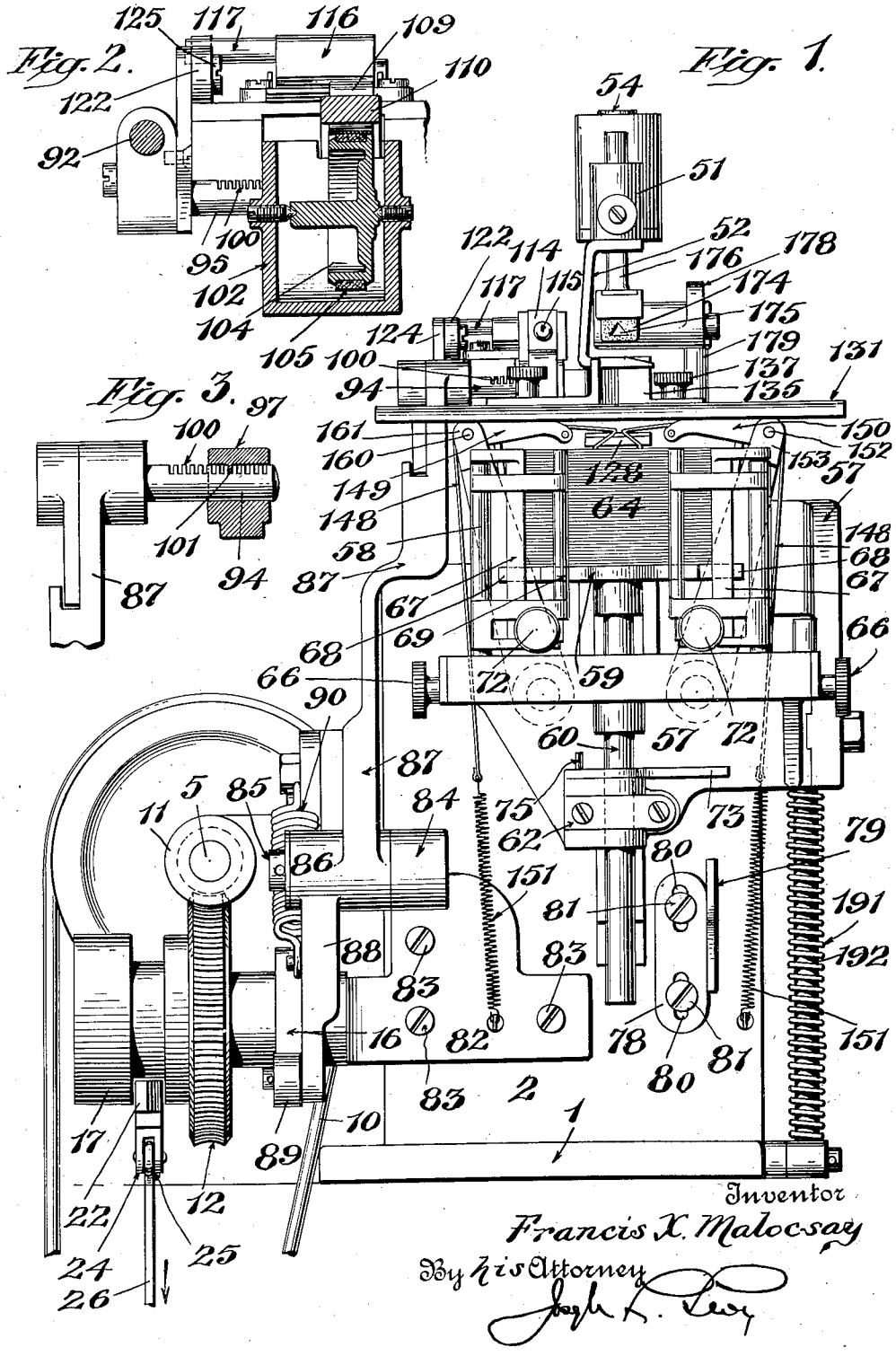
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BANDING MACHINE

