

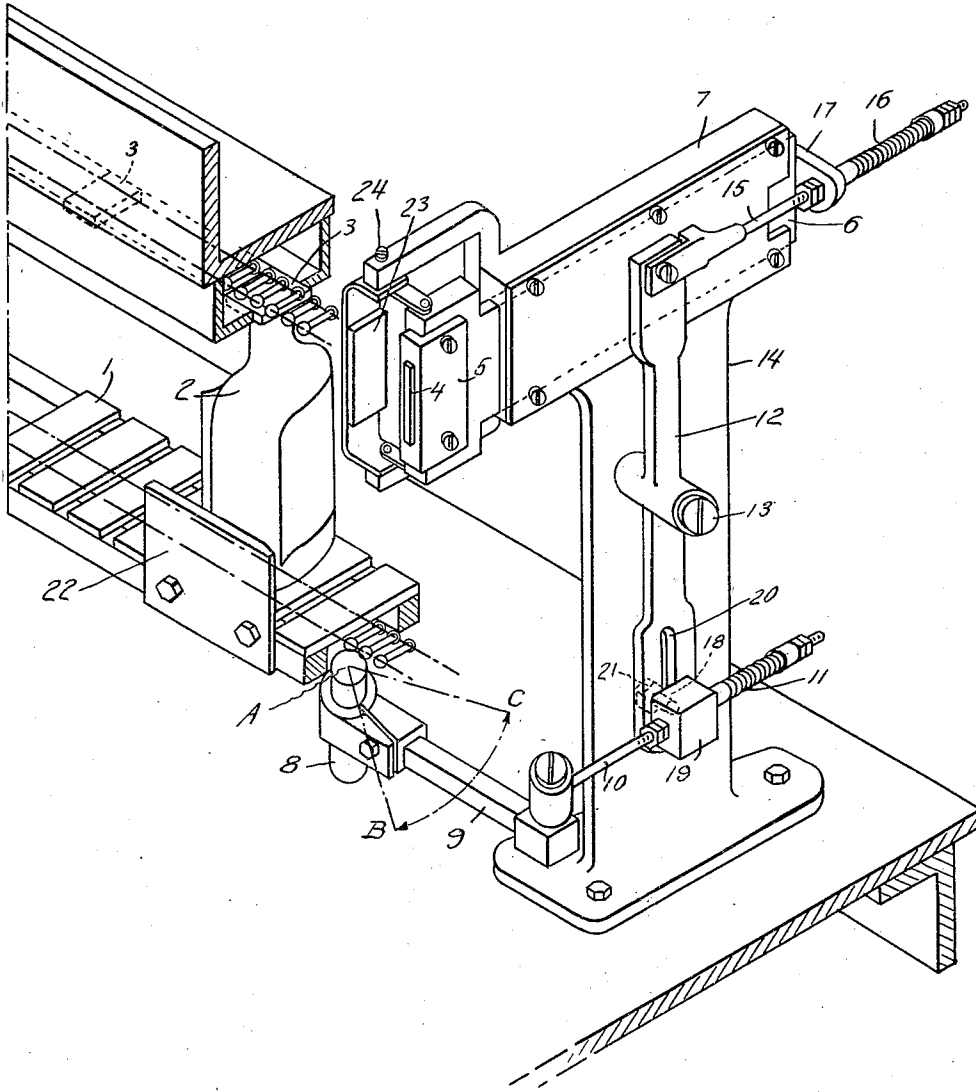
Nov. 17, 1931.

P. S. PITTENGER ET AL

1,832,501

AUTOMATIC STAMPING MACHINE

Filed Jan. 17, 1931



INVENTORS  
Paul S. Pittenger and  
Edward J. Richards  
BY  
Perrin Davis Mason & Edwards  
ATTORNEYS

## UNITED STATES PATENT OFFICE

PAUL S. PITTENGER, OF PHILADELPHIA, PENNSYLVANIA, AND EDWARD J. RICHARDS, OF BALTIMORE, MARYLAND, ASSIGNORS TO SHARP & DOHME, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF MARYLAND

## AUTOMATIC STAMPING MACHINE

Application filed January 17, 1931. Serial No. 509,418.

This invention relates to automatic stamping devices for use on labeller machines of the type in which a bottle or other container clamped or otherwise positively held in position is moved along a continuous conveyor with a stop-start motion. At the various stations at which the container stops as it is moved along by the conveyor different operations are performed. The operations performed on different machines vary. As an example of the operations performed by the usual labeller machine of this type we may mention applying glue to the bottle or other container at one station, bringing the label in contact with the glued bottle at another station and wiping the label on to the bottle at a third station. Other operations may be included and the labelling operations may be accomplished on the same continuous conveyor with the filling and capping operations, etc.

