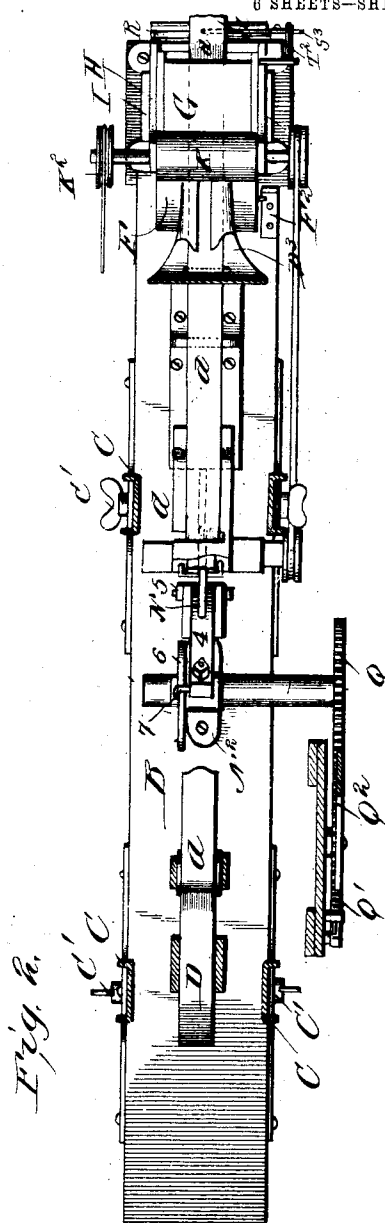
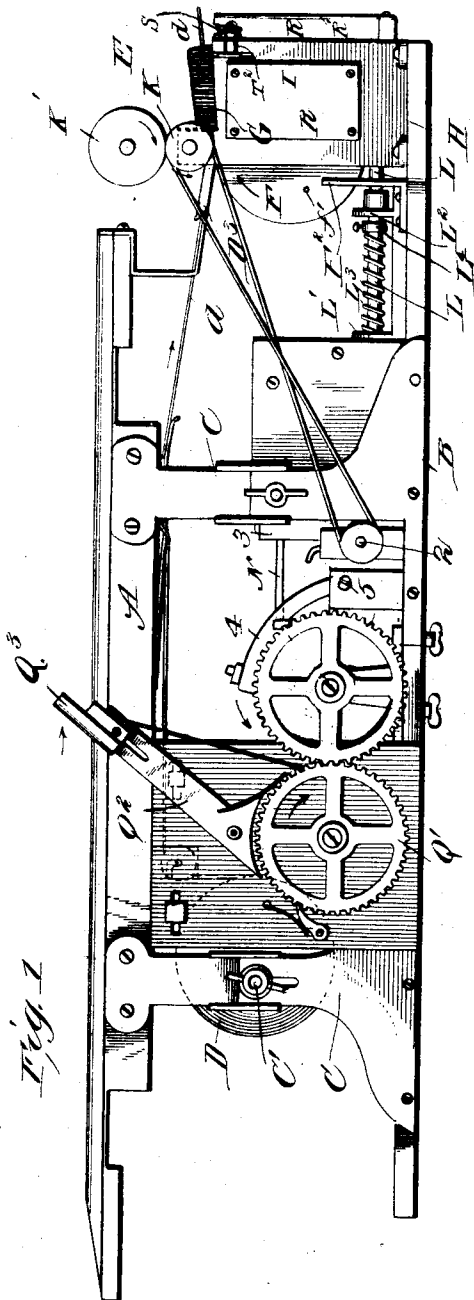


No. 831,437.

PATENTED SEPT. 18, 1906.

A. L. HOLTON.
PACKING APPARATUS.
APPLICATION FILED APR. 25, 1904.

6 SHEETS—SHEET 1.



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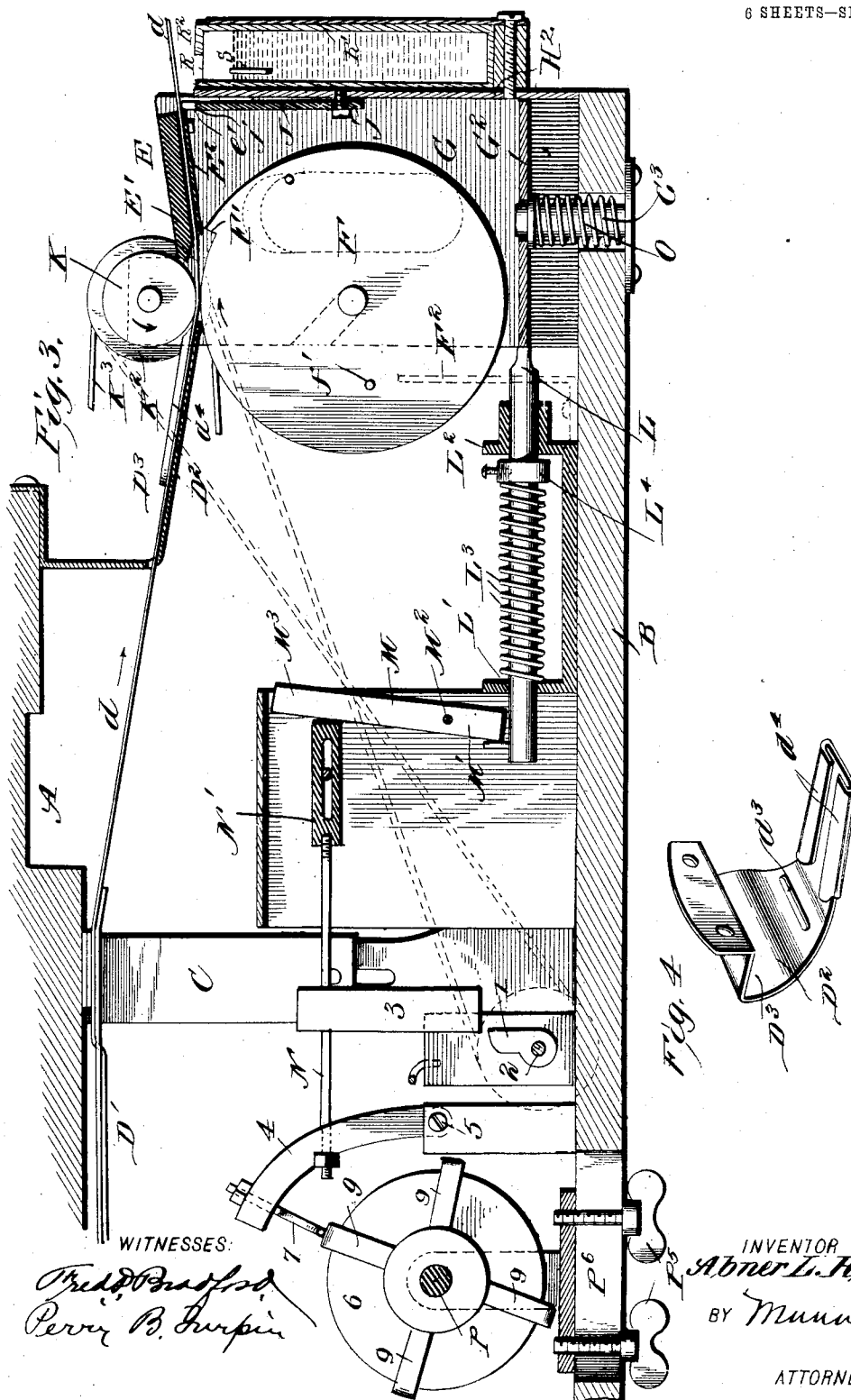
ATTORNEYS