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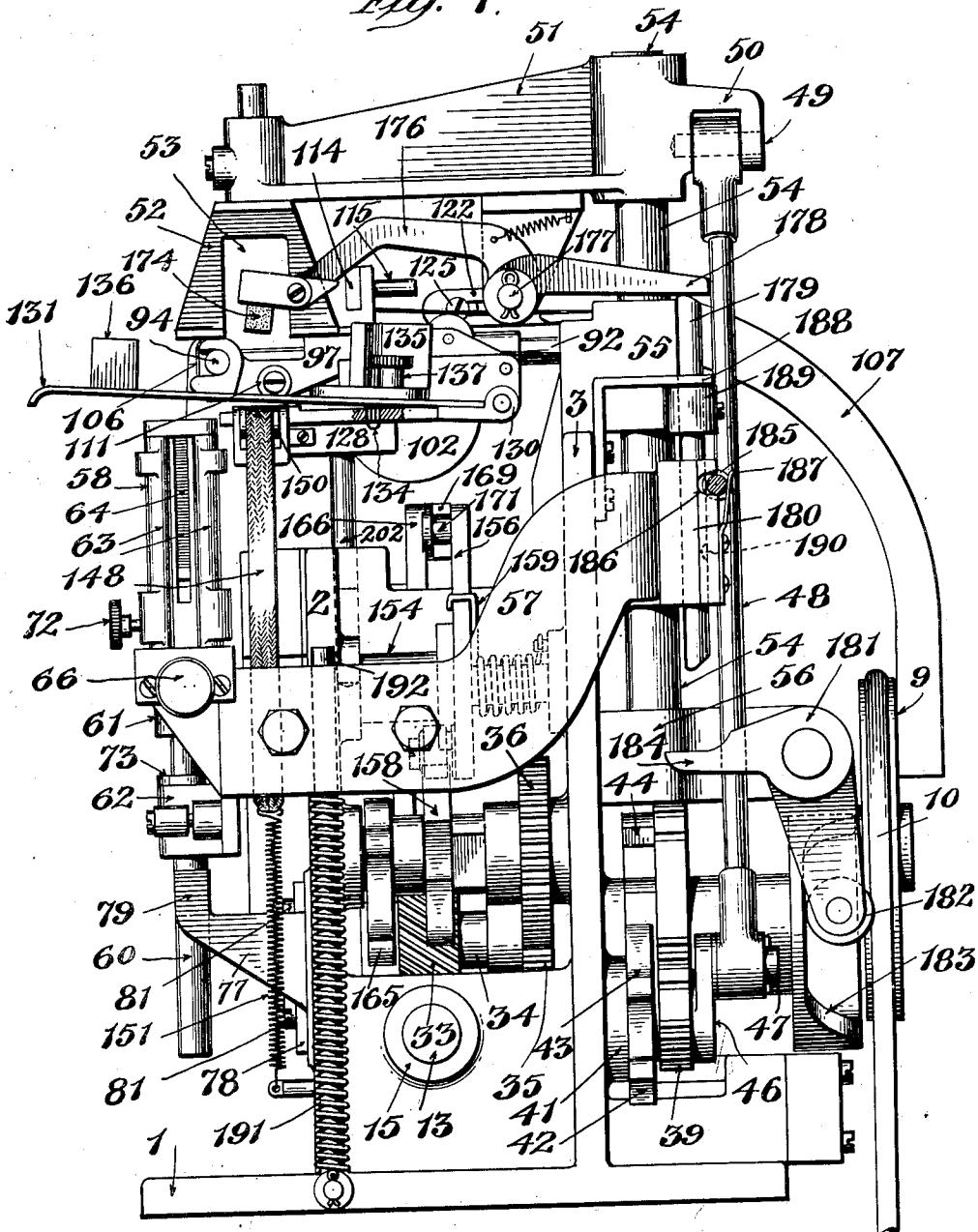
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Fig. 1.



