

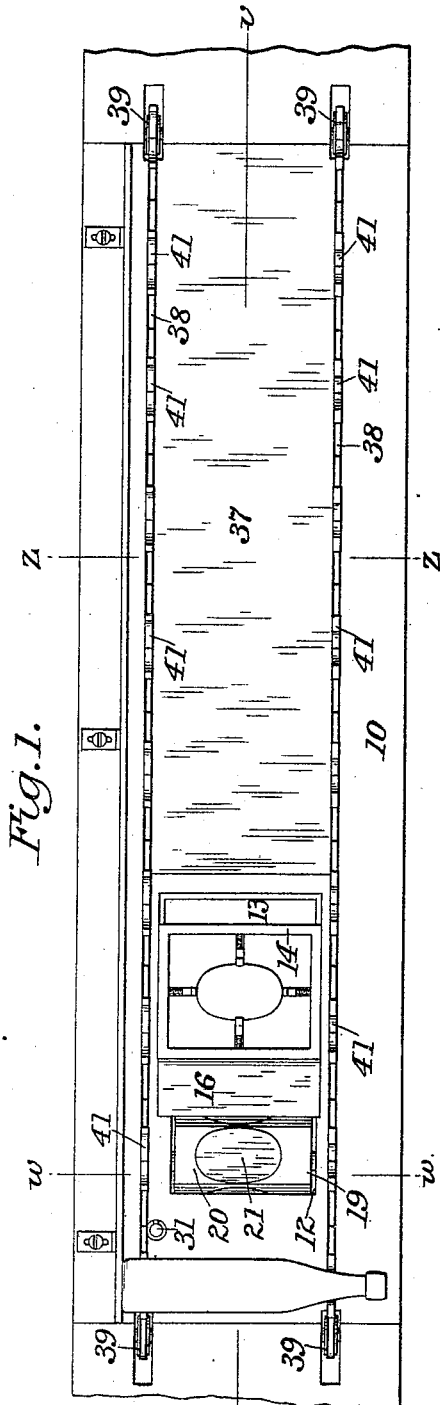
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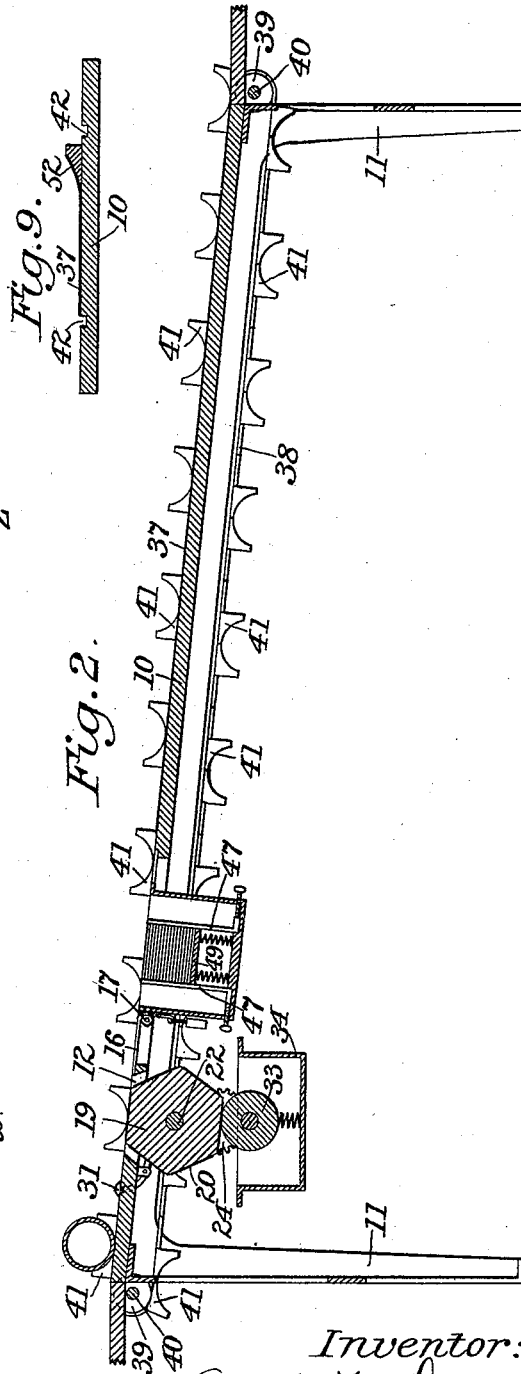
A. M. DONALLY.
LABELING MACHINE.

