

A. CAMERON, JR., W. F. HENDRICKS & H. R. SCHLUETER.

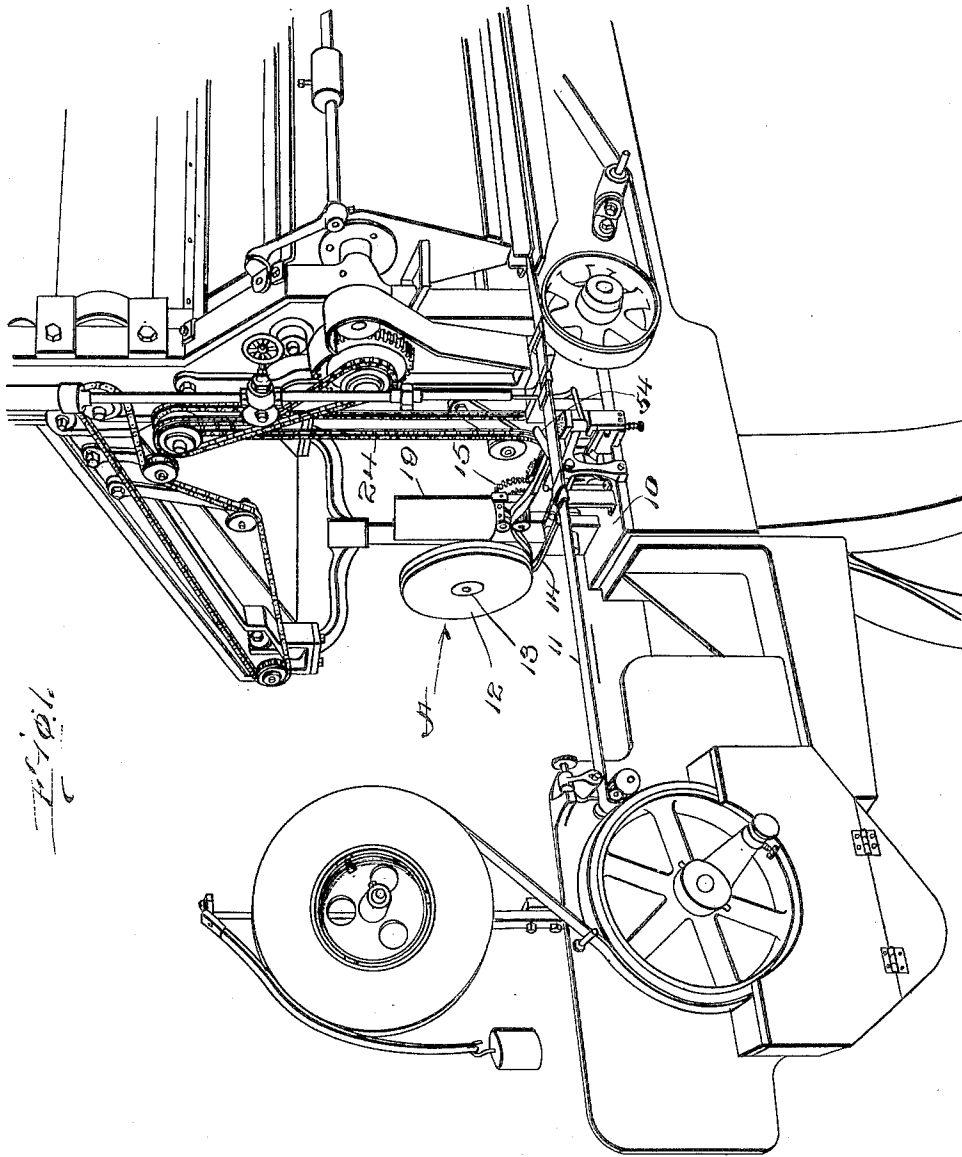
MACHINE FOR PUTTING TIPS ON CIGARETTES.

APPLICATION FILED JAN. 26, 1911.

1,088,533.

Patented Feb. 24, 1914.

