C. BECKMANN.

MAGAZINE FOR LABELING AND WRAPPING MACHINES.

APPLICATION FILED MAY 1, 1916.

1,219,426. Patented Mar. 20, 1917.

Fig. 1,

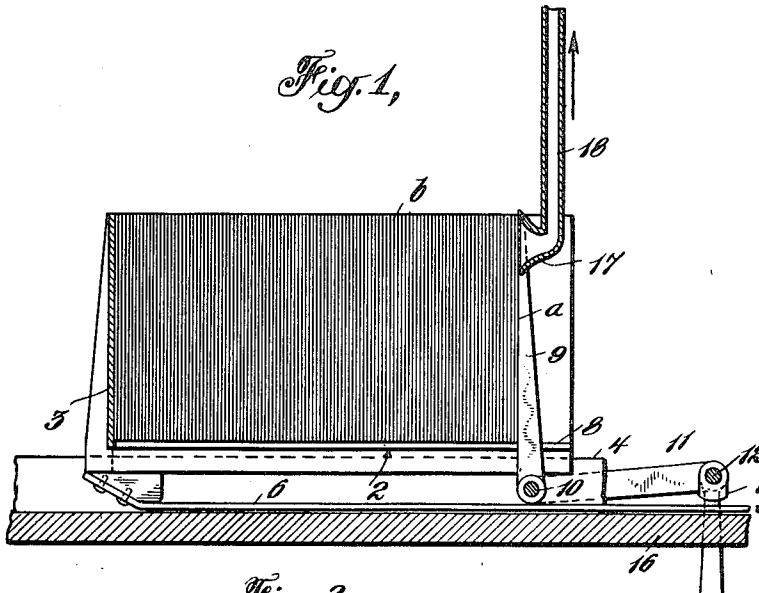
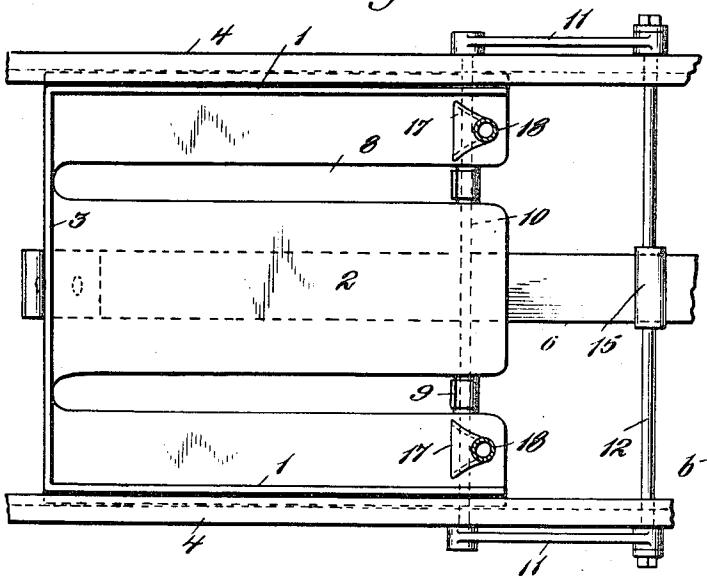


Fig. 3.



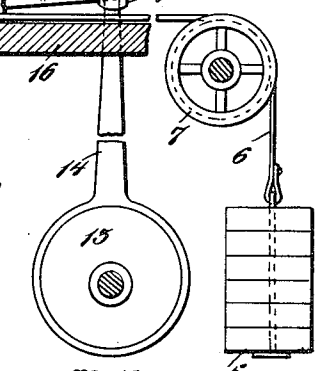
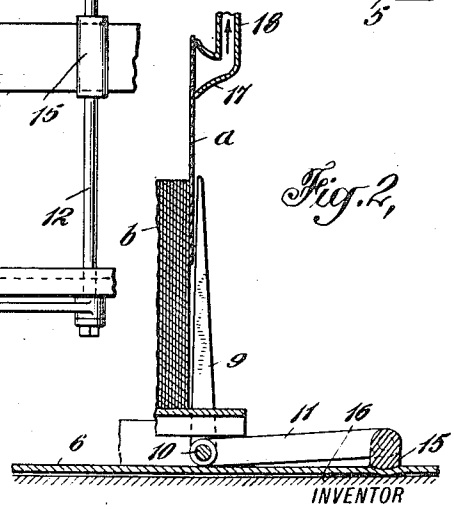


Fig. 2,



WITNESSES

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MAGAZINE FOR LABELING AND WRAPPING MACHINES.

1,219,426. Specification of Letters Patent. Patented Mar. 20, 1917.

Application filed May 1, 1916. Serial No. 94,645.

To all whom it may concern:

Be it known that I, CARL BECKMANN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Magazine for Labeling and Wrapping Machines, of which the following is a full, clear, and exact description.

This invention relates to magazines for use with labeling and wrapping machines to feed labels, wrappers or the like successively and automatically.

The invention has for its general objects to improve and simplify the construction and operation of apparatus of this character so as to be reliable and efficient in use, comparatively simple and inexpensive to manufacture, and so designed as to permit the labels or wrappers to be fed in quick succession and only one at a time.

A more specific object of the invention is the provision of a magazine in which the pack of labels or wrappers is held with the labels or wrappers vertical, and the outermost label or wrapper is picked up and removed from the magazine in a vertical plane, there being novel means coöperating with the pick-up elements for insuring the delivery of the labels in a uniform manner and one at a time.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in all the views,

Figure 1 is a vertical section of the magazine;

Fig. 2 is a detail sectional view showing a label or wrapper in the act of being withdrawn; and

Fig. 3 is a plan view of the magazine.