No. 491,989.

Patented Feb. 21, 1893.



Attest:
A. H. Jesperson.
A. H. Hilder.



Inventor:
Amalia M. Donally
by William B. Greeley
Atty.

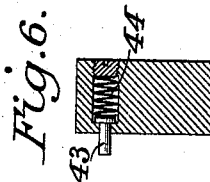
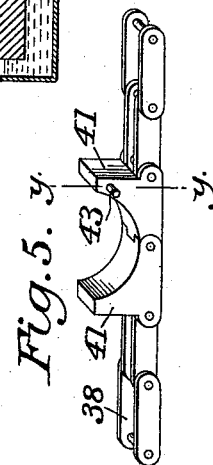
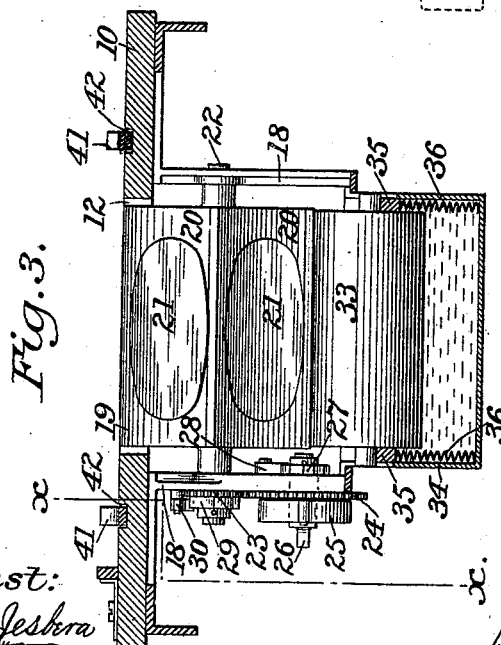
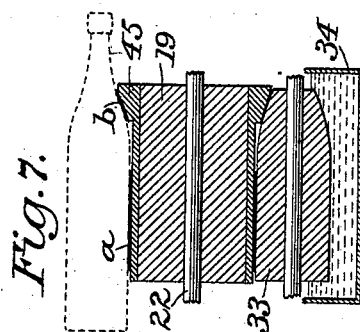
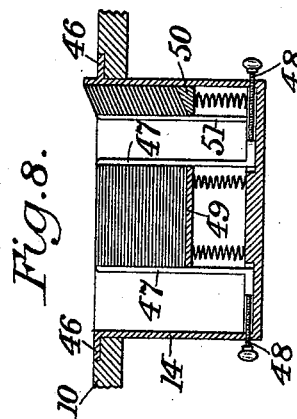
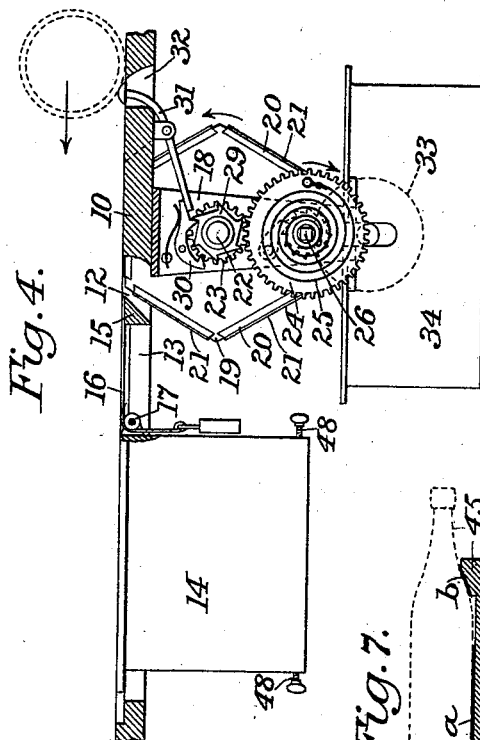
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3 Sheets—Sheet 2.