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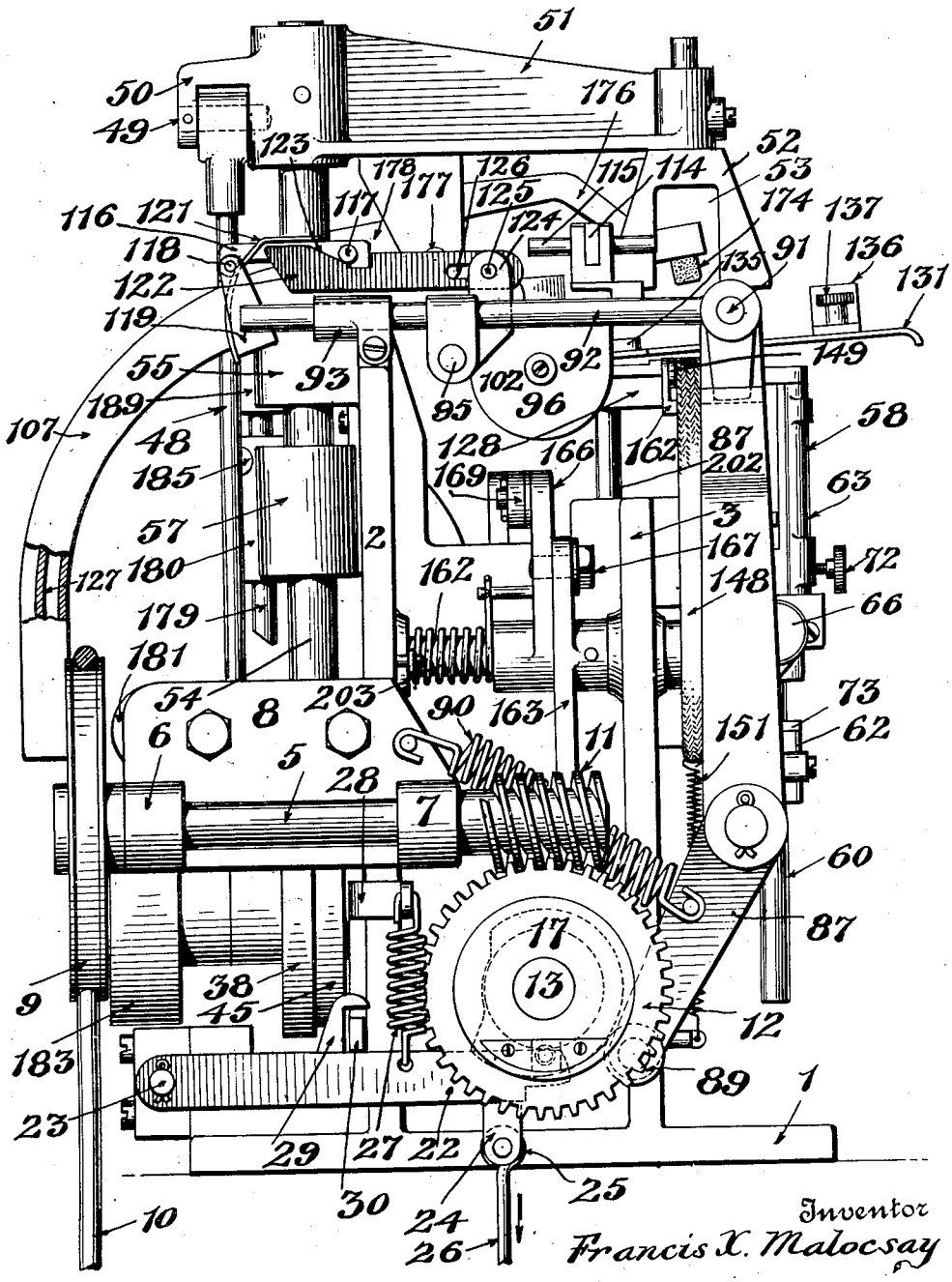
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Fig. 5.



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Fig. 6.

