S. L. SALOMON, C. F. KNOCH & G. A. SEMEL.

Can-Labeling Machine.

No. 203,200. Patented April 30, 1878.

Fig. 1.

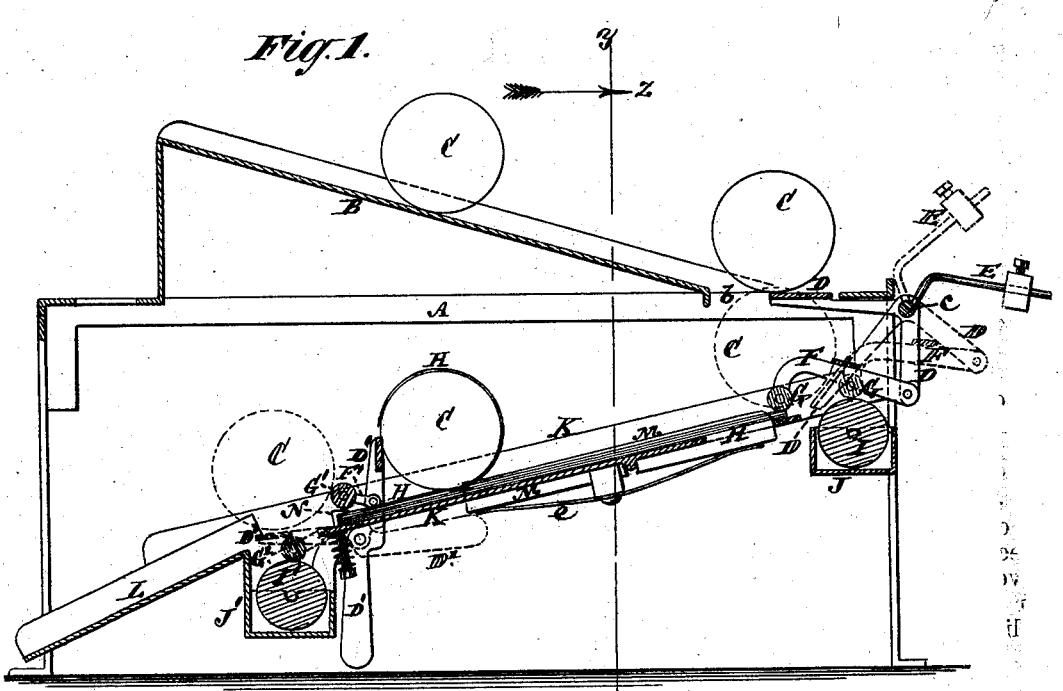


Fig. 2.

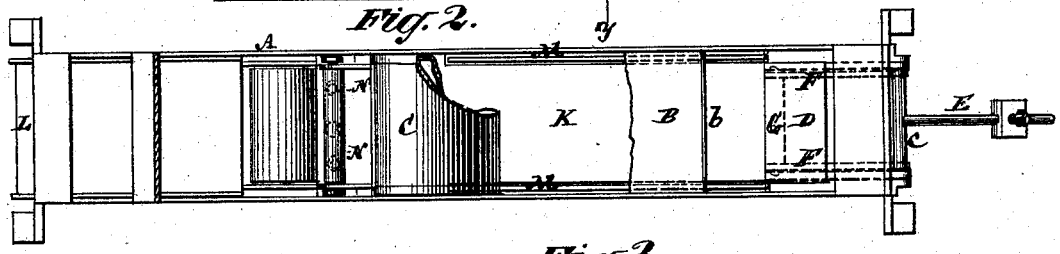
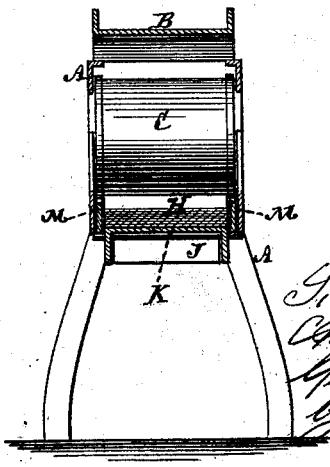


Fig. 3.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CAN-LABELING MACHINES.

Specification forming part of Letters Patent No. **203,200**, dated April 30, 1878; application filed February 18, 1878.

To all whom it may concern:

Be it known that we, SIEGMUND L. SALOMON, CHARLES FR. KNOCH, and GEORGE A. SEMEL, all of the city and State of New York, have invented certain new and useful Improvements in Machines for Labeling Cans, Boxes, and other articles, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to that class of machines for labeling round metal cans, boxes, and other like articles, in which the labels that are laid in a pile on an inclined table are successively pasted on said cans or articles as the latter are rolled down over the labels.

The invention consists in a combination, with an inclined feeding table or trough for the cans or boxes, of a reversely-inclined label trough or holder, arranged beneath the feeding-table, and with its upper end beyond the lower end of the feeding-table, whereby each can or box in succession, when laid on the feeding-table, rolls down the latter, and subsequently drops onto the reversely-inclined label-trough, or one pasted end of the upper label therein, and subsequently rolls in a reverse direction down or through the label-trough to wrap the label around it, and to secure the opposite or overlapping pasted end of the label on it.

The invention also consists in a combination, with the upper inclined feeding-table, the lower reversely-inclined label trough or holder, and paste-boxes or supplying devices at opposite ends of the label-trough, of automatically-operating movable guards or devices, carrying or having connected with them paste-distributing rollers, the whole being arranged so that the motion of the can or box, in passing through the machine, automatically controls the action of the paste-rollers, to pass them in and out of the paste-boxes and onto the ends of the label, substantially as hereinafter described. The label-trough is also provided with downwardly-yielding side guides, to keep the labels in lateral position within the trough and up to the cans; also, spring-clamps to hold down the pile of labels, and for other purposes; but such devices form no part of this invention.

