

G. I. & C. E. MOSSOP.
CAKE COATING MACHINERY.
APPLICATION FILED MAR. 12, 1908.

927,576.

Patented July 13, 1909.

4 SHEETS—SHEET 1.

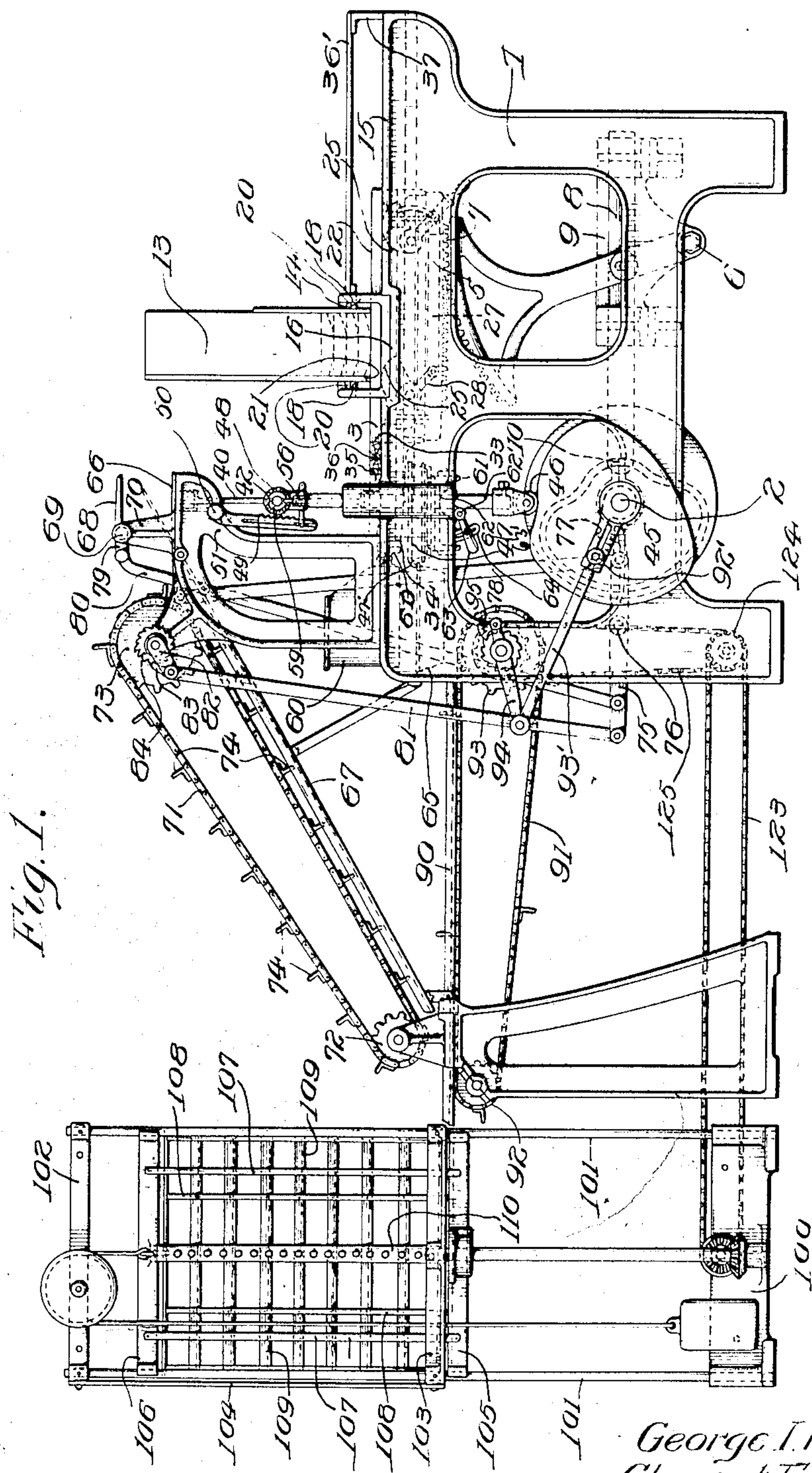


Fig. 1.

WITNESSES

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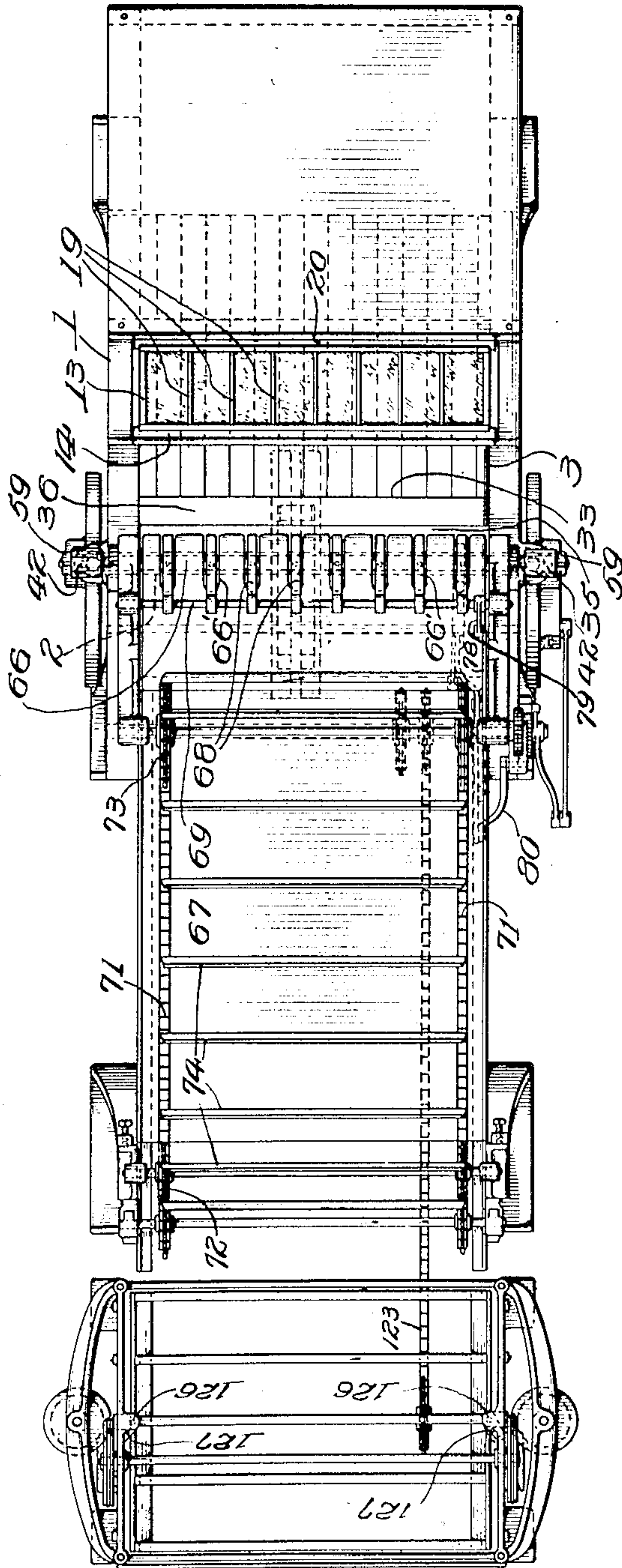
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4 SHEETS—SHEET 2.

