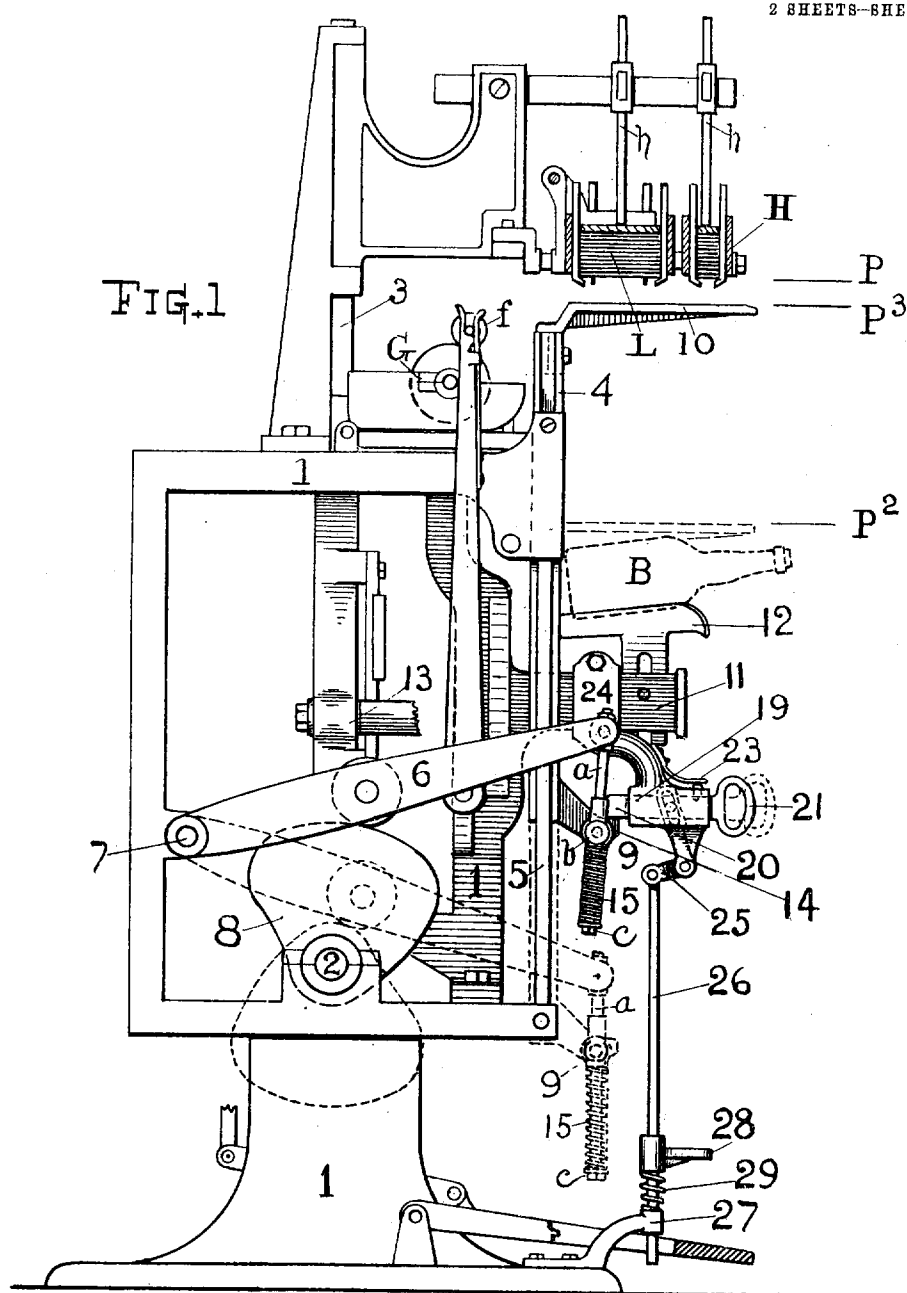


F. O. WOODLAND.
 FEED CONTROLLING MEANS FOR LABELING MACHINES.
 APPLICATION FILED MAR. 25, 1909.

974,326.

Patented Nov. 1, 1910.

2 SHEETS-SHEET 1.



Witnesses.