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6 SHEETS—SHEET 2.

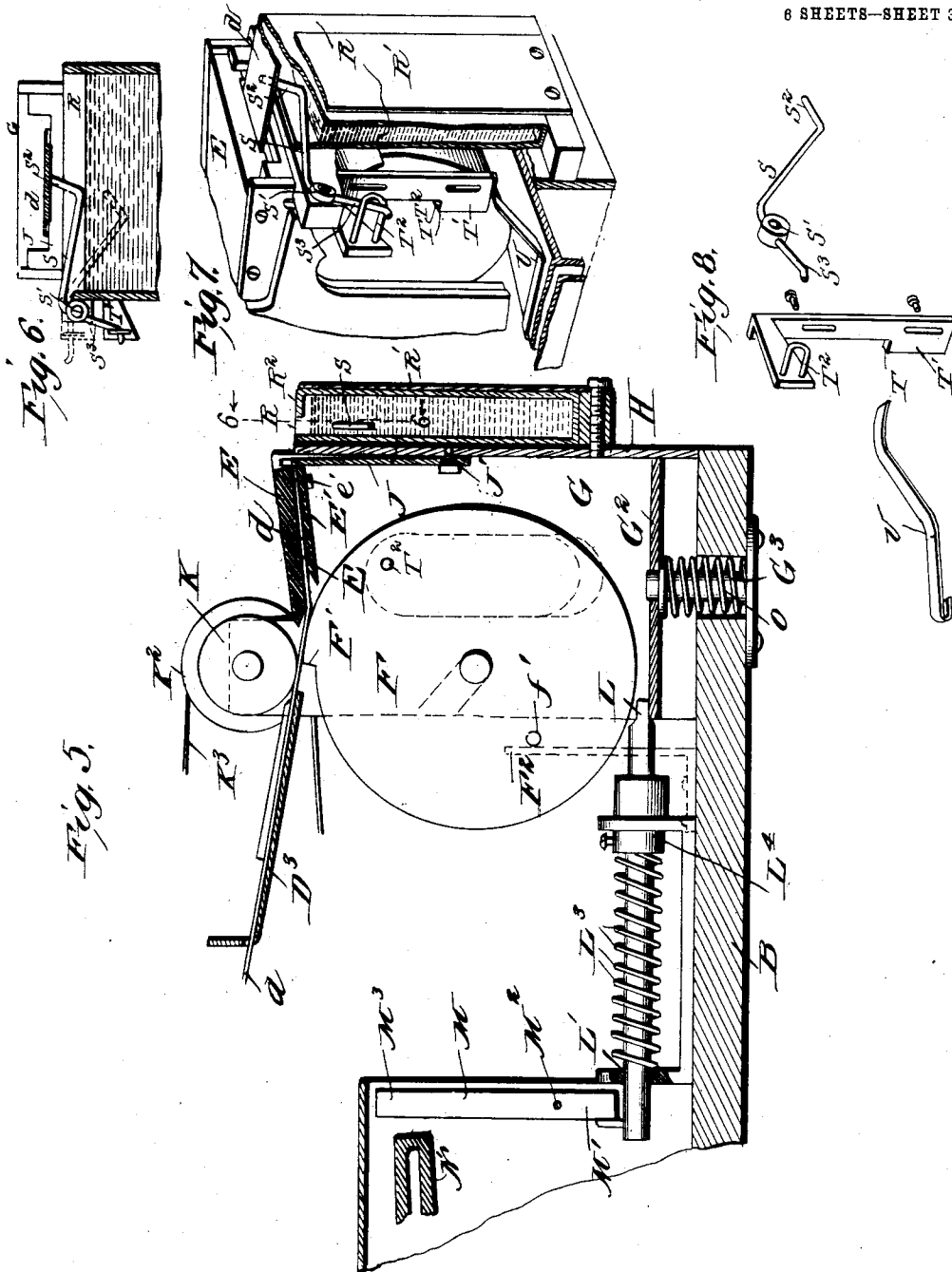


No. 831,437.

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APPLICATION FILED APR. 25, 1904.

