

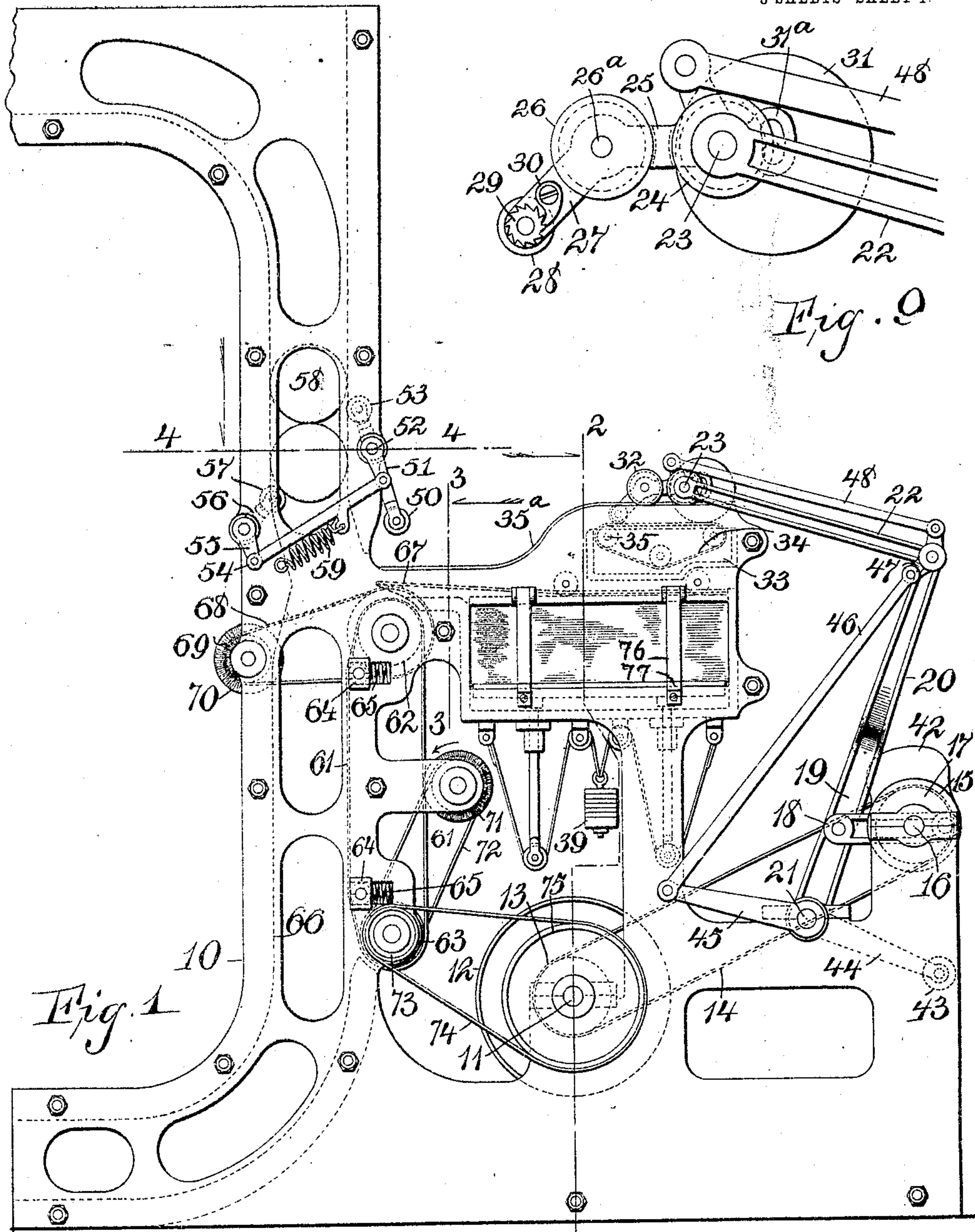
No. 846,878.

PATENTED MAR. 12, 1907.

H. H. TOUSSAINT.  
LABELING MACHINE.

APPLICATION FILED NOV. 23, 1906.

3 SHEETS—SHEET 1.



WITNESSES:

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R. Johnson.