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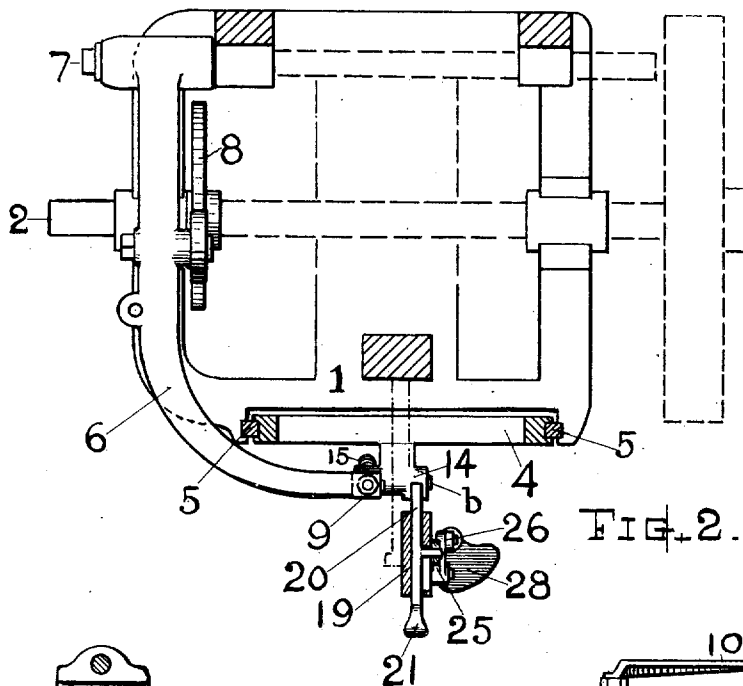


FIG. 2.

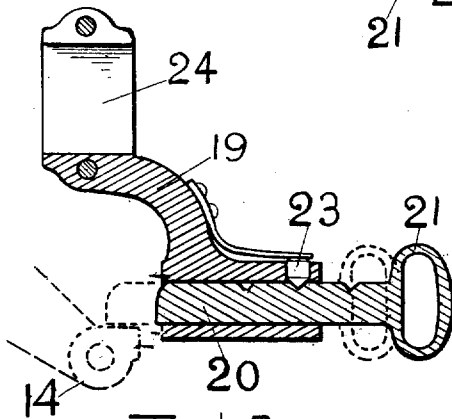


FIG. 3.

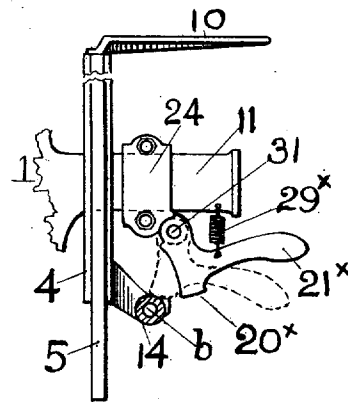


FIG. 4.

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UNITED STATES PATENT OFFICE.

FRANK O. WOODLAND, OF WORCESTER, MASSACHUSETTS.

FEED-CONTROLLING MEANS FOR LABELING-MACHINES.

974,326.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed March 25, 1909. Serial No. 485,577.

To all whom it may concern:

Be it known that I, FRANK O. WOODLAND, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Feed-Controlling Means for Labeling-Machines, of which the following is a specification, reference being made therein to the accompanying drawings.

My invention relates to improvements applicable to labeling machines of that class wherein a pack, or packs, of labels is supported in or upon a supply-box or label-holder from which the labels are fed or taken, at a predetermined position and approximately perpendicular to the plane of the label, by pickers that move to and from the position of feed-delivery, with a reciprocating or equivalent action, for adhesively extracting labels severally from the pack, or packs, and carrying said labels to the position for the affixment of the same to a bottle, or like article; the object of my present invention being to provide a labeling machine of this class with an interposable means for intercepting and arresting the movement of the picker-carrier, and thereby positively stopping the pickers at a position where they are out of contact with the pack, or packs, of labels. Also, to provide in a machine of the class specified, in combination with the reciprocating pickers and picker-carrier, means for yieldingly imparting motion to said picker-carrier, and an adjustable stop-dog or obstruction device adapted to be thrown into and out of intercepting engagement with the picker-carrier to arrest the upward movement thereof while the carrier-actuating mechanism continues in full operation.

For illustration my invention is herein shown as employed in a labeling machine having its picker-carrier supported on parallel vertical guides, and operated by a swinging lever actuated by a cam; but I do not wish to confine myself to this particular style or form of embodiment; since the invention can be applied to labeling machines of other general construction, and to picker-carriers operated by different means, without departure from the nature and object of my invention.

