F. O. WOODLAND.

LABELING MACHINE.

APPLICATION FILED MAR. 7, 1908.

938,807.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

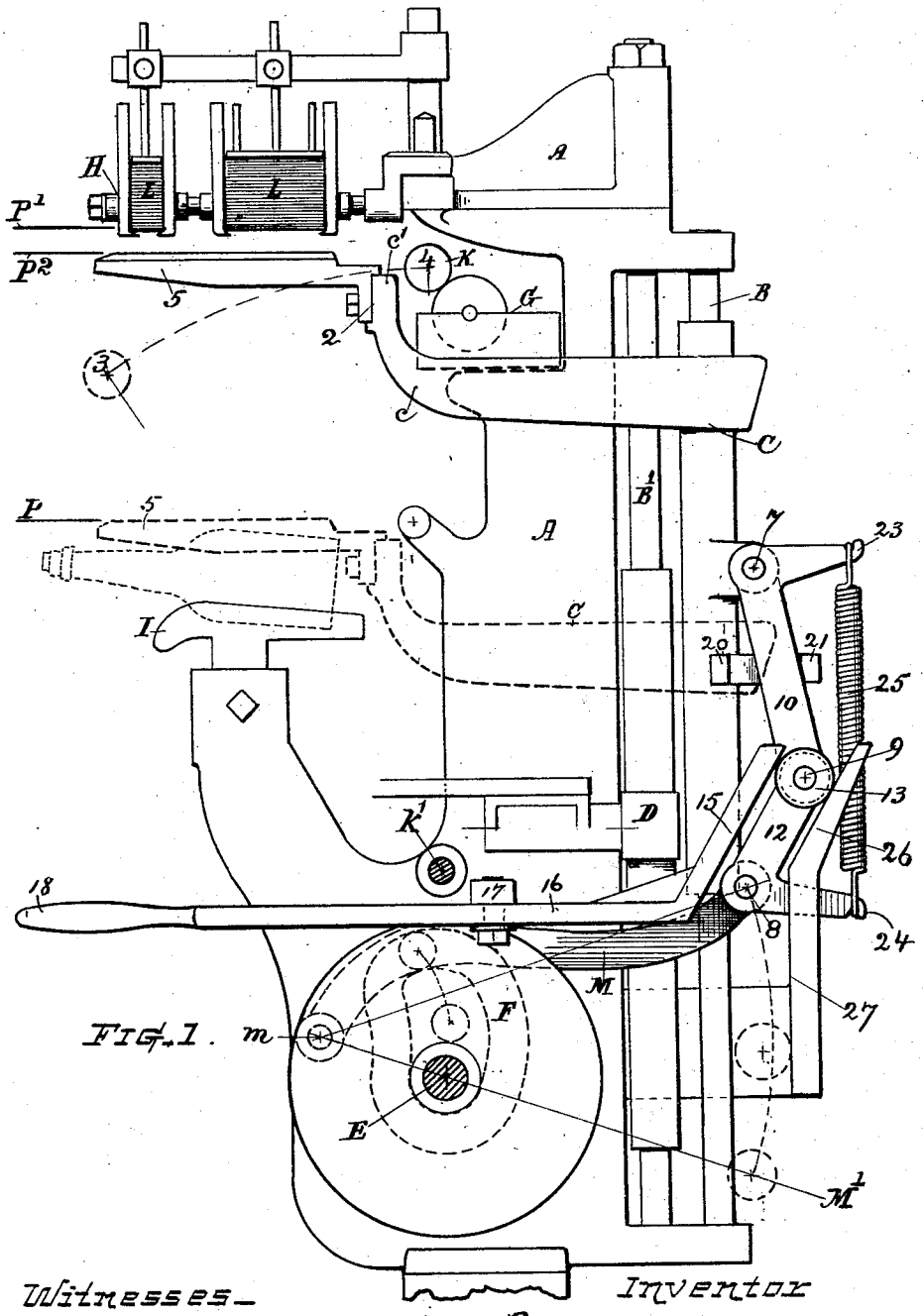

FIG. 1.