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A. M. DONALLY.
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3 Sheets—Sheet 3.

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Fig. 10.

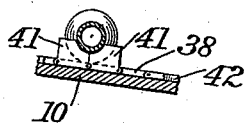
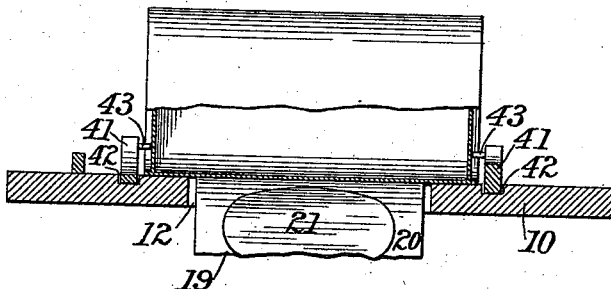


Fig. 11.



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UNITED STATES PATENT OFFICE.

AMALIA M. DONALLY, OF NEW YORK, N. Y.

LABELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 491,989, dated February 21, 1893.

Application filed March 4, 1892. Serial No. 423,705. (No model.)

To all whom it may concern:

Be it known that I, AMALIA M. DONALLY, of New York, in the county and State of New York, have invented certain new and useful
5 Improvements in Labeling-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon,
10 making a part of this specification.

My invention relates to labeling machines of the general character indicated in the accompanying drawings and has for its object
15 to improve the construction and operation of such machines and particularly to insure the application of the label to that portion of the bottle which has been coated with paste, to improve the operation of paste-applying devices, to provide for the application of a label
20 to the neck as well as to the body of the bottle, and to adapt the machine for the labeling of cans as well as of bottles.

The invention consists in the improvements hereinafter described and claimed.

25 In the accompanying drawings: Figure 1 is a plan view of the machine, the tables at the ends being represented as broken off: Fig. 2 is a longitudinal section on the line $v-v$ of Fig. 1: Fig. 3 is a transverse section
30 on the line $w-w$ of Fig. 1: Fig. 4 is a partial longitudinal section on the line $x-x$ of Fig. 3: Fig. 5 is a detail view of a guide-chain: Fig. 6 is a section on the line $y-y$ of Fig. 5: Fig. 7 is a vertical section illustrating the modification of the paste-supplying devices:
35 Fig. 8 is a transverse section of the label holder which is used with the construction shown in Fig. 7: Fig. 9 is a transverse section of the bed of the machine also adapted for use with the construction shown in Fig. 7.
40 Fig. 10 is a detail view showing the relation of one of the guide-blocks to the neck of a bottle: Fig. 11 is a detail sectional view showing the adaptation of the machine for labeling
45 ing cans.

A suitable bed or table 10 is supported upon legs 11 at such an inclination that bottles or other cylindrical objects will roll down readily. Near the upper end of the table is formed
50 an aperture or opening 12 through which the paste may be applied to the bottle or other article to be labeled. Below this opening is

formed another opening 13 in which the label holder 14 is movable by hand longitudinally to vary the distance between the paste-
55 supplying devices and the label holder according to the size of the articles to be labeled. It is desirable that the article to be labeled should roll regularly from the paste-supplying devices to the label holder and to effect
60 this it is necessary that the bed should be practically continuous whatever the position of the label holder may be. Accordingly I affix to the cross-bar 15, (see Fig. 4) which forms the lower edge of the opening 12, the
65 end of an apron 16. The other end of the apron is passed over a rod or roller 17, which is supported by and moves with the label holder a weight being attached to the apron, as shown, to keep it taut. The space between
70 the opening 12 and the label holder is consequently filled always by an apron which is sufficiently stiff and unyielding to cause the bottle to roll regularly as it passes from one point to another.