5 SHEETS—SHEET 1.



Witnesses

J. N. Fowler Jr.
L. G. Merrill

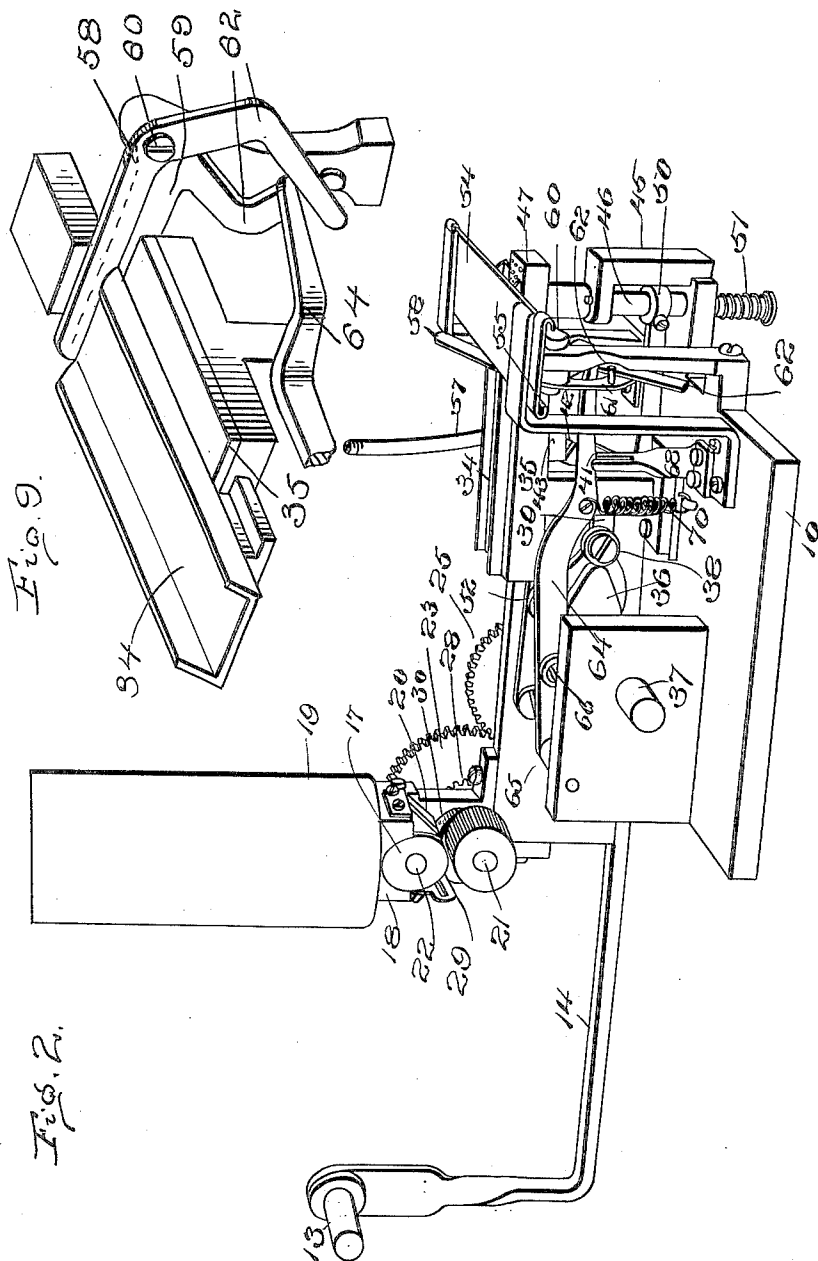
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