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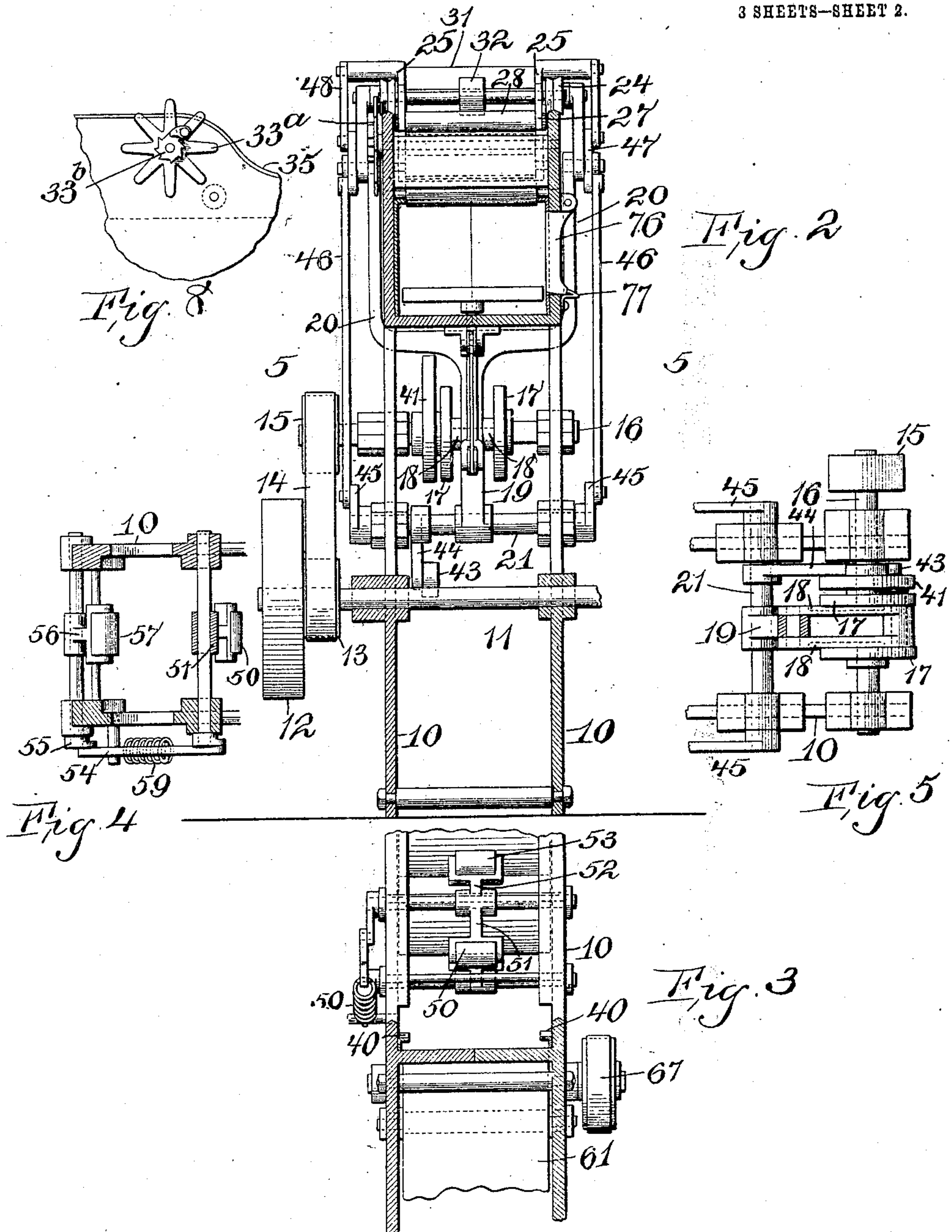
