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O. TYBERG & S. I. PRESCOTT.

PASTING MECHANISM.

APPLICATION FILED AUG. 1, 1901.

NO MODEL.

Fig. 1.

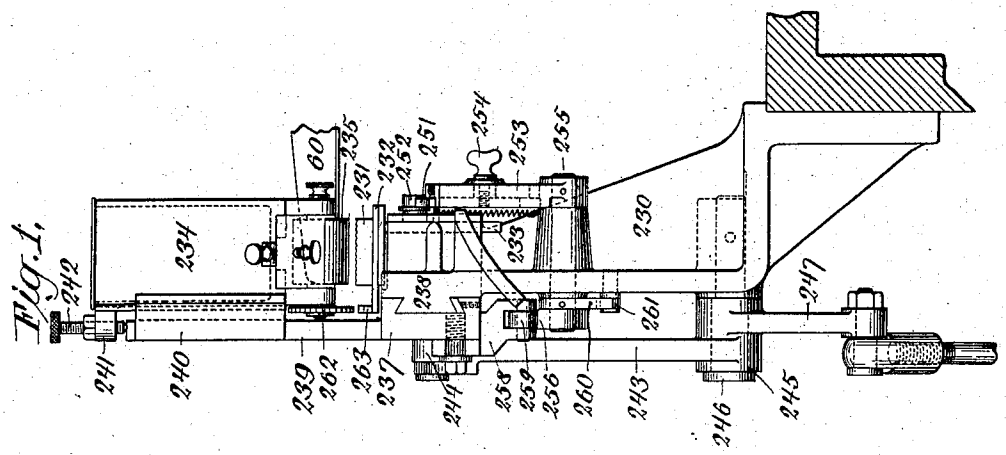


Fig. 2.

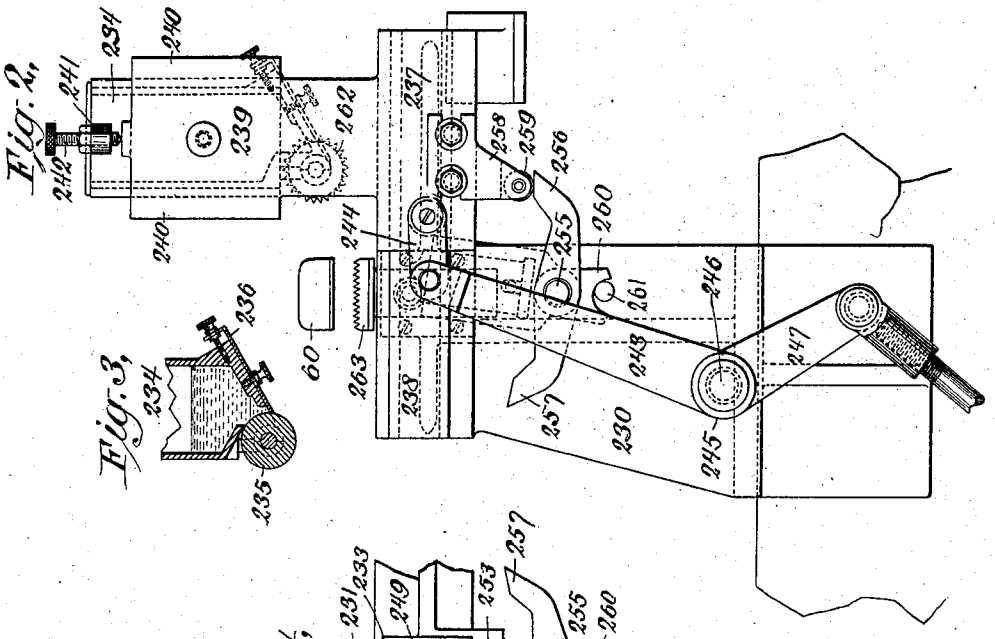
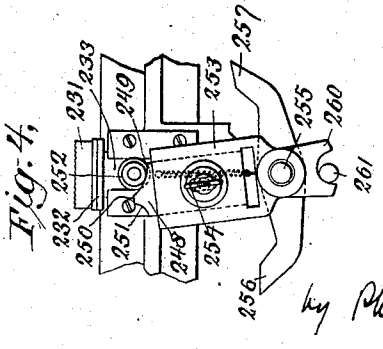


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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PASTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 751,224, dated February 2, 1904.

