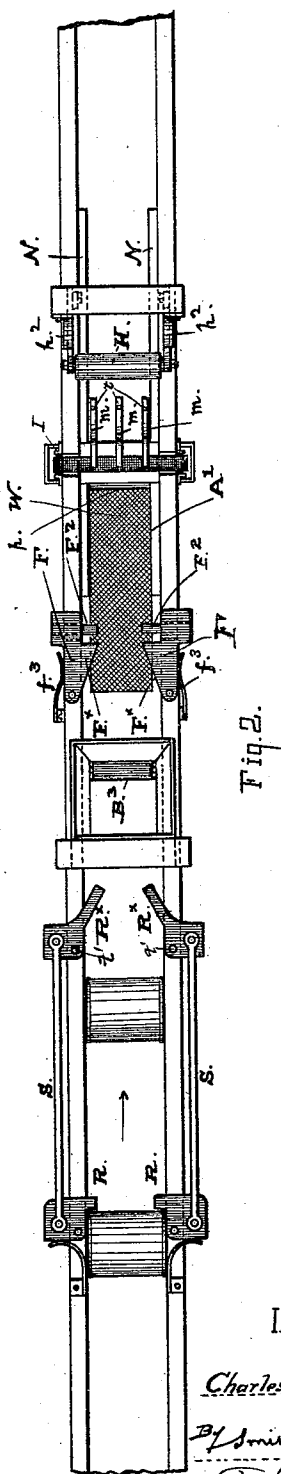
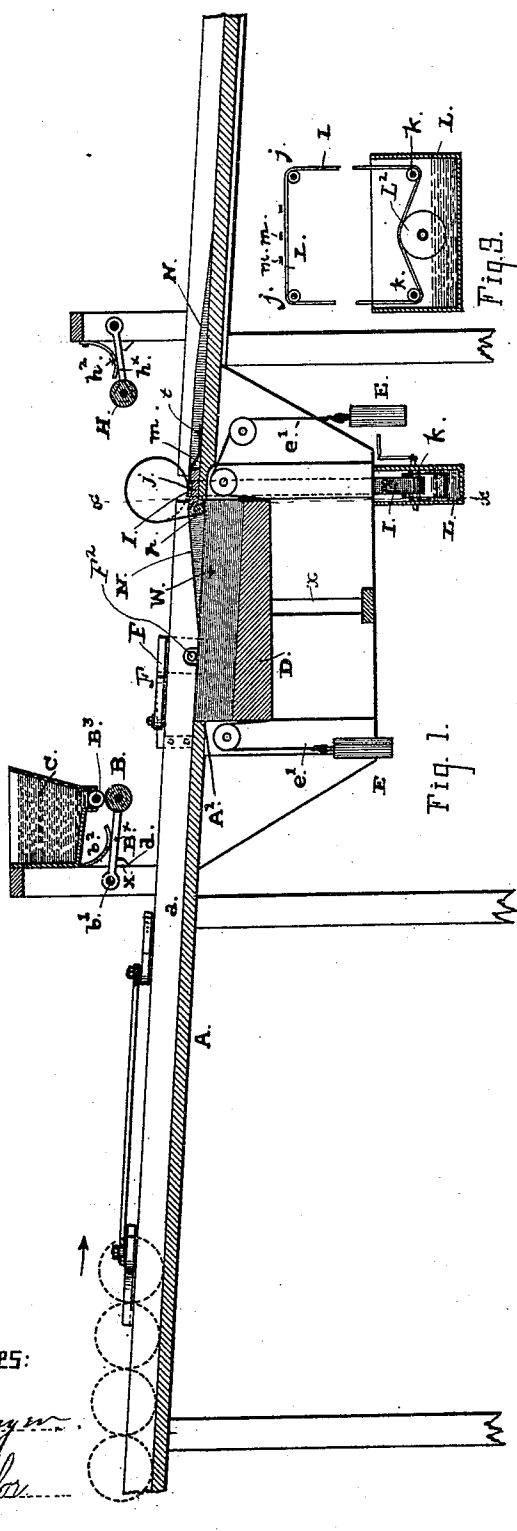


(No Model.)

C. E. NEWELL.
CAN LABELING MACHINE.

No. 470,165.

Patented Mar. 1, 1892.



Witnesses:

Wm. May
L. Taylor

Inventor:

Charles E. Newell
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for Atty.

UNITED STATES PATENT OFFICE.

CHARLES E. NEWELL, OF SAN FRANCISCO, CALIFORNIA.

