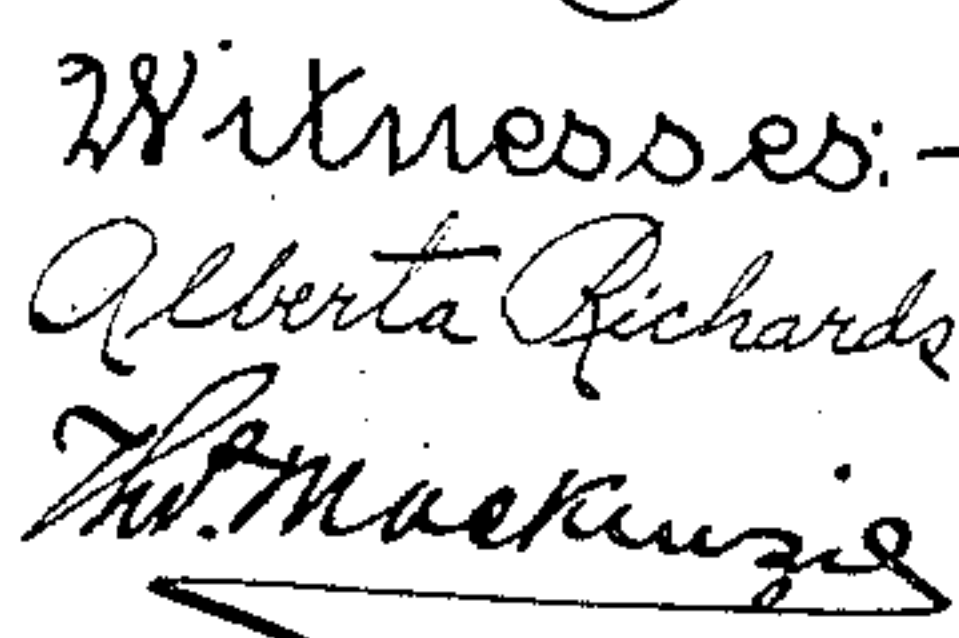


LABELING MACHINE.

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Patented Mar. 8, 1910.



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UNITED STATES PATENT OFFICE.

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LABELING-MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK W. WILD, Jr., of the city of Baltimore and State of Maryland, have invented certain Improvements in Labeling-Machines, of which the following is a specification.

This invention relates to certain improvements in that class of can labeling machines whereby a label is attached at one end only to a can by means of an adhesive, the other end being lapped over and pasted to the first.

When a label is applied as described to a can having a head or lid the flange of which is slid over the end of the body, the contents of the can are not excluded from the outer air; and the leading feature of the present invention is for the purpose of producing a practically air-tight joint at the junction of the flange of the head, and the body of the can by means of the label, as will hereinafter fully appear.

In carrying out my invention I apply a layer of paste to the can where the edge of the flange of the head adjoins the body, in order that the label in its application to the can will adhere to the pasted surface and produce a practically air-tight joint.

In the further description of the said invention which follows, reference is made to the accompanying drawing forming a part hereof, and in which,

Figure 1 is a partly sectional side view of a can labeling machine in which heat-liquefied cement is applied to a limited portion of the can body and the can rolled over a label which is picked up by the can from a stack of labels placed in its path, and the latter end of the label which receives a coating of paste, lapped over the forward and cemented end. Fig. 2 is a plan of certain parts of Fig. 1. Fig. 3 represents two views of a paste-applying wheel of peculiar construction. Fig. 4 is a partly sectional side view of the paste-applying wheel with a portion of the pasting belt, and the paste pot. Fig. 5 is an edge view of the pasting wheel and a scraper which is applied thereto. Fig. 6 is an exterior side view of a can of the description hereinbefore referred to, together with a cross-section of the belt whereby the annular coating or layer of paste is applied to the head joint.

Referring now to the drawing, 1 represents the bars forming the upper portion of the frame-work of the machine, and 2, 2 are

the guide rails between which the cans roll in the labeling operation.

3, 3 are the endless conveyer belts, and 4, 4 the pulleys which carry the same.

5 is a pot for heat-liquefied cement, and 7, 7 are the wheels situated within the pot which apply the cement to the body of the can as the same rolls over them.

8 is the table upon which a stack of labels is placed.

9 is an endless belt placed crosswise of the machine, which receives a coating of paste from the pot 10 through the medium of a wheel 12, and applies it to the latter end of the top label.

The parts of the machine so far described are commonly in use and do not in themselves form any part of the present invention.

14 is a narrow endless pasting belt carried by the pulleys 15 and 16 which receive their movement by means of any suitable devices. In the drawing the pulley 16 is shown as driven from the shaft 17 of the pulleys 4 through the medium of the pulleys 19, 20, 21 and 22, and the belts 23 and 25 the latter being shown in dotted lines in Fig. 1.

In the operation of the machine, a can represented by A upon entering the machine to the left of the drawing, rolls along the pasting belt 14 and receives a coating of paste which covers a portion of the cans which extends a limited distance over either side of the edge of the lid, as shown by the dotted lines in Fig. 6. After leaving the pasting belt 14, the can rolls over the cement applying wheels 7 and in continuing its forward movement picks up the top label from the stack on the table 8 and which label is provided at its free end with a coating of paste through the medium of the belt 9 over which the can rolls, as is common in labeling machines of this class. At the termination of the operation described, the can is found to be provided with a label the forward end only of which is attached to the can, the latter end being lapped over and pasted to the former and the head joint entirely covered by a pasted portion of the label which serves to exclude air from the contents of the can.

In the ordinary method of applying paste to the latter or free end of a label by means of an endless belt which is coated from the surface of a wheel in a paste pot, the quan-

5 tity of paste received by the said belt is greater than that required to effect the desired purpose, and the label is thereby dampened and expanded laterally to such an extent as to cause it to wrinkle when pressed upon the portion of the label beneath it.

10 After much experiment with the view to reduce the quantity of paste applied to the pasting belt and that without respect to the quantity taken up by the pasting wheel, I now construct the said wheel with a multiplicity of cavities *a* in its face, and use in connection with the said wheel, a scraper 27 which in the rotation of the wheel removes from its face practically all the paste thereon except that which is contained in the cavities.

20 The belt 9 by close contact with and while effecting a slow rotation of the pasting wheel 12, receives paste from the cavities by the process commonly known as suction, and the result is the transfer of isolated patches of paste to the latter or free end of the label, which in the aggregate is much less than can in practice be applied should the entire surface of the belt be coated with the adhesive.

30 I am aware that labels have been pasted over the entire surface of cans having flanged lids, and tight joints formed, but this method of affixture is objectionable for many rea-

sons among which may be mentioned, that the label is softened throughout, and a large quantity of paste used. The same result as far as the air-tight closing of the can is concerned, is effected in the manner and by means of the appliances described, without the disadvantage above referred to.

I claim as my invention,—

1. In a labeling machine, appliances to produce a pasted surface of limited width entirely around a can at the junction of the flange of the lid with the body, combined with devices to apply and affix a label to the can, and cause the same to adhere to the said pasted surface, whereby a practically air-tight joint is formed, substantially as specified.

2. A labeling machine having at its entrance end an endless longitudinally-extending pasting belt of a width which is less than the length of the can body, and so situated with respect to the can as to apply paste to the head joint, combined with means to roll a can over and along the belt, and mechanism to affix a label around the can and cause it to adhere to the said annular pasted surface, substantially as specified.

FREDERICK W. WILD, JR.

Witnesses:

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