

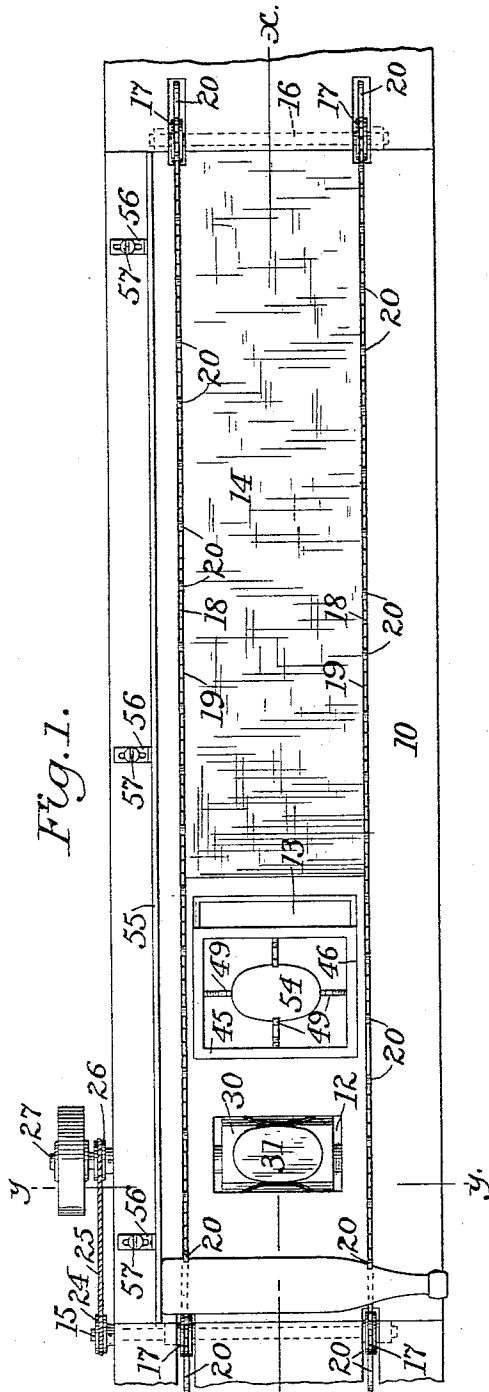
(No Model.)

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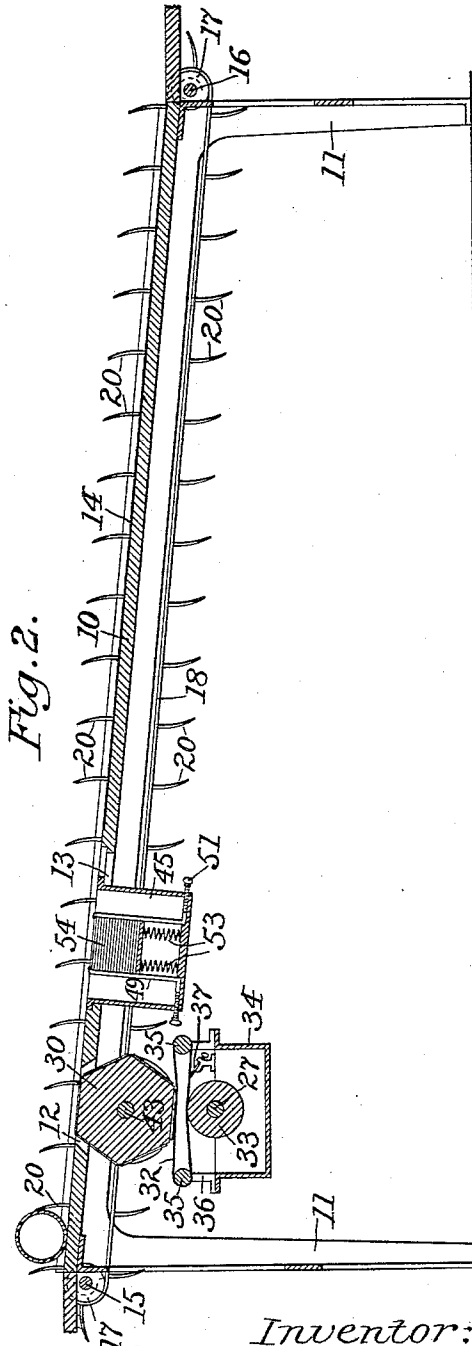
R. KUF.  
LABELING MACHINE.

No. 476.392.

Patented June 7, 1892.



Attest:  
A. J. Jespersen.  
A. Widder.



Inventor:  
Richard Knapp  
by William B. Greeley  
Atty.