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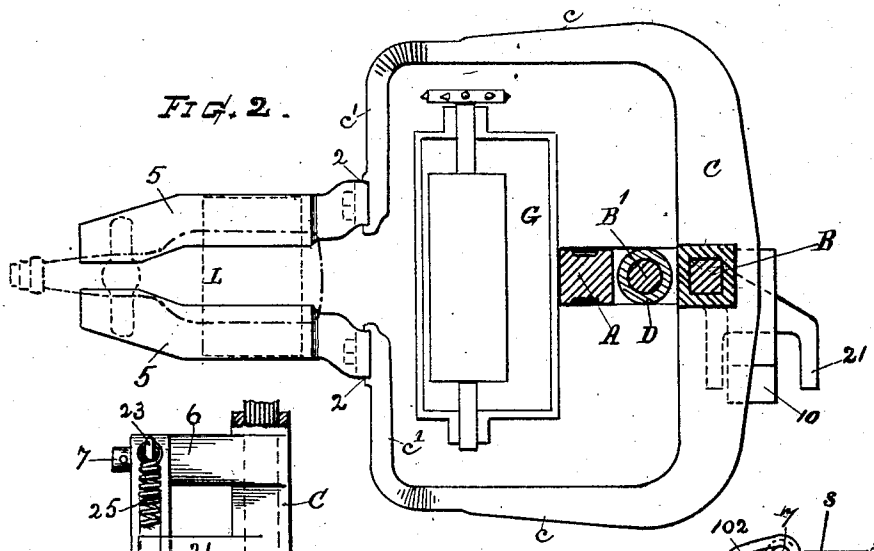
2 SHEETS—SHEET 2.

FIG. 2.



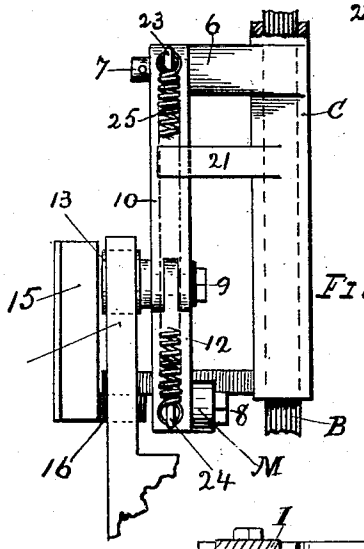


FIG. 3.

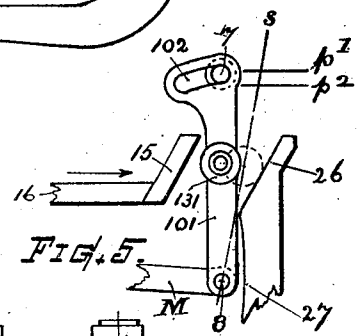


FIG. 5.

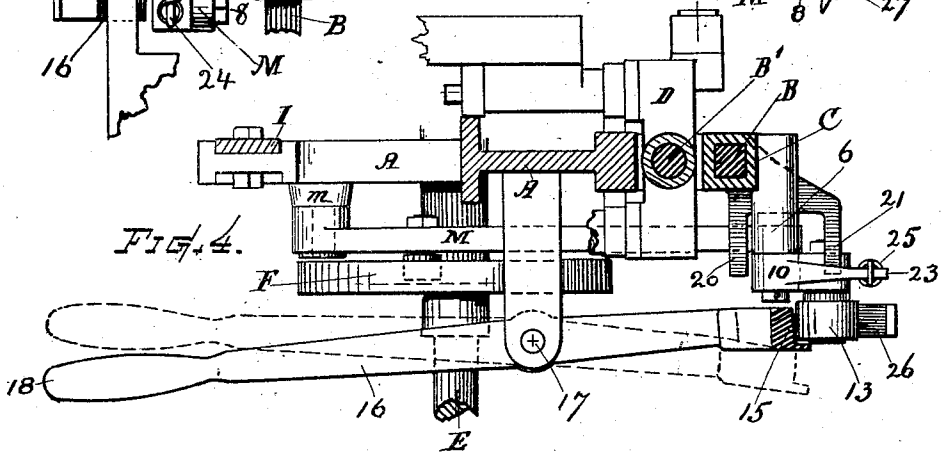


FIG. 4.

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UNITED STATES PATENT OFFICE.