CAN-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 470,165, dated March 1, 1892.

Application filed May 27, 1891. Serial No. 394,244. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. NEWELL, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Can-Labeling Machines, of which the following is a specification.

My invention relates to machines or apparatus for pasting and fixing labels on fruit-cans; and it consists in certain novel parts or devices and combination of parts by which paste is applied to the surface of the can, the label is taken up and wrapped around the paste-coated surface, and the ends of the label are lapped and fixed on the can in the run or descent of the can through an inclined runway, the several operations being performed automatically and by the rolling movement of the can.

The invention embraces, also, certain novel mechanism to regulate the headway or interval of time between the rolling cans in their passage through the several devices.

The nature of the improvements and the manner in which I have constructed and combined the same in the production of an automatic machine will be understood from the following description, the accompanying drawings, that form part of this specification, being referred to by letters.

Figure 1 represents the machine in side elevation and principally in longitudinal section. Fig. 2 is a plan or top view. Fig. 3 is a vertical cross-section taken through the lap-pasting device at about the line *xx*, Fig. 1.

In this machine the cans roll by gravity on an inclined runway, and the pasting devices and label-feeding mechanism are located at points in the length of the runway, leaving such intervals of space between them that the momentum of the can is sufficient to carry it through and cause it to act on each device or mechanism in turn. The body of the can or a portion thereof is first coated with paste and then in its rolling motion is caused to pick up and wrap around it the label, which after being smoothly laid and fixed by the rolling contact and weight of the can is pasted at the overlapping ends by an auxiliary or separate pasting device. The headway or interval of time between one can and the next is controlled by automatic stops, through the

medium of which one can in its descent releases and regulates the time of discharge and descent of the next can.

A indicates the inclined runway for the cans, and B a paste-carrying roller hung on a pivoted frame over the runway and under a paste-fountain C. The labels are held and presented flatwise in the path of the rolling can by an upwardly-moving label-bed D. Beyond the level-bed is placed an auxiliary pasting device that applies paste to one of the edges or ends of the lap, and beyond this second paster is arranged a presser-roller H to act upon the overlapped ends and join them together. The roller H is mounted over the runway in pivoted arms *h^x*, and springs *h²*, applied to the arms, act to press the roller against the lapped edges as the can rolls over it. The pasting-roller B is hung in swinging arms *B^x* and is held against the can with suitable pressure to produce rolling contact with the can by springs *b²*, bearing upon the arms. The stop *d* is placed on the stationary uprights of the frame X to limit the drop of the arms. This frame also carries the paste-fountain C, that is set over the pasting-roller. The paste is delivered through an aperture in the bottom of the fountain upon a fountain-roller *B³*, running in contact with the pasting-roller. In passing under the pasting-roller *B³* the body of the can will receive a coating of paste over a portion of its circumferential surface sufficient in area to cause the label to adhere reliably to it, and the subsequent lap-pasting will unite the meeting ends of the label and hold it permanently upon the can. It will thus be seen that the entire peripheral surface of the can need not be coated with paste, as a reliable affixture of the label is secured with only a portion thereof so coated. The label-bed D is movable in stationary sides *xx* and fills an opening *A'* in the bottom of the runway of the same size as the labels, so that a pile of labels placed on the bed is fed up and the labels are presented one after another to the rolling cans. The bed is suspended in the opening by cords *e' e'* and weights *E E*. Movable stops *F² F²* set over the topmost label and keep it in position on a level with the bottom of the runway until the can has passed over the first or leading end of the label and taken it up. These

stops are fixed on the inner sides of two pivoted fingers *F* on opposite sides of the runway and set over the edges of the topmost label, and the inner sides of the pivoted plates projecting over the runway have inclined edges *F'*, set to engage with the ends or heads of the cans as they roll down the runway, which strike the fingers with sufficient force to press them back and throw the stops clear of the label. Springs *f*³ on the back of the fingers serve to return the stops into position over the label next beneath as soon as the can has taken up the topmost label and drawn it beyond the stops. I do not herein claim these movable stops, as they are made the subject-matter of a separate application for Letters Patent filed June 6, 1891, Serial No. 395,327.

To regulate the headway or interval of space between one can and the next, I arrange two sets of stops *R R*^x *R*^x on opposite sides of the runway above the point where the pasting-roller is located, with a greater or less interval of space between the higher and the lower set, according to the distance to be maintained between the cans in their run along the incline.