Fig. 2.



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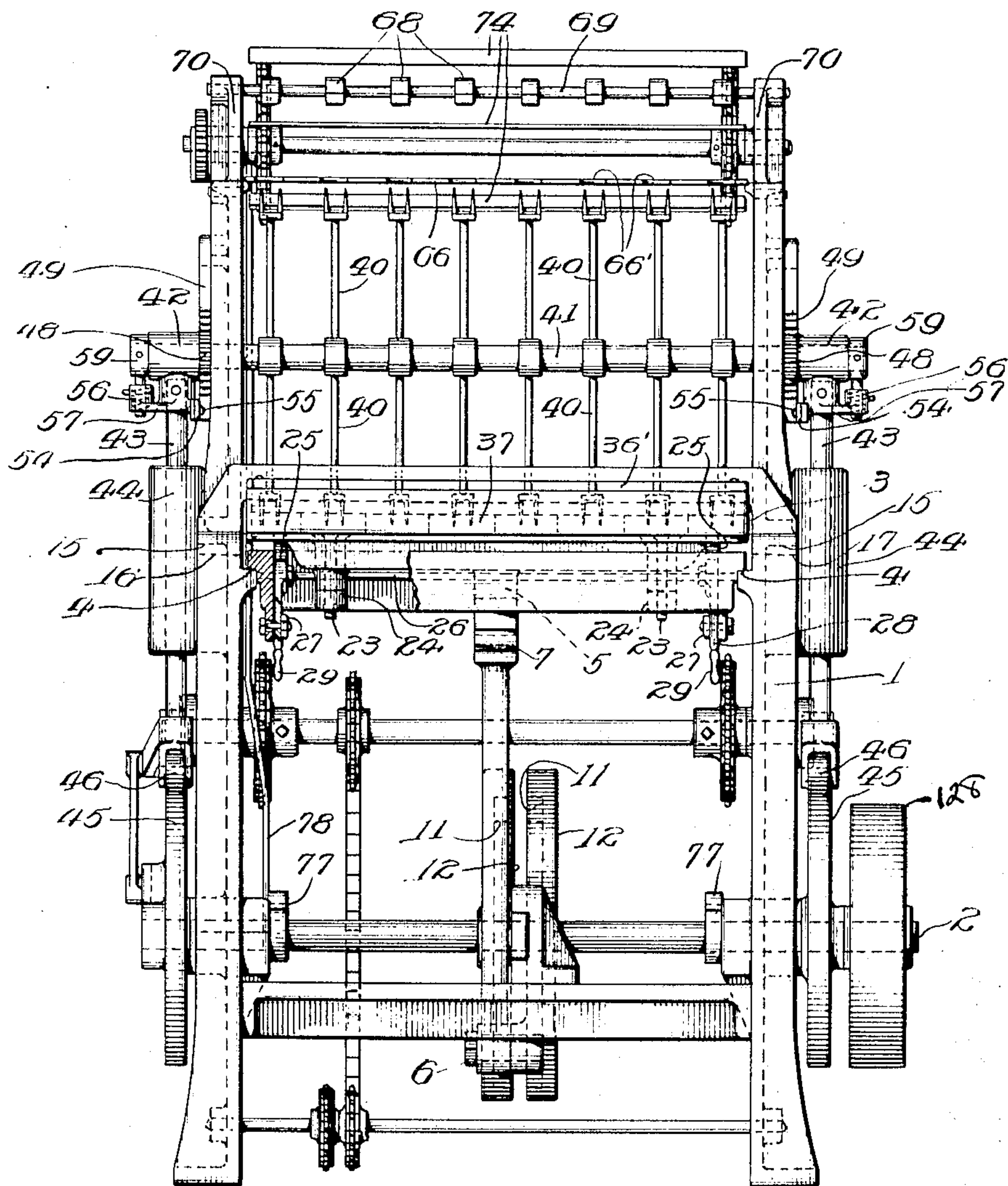
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4 SHEETS—SHEET 3

Fig. 3.



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4 SHEETS—SHEET 4.

Fig. 4.

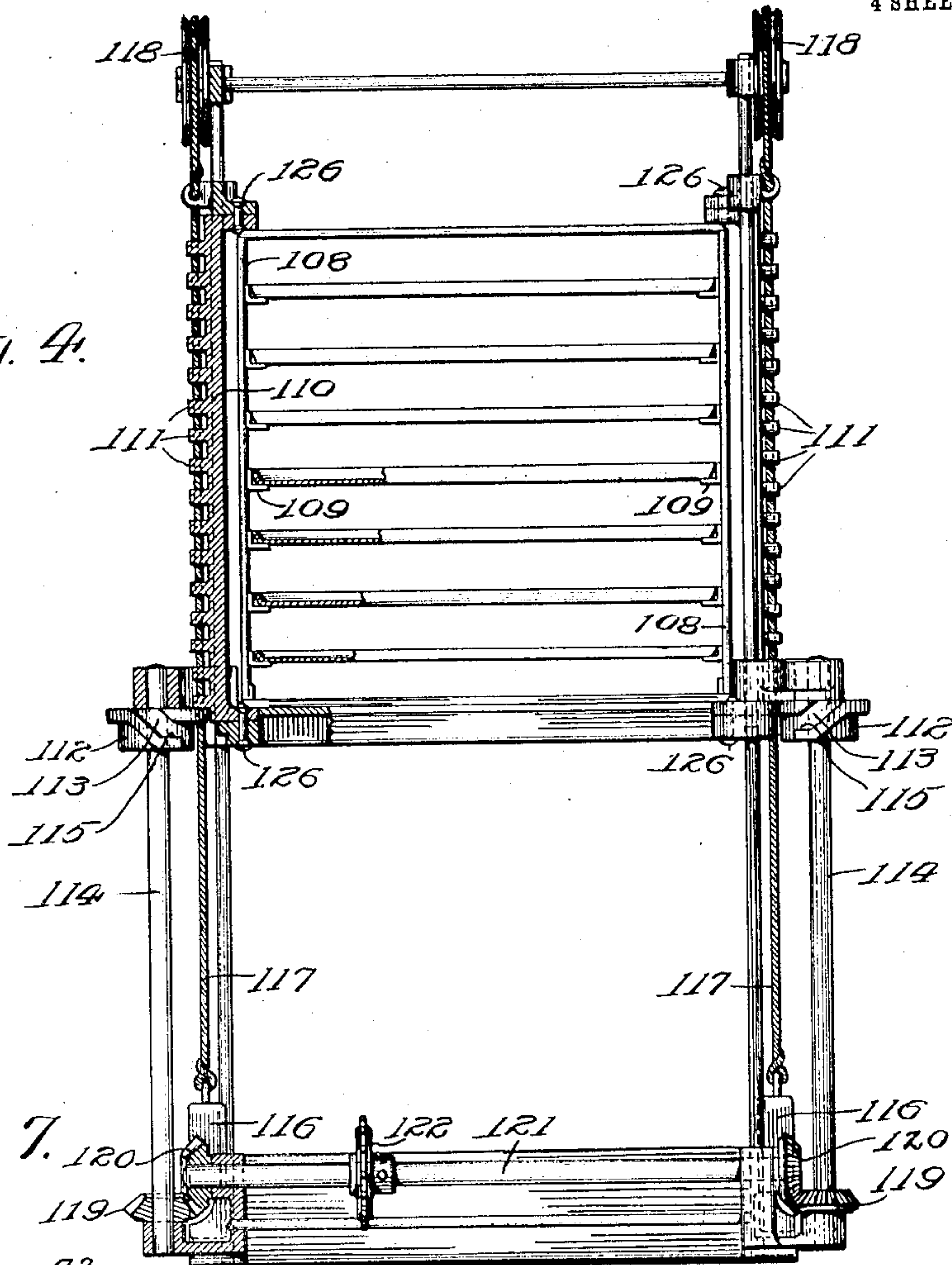


Fig. 7.