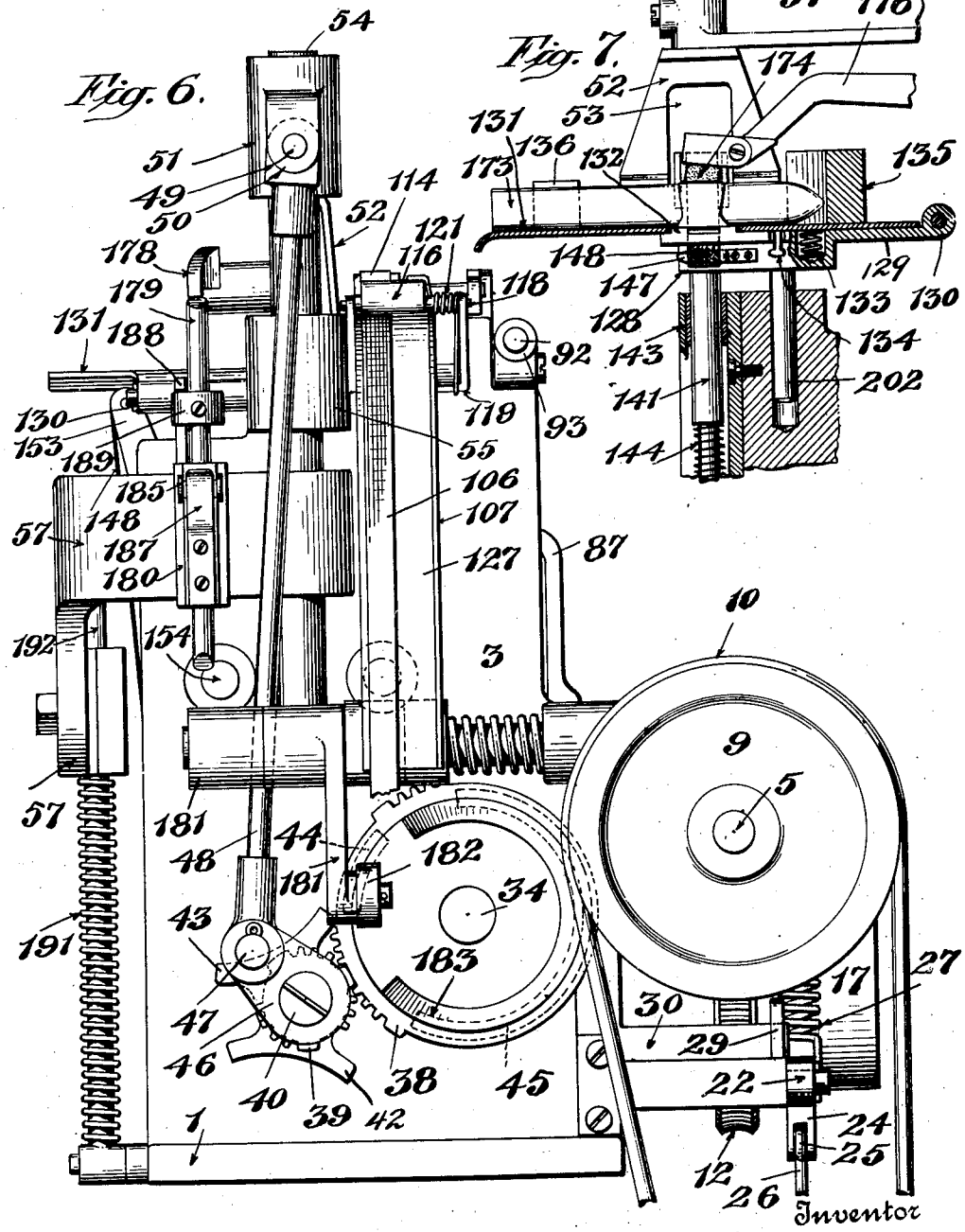


Fig. 7.

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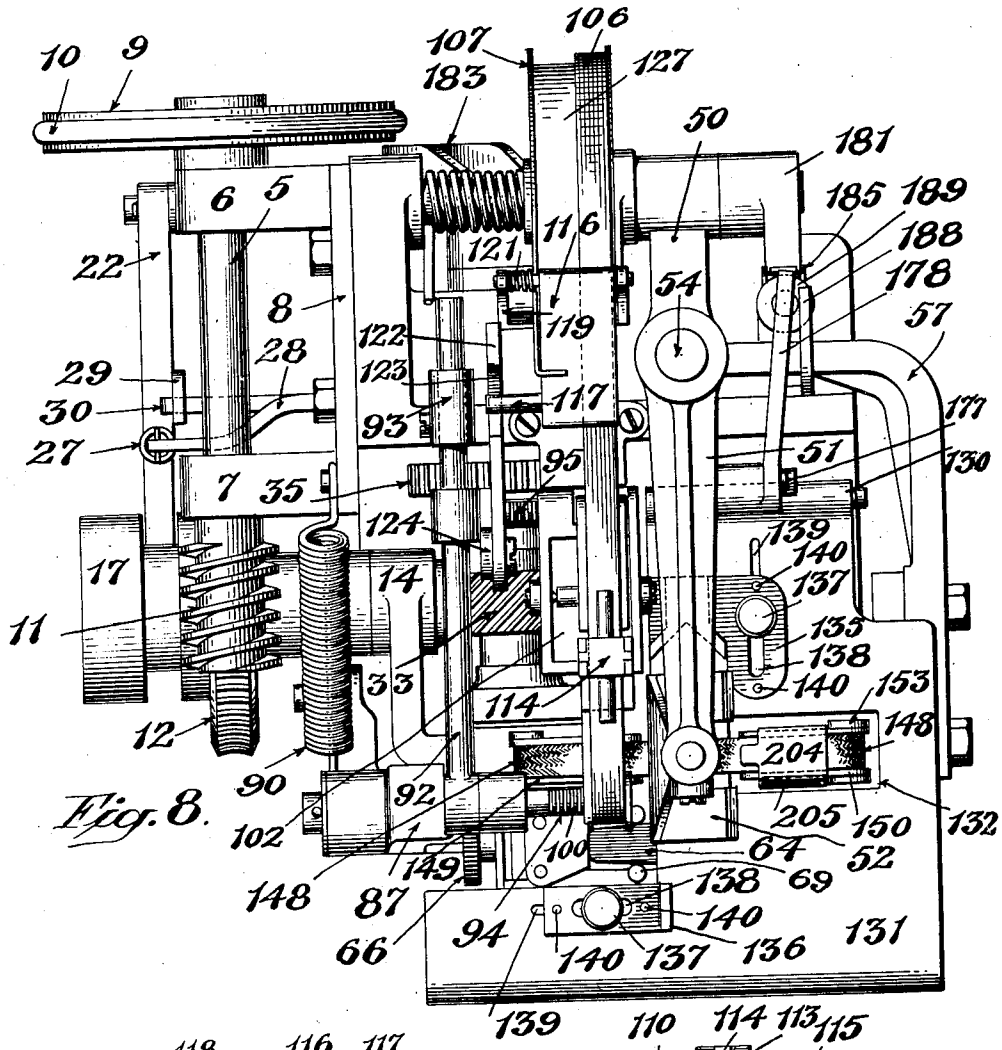


Fig. 8.