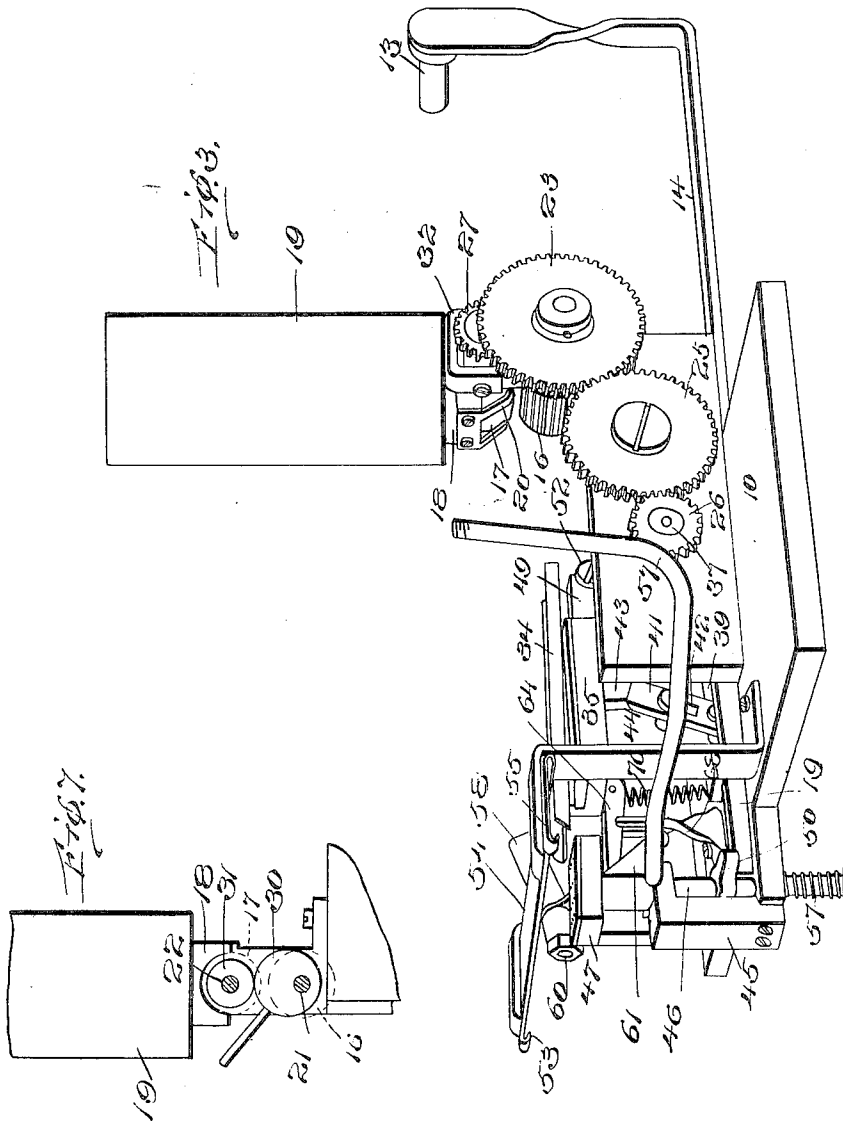
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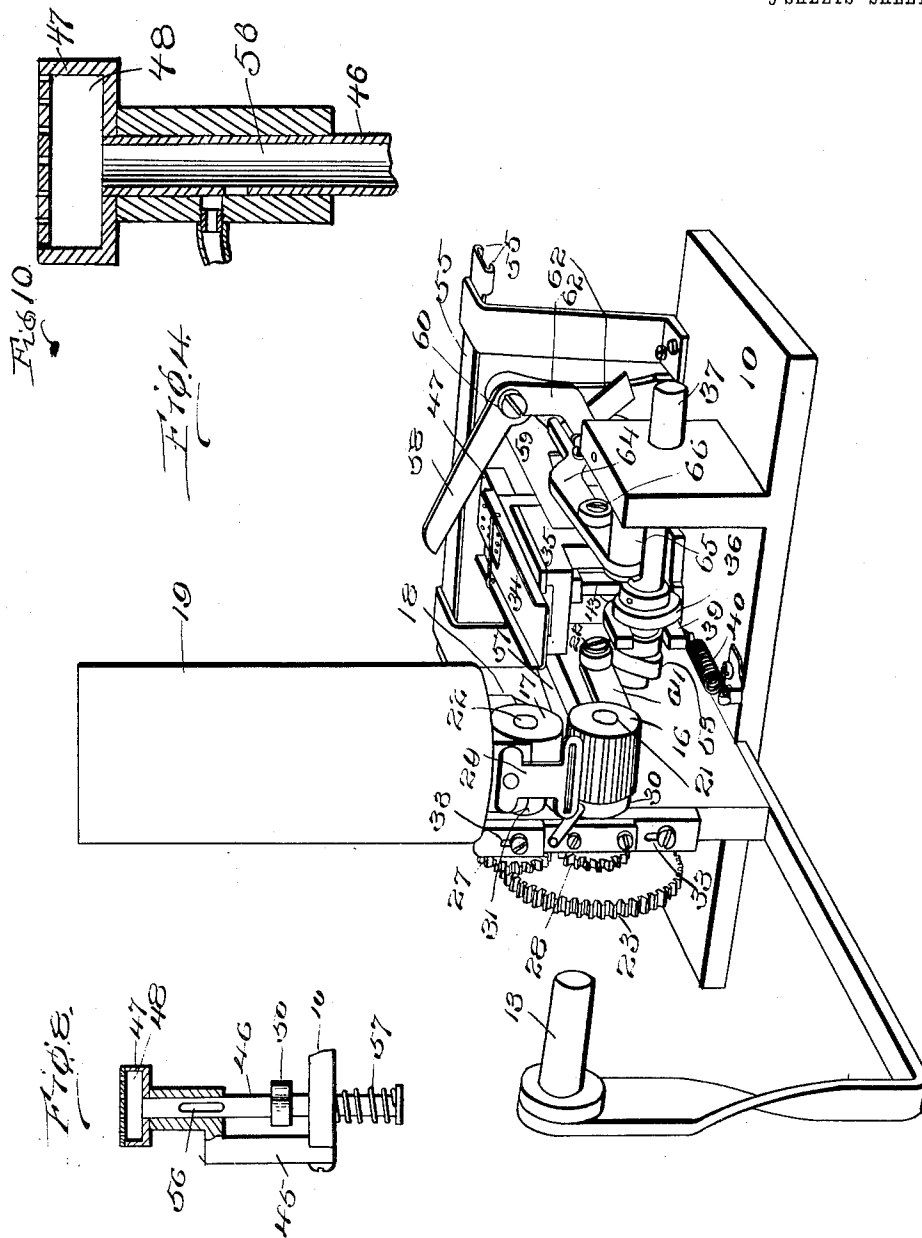