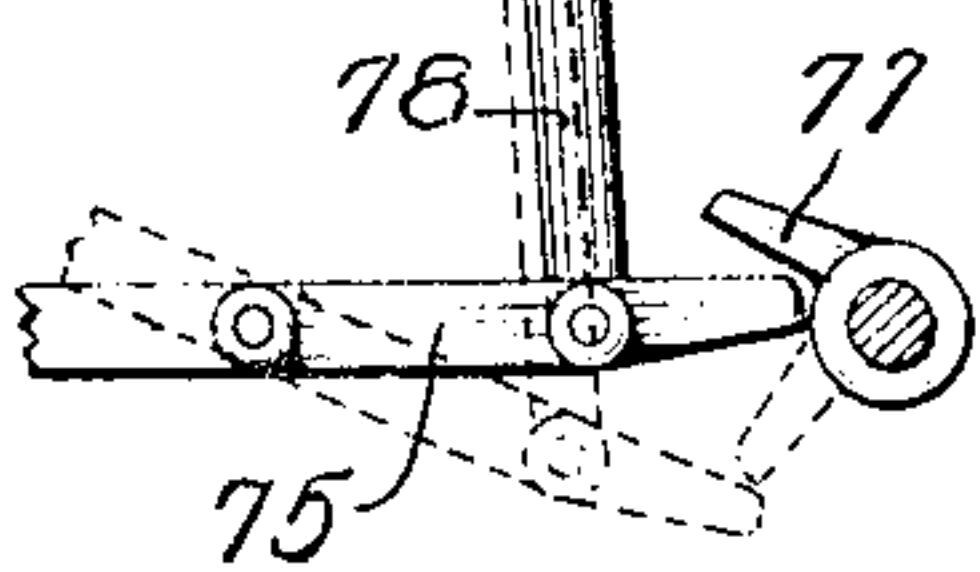


Fig. 6.

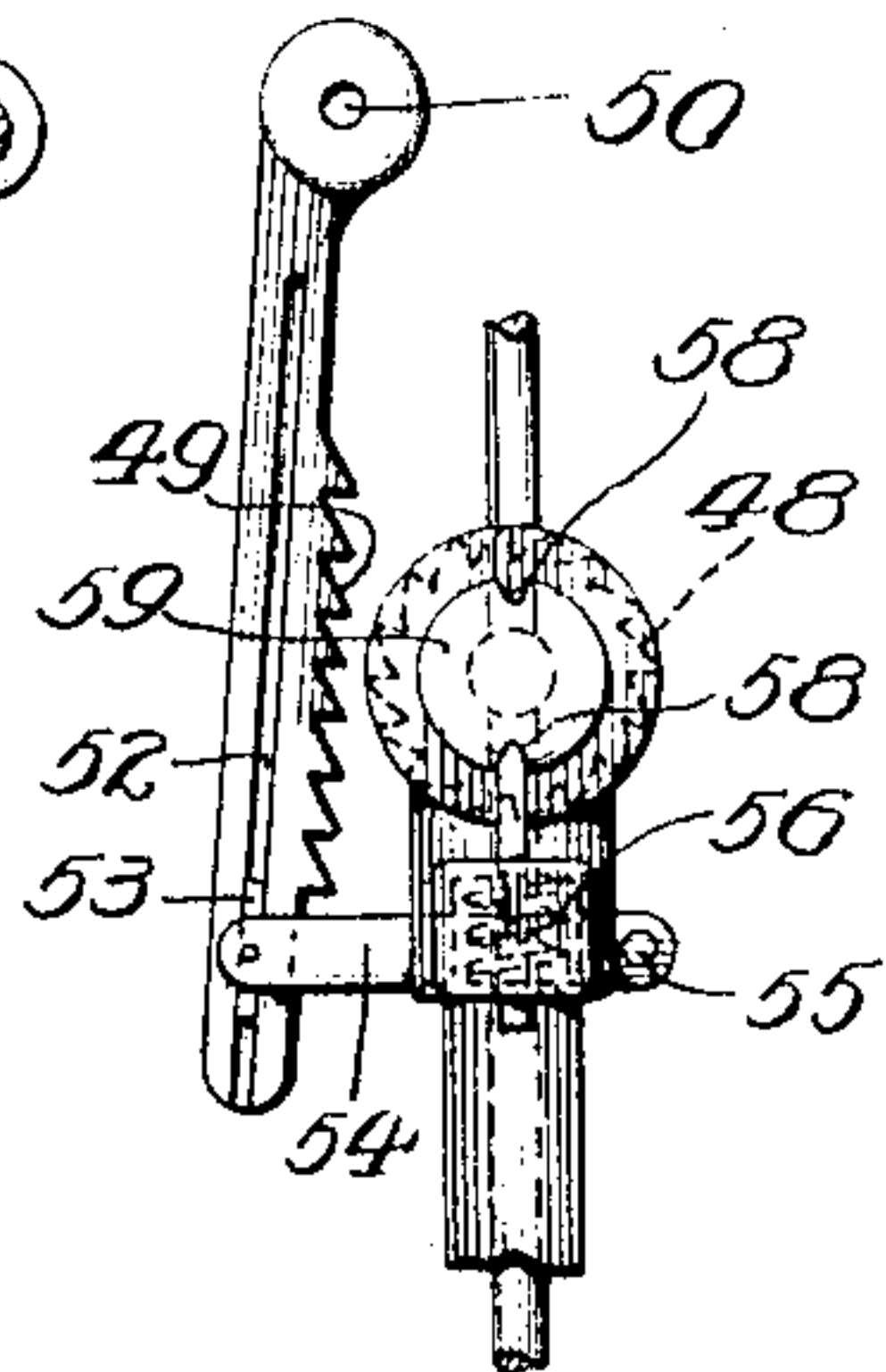
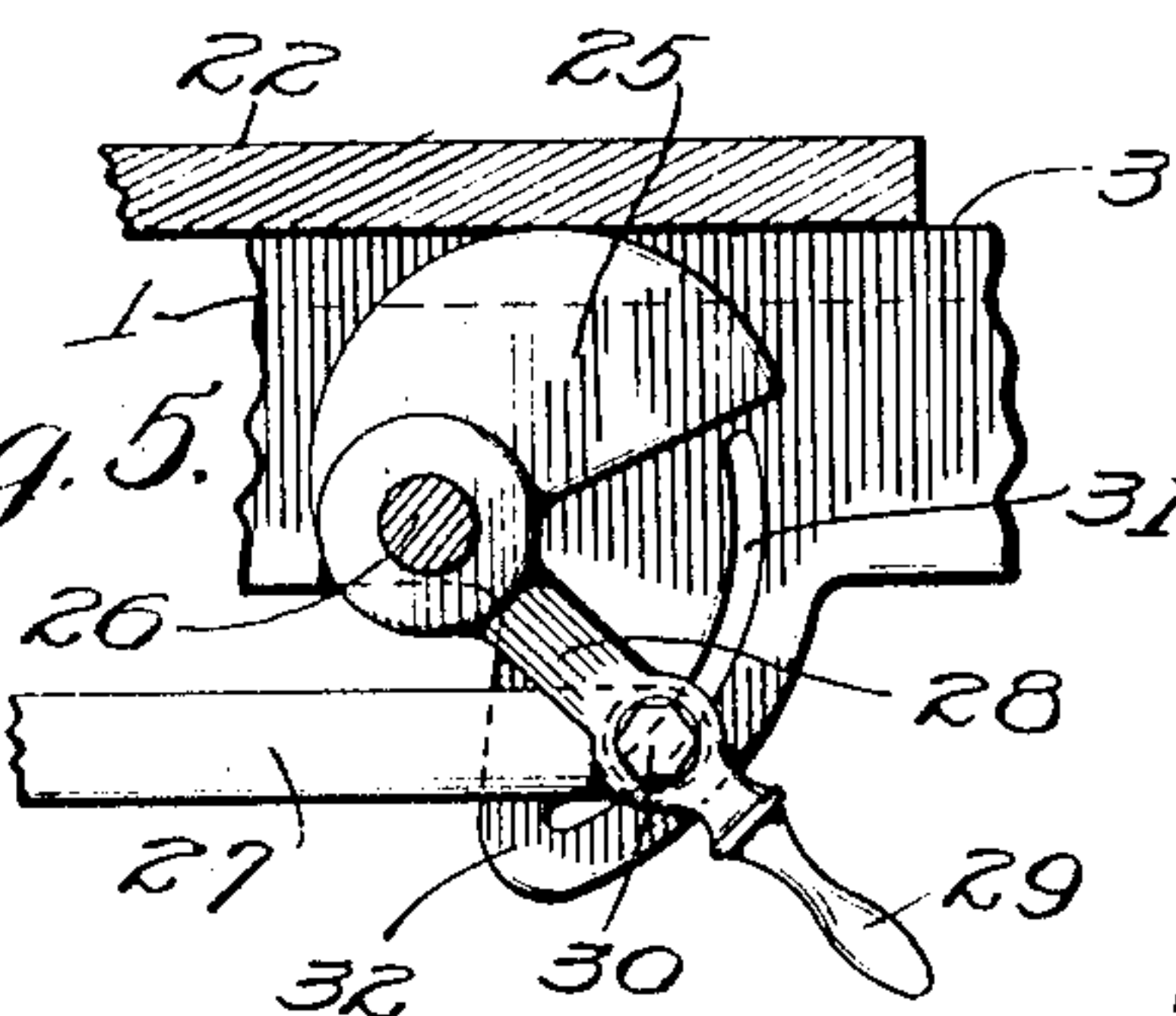