75 The paste-applying devices are supported by brackets 18 secured to the under side of the bed 10 and consist of a prismatic paste-roll 19, which has its faces dove-tailed, as shown in Fig. 4, to receive and hold plates 20
80 which bear the paste-pads 21 of the form of the label to be applied. The shaft 22 of the paste roll is adapted to be rotated by a spring or weight. As shown in Figs. 2 and 4 the shaft has fixed thereto a pinion 23 which
85 meshes with a gear 24 which is driven by a spring 25 and is provided with the usual winding arbor 26, ratchet 27 and pawl 28. The shaft 22 is also provided with an escape-
90 ment wheel 29 which is engaged by a pallet 30. One end of a lever 31, which is pivoted to the under side of the bed 10, underlies the end of the pallet while the other end of the lever projects through an opening 32 into the
95 path of the bottle or can as it approaches the paste roll. The paste roll is consequently always under tension of the spring 25 and is released by each bottle or can as it approaches and permitted to make a partial rotation to bring a fresh surface into position to apply
100 a coating of paste to the bottle. A feed roll 33 is journaled beneath the paste roll 20 with its lower portion submerged in the paste in the trough 34, and as its upper portion

should always remain in contact with the paste roll its journal-boxes 35 are supported by springs 36.

As the paste-roll is prismatic in order so that each bottle may roll over a plane surface while receiving the paste, it is desirable that the feed roll should be supported as described in order that the plane faces of the paste-roll may be completely and uniformly coated with paste.

Guides are provided to preserve the parallelism of the bottles or cans as they roll successively over the paste-roll, the label-holder, and the cloth or pad 37 which insures a close contact of the label with the pasted surface. I prefer to employ two endless chains or belts 38, 38 which run over wheels 39, 39 fixed to shaft 40, 40, at the upper and lower ends of the table. I affix to the chains blocks 41 having curved sides as shown, the blocks being preferably arranged in pairs, with the curves toward each other, thus forming between them a segmental recess. The blocks may be formed as links of the chains, as shown in Fig. 5, and the chains travel in grooves 42 of such depth that the bottom of the segmental recess designed to receive the base of the bottle is flush with the surface of the table. As a bottle rolls down the table it may depart slightly from its proper position but whether the bottle fits snugly to the curves of the blocks or not any such departure will be corrected at once through the tendency of the bottle to remain at the lowest point of the recess.

Preferably the blocks which receive the necks of the bottles are formed with somewhat smaller and shallower recesses than the other blocks so that the said recesses may more nearly fit the necks and so maintain the bottles in proper position.

To adapt the machine for labeling cans one block of each pair is provided with a pin 43 (see Figs. 5 and 6) to engage the flange or rim which is usually formed on the end of a can and thereby to guide the can as it rolls down the bed or table. If the cans are of such length as to fill the space between the chains the pin should be seated within a recess in the block and be seated upon a spring 44, as shown in Figs. 6 and 7, so that it may be pressed in to allow the can to be placed in position and then spring out to engage the flange.

