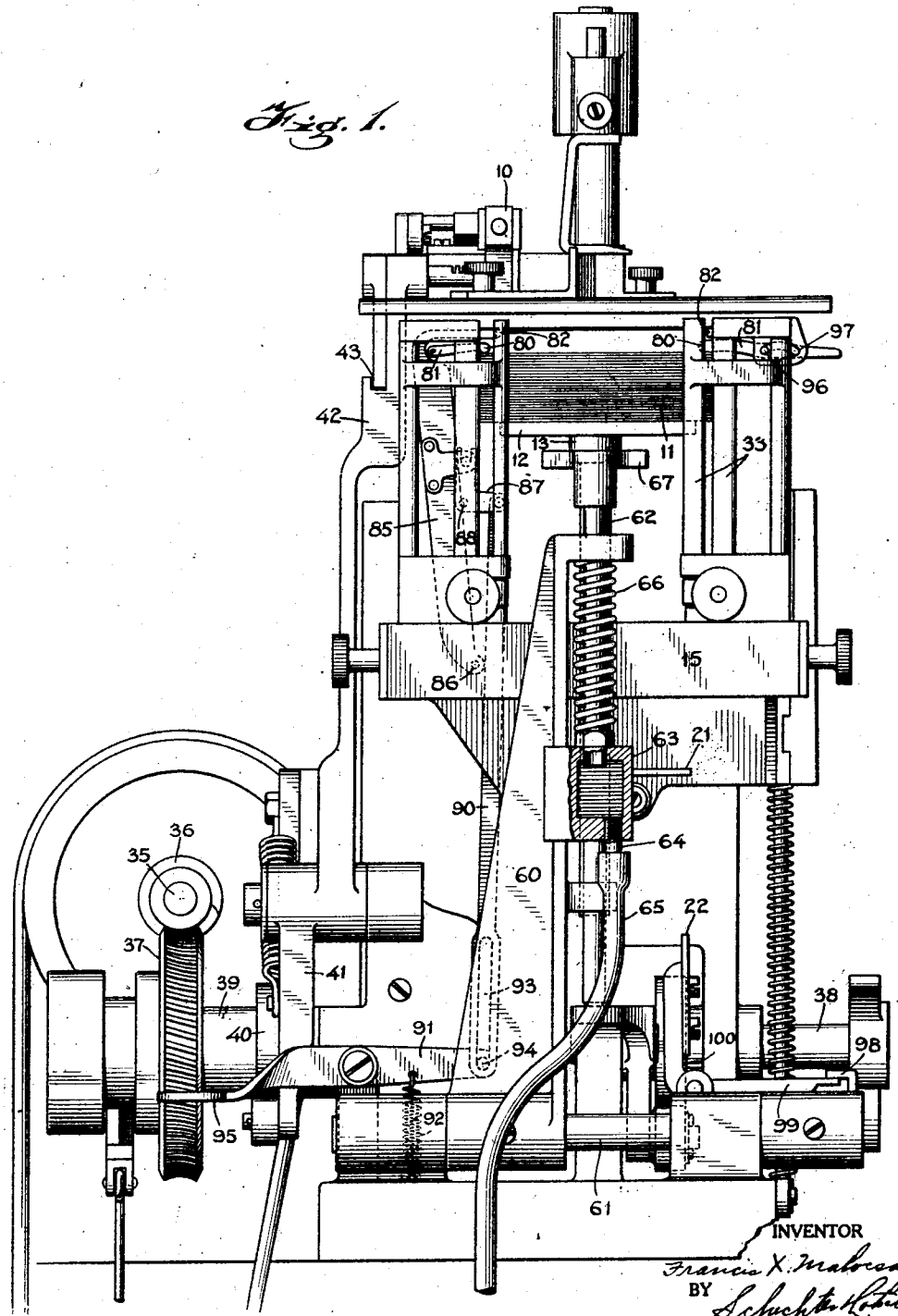
May 10, 1927. 1,627,794

F. X. MALOCSAY

CIGAR BANDING MACHINE

Filed July 26, 1923 4 Sheets-Sheet 1

Fig. 1.