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ASSIGNORS OF ONE-THIRD TO WILLIAM F. MOSSOP, OF PHILADELPHIA, PENNSYLVANIA.

CAKE-COATING MACHINERY.

No. 927,576.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed March 12, 1908. Serial No. 420,602.

To all whom it may concern:

Be it known that we, GEORGE I. MOSSOP and CLEMENT E. MOSSOP, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Cake-Coating Machinery, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The main object of our invention is to provide a device of comparatively simple and inexpensive construction which will transfer cakes or confections from a magazine, coat them with icing, jelly, chocolate or other liquid material; place them upon a conveyer after the coating process; convey them into pans; and stack the pans in a rack.

A further object of our invention is to provide a device of the character described, that will be quick and cleanly in operation, economical in the use of material, and which will give uniform results of the highest degree of excellence.

With these and other objects in view, our invention consists in the novel construction, combination and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a side elevation of a machine constructed in accordance with this invention; Fig. 2 a top plan view; Fig. 3 an enlarged end elevation with some parts removed for clearness; Fig. 4 a vertical central section of the vertically movable pan rack; and Figs. 5, 6 and 7 are fragmentary side elevations of details of the machine.

Referring to the drawings, the device comprises a main supporting frame 1, in which is journaled the main drive shaft 2 which actuates all of the moving parts of the machine. Upon the main frame, is slidably mounted a table or platen 3 which reciprocates upon parallel ways 4 rigid with the frame. Upon the under side of the table, and rigid therewith is secured a longitudinal rack 5 and engaging with this rack and pivoted to the main frame at 6 is a segmental gear 7.

To reciprocate the table, the segmental gear is caused to oscillate about its pivot by means of a bar 8 which is slidably mounted in guides 9 rigid with the frame. The

inner end of the bar 8 is provided with cam followers 10 extending transversely and in opposite directions from the bar and engaging in cam grooves 11 upon the inner faces of cams 12 which are rigidly secured to the main drive shaft.

A cake magazine or hopper 13 is removably mounted in a saddle 14, the ends of which are supported upon side flanges 15 of the main frame, the flanges being slightly depressed to form recesses to receive the saddle to prevent the saddle from moving longitudinally of the frame. The saddle is recessed upon both sides as at 16 and 17 to permit of the elevation of the table as will be explained hereinafter to accommodate cakes of various thicknesses, and is provided with flanges 18 for supporting the magazine. The magazine extends the full width of the table and is divided by vertical partitions 19 into compartments, each of which is adapted to receive a vertical series of cakes and is provided with flanges 20, upon each sides thereof, adapted to rest upon the flanges 18 of the saddle to hold the magazine free from the table. The top of the magazine is left open for the introduction of cakes and the bottom of the magazine is also open to permit the bottom cakes to rest directly upon the table, the inner edge 21 of the magazine being slightly beveled so as to permit the free passage of a cake from the magazine outwardly beneath the edge when the table is reciprocated.

The outer upper portion 22 of the table is vertically movable with respect to the main part of the table and is carried upon vertical plungers 23 which are slidably mounted in bosses 24 rigid with the main part of the table. The movable portion of the table is moved and held in any desired position by means of four cams 25 which are rigidly mounted upon pivot bars 26, the opposite ends of the bars 26 being rotatably carried by the table, each bar having a cam at each end thereof. The cams 25 upon each side of the table are connected by means of a link 27 which is pivoted at its ends to a pair of arms 28 integral with the cams 25 respectively. One of these arms is extended to form a handle 29 by the movement of which all of the cams may be simultaneously rotated, and the arm 29 is locked in any desired position by means of a bolt 30 extending therethrough and through a

segmental slot 31 in a depending projection 32 rigid with the main part of the table.

