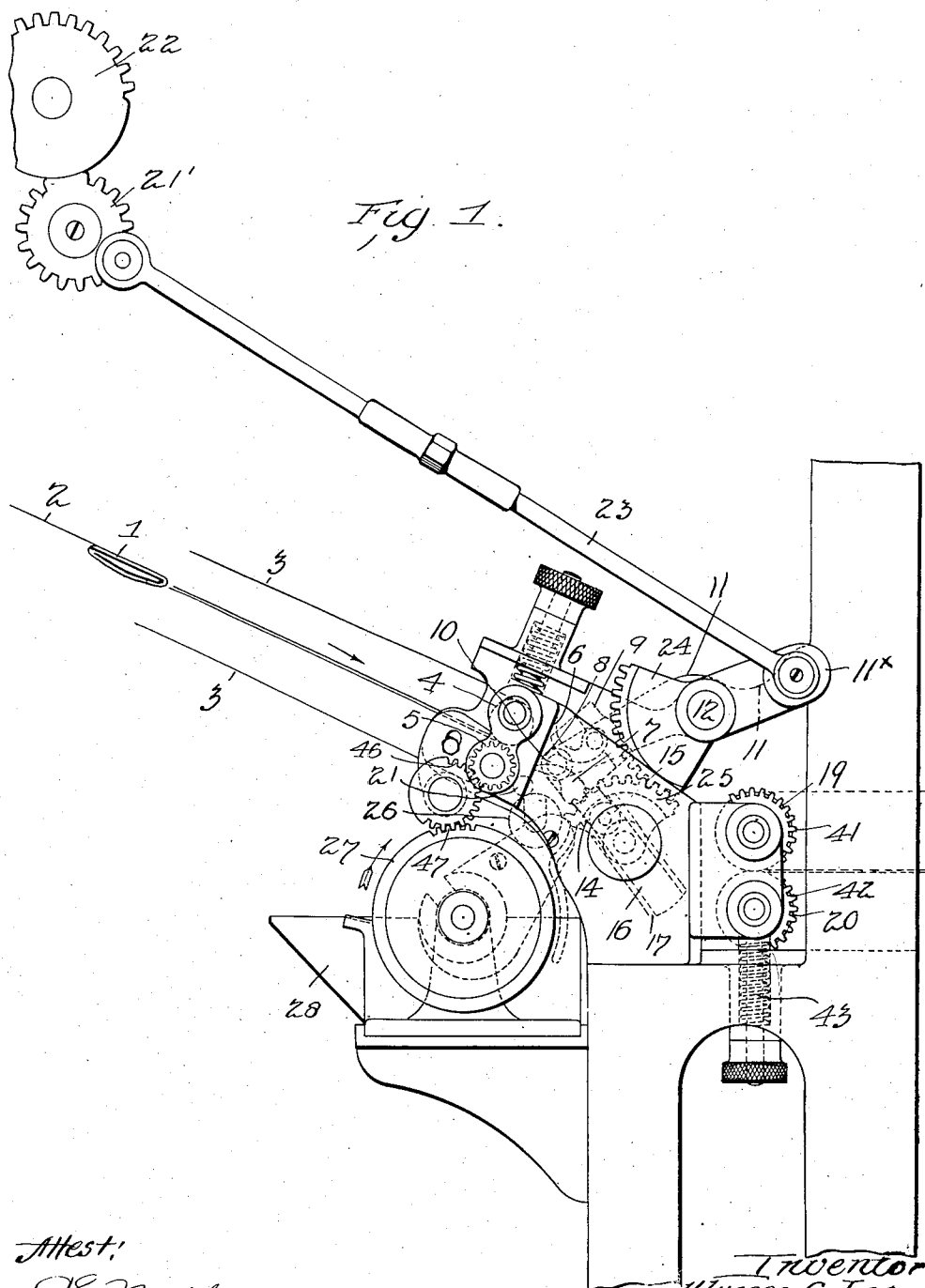


No. 826,039.