Application filed August 1, 1901. Serial No. 70,470. (No model.)

To all whom it may concern:

Be it known that we, OLUF TYBERG and SYDNEY I. PRESCOTT, citizens of the United States, and residents of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Pasting Mechanisms, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in pasting mechanism.

In one type of cigar-machines the wrapper is presented to the wrapping mechanism by a moving support, the wrapper being retained on the support by suitable means—as, for instance, by suction. It is necessary in cigar-machines that the end of the wrapper which is to be wrapped about the tip end of the bunch be pasted prior to the wrapping operation, so that the wrapper may be secured upon the bunch. In the type of machines referred to the paste is applied to the wrapper by bringing the wrapper while held on the support into contact with a paste-roller which runs in a fountain. This form of pasting apparatus is objectionable, for the reason that it is difficult to control the amount of paste on the roller so that the precise amount desired will be deposited on the wrapper. Furthermore, the rubbing action due to the relative movement between the support and the roller when the two come into contact is liable to misplace the wrapper on the support.

It is the object of this invention to produce a pasting apparatus primarily intended for use in pasting cigar-wrappers, although it may be used in other relations which shall avoid the objections heretofore stated, which shall be simple in construction, effective in operation, and which shall possess many other advantages over the pasting mechanisms now in use.

With this and other objects in view the invention consists in certain constructions and in certain parts, improvements, and combinations, as will be hereinafter fully described, and then specifically pointed out in the claims hereunto appended.

In the accompanying drawings, in which like characters of reference indicate the same parts, Figure 1 is an end elevation of a form of pasting mechanism constructed in accordance with the invention. Fig. 2 is a front elevation of the same. Fig. 3 is a detail sectional elevation illustrating the construction of the paste-fountain. Fig. 4 is a rear elevation of a part of the operating mechanisms shown in Fig. 2.

Referring to the drawings, which illustrate one embodiment of the invention, 230 indicates a bracket which may be secured in any suitable manner to the frame of the machine with which the pasting mechanism is used. This bracket serves to support a paste-applying device, which in the present instance consists of a pad 231, mounted on a plate 232, supported on a stem 233. This pad is designed to transfer paste to a cigar-wrapper or other material which is held at the time the paste is applied to it on a suitable support. The support for the wrapper may be of any suitable description. The support shown, however, which is marked 60, is a suction-support of the form disclosed in Patent No. 654,203, granted July 24, 1900, to R. L. Patterson and George Arents, Jr., as the assignees of Oluf Tyberg. The paste is first applied to the pad by suitable mechanism, after which a relative movement is produced between the applying-pad and the wrapper-support in order to enable the pad to transfer the paste to the wrapper. In the present machine this relative movement is effected by moving the pad, and to this end, therefore, the stem 233 is in the form of a slide and is movably held in the frame in any suitable manner—as, for instance, by gibs. The paste is contained in a suitable fountain 234, said fountain having a distributing device which may be of any suitable description. In the construction shown this distributing device consists of a roll 235, mounted in bearings carried by the fountain, said roll

being located, as usual, in the mouth of the paste-fountain. The amount of paste carried out of the fountain by the roll is determined by a suitable doctor, which may consist of a slide 236, controlled by set-screws.

In order to bring the paste-applying pad into contact with the distributing-roll, a suitable relative movement must be produced between the pad and the distributing-roll. While this relative movement may be effected in any desired way, it is accomplished according to the present invention by moving the fountain which carries the roll. To this end, therefore, the fountain is mounted on a suitable slide 237, said slide having ways which engage a dovetailed projection 238 on the bracket 230. The connection between the slide and the fountain may be of any suitable description. As shown, the slide has an upright 239, which is provided with ways 240, between which the fountain is located. These ways preferably overhang the edges of the fountain slightly, so that it is snugly held between them. The fountain is preferably vertically adjustable with respect to its support, and any suitable form of connections may be employed by which this adjustment can be effected. In the construction shown the fountain is provided with a threaded boss 241, through which is tapped a screw 242, bearing on the top of its support.

