

Aug. 18, 1942.

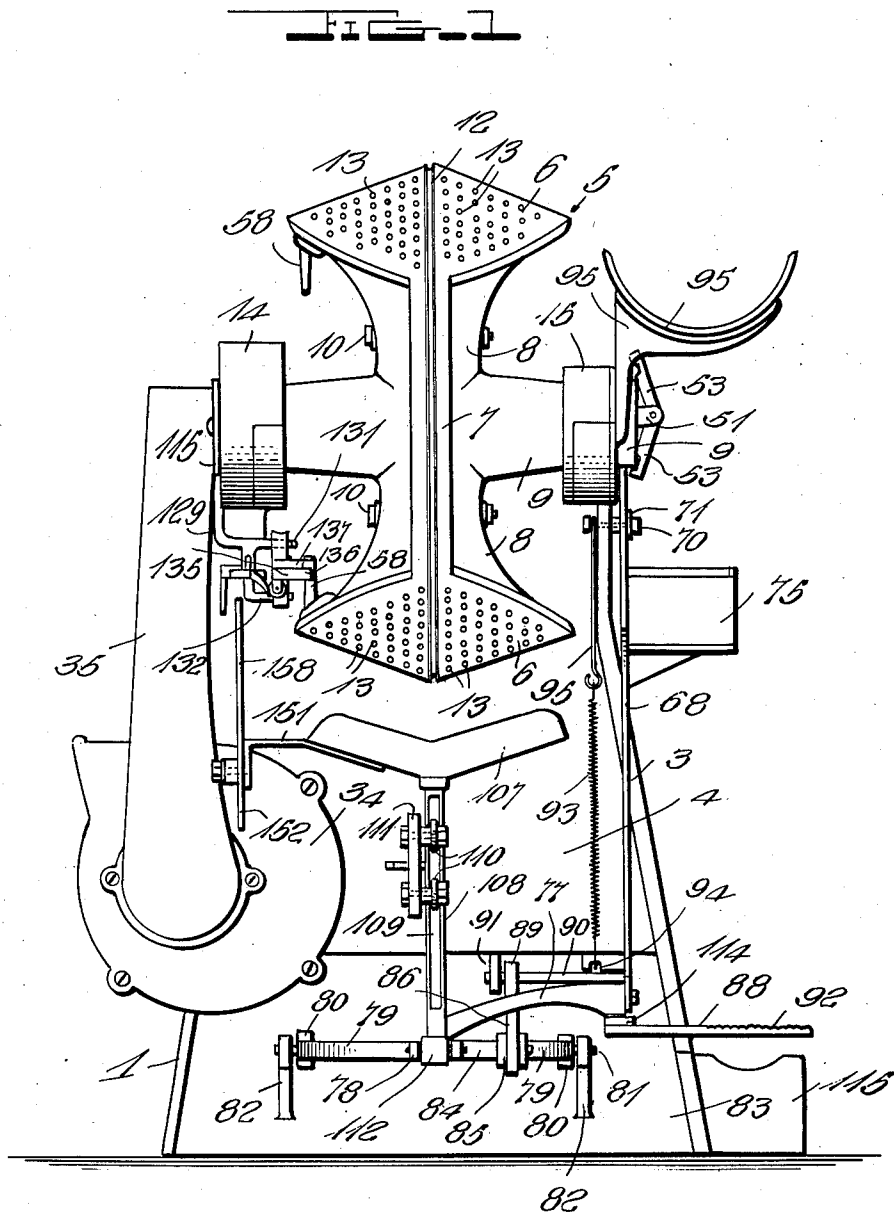
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 1



Inventor
Jose Maria Gonzalez,
BY *Jacob & Jacob*
ATTORNEYS.

Aug. 18, 1942.

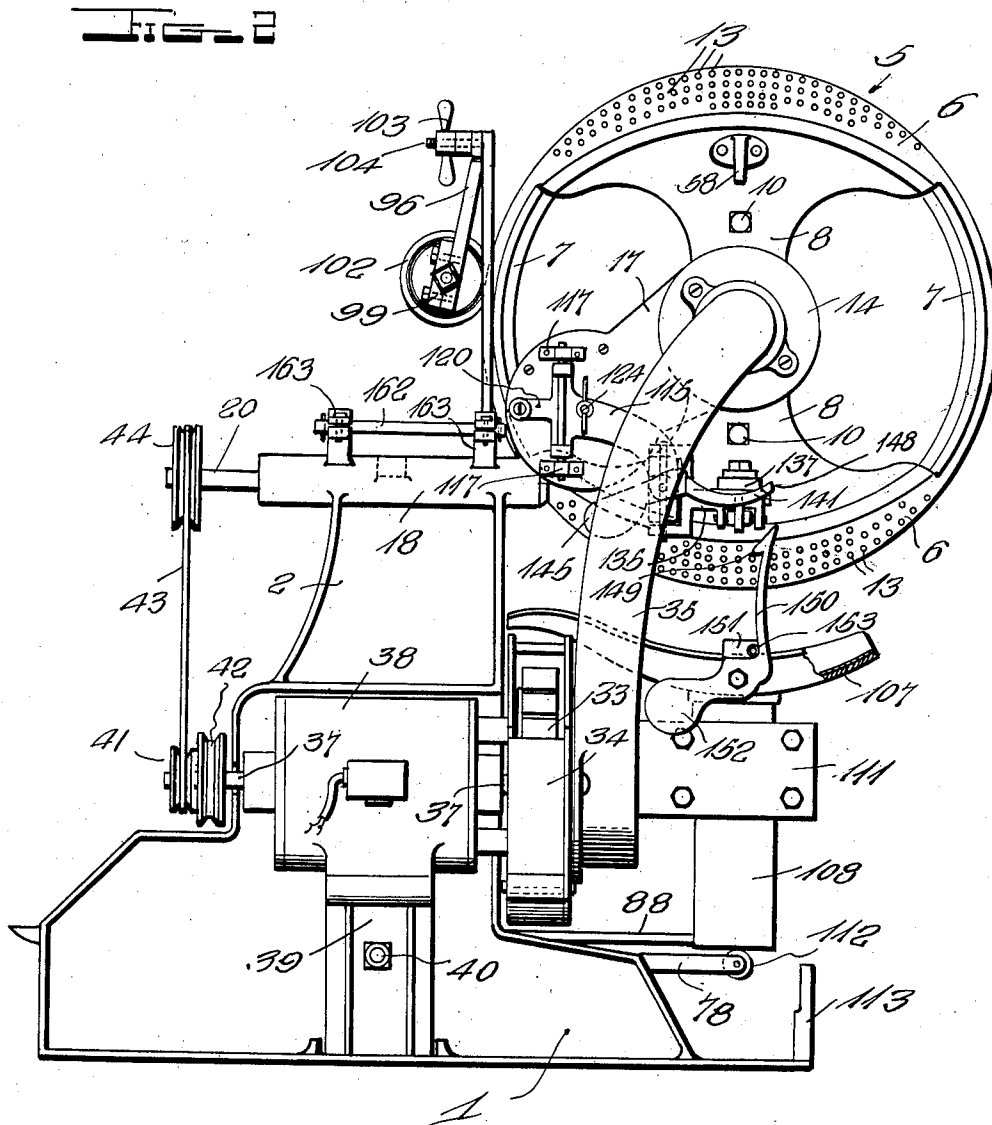
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 2



Inventor
Jose Maria Gonzalez,

BY *Joseph Joseph*
ATTORNEYS.

Aug. 18, 1942.

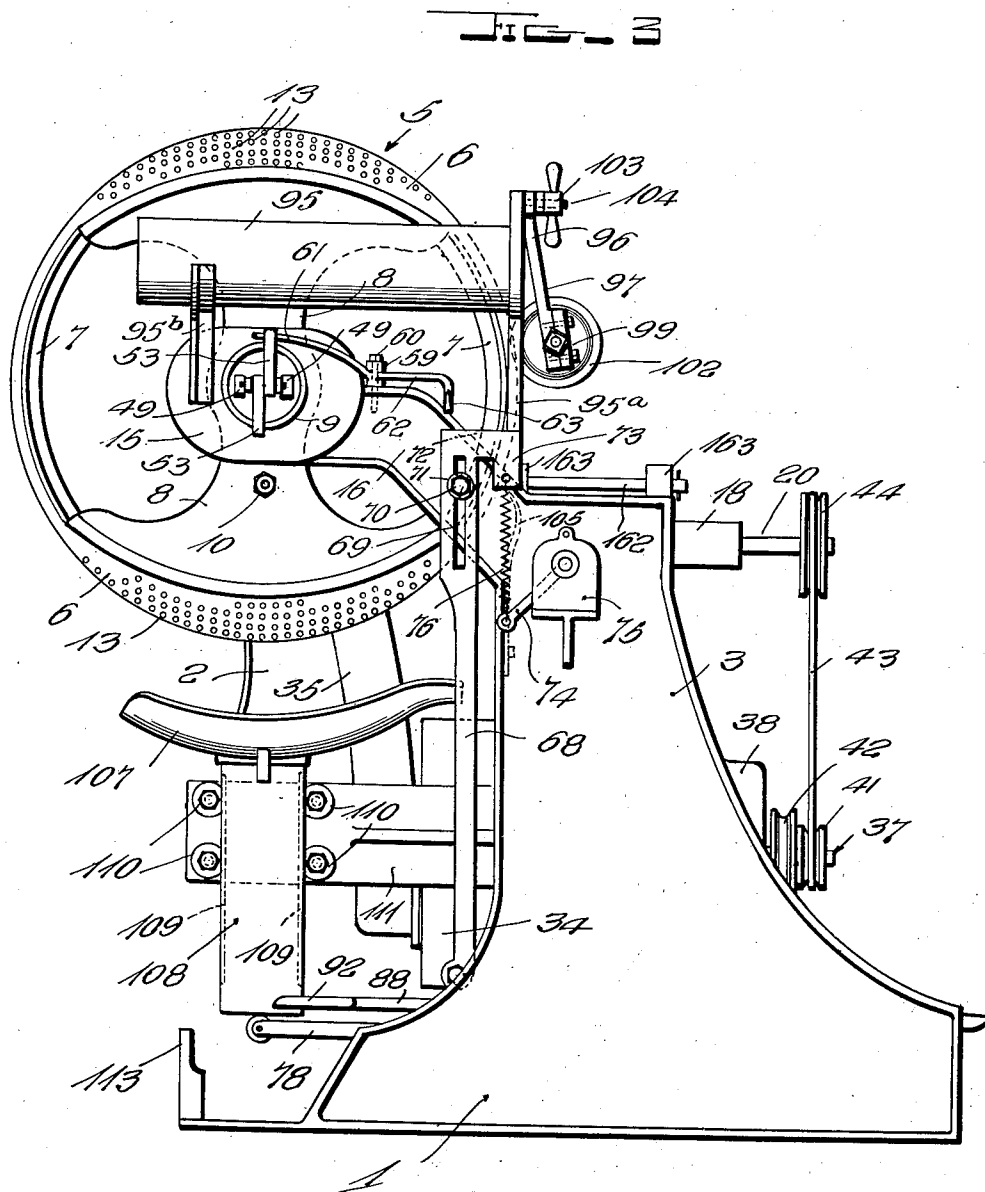
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 3



Aug. 18, 1942.

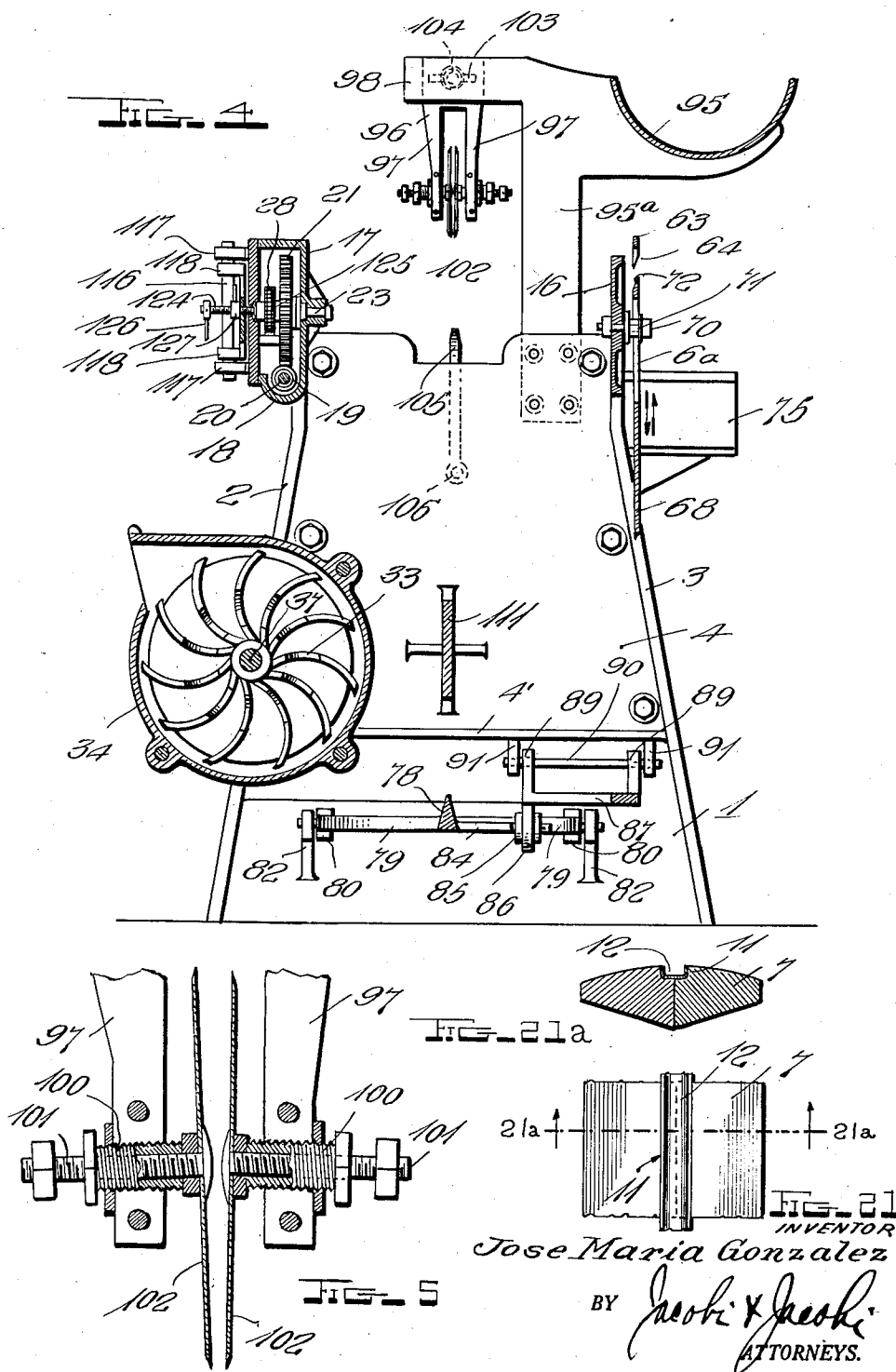
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 4



Aug. 18, 1942.

