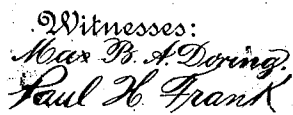


1,056,520.

3 SHEETS--SHEET 1.



Inventor
Edward Ernold
By his Attorneys
Brown, Ransom, Moody & Smith

E. ERMOLD.
BOTTLE LABELING MACHINE.
APPLICATION FILED APR. 12, 1912.

1,056,520.

Patented Mar. 18, 1913.

3 SHEETS—SHEET 2.

Fig. 3.

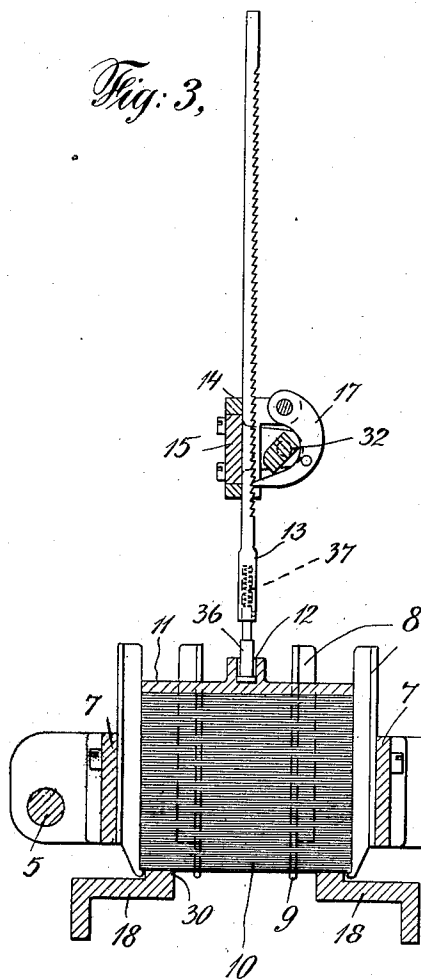
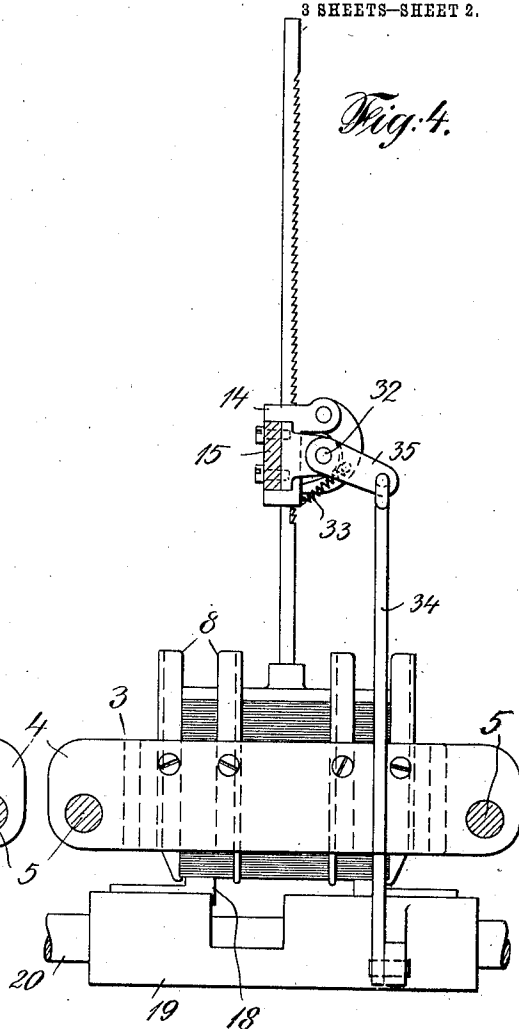


Fig. 4.