6 SHEETS—SHEET 3.



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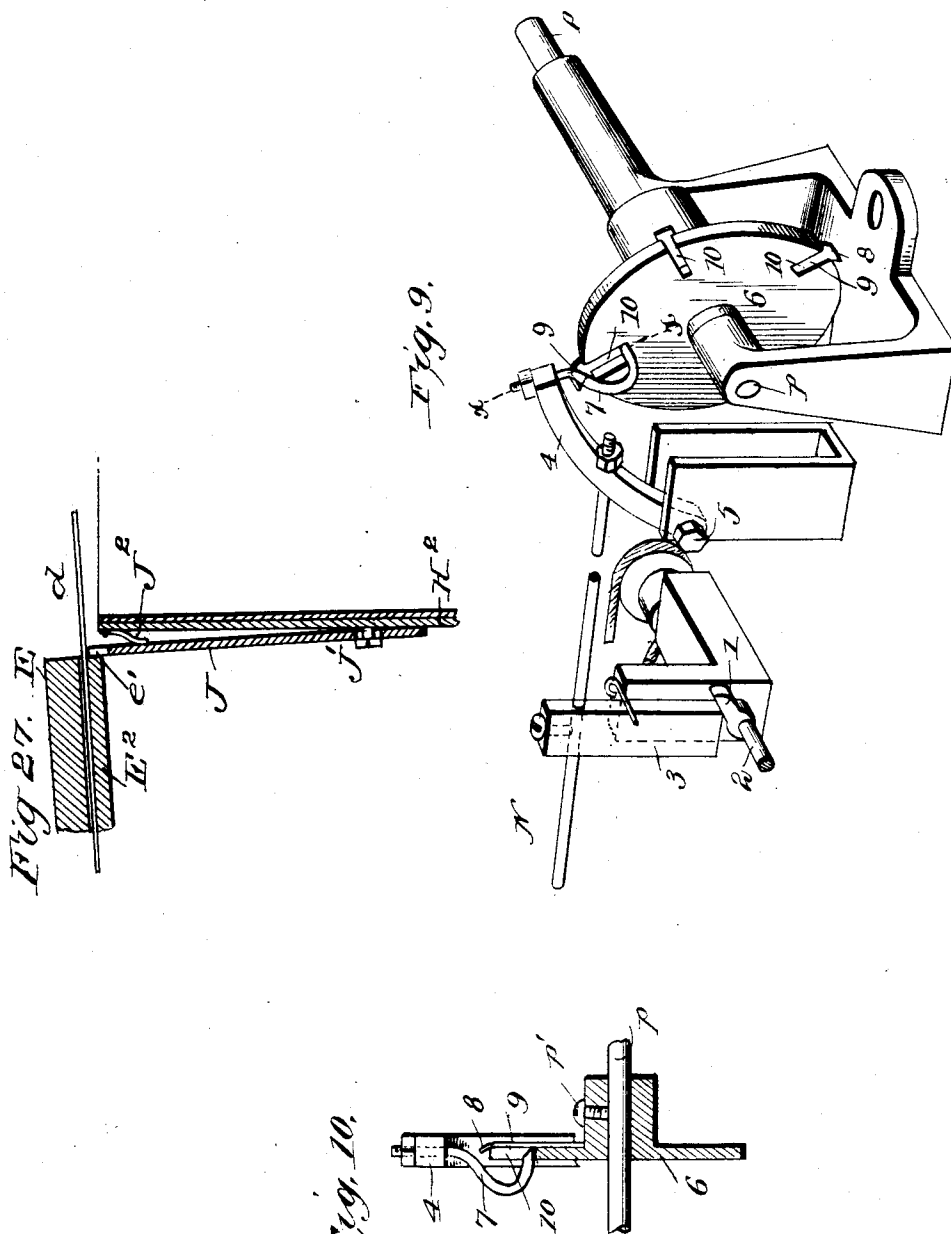
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No. 831,437.

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6 SHEETS—SHEET 4.



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APPLICATION FILED APR. 25, 1904.

6 SHEETS—SHEET 5.

Fig. 11.

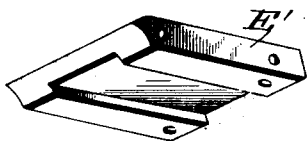


Fig. 12.

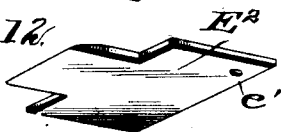


Fig. 13.

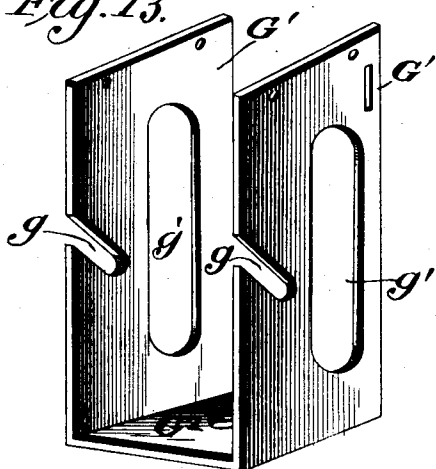


Fig. 14.

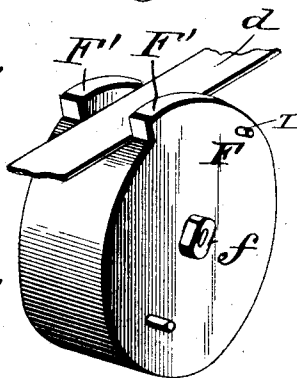


Fig. 16.

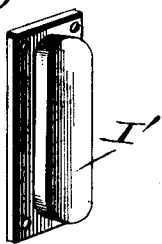


Fig. 15.

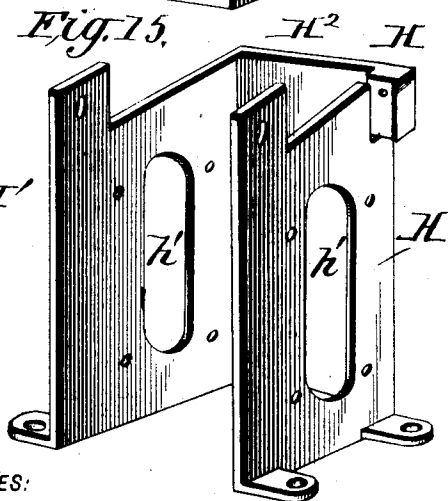


Fig. 17.



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APPLICATION FILED APR. 25, 1904.

6 SHEETS—SHEET 6.

Fig. 18.