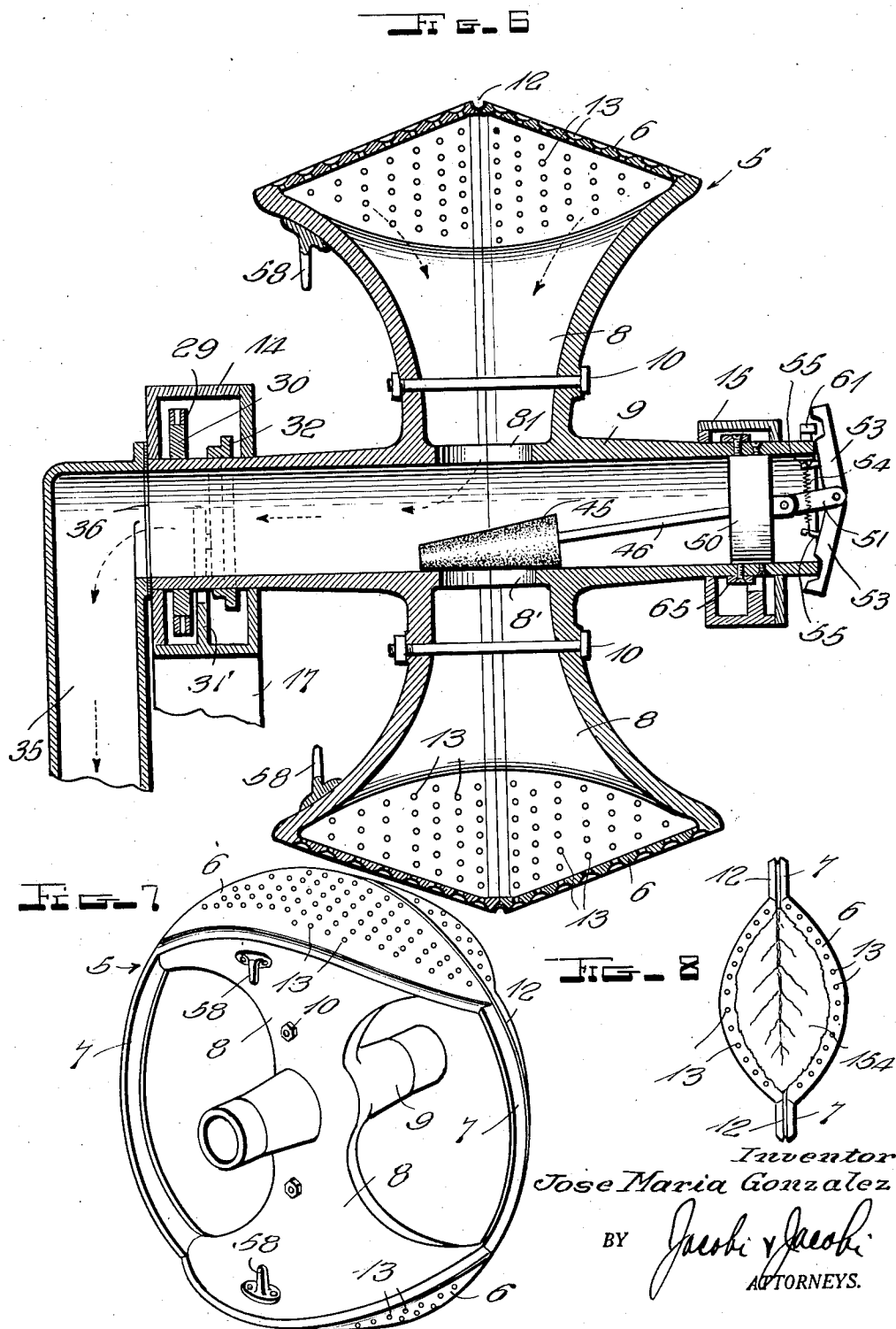
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 5



Inventor
Jose Maria Gonzalez

BY

Jacobi & Jacobi
ATTORNEYS.

Aug. 18, 1942.

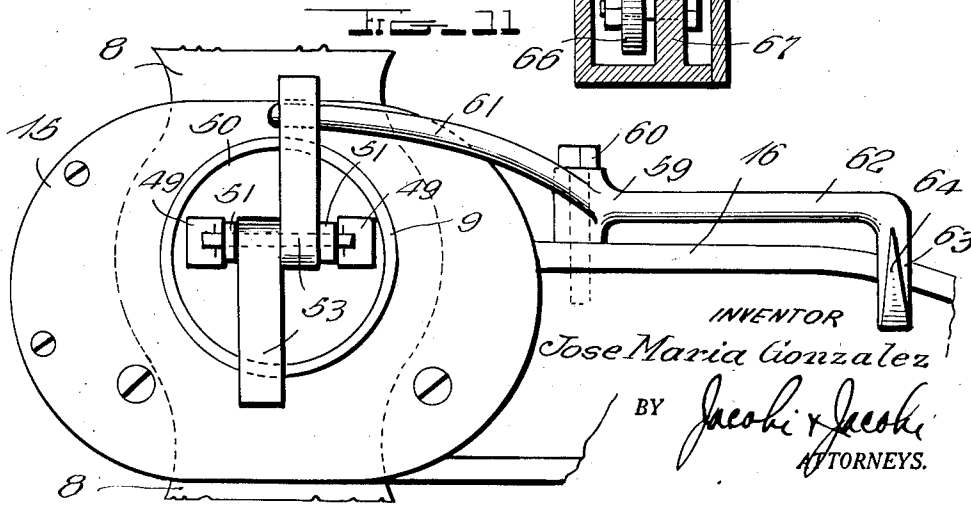
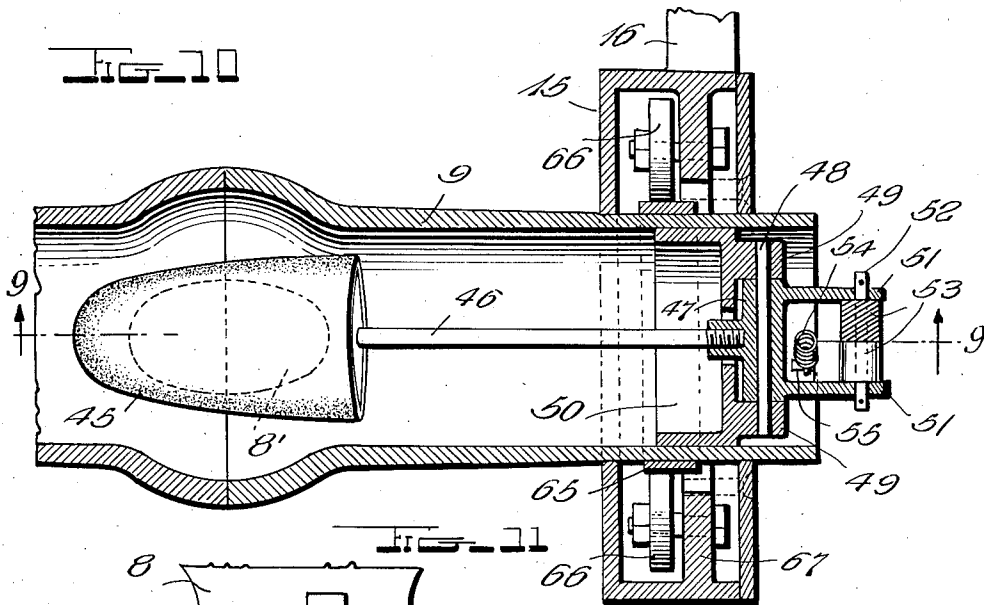
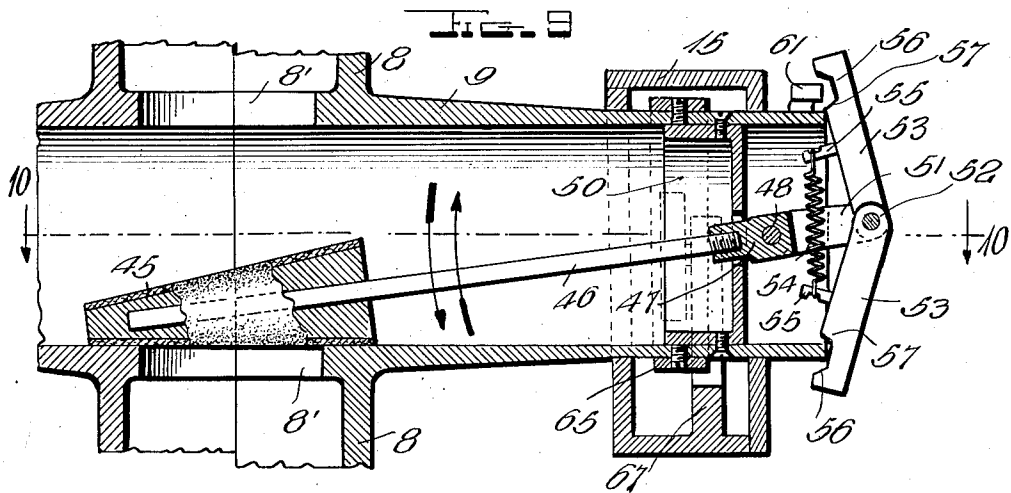
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 6



INVENTOR
Jose Maria Gonzalez
BY *Jacobi & Jacobi*
ATTORNEYS.

Aug. 18, 1942.

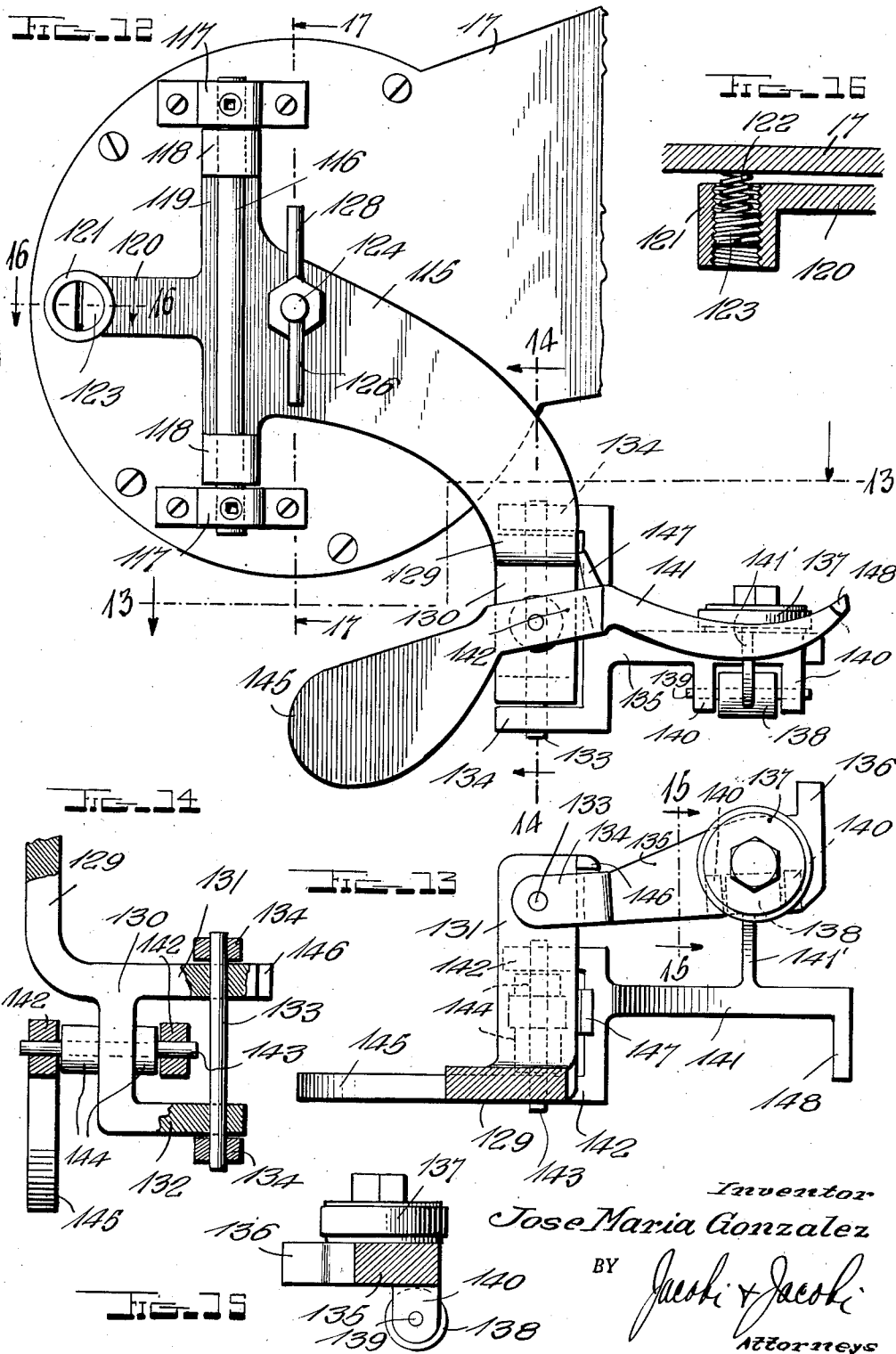
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 7



Inventor
Jose Maria Gonzalez
BY *Jacki & Jacki*
Attorneys

Aug. 18, 1942.