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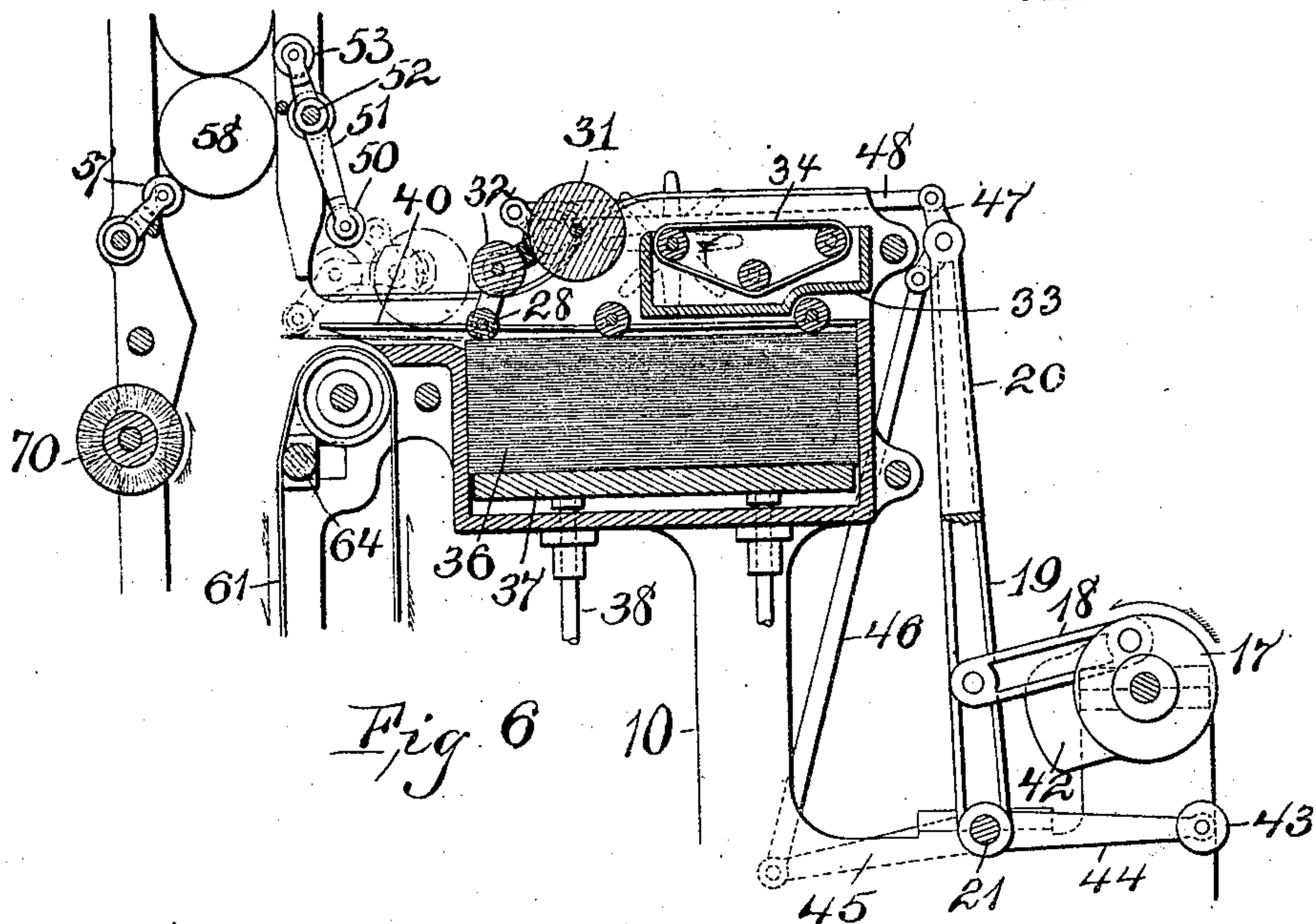