The automatic stamping device of this invention is operated in connection with such a labeller machine and in such a way that the label, after it is on the container, is stamped with a number or letter or other distinctive mark. The stamping operation may take place before or after the operation in which the label is wiped on to the bottle. The machine is of particular value in industries such as the pharmaceutical, chemical and food industries in which it is desirable to indicate on each bottle or other container the particular lot from which each bottle is filled or to indicate the operators who have handled the material which goes into each bottle, etc. If, for example, an individual lot contains 500 quarts or pounds of liquor or powder, etc. to be filled into the container and each bottle is to hold one quart or pound, each of the 500 bottles used to contain this one lot will be given a descriptive lot number. After this lot has been bottled another lot will be bottled and the number on the label will be changed.

It has been customary in the past either to print the lot number on the label or to stamp the labels by hand to indicate the lot from which the container is filled. The automatic numbering device of this invention not only

substitutes a machine operation for the usual hand operation, but the invention effects a saving in labels. A small percentage of labels are destroyed by the labelling machines, and, further, it is ordinarily impossible to predetermine the exact number of containers required to hold one lot of material; it is therefore impossible to predetermine exactly how many labels will be needed for labelling the bottles filled from any one lot. It is customary, according to the present practice, to number a larger quantity of the labels than it is expected will be used in order that there may be no shortage. The unused labels are marked with a number indicating one special lot and cannot be used for another lot and are therefore wasted. If the labels are stamped by hand after they have been taken from the machine, confusion may arise as to just what bottles belong to each lot. More important, however, is the fact that the hand operation is more expensive than the machine operation.

The stamping device of this invention is a simple device which may be attached to any labeller machine of the type described. It is usually actuated from the cam-motion part of the labeller machine. The movement of the stamping device is so synchronized with the stop-start motion of the conveyor that when a bottle stops opposite the device, the reciprocating arm which carries the stamp is near the end of the forward stroke and on completion of the forward stroke the desired number is stamped on the bottle. The return stroke is commenced before the bottle is again set in motion and the stamp is moved out of contact with the bottle before it moves on to the next stop.

Any desired designation may be put on the stamp, such as a number or letter or other distinguishing character, and this designation may be changed as often as desirable. Many thousands of bottles may be stamped with the same mark or the stamp may be changed after stamping each few bottles.

The stamp is advantageously a rubber stamp and automatic inking means is provided to keep fresh ink on the stamp. This

inking means applies ink to the stamp on the backward stroke of the arm which carries the stamp.

The stamp may be made up of individual types which may be taken out and reset at intervals or automatic means may be provided for changing the stamp when desired. The stamp may be operated as a counting means, for example, and the number applied by the stamp may be advanced each time the stamp comes in contact with a bottle or suitable means may be provided for advancing the counting machine at any desired interval.

The reciprocating arm to which the stamp is affixed, or in which it is embedded, is actuated by suitable lever arms or other means from a cam shaft which is attached to the cam-motion part of the labeller machine. The stamp is advantageously mounted on a rubber cushion and a compression spring is advantageously provided to press the lever arm against the bottle. Other resilient means may be employed for this purpose.

The accompanying drawing shows a preferred embodiment of the invention, but it is intended and is to be understood that the invention is not limited thereto:

The drawing shows a continuous conveyor 1 for carrying the bottles 2 thru the labeling machine. Rubber pads 3 clamp down on to the top of the bottle and hold it firmly in position as it passes thru the labeller machine. The pads 3 are placed at intervals, the space between the pads being the same as the distance between stations along the conveyor. The bottle is moved thru the labeller machine on the conveyor by a stop-start motion which causes it to stop at each station, each bottle stopping at each station for the same length of time, and although it is not necessary that a labelling operation be performed at each station, these operations are carried on at a plurality of stations simultaneously and as each individual bottle stops at the various stations in succession, the operations are carried on successively so that when the bottle is discharged from the end of the conveyor it has been properly labelled. The stamping device of this invention applies a number or other distinguishing mark to each of the bottles as they stop at one of the stations so that the bottles discharged from a labeller equipped with one of these stamping devices is not only properly labelled but is also marked.

The stamp 4 is embedded in the hard rubber or wooden piece 5. This is securely affixed to the reciprocating arm 6 which slides in a slot in the head piece 7. This slot is preferably substantially perpendicular to the surface to which the number is to be applied and moves perpendicularly to the gen-

eral direction of the movement of the bottle along the conveyor.