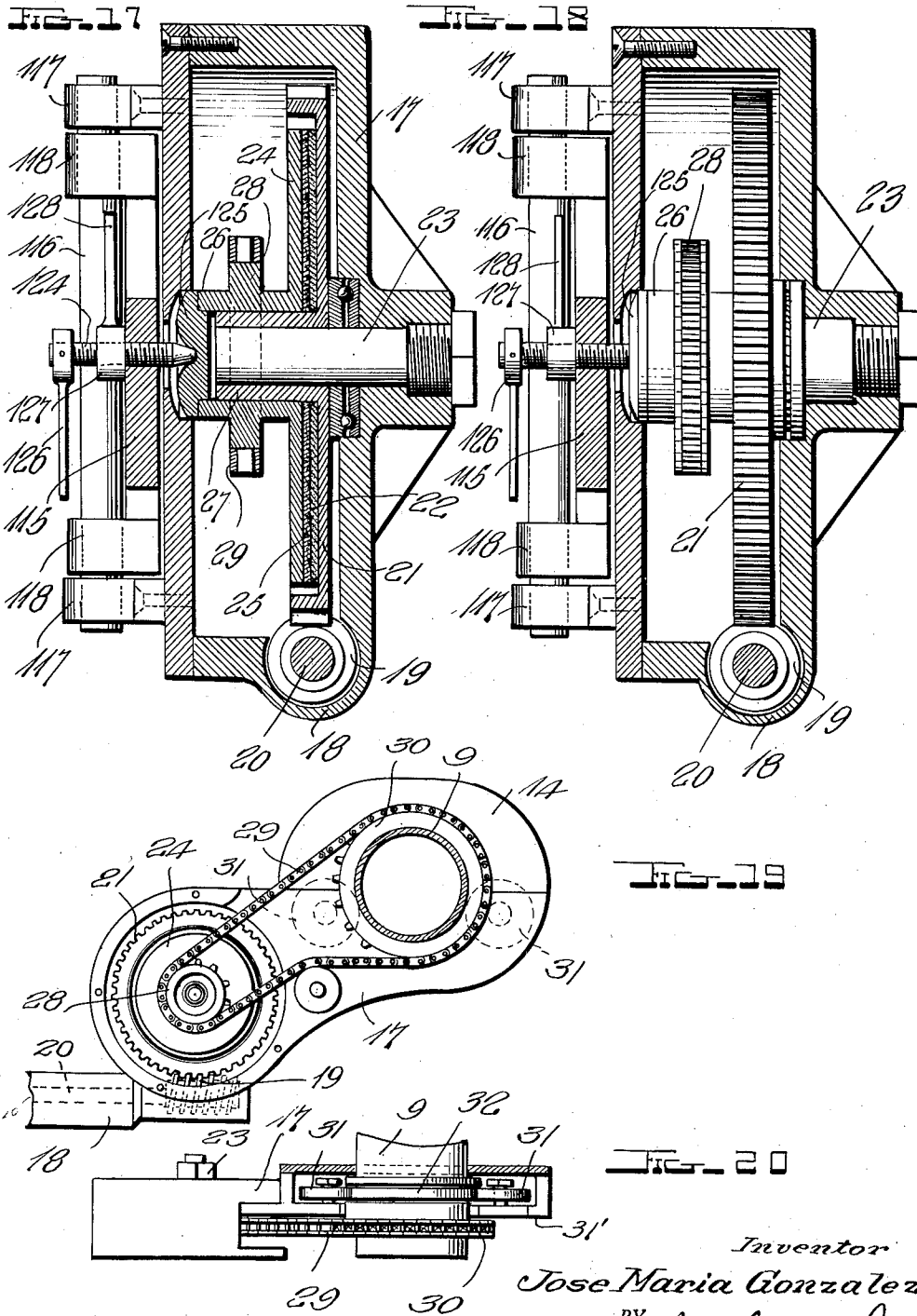
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 8



Inventor
Jose Maria Gonzalez
BY *Jacobi & Jacobi*
Attorneys

Aug. 18, 1942.

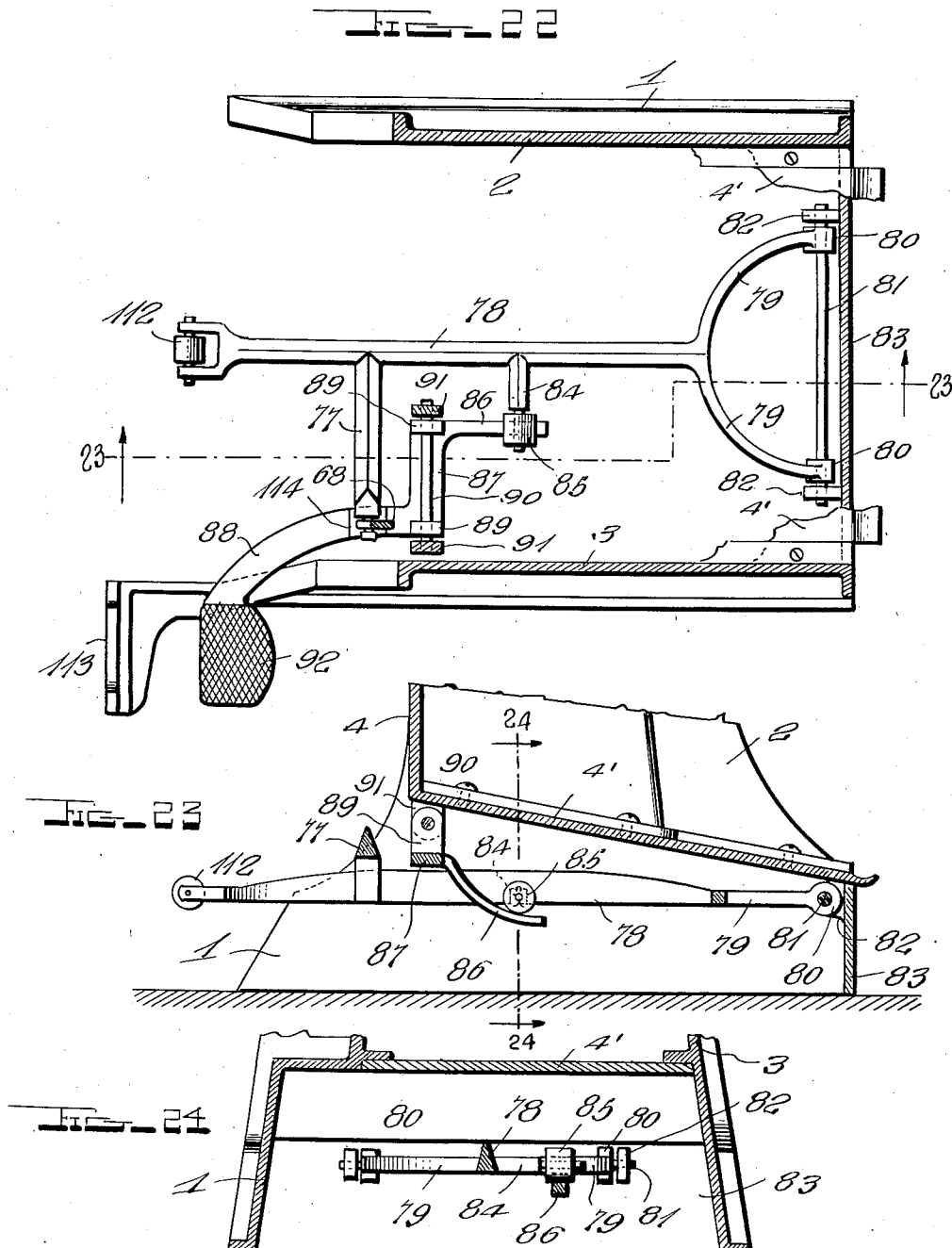
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 9



Jose Maria Gonzalez

INVENTOR.

BY

Jacobi & Jacobi
ATTORNEYS.

Aug. 18, 1942.

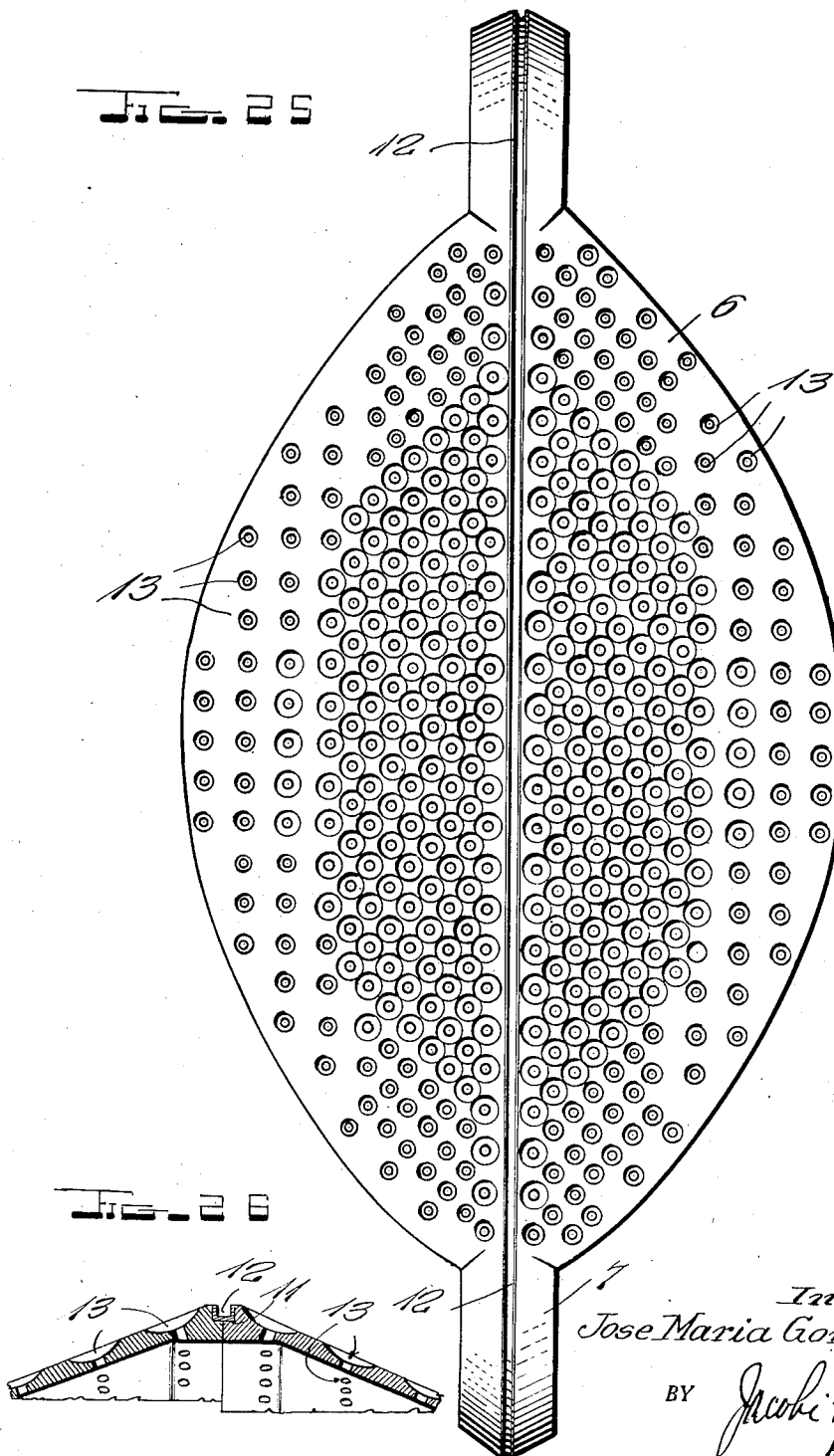
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 10



Inventor
Jose Maria Gonzalez

BY *Jacobi & Jacobi*
ATTORNEYS.

Aug. 18, 1942.