Fig. 6 10-

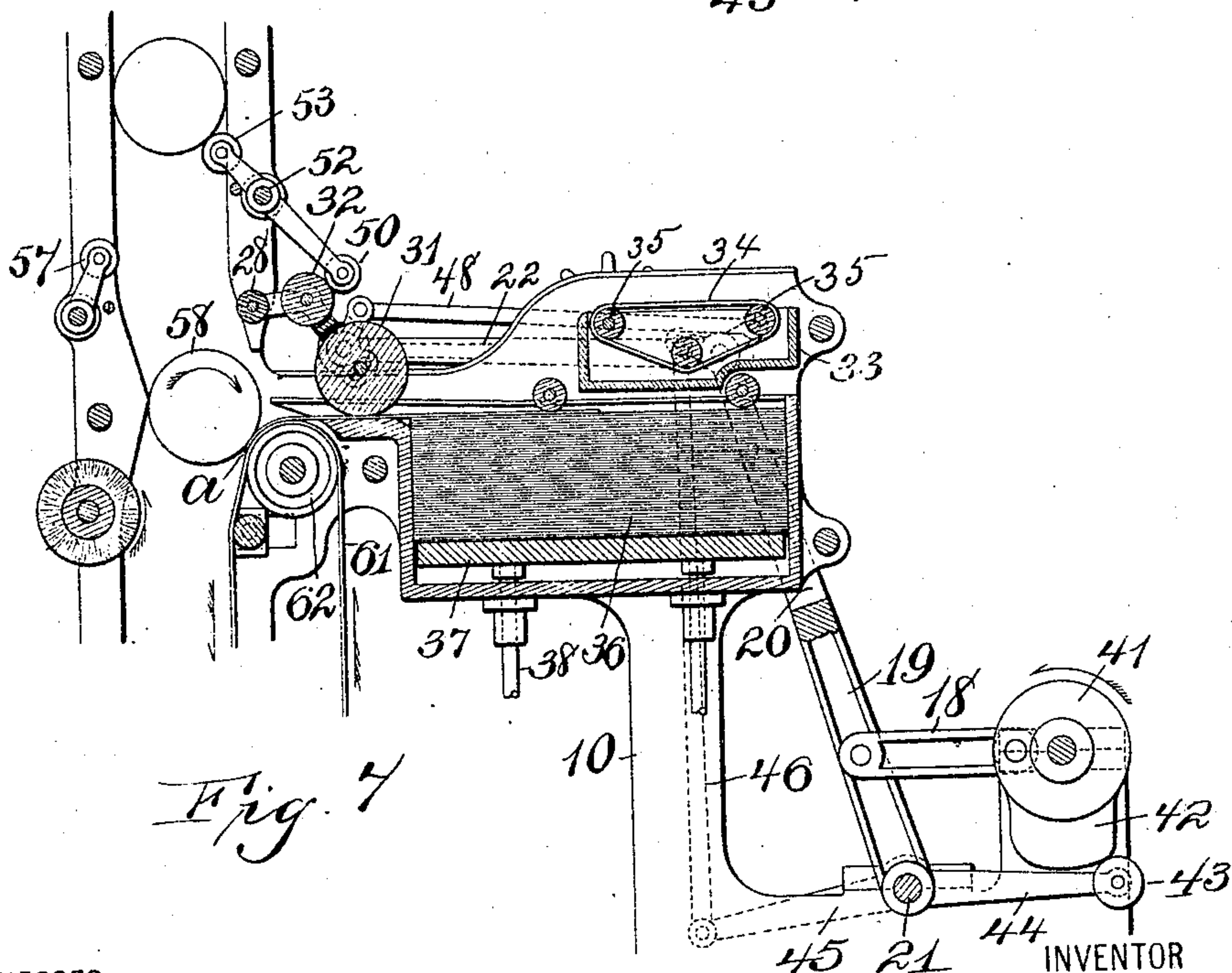


Fig. 7 10-

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# UNITED STATES PATENT OFFICE.

HARRY H. TOUSSAINT, OF NEWARK, NEW JERSEY.

## LABELING-MACHINE.

No. 846,878.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed November 23, 1906. Serial No. 344,673.

*To all whom it may concern:*

Be it known that I, HARRY H. TOUSSAINT, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Labeling-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to a machine for attaching labels to cans, and is adapted to provide a mechanism for feeding the labels forward on a table, pasting the edge first presented, then actuating an escapement to allow a can to drop by gravity on the front end of the label, then twirling the can to pull the remainder of the label so as to wrap it around the can, in the meantime pasting the rest of the label as it is pulled by the can to insure the affixing of the whole label to the can.

A further object is to roll the can after the label is attached to squeeze out all bubbles and air-spaces between the can and the label.

Another object of the invention is to provide brushes one revolving at a high speed to insure the affixing of the part of the label first presented to the can and the other brush to keep a belt moving to revolve the can free from paste.

The invention also provides a means for feeding the cans by means of a step-by-step movement, so that the cans are fed individually whenever a label is presented.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine. Fig. 2 is a section on line 2 2 in Fig. 1. Fig. 3 is a section on line 3 3 in Fig. 1. Fig. 4 is a section on line 4 4 in Fig. 1, and Fig. 5 is a section on line 5 5 in Fig. 2. Figs. 6 and 7 are vertical central sections showing the mechanism for feeding the labels and gumming them and the mechanism for feeding the cans in different positions. Fig. 8 is a detail view of a star-wheel used for operating a small belt in the paste-reservoir, and Fig. 9 is a detail view of the pasting-rolls.

The machine is made up of a frame composed of two side frames 10, and suitably journaled in the side frames is a shaft 11, which is driven by means of a drive-pulley

12. On this shaft is a suitable sprocket-wheel or pulley 13, which drives, by means of the medium 14, a sprocket or pulley 15, which is fastened to the shaft 16. On the shaft 16 are the disks 17, on which are pivoted eccentrically thereon a pair of bars 18, which fit on either side of a lever 19, the upper end of which is forked, as at 20. This lever is pivoted on one end, so as to ride loose on the shaft 21. Pivoted on the ends of the forks 20 of the lever 19 are the bars 22, in the ends of which are pivoted the shafts 23, and on these shafts 23 are mounted the wheels 24, having a peripheral groove to fit the top edge of the side frames, as will be seen more particularly from Fig. 2.