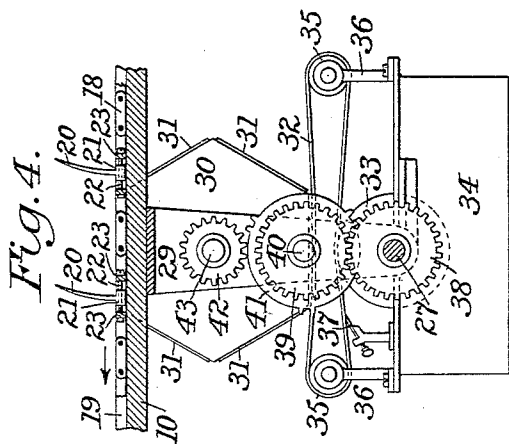
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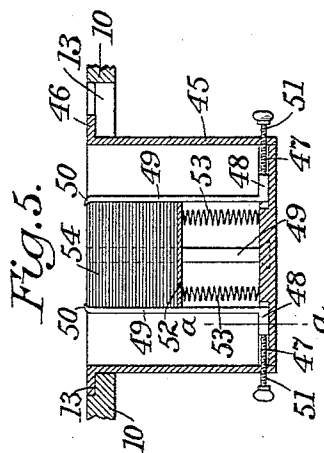
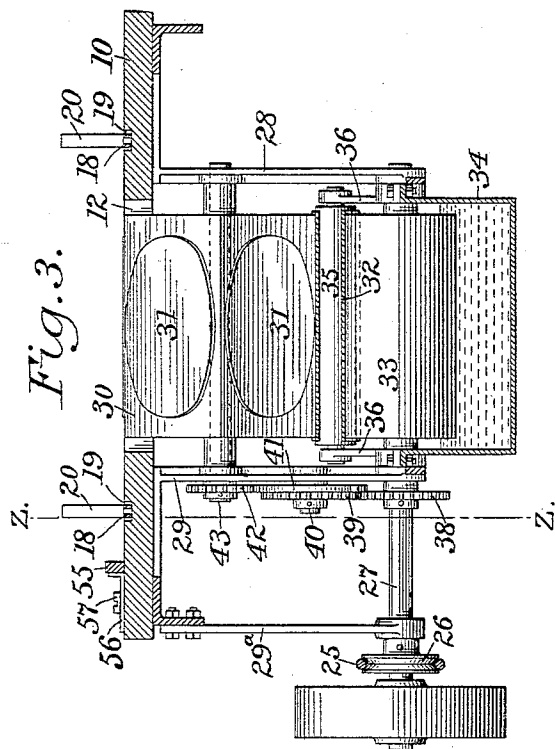
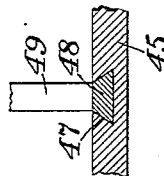
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*Fig. 6.*



Attest:  
A. S. Jespersen.  
A. Widdler.

Inventor:  
Richard Kufs  
by William D. Greeley  
Atty.

# UNITED STATES PATENT OFFICE.

RICHARD KUFs, OF NEW YORK, N. Y.

## LABELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 476,392, dated June 7, 1892.

Application filed January 25, 1892. Serial No. 419,159. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD KUFs, of New York, in the county and State of New York, have invented certain new and useful 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 figures of reference marked thereon, making a part of this specification.

My invention relates to machines for applying labels to bottles, cans, or other cylindrical articles, and has for its object generally to improve the construction and operation of machines of that class wherein the bottle or can rolls over a bed and in its progress receives first a partial coating of paste and subsequently receives a label upon the coated portion.

The invention consists in various features and details of construction, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of the machine. Fig. 2 is a longitudinal section of the same on the line  $x x$  of Fig. 1. Fig. 3 is a transverse section on the line  $y y$  of Fig. 1. Fig. 4 is a partial section on the line  $z z$  of Fig. 3. Fig. 5 is a partial longitudinal section through the label-holder on a larger scale than that of Fig. 1. Fig. 6 is a detailed sectional view on the line  $a a$  of Fig. 5.

A bed 10 is supported by suitable legs 11, preferably being inclined about as represented in Fig. 2. Near the upper or receiving end of this bed is an opening 12, through which the paste is applied to the bottle or can, and a little farther down is formed a second aperture 13 to receive the label-holder, the distance between the centers of these two apertures being about equal to the circumference of the article which is to receive the label. Beyond the label-holder the bed preferably is provided with a cloth or pad 14. At each end of the bed are provided bearings for shafts 15 and 16 and guide-rollers 17 to support and guide endless chains 18. The upper members of said chains travel in longitudinal slots 19, formed in the upper surface of said bed, so that said chains may not stand above the sur-

face of said bed. Fingers 20 are carried by the chains, preferably being adjustable longitudinally thereon. To this end each finger is mounted upon a sleeve 21, which is screw-threaded interiorly to receive a screw 22, swiveled in lugs 23, carried by a link of the chain. When a number of bottles have been placed upon the bed and are in engagement with the fingers of the chain, they will move downward from the feeding end to the delivery end of the bed if a sufficient inclination be given to the latter; but in order to insure the proper movement of the chains with regularity and uniformity one of the shafts, as the shaft 15, may be fitted with a gear or pulley 24, to be driven by a cord or belt 25 or other intermediate means from a gear or pulley 26 on the main driving-shaft 27 of the machine.