In the accompanying drawing, Figure 1 represents a longitudinal sectional elevation of a machine constructed in accordance with our invention, with cans to be labeled in the course of passing through the machine. Fig. 2 is a plan of the same; and Fig. 3, a transverse vertical section on the line *y y*, looking in direction of the arrow *z*.

A represents the main frame, which may be of any suitable construction. B is an inclined feeding board, table, or trough, onto the upper end of which the cans to be labeled are placed one by one, successively, and caused to roll down said trough in a straight line or course till they reach an opening, *b*, at the foot of the inclined feeding-board B, when their impetus causes them to be projected onto a trap or guard, D, arranged over or within said opening. Said cans are first filled and closed before placing them on the inclined feeding table or trough.

The guard D, which may be in the form of a bell-crank frame, is fitted to rock on or by a pin, *c*, at its upper rear end, and is supported in a raised or receiving position for the can as the latter is delivered from off the lower end of the inclined feed-table B onto it by a spring or weighted lever, E. Said guard, which drops or yields by the weight of the can to permit of the fall of the can through the opening *b*, has pivoted or jointed to its lower end a frame, F, which carries at its front a paste-distributing roller, G, that, when projected forward by the action of the weighted lever E, serves to smear with paste the one end marginal portion of each upper one in succession of a series of labels, H, piled one upon the other. During each back action of this frame F, as the can by its weight depresses and works back or out of the way the guard D, the paste-distributing roller G is brought in contact with a supply-roller, I, in a paste-box, J, for replenishing the distributing-roller with paste. These two positions of the guard D, with its attached paste-roller frame F, are shown by full and dotted lines in Fig. 1.

The paste-distributing roller may be fitted with rollers on its ends, arranged to travel on or over guide-rails, to properly support and direct the roller G as it is vibrated to and fro relatively to the pile of labels H and paste-supply roller I.

The pile of labels H, having their backs uppermost, are arranged upon an inclined trough or holder, K, which is placed beneath the inclined feeding-table B, and slopes in a reverse direction to the latter, with its upper end extending beneath the opening *b*. At the front of this inclined label trough or holder is another swinging guard, D′, controlled by a spring or weight, to occupy an approximately upright position till depressed or moved backward by a can in the inclined trough K striking and riding over it, for the purpose of causing a paste-distributing roller, G′, carried by a jointed frame, F′, to alternately swing back into contact with a supply-roller, I′, in a paste-box, J′, and forward again onto or over the bottom end marginal portion of the upper label H of the series of labels in the trough K, to smear said marginal portion with the paste.

In the general operation of the machine, each can, in succession, rolls down the inclined feed-table B onto the guard D, which, by the weight of the can, is pressed back out of the way, as hereinbefore described, and the can, falling through the opening *b*, strikes on the pasted upper end margin of the top label H in the trough K, and by its impact therewith insures the adhesion of said pasted end of the label to the can, which then rolls down the inclined trough K, wrapping the label around it, and causing the opposite pasted end of the label to be wrapped over the end thereof previously secured to the can. The can then strikes the guard D′, which it ultimately rides over, and passes onto a delivery-chute, L. This action of the can, combined with the action of the weights applied to the guards D D′, makes the paste-distributing rollers G G′ operate automatically as regards taking up their supply of paste and distributing it over the opposite ends of each label in succession.

The delivery-chute L may be of any desired length, and be covered with carpet or other rough material to smooth or perfect the lay of the label on the can. Furthermore, the inclined feeding-table B may be adjustable longitudinally to vary its distance from the opening *b* to suit different-sized cans, and the inclined label-trough K may be arranged at any desired distance below the table B, but in every case should be sufficiently far from it to give a good or extended drop to the can, as it is upon the impact of the latter with the pasted upper end of the label that the attachment of the latter to the can is insured.

Within the trough K are side guides M M, held up by weights or springs *e* from below. These guides serve to prevent lateral disturbance of the labels which are arranged between them. The ends of the cans run on said guides, which are made yielding by their controlling springs or weights to provide for the constantly-diminishing thickness of the pile of labels as one label after another is taken up by the cans. The lower ends of the labels are held down to their places in the trough K by means of spring hooks or clamps N, which have a threefold function, viz: first, to hold down the pile of labels; second, to act as stops to prevent the labels slipping down within the trough; and, third, to operate as drags on each upper label in succession as the can wraps said label around it and draws the bottom pasted end of the label from under the hooks, whereby a tight or close wrap of each label around the can is insured.

By the reverse arrangement of the inclined feeding-table B and inclined label trough or holder K, the cans are both fed to and delivered from the front end of the machine.

I claim—

1. The combination, with the inclined feeding table or trough, of a reversely-inclined label trough or holder, arranged at some distance below the feeding-table, and with its upper end beyond the lower end of the feeding-table, whereby the cans or boxes are made to drop from one to the other, and are delivered at the front end of the machine, substantially as and for the purpose herein set forth,

2. The combination, with the upper inclined feeding-table, the lower reversely-inclined label trough or holder, and paste-boxes or supplying devices at opposite ends of the label-trough, of automatically-operating movable guards or devices at both the upper and lower ends of the label-trough, provided with paste-distributing rollers for pasting both ends of the label, and having their action controlled by the cans or boxes as they pass through the machine, essentially as described.

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