FRANK O. WOODLAND, OF WORCESTER, MASSACHUSETTS.

LABELING-MACHINE.

938,807. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed March 7, 1908. Serial No. 419,660.

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 Improvement in Labeling-Machines, of which the following is a specification, reference being made therein to the accompanying drawings.

My present invention relates to the picker mechanism in labeling machines; more particularly machines for labeling bottles, or the like, including such as employ an overhead label-supply holder and reciprocating pickers that approach the label-holder for taking labels adhesively therefrom; the object of my present invention being to provide means for controlling the picker movement for temporarily interrupting its effective action, in the taking of labels, by curtailing, shortening or arresting the movement of the pickers in their approach toward the label-holder.

Another object is to provide, in combination with the picker-carrier and its actuating mechanism in a bottle labeling machine, means for changing or varying the extent or limit of movement imparted to the picker-carrier and pickers by the actuating connections, and operative when the machine is running, as more fully hereinafter described.

The accompanying drawings show such parts of a labeling machine as will illustrate the nature of my invention, the constructive features and minor objects thereof being explained in the following detailed description, and the particular subject matter claimed being hereinafter definitely set forth.

Figure 1 represents a side view of the parts of mechanism having relation to and including my invention. Fig. 2 is a sectional plan view representing the top of the pickers and picker-carrier. Fig. 3 is a fragmentary rear view showing the picker-actuating connections and controlling devices. Fig. 4 is a sectional plan view representing the picker actuating devices and controlling devices combined therewith, and Fig. 5 represents a modification in the form of the connecting members, drawn to smaller scale.

In this description and drawings I have illustrated the nature of my invention in one form of its embodiment, and as applicable to a bottle-labeling machine of the class or general character described in my application for Letters Patent Serial No. 197,485; but the inventions may in practice be successfully employed in connection with labeling machines of other general construction than that noted, and the form of the embodiment can be varied to meet the constructive requirement of different labeling machines, without departure from the essential nature and spirit of the invention as expressed in the summary.

In the drawings, the part marked A represents a suitable supporting frame; B and B^1 guides for the reciprocating parts; C the picker-carrier movable on the guide B, and D the wiper-carrier slide movable on guide B^1. The wiper mechanism can be of any suitable construction. It is not essentially an element of my present invention, and only a portion thereof is herein shown for disclosing the relation thereto of the picker carrier.

E indicates the operating shaft having means, as a cam F, for moving the picker-actuating devices; and H indicates the label-holder for containing the pack, or packs, of labels L; said label-holder being stationary, supported upon the frame A and adapted for the taking of labels therefrom by bottom delivery in single order upon the glue-coated faces of the pickers 5 which are brought into contact with the pack of labels and the label carried by the pickers and presented at position for its affixment to the bottle or article by the reciprocating movement of the pickers, as will be readily understood; a label being taken from the holder each time the pickers reciprocate into contact therewith, when normally acting.

The picker-carrier C preferably consists of two laterally and forwardly extended arms c having inwardly projecting front ends c^1 provided with seats 2 for the attachment thereto of the pickers 5 which are detachably secured thereto and project forward therefrom, as shown in Figs. 1 and 2. The carrier arms are connected with a tubular upright slide that is mounted to move up and down upon the guide-rod B disposed adjacently in rear of and parallel with the wiper-carrier guide B^1 at the back of the frame. The arms afford an approximately rectangular central open space, as shown in Fig. 2. The pickers are suitably attached to the picker-carrier and held in rigid connection therewith to move with the reciprocating action of said carrier. By construct-

ing the picker-carrier in the manner shown with the laterally and forwardly extended arms, with inwardly projecting front ends to which the pickers are attached to extend forward therefrom; and by mounting the picker-carrier on a central guide in rear of and parallel with the wiper-carrier guide, I attain an unobstructed access to the bottle rest for placing and removing bottles quickly; while ample room is afforded between the arms for passing the glue-supply box and glue-delivering roll, and other parts of the mechanism, thus rendering the machine desirable and convenient for attendance.

I indicates the bottle-rest; G the glue-box provided with a glue-delivering roller; and K the transferring roller for spreading glue or adhesive material on the face of the pickers as they approach the label holder. Said parts can be of usual construction and operation, the roller K moving from position 3 to position 4 and back to its first position, as heretofore practiced.