J. M. GONZALEZ

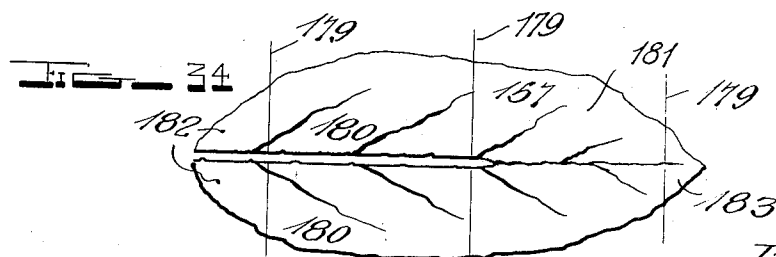
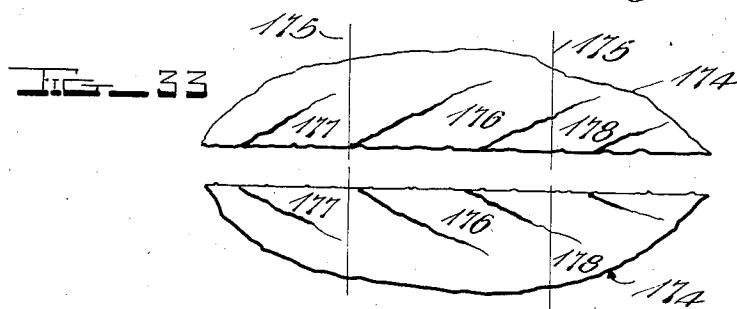
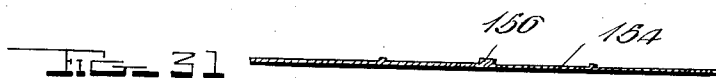
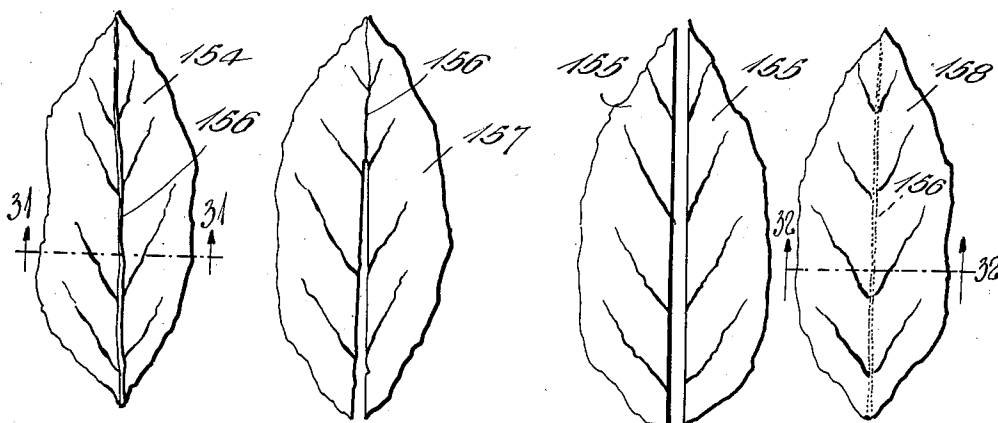
2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 11

FIG. 27 FIG. 28 FIG. 29 FIG. 30



Inventor
Jose Maria Gonzalez

BY *Joseph J. Janki*
ATTORNEYS.

Aug. 18, 1942.

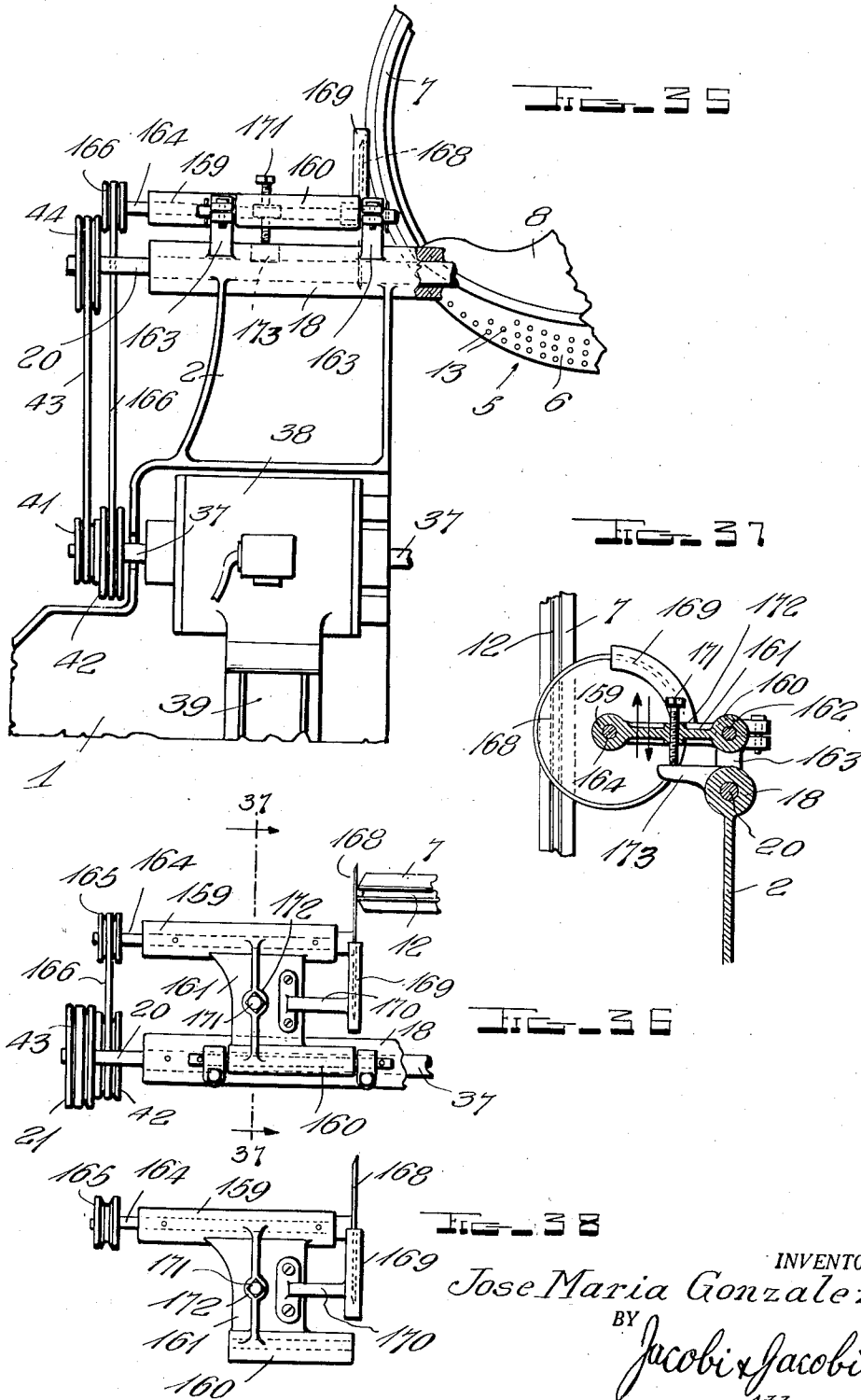
J. M. GONZALEZ

2,293,604

TOBACCO SHIPPING MACHINE

Filed March 21, 1940

12 Sheets-Sheet 12



INVENTOR.

Jose Maria Gonzalez,

BY

Jacobi & Jacobi

Attorneys

UNITED STATES PATENT OFFICE

2,293,604

TOBACCO STRIPPING MACHINE

Jose Maria Gonzalez, Tampa, Fla., assignor, by
mesne assignments, to Karl B. Cuesta and Ed-
ward W. Berriman, both of Tampa, Fla.

Application March 21, 1940, Serial No. 325,245

33 Claims. (Cl. 131—125)

This invention relates to a tobacco stripping machine by means of which tobacco leaves may have their stems entirely or partially removed and the leaves prepared for use as fillers, binders or wrappers during manufacture of cigars.

One object of the invention is to provide a machine wherein leaves which are to have stems trimmed or stripped therefrom are applied to a rotary drum and move with the drum during rotation thereof into engagement with cutting blades, means being provided for controlling intermittent rotation of the drum, and means also being provided for actuating a valve through the medium of which a vacuum for holding leaves against the drum is regulated.

Another object of the invention is to provide a drum having leaf-carrying portions formed with perforated walls and communicating with a hollow shaft through which suction is created, a valve being mounted in the shaft and so actuated that a leaf will be firmly held against the drum during a partial rotation of the drum and then released for deposit upon a holder for a stack of prepared leaves.

Another object of the invention is to so mount the holder for the prepared leaves that it is shifted upwardly into position to receive a prepared leaf and then moved downwardly, thus eliminating constant pressure upon a stack of leaves and preventing the leaves from becoming bruised.

Another object of the invention is to provide a machine wherein during rotary motion of the drum a clutch will be automatically moved into and out of an operative position and thus cause the drum to be rotated after a leaf has been applied to it and the clutch disengaged when the drum reaches a position disposing the prepared leaf over the leaf receiving tray.

Another object of the invention is to so arrange elements of the machine that suction holding the prepared leaf against the drum will be cut off when the tray moves upwardly into position to receive a leaf and during this upward movement an abutment which halts rotation of the drum in position to deposit the prepared leaf moved to a drum releasing position, and at the same time a clutch controlling device actuated to throw in the clutch and cause rotation of the drum.

Another object of the invention is to provide a stripping machine wherein leaves may be so applied to the drum that the stems will be shaved or stripped in the direction of the butt end of the leaf instead of toward the tip thereof, thus

causing the stems to be so shaved or stripped that the leaves may be economically cut to form fillers and waste reduced to a minimum.

Another object of the invention is to provide a machine by use of which small leaves may be prepared for use as fillers. It will thus be seen that instead of using large leaves from which the stems are entirely removed and the half-leaves cut to form fillers, small leaves may have the stems removed for a portion of the length of a leaf and fillers formed of portions of the leaf at opposite sides of and forwardly of the removed portion of the stem. It will thus be seen that purchase of large leaves for use as fillers will not be necessary and the manufacturing cost of cigars proportionately reduced.

Another object of the invention is to provide a drum so constructed that by inserting a temporary filler in a circumferentially extending groove in the drum the depth of the portion of the stem shaved off may be regulated and the extent to which the stem is removed thus controlled.

Another object of the invention is to provide a machine wherein the drum and the suction fan are driven from a single motor mounted upon the base portion of the machine, the fan being continuously driven and rotary motion being transmitted to the drum through the medium of a transmission having a clutch associated therewith so that rotary motion will be intermittently imparted to the drum.

Another object of the invention is to provide a stripping machine which is very easy to operate, of sturdy construction, and not liable to get out of order and need repairing.

With these and numerous other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

The invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a front elevation of the stripping machine.

Fig. 2 is a view looking at one side of the machine.

Fig. 3 is a view looking at the other side thereof.

Fig. 4 is a vertical sectional view taken transversely through the machine at the suction fan.

Fig. 5 is a view upon an enlarged scale showing the manner in which the stripping knives are mounted.

Fig. 6 is a vertical sectional view through the drum taken longitudinally of the shaft thereof.

Fig. 7 is a perspective view of the drum.

Fig. 8 is a plan view illustrating the manner in which leaves are applied to the drum.

Fig. 9 is a vertical sectional view taken longitudinally through the drum shaft upon the line 9—9 of Figure 10, and showing the suction-controlling valve in one position of adjustment.

Fig. 10 is a sectional view taken along line 10—10 of Figure 9.

Fig. 11 is a view in elevation showing the valve adjusting means.

Fig. 12 is a view in elevation of the clutch controlling mechanism.

Fig. 13 is a fragmentary view taken along line 13—13 of Figure 12.

Fig. 14 is a sectional view taken along line 14—14 of Figure 12.

Fig. 15 is a sectional view taken along line 15—15 of Figure 13.

Fig. 16 is a fragmentary sectional view taken along line 16—16 of Figure 12.

Fig. 17 is a sectional view taken vertically through the clutch and its housing along the line 17—17 of Figure 12.

Fig. 18 is a view similar to Figure 17 showing the housing in section and elements of the clutch in elevation.

Fig. 19 is a view illustrating the manner in which rotary motion is transmitted from the clutch to the drum shaft.

Fig. 20 is a view showing the mechanism of Figure 19 partially in top plan and partially in section.

Fig. 21 is a fragmentary view of the drum looking at the outer face of a portion of its peripheral wall.

Fig. 21a is a sectional view taken transversely through Figure 21 upon the line 21a—21a.

Fig. 22 is a sectional view taken horizontally through the base portion of the machine and looking down upon the treadle thereof.

Fig. 23 is a sectional view taken along line 23—23 of Figure 22.

Fig. 24 is a sectional view taken along line 24—24 of Figure 23.

Fig. 25 is a view looking at a leaf-holding portion of the drum.

Fig. 26 is a fragmentary sectional view taken transversely through the outer wall of a leaf-holding portion of the drum.

Fig. 27 is a view of a tobacco leaf before being stripped.

Fig. 28 is a view showing the manner in which the stem is partially stripped from a leaf to be used as a filler.

Fig. 29 is a view showing the entire stem removed from a leaf to form two wrappers.

Fig. 30 is a similar view of a leaf prepared for use as a binder.

Fig. 31 is a sectional view upon an enlarged scale taken transversely through the leaf upon line 31—31 of Figure 27.

Fig. 32 is a similar view taken along line 32—32 of Figure 30.