PATENTED JULY 17, 1906.

U. G. LEE.
PASTING MACHINE.
APPLICATION FILED SEPT. 21, 1905.

4 SHEETS—SHEET 1.



Attest:

OS. Madison
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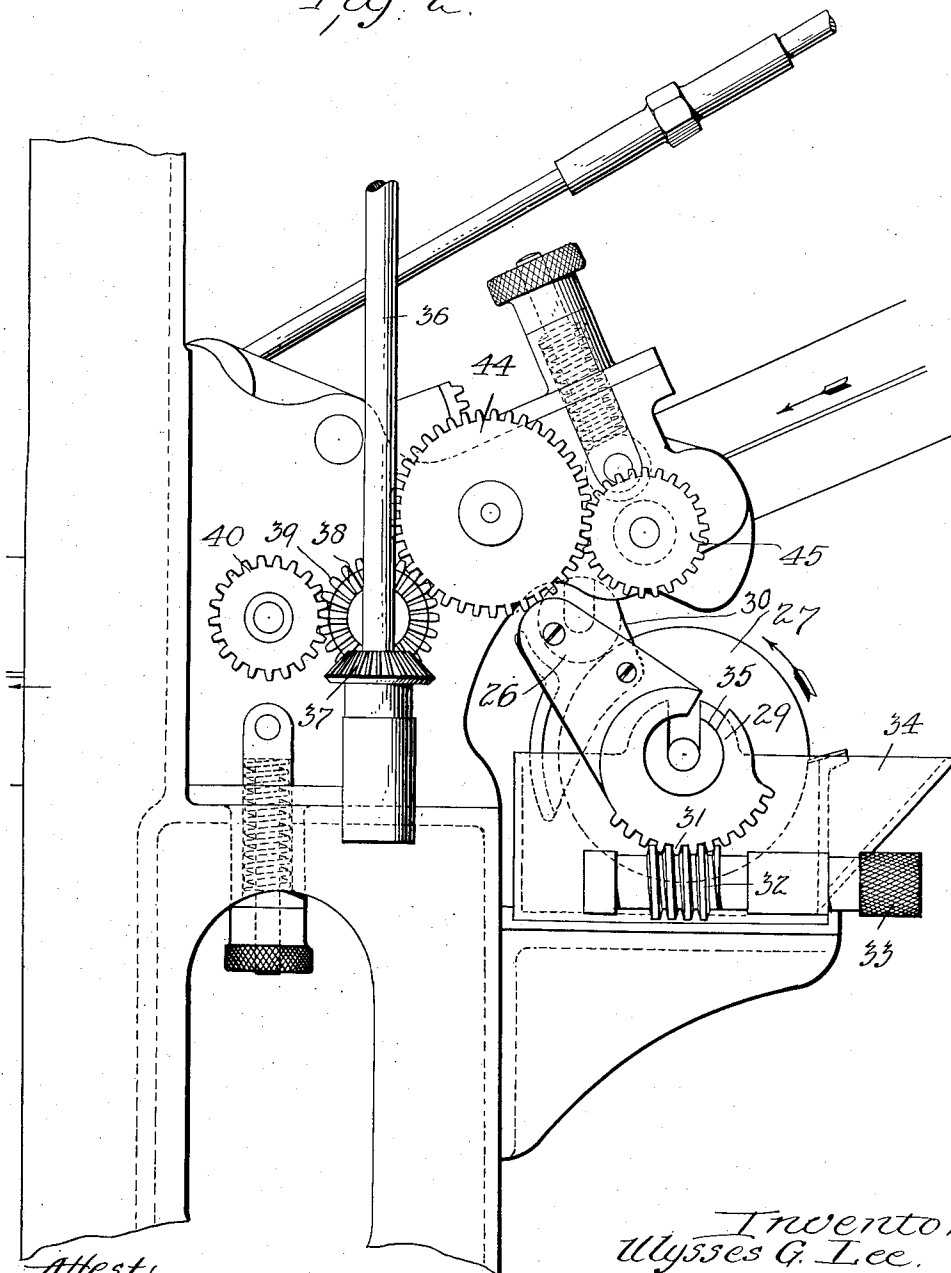
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4 SHEETS—SHEET 2.