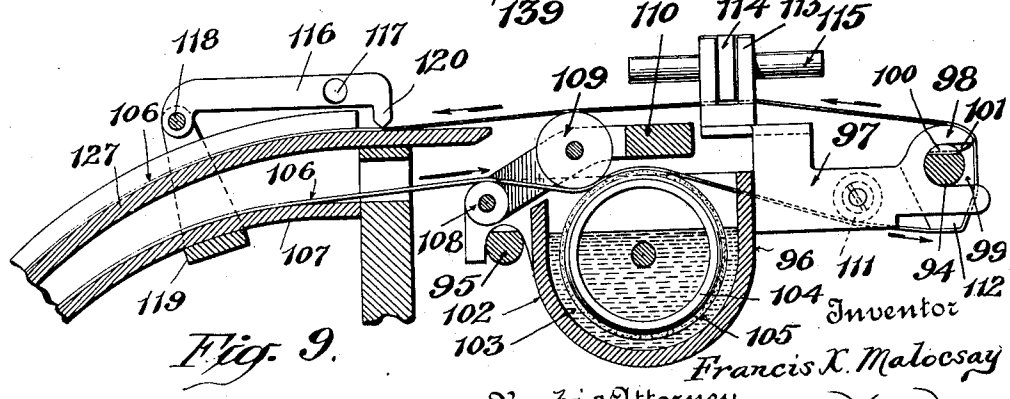


Fig. 9.

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Fig. 10.

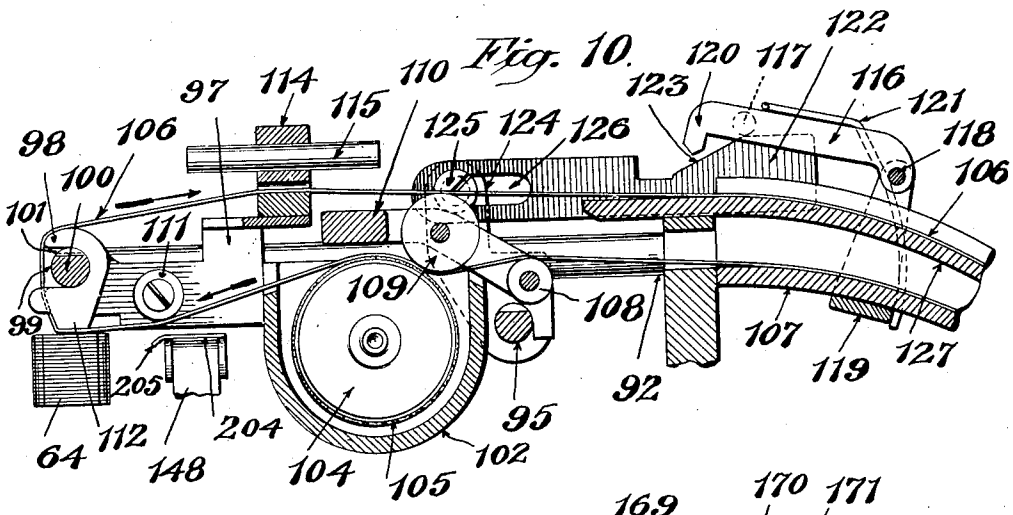
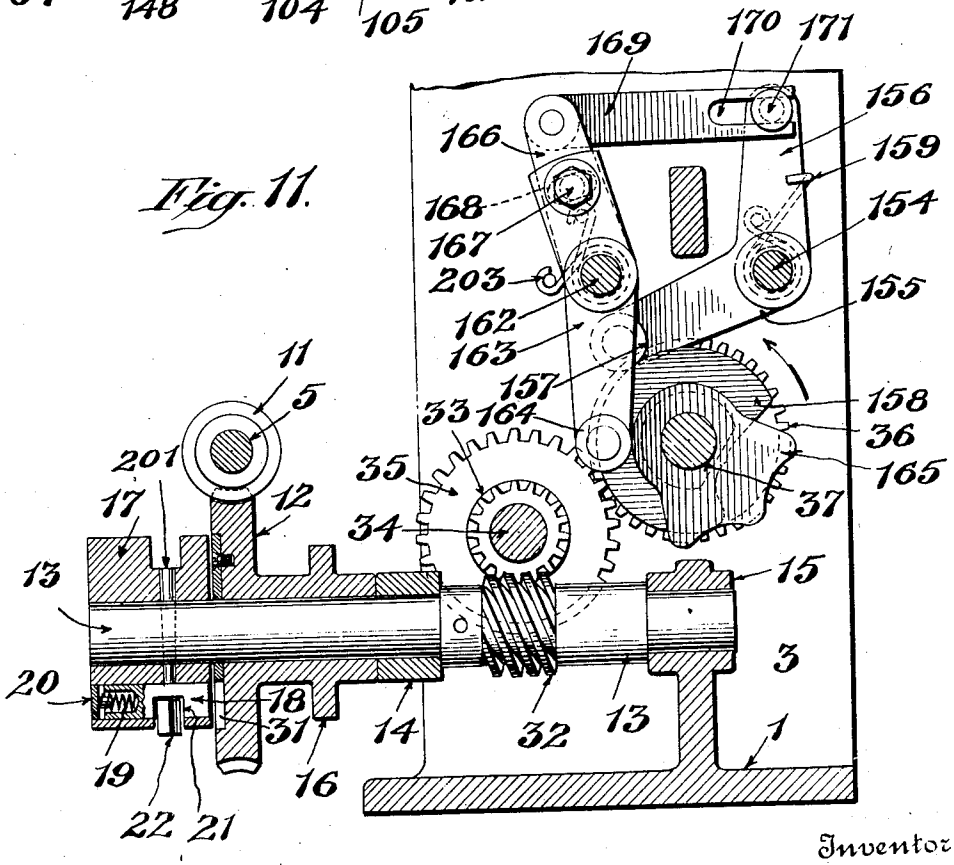