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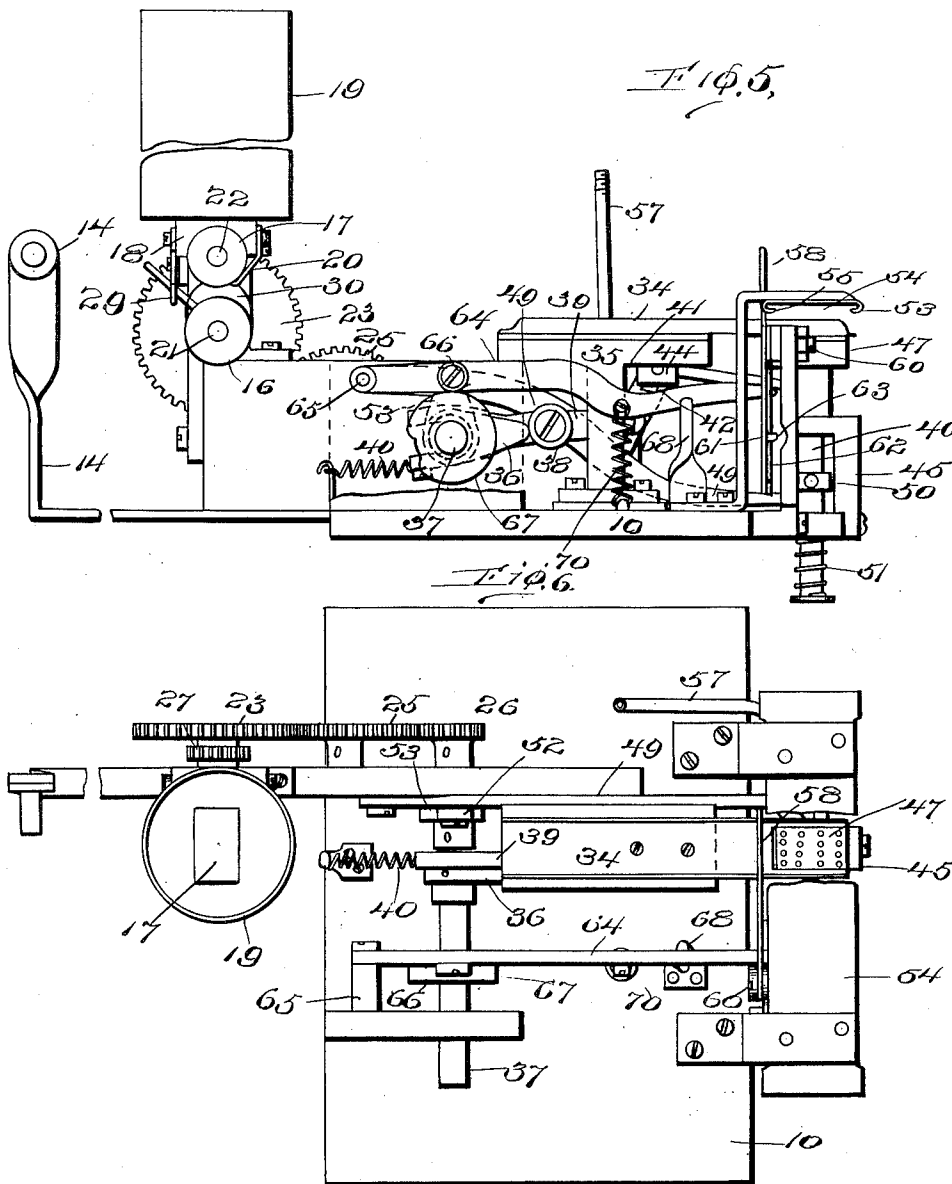
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6 SHEETS—SHEET 5.