R R are the principal stops, and the ones *R*^x *R*^x below them are tripping-stops, that when struck and pressed by the rolling can are made to draw back the principal stops and release the foremost can on the incline. *S S* are rods connecting the tripping-stops to the others above. The stops are pivoted at *t'* on the raised sides of the runway.

The time required for a can to run by gravity and to acquire proper momentum for carrying it through the pasting device and for picking up and running over the label will determine the distance between the two sets of stops. One can, as it strikes the lower stops *R*^x, therefore releases the next can and throws the principal stops into place in the front of the next can, so that one can at a time is set free, while the entire operation of feeding the cans, applying a coat of paste to the label-bearing surface, and wrapping the label around it is performed automatically.

To complete the work of fixing the label, it is necessary to lap and secure the ends at the joint, and for that purpose I arrange at the lower end of the label-bed a lap-pasting device, by which a small quantity of paste is applied on the outside face of that end of the label which comes undermost in the lap and before the other end is pressed down. This auxiliary pasting device is a narrow endless belt or tape *I*, mounted on rollers *j j* in horizontal position across and above the end of the label lying uppermost on the bed and running through a paste-trough *L* below the bed or runway. Small guide-rollers *k k* in the paste-trough carry the belt over a roller *L*², running in the paste. A small roller *p* sets across the ends of the labels just in advance of the paste-belt to hold down the labels, and as the can in its rolling motion takes up the top label it draws out the end from under the

roller. The paste-belt is set just above the top of the roller *p*, and the can is carried up by inclined tracks *N N* to clear the roller and run over the belt. In reaching this point where the paste-belt is set the rolling can is in such position that the end of the label already fixed to the can-body comes directly in contact with the paste-bearing surface of the belt and becomes coated by such contact before the other end of the label is pressed down against the can. The remainder of the operation is performed by the joint motion of the can and the pressure of the overhead roller *H*, placed just beyond the lap-paster. This roller is hung in pivoted arms, and is held down by a spring that gives sufficient pressure to produce rolling contact of the roller with the can. These features—namely, the auxiliary paster to apply paste to one of the overlapping ends of the label and the presser-roller—are of especial importance as producing a smooth and regular joining of the ends of the label, so that no subsequent hand-labor is necessary. *m m* are flat spring-fingers fixed at the ends *t t* and setting over the paste-belt *I*, with their free ends presented toward the label-bed. The office of these fingers is to prevent the label from adhering to the paste-belt, and thereby lifting the belt or drawing the label away from the can. The springs are depressed by the first contact of the rolling can, and afterward by their elasticity they act to slightly accelerate the motion of the can or prevent the sticky character of the surface from retarding that motion.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a can-labeling machine, the combination, with an inclined runway on which the cans run by gravity, of the stops *R R* and tripping-stops *R'*, located at a distance below said stops *R* in the path of the cans and having connection with said stops, whereby the foremost descending can by contact with the tripping-stops operates on the stops *R* to release the next can, substantially as hereinbefore described.

2. In a can-labeling machine, the combination, with an inclined runway, of a can-pasting roller adapted to apply a coating of paste to the body of the can, a label-feeding bed arranged in the runway and presenting a label flatwise in position to be taken up by the paste-coated surface of the can and to be wrapped by rolling contact of the can, and an auxiliary pasting device consisting of a belt arranged to travel transversely across the runway just beyond and at a higher level than the lower end of the label-bed and adapted by its form and position to apply a line or strip of paste across one end of the label before the opposite end is brought over and pressed against it to finish the lap, substantially as hereinbefore described.

3. In a can-labeling machine, the combination, with a label-feeding bed and an inclined

runway by which the cans are carried over the bed in contact with the label thereon, of a lap-pasting device consisting of a paste-supply trough and an endless paste-carrying transversely-moving belt receiving a supply of paste therefrom and located just beyond and at a higher level than the end of the label at the lower end of the label-bed in the path of the rolling can and at such distance from the upper end of the label-bed that the end of the label first taken up is brought by the rolling motion of the can directly against the said paste-belt before the opposite end of the label is brought against the can and pressed down to complete the lap.

4. In a can-labeling machine, the combination, with an inclined runway and a label-feeding bed therein, of the lap-pasting belt I, presenting a paste-bearing surface across the path of the rolling can in position for contact with the surface of the label at the end, and the spring-fingers arranged to lie over the lap-pasting belt for operation as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

CHAS. E. NEWELL. [L. S.]

Witnesses:

EDWARD E. OSBORN,
A. M. CHARLOT.