Fig. 11.



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Fig. 12.

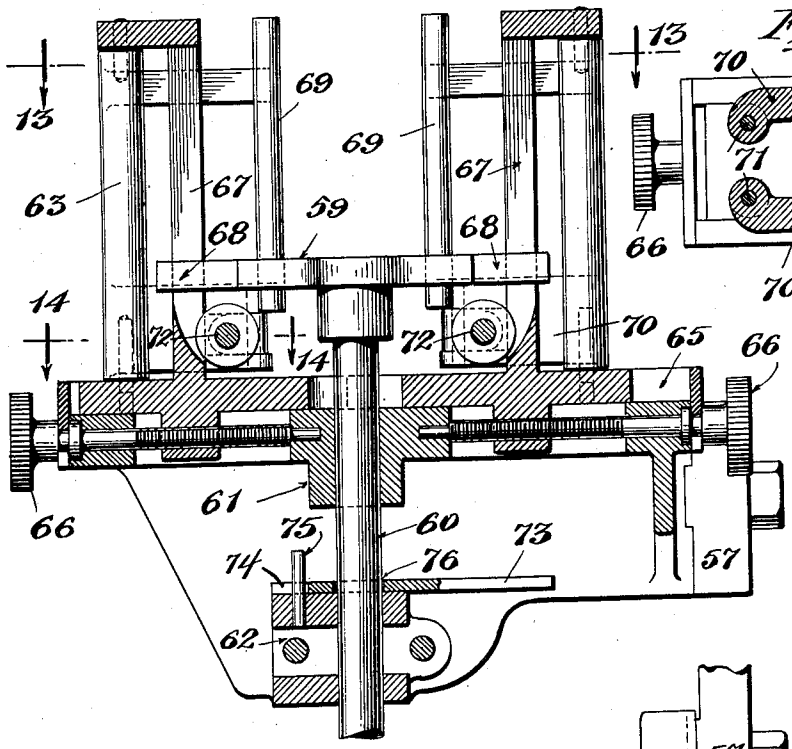


Fig. 14.

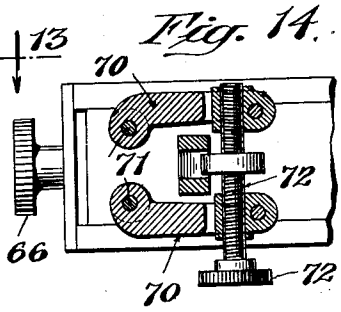
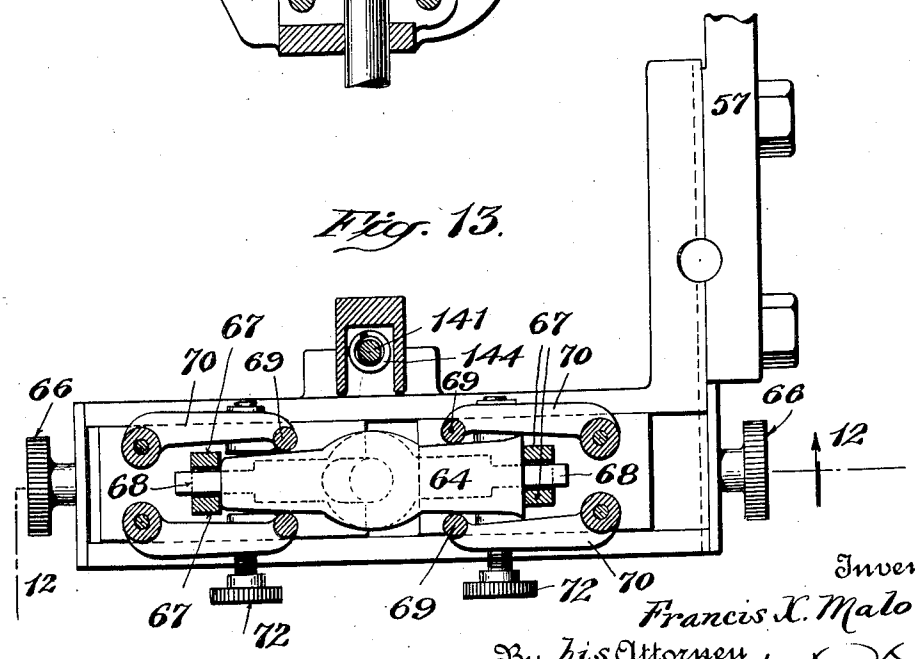


Fig. 13.