In brackets 28 and 29, depending from the under side of the bed 10, is journaled a paste-roll 30, which is preferably formed as a prism having plane faces, upon each of which may be secured a suitable pad 31 for transferring the paste to the bottle as the latter passes over the pad. The roll is so placed as that the surface of the pad may be flush with the surface of the bed or slightly above the same in order to insure a thorough contact of the bottle with the pad. The roll is caused to rotate, preferably with an intermittent motion, by means hereinafter described, and as it rotates its lower surface contacts with a paste-apron 32, to which the paste is supplied by a feeding-roller 33, which is partially submerged in the paste in the trough 34. The apron may be carried by rollers 35, journaled in brackets 36, supported by the sides of the trough, and excess of paste may be removed from the apron by the usual adjustable blade or doctor 37. The feeding-roll 33 may be mounted upon the shaft 27, which is journaled in the brackets 28, 29, and 29<sup>a</sup>. A gear 38 is fixed upon the shaft 27 and meshes with a gear 39, which rotates on a stud 40, carried by the bracket 29, and has secured to itself so as to rotate therewith an interrupted gear 41. The latter meshes with a gear 42 on the shaft 43 of the paste-roll 30, and consequently drives said roll with an intermittent motion.

The driving mechanism is so timed that the paste-roll rotates and brings a fresh surface flush with the surface of the bed just before a bottle passes over the roll and remains at rest while the bottle is so passing.

As before stated, the aperture 13 receives a label-holder. This consists of a suitable casing 45, having a lip 46, which serves to support it, as indicated. The bottom of the casing is formed with undercut grooves 47, in each of which slides a dovetailed block 48. Each block carries a vertical finger 49, which is formed at its upper extremity with an inwardly-extending lip 50. The blocks, with the fingers, are adapted to be pressed toward a common center by thumb-screws 51, threaded into the sides of the casing and bearing against the blocks. A plate 52, resting upon suitable springs 53, serves as a spring-follower to support and feed upward a pile of labels 54 against the lip 50 of the fingers 49. The adjustability of the fingers 49 permits the use of labels of different sizes and shapes. A bar 55, carried by slotted plates 56, may be fixed adjustably at one side of the bed 10 by screws 57 to form a guide for the ends or bottoms of the bottles.

In the operation of my improved machine the bottles are laid on their sides at the upper end of the bed and roll down over its full length, being guided in a true course by fingers on the bands or chains. The bottles should be placed with their necks in one direction and the fingers of the chain nearest the necks should be adjusted according to the shape of the bottles to be labeled, so that the necks may be supported by the fingers and the bottles thereby be maintained in a true course as they roll down the incline. As each bottle rolls over the paste-roll 30 it will receive a coating of paste of the shape of the label to be applied, and as it rolls on, turning once over, the paste portion will be brought into contact with the topmost label of the pile and will draw the same from the grasp of the fingers. As it passes on from the label-holder it will roll over several times on the cloth or pad 14, and the label will thereby be fixed in position.

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 paste-supply device, a label-holder, and movable bands or chains having fingers

to receive and guide the articles to be labeled, substantially as shown and described. 55

2. The combination, in a bottle-labeling machine, of a bed over which the bottles may roll, a paste-supplying device, a label-holder, and movable bands or chains having fingers to receive and guide the bottles, the fingers on one of said bands or chains being longitudinally adjustable thereon, substantially as shown and described. 60

3. The combination, in a labeling-machine, of a bed over which the articles to be labeled may roll, a paste-supplying device, a label-holder, movable bands or chains having fingers to receive and guide the articles to be labeled, and a bar adjustably secured upon the bed to guide the ends of the articles, substantially as shown and described. 65 70

4. The combination, in a labeling-machine, of a bed over which the articles to be labeled may roll and having an aperture therein, a paste-roll journaled beneath said aperture with its upper surface flush with the upper surface of the bed, means to rotate said roll, means to supply paste to said roll, and movable bands or chains having fingers to receive and guide the articles to be labeled, substantially as shown and described. 75 80

5. The combination, in a labeling-machine, of a bed over which the articles to be labeled may roll and having an aperture therein, a prismatic paste-roll journaled below said aperture, means to supply paste to said roll, and means to rotate said roll with an intermittent motion, substantially as shown and described. 85

6. The combination, in a labeling-machine, of a bed over which the articles to be labeled may roll and having an aperture, a label-holder supported below said aperture, said holder consisting of a series of fingers terminating in inwardly-turned lips flush with the surface of the bed, and a spring-follower, and movable bands or chains having fingers to receive and guide the articles to be labeled, substantially as shown and described. 90 95

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 100

RICHARD KUFS.

Witnesses:

A. N. JESBERA,  
A. WIDDER.