Fig. 2.



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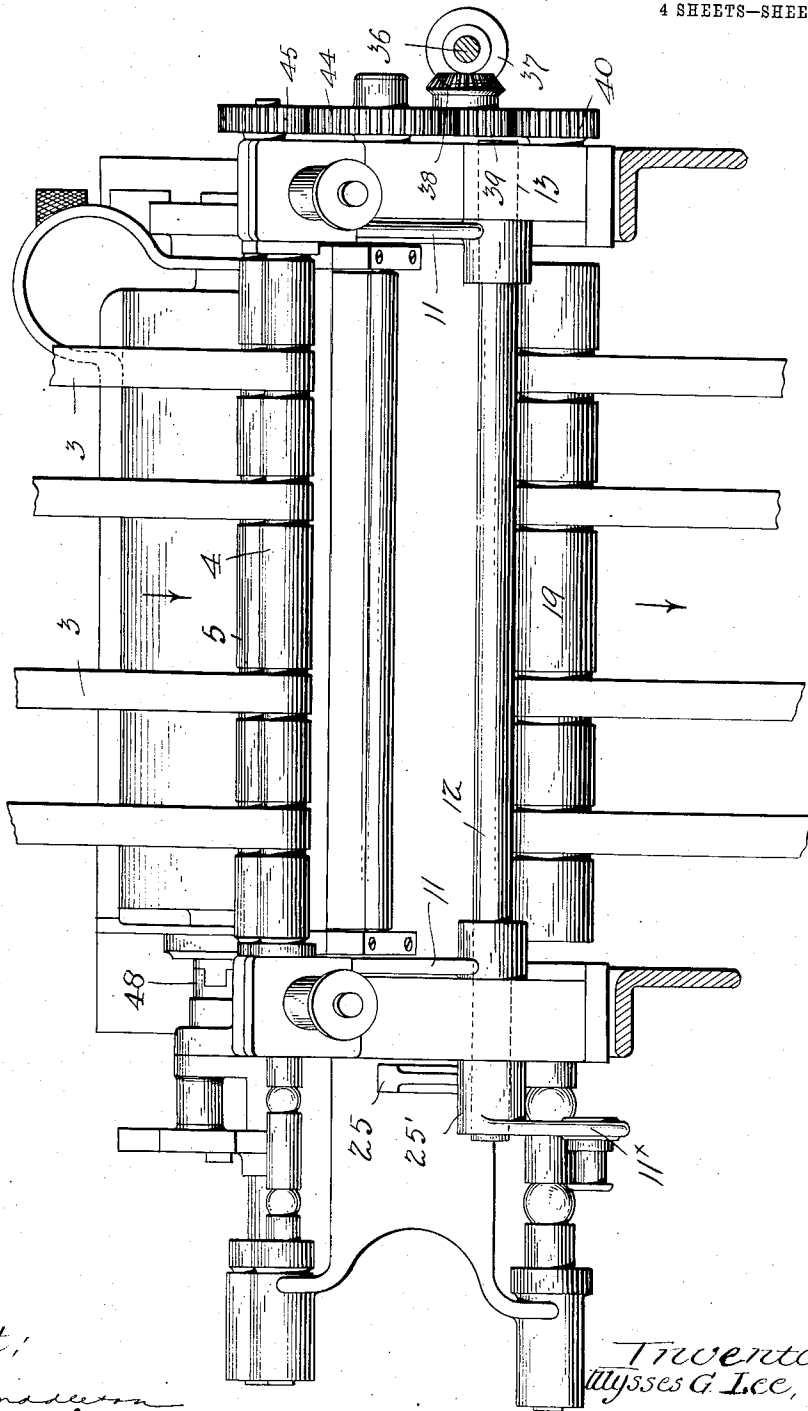
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4 SHEETS—SHEET 3.