The normal movement of the picker-carrier C is such as to carry the face of the pickers from the line P, or plane where the labels are presented for attachment to the bottle, up to the line P^1, or predetermined position of label delivery where the face of the pickers contacts with the pack, or packs, of labels L, and vice versa. The movement is imparted by suitable actuating connections from the operating shaft E; in the present instance by a cam F and a swinging lever or arm M fulcrumed at *m* and operated by said cam; the end of the lever being linked to the picker-carrier slide.

The gist of my present invention consists, broadly, in the employment of picker-controlling means that can be brought into effect for temporarily preventing the pickers from moving completely up to the label-holder, or contacting with the labels while the machine is otherwise in normal operation.

The numerals 10 and 12 indicate link members of a knuckle-joint character hinged together at 9, and provided with a stud or roller 13 on the side of the joint. One of said members is pivotally connected to the lever M at 8, and the other member is pivotally connected at 7 to the picker-carrier, preferably to a projecting boss or ear 6 fixed on the picker-carrier slide which runs upon the guide B. At a suitable position adjacent to the roller 13 I provide a shiftable inclined abutment 15 that can be moved into and from contact with said roller, thereby deflecting the knuckle-joint from its normal direct line when said abutment is brought into coacting position, as best shown in Fig. 1. This deflecting abutment is preferably attached to a hand lever 16 suitably fulcrumed at 17 to a stationary part of the frame, and provided with a handle 18, at a position conveniently accessible to the operator at the front of the machine, whereby the lever can be swung one way or the other for shifting the abutment into or from engagement with the knuckle-joint roller 13, as indicated by full lines and dotted lines on Fig. 4. A front stop 20 and a back stop 21 are best provided for limiting the extent to which the knuckle-joint members can swing in either direction. A spring 25 is preferably combined with the parts and arranged to cause the members 10 and 12 to assume a position of direct alinement. Said spring can be of any approved form. As a preferred construction, herein shown, each of the connection members is provided with a backwardly projecting arm, as 23 and 24, and the ends of said arms linked to each other by a coiled wire spring that exerts contractile force to straighten the knuckle.

At the rear of the roller 13 I arrange a stationary guard having an inclined surface 26 for forcing the knuckle-joint into a straight alinement as the parts move downward, and with a standing surface or edge 27 that prevents the knuckle roller from being thrown back, excepting when it is between the abutment 15 and incline 26. It also positively extends the connection at the lower part of the movement so that the pickers will not descend beyond the line P, or the predetermined position at which labels are normally presented for affixment to the bottle.

The operation is as follows: When the hand-lever 16 and abutment 15 are in the position indicated by dotted lines on Fig. 4, the connections 10 and 12 work in straight alinement and the pickers 5 are moved up to the level P^1 where they contact with and take a label from the label holder H, such being the normal working conditions. If for any reason it is desired that a label should not be taken from the label holder, then the attendant swings the hand lever 16 to the position shown in full lines on Fig. 4. This brings the abutment 15 into the path of the knuckle roller 13, and as the picker actuating connections 10 and 12 move upward the roller 13 is forced rearward by the inclined face of the abutment; flexing the hinge 9, as shown in Fig. 1, thereby shortening the effective length of the connecting links, so that the pickers are elevated only to the level of the line P^2, or as shown in full lines on Fig. 1, and the contact of the pickers with the pack of labels L is thus prevented; consequently no label is then taken by the pickers when they descend, although all other parts of the machine may be running in their regular order. At the descending movement of the picker actuating connections the roller 13 follows the face of the guard 26 and the members 10 and 12 of the

connection are brought into straight alinement before reaching the limit of downward movement. This is the case whether the abutment is at engaging position or otherwise; consequently the picker carrier C is always stopped at the predetermined position with the face of the pickers at the level P.

This invention provides a very simple and efficient means for stopping the feed of labels at any moment and for any length of time, when it is desired not to stop the running of the entire machine.