The reciprocating arm 6 is actuated by the cam shaft 8. The movement of the cam shaft causes the lever 9 to describe an arc in a horizontal plane. This cam shaft is a part of the labeller machine or is actuated by the cam-motion part of the machine. The lever 9 with "A" as a center describes the arc "BC". The lever 9 transmits motion to the link 10 which with its respective adjustments and the compression spring 11 causes the piece 12 to operate pendulum fashion on the shoulder screw 13. This shoulder screw is stationary, being affixed to the upright 14 which supports the head piece 7. The pendulum-like movement of the piece 12 in turn operates the link 15; this in turn, thru the compression spring 16 and the piece 17 imparts a reciprocal motion to the arm 6. The movement of the link 10 is imparted to the piece 12 thru a stud 18 fastened on the block 19, the stud 18 being free to move in the slot 20 in the piece 12 and being held in position by the nut 21 which is threaded on to the stud 18.

The motion of the cam shaft is reciprocal. When the lever 9 is moved into the position "AB" the lower portion of the piece 12 is moved forward and the upper portion is moved backward and the reciprocating arm 6 is then at the end of the backward stroke. When in this position the bottles on the conveyor are moving from one station to the next. The motion of the cam shaft is then reversed and the reciprocating arm starts forward. The movement is so synchronized that immediately before the lever 9 assumes the position "AC" the bottle which is to be marked has become stationary. When the lever 9 assumes the position "AC" the reciprocating arm has reached the end of its forward stroke. The stamp is then pressed firmly against the bottle by the compression spring 16. The combined effect of the compression spring, the rubber type and the rubber cushion under the type-holder in which the stamp is embedded prevents breakage of the bottle. The stop 22 prevents the bottle from being moved sideways on the conveyor. After the stamp contacts with the label and as it moves backward, the inking pad 23 swivels about the point 24 and it is brought into contact with the stamp as it reaches the end of its backward stroke and freshens the ink on the stamp.

Variations in the operating mechanism may be provided as required.

We claim:

1. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a stamp affixed to a reciprocating arm and means actuated by the means which imparts motion to the conveyor

to move the stamp in and out of contact with a container carried by the conveyor.

2. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm with a stamp affixed thereto and means actuated by the same mechanism which actuates the conveyor for imparting to the reciprocating arm a motion perpendicular to the movement of the conveyor and so synchronized with the movement of the conveyor that the stamp is brought into contact with a container conveyed by the conveyor at one of the stations along the conveyor.

3. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm with a stamp affixed thereto, means actuated by the same mechanism which actuates the conveyor for imparting to the reciprocating arm a motion perpendicular to the movement of the conveyor and so synchronized with the movement of the conveyor that the stamp is brought into contact with a container conveyed by the conveyor at one of the stations along the conveyor, and an inking pad for inking the stamp when it is out of contact with the container.

4. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm with a stamp affixed thereto, adapted to move in a plane perpendicular to the motion of the conveyor, mechanism actuated by the cam-motion part of the labeller machine for imparting to the reciprocating arm a motion which causes the stamp to move forward into contact with a container on the machine at one of the stations along the conveyor and resilient means adapted to apply pressure to the reciprocating arm when in contact with the container.

5. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm with a stamp affixed thereto, mechanism actuated by the cam-motion part of the labeller machine for imparting to the reciprocating arm a motion which causes the stamp to move forward into contact with a container on the machine at one of the stations along the conveyor and for moving the stamp backward out of such contact, and means for inking the stamp at the end of the backward stroke.

6. In combination with a labeller machine

of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm located at one of the stations along the conveyor, a stamp affixed thereto, means for moving the arm backward and forward in such a way that at the end of the forward stroke it contacts with a bottle on the conveyor, and resilient means for applying pressure thereto.

7. In combination with a labeller machine of the type comprising a continuous conveyor with means for holding a container on the conveyor and for imparting a stop-start motion to the conveyor, a reciprocating arm located at one of those stations along the conveyor at which the means for holding a container comes to rest at the end of each of the stop-start movements of the conveyor, a stamp affixed to the forward end of the reciprocating arm in such a way that it contacts with the container on the conveyor at the end of the forward stroke of the reciprocating arm, a compression spring connected with the reciprocating arm, means actuated by the cam-motion part of the labeller machine which moves the reciprocating arm forward and applies pressure thereto through the medium of the compression spring and which also moves the reciprocating arm in the reverse direction, the movement of the reciprocating arm being so synchronized with the movement of the conveyor of the labeller machine that the reciprocating arm reaches the forward end of its stroke immediately after each pause in the stop-start movement of the belt.

In testimony whereof we affix our signatures.

PAUL S. PITTENGER.  
EDWARD J. RICHARDS.

70

75

80

85

90

95

100

105

110

115

120

125

130