Fig. 3.



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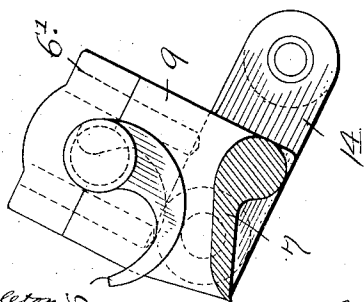
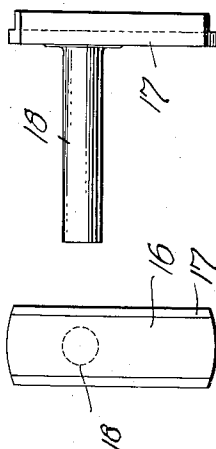
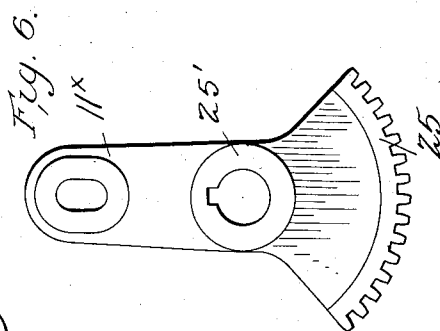
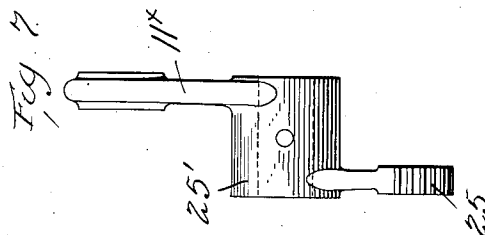
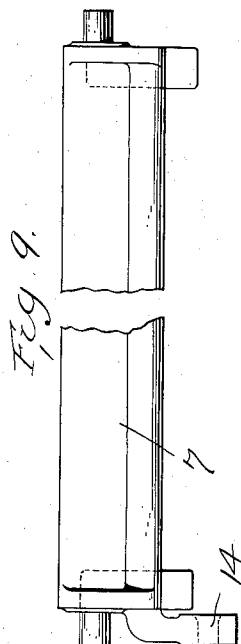
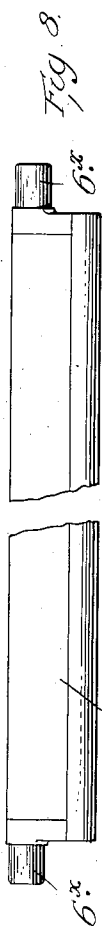
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UNITED STATES PATENT OFFICE.

ULYSSES G. LEE, OF CHATTANOOGA, TENNESSEE, ASSIGNOR TO DWIGHT P. MONTAGUE AND CHARLES OWENS, OF CHATTANOOGA, TENNESSEE.

PASTING-MACHINE.

No. 826,039.

Specification of Letters Patent.

Patented July 17, 1906.

Application filed September 21, 1905. Serial No. 279 469.

To all whom it may concern:

Be it known that I, ULYSSES G. LEE, a citizen of the United States, residing at Chattanooga, Tennessee, have invented certain new and useful Improvements in Pasting-Machines, of which the following is a specification.

My invention relates to pasting-machines for use in pasting the wrappers of magazines or other articles which are wrapped for mailing purposes.

The invention consists in the features and combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side view of the machine. Fig. 2 is a view of the opposite side of the machine from that shown in Fig. 1. Fig. 3 is a plan view of the machine. Fig. 4 is a detail view of the block carrying the paster-bar and the eccentric or clamp bar, showing also one of the arms to which the said block is pivotally connected. Fig. 5 is a detail view of the slotted guide-lever and segment connected therewith for swinging the block which carries the paster-bar and the eccentric-bar. Fig. 6 is a side view of one of the operating-segments and its arm. Fig. 7 is an edge view of the parts shown in Fig. 6. Figs. 8 and 9 are the gripper-bars.