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UNITED STATES PATENT OFFICE.

ALEXANDER CAMERON, JR., WILLIAM F. HENDRICKS, AND HENRY R. SCHLUETER, OF
RICHMOND, VIRGINIA.

MACHINE FOR PUTTING TIPS ON CIGARETTES.

1,088,533.

Specification of Letters Patent.

Patented Feb. 24, 1914.

Application filed January 26, 1911. Serial No. 604,862.

To all whom it may concern:

Be it known that we, ALEXANDER CAMERON, JR., WILLIAM F. HENDRICKS, and HENRY R. SCHLUETER, all citizens of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Machines for Putting Tips on Cigarettes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to tipping mechanisms for cigarette rolling machines and has for an object to provide mechanism applied directly to and operating synchronously with a conventional cigarette rolling machine adapted to apply a section of cork or other tipping material to the paper wrapper as the same is being fed into the wrapping machine in a continuous ribbon.

A further object of the invention is to provide mechanism employing a spool of cork or other ribbon with means to feed the same forward with a step by step movement, to apply an adhesive to such ribbon and to apply sections of the ribbon to the paper wrapper at predetermined intervals as the paper wrapper passes into the wrapping machine.

A further object of the invention is to provide mechanism adapted for advancing a ribbon of tipping material with a step by step movement with means for applying sections of such ribbon to a passing paper ribbon and means for severing the tipping ribbon in timed relation to the application of such tipping ribbon to the paper ribbon.

A further object of the invention is to provide means for advancing a tipping ribbon with a step by step movement and into engagement with a presser-foot having pneumatic means for retaining such ribbon upon such presser-foot until applied to a paper ribbon and means to sever the tipping ribbon to leave a section of the ribbon upon the presser-foot.

A further object of the invention is to provide mechanism for operating in timed relation to advance a ribbon of cork, or other tipping material, retain a section of such ribbon upon a presser-foot, sever the section so retained and apply the section re-

tained upon the presser-foot to a passing paper ribbon.

A further object of the invention is to provide a pasting means for applying an adhesive to a passing tipping ribbon and with means for raising the pasting mechanism out of operative relation with the ribbon.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings: Figure 1 is a perspective view of the essential parts of a conventional cigarette wrapping machine with the improved tip applying mechanism associated therewith as indicated by the arrow A. Figs. 2, 3 and 4 are each respectively perspective views of the tip applying mechanism removed from the wrapping machine. Fig. 5 is a view of the tip applying mechanism in side elevation with parts broken away. Fig. 6 is a top plan view of the tip applying mechanism. Fig. 7 is a fragmentary detail view of the pasting mechanism. Fig. 8 is a detail view partly in section of the presser-foot and operating mechanism. Fig. 9 is a fragmentary perspective view of the carrier and the shears in opposite position to the showing in Figs. 4 and 5. Fig. 10 is a sectional view as on the line 10—10 of Fig. 8.