Any suitable means may be used for reciprocating the support in its ways. As shown, it is reciprocated by an arm 243, connected by a link 244 with the slide. The arm 243 extends from a hub 245, mounted on a stud 246, projecting from the bracket 230. An arm 247 also extends from this hub, said arm being operated by a link which extends, or may extend, to any suitable moving part of the machine on which the pasting apparatus is mounted.

The means for producing the movement of the paste-applying pad may be of any suitable description. Preferably, however, the means for moving this paste-applying pad will be of such a character that it will first be moved from its lower position into a position where it will contact with the paste-distributing device on the fountain, and after this device has placed a layer of paste thereon the pad will be given a further movement to transfer the paste to the material to be pasted. In the construction shown there is provided an operating-cam 248, which has three operating-faces 249 250 251. This cam has a movement which will bring these faces into contact with a stud 252, which is secured to the slide 233 before described. When the stud is resting on the face 249, the pad is in its lowest position, at which time it is below the path of movement of the distributing-roll of the fountain. When the stud is resting on the face 251, the pad has been moved upward into a position where the distributing device during the movement of the fountain will apply a layer of paste thereto. When the stud is resting on the face 250, the pad will be in its highest position and will be transferring the layer of paste to the wrapper or other material to be pasted. The construction is furthermore arranged so that the pad will remain in its lowest position until the fountain has nearly completed the first half of its reciprocation. As the fountain returns the stud is moved from the face 249 to the face 251, so that the distributing-roll will pass over the pad and apply a coating of paste thereto. As the distributing-roll leaves the face of the pad the face 250 of the cam comes into action and throws the pad against the material to be pasted. It will be seen that the face 250 of the cam is very short, so that this movement is quickly performed.

The means for operating the cam 248 may be of any suitable description. As shown, it is secured in a socket in a block 253 by any suitable means—as, for instance, by a wing-nut 254. This block 253 is mounted on a short shaft 255, which extends through a rib of the bracket 230. It is apparent that by suitably rocking the shaft 255 of the block the cam may be given the desired movement. Any suitable means may be employed for rocking the block; but these means are preferably controlled by the slide 237. To this end, therefore, the shaft 255 is provided with a two-marked rocker 256 257, and the slide is provided with an extension 258, said extension carrying a roller 259, which is in position to contact with the arms 256 257 of the rocker. The shaft 255 is further preferably provided with a limiting-stop 260, coöperating with a pin 261 in an obvious manner.

In order to distribute the paste smoothly and evenly on the pad, it is desirable that the distributing-roll 235 be caused to rotate during the time when it is in contact with the pad. While this may be effected in any suitable manner, in the construction shown the shaft of the roll is provided with a gear 262, which coöperates with a rack 263, mounted alongside the pad 231 and preferably on the plate which supports the pad. The construction being as before described, it is apparent that as the fountain is moved to the left of the observer (see Fig. 2) there will be no movement of the pad and no paste will be placed upon it. As the fountain completes its movement to the left, however, the roll 259 strikes the arm 257 and rocks the block 253, so that the stud 252 passes from the face 249 of the cam 248 to the face 251. This raises the pad into its intermediate position, and as the fountain returns, therefore, the distributing-roller will run over the face

of the pad, the gear 262 of the roller at this time engaging the rack 263, and thus positively rotating the roller. By thus rotating the roller by means independent of the pad and the roller any wiping action of the roller on the pad is prevented. As the fountain completes its return reciprocation the roll 259 strikes the rocker-arm 256 and throws the cam over, so that the stud 252 passes from the face 251 back to the face 249. As the stud passes from the face 251 to the face 249, however, it runs over the face 250, which raises the pad to its highest position. Just before the stud passes over this face, however, the support 60, carrying the wrapper, has come to a position of rest above the pad, so that as the cam-face 250 raises the pad to its upper position the paste on the bed is transferred to the wrapper. It will be seen that by this mechanism any tendency to displace the wrapper on its support is obviated and, further, that by properly controlling the doctor the precise amount of paste desired can be placed upon the pad and by it transferred to the wrapper. Furthermore, the pad does not receive its paste from the fountain until the fountain is making its return stroke, and it immediately moves up into contact with the wrapper, so that there is no danger that the paste will dry on the pad.