Fig. 33 is a view illustrating the manner in which stripped leaves have previously been cut to form fillers.

Fig. 34 is a view illustrating the manner in which a leaf prepared as shown in Figure 28 is cut to form fillers.

Fig. 35 is a fragmentary side elevation showing the machine equipped for preparing leaves for use as fillers and binders.

Fig. 36 is a top plan view of the mechanism for planing off the stems of leaves used as fillers and binders.

Fig. 37 is a sectional view taken along line 37—37 of Figure 36.

Fig. 38 is a top plan view of the planing attachment before being applied to the machine.

This improved stripping machine has a body which is preferably formed of heavy cast metal but may be of any material desired and has a base 1 from which rise side walls 2 and 3 between which extend a vertical web 4 and a horizontal platform 4'. In front of the web 4 is a large drum 5 which is of hollow formation and has circumferentially extending leaf-holding sections 6 connected by solid arms 7 and having shanks 8 which communicate with a tubular hub 9 through openings 8', so that suction may be created through the leaf-holders 6. Referring to Figure 6, it will be seen that the drum consists of companion side sections which are secured in operative engagement with each other by bolt 10 passing transversely through the arms 8 and that meeting inner side edge portions of the two sections are recessed to form a circumferentially extending groove 11 in which a ring 12 formed of channeled metal is mounted to provide a stem receiving track. Side portions of the leaf-holders 6 extend diagonally as clearly shown in Figure 6 and are formed with a multiplicity of perforations 13 having enlarged outer end portions and through which air is to be drawn by suction through the hollow hub or shaft 9 to maintain leaves in flat contacting engagement with the leaf-holders with their stems extending along the groove or track 12, as shown in Figure 8.

In order to rotatably mount the drum, there have been provided bearing housings 14 and 15, the bearing 15 being carried by an arm 16 extending forwardly from the upper end of the side wall or standard 3 of the frame or body of the machine and the bearing housing 14 constituting the forward end of a transmission housing 17. This transmission housing 17 extends upwardly at an incline from the forward end of a casing 18 extending horizontally along the upper end of the side wall or standard 2, and upon referring to Figures 4, 17, 18 and 19 it will be seen that in the casing 18 is rotatably mounted a worm 19 having a shaft 20 which projects from the rear end of the casing 18. A worm gear 21, which is provided with a clutch facing 22, is mounted in the rear portion of the transmission casing 17 about a shaft 23 and cooperating with this gear is a clutch member or disc 24 having a clutch facing 25 confronting the facing 22. The clutch disc 24 has a hub extension or sleeve 26 fitting loosely about the sleeve or hub 27 of the gear 21, as shown in Figures 17 and 18, and the sleeve or hub 26 carries a sprocket wheel 28 about which is engaged a sprocket chain 29 as shown in Figures 17 and 19. This sprocket chain 29 extends forwardly through the housing 17 as shown in Figures 19 and 20 and is engaged about a larger sprocket wheel 30 carried by the end portion of shaft 9, as shown in Figures 6 and 19, the shaft 9 being journaled in the bearing housing 14 as shown in Figure 20 and resting upon rollers 31 which are rotatably carried by the web 31' in the bearing housing and engage the collar 32 of the shaft or hub. By this arrangement rotary motion may be transmitted from the sprocket 28 of clutch 24 to the shaft or hub 9 and the drum turned at the proper speed during operation of the stemming machine. Suction through the

drum is created by means of the fan 33 shown in Figure 4 and mounted in a fan housing 34 which is secured against the web 4 at the front end of the side wall or standard 2 as shown in Figure 2 and formed with an inlet about which is secured the lower end of a conduit 35. This conduit extends upwardly with its upper end portion curved forwardly as shown in Figure 2 and secured against the outer side face of the housing 14 in position to register with the adjacent end of the shaft 9, a gasket 36 being interposed between the conduit and the side face of the housing to prevent leakage. The fan 33 is carried by one end portion of the shaft 37 of an electric motor 38 mounted at one side of the base or frame of the machine and supported by a post 39, the post being removably held in place by a bolt 40 in order that the post may be removed when dismantling of the motor for repairs or replacement is necessary. At its rear end the motor shaft 37 carries pulleys 41 and 42, which may be a single pulley of double formation, if so desired, and about the pulley 41 is engaged a belt 43 which extends upwardly and has its upper portion engaged about a pulley 44 carried by shaft 20. It will thus be seen that the motor 38 constitutes a power unit for the shaft 20 as well as for the fan, and the fan and the shaft 20 will be continuously driven when the machine is in operation.

It is only desired to have suction through one of the leaf-holders 6 at a time and in order to control suction through the leaf-holders there has been provided a valve 45 which is mounted in the hub or shaft 9 and has a stem 46 extending longitudinally in the hub, as shown in Figures 6, 9 and 10. Referring to these figures, and particularly to Figures 9 and 10, it will be seen that the stem 46 has its outer end carried by rocker arm or lever 47 which is pivotally mounted by a pin 48 carried by ears 49 which project outwardly from a plug 50 serving as a closure for one end of the hub or shaft 9. The rocker arm or lever 47 has outwardly projecting fingers 51 carrying a pin 52 by means of which dogs 53 are pivotally mounted, and in order to yieldably hold the dogs in an operative position, there has been provided a spring 54 extending between and secured at its ends to pins 55 projected inwardly from the dogs. Recesses or notches 56 defining shoulders 57 are formed in inner side edge portions of the dogs near the free ends thereof to receive edge portions of an adjacent end of the hub 9 and it will be readily understood that, as long as one of the dogs has engagement with the hub, the valve will be maintained in one of its positions of adjustment where it will close one of the openings 8' and prevent suction through the leaf-holder with which the covered or blocked opening 8' communicates. During operation of the machine the drum has intermittent rotary motion imparted to it and makes a half turn each time it rotates, turning of the drum being controlled by abutment fingers 58 projecting from one side of the drum and each located midway the length of one of the leaf-holders. It should also be noted that rotation of the drum is brought to a stop with one of the leaf-holders in an upper position and the other in a lower position. Therefore, when the drum is brought to a stop with the valve extending upwardly in closing relation to the opening 8' of the upper leaf-holder and the upper dog 53 is moved out of engagement with the edge of the hub 9, the weight of the valve will cause it to drop to the lowered position for closing the opening 8' of the lower leaf-holder

and the spring will draw the lower dog into latching engagement with the edge of the hub. The valve will then be held in this position until the drum has made another one-half revolution and the dog holding the valve in its position of adjustment is moved to a releasing position. Movement of a dog to a releasing position is accomplished by means of a bell crank lever 59 which is pivoted to the arm 16 by a bolt or screw 60 as shown in Figures 3 and 11, and has its arms 61 and 62 extending longitudinally of the arm 16. The arm 61 of the bell crank lever extends along the bearing housing 15 over the protruding end of the hub 9 and the arm 62 terminates in a depending finger 63 having a cammed surface 64 and from an inspection of Figures 9 and 11, it will be readily seen that when the cam surface 64 is acted upon to apply inward pressure to the finger 63 the bell crank lever will be swung about its pivot pin 60 to swing its arm 61 outwardly and cause the uppermost dog 53 to be shifted outwardly and disengaged from latching engagement with the edge of the hub 9, thus permitting the weight of the valve to carry the valve downwardly into closing relation to the opening 8' of the lower leaf-holder and permit the spring 54 to draw the lower dogs inwardly into its operative position in which it has latching engagement with the hub and prevents the valve from moving out of the adjusted position until the dog in the operative position is shifted to a releasing position by operation of the bell crank lever. The portion of the hub or shaft 9 passing through the bearing housing 15 also carries a ring or collar 65 shown in Figures 6, 9 and 10 corresponding to the ring or collar 32 and resting upon rollers 66 corresponding to rollers 31 and rotatably mounted at one side of the web 67 formed within the bearing housing.

In order to actuate the bell crank lever 59 there has been provided a bar 68 which is disposed vertically as shown in Figure 3 with its upper portion extending across the outer face of arm 16 and formed with a longitudinally extending slot 69 through which passes a pin or bolt 70 carrying a roller 71 so that the bar may slide easily when shifted vertically. The upper end of this bar normally terminates a short distance below the finger 63 of the latch releasing lever 59 and has its inner face formed with a beveled surface 72 for engaging the beveled surface 64 of the finger 63 and setting up a cam action which will move the lever 59 to a latch releasing position when the bar is shifted upwardly. The bar 68 carries a depending arm or finger 73 at its upper end which is connected with the lever 74 of a conventional counter 75 by a spring 76, and each time the bar is shifted vertically and then allowed to return to its lowered position, the counter will be operated. Therefore, the number of leaves stripped may be kept track of. The lower end of the bar 68 is pivoted to a side arm 77 shown in Figures 1 and 22 and extending laterally from a lever 78 which extends longitudinally of the base of the frame and at its rear end is formed with forks 79 terminating in bearings 80 which loosely engage about a pivot rod 81 carried by ears 82 which project inwardly from the short rear wall 83 of the base. A shorter arm 84 extends from the same side of the lever 78 as the arm 77 and this arm 84 is faced rearwardly from arm 77 and carries a roller 85 which rests upon an arm or finger 86 extending rearwardly from one end of the hanger bar 87 of a treadle 88. This hanger bar 87 has upstanding ears 89 which en-

gage about a pivot pin or rod 90 carried by ears 91 depending from the platform 5 at the front end thereof, and from an inspection of Figures 22 and 23, it will be readily seen that when downward pressure is applied to the foot piece 92 of the treadle 88, the arm or finger 86 of this treadle will cause the lever 78 to be swung upwardly and the bar 68 will be carried upwardly with it, since the lower end of the bar 68 is pivoted to the side arm 77 of the lever 78. A spring 93 shown in Figure 1 has its lower end anchored to a lug 94 extending inwardly from the lower end of the bar 68 near the lower end thereof and the upper end of the spring is anchored to a hook 95 suspended from the inner end of the bolt 70 carried by and passing through the arm 16. The spring exerts upward pull and assists in moving the bar 68 upwardly during upward swinging movement of the lever 78. When the operator's foot is removed from the treadle the weight of the lever 78 and associated parts returns the pedal and the bar to the raised position. The leaves which are to be stripped are placed in a pile or stack in the trough 95 shown in Figures 1, 3 and 4 and carried by a bracket 95a which extends upwardly from the web 4, there being also provided a supporting bracket 95b secured against the outer side face of the bearing housing 15. A yoke 96 having downwardly extending arms 97 is removably secured to the side arm 98 of the bracket 94 as shown in Figure 4 and at lower ends of the arms 97 are provided bearings 99 shown in Figure 3 through which are threaded bushings 100 as shown in Figure 5. Stems 101 pass through the bushings and at their inner ends carry circular cutting blades 102 which converge, as shown in Figure 5, and fit into the track 12 near the side walls thereof so that as the drum rotates with the stem of a tobacco leaf extending along the groove or track, the rotating blades will cut through the leaf along sides of the stem and thus strip the stem from a leaf. By adjusting the bushings the blades may be shifted toward or away from each other and thus properly spaced so that their sharpened edges will engage properly in the tracks. By removing the winged nut 103 the yoke 96 may be withdrawn from the threaded supporting stem or post 104 and put away when use of the circular knives is not desired. A narrow strip 105 of resilient metal is disposed vertically against the web 4 as shown in Figures 3 and 4 and secured thereto by a fastener 106. This strip has its upper end portion curved longitudinally and projecting over the upper end of the web 4 for engagement in the track to dislodge the stems therefrom and cause these stems to drop downwardly onto the platform 5 after they have been cut from the tobacco leaves.

In order to receive the stripped leaves there has been provided a tray or pan 107 disposed under the drum and mounted upon the upper end of a bar 108 which constitutes a shank for the trough and has its edge faces grooved as shown at 109 in Figures 1 and 3 so that it may be slidably mounted between rollers 110 rotatably mounted at one side of a supporting bar 111 which projects forwardly from the web 4. The lower end of the bar or shank 108 rests upon a roller 112 at the front end of lever 78 and it will be readily understood that when the treadle 88 is depressed and the lever 78 swung upwardly, the shank 108 and the tray or pan 101 carried thereby will be moved upwardly toward the drum. A support 113 is provided at one side of the front of the machine for the foot by means of which the

pedal is operated. Engagement of the outer end of the arm 77 with the pedal 88 which it overlaps, as shown in Figure 1, limits downward movement of the lever 78, and in order to absorb shocks and eliminate undesired noise during operation of the machine, there has been provided a rubber pad 114 carried by the treadle in position for engagement by the lever arm as shown in Figures 1 and 22. In view of the fact that upward movement is imparted to the shank 108 through the medium of the treadle 88 acting upon lever 78, the tray will be shifted upwardly in proper timed relation to actuation of the valve 45 and rotation of the drum to move a leaf carrier from an uppermost position to a lowered position where a stripped leaf will be released and deposited upon the tray or upon a stack of stripped leaves resting upon the tray.