In the accompanying drawings, Figure 1 represents a side view of such parts of a bottle-labeling machine as will illustrate the nature of the invention; some parts of the

machine being shown in section, and the action of the picker-carrier mechanism being indicated by dotted lines. Fig. 2 is a horizontal sectional view of the stop-dog or intercepting devices, the picker-carrier and carrier-actuating means. Fig. 3 is a vertical sectional view of the intercepting devices, on somewhat larger scale, and Fig. 4 illustrates a modification which employs a swinging instead of a sliding dog or intercepting member.

Referring to the drawings, the parts marked 1 represent the frame; 2 indicates the operating-shaft; 3 the wiper-guide rod; 4 the reciprocating picker-carrier; 5 the picker-carrier guides; 6 the picker-operating lever; 7 its fulcrum axis; 8 the cam for actuating said lever; 9 a yieldable connection flexibly uniting the end of the operating lever with a projecting ear or lug fixed on the picker-carrier; and 10 indicates the glue-applying pickers which are attached to the upper part of the picker-carrier in the usual manner.

G indicates a glue-supply or gum-box and its delivery roll, and *f* the transferring roller that carries and applies glue, gum or adhesive substance to the faces of the pickers.

B indicates the label-holder, which is shown as arranged above the pickers and adapted for the bottom-delivery or feed of labels thereto, at a predetermined position, from the pack, or packs, of labels L supported upon said holder. Suitable automatic resisting follower devices *h* retain the labels in close pack and prevent the lifting of the picker by contact of the pickers.

12 indicates the bottle-supporting rest secured to a forwardly projecting arm or part 11 of the frame; and 13 indicates the carrier for the wiper-arms and wipers, which latter are not herein shown. The various parts which are above named, as well as the several operating parts not herein shown but generally employed in a complete labeling machine, can be constructed substantially as heretofore employed, or in any suitable well known manner.

The connection 9, as shown on Figs. 1 and 2, consists of a rod *a*, fixed in a rocking head on the end of lever 6, and passing through a wrist-pin *b* arranged in the lug or ear 14 of the picker-carrier 4. An expanding-tensioned coil-spring 15 is arranged about the rod *a* below said wrist-pin, and confined thereon by a head, washer-nut or other suit-

able fastener *c* at the end of the rod, substantially as shown in Fig. 1; so that while the lever is normally maintained in proper operating relation with the picker-carrier, the connection can yield or become elongated, under excessive stress, by the compression of the spring 15 and the sliding of the rod in the wrist-pin, and will automatically assume its normal relation when the excessive stress is relieved.

At a convenient position in respect to the picker-carrier, there is provided, according to my invention, a movable dog or means that can be adjusted or shifted into engagement for intercepting the picker-carrier in its movement toward the label-holder, and thereby positively arrest the advancement of the pickers as they approach the pack, or packs, of labels, but before said pickers contact therewith; while the yielding of the connection 9 permits the operating means or lever 6 to accomplish its full movement. The dog, or intercepting device, preferably consists of an endwise movable bar or bolt 20 mounted in or upon a hanger or bracket 19 that is connected with the forwardly projecting portion 11 of the frame whereon the bottle-rest 12 is supported; said bracket being located so that the end of the bar or dog 20, when advanced, will project over the ear or lug 14 on the picker-carrier, as indicated in Figs. 1 and 2; and when retracted will allow said ear or lug to pass by the end of the dog without interruption. The dog or intercepting member is best provided with a suitable handle 21, and a spring-catch 23, or spring pressed frictional stud, is combined therewith for retention of the dog at adjusted position in or out of engagement. The bracket 19 can be bolted to the arm 11, or made with a pair of side-plates 24 fitted to embrace either side of said arm, and held thereon by clamping the parts together by a bolt, or bolts, extending through the plates at either end, so as to hold the bracket rigidly in position.

When desired, an angle-lever 25 is pivoted upon a suitable projecting portion or fulcrum support; one arm of said lever being connected with the dog or bar 20, while the other arm of said lever is pivoted to an upright rod 26, the lower end of which works through a guide 27 secured to the base, as indicated in Fig. 1. A step or projecting member 28 is fixed to the rod, whereby the intercepting-stop can be operated by the foot or toe of the attendant, for controlling the feeding of labels to the label-affixing devices. A spring 29 is preferably provided for lifting or counter-balancing the rod 26, but may not in all cases be required or used. The hand-actuating means and foot-actuating means can be separately employed if in any instance so desired.