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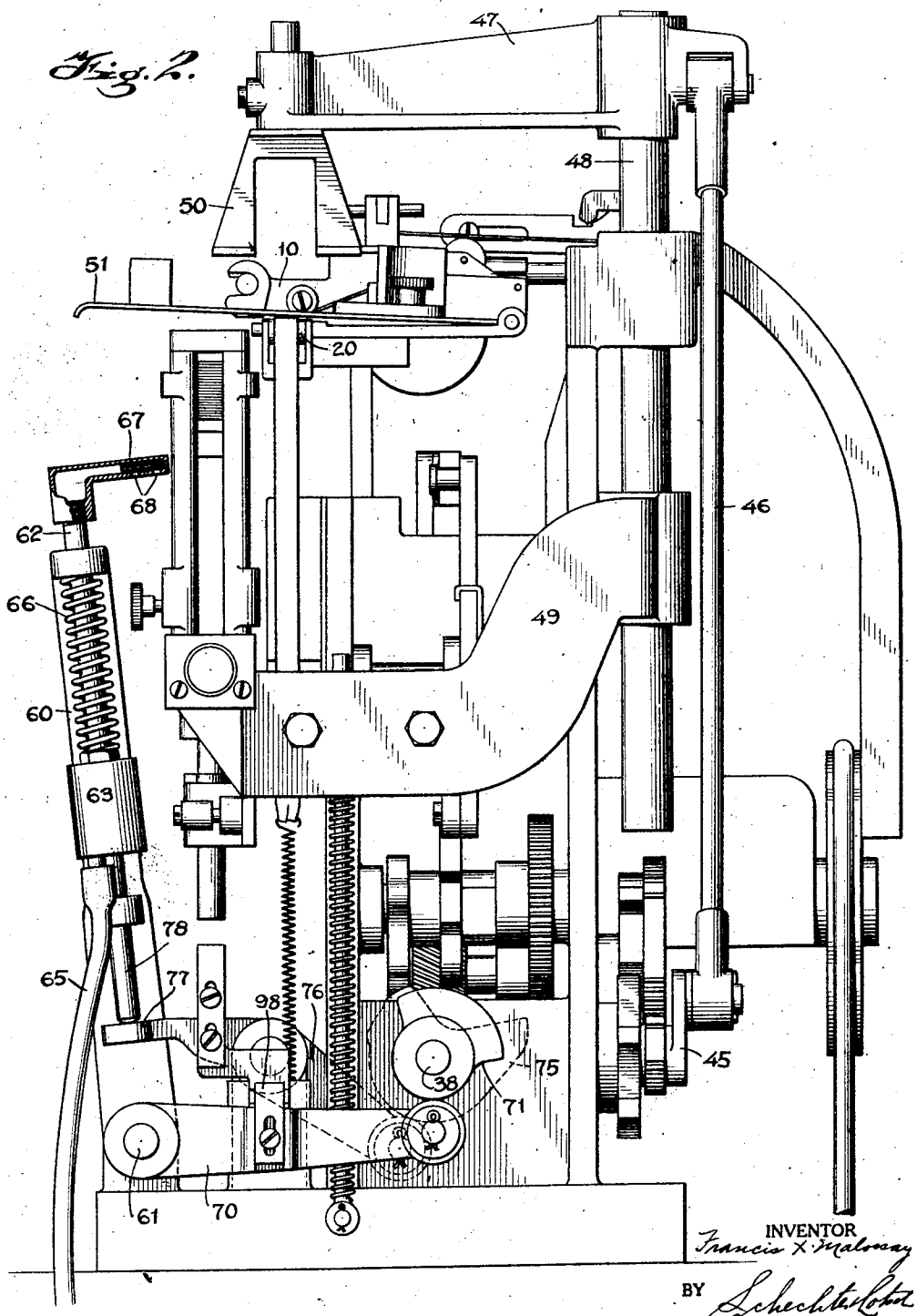
May 10, 1927. 1,627,794

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CIGAR BANDING MACHINE

Filed July 26, 1923 4 Sheets-Sheet 2

Fig. 2.



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CIGAR BANDING MACHINE

Filed July 26, 1923 4 Sheets-Sheet 3

Fig. 3.

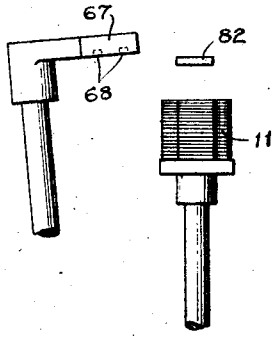


Fig. 4.

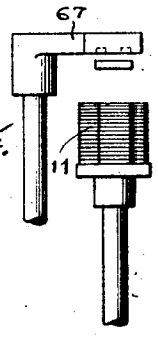


Fig. 5.

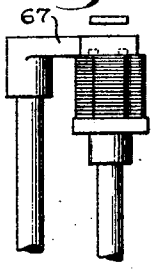


Fig. 6.

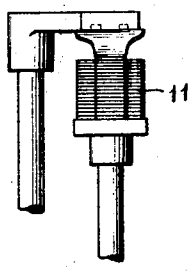


Fig. 7.

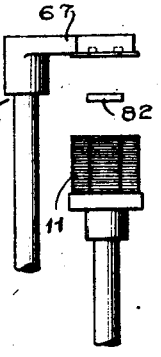


Fig. 8.

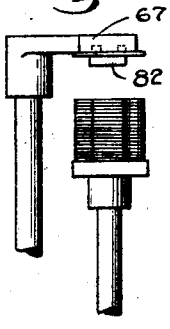


Fig. 9.

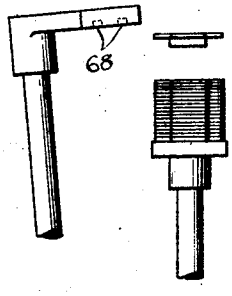
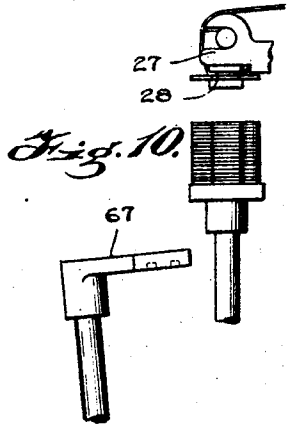


Fig. 10.