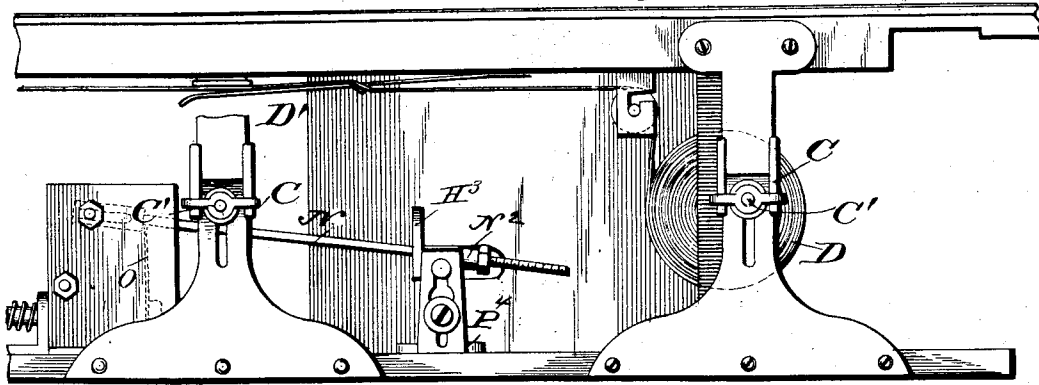


Fig. 19.

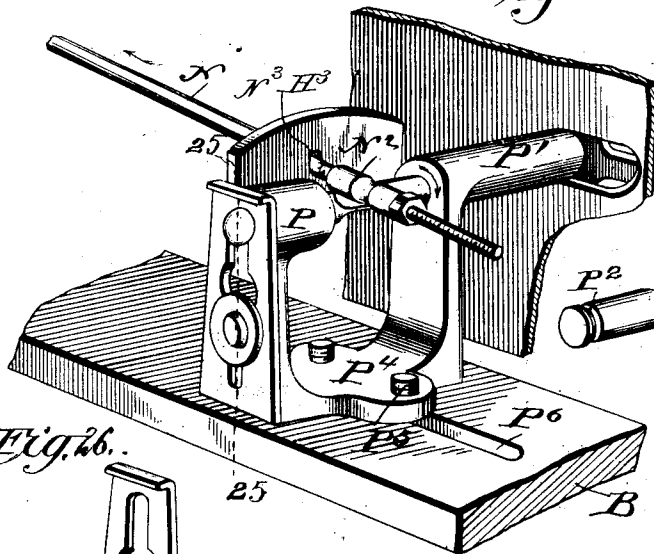


Fig. 20.

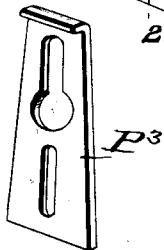


Fig. 21.



Fig. 22.

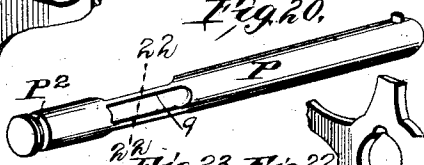


Fig. 23.

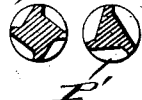
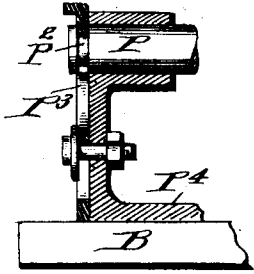


Fig. 25.



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UNITED STATES PATENT OFFICE.

ABNER L. HOLTON, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF TO
MIRABEAU L. T. DAVIS, OF NORFOLK, VIRGINIA.

PACKING APPARATUS.

No. 831,437.

Specification of Letters Patent.

Patented Sept. 18, 1906.

Application filed April 25, 1904. Serial No. 204,790.

To all whom it may concern:

Be it known that I, ABNER L. HOLTON, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have made certain new and useful Improvements in Packing Apparatus, of which the following is a specification.

This invention is an improvement in packing apparatus, and relates particularly to apparatus such as that covered in my former patent, No. 745,847, dated December 1, 1903, and comprising a counting device and means operated from the counting device for delivering separating-strips to separate a pile into desired divisions; and the present invention relates to certain novel constructions and combinations of parts especially designed to secure the delivery of the separating-strips in a purely mechanical way and without the necessity of any electrically-operated devices; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a sectional plan view, of a machine embodying my invention. Fig. 3 is a vertical longitudinal section of the machine, parts being broken away. Fig. 4 is a detail perspective view of the strip-guide. Fig. 5 is a sectional view similar to Fig. 3 of the parts at the delivery end of the apparatus, showing the feed-roller depressed from feed engagement with the drive-roller. Fig. 6 is a detail cross-section on about line 6 6 of Fig. 5, showing the means for supplying adhesive material to the separating-strip. Fig. 7 is a detail perspective view of the devices for delivering the adhesive material. Fig. 8 is a detail perspective view showing some of such devices detached. Fig. 9 is a detail perspective view of the devices for operating the slide-rod to give the hammer-stroke to retract the detent. Fig. 10 is a detail section on about line X X of Fig. 9. Figs. 11 and 12 are detail perspective views, respectively, of the upper and lower sections of the strip-guide of the carrier. Fig. 13 is a detail perspective view of the body of the carrier. Fig. 14 is a detail perspective view of the feed-roller. Fig. 15 is a detail perspective view of the casing within which the carrier operates. Figs. 16 and 17 are perspective views of the plates secured to the casing for guiding the carrier; and Fig. 18 is a side elevation of a portion

of the machine from the side opposite that shown in Fig. 1, showing a somewhat different construction from that shown in Figs. 1, 2, and 3. Fig. 19 is a detail perspective view of the parts immediately associated with the shaft of the counting device in the construction shown in Fig. 18. Fig. 20 is a detail perspective view of the counter-shaft. Fig. 21 is a detail perspective view showing the washer and screw for securing the gear-wheel on the counter-shaft. Fig. 22 is a cross-section on about line 22 22 of Fig. 20. Fig. 23 is a similar section showing four instead of three teeth, as shown in Fig. 22. Fig. 24 is a detail perspective view of the central portion of one of the counter-gears. Fig. 25 is a detail sectional view on about line 25 25 of Fig. 19. Fig. 26 is a detail perspective view of the latch-plate for securing the shaft in its bearings, and Fig. 27 is a detail section showing the spring for pressing the blade for severing the strip.