In the operation, the normal reciprocation

of the picker-carrier 4 and picker 10, is from the predetermined place of delivery of the labels at the level of line P, down to the place of their presentation for affixment to the bottle B, where the picker is indicated by dotted lines, or approximately at the level of line P². But when the stop-dog or device 20 is thrown inward, as indicated by full lines on Figs. 1, 2 and 3, then the upward movement of the picker-carrier 4 is intercepted, as the lug or ear 14 strikes the end of the stop-dog, and said carrier is thereby caused to come to a dead stop before the pickers 10 are brought into feeding contact with the pack of labels, or when at a position about the level of the line P²; while the yielding of the spring 15 of the connection 9 relieves the mechanism from any excessive strain due to the arresting of the picker-carrier movement.

In Fig. 4 there is shown a modification of my invention, wherein the stop-dog or intercepting means 20^{*} is made as a swinging member pivoted at 31 and provided with a projecting handle 21^{*} by which the dog can be swung into and out of intercepting position, the latter position being indicated by dotted lines. Suitable lugs may be provided for limiting the swing movement of the dog in either direction; and a spring 29^{*} is preferably arranged in connection with the dog for normally retaining it at retracted position, or so that it will not fall into engagement by the jaw of the machine.

I am aware that in practicing my invention changes may be made, by persons skilled in the art, in the form of its embodiment without departing from the nature and scope of the invention as expressed in the claims. I do not wish, therefore, to be limited to the special details or form shown herein; but

What I claim is—

1. In a labeling machine, the combination with the label-supply holder, pickers that take labels therefrom, and a reciprocating picker-carrier upon which the pickers are mounted; of an intercepting stop-device shiftable into and from abutting alinement with a coacting member upon the picker-carrier, for arresting the movement of said picker-carrier and pickers, and means for adjusting said intercepting stop-device into and out of engagement, for the purpose set forth.

2. In a labeling machine, a label-holder adapted for supporting a pack of labels for bottom delivery at a predetermined position, pickers movable to and from said position for taking labels singly from the pack, a carrier for said pickers, means for operating said picker-carrier, a yieldable connecting device joining said picker-carrier and its operating means, and a shiftable stop-device supported adjacent to and adapted to be

thrown as an intercepting barrier into the path of the picker-carrier for abutting engagement with said picker-carrier to stop its upward movement when the pickers are near to but not in contact with the pack of labels.

3. In a labeling machine of the class specified, a reciprocating picker-carrier, guiding means therefor, mechanism for fully operating said picker-carrier, a stationary label-holder having means for supporting a pack of labels, glue-applying pickers mounted upon said picker-carrier, an intercepting device supported on a stationary part of the machine and adjustable into position for temporarily intercepting and arresting movement of the picker-carrier when approaching the label-holder, and means for relieving the strain on the carrier-operating mechanism when said picker-carrier is arrested, without stopping said operating mechanism.

4. The combination of a top-charged bottom-delivery label-holder, having a plurality of pairs of stakes adapted for supporting labels in pack thereon, glue-applying pickers that take labels individually from the pack, an operating means for bringing said pickers and label-holder into conjunction to effect the feeding of labels by contact of the picker-faces with the under label of the pack, an interposable and retractable dog or stop-device engageable with the moving part at a fixed position to temporarily prevent contact of the pickers and labels, a yieldable connection uniting the moving part with its operating means, and means by which said

dog or stop-device can be manually interposed and retracted at will of the operator.

5. In a labeling machine, the combination, with the label-holder, vertically reciprocating picker-carrier, pickers thereon, picker-operating means connected with said picker-carrier, a yieldable connecting-joint mechanism therefor, a stationary bottle-rest, and the forwardly projecting arm that supports said rest; of a hanger secured upon said arm, a picker-stopping device adjustably supported by said hanger, and adapted to be moved into the path of the picker-carrier or an engageable member thereon; said stopping device having a handle member at convenient position for manual actuation thereof for adjusting the stop-device into and out of intercepting or engaging position, for the purpose set forth.

6. In a mechanism of the class described, the combination with the label-feeding means, the picker-carrier, and an intercepting stop-device for arresting the upward movement of said picker-carrier before reaching the normal limit of its action, for controlling the feed of labels; of an actuating connection for moving said stop-device, comprising an angle-member, a depending bar, and a step or pedal fixed on said bar, whereby said stop-device can be operated by the foot of the operator.

Witness my hand this 23rd day of March, 1909.

FRANK O. WOODLAND.

Witnesses:

CHAS. H. TRULEIGH,
A. G. DAVIS.