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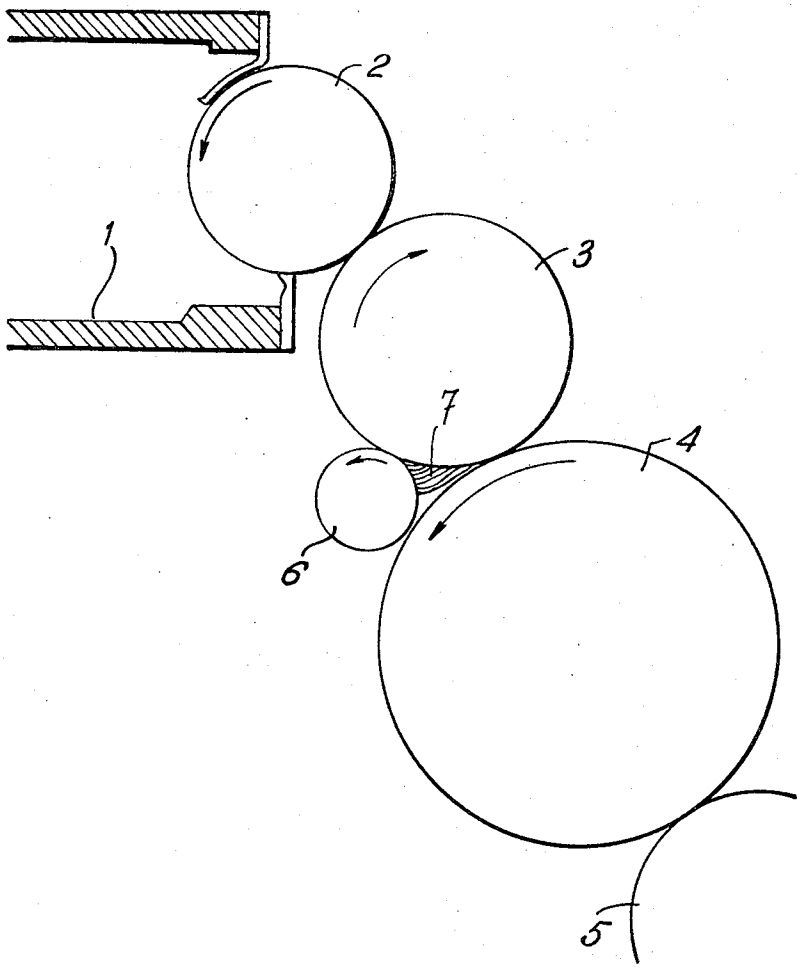

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DEVICE FOR PREVENTING THE FOULING OF LABELLING MACHINES BY THE LABEL GLUE

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1 Claim. (Cl. 156—389)

ABSTRACT OF THE DISCLOSURE

In a gluing machine, a recovery roller is rotated in contact with the adhesive transferring roll in the same direction and in closely spaced relationship to the applying roll but in opposite direction to said transferring roll so as to serve as doctor roll for the applying roll returning excess adhesive to the adhesive transferring roll for which it acts as spreader roll.

This invention relates generally to labelling machines and has specific reference to means for preventing the fouling of labelling machines by filaments of drawn glue flowing from moving parts, notably the revolving rolls of which the surface is coated with glue.

It is already known to associate with the gumming rolls of such machines devices consisting notably of doctor blades serving the purpose of arresting the filaments drawn between two parts in relative movement with respect to each other. However, these doctor blades constitute in most cases abutments on which the glue accumulates, so that after a certain period of operation of the labelling machine the glue flows and forms filaments which, although they are prevented from fouling the label gumming roll, will finally foul another part of the machine such as the combs or the turret.

It is a primary object of this invention to provide a device which, instead of operating as a conventional stopping doctor, acts as a collecting or recovering device adapted to return the filaments of glue to the distributor member, for instance the gumming roll.

In the device according to this invention the glue filaments which would otherwise have flown anywhere or at random are recovered and thus the device acts as a feed regulator by returning to the distributing member the excess of glue of which the output is always difficult to control.