In order to actuate the clutch 24 and effect shifting thereof into and out of clutching engagement with the facing 22 of the worm gear 21, there has been provided a rocker arm or lever 115 which is pivotally mounted at the outer side of the transmission housing 17 as shown in Figures 2, 12, 17 and 18 by a pivot bar or rod 116 carried by bracket 117 and passing through ears 118 carried by the cross-head 119 of this lever. An arm 120 extends rearwardly from the cross-head 119 and terminates in a cup 121 shown in Figure 16 and in which is mounted a spring 122, the tension of which is regulated by a plug 123 screwed into the cup. The spring serves to rock the lever 115 about the rod 116 and urge the lever toward the transmission housing so that a stem or pin 124 which is threaded through an opening in the lever as shown in Figures 12, 17 and 18 will be forced inwardly with the lever and apply pressure to the cap 125 at the outer end of the hub or sleeve 26 and hold the clutch disc 24 in frictional gripping engagement with the clutch surface of the gear 21. A handle 126 for turning the stem 124 and adjusting the stem through the lever is carried by the outer end portion of the stem and in order that the stem may be secured in an adjusted position, there has been provided a lock nut 127 threaded upon the stem and provided with an actuating handle 128. It will thus be seen that wear upon the facings 22 and 25 can be compensated for. The forward portion of lever 115 extends downwardly to provide a depending arm 129 shown in Figures 12, 14 and 15. This arm terminates in a yoke 130 having upper and lower arms 131 and 132 carrying a pin 133 which passes through the forks 134 of a stop member 135. This stop member projects forwardly from the yoke 130 and at its front end is formed with an inwardly extending lug or finger 136 constituting an abutment for engagement by the stops or fingers 58 carried by the drum. A roller 137 is rotatably mounted horizontally over the stop member 135 for engagement by the fingers 58 and under the stop member is disposed a roller 138 rotatably mounted by a pin 139 carried by the depending ears 140. A keeper 141 having a side arm or finger 141' for engaging the stop member 135 as shown in Figure 13 extends longitudinally of the stop member at one side thereof and at its inner end is formed with forks 142 pivotally mounted by a pin 143 extending through the yoke and carrying faces 144. The outer fork 142 is extended to form a weight 145 by means of which the keeper is yieldably held in its normal position with the finger 141' engaging between the stop member 135 and the roller 138 to prevent outward swinging move-

ment of the stop member relative to the side arm of the lever 115 beyond the position shown in Figure 13. An abutment 146 carried by the upper arm 131 of the yoke limits inward swinging movement of the stop member and an abutment arm 147 which extends upwardly from the inner end of the keeper limits upward movement thereof under influence of the weight 145. At its outer end the keeper is formed with an arm or finger 148 which projects outwardly therefrom as shown in Figures 12 and 13 for engagement by the bill 149 of a hook 150 shown in Figure 2, the hook being pivoted in a vertical position to a bracket 151 extending outwardly from one side of the pan 107. This hook is yieldably held in the normal position shown in Figure 2 by a weight 152 and swinging movement of the hook under influence of the weight 152 is limited by the abutment 153.

During use of this machine to remove stems from tobacco leaves, the leaves to be stripped are placed in a pile in the trough or basket 95. At this time no suction is taking place through the upper leaf-holder and when a leaf is removed from the pile of leaves in the trough or basket and placed upon the upper leaf-holder, it may be freely shifted about and centered upon the leaf-holder as shown at 154 in Figure 8, with the tip of the leaf extending rearwardly and the stem thereof extending along the groove or track 12 and fitting within this track. Since the leaf has its tip presented rearwardly, cutting will take place in a direction towards the butt end of the leaf when the drum is rotated. After the leaf has been applied to the upper leaf-holder, the operator of the machine places his foot upon the treadle and applies pressure thereto to shift the bar 68 upwardly and actuate the latch-releasing lever 59 to move the upper latch or dog to a releasing position and allow the valve to swing downwardly by gravity into closing relation to the opening 9' of the lower leaf-holder. Suction will then take place through the upper leaf-holder to firmly hold the leaf in engagement therewith and if a leaf has been adhering to the lower leaf-holder, cutting off of such through this lower leaf-holder will release the leaf and allow it to drop down upon the pan or tray 107, or onto a stack of prepared leaves resting upon this tray which has been moved to its raised position by lever 78 when the operator steps upon the treadle. The operator then removes his foot from the treadle and as the arm 68 and the tray 107 move downwardly the hook 150 carried by the tray will engage the finger 148 of the keeper 141 and tilt this keeper downwardly to move its arm 141' out of its normal position over the roller 138 in which it has latching engagement with the stop member 135 and prevents the stop member 135 from moving outwardly independent of lever 115. The stop member 135 will then be free to swing outwardly over the arm 141' relative to the arm 131 of lever 115 and the lever 115 may be urged inwardly about its pivot 116 by the spring 122. During inward movement of the lever 115 the stem 124 will force the clutch member 28 toward the gear 21 for frictional binding engagement therewith and the clutch member will be turned with the gear and rotary motion transmitted to the shaft 9 of the drum by the sprocket chain 29. It will thus be seen that the drum will be rotated to move the leaf-carrier holding a leaf rearwardly and downwardly and during this rotary movement of the drum the circular knives 102 will cut through the leaf longitudinally there-

of at opposite sides of the stem, the stem being dislodged from the track or groove 12 by the stem or finger 105. The fact that the keeper 141 is pivotally mounted allows it to slip out of engagement with the hook 150 after the stop member 135 has been released. The weight 145 then returns the keeper to its operative position. The fact that the arm of finger 141' is tilted and released from the hook 150 after the keeper has moved to a releasing position and the drum started rotation allows the keeper to be returned to its normal position by the weight 145 and again engage the stop member to hold the stop member in its set position. As the leaf-holder carrying a leaf approaches a position at the bottom of the drum, the finger 58 projecting from a side of this holder will first engage the roller 137 and apply outward force to swing the stop member 135 and the lever 115 outwardly as a unit to open the clutch, the finger 58 then engaging the abutment finger 136 to stop rotation of the drum. It will thus be seen that the drum may not continue rotation for more than a half turn. Another leaf will now be removed from the pile of leaves and placed upon the upper leaf holder and the treadle depressed to raise the bar and adjust the valve to cause suction to take place through the upper leaf-holder to hold the newly applied leaf thereon while cutting off suction through the lower leaf-holder to release the prepared leaf and allows it to drop down upon a stack prepared of prepared leaves resting upon the tray 107. Pressure upon the treadle is then removed in order to shift the tray 107 and the bar 68 downwardly and allow the hook 150 to move the keeper 141 out of binding engagement with the stop member 135 so that the spring 122 may move the lever 115 independently of the stop member and engage the clutch to cause the drum to be turned by rotary motion transmitted to it from the clutch which at this time is moved into gripping engagement with the worm gear.

In addition to stripping the entire stem from a leaf and dividing the leaf into side sections or halves 155 for use as wrappers, it is also desired to permit leaves to have the stem 156 partially removed as shown in Figure 28 for use as a filler 157 or merely plane off the protruding portion of the stem as shown in Figures 31 and 32 so that the leaf may be formed into a binder 158 as shown in Figure 30. In order that the leaves may be prepared as shown in Figures 28 and 30, the attachment shown in Figures 35 through 38 is applied to the machine. This attachment has sleeves 159 and 160 between which extends a web 161. The sleeve 160 fits about a rod or shaft 162 carried by bearing brackets 163 extending upwardly from the sleeve 159 and the sleeve 159 constitutes an elongated bearing for a shaft 164 which has one end portion equipped with a pulley 165 so that rotary motion may be transmitted to this shaft by a belt 166 trained about the pulley 42 carried by the motor shaft 37. At its other end the shaft 164 carries a circular cutting blade 168 which has been shown with a smooth edge. A guard 169 is provided for the blade 168 in order to eliminate danger of the operator being accidentally cut by the blade, the guard being mounted in shielding relation to the blade by an arm 170 which is bolted to the web 161. The blade 168 extends across the periphery of the drum and the web carries a set screw 171 which is threaded through a bore 172 with its lower end resting upon a side arm 173 carried by the sleeve 159. By adjusting the set screw the web and the

sleeve 159 may be swung vertically to adjust the blades across the horizontal diameter of the drum. It will thus be seen that the blades may be disposed very close to the periphery of the drum or shifted away from the same. When this attachment is in use, the yoke 96 carrying the cutting blades 102 is removed as it is not desired to have the leaf cut through at opposite sides of the stem for the full length of the leaf. The leaves are applied in the same manner previously described and as the drum is turned the stem will move into engagement with the sharp edge of the blade 68. Engagement of the blade with the stem causes the rotating blade to have a planing action and shave off the stem to such an extent that it will be flush with the portions of the leaf at opposite sides of the stem. If it is found that the blade is cutting too deep or not deep enough, it is merely necessary to adjust the set screw 171 and the blade will be moved into position to plane off the stem to the proper depth. A leaf so prepared may be used as a binder and it will thus be seen that a small leaf having its stem planed off may be used as a binder instead of it being necessary to use half of a large leaf in order to obtain the proper width. When the leaves are to be used for forming fillers backing strips which are somewhat thicker will be substituted in place of the backing strips previously used. The thicker backing strips are somewhat shorter and will only extend from the butt end of a leaf to a point in spaced relation to the tip thereof. Therefore, when the leaves are applied on the blade properly set, the thick portion of a stem may be removed from a leaf as shown in Figure 28 and the finer portion of the stem left in the tip portion of the leaf. It has previously been customary to use large leaves for forming fillers, these leaves having the entire stem removed therefrom, as shown in Figure 33, and then cutting the two halves or sections 174 of a leaf along the lines 175 to form fillers 176 of the intermediate portions of the two half leaves, the end portions 177 and 178 being waste as these portions of the half leaves are not large enough for use as fillers. When a leaf is prepared as shown in Figures 28 and 34, only a very small portion of the leaf is wasted, as this leaf may be cut along the lines 179 to form fillers 180 and a forward filler 181, the filler 181 being formed of the forward or tip portion of the leaf from which the fine portion of the stem has not been removed. Only the small pieces 182 and 183 at the butt and tip ends of this leaf will be waste. Therefore, the leaf may be divided to form three fillers and only a very small amount of waste instead of being divided to form two fillers and a great deal of waste.

I claim:

1. In a tobacco stemming machine, a loading station, a discharge station, leaf carriers movable between said stations, a cutter between said stations for operating upon a leaf carried by a carrier moving from the loading station toward the discharge station, means for driving said carriers including clutch means for intermittently effecting movement of the carriers between the stations, means for creating suction through said carriers to hold leaves in place thereon, valve means for controlling suction through said carriers, means for actuating the valve and the clutch to obtain suction through a carrier at the loading station and shut off suction through a carrier at the discharge station and thereafter cause closing of the clutch to impart movement

to the carriers, and means for halting movement of the carriers at the said stations constructed and arranged to move the clutch means to an open position as the carriers approach the said stations.

2. In a tobacco stemming machine, a loading station, a discharge station, leaf carriers movable between said stations, a cutter for operating upon a leaf carried by a carrier moving toward the discharge station, means for driving said carriers including clutch means for intermittently effecting movement of the carriers, means for creating suction through said carriers to hold leaves thereon, valve means for controlling suction through said carriers, and actuating mechanism including means for adjusting said valve means to cut off suction through a carrier at the discharge station and allow suction through a carrier at the loading station, means to thereafter effect closing of the clutch and cause movement to be imparted to the carriers, and means associated with the last mentioned means to effect opening of the clutch and halt motion of the carriers as a carrier reaches the discharge station.

3. In a tobacco stemming machine, a loading station, a discharge station, leaf carriers movable between said stations, means for removing a stem from a leaf during movement of a carrier toward the discharge station, driving means for said carriers including a clutch normally in a closed position, a stop engageable by a carrier approaching the discharge station, a support for said stop constituting means for effecting opening of the clutch when engaged by the carrier, a keeper carried by said support and movable into and out of position for releasably holding said stop in an operative position, and means for moving said keeper to a releasing position.

4. In a tobacco stemming machine, a loading station, a discharge station, leaf carriers movable between said stations, a cutter for operating upon a leaf carried by a carrier moving toward the discharge station, driving means for said carriers including a clutch urged toward a closed position, a stop for halting movement of said carriers engageable by a portion of a carrier approaching the discharge station and constituting means for effecting opening of the clutch when engaged by the carrier, a keeper for releasably holding said stop in an operative position, a tray movable into and out of position to receive a leaf from a carrier at the discharge station, and means for moving said keeper to a releasing position as the tray moves away from the carrier at the discharge station.

5. In a tobacco stemming machine, a loading station, a discharge station, leaf carriers movable between said stations, a cutter for operating upon a leaf carried by a carrier moving toward the discharge station, driving means for said carriers including a clutch urged toward a closed position, a stop for halting movement of said carriers engageable by a portion of a carrier approaching the discharge station and constituting means for effecting opening of the clutch when engaged by the carrier, a keeper for releasably holding said stop in an operative position, a tray movable into and out of position to receive a leaf from a carrier at the discharge station, means for creating suction through said carriers, valve means for controlling suction through the carriers including a latch for holding the valve in an adjusted position, means for adjusting said valve as said tray moves toward a carrier at the

discharge station, and means for moving said keeper to a releasing position as the tray moves away from the carrier at the discharge station.

6. In a tobacco stemming machine, a rotatable leaf holder having leaf carriers movable therewith between a loading station and a discharge station, means for removing stems from leaves as the carriers move toward the discharge station, means for creating suction through the holder, a valve for controlling suction through said carriers, means for rotating the leaf holder including a clutch, a tray movable from a lowered position to a raised position for receiving a leaf at the discharge station, means actuated during upward movement of said tray to adjust said valve and cause suction through a carrier at the loading station while cutting off suction through a carrier at the discharge station, and means actuated during downward movement of said tray to close the clutch and impart movement to the leaf holder subsequent to adjustment of the valve.