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May 10, 1927. 1,627,794

F. X. MALOCSAY

CIGAR BANDING MACHINE

Filed July 26, 1923 4 Sheets-Sheet 4

Fig. 11.

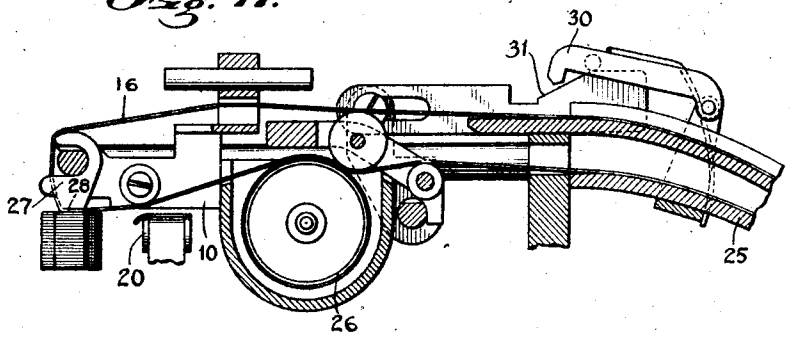


Fig. 12.

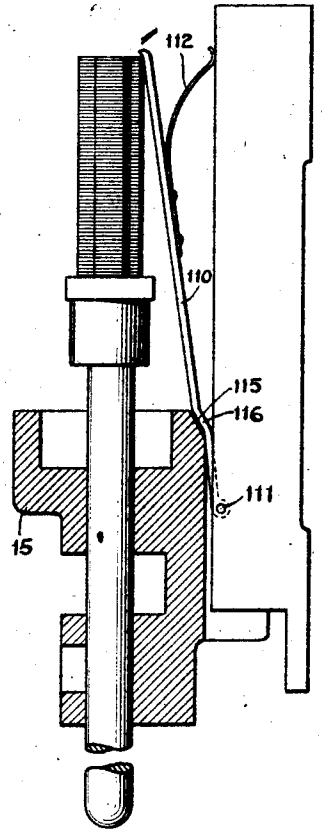
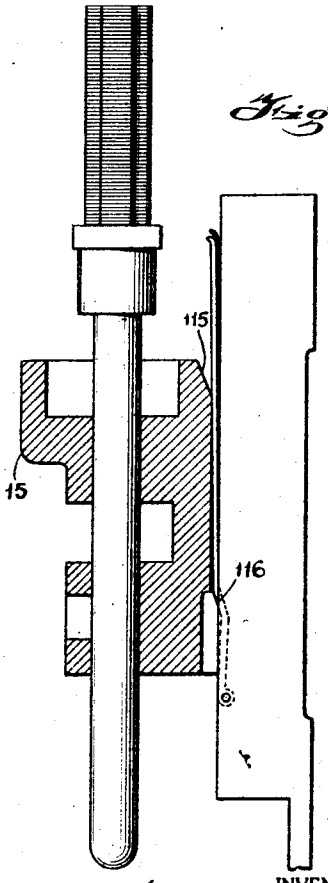


Fig. 13.



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Patented May 10, 1927. 1,627,794

UNITED STATES PATENT OFFICE.

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CIGAR-BANDING MACHINE.

Application filed July 26, 1923. Serial No. 653,831.

This invention relates to cigar banding machines, and is an improvement on the machine shown in my co-pending application, Ser. No. 483,464, filed July 9, 1921. In said machine there is provided a reciprocatory carriage over which is adapted to be fed a gum-tape which is moistened at a suitable point in its passage around said carriage, and said carriage and tape are operated toward a band stack which is moved upwardly into engagement with the gum-tape. Said gum-tape carries therewith the uppermost band which adheres thereto and positions said band over the band-wrapping fingers. I have found, however, that frequently the gum on said tape is inclined to run, and even when the gum is of a comparatively thick consistency the pressure of the band stack against the tape causes the gum to overrun the edges of the uppermost band of the stack and spread along the edges thereof. When this condition occurs, several bands are frequently removed from the stack at the same time. To obviate the foregoing difficulties, this invention has for one of its objects the provision of means for gumming each band separately.

A further object of the invention is the provision of means for rendering impossible the gumming of more than the outermost band in any single operation. For this purpose I provide in one form of my invention the band stack with a set of shoulders, and with means for withdrawing the outermost band from the stack prior to effective movement of the tape and positioning said band upon the aforesaid shoulders out of contact with the remainder of the stack. The tape is then operated forwardly into engagement with the separated band which is then spaced sufficiently from the remainder of the band stack so that even should there be a surplus of gum deposited by said tape on the end of said separated band, said gum could not overrun into engagement with the stack proper.

Since the outermost band is, by the above described mechanism, separated from the body of the stack prior to its engagement with the gum-tape, it is necessary to provide a support for that end of the band which engages the tape. For this purpose, this invention has for one of its objects the provision of means for supporting one end of the band stack and adapted to be rendered effective when the band stack is moved upwardly preparatory to engaging the gum-tape. Said means is adapted to be rendered ineffective when the band stack is moved to lowered position so as not to interfere with the transfer of the next band to its separated supporting position.