Like characters of reference designate corresponding parts throughout the several views.

As shown at Fig. 1 a cigarette wrapping machine of the usual and ordinary type is employed to which is applied the tipping mechanism for applying cork or other material, which forms the subject matter of this application, by the employment of the bed plate 10 which is secured to the wrapping machine in such manner that the tipping device is associated with the paper ribbon 11 which forms the wrapper of the cigarette after passing through the wrapping machine.

The cork or other tipping material to be applied to the paper wrapper is employed upon a spool or in the form of a roll shown at 12 carried upon the stud 13 which in turn is supported by an arm 14. The cork ribbon 15 passes from the spool or roll 12 over a

milled roller 16 and under a paste roller 17 the latter of which rotates in a box 18 in communication with the paste receptacle or reservoir 19 which is supplied with a quantity of paste and applied by the paste roller 17 to the upper or top side of the ribbon 15 as the same passes between the rollers. To insure the stripping of the ribbon from the paste roller 17 fingers 20 are provided bearing upon the rollers 17. The rollers 16 and 17 are respectively mounted upon shafts 21 and 22, the former of which is driven by the gear 23 receiving power from any convenient source as the sprocket chain 24 through a train of gears 25 and 26. The shaft 22 receives motion by the mounting of a pinion 27 thereon intergeared with the gear 28 also carried by the shaft 21 and rotating therewith so that the rollers 16 and 17 rotate in timed relation. A guide 29 is also employed for the cork ribbon to pass through on being fed between the rollers 16 and 17 and the paste roller 17 is thrown out of engagement with such ribbon by means of an eccentric 30 mounted to rotate upon the shaft 21 and a roller 31 mounted upon the shaft 22 whereby when the eccentric is rotated to the position shown in the several figures the reservoir 19 and paste roller 17 together with the shaft 22 and gear 27 are raised to disengage the roller 17 from the cork strip and also disengages the gear 27 from the gear 28. Such lifting motion is permitted by mounting the reservoir 19, shaft 22 and gear 27 upon a bracket 32 which is provided with slots 33 permitting a raising of the parts. From the rollers the cork ribbon passes to the carriage 34, which is intended to guide said cork ribbon and assure its being positioned properly for attachment to the paper ribbon 4 and is mounted to reciprocate upon a guide member 35. Reciprocating motion is imparted to the carriage by means of a cam 36 carried upon the shaft 37 which also carries the gear 26 and is the main driving shaft of the mechanism. The cam 36 engages the roller 38 carried by the arm 39 which is bifurcated at one end to embrace the shaft 37 and is actuated by a spring 40 on its return movement. The forward end of the arm 39 is pivotally connected with a rocker 41 which is pivoted to the bed plate 10 and provided with a slot 42 to which the carriage 34 is pivotally connected by means of an arm 43 and pivot 44. At the forward edge of the machine an upright 45 is erected with a hollow shaft 46 mounted to reciprocate vertically therein and carrying at its upper end a presser-foot 47 having its upper face perforated and in communication with the chamber 48 which in turn is in communication with the interior of the hollow shaft 46. The carriage 34 is provided at its forward end with a cut out portion of the proper dimensions to permit the passage of the