The inner end 33 of the movable part of the table is spaced from the inner end 34 of the fixed part of the table and the upper surface of the movable portion is normally above the upper surface of the fixed portion of the table, thus forming a recess 35 at the inner end of the table, extending the full width thereof for the reception of a series of cakes from the magazine.

For the purpose of adapting the recess to cakes of various widths, to bring the cakes in proper alinement to be taken up by the forks as hereinafter described, a removable strip 36 is arranged upon the inner end of the fixed portion of the table and this strip is varied in width and thickness according to the needs of the particular case. As the table is reciprocated, the recess 35 is brought, at the outer end of the stroke of the table, beneath the magazine and a series of cakes falls from the magazine into the recess. Upon the return movement of the table, the cakes are carried forward and brought into proper position for the further action of the machine. The outer end of the table is preferably inclosed by a shelf 36' connected at one end to the saddle 14 and at its opposite end to a bracket 37 rigid with the main frame of the machine.

Arranged above the recess of the table when the table is at the inner end of the stroke are a series of double ended spaced forks 40 centrally and rigidly secured to a transverse rotatable shaft or cross head 41. The ends of the cross head are mounted in bearings 42 on the ends of vertical plungers 43 mounted to reciprocate in guides 44 which are rigid with the main frame. A vertical reciprocating motion is given to the cross head by means of cams 45, arranged one upon each side of the main frame, and rigidly mounted upon the main drive shaft 2, the lower ends of the plungers 43 being provided with cam followers 46 engaging against the cams.

The cam grooves 11 in the cams 12 controlling the reciprocating movement of the table and the cams 45 controlling the movement of the cross head 41 are so designed that the table is brought to rest at the inner end of its stroke and the cross head is then caused to descend, bringing the lower ends of the forks into the recess at the end of the table to penetrate the cakes carried therein. The cross-head then ascends, lifting the cakes free from the table and the table is then carried outwardly from beneath the cakes. The cross head then descends to immerse the lower sides of the cake in the coating material which is contained in a vat 47 which is adjustably supported within the main frame. After the cakes have been dipped one or more times according to the shape of the

cams, the cross head ascends and a rotary movement is given thereto by means of the ratchet wheel 48 which is rigidly mounted upon one end of the cross head and which engages a rack 49 pivoted at one end 50 to one of the vertical side extensions 51 of the main frame. The rack 49 is provided with a longitudinal slot 52 upon the outside thereof and a slide 53 engages in said slot and the slide is pivoted to one end of a link 54, the other end of which is pivoted as at 55 against a flattened face upon the inner side of the lower portion of one of the bearings 42 carrying the cross head. The construction of the sliding link connection is such that as the cross head is moved upwardly the lower end of the rack bar is drawn toward the cross head to bring the teeth of the rack into engagement with the ratchet wheel 48 thereby causing the cross head to rotate through one half of a revolution. Upon the downward stroke of the cross head the link 54 causes the teeth of the rack to be disengaged from the ratchet wheel and the cross head is therefore not rotated in its downward stroke and the noise of the rack sliding over the ratchet is avoided.

To hold the forks with sufficient force, in a fixed vertical position during their outward stroke, spring catches 56 are provided mounted upon each side of the machine and carried by projecting lugs 57 rigid with bearings 42 of the cross head, the inner ends of the catches engaging in oppositely disposed notches 58 in the collars 59 which are secured to the outer ends of the cross head.

The vat 47 for the coating material is fed from a reservoir 60 through the faucet 60' and both the vat and reservoir are preferably inclosed by outer vessels containing water and having means for keeping the water heated to a uniform temperature by the use of steam, gas or any other well known manner, thus keeping the coating material at a predetermined state of fluidity. The vat 47 is mounted upon a vertically movable table 61 resting upon cams 62, one upon each side of the table, rigidly fixed upon a shaft 62' journaled to rotate in the frame of the machine. The shaft 62' is rotated by means of a handle 63 rigid therewith to bring the cams into any desired position to raise or lower the vat and the cams are locked in any desired position by means of a bolt 63' upon the handle 63, engaging in a slot in a projection 64 of the main frame. One edge of the vat 47 is provided with an outwardly lipped recessed edge 47' upon one side thereof to form an overflow spout, and an overflow vat 65 is provided beneath the spout, to receive any overflow from the vat 47.

A stripper 66 in the form of a flat shelf extends transversely of the machine over the cross head and is adapted to rest upon the

upper edges of the vertical side extensions of the main frame. The stripper is provided upon its front edge with recesses 66' for the admission of the ends of the forks as the forks are rotated, thus bringing the cakes upon the upper side of the stripper, with their coated sides upward. During the downward movement of the forks, the stripper is held in a fixed horizontal position resting upon the edges of its support and the forks are withdrawn from the cakes. The stripper is then swung into an inclined position upon its pivots by means hereafter described to bring the cakes in alinement with a chute 67 which extends outwardly and rearwardly from the inner edge of the stripper.

A series of fingers 68 corresponding in number with the recesses in the stripper, and in alinement therewith, are rigidly mounted upon a transverse rock shaft 69 the ends of which are journaled in the vertical brackets 70 rigid with the frame of the machine. When the stripper has been brought into its inclined position, the rock shaft carrying the fingers is rotated through part of a revolution by means hereinafter set forth, to bring the fingers into engagement in the recesses of the stripper to start the cakes down the chute. An endless conveyer 71 carried over sprockets 72 and 73 is mounted to move over the upper face of the chute and is provided with lugs 74 to continue the motion of the cakes down the chute.

Intermittent movement is given to the stripper, to the fingers 68 and to the conveyer 71 by means of a lever 75 pivoted intermediate of its ends at 76 to the main frame, the inner end of the lever being adjacent the main drive shaft 2. A finger 77 rigidly mounted upon the main drive shaft engages against the inner end of the lever 75 at each revolution of the shaft to rock the inner end of the lever downwardly, the lever returning to its original position upon being released by the finger, owing to the weight of the outer end of the lever and the parts carried thereby. The inner end of the lever is connected by means of link 78 to the inner edge of the stripper and the outer end of the lever is connected to a crank arm 79 upon the rock shaft carrying the fingers, by means of a link 80, and is also connected by means of a link 81 to the outer end of a radial arms 82 carrying a pawl 83 engaging with a ratchet wheel 84 which drives the sprocket carrying the conveyer 71.

Extending rearwardly from the main frame and beneath the lower end of the chute 67 are substantially horizontal tracks or flanged guides 90 adapted to hold pans to receive the cakes as they fall from the chute. The pans are carried outwardly upon the tracks by means of an endless conveyer 91 mounted upon sprockets 92 and 93 carried

by the frame of the machine. Movement is given to the conveyer 91 by means of a slotted radial arm 92' rigid with the outer end of the main driving shaft and carrying a link 93' adjustably secured at one end in said slotted arm and pivotally connected at its other end to a radial arm 94 carrying a pawl 95 driving the ratchet wheel 96 which drives the sprocket 93. By these means an intermittent movement is given to the conveyer 91.

Located in the rear of the machine and adjacent the outer end of the pan tracks is a vertical frame comprising a substantially rectangular base 100, vertical corner beams 101, rigid with the base, horizontal braces 102 at the top of the frame, bowed horizontal braces 103 intermediate of the ends of the frame and longitudinal braces 104 upon the rear outer side of the frame.