It is a further object of this invention to provide additional means for facilitating the separation of the individual bands, said means comprising a scraping member adapted to engage the edges of the band stack as said stack is elevated, and to disengage said stack during its movement toward lowered position.

It is a further object of this invention to provide means for preventing more than one band from following the band under suction.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and correlation of instrumentalities herein fully described, and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive, standpoint.

The inventive idea involved is capable of receiving a variety of mechanical expressions, one of which, for the purposes of illustration, is shown in the accompanying drawings, in which—

Fig. 1 is a front view of a cigar banding machine embodying my invention.

Fig 2 is a side view of the machine shown in Fig. 1.

Figs. 3 to 10 inclusive illustrate the successive steps in the operation of my machine to constitute a complete cycle.

Fig 11 is a detail view of the reciprocatory carriage and gum-tape carried thereby.

Fig. 12 is a side vertical section of an auxiliary band stack separating device, the stack being shown in lowered position.

Fig. 13 is a view of the device shown in Fig. 12, with the band stack in raised position.

Referring to the drawings, there is illustrated the machine which is more fully described in my copending application Ser. No. 483,464, hereinbefore referred to, to which reference should be had for a complete description of the structure and operation. For the purpose of this invention only so much of the prior structure will be described as is necessary to explain the operation of my improved device. Briefly, the prior machine may be described as follows: A tape carriage 10 is adapted to be reciprocated forwardly and rearwardly (in Fig. 1) over one end of a stack of bands 11 supported upon a plate 12 fixed to the upper end of a shaft 13 frictionally held in a band carrier 15 which is adapted to be reciprocated vertically. The reciprocating carriage carries a gum-tape 16 (see Fig. 11) which is adapted to apply gum to one end of the outermost band of the stack. The tape carriage is adapted to be reciprocated forwardly directly over the band stack at substantially the same time that the band stack is moved upwardly, so that the gum-tape strikes one end of the outermost band which adheres to said tape. When the tape carriage moves rearwardly, said outermost band is carried rearwardly over the wrapper arms 20 which are adapted to be operated by separate driving means, as described in said prior application, to wrap the ends of the band around a cigar in banding position. The band stack carrier is then lowered and a plate 21 fitting loosely around the shaft 13 of the band stack support comes in contact with an upstanding arm 22 to rock said plate and move said shaft upwardly relative to the band stack carrier 15 against the frictional engagement of said shaft in said carrier. The band stack is thus fed upwardly substantially the thickness of one band at each reciprocation. The tape carriage shown in Fig. 11 comprises essentially a guide 25 through which the tape passes over a moistening roller 26 and thence around a nose 27 which has a flat bottom 28 adapted to contact with the outermost band of the stack, thence around said nose and back over the guide. The tape carriage is adapted to be reciprocated forwardly and rearwardly (by mechanism not shown) and on its forward reciprocation, one branch of the loop is adapted to be gripped by a finger 30, which holds said branch against movement, thus forcing the other branch to give and unwind from the supply roll. Before the return movement, the gripping finger is released by a cam 31 and both branches of the loop move rearwardly. The upper branch of the loop thus continuously gains with each reciprocation, causing continuous unwinding of the supply roll, and hence continuous feeding of the tape.

As hereinbefore described, the band stack is carried upon a supporting plate 12, to which the shaft 13 is attached, said shaft being frictionally held in the band stack carrier 15. Said carrier has positioned thereon various adjusting mechanisms 33 for properly aligning and positioning the stack of bands on the band supporting plate. The various members are reciprocated from a main driving shaft 35 operating suitable cams, as fully described in said prior application. As shown, power may be taken from the main shaft 35 and suitably geared by gearing 36, 37 to drive the shaft 38 within bearing 39. Said shaft 38 carries a cam 40 operating a bell-crank 41 having one arm 42 extending upwardly and connected to the carriage at 43. The driving cam for the band stack carrier is shown in Fig. 2, and comprises a crank 45 operating a link 46 which reciprocates a head 47 at the upper end of a shaft 48 to which is connected an arm 49 which supports said band stack. The head carries also feet 50 adapted to be lowered into engagement with a cigar in banding position upon table 51. The mechanism thus far described is substantially the same as that shown in my co-pending application hereinbefore referred to. In the form there shown, it will be seen that the nose of the tape carriage comes directly in contact with the outermost band which is supported upon the remaining bands of said stack. Under certain conditions, the glue would overrun the edge of the outermost band and accumulate along the edges of the bands beneath, causing a plurality of bands to adhere and be carried to banding position together. To obviate this difficulty, I provide means for detaching the outermost band from the remainder of the stack prior to applying the gum thereto. For this purpose, I provide, in one form of my invention, a suction member 60 whose normal position is indicated in Fig. 2, positioned outwardly from the band stack. Said suction member comprises a supporting arm fixed to a shaft 61, said arm having slidable therein a hollow tube 62 threaded into an air chamber 63 into the other end of which is threaded a nipple to which is attached a flexible tube 65 extending to any suitable source of suction, such as a suction pump. The air chamber is suitably guided for sliding movement on the supporting arm and a spring 66 abuts thereagainst and against the upper end of said arm to maintain said hollow tube normally in depressed or lowered position. The hollow tube is provided with a forwardly extending block 67 which, when the arm is rocked toward the band stack, is adapted to overlie the bands. The opening through tube 62 is continued through block 67, where