My apparatus may be employed in connection with the lay-boy of a ruling-machine or in connection with any other machine or device whereby sheets are delivered successively, so that the sheets may operate the counting devices presently described.

In the construction as shown the framing of the machine includes a top bar A, which may be a slat out of a lay-boy of an ordinary ruling-machine; but it will be understood that I do not desire to be limited in the broad features of my invention to any special construction of framing or the application of the machine to any special construction of machine or device for delivering sheets successively. In connection with the top bar A the framing includes the base-bar B and standards or connections C, the latter being made in upper and lower sections adjustably connected at C', so the framing can be adjusted as to height for any desired purpose. In securing this adjustment of the framing the standards C are composed of upper and lower sections lapped together at their meeting ends, one of the sections being provided with a longitudinal slot and the other with a connecting-screw passing through said slot and receiving a clamping-nut, as best shown in Figs. 1, 2, and 18 of the drawings.

The purpose of the invention being to deliver the separating-strips between the divided portions or divisions of a pile of note-

sheets or the like, I provide the strips in the form of a roll D, supported in the framing passing through a tension device D', which prevents the strip from being wound too freely off the roll, thence through the strip-guide D², and thence through the carrier E. The tension device D' may consist, as shown, of a strip of metal having a deflected portion d' between its ends and a slot therein through which the strip d passes from the roll.

The carrier E has a head E', provided with a guide-passage e', through which the strip d passes. The carrier has a frame G, which is movable vertically, being suitably guided in the casing H from the position shown in Fig. 3 to that shown in Fig. 5, and vice versa. As shown, the carrier-frame G has side plates G', which are slotted longitudinally at g', and these side plates also are provided in their rear edges with inclined slots g, in which the trunnions f of the feed-roller F are journaled. The casing H has its side plates H' provided with slots h', and to these side plates H' are secured plates I, provided with inwardly-projecting guide-lugs I', which project through the slots h' and into the slots g' in the side plates G' of the carrier and operate to guide the said carrier-frame as it moves up and down between the positions shown in Figs. 3 and 5. The casing H also has an end plate H², to which is secured the cutter-blade J, the latter being secured at J' near its lower end adjustably to the plate H² and being arranged at its upper edge at j' to cut alongside the rear edge e' of the lower plate of the guide E' to sever the strip d when the carrier, with the said guide E', is depressed to the position shown in Fig. 5. A spring J² operates against the rear side of the upper edge of the blade J and presses the same to position to operate with certainty against the rear edge e' of the lower plate E² of the guide E' in order to secure a clean cut of the strip when the parts are forced to the position shown in Fig. 5. A spring G³ operates between the base B and the lower end of the carrier G and presses the same normally to the position shown in Fig. 3, in which the feed-roller F will be in a position to operate in connection with the drive-roller K to drive the strip d in the direction of the arrow in Fig. 3.

The roller F is provided on its periphery at one point in its circumference with the cam projection F', made in sections spaced sufficiently apart to receive the paper strip d between them, and these cam projections F' extend radially beyond the circle described by the major portion of the feed-roller, so that when they come beneath the drive-roller K in the operation of the machine the said roller F and the carrier in which such roller journals will be depressed from the position shown in Fig. 3 to that shown in Fig. 5, thus bringing the carrier and detent to the

position shown in Fig. 5, in which the cutter J will sever the strip and in which the detent L will adjust above the base-plate G² of the carrier, as shown in Fig. 5, and hold the carrier in its depressed position until the delivery-detent is released by the means presently described. It will be noticed from the foregoing description that the paper strip d will be fed by the movement of the rollers K and F in the direction indicated by the arrows in Fig. 3 and that also when the rollers are in a position in which the roller K is operating upon the cam projections F' of the feed-roller F the strip will lie between said cam projections and will not be driven by the movement of the feed-rollers, as it will at such time be out of contact with the drive-roller K, so that the strip will remain stationary, while the cutter J is severing the same in the use of the apparatus, and such strip will not be fed subsequently until the feed-roller F is again permitted to be pressed upwardly by its spring G³ into contact with the paper-strip and force the same into driving contact with the drive-roller K. When the feed-roller F has been moved to a point where its cams F' escape from contact with the drive-roller K, the momentum of said roller F, will continue its revolution until a stop f' on the side of said roller F engages an abutment F², as shown in Fig. 5. By this means the roller F is stopped at all times at a predetermined point; so the length of strip fed by the subsequent operation of the rollers K and F will be the same in all instances. It will be noticed that the stop-pin f' bears against the abutment F² when the roller F is depressed into the position shown in Fig. 5; but when the said roller F rises to the position in Fig. 3 the projection f' will escape from the abutment F² and the roller may turn in the direction of the arrows shown in Fig. 3.

From the foregoing description it will be noticed that the operation of the parts is as follows: When the carrier has moved up to the position shown in Fig. 3, so that its roller F engages with the guide-roller K, the strip will be fed forward until the cam projections F' come into contact with the drive-roller K, when said feed-roller F will be depressed, with its carrier, to the position shown in Fig. 5, the paper strip will be severed by the cutter J, the feed-roller will be stopped by the engagement of its projection f' with the abutment F², and the carrier will be held in its depressed position by the detent L until the latter shall have been released by suitable devices, one form of which I will presently describe.

Manifestly the drive-roller K may be driven by the contact of same with a constantly-revolving pulley K', which latter may be driven in any suitable manner, as will be understood from Fig. 1 of the drawings, or the said pulley K may be driven by providing it with a pul-

ley K^2 , receiving a suitable driving-belt K^3 , as shown in Fig. 3 of the drawings.

As shown, the strip-guide D^2 comprises a shank D^3 , secured to the framing and having a slot d^3 , through which the strip d passes, and a guide portion d^4 for the strip d , as best shown in Figs. 3 and 4 of the drawings.