Witnesses:
Max B. A. Doring
Paul H. Frank

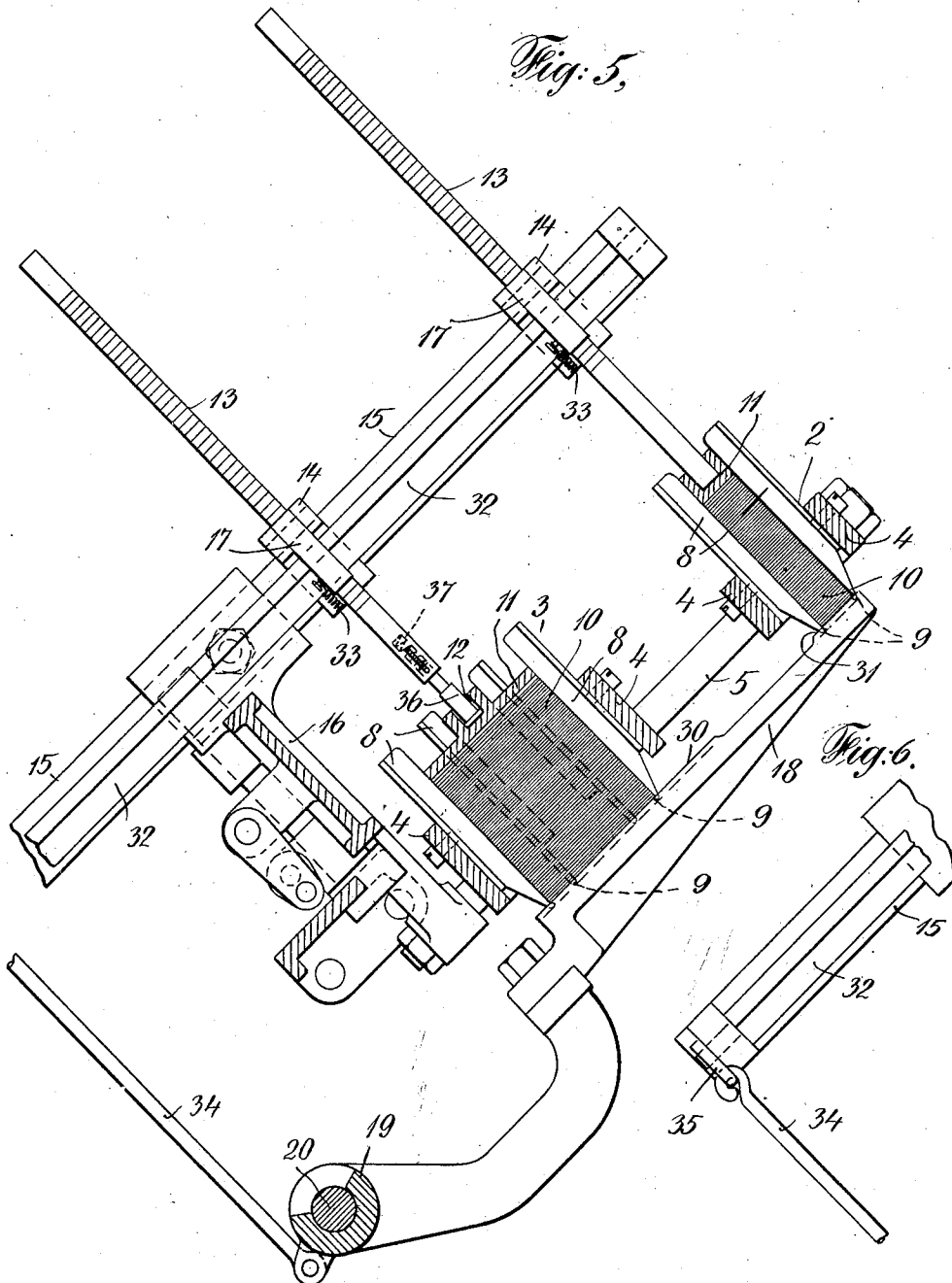
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UNITED STATES PATENT OFFICE.

EDWARD ERMOLD, OF NEW YORK, N. Y.

BOTTLE-LABELING MACHINE.

1,056,520

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed April 12, 1912. Serial No. 690,374.

To all whom it may concern:

Be it known that I, EDWARD ERMOLD, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bottle-Labeling Machines, of which the following is a specification.

This invention relates to improvements in machines for applying labels to bottles, and comprises improvements upon the machine for the same purpose set forth in my Patent No. 1,023,143, dated April 16, 1912.

My present invention relates to improved means for regulating the supply of labels from the label receptacles; and the objects of the invention are to provide means for positively controlling the operations of the label feeding mechanism by the action of the picker mechanism.

To the accomplishment of the above objects and to such as may hereinafter appear, the invention comprises label receptacles open at the top, the labels being pressed downward by means of weights, the action of which are regulated by ratchet rods engaging spring pressed pawls the movements of which are controlled by the action of the label pickers.