7. In a tobacco stemming machine, a rotatable leaf holder having leaf carriers movable therewith between a loading station and a discharge station, a cutter for operating upon leaves as the carriers move toward the discharge station, means for rotating said leaf holder including a clutch, means for creating suction through the leaf holder and its carriers, a valve for controlling suction through the leaf carriers, a clutch actuating lever yieldably held in position to close the clutch, a stop carried by said lever and movable into and out of position to halt turning of the leaf holder with a leaf carrier at the discharge station and another at the loading station, a keeper carried by said lever for holding said stop in position for engagement by the leaf holder to effect movement of the lever for opening the clutch as a carrier approaches the discharge station, and means movable in one direction to adjust said valve having mechanism associated with it to move said keeper to a releasing position and effect closing of the clutch and movement of the stop out of an operative position as the said means returns to its normal position.

8. In a tobacco stemming machine, a loading station, a discharge station, a rotatable leaf holder having leaf carriers spaced from each other circumferentially thereof and moving between the stations during rotation of the leaf holder, a cutter between said stations for operating upon leaves as the carriers move from the loading station toward the discharge station, means for rotating said leaf holder including a clutch, means for creating suction through the leaf holder and its carriers, a valve for controlling suction through the leaf carriers, means for adjusting the valve to establish suction through a carrier at the loading station and shut off suction through a carrier at the discharge station, and means for effecting opening and closing of said clutch having means associated therewith for engagement by a portion of the leaf holder to open the clutch as the carriers approach said stations and halt movement of the leaf holder with the carriers located at the stations.

9. In a tobacco stemming machine, a rotatable leaf holder having leaf carriers movable therewith between a loading station and a discharge station, a cutter for operating upon leaves as the carriers move toward the discharge station, means for creating suction through the holder and the carriers, a valve for controlling

suction through said carriers, means for rotating said holder including a clutch, a treadle, means actuated during movement of said treadle in one direction to adjust said valve and cause suction through a carrier at the loading station while cutting off suction through a carrier at the discharge station, means actuated during movement of the treadle in an opposite direction to effect closing of the clutch and rotation of the leaf holder, and means for halting rotation of said leaf holder adapted to effect opening of the clutch when engaged by a leaf carrier approaching the discharge station.

10. In a tobacco stemming machine, a movable leaf holder, a cutter for operating upon a leaf during movement of the leaf holder, driving means for said leaf holder including a clutch movable into and out of an operative position, an actuating member for said clutch, a stop carried by said actuating member and movable relative thereto into and out of position for engagement by said leaf holder to halt movement of the leaf holder in a predetermined position and effect movement of the clutch to an inoperative position, a keeper carried by the actuating member for releasably holding said stop in an operative position, and means for moving said keeper to a releasing position.

11. In a tobacco stemming machine, a movable leaf holder, a cutter for operating upon a leaf during movement of the leaf holder, driving means for said leaf holder including a clutch movable into and out of an operative position, pivotally mounted means for actuating said clutch having a stop pivotally carried thereby for movement into and out of position for halting movement of said leaf holder and imparting movement to the actuating means for effecting opening of the clutch when the stop is engaged by the leaf holder, a keeper for releasably holding said stop in an operative position, and means movable into and out of position for engagement with the keeper to move said keeper to a releasing position.

12. In a tobacco stemming machine, a movable leaf holder, a cutter for operating upon a leaf during movement of the leaf holder, driving means for said leaf holder including a clutch movable into and out of an operative position, means for actuating said clutch pivotally mounted and including a pivoted stop movable into and out of position for engagement by said leaf holder to halt movement of the leaf holder in a predetermined position and simultaneously tilt the actuating means to move the clutch to an inoperative position, a keeper carried by the actuating means and yieldably held in position to engage said stop and hold the stop in an operative position, and means for moving said keeper to a releasing position.

13. In a tobacco stemming machine, a movable leaf holder, a cutter, means for creating suction through the leaf holder to retain a leaf in engagement therewith, a valve for controlling suction through the leaf holder movable by gravity to adjusted positions, a latch for releasably holding the valve in an adjusted position, driving means for the leaf holder including a clutch normally closed, actuating means for said clutch including a stop for halting movement of the leaf holder and holding the clutch open, a keeper for releasably holding said stop in an operative position, means for moving said keeper to a releasing position having an operating member, and means associated with the operating

member for actuating the latch and permitting movement of the valve to a position to cut off suction through the leaf holder and thereby release a leaf carried by the leaf holder when the last mentioned means is operated to move said keeper to a releasing position.

14. In a tobacco stemming machine, a cutter, a hollow movable leaf holder having a chamber and a plurality of leaf carriers communicating therewith, means for creating suction through the chamber of the leaf holder and the carriers, a single valve for controlling connection between the chamber and the leaf carriers, a latch for releasably securing said valve in position to cut off suction through one leaf carrier and permit suction through the other leaf carrier, driving means for said leaf holder including a clutch normally closed, means for halting movement of said leaf holder with a carrier in a predetermined position and simultaneously moving the clutch to an opened position, and means for actuating the last mentioned means to release the leaf holder and close the clutch, and means associated with the last mentioned means for releasing the latch and permitting movement of the valve to a reversed position.

15. In a tobacco stemming machine, a movable leaf holder having leaf carriers movable therewith from a leaf receiving station to a leaf discharging station, means for creating suction through said carriers to hold leaves in engagement therewith, a valve for controlling suction through said carriers, a latch for releasably securing the valve out of blocking relation to a carrier while the carrier is moving from the receiving station to the discharging station, driving means for said leaf holder including a clutch normally closed, means actuated by said leaf holder for opening said clutch constituting means for halting movement of the leaf holder with one leaf carrier at the receiving station and another at the discharge station, means for actuating the last mentioned means to release the leaf holder and effect closing of the clutch to impart movement to the leaf holder, means actuated from the last mentioned means for effecting adjustment of the valve to shut off suction through a carrier at the discharge station and creating suction through the carrier moving toward the discharge station, and a cutter for operating upon a leaf during travel thereof toward the discharge station.

16. In a tobacco stemming machine, a rotatable leaf holder having leaf carriers spaced from each other circumferentially thereof and movable with the holder from an upper loading station to a lower discharge station, a cutter for operating upon leaves traveling toward the discharge station, a tray at the discharge station shiftable vertically from a lowered position to a raised position adjacent the leaf holder, means for creating suction through the leaf holder and its leaf carriers, a valve for controlling suction through the leaf carriers, means for rotating said leaf holder including a clutch normally closed, a stop for interrupting rotation of the leaf holder constituting means for effecting opening of said clutch as a leaf carrier moves into position over said tray at the discharge station and another leaf carrier moves into place at the loading station, a keeper for releasably holding said stop in position for engagement by a portion of the leaf holder, means for shifting said tray upwardly including an operating treadle, means actuated from said treadle during upward

movement of said tray for adjusting said valve to cut off suction through a leaf carrier at the discharge station and cause suction through the leaf carrier at the loading station, and means operating during downward movement of the tray to move said keeper to a releasing position allowing closing of the clutch and movement of the tray to a position temporarily allowing turning of the leaf holder.

17. In a tobacco stemming machine, a rotatable drum having leaf carriers spaced from each other circumferentially thereof and moving with the drum from an upper loading station to a lower discharge station, a cutter for operating upon leaves carried by carriers traveling toward the discharge station, a tray movable toward and away from a leaf receiving position under a carrier at the discharge station, means for creating suction through said carriers, a valve for controlling suction through the carriers, driving means for said drum including a clutch yieldably held closed, means for shifting said tray toward its leaf receiving position, means actuated during such movement of the tray for adjusting said valve to shut off suction through a carrier at the discharge station and establish suction through a carrier at the loading station, means for effecting opening of said clutch having a stop associated therewith for halting rotation of the drum with a leaf carrier at the discharge station, the drum when engaging the stop imparting unitary movement thereto to effect opening of the clutch, and means for releasably holding said stop in an operative position adapted to be moved to a releasing position as said tray returns to its normal position and allow closing of the clutch to cause rotation of the drum.

18. In a tobacco stemming machine, a rotatable drum having leaf carriers about its periphery moving therewith from a loading station to a discharge station and back to the loading station during rotation of the drum, a cutter for operating upon leaves traveling toward the discharge station during rotation of the drum, means for intermittently rotating said drum including a clutch movable into and out of an operative position and an actuating lever therefore, a stop for halting movement of said drum pivotally carried by said lever and constituting means movable transversely of the lever into and out of position for moving the lever in a direction to effect opening of the clutch when the stop is engaged by the drum to halt rotation of the drum with a leaf carrier at the discharge station and another at the loading station, a keeper pivotally carried by said lever and movable into and out of position for engaging the outer side face of the stop and releasably holding said stop in an operative position, and manually actuated means for moving said keeper to a releasing position and permitting closing of the clutch and turning of the drum.

19. In a tobacco stemming machine, a movable leaf holder having leaf carriers moving therewith from an upper loading station to a lower discharge station, a cutter for operating upon leaves carried by carriers traveling toward the discharge station, a tray shiftable vertically from a lowered position to a raised position under a leaf carrier at the discharge station, means for creating suction through the leaf carriers, valve means for controlling suction through said leaf carriers, a latch for holding said valve means in an adjusted position, means for driving said leaf holder including a clutch yieldably held closed,

abutments carried by said leaf holder, a stop for engaging said abutments and interrupting movement of said leaf holder constituting means for effecting opening of the clutch when engaged by one of the abutments to hold movement of the leaf holder with a leaf carrier at the discharge station and another leaf carrier at the loading station, a keeper for releasably holding said stop in position for engagement by said abutments, a lever mounted for moving vertically and engaging the tray, a treadle for swinging said lever upwardly to raise the tray, means actuated during upward movement of said lever to release said latch and permit movement of the valve to a position shutting off suction through the leaf carrier at the discharge station and establishing suction through a leaf carrier at the loading station, and means carried by said tray for moving said keeper to a releasing position as the tray moves downwardly from a leaf carrier at the discharge station.

20. In a tobacco stemming machine, a frame, a drum rotatably carried by said frame and having hollow leaf carriers about its periphery moving with the drum from a loading station to a discharge station, means for creating suction through said leaf carriers, valve means carried by said drum for controlling suction through said leaf carriers, driving means for rotating said drum and moving the leaf carriers in a circular path from the loading station to the discharge station and back to the loading station, a cutter carried by said frame for operating upon a leaf carried by a carrier traveling toward the discharge station, a clutch for the driving means, an actuating lever for said clutch yieldably holding the clutch closed, a stop movably carried by said lever, a keeper carried by said lever for releasably holding said stop in an operative position, abutments carried by said leaf carriers for engaging said stop to move the lever to a position for opening the clutch and halting rotation of the drum with a leaf carrier at the discharge station and another leaf carrier at the loading station, and manually operated actuating means having means associated therewith for adjusting said valve to cut off suction through a leaf carrier at the discharge station and establish suction through a leaf carrier at the loading station and thereafter move said keeper to a position for releasing said stop and permitting closing of the clutch and turning of the drum.

21. In a tobacco stemming machine, a frame having a base and side walls rising therefrom, arms carried by said side walls and having bearings at their ends, one arm being hollow and together with its bearing constituting a transmission casing, a drum between said arms having a hollow shaft rotatably mounted through said bearings, said drum being formed with hollow leaf carriers having shanks communicating with said shaft, outer walls of the leaf carriers being perforated, bars extending circumferentially of the drum between ends of the leaf carriers, a valve in said shaft movable from a position closing the shank of one leaf carrier to a position closing the shank of the other leaf carrier, latch means for holding said valve in an adjusted position, driving means for said drum including transmission means in the transmission housing having a clutch incorporated therein, a lever for said clutch yieldably holding the clutch closed, a stop pivoted to said lever, a keeper pivoted to said lever for releasably holding the stop in an operative position, abutments carried by said leaf

carriers for engaging said stop to move the stop into position to halt rotation of the drums and move the lever to a position for opening the clutch, a treadle, means actuated during movement of the treadle in one direction to actuate the latch and effect adjustment of said valve, and means operating during movement of the treadle in an opposite direction to move said keeper to a position releasing the stop and permitting closing of the clutch and rotation of the drum until another abutment engages the stop to open the clutch and halt rotation of the drum.

22. In a tobacco stemming machine, a frame having a base and side walls rising therefrom, arms carried by said walls, bearings carried by said arms, a drum between said arms having a hollow shaft and hollow leaf carriers having perforated outer walls extending circumferentially of the drum and hollow shanks carried by the shaft and communicating with the shaft through openings spaced from each other circumferentially of the shaft, means for creating suction through the drum, a valve in said shaft having a head and a stem extending longitudinally in the shaft and pivotally mounted for movement transversely of the shaft to move the valve head from blocking relation to the shaft of a leaf carrier at an upper loading position into blocking relation to the shank of a leaf carrier at a lower discharge position, latches pivotally carried by the outer end of said stem and yieldably urged toward a position for engaging the adjacent end of the shaft and holding the valve in an adjusted position, a lever pivoted to the arm carrying the bearing through which the last mentioned end of said shaft extends, means for actuating said lever to move a latch to a releasing position and allow movement of the valve out of blocking relation to the upper leaf carrier to a position blocking the lower leaf carrier, and means for thereafter effecting rotation of the drum and halting rotation of the drum as a leaf carrier reaches the discharge station.