As best shown in Fig. 3, the detent L comprises a rod or bar which is movable longitudinally in suitable guides L^1 and L^2 and is arranged at one end to bear against the rear edge of the plate G^2 of the carrier G or to engage above said plate G^2 when it is desired to retain the carrier in its depressed position. A spring L^3 encircles the rod L and bears between the guide L^1 and a shoulder L^4 on the rod L , which shoulder L^4 may be a collar adjustable along the rod L and having a screw by which to hold it in any desired adjustment. This detent is operated by the spring L^3 normally toward the position shown in Fig. 5 or may be retracted by the engagement therewith of the lower end M' of a lever M , said lever M being pivoted at M^2 and arranged at its upper end M^3 to be operated by the stroke of a hammer-head N' at one end of a slide-rod N , said slide-rod being operated at intervals by the stroke of a projection 1 on the constantly-driven shaft 2 against an abutment 3 on the slide-rod N . This abutment 3 is shown as a bar depending from the slide-rod N and arranged to be adjusted at intervals into the path of the constantly-moving projection 1 by a step-by-step device operating upon a carrier 4, to which the slide-rod N is connected, as shown in Fig. 3 of the drawings. The carrier 4 is shown as a curved bar pivoted at its lower end at 5 and curving thence upwardly and rearwardly toward its rear end, provided at such end with means to engage with the rim of a wheel 6, which latter is given a step-by-step movement by the operation of its shaft P by the means presently described. As shown, the carrier 4 is provided near its upper end with a depending pin to engage the flanged outer end 8 of the keeper-spring 9, which is secured to the wheel 6 and extends radially alongside a slot 10, cut radially in the wheel 6 and extending to the outer edge thereof, the flanged outer end 8 of the keeper-spring 9 projecting over the outer end of the slot 10, so the hooked portion at the lower end of the pin 7 will when moved outwardly force past the flanged end 8 of the spring and rest thereon and pass thence to the outer edge of the wheel 6 as the wheel continues to move. As best seen in Fig. 9, the flanged outer end 8 of the spring 9 is arranged sufficiently beyond the periphery of the wheel 6 to permit the pin 7 when riding on the edge of the said wheel 6 to drop into the slot 10 to the position shown in Fig. 9 and Fig. 10. When the pin 7 drops into the slot 10, as shown in such figures, the carrier 4 is lowered and the abutment 3 drops into the path of

the projection 1 on the shaft 2 and is operated by the said shaft to force the slide-rod forward and give a hammer-stroke to the head N' on the slide-rod N to operate upon the lever M to retract the detent and effect the operation before described. This wheel 6 is secured on the shaft P , preferably by means of a screw p' , so it can be removed and another substituted with a greater or less number of slots 10, according to the number it may be desired to separate in the use of the invention.

It will be noticed that as the projection 1 strikes the abutment 3 and forces the slide-rod N forward, such slide-rod N , pulling upon the carrier 4, will swing such carrier forwardly and will quickly pull the pin 7 out of the slot 10 past the flanged outer end 8 of the keeper-spring 9, so the pin 7 will ride on the spring 9 and pass thence to the periphery of the wheel 6, the operation continuing from time to time as often as the pin 7 drops into a slot 10 of the wheel 6.

Instead of operating the slide-rod N by the means before described and as shown in detail in Figs. 9 and 10, I may employ the construction illustrated in Figs. 18 to 21, inclusive, for operating such slide-rod. In this construction a spring O^{12} operates the rod N in the direction of the arrow in Fig. 19, and the rod is operated in opposite direction or against the tension of the spring O^{12} by retracting and releasing devices operating upon a shoulder projection N^2 on the rod N , as shown in Fig. 19. The shoulder projection N^2 may preferably be a sleeve encircling the rod N and threaded thereon, so it can be turned to adjust the shoulder projection longitudinally along the slide-rod, as may be desired, in order to vary the throw of the slide-rod as well as to adapt the shoulder projection for proper operation by retracting and releasing devices when the latter are adjusted relatively to the frame of the machine, as will be more fully described. As shown in Figs. 18 and 19, the slide-rod N passes through a guide H^3 , in which it has limited play up and down in order to permit the engagement of the slide-rod with the toothed counter-shaft P , which latter is shown in detail in Figs. 20 and 22. As shown, the shaft P is toothed at P' to engage with the shoulder projection on the slide-rod (see Figs. 20, 22, and 23) and operates when turned in the direction of the arrow in Fig. 19 to retract the rod N against the tension of its spring O^{12} and then to release the said rod, so the latter may be operated by the spring O^{12} to strike with its hammer-head N' the upper end of the lever N^3 , and so retract the detent from the position shown in Fig. 5 to permit the carrier to move upwardly from the position in said Fig. 5 to that shown in Fig. 3, when the parts will operate, as before described.

As shown in Figs. 20 and 22, the counter-shaft P has three teeth; but manifestly the number of teeth in said shaft may be varied, and I have shown in Fig. 23 the shaft provided with four teeth, but do not desire to be limited to any particular number of teeth in the shaft. This shaft P is journaled in bearings P' and is provided at one end with an annular groove P² for engagement by the latch-plate P³, (see Figs. 19 and 26,) so the shaft P can be readily secured in its bearings P' and released to permit the withdrawal of the said shaft and the insertion of another having more or less teeth, or when for any other purpose it is desired to remove the said shaft P.