Fig. 5 illustrates a modification, in which the connecting link 101 is made as a single piece and provided with an inclined slot 102 that embraces the pivot 7 which unites it with the picker carrier C. The roller 131 is mounted upon a stud fixed on the side of the link. In this construction, when the abutment 15 is moved into the path of the roller the upper end of the link is swung back, as indicated by the broken line *s;* and the shortening or variation in the connection is effected by the incline of the slot 102, as represented by lines p^1 p^2.

I am aware that changes may be made in the form of embodiment of my invention by those skilled in the art, without departing from the spirit and scope thereof as expressed in the claims. I do not desire, therefore, to be limited to the precise construction in detail herein shown and described; but

What I claim and desire to secure by Letters Patent is—

1. In a labeling machine, a reciprocating picker-carrier with glue-applying pickers thereon, a label holder for supplying labels to said pickers, means for imparting the normal movement for operating the picker-carrier, and means for changing the extent of the picker-carrier movement to prevent contact of the pickers with the labels upon said label-holder.

2. In a labeling machine, the combination, of a bottom delivery label-holder, a reciprocating picker-carrier with glue-applying pickers thereon that normally move into conjunction with said label holder for receiving the label therefrom, and means for temporarily controlling the picker action to terminate its upward movement at a lower position than the label-holder.

3. In a labeling machine, in combination, a label-holder having means for supporting a pack of labels for bottom delivery, a rest for supporting the article to be labeled, devices for taking a label from the pack and transferring it to a predetermined position above said rest, means for operating the label-transferring devices, and a manually controlled means for varying or reducing the normal movement of said label-transferring devices toward the label-holder, without interfering with or changing the limit of its movement toward said predetermined position.

4. In a labeling machine, the combination of a label holder adapted for holding a pack, or packs, of labels and supported for delivering labels at a predetermined stationary position, a reciprocating picker-carrier having pickers mounted thereon, movable to and from said delivering position in a direction approximately perpendicular to the plane of the label-holder, means for operating the picker-carrier, a variable connecting device between said operating means and picker-carrier, and a manually actuated means for temporarily controlling said connection to decrease the extent of movement transmitted thereby to the picker-carrier, for the purpose set forth.

5. In a labeling machine, the combination, with a stationary label-holding means, a picker mechanism adapted for taking labels therefrom, an operating shaft and means actuated from said shaft for reciprocating the picker mechanism, said means comprising a displaceable jointed connection, the effective length of which is variable by the offsetting and straightening of its joint, and means for temporarily effecting flexure of said connection while the picker mechanism is in operation.

6. In a labeling machine, in combination with a stationary label-holder that delivers labels at a predetermined position, a bottle supporting rest, a reciprocating picker-carrier provided with pickers that transfer labels from said label-holder and present them above said bottle-rest, of a picker-actuating lever, means for operating said lever, a knuckle-jointed connection consisting of two hingedly united members respectively pivoted to said operating lever and picker carrier, a roller or stud carried upon said connection, an inclined abutment shiftable into and from the path of said roller for flexing the joint, a hand-lever for shifting said abutment, a reflexing spring for said connection members, back and front stops for limiting the flexive movement, and a guard device that readjusts the straight alinement of the connection members when the roller is released from contact with the abutment.

7. In a labeling machine, the combination as described, with the supporting-frame, bottle-rest, label-holder, glue-supply box, glue-delivering mechanism, and wiper carrier and the wiper-carrier guide at the rear of the frame; of the picker-carrier guide disposed in rear of and adjacently parallel with said wiper-carrier guide, the picker-carrier mounted thereon and consisting of a tubular slide, and a pair of laterally and forwardly projecting arms that reach around the glue-supply box, said arms provided with in-

wardly offset ends having seats for the support of pickers, and the forwardly projecting pickers detachably secured to said carrier ends, substantially as set forth.

8. In a labeling machine, a picker-carrier constructed substantially as described, and consisting of a pair of laterally and forwardly reaching arms having inwardly projecting ends provided with picker-attaching seats at their extremities, and a guiding member perpendicular to and integrally united with the back portion of said arms and slidably supported upon a guide at the rear of the machine, said guiding member provided with means for the connection therewith of operating devices, and means for operating said picker-carrier.

Witness my hand this 27th day of February 1908.

FRANK O. WOODLAND.

Witnesses:
CHAS. H. BURLEIGH,
ELLA P. BLENUS.