As before stated, one object of my invention is to provide for the application of a label to the neck or shoulder as well as to the body of a bottle. To this end some parts of the apparatus are modified slightly and in Figs. 7, 8 and 9 I have shown such modifications as are necessary. The paste-roll 19 remains as before, but in place of the straight pad 21 I put a pad 45 (see Figs. 7) which is formed with a plane surface *a* for applying paste to the body of the bottle, and with a raised surface *b* which is shaped to conform to the neck of the bottle. The pads may be removed readily from

the roll and be replaced by others according to the shape of the bottles to be labeled. The feed roll 33 is shaped to conform to the profile of the paste-roll. The label-holder, comprises in either case a casing 14 having a lip 46 which serves to support it in the aperture 13, vertical fingers 47, adjusting screws 48, and a spring follower 49 having a horizontal surface. The follower 49 supports the labels which are to be applied to the body of the bottle. A second spring follower 50, (see Fig. 8) having its upper surface inclined to conform to the shape of the bottle where the label is to be applied, supports, in line with the pad *b*, a pile of neck or shoulder labels which may be held in position between a vertical finger 51 and the side of the casing or other fingers as desired. To the table or bed 10 below the label-holder, and in line with the pad *b*, is fixed a molding 52 (see Fig. 9) whose office is to press the label upon the bottle. The pads, the feed roll and the molding being readily replaced by others of different shape, the machine can be adapted to operate upon bottles of any shape.

I am aware that heretofore a labeling machine has been devised having a bed over which the articles to be labeled may roll, a paste-supplying device, a label-holder, and guide-chains and therefore I do not claim such construction broadly.

I claim as my invention—

1. The combination, in a labeling machine, of a bed over which the articles to be labeled may roll, a prismatic paste-roll, means to cause an intermittent rotation of said paste-roll a paste-trough, a feed roll rotating in said trough, and spring pressed bearings for said feed roll to maintain the same in contact with the paste-roll, substantially as shown and described.

2. The combination, in a labeling machine, of a bed over which the articles to be labeled may roll, a paste-roll, means for rotating said roll, an escapement to hold said roll against rotation and a trip for said escapement adapted to be actuated by the article to be labeled as it rolls over the bed, substantially as shown and described.

3. The combination, in a labeling machine, of a bed over which the articles to be labeled may roll, a paste-roll, a spring motor for driving said roll, an escapement wheel connected to said roll, a pallet therefor, and a trip controlling said pallet and adapted to be operated by the article to be labeled as it rolls over the bed, substantially as shown and described.

4. In a bottle labeling machine, the combination of a roll, a paste-pad secured thereto and conforming to the shape of the bottle neck, a paste-trough, and a feed-roll partially submerged in said trough and conformed to the shape of the paste-roll, substantially as shown and described.

5. In a bottle labeling machine, the combination of a bed over which the bottle may roll, a paste-roll conformed to the shape of the

bottle-neck, means for supplying paste to said roll, and a label-holder having a spring follower to support the labels and inclined to conform to the shape of the bottle neck, substantially as shown and described.

6. In a bottle labeling machine, the combination of a bed over which the bottle may roll, a paste roll having a raised portion to conform to the bottle neck, a label holder to support labels in a position to conform to the bottle neck, and a molding also shaped to conform to the bottle neck and secured to the bed below the label holder and in alignment therewith, substantially as shown and described.

7. In a bottle labeling machine, the combination of a bed over which the bottle may roll, a paste-roll, a paste-pad secured thereto having a portion adapted to apply paste to the body of the bottle and a raised portion adapted to apply paste to the neck of the bottle, and a label-holder having a spring follower to support labels for application to the body of the bottle and having a second spring follower to

support labels for application to the neck of the bottle, substantially as shown and described.

8. In a labeling machine, the combination of a bed over which the articles to be labeled may roll, a paste-applying device supported beneath an aperture in said bed and adapted to apply paste to the article as it rolls over the same, a label-holder supported in a second aperture in said bed and adapted to be moved toward or from the paste-applying device, and an apron having one end fixed to a cross-bar below said paste-applying device and having its other end weighted and passed over a guide carried by the label-holder, substantially as shown and described.

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

AMALIA M. DONALLY.

Witnesses:

A. N. JESBERA,
A. WIDDER.