Projecting forwardly and pivoted on the shafts 23 is a yoke 25, and on either side of the yoke is a wheel 26, also having its periphery grooved and fitting the top edge of the side frame. These wheels 26 are mounted on a shaft 26<sup>a</sup>, and in the center of the shaft is arranged a roller 32, which is a tripping-roll for the cans, the operation of which will be described hereinafter. The yoke 25 projects downwardly and forwardly on either side, as at 27, and a small paste-roll 28 is arranged to turn in the ends of these side pieces 27. A ratchet 29 and a pawl 30 allow movement of this paste-roll in only one direction, as will be seen from Fig. 9. On the end of the yoke 25, opposed to the hereinbefore-described mechanism, is a large paste-roll 31, which slides in a slot 31<sup>a</sup> to allow a slight vertical movement.

It will be seen that as the disks 17 rotate they cause a reciprocation of the lever 19, and starting from the position shown in Fig. 1 it will be seen that the carriage riding on the wheels 24 and 26 on either side of the machine is passed over a paste-reservoir 33, and a belt 34, rotating around the rollers 35, assures the feeding of the paste-rolls with paste. To insure the turning of this belt, I provide the mechanism shown in Fig. 8, which is attached to the forward roll 35 and comprises a star-wheel 33<sup>a</sup>, provided with the ratchet mechanism 33<sup>b</sup>, so that the engagement of this star-wheel by the carriage will cause a constant feeding of the belt coated with paste. As the lever 19 is thrown forward, as above described, it passes down the curved portion 35<sup>a</sup> of the top edge of the side frames 10 and in its passage assumes the position shown in Fig. 6, and the small paste-wheel 28 engages the front edge of the top



label of a set of labels 36, these labels resting on a platform 37, which in turn are supported by the rod 38, which has a tendency to be fed upward by the weight 39, as in Fig. 1.

5 As the topmost label is engaged by the paste-roll it is carried forward, because the paste-roll is unable to turn by reason of the pawl and ratchet shown in Fig. 9. As the carriage is further propelled it assumes the dotted position shown in Fig. 6. When the label is projected out slightly beyond the table, a pair of guides 40, one on each side of the machine, these guides being shown also in Fig. 3, maintain the label in its position 10 when the paste-roll is drawn away from it. The withdrawal of the paste-roll and the tripping of a can is simultaneous, and the mechanism for accomplishing this will now be described.

20 On the shaft 16 is arranged a cam 41, having a projection 42, and on the periphery of the cam runs a roller 43, which is attached to the end of a lever 44, which is fastened to and operates the shaft 21, and on the outside 25 edges of the shaft 21, on either side of the machine, are arranged the levers 45, to which are connected the bars 46, adapted to actuate the bell-cranks 47, which in turn operate the rods 48 and by means of the short lever 30 49 tilt the carriage carrying the roller 32 and the paste-rollers. The mechanism is so adjusted that as the carriage arrives at the dotted position shown in Fig. 6 the nose 42 of the cam will engage the lever 43, and the 35 mechanism above described will cause a quick tilting of the carriage, and the tripping mechanism of the cans will be operated. This tripping mechanism comprises a wheel or a roller 50 to be engaged by the roller 32, 40 this roller 50 being on a lever 51, fastened to a rod 52, to which is secured a roller 53 to be thrown into contact with the second can when the first can is released. When this mechanism is operated, the connecting-bar 45 54 is pulled, which turns the arm 55, and the lever 56, with its roller 57, is drawn back from the position shown in Fig. 1 to that shown in Fig. 7. This allows one can to fall and come down on the end of the label previously advanced and settle on the pasted end *a*, as 50 shown in Fig. 7. The tilting carriage holds this position shown in Fig. 1 while the can is turned or twirled, the mechanism for doing this being described hereinafter, so that the label as it is pulled through is supplied with 55 paste by the large paste-roller 31. The mechanism is so adjusted, however, that as the end of the label comes to the roller the roller 43 on the projection 42 of the cam 41 is allowed to rise and the carriage assumes a 60 horizontal position and is drawn up over the curved portion 35 of the track on the top edge of the side frames and is carried back over the belt 34 in the paste-reservoir to be 65 replenished. While this return movement