In the construction shown in Fig. 3 the wheel 6 is secured to a counter-shaft, which is lettered in said construction P, and in the construction shown in Figs. 19 and 20 the shoulders 9 are formed on the counter-shaft P. The shaft p (see Figs. 2 and 9) is mounted in bearings and is secured by the fitting of the wheel 6 on the said shaft between said bearings and securing it by the screw p', as shown in Figs. 9 and 10. The counter-shaft in both these constructions carries a gear-wheel Q, (see Figs. 1 and 2,) and this gear Q is meshed by a gear Q', which is operated by a pawl-carrier Q², having a portion Q³ arranged to be operated successively by the sheets delivered into the pile. This wheel Q' is operated step by step by the arm or lever Q³ and so turns the gear Q, which latter operates the shaft P. To vary the operation of delivering the separating-strip d, according to the number of sheets desired to place in the pile, I may employ counter-shafts P, having different numbers of teeth P', or I may employ gears Q of different sizes, or I may employ both such means in securing the delivery of the separating-strips to divide the pile into different divisions. When gears Q of different sizes are provided, I may adjust the bearings P' longitudinally in the framing, and to this end I show the bearings P' mounted on a base P⁴, which latter is secured by bolts P⁵, passing through a slot P⁶ in the base P, so the bearings may be adjusted along the base in the direction of length thereof. By this means gears Q of different sizes may be employed, and such gears and their shafts may be suitably supported in the framing of the machine.

It becomes important in machines of this class to provide means whereby to prevent the separating-strips from sliding out of the piles. To this end I provide means for delivering adhesive material to the separating-strips. In the construction shown, and as preferred, this includes the box or cup R, arranged at the delivering end of the machine and secured removably in place by a spring-clasp R', said box R being adapted to contain mucilage or other suitable paste material and being open at its upper end and pro-

vided at its rear side at R² with a forwardly-projecting flange which contracts the upper open end of the box. The separating-strip d (see Fig. 7) passes directly over the open upper end of the box R, and a paste-delivering device S is movable up and down in the paste-cup R and is operated at intervals to deliver the paste in small quantities to the under side of the strip d. As shown in Figs. 6 and 7, the paste-delivering device is in the form of a lever pivoted between its ends at S' and arranged at one end at S² to dip into the paste in the box R and then to rise into contact with the under side of the strip d and arranged at its other end to be operated by a pin T on the rollers F through the medium of a slot T', which engages at T² with the arm S³ on the lever S, is pressed upwardly by a spring U, and is arranged to be depressed by engagement of the pin T with the shoulder T² on a drum F. The connection at T² is effected by an open link on the slide T, receiving the arm S³ of the lever. In the operation as the drum T is turned at intervals by the operation before described it will be caused by its pin T to move the slide 7 downwardly and then escaping from the shoulder T² permit the slide to be readjusted by its spring U, so that at each operation of the drum F to deliver a cut-off or separating strip the latter will be supplied with sufficient adhesive material to hold it securely in place.

The level of the paper after it falls in the lay-boy is very much lower at all times than the mouth of the strip-delivery mechanism and also much lower at all times than the top or mouth of the paste-box, so that when the separating-strip is severed the weight of the paper in the lay-boy presses it down below the level of the mouth of the paste-receptacle, leaving the way clear for the subsequent separating-strip to pass out and receive its share of paste as it is delivered.

In operation the paper sheets making up the number of each section or division are delivered over the roller K' and to a suitable receptacle at the end of the machine, and the separating-strips are delivered at suitable intervals to the pile of sheets and will adhere to the sheet next below to properly divide the same, as desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus substantially as herein described, comprising a framing, a carrier having a guide for the separating-strip, a casing in which said guide is movable, a cutter in the casing and operating to sever the separating-strip, a drive-roller, a feed-roller journaled in the carrier and having cam projections whereby the said feed-roller and its carrier may be depressed, a spring operating the carrier in one direction, a detent for holding the carrier against the action of its spring

when depressed, a spring operating said detent in one direction, a lever arranged to retract the detent against the action of its spring, a slide-rod having a hammer-head operating upon the lever, and means for operating said slide-rod.

2. The combination in an apparatus substantially as described, of a carrier having a guide for the separating-strip, a cutter operating in connection with said guide, the carrier being movable to and from cutting position, and a detent for securing the carrier when moved.

3. The combination of the guide for the separating-strip, a carrier for said guide, a detent for securing said carrier in one of its positions, a slide-rod, intermediate devices between the slide-rod and the detent, whereby the latter may release said detent, and means for retracting and releasing said slide-rod.

4. The combination in an apparatus substantially as described, of the carrier having a guide for the separating-strip, a spring for operating such carrier in one direction, a detent for restraining the operation of the carrier by its spring, a lever arranged at one end to retract the detent, a slide-rod having a hammer-head arranged to operate on said lever, and means for operating the slide-rod.

5. The combination in an apparatus substantially as described, of a drive-roller, a feed-roller having cam projections whereby it may be forced by the drive-roller at a certain point in its revolution away from the said drive-roller, a movable carrier for said feed-roller and guide and severing devices for a separating-strip.

6. The combination in an apparatus substantially as described of counting devices, means for severing a separating-strip, a detent operating in connection with the severing means and intermediate devices between the counting devices and the detent whereby the operation of the counting devices may effect an operation of the detent.

7. The combination of counting devices, means for severing a separating-strip, a detent operating in connection with said severing means and intermediate devices between said counting devices and severing means, said intermediate devices including a slide-rod and means for retracting and releasing the same by the operation of the counting devices.

8. The combination in an apparatus substantially as described of means for severing a separating-strip, a detent operating in connection with said severing means, a lever arranged to release said detent, a slide-rod having a hammer device operating upon said lever, and means for retracting and advancing said slide-rod.

9. The combination in an apparatus substantially as described of a detent, devices

restrained by said detent, a lever by which to retract said detent, a slide-rod having a hammer portion to operate upon said lever and means for retracting and advancing the slide-rod.

10. An apparatus substantially as described comprising a counting device and mechanically-operating devices substantially as described operating from the counting devices for delivering separating-strips to separate a pile into desired division, and means for delivering adhesive material to the separating-strip.

11. An apparatus having counting means arranged for direct operation by delivered sheets and mechanically-operated devices substantially as described controlled by the counting means for delivering separating-strips to separate the packages of sheets, and means for delivering adhesive material to the separating-strip.

12. The combination in an apparatus substantially as described of devices for delivering separating-strips to separate a pile into divisions, and counting means and intermediate mechanism between said counting means and the strip-delivering devices including a slide-rod, a pivoted carrier for the slide-rod and a shaft having means for operating said carrier.