it terminates in a plurality of openings 68 so that suction may be applied to the bands. To cause the arm to be rocked rearwardly so that the block overlies the band stack, there may be fixed to the same shaft 61 that carries the arm, a lever 70 with which engages a cam 71 driven from the shaft 38 which carries the gear 37. Assuming the band stack to be in lowered position as shown in Fig. 4, the arm is rocked until the suction block overlies the band stack. A second cam 75 then operates against one end of a lever 76 whose other end 77 is in engagement with a stem 78 depending from the air chamber 63 and which normally holds said air chamber and suction block upwardly to permit the air chamber and suction block to be depressed by the spring into engagement with the band stack, as shown in Fig. 5. Said cam 75 then operates again to raise the suction block to which the outermost band now adheres. The suction block 67 is adapted to contact with said band, near the middle thereof, so that, in raising the band from the pile, the band will be bowed, so that its ends may slip past the two small retaining shoulders 80 provided by the levers 81 pivoted in the uprights of the band stack carrier and past a second set of shoulders 82 positioned directly above said first set of projections. The upward movement of the suction block is continued by reason of said cam 75 until the band has cleared both sets of shoulders by a substantial distance, as shown in Fig. 7. The cam then permits the suction block to descend to approximately the same position as in Fig. 4, so that the band rests upon the upper set of shoulders or tongues 82, as shown in Fig. 8. The suction is then released and the suction block is moved forwardly to its initial position, the band remaining in separated, isolated position upon the upper set of tongues. It will readily be apparent that when the band stack carrier is now moved upwardly only the separated band will engage the gum-tape, thus avoiding any possibilty of the gum on said tape overrunning the outermost band and causing several of the underlying bands to stick together.

As previously described, the gum-tape contacts with one end of the band, so that it is necessary to provide an underlying support against which said tape may press. It is not desirable to have a tongue projecting inwardly over the band stack at all times, since this would interfere with the hereinbefore described operation of lifting the outermost band from the stack past said various tongues and projections. I therefore provide means whereby this support may be extended inwardly beneath the separated band after the band has been deposited on the upper tongues and while the band stack carrier is being elevated toward the gum-tape. It is to be understood that after a band has been deposited on the upper tongues 82 of the suction block, it is moved to the Fig. 2 or Fig. 10 position, thus completing its cycle of operation. The band stack then begins to move upwardly. I utilize one of the upper set of tongues 82, in this case the left tongue in Fig. 1, as the support against which the gum-tape is to operate. For this purpose, I have shown said tongue as forming the inner end of a lever 85 pivoted in the band stack carrier eccentrically at 86, so that the lever normally falls toward the left in a counter-clockwise rotary movement until the tongue engages the upright wall of the carrier. In this position, only the tongue projects inwardly, to an extent substantially the same as the right upper tongue and the lower set of tongues. This amount of projection is not sufficiently great to interfere with the passage of the outermost band thereover in the cycle of operation hereinbefore described, but is sufficient to support the band when the suction block deposits the band thereon. When the band stack carrier begins to move upwardly, however, the lever 85 is rocked in a clockwise direction by means of a bell crank 87 pivoted to said band stack carrier at 88 and connected at one end to said lever and at the other end to a link 90 which engages a lever 91 normally held downwardly by a spring 92. The upward movement of the link, therefore, is opposed by the spring, so that the tongue-carrying lever 85 is rocked in a clockwise direction as the band stack carrier moves upwardly toward the gum-tape, thus causing the tongue to move inwardly and providing a substantial support against which the nose of the tape carriage can strike.

The end of the link is provided with an elongated slot 93 into which fits a pin 94 on one end of the lever, the other end of which is provided with a finger piece 95. The pin is normally positioned in the lower end of said slot, so that the link is held against upward movement by said spring and against downward movement by the weight of the eccentrically positioned tongue-carrying lever 85. If the finger piece is depressed it will be apparent that the pin will ride upwardly in the slot and permit the link to move upwardly and the tongue-carrying lever to rotate in counter-clockwise direction to withdraw the tongue. This hand operation of the tongue and its support is desirable at those times when there is no band in effective position, the withdrawal of the support preventing the application of gum thereon.

To facilitate insertion of the band stack, one of the lower tongues 80 may be made movable into and out of the space occupied by said band. For this purpose, the lower

right hand shoulder is shown as forming the end of a stem or lever 81 having a pin 96 intermediate its length, said pin operating in a slot 97 formed in the band stack carrier, so that the lever may be moved outwardly to withdraw the lower right hand tongue out of the path of the bands. The stack of bands is then inserted beneath the lower left hand tongue and allowed to drop upon the band stack supporting plate, whereupon the lower right hand tongue is again operated inwardly to overlie the stack of bands.