With the device according to this invention, the machine is kept not only in a satisfactory clean condition but also in proper conditions of operation, and it is an advantageous feature of this device that substantial amounts of glue are saved in the long run.

This device also permits, as contrasted with hitherto known labelling machine arrangements, of using glues of considerably greater tackiness even if the distributing members or the rolls carrying the labels to be applied are driven at higher peripheral speeds in relation to each other.

Finally, an advantageous feature of the device according to this invention resides in the considerable improvement of the quality of label adherence on the articles to

be labelled, such as bottles, containers, tin cans, etc. In fact, with the conventional technique it was customary to observe the partial formation of drawn glue filaments on the cylindrical or operating surface of the glue distributing roll, so that these filaments created ribs or relief lines impairing the surface smoothness of the gummed roll. It is clear that these filamentary ribs or projections prevent the label from adhering regularly on the application surface. With the device of this invention any stray filaments of this character are eliminated and the smoothness and regularity of the glue distributing surface is protected, thus improving the quality of the labelling operation. Under these conditions, by smoothing out the surface of the glue to be distributed a twofold result is obtained: on the one hand, preventing the fouling of the machine as a whole, and on the other hand improving the gumming step.

The arrangement according to this invention is characterized essentially in that it consists of a filament cutting or recovery roll in tangent contact with an intermediate glue feed roll adapted to deliver glue to the surface of a label gumming roll with which it is also in tangent contact, the first roll aforesaid being located very close to the label gumming roll without however contacting same, whereby the glue filaments extending from said intermediate roll and said label gumming roll are picked up by the recovery roll which turns these filaments over and presses same on the intermediate roll surface.

Reference will now be made to the single figure of the attached drawing showing diagrammatically by way of example a typical form of embodiment of the invention.

In the drawing, the reference numeral **1** designates the glue container from which the glue is delivered by means of a bronze feed roll **2** in tangent contact with an intermediate gumming roll **3** lined with rubber or like elastic material which on the other hand is in tangent contact with the label gumming roll **4** made of or lined with bronze and adapted eventually to deliver the glue to the back face of the labels carried by the label pick-up roll **5**.

The filament cutting or recovery roll according to this invention is designated by the reference numeral **6** and consists of bronze. This roll **6** is in tangent contact with the intermediate roll **3** but not with the roll **4**, although its peripheral surface is very close thereto.

The arrows indicate the directions of rotation of the various rolls; it will be seen that roll **3** revolves in opposite direction to rolls **4** and **6** which revolve in the same direction.

The reference numeral **7** designates on the other hand the glue filaments tending to develop on the outlet side of the nip formed betwen rolls **3** and **4**. These filaments are picked up by the revolving roll **6** which tends to return the filaments to the surface of roll **3** and to press these filaments against this surface, as shown, thus regulating the coated surface of roll **3**.

Under these conditions it is clear that no filament likely to foul the roll **4** can escape the recovering action of roll **6** and the labels carried by the feed **5** are thus properly gummed.

It goes without saying that it would not constitute a departure from the spirit and scope of this invention to bring various modifications to the specific form of embodiment shown and described herein by way of example.

Thus, more particularly, the number of filament cutting rolls may be more than one, if desired, in a same

labelling machine. In this case, for example, an additional filament cutting roll may be disposed between rolls **2** and **3**.

What I claim is:

1. Device for preventing the fouling of labelling machines by the label glue, characterized essentially in that it consists of a recovery roll kept in tangent contact with an intermediate gumming roll adapted to feed glue to a label gumming roll with which it is also kept in tangent contact, said intermediate gumming roll being rotated in opposite direction to said recovery roll and said label gumming roll which both latter rolls are rotated in the same direction, said recovery roll being located very close to said label gumming roll without actually contacting same whereby the glue filaments extending from said intermediate roll to said label gumming roll are picked

up by the recovery roll, and subsequently returned and pressed by said recovery roll on the surface of said intermediate roll.

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