I will now proceed to describe my invention with reference to the accompanying drawings and will then point out the novel features in claims.

In the drawings: Figure 1 is a side elevation of the label receptacles showing one side of the frame, the other parts of the machine being removed. Fig. 2 is a detail view of the spring connection of the levers for operating the pickers. Fig. 3 is a detail vertical section of one of the label receptacles. Fig. 4 is a rear view of the label receptacle shown in Fig. 3. Fig. 5 shows on a larger scale than Fig. 1, a detail elevation and partial section of the label holders and picker mechanism. Fig. 6 shows a detail view of the means for actuating the rod 32.

Referring to the drawings: the different operative parts of the machine are all supported upon a suitable frame 1, a portion of which is shown in Fig. 1. The label-receptacles 2 and 3 are in the present instance two in number, one being provided for holding body labels which are to be pasted on the body of the bottle, while the other receptacle is provided for holding neck labels, which are to be pasted on the neck

of the bottle. Both label receptacles are alike except that one is, in the present instance, arranged for larger labels than the other. The label receptacles each comprise transverse end members 4, movably mounted upon the rods 5, for the purpose of adjustment, one end of each of the members 4 being provided with a suitable boss 6 for holding the members 4 in position on the rods 5. Suitable side members 7 are secured to the end members 4 and to them are secured label fingers 8, the lower ends of which are provided with lips 9 for holding a pile of labels 10, it being noted that the end members 4 are also provided with label fingers 8 having lips 9 similar to the label fingers secured to the side members 7. On top of each set of labels is arranged a follower 11 for pressing the labels downward so that they will feed readily out of the bottom of the receptacles. Each of the followers is provided with a recess 12 in which rests the end of a follower-rod or presser-bar 13 which passes through a guide 14 supported upon an arm 15 secured to the plate 16 to which the rods 5 are also secured. In the present instance the rod or presser-bar 13 is provided with a rack which engages a pawl 17 secured to the guide 14 so as to limit the upward movement of the follower 11.

Pickers 18, the lower ends of which are secured to a sleeve 19, loosely mounted upon a shaft 20 secured to the frame of the machine, are provided for removing the labels one by one from the bottom of the label receptacles. The pickers are operated through the medium of a suitable cam 21, secured to the cam shaft 22, which cam engages a roller 23 secured to a lever 24 pivoted at its rear end to a shaft 25 mounted in the frame of the machine, while to the other end of the lever 24 is connected one end of a rod 26, through the medium of a spring 27 as clearly shown in Fig. 2. The other end of the rod 26 is pivotally connected, through the medium of a link 28 to one of the pickers intermediate of its length, at 29, so that when the lever 24 and rod 26 are operated, the pickers will move from the position shown in Fig. 1 to the position shown in Figs. 3 and 4. The top surfaces of the pickers are provided with raised portions 30 and 31 to which paste is applied for engaging the edges of the bottom labels in the label receptacles, when the pickers are in the position shown in Figs. 3 and 4,

and to remove the bottom labels from the label receptacles when the pickers are lowered toward the position shown in Fig. 1.

In order to control the proper movement of the rods 13 by the action of the pawls 17, a flat cam-bar 32, pivoted at each end to the arm 15, is provided for disengaging the pawls 17 to permit the rods 13 to move downward when the pickers are in the position shown in Fig. 1, the bar 32 being returned to inoperative position, shown in Fig. 3, before the pickers come in contact with the label receptacles, in which position the pawls 17 are drawn into engagement with the rack by means of a spring 33. The movements of the flat bar 32 are controlled by the movements of the pickers, to which the bar 32 is connected by means of a link 34, which is pivoted at one end to the pickers and at the other end to a short lever 35 secured to one end of the flat bar 32.

From the above description it will be seen that as the pickers move downward to the position shown in Fig. 1, the flat bar 32 is moved into engagement with the pawls 17, so as to overcome the action of the springs 33, thereby permitting the rods 13 to move downward in contact with the followers 11. When, however, the pickers start to return for a new label the bar 32 is moved out of engagement with the pawls 17 and the springs 33 force the pawls against the racks so as to prevent the pile of labels being forced upward.