In the drawings the magazine is indicated at 1 as it appears when it comes from the folding mechanism with the last flap of wrapping paper 2 extending to the rear. The magazine is carried along in its folded condition and with its flap extended, as indicated, in the direction of the arrow, Fig. 1, between traveling tapes 3. These tapes direct the magazine between feeding-in rolls 4 5, driven as will be hereinafter described, which rolls direct the magazine into the grip of a pair of bars 6 7. These gripping-bars are curved on their opposing surfaces, presenting a widely-flared opening 8, for the reception of the magazine with its wrapper as they leave the rolls 4 5. The lower gripper-bar 7 I term a "paste-bar," and the upper bar 6 I term an "eccentric-bar." These bars are carried by a block 9, which is pivotally supported at 10 to arms 11. These arms are secured rigidly to a rock-shaft 12, journaled in the frame at 13. The block 9 is provided with an extension or arm 14, carry-

ing a roller 15, adapted to run in a groove 16 of a guide arm or lever 17. This guide arm or lever is journaled in the frame, its journal pin or shaft being indicated at 18, and it is oscillated at the proper time through mechanism, as will be hereinafter described.

After the magazine is received and gripped between the bars 6 and 7 it is carried by the movement of the arms 11 from the rollers 4 5 to the delivery-rolls 19 20, driven as will be hereinafter described. In its passage from one set of rolls to the other paste is applied to the magazine, and the magazine is delivered to the rolls 19 and 20 in such a manner as will cause the folding down of the loose flap and the sealing of it in place by means of a line of paste which has been applied to the magazine.

The paste is applied to the magazine by means of a paste-roller 21, located directly below and adjacent to the forward edge of the paste-bar 7. The relation of the parts is such that the paste-bar is located forward of the vertical plane of the center of motion of the arms 11—i. e., the shaft 12—forty-five degrees or more, so that as the arms 11 swing toward the rear to deliver the magazine to the delivery-rolls the first movement of the paste-bar and eccentric-bar gripping the magazine is a downward and a slightly-rearward movement. This downward movement immediately the arms begin to swing brings the rear edge of the magazine against the upper surface of the paste-roller 21, thus applying the paste to the under side of the magazine, at or near its edge. The paste is applied in a narrow line along the edge of the magazine, and the said magazine, with its loose flap, then continues on its movement toward the delivery-rolls 19 and 20. In this movement the magazine is turned upside down or through one hundred and eighty degrees and in the direction of the hands of a clock, so that its pasted edge is turned uppermost and forward in relation to the direction of movement. This cause the loose flap by contact with the roll 19 to be wrapped or folded about the magazine and pressed upon the pasted edge. The loose flap on striking the roll 19 is folded backward, and the pressure for pasting is applied by the rolls 19 and 20. The paste-bar and associated parts remain in a position of rest, as shown in Fig. 1, for about one-third of the

time, this being due to the arrangement of intermittent gears 21' 22, from which the arms 11 are driven by means of the rod 23. This dwell in the movement of the swinging arms and gripping-bars allows for any inequality in the spacing of the magazine on the delivery-belts 3 as they come from the folding mechanism, and it also allows sufficient time for the magazines to pass into the space between the gripper-bars. The grooved guide-lever 17 is oscillated through segments 24 25, the latter being located on a sleeve 25', Figs. 3, 6, and 7, having formed thereon the arm 11^x, with which the rod 23 directly connects.