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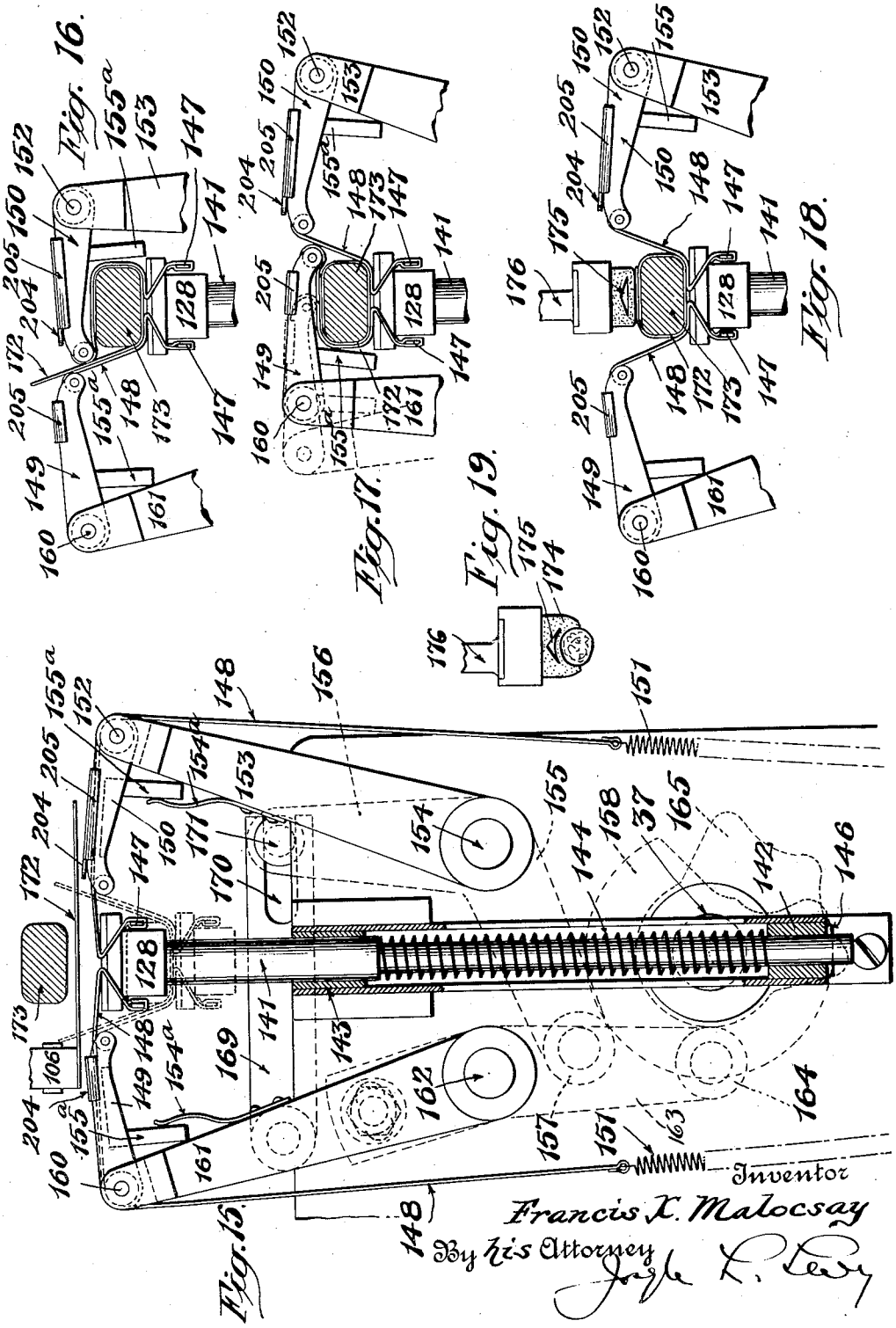
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BANDING MACHINE

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Patented Dec. 27, 1927. 1,653,646

UNITED STATES PATENT OFFICE.

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BANDING MACHINE.

Application filed July 9, 1921. Serial No. 483,462.

This invention relates to a machine for placing bands on cigars, and has for its object to provide a machine of this character which will be entirely reliable and which will rapidly and accurately apply the bands to the cigars.

A further object of this invention is to provide a machine of this character which will be entirely automatic in operation, comparatively simple in construction, small in size and free from the complex mechanisms usually found in machines of this character.