As previously described, each time the band stack carrier descends, the plate 21 carried by the shaft 13 fixed to the band stack supporting plate 12 is oscillated upwardly by contact with the plate 22 to cause said shaft to operate upwardly through the bottom member of the band stack carrier 15 in which it is frictionally held. As hereinbefore described, during the cycle performed by the suction member, the suction block presses downwardly upon the stack of bands preparatory to lifting one from said stack. This is the position shown in Fig. 5, and during this downward movement of the suction block, the band stack is depressed, and hence the shaft is depressed, so that ordinarily, during this movement, the oscillatable plate 21 would engage the upstanding plate 22 to feed the shaft, and hence the band stack, upwardly. To prevent feeding of the band stack upwardly during the downward movement of the suction block, the said upstanding plate is rendered inoperative throughout the cycle of operation of said suction member. For this purpose, when the suction member is operated rearwardly for the first step of its cycle, as shown in Fig. 5, a catch 98 formed on the lever 70 fixed to the same shaft 61 as the suction member is made to engage an arm 99 forming one arm of a bell crank 100, the other arm of which is said upstanding plate 22, so that, as said suction member is rocked rearwardly to effective position, the bell crank is rotated in a clockwise direction to swing the upstanding member out of the path of the oscillatable plate. In this manner, feeding of the band stack does not take place during the cycle of operation of the suction member.

Additional means for insuring separation of the bands from the stack individually may be provided by the mechanism shown in Figs. 12 and 13. By this arrangement I provide a scraping member 110 pivoted at one end to the fixed bracket of the machine at 111 and having its other end pressed forwardly into the path of the band stack by means of a leaf spring 112. When the band stack is in lowered position, the scraper engages over the top of the band stack closely adjacent the edge of said stack. Member 110 also prevents more than one band from following the suction member. As said stack moves upwardly toward the gum-tape, the band stack carrier is adapted to press said scraper gradually toward the fixed bracket against the action of the spring 112. Before the tip of the scraper disengages the band stack, it will have scratched the edge of said stack for a certain distance below the top, thus separating the bands and overcoming any tendency of said bands to adhere. For facilitating the movement of the scraper to ineffective position as the band stack moves upwardly, the carrier 15 may be provided with an inclined shoulder 115 adapted to engage under a similar inclined surface 116 formed in the scraper and acting as a cam against said scraper. The scraper will be held closely against the fixed bracket by the rear wall of the carrier 15 until the inclined shoulder 115 engages beneath the inclined surface 116 of the scraper, at which point the scraper will be permitted to move forwardly over the band stack under the action of spring 112, the band stack having then reached its lowermost position. It is thus apparent that the scraper cannot interfere with the downward movement of the band stack.

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the apparatus which I now consider to represent a practical embodiment thereof, but I desire it understood that my invention is not confined to the particular form of apparatus herein shown and described, the same being merely illustrative, and that the invention can be carried out in other ways without departing from the spirit of my invention, and, therefore, I claim broadly the right to employ all equivalent instrumentalities coming within the scope of the appended claims, and by means of which the objects of my invention are attained, and the new results accomplished, as herein set forth, as it is obvious that the particular embodiments herein shown and described are only some of many that can be employed to attain these objects and accomplish these results.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. In a cigar banding machine, a band carrier adapted to hold a stack of bands, means for spacing the outermost band from the rest of the stack, said carrier having means for supporting the said outermost band and means for applying gum to said outermost band.

2. In a cigar banding machine, a band carrier adapted to hold a stack of bands, means for spacing in said carrier the outermost band removed from the rest of the stack, and means for applying gum to said outermost band.

3. In a cigar banding machine, a band carrier having means for supporting a stack of bands and having means spaced from said first means for supporting additional bands.

4. In a cigar banding machine, a band carrier having means for supporting a stack of bands, and means for detaching the outermost band of said stack, said carrier having additional means spaced from said first means for supporting said detached band spaced from the stack.

5. In a cigar banding machine, a band carrier having means for supporting a stack of bands, and means for engaging the upper surface of said stack, said carrier having additional band supporting means above said stack.

6. In a cigar banding machine, a band stack carrier, means for engaging the upper surface of said stack, said carrier having additional band supporting means above said stack, and means for detaching the outermost band from said stack and positioning it upon said additional band supporting means.

7. In a cigar banding machine, a band stack carrier, and means adapted to remove the outermost band of the stack and position said band on said carrier spaced from the stack, said carrier having a pair of tongues for supporting said spaced band.

8. In a cigar banding machine, a band carrier having means for supporting a stack of bands, means for detaching the outermost band of said stack, said carrier having additional means spaced from said first means for supporting said detached band spaced from the stack, and means for applying gum to said detached band.

9. In a cigar banding machine, means for supporting a stack of bands, means on said first means for supporting a band spaced from said stack, and means for removing the outermost band of said stack and positioning it on said last named means.

10. In a cigar banding machine, a band carrier adapted to hold a stack of bands, and means for spacing in said carrier the outermost band from the rest of the stack prior to applying gum thereto.

11. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier projecting above the band stack and adapted to support a band spaced from said stack, and means for raising the outermost band from said stack above said tongues.

12. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier projecting above the band stack and adapted to support a band spaced from said stack, means for engaging the outermost band, and means for actuating said last named means to raise said outermost band above said tongues.

13. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier projecting above the band stack and adapted to support a band spaced from said stack, means for engaging the outermost band, and means for actuating said last named means to position said outermost band upon said tongues.

14. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier, projecting above the band stack and adapted to support a band spaced from said stack, means for engaging the outermost band, and means for actuating said last named means to raise said outermost band above said tongues and then position said band upon said tongues.

15. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier projecting above the band stack and adapted to support a band spaced from said stack, means for engaging the outermost band substantially at the center thereof, and means for actuating said last named means for raising the center of said outermost band above the ends thereof and for raising said band above said tongues.

16. In a cigar banding machine, a band stack carrier, a pair of tongues on said carrier projecting above the band stack and adapted to support a band spaced from said stack, means for engaging the outermost band substantially at the center thereof, and means for actuating said last named means for raising the center of said outermost band above the ends thereof and for raising said band above said tongues and then lowering said band upon said tongues.

17. In a cigar banding machine, a band stack carrier, projections on said carrier for engaging the upper surface of said stack, a second set of projections on said carrier above said first projections for supporting a band spaced from the stack, and means for engaging the outermost band of the stack and moving said band beyond said first and second projections.

18. In a cigar banding machine, a band stack carrier, projections on said carrier for engaging the upper surface of said stack, a second set of projections on said carrier above said first projections for supporting a band spaced from the stack, means for engaging the outermost band of the stack, and means for actuating said last named means to raise said outermost band above said first and second projections.

19. In a cigar banding machine, a band stack carrier, projections on said carrier for engaging the upper surface of said stack, a second set of projections on said carrier above said first projections for supporting a band spaced from the stack, means for engaging the outermost band of the stack, and means for actuating said last named means to raise said outermost band above said first

and second projections and lower said band upon said second projection.

20. In a cigar banding machine, a band stack carrier, projections on said carrier for engaging the upper surface of said stack, a second set of projections on said carrier above said first projections for supporting a band spaced from the stack, means for engaging the outermost band of the stack substantially at the center thereof, and means for actuating said last named means for raising the center of said outermost band above the ends thereof and for raising said band above said projections.

21. In a cigar banding machine, a band stack carrier, projections on said carrier for engaging the upper surface of said stack, a second set of projections on said carrier above said first projections for supporting a band spaced from the stack, means for engaging the outermost band of the stack substantially at the center thereof, and means for actuating said last named means for raising the center of said outermost band above the ends thereof and for raising said band above said projections and then lowering said band upon said second projections.

22. In a cigar banding machine, a band stack carrier having means for supporting a band spaced from the stack and a suction member for removing a band from the stack and positioning it on said first named means.

23. In a cigar banding machine, a band stack carrier having means for supporting a band spaced from the stack, a suction member for engaging the outermost band of the stack, and means for moving said member and band beyond said first named means.

24. In a cigar banding machine, a band stack carrier having means for supporting a band spaced from the stack, a suction member for engaging the outermost band of the stack, and means for moving said member and band beyond said first named means and then positioning said band upon said first named means.

25. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member for engaging the outermost band of the stack, and means for moving said member and band above said first named means.

26. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member for engaging the outermost band of the stack, and means for moving said member and band above said first named means and then positioning said band upon said first named means.

27. In a cigar banding machine, a band stack carrier mounted for vertical movement, a suction member normally in ineffective position, means for moving said member to effective position, and means for lowering said member into engagement with the band stack in said carrier to depress said stack and carrier.

28. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, means for lowering said member into engagement with the outermost band of the stack, and means for raising said member and band above said first named means.

29. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, means for lowering said member into engagement with the outermost band of the stack, and means for raising said member and band above said first named means.

30. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, means for lowering said member into engagement with the outermost band of the stack, means for raising said member and band above said first named means, and means for depositing said band on said first named means.

31. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, means for lowering said member into engagement with the outermost band of the stack, means for raising said member and band above said first named means, means for depositing said band on said first named means, and means for returning said member to ineffective position.

32. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, and a cam permitting lowering said member into engagement with the outermost band of the stack.

33. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, and a cam permitting lowering said member into engagement with the outermost band of the stack and for raising said member and band above said first named means.

34. In a cigar banding machine, a band

stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, means for moving said member to effective position above the stack, and a cam permitting lowering said member into engagement with the outermost band of the stack, raising said member and band above said first named means and for depositing said band on said first named means.

35. In a cigar banding machine, a band stack carrier having means for supporting a band spaced above the stack, a suction member normally in ineffective position, a cam for moving said member to effective position above the stack, means for moving said member into engagement with the outermost band of the stack, and means for raising said member and band above said first named means, said cam operating to restore said member to ineffective position.

36. In a cigar banding machine, a gum applying device, a band stack carrier, means for spacing the outermost band above said stack, means for causing said spaced band to engage said device, and a support beneath said spaced band.

37. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band above said stack, means for causing said spaced band to engage said device, and a support beneath said spaced band normally ineffective and adapted to be rendered effective prior to engagement of said spaced band with said device.

38. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band above said stack, means for causing one end of said spaced band to engage said device, and a support beneath said end of the spaced band.

39. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band above said stack, means for causing one end of said spaced band to engage said device, a support beneath said end of the spaced band, means for normally maintaining said support in ineffective position, and means for rendering said support effective prior to engagement of said spaced band with said device.

40. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band in said carrier removed from said stack, means for operating said carrier upwardly to cause said spaced band to engage said device, and a support beneath said spaced band normally ineffective but adapted to be rendered effective when said carrier is moved upwardly.

41. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band in said carrier removed from said stack, means for operating said carrier upwardly to cause said spaced band to engage said device, a support beneath said spaced band, means normally maintaining said support in ineffective position, and means actuated by the upward movement of said carrier for rendering said support effective.

42. In a cigar banding machine, a gum-applying device, a band stack carrier, means for spacing the outermost band in said carrier removed from said stack, means for operating said carrier upwardly to cause one end of said band to engage said device, a support beneath said end, means normally maintaining said support in ineffective position, and means actuated by the upward movement of said carrier for rendering said support effective.

43. In a cigar banding machine, a gum-applying device, a band stack carrier, banding means for supporting a band spaced from the stack, means for moving the outermost band of the stack to said first means, and means for moving said carrier toward said device to cause said spaced band to engage said device.

44. In a cigar banding machine, a gum-applying device, a band stack carrier, banding means for supporting a band spaced from the stack, means for moving the outermost band of the stack to said first means, and means for moving said carrier toward said device to cause said spaced band to engage said device, said first means including a member normally ineffective but adapted to be rendered effective when said carrier moves toward said device for supporting the portion of the spaced band which engages said device.

45. In a cigar banding machine, a gum-applying device, a band stack carrier having a pair of tongues for supporting a band spaced from the stack, means for moving said carrier toward said device to cause one end of said spaced band to engage said device, and means actuated by the movement of the carrier toward said device for extending one of said tongues beneath said end of the spaced band which engages said device.

46. In a cigar banding machine, a gum-applying device, a band stack carrier having a pair of tongues for supporting a band spaced from the stack, means for moving the outermost band of the stack to position upon said tongues, means for moving said carrier toward said device after a band has been positioned on said tongues to cause one end of said spaced band to engage said device, and means actuated by the movement

of the carrier toward said device for extending one of said tongues beneath said end of the spaced band which engages said device.

47. In a cigar banding machine, a gum-applying device, a band stack carrier having a pair of tongues for supporting a band spaced from the stack, means for moving said carrier toward said device to cause one end of said spaced band to engage said device, means actuated by the movement of the carrier toward said device for extending one of said tongues beneath said end of the spaced band which engages said device, and hand operated means for actuating said extensible tongue to ineffective position.

48. In a cigar banding machine, a band stack carrier, said carrier having means at each side thereof for engaging and overlying the top of the band stack, and means for rendering certain of said first named means ineffective to permit insertion of a stack in said carrier.

49. In a cigar banding machine, a band stack carrier, said carrier having pivoted fingers at each side thereof for engaging and overlying the top of the band stack, and means whereby the fingers at one side may be withdrawn to ineffective position to permit insertion of a stack in said carrier.

50. In a cigar banding machine, a band stack carrier, means for reciprocating said carrier, and means adapted to engage an edge of said stack during said reciprocation to separate the bands of said stack.

51. In a cigar banding machine, a band stack carrier, means for reciprocating said carrier, and a scraper adapted to engage an edge of said stack during said reciprocation to separate the bands of said stack.

52. In a cigar banding machine, a band stack carrier, means for reciprocating said carrier, means ineffective during the movement of said carrier in one direction but effective during the movement of said carrier in the other direction for engaging an edge of said stack to separate the bands thereof.

53. In a cigar banding-machine, a band stack carrier, means for reciprocating said carrier, a scraper ineffective during the movement of said carrier in one direction but effective during the movement of said carrier in the other direction for engaging an edge of said stack to separate the bands thereof.

54. In a cigar banding machine, a band stack carrier, means for reciprocating said carrier, a scraper, means whereby said scraper is maintained by said carrier in ineffective position during the movement of said carrier in one direction and whereby said scraper is released by the carrier during the movement in the other direction so that said scraper engages one edge of the stack to separate the bands thereof.

55. In a cigar banding machine, a band carrier adapted to hold a plurality of bands, means for spacing the outermost band from the rest of the bands, means for holding the outermost band stationary in spaced position, and means for applying gum to said outermost band.

56. In a cigar banding machine, a band carrier adapted to hold a stack of bands, means for spacing the outermost band from the rest of the stack, means for holding the outermost band stationary in spaced position within the outline of the stack, and means for applying gum to said outermost band.

57. In a cigar banding machine, a band carrier adapted to hold a stack of bands, means for detaching the outermost band, and means for holding the outermost band stationary in detached position prior to applying gum thereto.

This specification signed this 24th day of July, 1923.

FRANCIS X. MALOCSAY.