Referring to the drawing, the magazine comprises a box formed of side walls 1, a bottom 2 and an end wall 3, the top and one end being open. The magazine or box-like body is movable horizontally in parallel guides 4, and movement is effected in one direction by a weight or equivalent means 5 which is connected by a strap or flexible element 6 with the bottom of the box adjacent the closed end thereof. The strap 6 passes around a guide pulley 7, and by reason of this arrangement the pack of labels or wrappers in the box is progressively moved forward to maintain the outermost label or wrapper in delivery position. The bottom of the box has longitudinal slots 8 to accommodate upwardly extending fingers or stop elements 9 which engage the outermost label or wrapper and thereby yieldingly oppose the movement of the magazine to the right under the pull of the weight 5. The stop fingers 9 are fastened to a horizontal shaft 10 journaled in the guides 4 and on the shaft are arms 11 connected together by a horizontal bar 12. The bar receives a slight oscillatory motion from an eccentric 13 and an eccentric rod 14. This eccentric causes the fingers to move from the position shown in Fig. 1 to that shown in Fig. 2, and back again, and by reason of this movement the outermost label or wrapper is released so that it can be picked up and withdrawn from the magazine box. On the rod 12 is a clutch member 15 which lies over the strap 6 and is adapted to grip the same against the bed 16 of the magazine, thereby preventing the weight from pulling on the magazine box during the time the foremost label or wrapper is being lifted. Any suitable pick-up devices may be employed for successively feeding the labels or wrappers from the box, but in the present instance the pick-up devices are shown as of the pneumatic type, comprising nozzles 17 on the lower ends of pipes 18. These pipes have a vertical reciprocatory motion, moving downwardly to a position in front of the outermost wrapper with which it is caused to adhere by the suction through the nozzles, and then as the pick-up devices move upwardly the label or wrapper *a* is withdrawn, as shown in Fig. 2, the rest of the pack of labels or wrappers *b*

remaining in place. It will be noted from Fig. 2 that, as the label is being withdrawn, the clutch element 15 tightly grips the strap 6, so that there is no forward pressure on the magazine box, and consequently the outermost label or wrapper is not clamped between the fingers 9 and the second label or wrapper with sufficient friction to prevent the pick-up devices from withdrawing the outermost label or wrapper. Preparatory to the descending movement of the pick-up devices the eccentric moves the fingers 9 back to their normal position, thereby moving the outermost label or wrapper to the rear of the path of the pick-up devices, thus affording sufficient clearance for the free movement of the latter downwardly to a position in front of the pack of labels. The pick-up devices again take up a label or wrapper and the operation as described is repeated.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a magazine, the combination of a box open at one end and in which the labels or wrappers are disposed vertically side by side, vertically reciprocatory pick-up devices for engaging the outermost wrapper or label and removing the same vertically out of the top of the box, means for moving the box progressively toward the pick-up devices, and stop fingers at the open end of the box for pressing the outermost label or wrapper out of the path of the pick-up devices as they descend and movable laterally to permit the foremost label or wrapper to engage with the pick-up devices.

2. In a magazine, the combination of a box open at one end and in which the labels or wrappers are disposed vertically side by side, vertically reciprocatory pick-up devices for engaging the outermost wrapper or label and removing the same vertically out of the top of the box, means for moving the box progressively toward the pick-up devices, stop fingers at the open end of the box for pressing the outermost label or wrapper out of the path of the pick-up devices as they descend and movable laterally to permit the foremost label or wrapper to engage with the pick-up devices, and a clutch device associated with the fingers to interrupt the box-moving means during the time a label or wrapper is being withdrawn by the pick-up devices.

3. A magazine box open at one end and having a longitudinal slot, guide means on which the box moves horizontally, a device tending to move the box in its guiding means, a finger extending upwardly through the slotted bottom to coöperate with the closed end to support labels or wrappers vertically, and pick-up means for picking up the outermost label and conducting it out of the magazine in an upward direction.

4. A magazine of the class described comprising a holder in which a number of labels are progressively fed in one direction, pick-up means toward which the labels are fed and arranged to engage the outermost label, and stop fingers engaging the outermost label to hold the same backwardly out of the path of the pick-up means as the latter moves to pick-up position and adapted to move in the opposite direction when the pick-up device withdraws the outermost label.

5. A magazine of the class described comprising a holder in which a number of labels are progressively fed in one direction, pick-up means toward which the labels are fed and arranged to engage the outermost label, stop fingers engaging the outermost label to hold the same backwardly out of the path of the pick-up means as the latter moves to pick-up position and adapted to move in the opposite direction when the pick-up device withdraws the outermost label, means for feeding the labels progressively toward the pick-up means, and means for interrupting the feeding means when the stop fingers release the outermost label.

6. A magazine of the class described comprising a box open at one end and having longitudinal slots, means tending to feed the box in the direction of its open end, fingers pivoted below the box and extending upwardly through the slots to coöperate with the closed end of the box to hold labels, means for oscillating the fingers to engage and disengage the outermost label, pick-up means arranged to move into engagement with the outermost label and withdraw the same in the direction of its plane, and clutch means movable simultaneously with the fingers for interrupting the action of the feeding means when the fingers disengage the outermost label.

7. In a mechanism of the class described, the combination of a box open at its top and one end and having its bottom provided with longitudinal slots extending inwardly from the open end, a weight, a flexible element connected with the weight and with

the box to move the latter in a direction with the open end foremost, stop fingers extending upwardly through the slots to engage and disengage the outermost label in the box, arms connected with the fingers, an eccentric device for oscillating the arms and fingers, a clutch member movable with the arms to engage the said flexible element to prevent the weight from moving the box, and pick-up means movable to and from a position for engaging the outermost label when the fingers are released therefrom and withdrawing the label in the direction of its plane.

CARL BECKMANN.