23. In a tobacco stemming machine, a frame having a base and side walls rising therefrom, arms carried by said walls, bearings carried by said arms, a drum between said arms having a hollow shaft and hollow leaf carriers having perforated outer walls extending circumferentially of the drum and hollow shanks carried by the shaft and communicating with the shaft through openings spaced from each other circumferentially of the shaft, means for creating suction through the drum, a valve in said shaft having a head and a stem extending longitudinally in the shaft and pivotally mounted for movement transversely of the shaft to move the valve head from blocking relation to the shaft of a leaf carrier at an upper loading position into blocking relation to the shank of a leaf carrier at a lower discharge position, latches pivotally carried by the outer end of said stem and yieldably urged toward a position for engaging the adjacent end of the shaft and holding the valve in an adjusted position, a lever pivoted to the arm carrying the bearing through which the last mentioned end of said shaft extends, a bar extending vertically and slidably mounted at one side of the last mentioned arm with its upper end disposed in position to engage the lever as the bar is shifted upwardly and moves the lever to move a latch to a releasing position and allow said valve to swing downwardly out of blocking relation to the upper leaf carrier and into blocking relation to a leaf carrier at the lower discharge station, actuating

means including a treadle and means for shifting the bar upwardly when the treadle is moved in one direction, and means for intermittently imparting rotation to said drum including means for setting the drum in motion as the treadle returns to its normal position and halting rotation of the drum as a leaf carrier moving from the upper loading station reaches the lower discharge station.

24. In a tobacco stemming machine, a frame having a base and side walls rising therefrom, arms carried by said walls, bearings carried by said arms, a drum between said arms having a hollow shaft and hollow leaf carriers having perforated outer walls extending circumferentially of the drum and hollow shanks carried by the shaft and communicating with the shaft through openings spaced from each other circumferentially of the shaft, means for creating suction through the drum, a valve in said shaft having a head and a stem extending longitudinally in the shaft and pivotally mounted for movement transversely of the shaft to move the valve head from blocking relation to the shaft of a leaf carrier at an upper loading position into blocking relation to the shank of a leaf carrier at a lower discharge position, latches pivotally carried by the outer end of said stem and yieldably urged toward a position for engaging the adjacent end of the shaft and holding the valve in an adjusted position, a lever pivoted to the arm carrying the bearing through which the last mentioned end of said shaft extends, a bar extending vertically and slidably mounted at one side of the last mentioned arm with its upper end disposed in position to engage the lever as the bar is shifted upwardly and moves the lever to move a latch to a releasing position and allow said valve to swing downwardly out of blocking relation to the upper leaf carrier and into blocking relation to a leaf carrier at the lower discharge station, an arm carried by said frame, guide rollers carried by said arm, a tray under said drum having a depending shank slidable vertically between said rollers, a support for said tray pivotally carried by said frame with its free end engaging under the lower end of the shank of said tray, a treadle pivotally carried by said frame and having an arm engaging under said support to shift the support and the tray upwardly as the treadle is depressed, said bar having its lower end pivoted to said support to cause upward movement of the bar and releasing of a latch as the support is shifted upwardly and the tray is moved to an elevated position to receive a leaf from a leaf carrier at the lower discharge station, and means for intermittently imparting rotation to said drum including means for effecting rotation thereof as the valve is moved to an adjusted position to allow suction through a leaf carrier at the upper loading station and means for halting rotation of the drum as a leaf carrier reaches the lower discharge station.

25. In a tobacco stemming machine, a frame, a drum rotatably carried by said frame and having a hollow shaft and hollow leaf carriers having perforated leaf receiving walls and hollow shanks carried by and communicating with the shaft in spaced relation to each other circumferentially of the shaft, means for creating suction through one end of said shaft, a plug closing the other end of said shaft, means for intermittently imparting rotation to said shaft to successively move the leaf carriers from an upper loading station to a lower discharge station, a

cutter for operating upon a leaf carried by a carrier moving toward the discharge station, a rocker pivotally mounted through said plug, a valve stem carried by said rocker and extending longitudinally in said shaft, a head carried by said stem, latches pivoted to the outer end of said rocker, a spring urging said latches toward an operative position for engaging the adjacent end of the shaft and holding the valve head in closing relation to the inlet of the shank of one leaf carrier, a bell-crank lever having one arm adapted to engage a latch and release the latch to permit rocking of said rocker and movement of the valve head into position to shut off suction through a leaf carrier at the lower discharge station and to permit suction through a leaf carrier at the upper loading station, a bar slidably carried by said frame, and means for shifting said bar upwardly to actuate said bell-crank lever and subsequently cause rotation of said drum and then halt the drum as a leaf carrier reaches the discharge station.

26. In a tobacco stemming machine, a frame, a drum rotatably carried by said frame and having a hollow shaft and hollow leaf carriers having perforated leaf receiving walls and hollow shanks carried by and communicating with the shaft in spaced relation to each other circumferentially of the shaft, means for creating suction through one end of said shaft, a plug closing the other end of said shaft, means for intermittently imparting rotation to said shaft to successively move the leaf carriers from an upper loading station to a lower discharge station, a cutter for operating upon a leaf carried by a carrier moving toward the discharge station, a rocker pivotally mounted through said plug, a valve stem carried by said rocker and extending longitudinally in said shaft, a head carried by said stem, latches pivoted to the outer end of said rocker, a spring urging said latches toward an operative position for engaging the adjacent end of the shaft and holding the valve head in closing relation to the inlet of the shank of one leaf carrier, and means for moving a latch to a releasing position to permit rocking of the rocker and the valve stem and movement of the valve head out of closing relation to a leaf carrier at the loading station, and into closing relation to a leaf carrier at the discharge station while the second latch moves into operative engagement with the shaft.

27. In a tobacco stemming machine, a frame, a drum rotatably carried by said frame and having a hollow shaft and hollow leaf carriers having perforated leaf receiving walls and hollow shanks carried by and communicating with the shaft in spaced relation to each other circumferentially of the shaft, means for creating suction through one end of said shaft, a plug closing the other end of said shaft, means for intermittently imparting rotation to said shaft to successively move the leaf carriers from an upper loading station to a lower discharge station, a cutter for operating upon a leaf carried by a carrier moving toward the discharge station, a rocker pivotally mounted through said plug, a valve stem carried by said rocker and extending longitudinally in said shaft, latches pivoted to the outer end of said rocker and extending in opposite directions therefrom, a spring carried by said latches and urging the latches toward an operative position for latching engagement of one of the latches with the adjacent end of the shaft, a head at the free end of said valve stem movable therewith from a position for shutting off suc-

tion through a leaf carrier at the loading station to a position for shutting off suction through a leaf carrier at the discharge stations, and actuating means for said latches during pauses in rotation of the drum.

28. In a tobacco stemming machine, a frame having side walls and arms extending from the side walls, bearings carried by said arms, one arm and its bearing being hollow and constituting a transmission casing, a drum between said arms having a shaft rotatably mounted in said bearings and leaf carriers carried by the shaft and movable therewith between an upper loading station and a lower discharge station during rotation of the drum, abutments carried by said leaf carriers, means for driving said shaft including a transmission in said casing, a clutch constituting an element of the transmission and including a clutch member shiftable toward and away from operative engagement with a companion clutch member, a lever pivoted to said casing, a stem adjustably carried by said lever and extending laterally therefrom into the casing with its inner end engaging the movable clutch member, a spring yieldably holding said lever in a normal position with the clutch closed, a stop pivoted to said lever and movable into and out of position to engage the abutment of a leaf carrier and halt rotation thereof with the leaf carrier at the discharge station, a keeper pivoted to said lever and yieldably held in position to hold the stop in an operative position for engagement by the stop and cause the lever to be tilted about its pivot and permit the clutch to open, and means for moving said keeper to a releasing position.

29. In a tobacco stemming machine, a frame having side walls and arms extending from the side walls, bearings carried by said arms, one arm and its bearing being hollow and constituting a transmission casing, a drum between said arms having a shaft rotatably mounted in said bearings and leaf carriers carried by the shaft and movable therewith between an upper loading station and a lower discharge station during rotation of the drum, abutments carried by said leaf carriers, means for driving said shaft including a transmission in said casing, a clutch constituting an element of the transmission and including a clutch member shiftable toward and away from operative engagement with a companion clutch member, a lever pivoted to said casing, a stem adjustably carried by said lever and extending laterally therefrom into the casing with its inner end engaging the movable clutch member, said lever extending downwardly below said casing and terminating in a forked arm extending horizontally under the casing, a stop pivoted to the forked arm and extending forwardly from said arm and provided with a side extension for engagement by said abutments to halt rotation of the drum with a leaf carrier at the discharge station, a keeper pivoted to said arm outwardly of said stop and yieldably held in a normal position, said keeper having a side extension for engaging the stop and normally holding the stop in its operative position and cause the lever to be moved about its pivot and allow opening of the clutch, means for moving said keeper to a releasing position and allow closing of the clutch and rotation of the drum, and means for operating upon leaves carried by leaf carriers moving toward the discharge station.

30. In a tobacco stemming machine, a frame having side walls and arms extending from the

side walls, bearings carried by said arms, one arm and its bearing being hollow and constituting a transmission casing, a drum between said arms having a shaft rotatably mounted in said bearings and leaf carriers carried by the shaft and movable therewith between an upper loading station and a lower discharge station during rotation of the drum, abutments carried by said leaf carriers, means for driving said shaft including a transmission in said casing, a clutch constituting an element of the transmission and including a clutch member shiftable toward and away from operative engagement with a companion clutch member, a lever pivoted to said casing, a stem adjustably carried by said lever and extending laterally therefrom into the casing with its inner end engaging the movable clutch member, said lever extending downwardly below said casing and terminating in a forked arm extending horizontally under the casing, a stop pivoted to the forked arm and extending forwardly from said arm and provided with a side extension for engagement by said abutments to halt rotation of the drum with a leaf carrier at the discharge station, a keeper pivoted to said arm outwardly of said stop and yieldably held in a normal position, said keeper having a side extension for engaging the stop and normally holding the stop in its operative position and cause the lever to be moved about its pivot and allow opening of the clutch, a tray under said drum shiftable vertically toward and away from a leaf carrier at the discharge station, means for shifting said tray toward the drum, and a hook carried by said tray and extending upwardly and yieldably held in position for engaging the keeper as the tray moves downwardly and move the keeper to a releasing position allowing closing of the clutch and rotation of the drum, and a cutter for operating upon leaves carried by leaf carriers moving toward the discharge station.

31. In a tobacco stemming machine, a frame having side walls, bearings carried by said side walls, a drum between said side walls having a hollow shaft rotatably mounted in said bearings and hollow leaf carriers communicating with the shaft and having perforated leaf-receiving portions, said leaf carriers having movement with the shaft between a loading station and a discharge station, a cutter for operating upon leaves carried by carriers moving toward the discharge station, a motor at one side of said frame, a fan at one end of said motor, a fan housing having an inlet pipe communicating with one end of the drum shaft whereby suction may be created through the shaft and the leaf carriers, a valve for controlling suction through the leaf carriers, a driven shaft, means at the other end of said motor for transmitting rotary motion to said driven shaft, a transmission between the driven shaft and the drum shaft including a clutch yieldably held closed, means for adjusting said valve to cause suction through a leaf carrier at the loading station and shut off suction through a leaf carrier at the discharge station, means actuated by said drum to open the clutch and halt rotation of the drum as a leaf carrier reaches the discharge station, and means operating subsequent to adjustment of the valve for releasing the drum and effecting closing of the clutch for imparting rotation to the drum.

32. In a tobacco stemming machine, a frame having side walls, bearings carried by said walls, a drum between the walls having a hollow shaft rotatably mounted by said bearings and hollow

leaf carriers spaced from each other circumferentially of the drum and communicating with the hollow shaft, said drum being formed with a depressed track about its periphery, means for creating suction through the shaft and said leaf carriers, a gravity actuated valve in the shaft for controlling suction through the leaf carriers, a latch for holding the valve in an adjuated position, means for intermittently rotating said drum and successively moving the leaf carriers from a loading station to a discharge station and back to the loading station and halting rotation of the drum as a leaf carrier reaches the discharge station, means associated with the last mentioned means for moving the latch to a releasing position, a cutter for operating upon leaves carried by carriers moving from the loading station toward the discharge station with the stems of the leaves extending along said track, and means carried by said frame for engaging in the track and dislodging stems therefrom.

33. In a tobacco stemming machine, a frame having side walls, bearings carried by said walls, a drum between the walls having a shaft rotatably mounted by said bearings and hollow leaf carriers spaced from each other circumferentially of the drum, said drum being formed with a depressed track about its periphery, means for creating

suction through said leaf carriers, valve means for controlling suction through the leaf carriers, means for intermittently rotating said drum and successively move the leaf carriers from a loading station to a discharge station and back to the loading station and halting rotation of the drum as a leaf carrier reaches the discharge station, and cutting means for operating upon leaves carried by carriers moving toward the discharge station comprising a bearing bracket having a mounting sleeve at one side, a pivot shaft extending through said sleeve, a web extending laterally from said sleeve, a bearing sleeve carried by said web, a driven shaft journaled through said bearing sleeve with its ends projecting therefrom, means at one end of the driven shaft for transmission of rotary motion to the shaft, a circular cutting blade at the other end of the driven shaft for extending transversely across the track of said drum, and means for shifting said bracket vertically and supporting the bracket in an adjusted position with the cutting blade spaced from the track a predetermined distance for trimming a predetermined depth of stem from leaves carried by leaf carriers moving toward the discharge station.

JOSE MARIA GONZALEZ.