presser-foot 47 therethrough so that as the carriage 34 advances with the cork ribbon carried thereby it passes over the presser-foot 47 and permits the presser-foot to rise through the opening and to lift the cork ribbon. The rising of the presser-foot is accomplished by a lever 49 engaging under a collar 50 carried by the shaft 46 and with a spring 51 to provide return movement of the presser-foot. The lever 49 is provided with a roller 52 engaging upon a cam 53 mounted also upon the power shaft 37 by which the hollow shaft 46 is lifted at the proper moment. The paper ribbon 11 is carried on the under side of the plate 54 which is provided with downwardly turned hooks 55 for supporting such paper ribbon 11 and permitting it to pass along the under side of the plate 54. It is apparent, therefore, that as the presser-foot 47 is raised with a strip of cork thereon with paste upon its upper side the result will be that it adheres to the under side of the paper ribbon 11 passing along the under side of the plate 54. To prevent displacement of the cork ribbon from the presser-foot 47 the hollow shaft 46 is provided with a slot 56 which is in communication with a pipe 57 which is in turn in communication with any approved air exhausting mechanism. It is apparent that when the presser-foot is at its lowest limit of movement the suction will be cut off which will permit the cork strip to pass over the presser-foot without obstruction. As soon as the presser-foot starts upwardly the suction is applied which by reason of the atmospheric pressure retains the cork strip upon the presser-foot until it reaches practically the upward limit of its movement to be applied to the paper ribbon whereupon the suction is again cut off to permit the presser-foot to be withdrawn from the cork strip without displacing it from the paper ribbon. At the same time and operating in timed relation therewith the cork ribbon is severed by the shears consisting of the blades 58 and 59 which are positioned to sever the cork strip directly at the rear of the presser-foot 47. The blades 58 and 59 are pivoted as at 60 and are provided respectively with wings 61 and 62 one of which is provided with a stop 63 to limit the open movement of such shears. To operate the shears a lever 64 is pivoted as at 65 and provided with a cam roller 66 bearing upon the cam 67 also mounted upon the main driving shaft 37. Adjacent the front side of the machine a guide 68 is erected for guiding the lever 64 and a spring 70 is provided for imparting a downward movement to the lever 64. The forward end of the lever 64 extends between the wings 61 and 62 of the shears so that a downward movement of the lever 64 under the action of

the spring 70 separates or spreads the wings 61 and 62 thereby closing the blades 58 and 59 of the shears and severing the cork strip.

It is believed that the operation of the device has been made sufficiently clear in the description of its construction and that further description of the operation will not be necessary.

We claim:

1. In a cork tipping mechanism, a paper ribbon guide, means to deliver a cork ribbon at right angles to and beneath the paper ribbon guide, a presser-foot comprising a hollow chamber and shaft and perforated face, air exhausting mechanism in communication at times with the hollow chamber, and means to prevent the passage of air when the presser-foot is at its upper and lower limits of movement.

2. In a cork tipping device, a paper ribbon guide, a hollow shaft mounted to reciprocate vertically beneath the guide, a presser-foot having a perforated face in communication with the hollow shaft, and a conduit communicating with the hollow shaft at times but disconnected therefrom when the presser-foot is at its upper and lower limits of movement.

3. In a cork tipping machine, a shaft carrying a gear and a roller, a bracket slidably mounted adjacent the shaft, a shaft journaled upon the bracket and movable therewith, a pinion carried by the last mentioned shaft intergeared with the first mentioned pinion, a paste reservoir carried by the bracket, a roller operating in conjunction with the paste reservoir and in normal engagement with the first mentioned roller, an eccentric loosely mounted upon the first mentioned shaft, a roller loosely mounted upon the second mentioned shaft and engaging the eccentric and so proportioned that

when the eccentric is rotated the bracket is lifted carrying therewith the paste reservoir, roller and gear.

4. A cigarette tipping machine comprising in combination with a cigarette making machine, having mechanism for employing a continuous ribbon of paper and a ribbon of cork to be fed intermittently to said ribbon of paper at right angles thereto, a horizontally reciprocating carriage to guide said ribbon of cork, a guide for said ribbon of paper, a foraminous presser block beneath said guide and the end of said reciprocating carriage when the same is extended, a pair of shears operating between said reciprocating carriage and presser block when said carriage is retracted and means to exhaust air from said presser block.

5. In a cigarette tipping machine, a feed roller, a disk eccentrically mounted upon the journal of the feed roller, a second roller above the first mentioned feed roller and positioned to engage against the eccentric disk, and an adhesive receptacle mounted operatively above the second roller.

6. In a cigarette tipping machine, a feed roller, a disk eccentrically mounted upon the journal of the feed roller, a frame vertically slidable adjacent the feed roller, a second roller mounted upon and movable with the frame and positioned to engage the eccentric disk, and interengaging gears carried by the journals of the rollers.

In testimony whereof we affix our signatures in presence of two witnesses.

ALEXANDER CAMERON, JR.
WILLIAM F. HENDRICKS.
HENRY R. SCHLUETER.

Witnesses:

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D. C. HANCOCK.