Within the frame is slidably mounted a vertically movable rack frame comprising a substantially rectangular base portion 105, a substantially rectangular top portion 106 and vertical braces 107 securing the bottom and top portions of the frame rigidly together. The corners of the bottom and top portions of the frame are recessed to slide upon the vertical corner beams 101 of the outer frame.

Within the rack frame is removably located, a pan rack comprising vertical bars 108, carrying horizontal strips of angle iron 109, forming ledges for the support of the pans, the front and rear ends of the flanges and of the rack being open so that the pans may be inserted or withdrawn from either side of the rack, the front upper portion of the frame carrying the rack being open so that the pans may enter from the conveyer.

An intermittent vertical downward movement is given to the pan rack by means of a vertical rack 110 secured at its ends to the bottom and top portions 105 and 106 of the pan rack frame and provided with cylindrical teeth 111 adapted to engage against the upper surfaces of cam wheels 112 and to pass through slots 113 thereof. The cam wheels 112 are rigidly mounted upon vertical shafts 114 the upper ends of which are rotatably journaled in the transverse braces 103 of the frame and the lower ends of which are journaled in the base 100 of the frame. The construction of each cam wheel 112 is such that as the wheel revolves, the rack engaged thereby, is held stationary during a part of the revolution of the wheel, one tooth of the rack resting upon the upper surface of the wheel. The tooth of the rack then descends through the slot 113 carrying the pan rack therewith and rests for part of a revolution upon the lower horizontal surface 115 upon the lower side of the groove until a second tooth has been brought into engagement with the upper surface of the wheel when the upper

ation is repeated. Counterweights 116 are provided to balance in part the weight of the pan rack and are connected to the rack by means of cables 117 extending over pulleys 118 mounted upon the upper cross braces 102 of the frame.

An intermittent rotary motion is given to the shafts 114 carrying the cam wheels by means of beveled gears 119 and 120, the former of which are rigid respectively with the shafts 114 and the latter of which engage the former and are mounted upon and rigid with a transverse shaft 121 journaled in the base of the frame. A sprocket 122 upon the transverse shaft 121, a sprocket chain 123 carried thereby, a second sprocket 124 carrying said sprocket chain and a second sprocket chain 125 suitably connected between the sprocket 124 and the shaft driving the pan conveyer 91 actuate the said beveled gears 119 and 120 whereby the movement of the pan rack corresponds with the movement of the pan conveyer.

For the purpose of providing a quick return for the pan rack after it has reached the bottom of its descent, the toothed racks 110 carrying the pan rack are pivoted at their ends upon pivots 126 and are held in their positions of engagement with the cam wheels by means of pins 127 upon the removal of which the toothed racks are free to be swung out of engagement with the cam wheels to permit the pan rack to be rapidly returned to the upper end of its path by a slight pull upon the cable supporting the counterweight.

Although I have illustrated in the drawings only one of the many forms in which this invention might be embodied, yet it is obvious that many changes might be made in the construction herein illustrated without departing from the spirit of this invention or the scope of the appended claims. For instance, the conveyers 71 and 90 and the vertically moving pan rack might be omitted and the cakes permitted to fall freely down a sharply inclined chute into a pan, or other receptacle put into position by hand to receive the same; or a vertically movable pan rack practically identical with the one already described, but having the pan arranged on an incline corresponding with the incline of the chute, might be arranged at the end of the chute, whereby the cakes would fall from the chute directly into the pan upon the rack without the intervention of either of the conveyers or of the horizontal pan tracks. These and other similar changes are thought to fall within the scope of this invention.

In the operation of the machine, the power is delivered to the main drive shaft 2 by means of the pulley 128 rigid therewith. The cakes may be placed in the magazine 13 without removing the magazine from the

machine, but preferably several magazines are used and when one has been emptied upon the machine, it is replaced by a filled one. Magazines of various proportions are used to accommodate cakes of various sizes and magazines for use with thick cakes do not extend as far down into the saddle as do magazines which are adapted to contain thin cakes, thus allowing for the proper elevation of the top of the table. After the magazine and table have been adjusted and the vat 47 containing the coating material has been arranged vertically to secure the proper depth of immersion of the cakes, the vertically movable pan rack is set at its uppermost position bringing a pair of ledges for the support of a pan in alinement with the horizontal pan tracks 90 of the horizontal pan conveyer 91 and the feed of the horizontal conveyer is adjusted to correspond to the size of the pans to be used, so that after one pan has been carried from the conveyer to the pan rack the motion of the conveyer will cease during the time in which the pan rack is being lowered one step. To facilitate the adjustment of the feed of the pan conveyer and pan rack the slotted crank arm 92 upon the main drive shaft is preferably provided with graduations numbered to correspond to pans of various widths, such graduations being shown in Fig. 1 of the drawing. After these adjustments of the machine have been made, it is only necessary to keep the magazine supplied with cakes and to supply the horizontal pan conveyer with emptied pans, the other operations being entirely automatic. The cakes are taken from the magazine by the reciprocating table and are brought beneath the forks whereupon the forks descend and lift the cakes from the table, the table then being moved downwardly from beneath the cakes. The forks then descend and immerse the tops of the cakes, the cakes being held in inverted position, the forks are then elevated and rotated through 180 degrees to bring the cakes in an upright position above the stripper, the opposite ends of the forks being brought into position to take up a second set of cakes which have meanwhile been brought into suitable position by the table. Upon the downward movement of the forks the forks are withdrawn from the cakes at the upper ends thereof leaving the cakes upon the stripper and the lower ends of the forks take up the second set of cakes and the operation is thus continued repeatedly. The cakes are carried from the stripper down the chute into the pans upon the horizontal conveyer and the pans are stacked in the rack as heretofore described. After one pan rack has been filled and lowered, it may be withdrawn from the rear of its frame and replaced by an empty rack or the rack may be left in position on the frame and the

filled pans removed, whereupon the pan rack is returned to its upper position as heretofore set forth, and thus, practically without interruption, the operation of coating the cakes may proceed.

Having thus fully described our invention, what we claim and desire to protect by Letters Patent of the United States is:

1. In an icing machine, the combination with a table mounted to move in its own plane, of a lifter mounted to reciprocate over said table to remove a cake therefrom.

2. In an icing machine, the combination with a reciprocating table mounted to move in its own plane, of a lifter mounted to reciprocate over said table to remove a cake therefrom.

3. The combination with a horizontally reciprocating table, of a lifter mounted to reciprocate over said table, and a cam and cam follower to control the movement of said lifter.

4. The combination with a table, a lifter mounted to reciprocate over said table, means to reciprocate said table horizontally, and means actuated by said first mentioned means to reciprocate said lifter.

5. The combination with a table, of a lifter mounted to reciprocate over said table, and means to move said table horizontally and said lifter vertically, said means comprising a driving shaft, a cam carried by said shaft, a cam follower engaging said cam to move said lifter, a second cam carried by said shaft, and a cam follower engaging said second cam, and operatively connected to said table to move said table.