In order to take up the shock incident to the pickers coming in contact with the pile of labels, the lever 24 and rod 26 are connected through the medium of a spring 27, as shown in Fig. 2. In order to further relieve the shock the rod 13 for the body labels is provided with a small plunger 36 which fits into a recess containing a coiled spring 37 to accomplish the purpose.

It is very important that the rods 13 be held positively while the pickers are acting upon the piles of labels, in order that the pickers may press against the bottom labels with sufficient force to insure that such bottom labels shall adhere to the pickers when the latter return. To this end, strong springs 33 are provided which pull the pawls 17 strongly against the racks 13. To insure perfect freedom of the racks 13 for downward feed, after the pickers have left the piles of labels, the rod 32 is provided; which rod, at such time, positively moves the pawls out of engagement with the racks against the tension of the springs 33 leaving said racks absolutely free to move downward.

In this machine, since the pawls 17 are held out of engagement with the rack rods 13 except while the pickers are acting on the bottom label, the labels in the label holders are under very light pressure when the

pickers are not acting, because the followers 11 and rack rods 13 are relatively light, and moreover are mounted in an inclined position; consequently, there is practically no tendency for the labels to buckle beyond the ends of the fingers 9; and this avoids the withdrawal of a plurality of the labels from one label holder at one time.

While the invention has been described with particular reference to the details of construction illustrated, it will be understood that changes may be made without departing from the spirit and scope of my invention.

What I claim is:—

1. A labeling machine comprising in combination a label receptacle, pickers for removing labels from said label receptacle, a presser-bar, and means controlled by the movement of the pickers which locks said presser bar when the pickers approach the label receptacle, and releases said presser bar when said pickers recede from the label receptacle.

2. A labeling machine comprising in combination a label receptacle, pickers for removing labels from said label receptacle, a presser-bar provided with a rack, a pawl for engagement with said rack, and means controlled by the movement of the pickers which locks said presser bar when the pickers approach the label receptacle, and releases said presser bar when said pickers recede from the label receptacle.

3. In a labeling machine the combination of a label receptacle, a presser-bar provided with a rack, a pawl or catch normally in locking relation with said rack, pickers for removing labels from said label receptacle, and means actuated by the movement of said pickers which intermittently releases said pawl from its locking relation with said rack after a label has been removed by the pickers.

4. In a labeling machine, the combination of a label receptacle arranged to hold the labels at an angle to the plane of the article to be labeled, a presser-bar for said label receptacle, means for normally locking said presser-bar against movement in one direction, a picker for removing labels from said label receptacle, and means actuated by said picker which intermittently releases said locking means after a label has been removed by the pickers.

5. In a labeling machine, the combination of a label receptacle adapted to hold a pile of labels and permit of the removal of the lowermost of said labels at any time, a presser-bar mounted to press on the top of the pile of labels, means for normally locking said presser-bar against upward movement, pickers for removing labels singly from the bottom of the pile, and means controlled by the movement of said pickers and

adapted to release said locking means from their engagement with the presser-bar after the label has been removed by the pickers.

5 6. A labeling machine comprising in combination a label receptacle, picker mechanism for removing labels from said label receptacle, a follower adapted to feed the labels in said label receptacle, locking means adapted to engage said follower and hold
10 same against return movement, a cam for disengaging said locking means from said follower, and means actuated by the picker mechanism for operating said cam.

15 7. A labeling machine comprising in combination a label receptacle, picker mechanism for removing labels from said label receptacle, a follower adapted to feed the labels in said label receptacle, a locking pawl adapted to engage said follower and
20 hold the same against return movement, a spring tending to hold said locking pawl in such engagement, a cam for moving said pawl out of such engagement, and means actuated by the picker mechanism for operating said cam.
25

8. A labeling machine comprising in combination a plurality of label receptacles, a frame supporting said label receptacles side by side, picker mechanism for removing labels from said receptacles, a follower for each such receptacle, adapted to feed the labels in said label receptacle, guiding means for said followers, pawls carried by said guiding means and adapted to engage said followers and hold same against return
30 movement, a spring for each such pawl adapted to hold the latter in such engagement, a cam rotatably mounted in said guiding means and engaging said pawls, and acting to move same out of engagement with
35 their respective followers, and means actuated by the picker mechanism for operating said cam.
40

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.
45

EDWARD ERMOLD.

Witnesses:

H. M. MARBLE,
D. A. DAVIES.