While the term "paste" has been used throughout the specification and in the claims of this application, it will be understood that this term is intended to cover any suitable form of adhesive. It will be further understood that while the mechanism described by which the several operations incident to the invention are carried out is effective for the purpose other forms of mechanism may be employed. The invention is not, therefore, to be limited to the specific details of construction shown and described nor to the specific use described, as it may be used in other relations.

What is claimed is—

1. The combination with a paste-fountain having a distributing-roll, of a paste-applying pad, means for reciprocating the fountain, means for positioning the pad so that it will contact with the distributing-roll on one stroke only of the reciprocation of the fountain, and positive means for causing the roll to rotate while it is in contact with the pad, substantially as described.

2. The combination with a support for material to be pasted, of a fountain having a distributing device, means for reciprocating the fountain, a paste-applying pad, means for positioning the pad so that it will contact with the distributing device of the fountain on one stroke only of the reciprocation of the fountain, and means for giving the pad a movement to apply the paste to the material on the support, substantially as described.

3. The combination with a support for material to be pasted, of a fountain having a distributing-roll, a paste-applying pad, means for reciprocating the fountain, means for positioning the pad so that it will contact with the distributing-roll on one stroke only of the reciprocation of the fountain, positive means for causing the roll to rotate while it is in contact with the pad, and means for giving the pad a movement to apply the paste to the material on the support, substantially as described.

4. The combination with a reciprocating support, of a fountain having a distributing device, said fountain being mounted on the support, a paste-applying pad, a cam for moving the pad so that it will receive paste from the distributing device of the fountain and for then moving it into contact with the material to be pasted, and means controlled by the movement of the fountain-support for operating the cam, substantially as described.

5. The combination with a fountain having a distributing device, of a reciprocating support in which said fountain is mounted, a paste-applying pad, a cam for moving the pad into position to receive paste from the distributing device and for giving it a further movement to bring it into contact with the material to be pasted, a two-armed rocker for operating the cam, and a projection on the support for operating the arm, substantially as described.

6. The combination with a fountain having a distributing-roll, of a reciprocating support in which said fountain is mounted, a paste-applying pad, a rack on said pad, a gear on the distributing-roll, means for moving the pad into position where it may contact with the roll and its rack engage the gear on the roll, and means for giving the pad a movement toward the material to be pasted, substantially as described.

7. The combination with a fountain having a distributing-roll, of a reciprocating support on which the fountain is adjustably mounted, a paste-applying pad, a rack on said pad, a gear on the distributing-roll, means for moving the pad into position where it may contact with the roll and its rack engage the gear on the roll, and means for giving the pad a movement toward the material to be pasted, substantially as described.

8. The combination with a reciprocating support, of a fountain adjustably mounted thereon, a distributing-roll in said fountain, a gear on said roll, a paste-applying pad, a rack on said pad, a cam constructed to move the pad into position where it will contact with the roll and its rack engage the gear on the roll, and also give it a movement toward the material to be pasted, and means controlled by the reciprocating support for operating said cam, substantially as described.

9. The combination with a reciprocating support, of a fountain adjustably mounted thereon, a distributing-roll in said fountain, a gear on said roll, a paste-applying pad, a rack on said pad, a cam constructed to move the pad into position where it will contact with the roll and its rack engage the gear on the roll and also give it a movement toward the material to be pasted, a rocker-arm for operating said cam, and a projection on the reciprocating support for operating the rocker-arm, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

OLUF TYBERG.
SYDNEY I. PRESCOTT.

Witnesses:
G. WHITE,
A. A. V. BOURKE.