Paste is supplied to the paste-roller 21 through a delivery-roller 26, which bears thereon and which bears also upon a supply-roller 27, extending down into the paste-tank 28. The supply-roller is journaled in brackets 29, and the intermediate roller 26 is journaled in the bracket 30, secured to the bracket 29. The bracket 29 is provided with a segment 31, meshing with a worm-wheel 32, which may be turned by a finger-piece 33. By operating the worm 32 the bracket 29 can be turned to lower the paste-roll 26, so that the paste-pan, together with the paste-rolls, can be withdrawn from the machine. For this purpose the brackets 29 are journaled on the paste-pan 34 at 35. The roll 26 rests by its own weight on the supply-roll 27. Another function of the adjustment of the brackets 29 is that the paste-roll may thereby be raised or lowered to vary the amount of paste applied to the magazine. It will be noticed that the arrangement of parts is such that the paste-bar 7 drops down so as to bring the rear edge of the partly-wrapped magazine in contact with the paste-roll 21 before the turning movement of the block 9 with the paste-bar begins and that the turning movement is accomplished before the magazine is advanced into the bite of the rolls 19 and 20. This admits of the magazine being advanced into the bite of the said rolls on a straight line after the turning movement is accomplished.

The machine is driven from a shaft 36, having a bevel-gear 37, meshing with the bevel-gear 38, which is connected with and drives a gear 39, which meshes with a gear 40 on the shaft of the upper delivery-roll 19, and from this delivery-roll motion is imparted to the lower delivery-roll through gears 41 and 42, Fig. 1. Suitable means are provided at 43 for adjusting the pressure between these rolls. From the gear 39 motion is transmitted through gears 44 and 45 to the shaft of the lower feed-roll 5. From this gear 45 motion is transmitted to the paste-supplying roll through gears 46 47.

The eccentric-bar or gripper-bar 6 is journaled in the swinging or reversible block so as to have an adjustment. For this purpose

it is provided with journal-pins 6^x, fitting in a bearing formed between the reversible block and a cap 6'. These parts fit closely enough to hold the eccentric-bar in correct position to permit adjustment for different sizes of magazine.

At 48 is shown a clutch by which the paste-pan can be disconnected from its shaft for the removal of the paste-pan without removing the driving-shaft of the said paste-pan.

I claim as my invention—

1. In a pasting-machine, a paste-roll or paste-carrying surface, means for directing the partially-wrapped magazine or other article adjacent thereto, means for engaging the said magazine and moving the same against the paste-covered surface, a pair of delivery-rolls and means for moving the engaging means from the paste-roll to the delivery-rolls and for turning the said engaging means to reverse the position of the partially-folded magazine and cause its flap to be folded down on the line of paste by contact with the delivery-rolls, substantially as described.

2. In combination in a pasting-machine, paste-carrying means, means for engaging the magazine, a paste-carrying surface adjacent thereto when in normal position, swinging supporting means for the said engaging means having a pivotal connection therewith and means for reversing the position of the said engaging means as it swings to the delivery-rolls by turning it on its pivot in relation to the swinging supporting means and delivery-rolls for receiving the magazine or other article from the engaging and carrying means and adapted to fold down the loose flap onto the pasted portion, substantially as described.

3. In combination in a pasting-machine, means for carrying the paste to apply to the part to be pasted, delivery-rolls and means having a back-and-forth movement for carrying the partially-wrapped magazine or other article from the paste-carrying means to the delivery-rolls and reversing the same to cause the folding of the last flap, the paste being applied during said carrying action substantially as described.

4. In combination, holding means for the paste, delivery-rolls and back-and-forth-moving carrying means for the magazine or other article to carry the magazine from the paste-holder, said carrying means having also a reversing movement to reverse the magazine and deliver it to the delivery-rolls whereby the last flap will be folded down and pasted, said paste-holder being below the position of the magazine as initially grasped by the carrying means substantially as described.

5. In combination a paste-holder, means

for directing the magazine or other article to a point above the paste-holder, movable carrying means for engaging and carrying the magazine, said carrying means first moving the magazine to contact with the paste on the holder, means for reversing the carrying means to turn the magazine and delivery means for receiving the magazine in its inverted or reversed position whereby the last flap will be folded down and pasted, substantially as described.

6. In combination the rolls 4, 5, and paste-holder adjacent to said rolls, a back-and-forth-traveling member having means to grip the magazine as it emerges from the rolls 4, 5, said traveling member having turning movement and delivery-rolls with means for turning the said traveling member to present the magazine to the delivery-rolls in an inverted position, said traveling member moving the magazine and wrapper past the paste-holder to apply the paste, substantially as described.

