups on the base portion 14 of the frame 10.

The filling trays 13 are formed of bent sheets and each have a bottom portion 40 and vertical side portions 41. At the front of the filling trays the side portions 41 are inclined downwardly so as to permit insertion of the filling trays into the incisions in the rolls. One cover 42 is provided for all of the filling trays 13 in view of the fact that the operator of the device injects the filling into each roll separately. This permits the removal of the cover from one filling tray to the other when necessary. The cover 42 is formed of a bent sheet, and has a flat top 43, vertical sides 44 and a manipulating handle 45 near the center.

Individual means for ejecting the filling from the trays are provided and comprise support lugs 46 attached to the rear of the filling trays and on the plate 11. These lugs have apertures in which are supported the rods 47 formed with heads 48 at their outer ends. The rods 47 extend into the filling trays 13 and have ram plates 49 attached on their inner ends. These ram plates have bottom lugs 50 slidable on the bottom portion of the filling tray as guides for said ram plates. The sides 41 of the filling trays have lugs 51 attached at their rear ends. These lugs are inturned so as to prevent the removal of the ram plate for the filling tray.

A means is provided for moving the slide so as to move the filling trays into retracted and extended positions. This means consists of a rod 52 transversely supported between the arms 37 and formed at its outer ends with a manipulating handle 53. Arms 54 are fixedly attached on the rod 52 and can rotate upon the manipulation of the handle 53. Pins 55 are supported on the on the outer ends of the arms 54. These pins can frictionally engage raised lugs 57 on the slide member 12. The slide member 12 has upturned lugs 58 at its front edge. Springs 59 are attached between the lugs 58 and eye bolts 60 supported in the flat base plate 14. The springs 59 normally urge the slide plate 12 into an extended position.

In operation of the device, a roll is placed in each one of the containers 17 when these containers are in their vertical positions. The hand lever 31 is manipulated for lowering the angle iron 10 and inserting the incision knives 25 into the rolls. Dot and dash lines 36 indicate the lowered position of the said platform. Next the hand lever is manipulated for raising the knives out of the rolls. As the rolls are cut the heating element 26 which heats the knives 25 toasts the inside of the incision so as to hold the sides of the rolls in place. The cups 17 are then moved into a horizontal position indicated by dot and dash lines 23.

Previous to placing the cups in the horizontal position the manipulating handle 53 is operated so as to engage the pins 55 against the lugs 57 to move the slide 12 to a rear position on the plate 11 so that the filling trays are in a retracted position. Next the cups are lowered to the horizontal position. Filling or food matter is then placed in the trays 13 and the cover 42 is placed on one of the trays. The manipulating handle 53 is then turned so as to permit the slide 12 to assume a normal extended position so as to insert the filling trays 13 into the incisions of the rolls. The ram rod 47 of the tray upon which the cover has been placed is then manually moved forward so as to inject the filling into the incision in the roll. The slide is then again moved into retracted position, and the cover 42 is placed on the next filling tray and the same operation is repeated. After all the rolls have been filled, a sharp instrument such as a knife may be inserted in the slots 21 so as to remove the rolls from the cups after the cups are moved back into the vertical.

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 slicing and filling machine, comprising a frame, hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling.

2. A bread roll slicing and filling machine, comprising a frame. hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling, said hinged

means for supporting rolls comprising cups united by a common hinge and operable as one unit.

3. A bread roll slicing and filling machine, comprising a frame, hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling, said means for forming vertical incisions in the rolls comprising a plurality of vertical knives attached at spaced distances to a slide frame.

4. A bread roll slicing and filling machine, comprising a frame, hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling, said slide formed with apertures engaged by rivets for constituting the movable mounting.

5. A bread roll slicing and filling machine, comprising a frame, hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling, said means for manually ejecting the filling from the trays comprising ram rods, ram plates attached on said ram rods, and guide lugs attached on said ram plates.

6. A bread roll slicing and filling machine, comprising a frame, hinged means for supporting rolls on said frame in vertical and horizontal positions, means for forming a vertical incision in each roll of said means when vertical, a plate supported laterally to said frame, a slide movably mounted on said plate, filling trays attached to the slide, means for manually ejecting the filling from the trays, means acting on the slide for holding said trays in a retracted position, and means for normally extending the trays when said holding means is released into the incisions in the rolls when the roll supporting means is in a horizontal position for filling the rolls by injecting the filling, said means for holding the slide in a retracted position comprising a turning rod mounted under said plate, a manipulating handle on said turning rod, arms attached on said turning rod, pins attached on said arms, and lugs formed on the slide plate for frictional engagement against the pins so as to permit retraction and extension by means of the manipulating handle.

In testimony whereof I have affixed my signature.

DAVID ESTRIN.