is taking place the can is turned over and over to assure the affixing of the label to the can and squeeze out all the air-bubbles, this turning being caused by a belt 61, which is constantly in motion and which passes over 70 an upper pulley 62 and a lower pulley 63 and running over the small idle rollers 64, each of which is pressed forward by a spring 65 to cause a very tight fit for the can between the belt 61 and the opposed face 66 in the frame. 75 On the same shaft with the pulley 62 is another pulley 67, which operates, by means of a belt 68, the pulley 69, which operates a shaft carrying the brush 70. This brush 70, by reason of its gearing, revolves faster than 80 the can that is turned and is adapted to take the end *a* of the label on the first rotation of the can and brush it securely up against the can, so that there is no liability of this edge of the label being turned over backward. A 85 second brush 71, operated by the belt 72 on the pulley 73, presses against the belt 61 and turns in reverse direction to keep the belt 61 free from paste. The pulley 73 is run by means of a belt 74, which derives its power 90 from the pulley 75 on the main shaft 11.

This whole machine goes to make up a device that is not liable to get out of order, in which all parts are easy of access, and one in which the cans are manipulated to make the 95 label adhere firmly and smoothly to its surface. The labels are inserted from the side of the machine, and the receptacle on its open end is fastened by means of bars 76, pivoted at one end to the machine and having 100 their other ends detachably secured by means of the spring-catches 77.

Having thus described my invention, what I claim is—

1. A machine of the kind described, comprising a frame, a label reservoir, a paste-reservoir, a carriage riding above the reservoirs and having paste-rolls thereon, means for locking one of the paste-rolls against 105 movement in one direction, means for feeding the paste-rolls from the paste-reservoir to the forward edge of the labels, one paste-roll being adapted to carry the topmost label from the label-reservoir, a can-chute, a tripping mechanism to feed the cans individually 110 to allow one can to drop, on the end of the label, by gravity, and mechanism for tripping the carriage to release the tripping mechanism of the cans.

2. A machine of the kind described, comprising a frame having a paste-reservoir, a label-reservoir, a carriage to engage the paste-reservoir, means for causing the carriage to engage the forward end of the topmost label and feed it forward, mechanism tripped by 120 the carriage to feed a can to the forward edge of the label, and means for twirling the can for affixing the label thereto.

3. A machine of the kind described comprising a frame having a label reservoir, a 130



paste-reservoir, a carriage adapted to be supplied with paste from the paste-reservoir, mechanism for causing the carriage to feed the topmost label from the label-reservoir, a tripping mechanism actuated by the carriage for releasing a can when the label has been fed, and means for twirling the can to affix the label thereto, the carriage pasting the label at the inception of the twirling.

4. A machine of the kind described, comprising a frame having a label-reservoir, a paste-reservoir, a carriage having paste-rolls, thereon, adapted to be supplied by the paste-reservoir, means for causing the carriage to engage the topmost label in the label-reservoir and feed it forward, a can, a tripping mechanism to deliver the can to the pasted edge of the label, means for causing the carriage to trip the can, means for twirling the can to affix the label thereto, means for pasting the label at the inception of the twirling, and a brush arranged to revolve faster than the can to insure the affixing of the forward end of the label.

5. A machine of the kind described comprising a frame having a label-reservoir therein, labels in the reservoir, a paste-reservoir above the label-reservoir, tracks above the reservoirs, a carriage riding on the tracks and having paste-rolls thereon, mechanism for forcing the carriage from the paste-reservoir to engage the forward end of the topmost label and feed it forward, a revolving belt

forming one wall of its passage, slightly smaller than the diameter of a can, a tripping mechanism for feeding a can and depositing it on the pasted end of the label, and then on the revolving belt, whereby the can is twirled to paste the label to the can, means for pasting the label at the inception of the twirling, and means for withdrawing the carriage to the paste-reservoir.

6. A machine of the kind described, comprising side frames inclosing a paste-reservoir between them, a label-reservoir having labels therein, between the side frames, a carriage riding on the top edge of the side frames and having paste-rolls to engage the paste-reservoir, and to engage the topmost label to feed it forward, cans arranged in a can-chute between the side frames, tripping mechanism actuated by the frame to cause a can to drop on the forward end of the label, a belt, means for directing a can to engage the label between itself and the belt, whereby the can is twirled to affix the label thereto, and means for withdrawing the carriage to the paste-reservoir.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of November, 1906.

HARRY H. TOUSSAINT.

Witnesses:

WM. H. CAMFIELD,  
E. A. PELL.