6. The combination with a table, of means mounted to reciprocate with respect to said table to lift a cake therefrom and afterward to dip said cake.

7. The combination with a main frame, of a table mounted to reciprocate thereon, a magazine for cakes fixed to said frame upon one side of said table, said magazine having an open end adjacent said table and said table being provided with a recessed portion to receive a cake from said magazine as said table is reciprocated to bring said recess in alignment with the open end of said magazine.

8. The combination with a main frame, of a table mounted to reciprocate thereon, a cake magazine fixed upon said main frame and having an open end adjacent one side of said table, said table being provided with a recess adapted to receive a cake from said magazine as said recess is brought into alignment with the open end thereof, and means to vary the size of said recess to receive cakes of various dimensions.

9. The combination with a main frame, of a table mounted to reciprocate thereon, a cake magazine fixed upon said main frame and having an open end adjacent one side

of said table, said table being provided with a recess adapted to receive a cake from said magazine when said recess is brought into alignment with the open end thereof, and means for varying the depth of said recess to accommodate cakes of different thicknesses, said means comprising a movable section forming a portion of the top of said table, a fixed portion of said table forming the inner surface of said recess and means to move said movable section toward and away from the plane of said fixed section.

10. The combination with a main frame, of a table mounted to reciprocate thereon, means for lifting a cake from said table and for dipping said cake mounted to move through a fixed path, and a vat to hold coating material arranged in the path of said cake lifting means.

11. The combination with a movable table, of means moving in a fixed path to remove a cake from said table, and means extending into the path of said cake removing means to apply a liquid coating to a cake carried thereby after said cake has been removed from said table.

12. The combination with a main frame, of a table mounted to reciprocate thereon, a rotatable cross head mounted upon said main frame to reciprocate vertically over said table, means carried by said cross head to lift a cake from said table, a vat for coating material arranged beneath said table and in alignment with said cross head, means to reciprocate said cross head to lift a cake from said table and to dip said cake into said vat, means to rotate said cross head to swing said cake, and means to remove said cake from said lifting means.

13. The combination with a rotatable reciprocating cake lifting means, of means to strip a cake therefrom said means being stationary during the act of stripping.

14. The combination with a rotatable reciprocating cake lifting means, of means to strip a cake therefrom, said means comprising a member extending into the path of said lifter as it is rotated, and being recessed to receive one end of said lifter.

15. The combination with a rotatable cake lifter mounted to oscillate, of means for stripping a cake from said lifter, said stripping means being recessed to receive the end of said lifter as it is rotated, and being held against the movements of said lifter as it is reciprocated to strip a cake therefrom.

16. The combination with a rotatable cake lifter mounted to reciprocate, of means to strip a cake from said lifter, said means being recessed to receive the end of said lifter and held against the reciprocation of said lifter.

17. The combination with a rotatable cake lifter mounted to reciprocate, of a ratchet wheel secured to said lifter and concentric

with the axis thereof, and a ratchet secured to a fixed point and adapted to engage said ratchet wheel to rotate said cake lifter when said lifter is reciprocated.

18. The combination with a rotatable cake lifter mounted to reciprocate, of a ratchet wheel secured to said lifter concentric with the axis thereof, and a bar provided with a series of teeth forming a ratchet, said bar being secured to a fixed point and adapted to engage said ratchet wheel when said lifter is reciprocated to rotate said lifter.

19. The combination with a rotatable cake lifter mounted to reciprocate, of a ratchet wheel secured to said lifter, concentric with the axis thereof, and a bar pivoted at one end to a fixed point and provided with a series of teeth engaging said ratchet wheel when said lifter is reciprocated to rotate the same.

20. The combination with a rotatable fork mounted to reciprocate, of a ratchet wheel secured to said fork, concentric with the axis thereof, and a bar pivoted to a fixed point and provided with a series of teeth adapted to engage said ratchet when said fork is reciprocated to rotate the same.

21. The combination with a rotatable cake lifter mounted to reciprocate, of a ratchet wheel secured to said lifter, concentric with the axis thereof, a bar pivoted at a fixed point, and provided with a series of teeth adapted to engage said ratchet to rotate said fork when said fork is reciprocated, and means to oscillate said bar to engage said ratchet wheel when said lifter is moved in one direction and to disengage said ratchet wheel when the lifter is moved in the opposite direction.

22. The combination with a cake lifter, of means to strip a cake from said lifter and to hold said cake after it has been stripped.

23. The combination with a cake lifter, of means to strip a cake therefrom, and to hold said cake, and means to convey said cake from said stripping means.

24. The combination with a cake lifter adapted to pierce the cake, of a stripper, a conveyer, and means to move the cake from the stripper to the conveyer.

25. The combination with a cake lifter, of a stripper, a conveyer, means to move a cake from the stripper toward the conveyer, and a second conveyer to receive the cake from said first conveyer.

26. The combination with a cake lifter, of a stripper, a chute, and means to remove a cake from the stripper to the chute.

27. The combination with a cake lifter, of a chute, and coating pivoted elements to transfer a cake from said lifter to said chute.

28. The combination with a conveyer, of a movable pan rack to receive a pan from

said conveyer, means to deliver cakes to said pans upon said conveyer.

29. The combination with a horizontal pan conveyer, of a vertically movable pan rack to receive pans from said conveyer and a conveyer to deliver cakes to pans upon the pan conveyer.

30. The combination with an endless pan conveyer, of a vertically movable pan rack provided with means for holding pans in vertical series and adapted to receive pans from said conveyer and means for delivering cakes to pans upon said conveyer.

31. The combination with cake coating means, of a vertically moving pan rack having means to hold pans in vertical series and a chute and an endless conveyer beneath said chute to transfer cakes from said coating means to said rack.

32. In a cake coating machine, the combination with a main frame, of a drive shaft, a rotatable cake lifter mounted to reciprocate, means actuated by said drive shaft to reciprocate said lifter and to rotate the same, a stripper pivoted to said main frame and means actuated by said shaft to oscillate said stripper.

33. The combination with a main frame, of a drive shaft, a rotatable cake lifter mounted to reciprocate upon said frame, stripper pivoted to said frame, means to move upon a cake from said stripper, means actuated by said shaft to reciprocate and to rotate said lifter, a lever pivoted to said main frame, means upon said shaft for oscillating said lever, and means between said lever and said stripper, and between said lever and said means to move a cake from said stripper, to actuate the same.

34. The combination with a main frame, of a drive shaft, a cake lifter, a stripper pivoted to said main frame, a finger pivoted to said main frame to move a cake from said stripper, a chute to receive a cake from said stripper, an endless conveyer in said chute, a ratchet wheel to rotate said conveyer, a lever pivoted to said main frame, means upon said drive shaft to oscillate said lever, and connections between said lever and said stripper, between said lever and said finger and between said lever and said ratchet wheel to actuate the same.

35. The combination with a main frame, of a drive shaft carried thereby, a cake lifter mounted to reciprocate on said frame and actuated by said drive shaft, a stripper mounted upon said frame, an inclined chute to receive a cake from said stripper, a pan conveyer located beneath the said chute, and means upon said drive shaft to actuate said conveyer.