13. The combination of strip-delivery devices, a detent for restraining the movement of a part of said devices, a spring operating said detent in one direction, a lever for operating the detent in the other direction, a counter and a slide-rod operated from the counter and having a hammer operating said lever.

14. The combination in an apparatus substantially as described, of a detent, means for retracting the detent, including a slide-rod having a hammer portion, an abutment on said slide-rod, a shaft having a projection to strike said abutment, the abutment being movable into and out of the path of said projection, and means for shifting the abutment into and out of the path of the operating projection.

15. The combination in an apparatus substantially as described, of a detent, means for retracting the detent including a slide-rod, an abutment on said slide-rod, a device for operating said abutment, the abutment being movable into and out of the path of the operating device, and means for shifting the abutment into and out of such path.

16. The combination in an apparatus substantially as described, of a slide-rod, an abutment thereon, an operating device arranged to strike said abutment to operate the slide-rod, a pivoted carrier connected with the slide-rod and having a depending pin provided with a lateral or hook portion, a wheel having a peripheral notch arranged to receive said hook portion of the pin, and a

spring-plate extending alongside said slot and having at its outer end a flange projecting over the slot and arranged to be operated by and to form a support for the lateral or hook portion of said pin, and means for operating the wheel.

17. The combination in an apparatus substantially as described, of a wheel having a peripheral slot and a spring-plate extending alongside the same and provided at its outer end with a flange overlying the said slot, and a pin operating in said slot and movable past the flange at the outer end of the said spring.

18. The combination in an apparatus substantially as described, of a detent, means for retracting the detent including a slide-rod having an abutment, a revolving device for operating said abutment, the abutment being movable into and out of the path of said device, a pivoted carrier connected with the slide-rod, a pin at the upper end of said carrier and having a lateral or hook portion, a wheel having a peripheral slot receiving said hook portion of the pin, and a side plate extending alongside said slot and having at its outer end a flange overlying the slot, and means for operating the said wheel.

19. The combination of the counting mechanism and counter-shaft, a gear thereon, bearings for said shaft, means for adjusting said bearings on the framing, a slide-rod, means operated from the counter-shaft for advancing and retracting the slide-rod, strip-severing means, a detent operating in connection with said strip-severing means, and means whereby the slide-rod may retract the detent.

20. The combination with strip-severing means, and a detent operating in connection therewith, of a lever for retracting the detent, a slide-rod for operating the lever, and means for advancing and retracting the slide-rod.

21. The combination in an apparatus substantially as described, of a drive-roller, a feed-roller operated by the drive-roller and having a cam projection whereby it may be forced away from the drive-roller, strip-guiding means and means for severing the strip arranged for operation by the action of the drive-roller upon the cams of the feed-roller.

22. The combination of the drive-roller, the feed-roller having a cam projection, a carrier for the feed-roller movable relatively to the drive-roller and strip-severing means operating on the movement of the carrier.

23. The combination of the drive-roller, the feed-roller having a cam projection and arranged for operation with the drive-roller, a movable carrier for the feed-roller, a projection on the feed-roller and a stop abutment for engagement by said projection to limit the movement of the feed-roller when the carrier thereof is depressed.

24. The combination of the drive-roller, the feed-roller having cam projections spaced apart and adapted to receive between them a separating-strip and a movable carrier for the feed-roller and severing devices arranged for operation by the action of the drive-roller upon the cam projections of the feed-roller.

25. The combination of the feed-roller, the carrier for the feed-roller, the drive-roller, the casing in which the feed-roller carrier operates, a guide in the carrier for the separating-strip, and a spring-actuated cutter in the casing for severing the separating-strip.

26. In an apparatus substantially as described the combination of means for delivering separating-strips to separate a pile into desired divisions and a means for discharging adhesive material to said strips.

27. The combination in an apparatus substantially as described of a counting device, means operated from the counting device for delivering separating-strips to separate a pile into desired divisions and means for delivering adhesive material to the separating-strips.

28. The combination of a carrier for the separating-strip, means for discharging and severing the strip, and means for discharging adhesive material to the separating-strip.

29. The combination of the carrier for a separating-strip, means for discharging and severing the strip, a cup for adhesive material, and a device movable up and down in said cup to deliver the adhesive material to the severed strip.

30. The combination in an apparatus substantially as described, of counting devices means for discharging and severing the strip, said means being controlled by the counting devices and a device movable into and out of contact with the strip to deliver adhesive material thereto.

31. The combination with counting devices and means for discharging and severing a strip said means being controlled by the counting devices, of a cup open at its upper end for adhesive material and arranged below the path of the strip, and a device movable up and down in said cup to deliver adhesive material from the cup to the strip.

32. The combination of means for discharging and severing the strip including a roller, a cup for adhesive material below the path of the strip, a device movable up and down in the cup to deliver adhesive material from the cup to the strip, and intermediate devices between said roller and device whereby the roller may operate the devices.

33. The combination of means for discharging and severing the strip, a lever for applying adhesive material to the strip, a slide for operating the lever and means on the strip-discharging means for operating the slide.

34. The combination of the cup for adhesive material and arranged below the path of the strip, the lever delivering material from the cup to the strip, the slide for operating the lever, and a roller for operating the slide.

35. The combination in an apparatus substantially as described of means for discharging the separating-strip and a device operated from the strip-discharging means for delivering adhesive material to the strip.

36. The combination of a counting mechanism, strip-discharging devices operated from the counting mechanism, and a device operating in connection with the strip-discharging devices for delivering adhesive material to the strip.

37. The combination of means for delivering a separating-strip, means for severing said strip, a cup for adhesive material below the path of the separating-strip and open at its upper end, and a rocker movable at one

end into the cup for adhesive material and thence to position to contact with the strip.

38. An apparatus substantially as described, comprising means for discharging a strip including a roller, a cup for adhesive material, a rocker operating at one end in said cup, and intermediate devices between the roller and the rocker for operating the latter from the roller,

39. The combination of the framing, means for discharging a separating-strip, a cup for adhesive material, means for holding said cup detachably to the framing, a device carried by the framing and adapted to deliver adhesive material from the cup to the strip and means for operating said device.

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