7. In combination the rolls 4, 5, the paste-holder adjacent thereto, a paste-bar, an eccentric-bar between which and the paste-bar the magazine is gripped, a block or support carrying said bars, swinging supporting means for the said block to which it is pivotally connected, means for reversing the position of the said block in its swinging or traveling movement, and delivery-rolls to receive the magazine from the grip of the paste-bar and eccentric-bar, substantially as described.

8. In combination a paste-holder, rolls 4, 5, to direct the partially-wrapped magazine or other article to a position over the same, means for receiving the magazine after passing through the rolls 4, 5, said means being pivoted to have turning or reversing movement, swinging arms for the said gripping means to which they are pivotally connected, means for swinging the supporting means to lower the magazine against the paste-holder, means for reversing the position of the gripping means as it travels toward the delivery-point and means for receiving the magazine in inverted position whereby the flap is folded down and pasted, substantially as described.

9. In combination the rolls 4, 5, the paste holder or roll adjacent thereto, a pair of swinging arms, a supporting member pivoted thereto, means on the said supporting member for gripping the magazine as it comes from the rolls 4, 5, and a guide engaging a portion of the pivoted support to turn the same as it travels toward the delivery-point in order to reverse the position of the magazine, and means for receiving the magazine in inverted position to thereby fold down the flap, the movement of the swinging arms and the gripping means causing the paste to be applied, substantially as described.

10. In combination the rolls 4, 5, the paste

holder or roll adjacent thereto, a pair of swinging arms, a supporting member pivoted thereto, means on the said supporting member for gripping the magazine as it comes from the rolls 4, 5, and a guide engaging a portion of the pivoted support to turn the same as it travels toward the delivery-point in order to reverse the position of the magazine, means for swinging the guide and means for receiving the magazine in inverted position to thereby fold down the flap, substantially as described.

11. In combination, paste-holding means, carrying means for the magazine having swinging movement to carry the magazine from the paste-holder to the delivery-point and segmental gears to operate the swinging means and permit a dwell in the movement thereof, substantially as described.

12. In combination the rolls 4, 5, a paste-holder adjacent thereto, delivery-rolls, a carrier for the magazine or other article, swinging supporting means for the said carrier, a shaft upon which the swinging support is sustained, means for reversing the position of the carrying means and the segmental gears for transmitting the reversing movement from the said sustaining-shaft to the reversing means, substantially as described.

13. In a pasting-machine, a paste holder or distributor, a paste-pan and supply-roller, a roller intermediate the supply-roller and the paste holder or distributor and adjustable arms or brackets supporting the said intermediate roller, said paste-pan and its roller and the intermediate roll being thereby removable from the machine, substantially as described.

14. In combination in a paste-applying machine, a paste-holder, a paste-pan, a supply-roller in the pan, a roller intermediate of the supply-roller and the paste holder or distributor, brackets supporting the intermediate roller, said brackets being adapted to turn about the shaft of the paste-supply roller and means for adjusting the said brackets to permit the removal of the paste-distributing means from the machine, substantially as described.

15. In combination in a paste-applying machine, a paste-holder, a paste-pan, a supply-roller in the pan, a roller intermediate of the supply-roller and the paste holder or distributor, brackets supporting the intermediate roller, said brackets being adapted to turn about the shaft of the paste-supply roller and means for adjusting the said brackets to permit the removal of the paste-distributing means from the machine, said adjusting means consisting of the worm and the segmental gear, substantially as described.

16. In a pasting-machine, a paste-roll or paste-carrying surface, a pair of delivery-rolls, means for receiving and engaging the

magazine and moving the same to the delivery-rolls and a movable guide for inverting the said receiving and engaging means as it approaches the delivery-rolls, the said engaging means in its movement causing the magazine to receive the paste from the paste-carrying surface, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ULYSSES G. LEE.

Witnesses:

C. C. PARIS,
ALEX. LYLE.