36. The combination with a main frame, of a drive shaft carried thereby, a cake lifter mounted to reciprocate on said frame and

actuated by said drive shaft, a stripper mounted upon said frame, an inclined chute to receive a cake from said stripper, a pan conveyer located beneath the said chute and means upon said drive shaft to actuate said conveyer, said means comprising a slotted crank arm rigid with said shaft, a link adjustably secured in said slotted arm, a ratchet actuated by said link, and a ratchet wheel driven by said ratchet.

37. The combination with a main frame, of a rotatable cake lifter mounted to reciprocate thereon, and a vertically adjustable vat to contain coating material, located in the path of said lifter.

38. The combination with a main frame, of a table mounted to reciprocate thereon, a cake lifter mounted to reciprocate on said frame, a drive shaft, a cam upon said drive shaft to reciprocate said lifter and a cam upon said drive shaft to reciprocate said table.

39. The combination with a main frame, of a table mounted to reciprocate thereon, a cake lifter mounted to reciprocate on said frame, a cam mounted upon said shaft and a cam follower engaging said cam to reciprocate said lifter, a second cam upon said shaft and a follower for said second cam, a slide bar caused to reciprocate by said second follower, a segmental gear pivoted to said main frame and to said slide bar, and a rack fixed upon said table and engaging said gear to reciprocate said table.

40. The combination with a main frame, of a drive shaft mounted transversely thereof, a table mounted to reciprocate upon said frame, a cross head extending transversely of said table, a vertical sliding guide bar secured to said cross head at each end thereof, and mounted to reciprocate vertically upon said frame, a cam carried by said drive shaft beneath each of said guide bars to reciprocate the same, and a series of cake lifters carried by said cross head.

41. The combination with a main frame, of a drive shaft carried thereby, a table mounted to reciprocate upon said frame and actuated by said drive shaft, a cake lifter mounted to reciprocate on said frame, a stripper, a chute, a vertically movable pan frame for holding pans in vertical series thereon, and means actuated by said drive shaft to give an intermittent vertical movement to said pan frame.

42. The combination with a drive shaft, of cake coating mechanism and a pan conveyer actuated thereby, and a movable pan rack actuated by said pan conveyer.

43. The combination with a drive shaft, of a conveyer, means between said drive shaft and said conveyer for giving said conveyer an intermittent movement, a movable rack, and means between said conveyer and said rack to actuate said rack.

44. The combination with a drive shaft, of a conveyer, a ratchet and a ratchet wheel to drive said conveyer, a slotted arm rigid with said drive shaft, a link adjustable in said slotted arm for driving said ratchet, a rack, and means driven by said conveyer to actuate said rack.

45. The combination with a fixed frame, of a vertically movable frame carried thereby, a vertical toothed rack secured to said movable frame, and a cam wheel engaging said toothed rack to give an intermittent downward movement to said movable frame.

46. The combination with a fixed frame, of a vertically movable frame carried thereby, a vertical toothed rack secured to said movable frame, and a cam wheel engaging said toothed rack to give an intermittent downward movement to said movable frame, said toothed rack being movable to be thrown out of engagement with said cam wheel to permit of the quick return of said movable frame.

47. In a cake coating machine, the combination with a rotary cross head mounted to reciprocate vertically, of a plurality of forks for lifting cakes, extending radially therefrom.

48. In a cake coating machine, a cross head, means for giving said cross head an intermittent rotary motion and an intermittent reciprocatory motion in a straight line, and a plurality of cake lifters extending radially therefrom.

49. The combination with a table mounted to reciprocate horizontally, of a cake lifter reciprocating vertically above said table, and across the path thereof, and a vat for coating material beneath said table, and in the path of said lifter.

50. The combination with a table mounted to reciprocate horizontally, of a cake lifter reciprocating vertically from said table, and across the path thereof, and a vertically adjustable vat for coating material, beneath said table, and in the path of said lifter.

51. The combination with a table mounted to reciprocate horizontally, of a cake lifter mounted to reciprocate vertically above and across the path of said table, a vat for coating material beneath said table, and in the path of said lifter, means to rotate said lifter, and means arranged above said table to strip a cake from the lifter.

52. The combination with a cake lifter mounted to reciprocate vertically, of means to bring a cake into the path of said lifter, means to move said lifter downwardly to engage a cake, then upwardly to lift the cake, then downwardly to dip the cake, then to raise and to rotate said lifter to invert the cake, and means to strip the cake from said lifter.

53. The combination with a rotatable

head of cake lifters extending in opposite directions therefrom, a table mounted to reciprocate beneath said head, a vat for coating material, beneath said table, a stripper arranged above said head, and means for giving said head vertical reciprocatory motion and an intermittent rotary motion to lift cakes from said table to dip them in said vat and to strip them from the lifters.

54. The combination with a rotatable head, of cake lifters extending in opposite directions therefrom, a table mounted to reciprocate horizontally beneath said head, a vat for coating material, beneath said table, a stripper arranged above said head, and means for giving said head vertical reciprocatory motion and an intermittent rotary motion to lift cakes from said table to dip them in said vat and to strip them from the lifters, whereby one cake is being dipped by one lifter at the same time a second cake is being stripped from the other lifter.

55. The combination with cake lifting means, of means to strip a cake therefrom, said means being stationary during the act of stripping.

56. The combination with cake lifting means, of pivoted means for stripping a cake therefrom, said means being stationary during the act of stripping and means to reciprocate said stripping means to move a cake therefrom.

57. The combination with rotatable cake lifting means, mounted to reciprocate, of means for stripping a cake from said lifter, said stripping means being recessed to receive the end of said lifter as it is rotated and being held against the movement of said lifter as it is reciprocated to strip a cake therefrom, and means to incline said stripper after the cake has been stripped, to permit the cake to fall from the stripper.

58. The combination with a fixed frame,

of a movable frame carried thereby, a pivoted rack secured to one of said frames, and a cam wheel engaging said rack to give an intermittent movement thereto.

59. In a cake coating machine, the combination with a main drive shaft, of a second shaft, a horizontal endless conveyer carried by said second shaft, means between the said main shaft, and said second shaft to give an intermittent rotary motion to said second shaft, a vertically movable pan rack adjacent said conveyer, and means actuated by said second shaft for moving said pan rack.

60. In a cake coating machine, the combination with a cake lifter mounted to reciprocate, vertically through a fixed path, of a vat for coating material vertically adjustable, and arranged in the path of said lifter.

61. In a cake coating machine, the combination with a cake lifter mounted to move in a fixed path, and a vat arranged below said lifter in the path thereof, and vertically adjustable, and means to keep said vat supplied with coating material to a predetermined depth.

62. In a cake coating machine, the combination with a cake lifter, of a vat for coating material arranged beneath said lifter, an overflow tank for said vat, and means to keep said vat supplied to a predetermined depth with coating material.

63. In a cake coating machine, the combination with a cake lifter, mounted to move to dip a cake, of means for holding coating material in the path of the lifter, and means for maintaining the surface of said coating material in a predetermined plane.

In witness whereof we hereunto set our hands this 7th day of March, 1908.

GEORGE I. MOSSOP.
CLEMENT E. MOSSOP.

Witnesses:

A. I. GARDNER,
ALEXANDER PARK.