Reference is to be had to the accompanying drawing forming part hereof, in which

Figure 1 is a front elevation of my improved cigar banding machine;

Figure 2 is a vertical sectional view of the adhesive-strip moistening device;

Figure 3 is a front elevation, partly in section of the front support for the adhesive strip moistening device;

Figure 4 is a side elevation of the machine;

Figure 5 is a view of the opposite side of the machine;

Figure 6 is a rear elevation of the machine;

Figure 7 is a sectional view showing the pressure-applying means for the applied band; the cigar support and adjacent parts;

Figure 8 is a plan view of the machine;

Figure 9 is a side elevation, partly in section, of the combined band conveyor and gum-applying device;

Figure 10 is a side elevation, partly in section, of the combined band conveyor and gum-applying device, looking at the same from the side opposite to that shown in Figure 9;

Figure 11 is a view showing the cam mechanism and levers which actuate the band-folding fingers;

Figure 12 is a vertical sectional elevation of the means for holding the stack of bands, the section being taken on the line 12—12 of Figure 13, looking in the direction of the arrows,

Figure 13 is a sectional view on the line 13—13 of Figure 12, looking in the direction of the arrows.

Figure 14 is a sectional view on the line 14—14 of Figure 12, looking in the direction of the arrows,

Figure 15 is a front elevation, partly in section, of the band-folding mechanism,

Figures 16, 17 and 18 are diagrammatic views illustrating the operation of the band-folding fingers, and

Figure 19 is a front elevation of the means for applying pressure to the banded cigar, showing the action of the rubber contacting portion of the pressure-applying means when used on a cigar of small diameter.

Throughout the various views of the drawings similar reference characters designate similar parts.

In the preferred embodiment of my invention, as disclosed in the accompanying drawing. I have shown a frame having a base 1, a front plate 2 and rear plate 3, said plates 2 and 3 being connected by a side web 4.

At 5 is shown the drive shaft of the machine which is mounted to rotate in bearings 6 and 7 projecting from a plate 8 secured to the frame of the machine. On the outer end of the drive shaft 5 is secured a pulley 9 which is driven by a belt 10 from any desired source of power such as an electric motor or the like.

On the inner end of the drive shaft 5 is secured a worm 11 which drives a worm gear 12 mounted to rotate at right angles to the worm 11. The worm gear 12 is loosely mounted to rotate on a shaft 13, said shaft 13 being mounted in bearings 14 and 15 in the frame. Formed integral with the worm gear 12 is a cam 16 which operates, through mechanism to be hereinafter described, a means for feeding a gummed strip from which adhesive is removed by successive cigar bands as will be hereinafter set forth.

Fixed upon the shaft 13 by the pin 201 is a clutch member 17 in which is a slidably mounted clutch dog 18 which is normally pressed inwardly through the medium of a spring 19 extending from the outer plate 20 of the clutch member 17. (See Figure 11.) The clutch dog 18 is provided with a recess 21 and a clutch release bar 22 is adapted to have its outer end moved in and out of the recess 21 to disengage or engage the clutch dog 18 with the worm gear 12 as will be hereinafter set forth. The clutch release member 22 is in the nature of a bar pivoted at one of its ends, as at 23, on a portion of the frame. This release bar 22 is provided

with a downwardly projecting clevis 24 in which is secured the eye 25 of an actuating rod 26. The rod 26 extends to a pedal or other actuating means by means of which the clutch bar 22 is drawn out of the recess 21 in the clutch dog. The clutch release bar 22 is normally held in the recess 21 in the clutch dog 18 by means of a spring 27 secured to the clutch release bar 22 and the spring 27 has its other end secured to an ear 28 on the frame. Pivotal movement of the clutch release bar 22 in one direction is restricted by means of a hook shaped member 29 extending from the release bar 22 and positioned over a lug 30 secured to the frame.

The lug 30 which extends over the release bar restricts its movement in the opposite direction.

The worm gear 12 is continuously driven by the worm 11 when the machine is in operation and as the worm gear 12 is loose upon the shaft 13 it does not drive said shaft until the clutch release bar 22 is moved out of the recess 21 in the clutch dog 18 whereupon said clutch dog is thrust outward through the medium of the spring 19 and the dog 18 enters into a recess 31 in the worm gear 12. In this manner, the clutch member 17, which is fixed upon the shaft 13, is engaged with the worm gear 12, consequently driving the shaft and the various mechanisms driven thereby.

Thus it will be understood that mechanisms driven through the medium of the shaft 13 will only be actuated when such shaft is connected to the worm gear 12 by the clutch mechanism above described.

Fixed on the shaft 13 and consequently driven thereby is a spiral gear 32 which meshes with a gear 33 fixed upon a shaft 34. Another gear 35 meshes with and drives a gear 36 fixed upon a shaft 37, on which shaft 37 is mounted cam mechanism for actuating band folding fingers to be hereinafter described.

The shaft 34 extends beyond the rear plate 3 of the frame of the machine and secured on said shaft 34 adjacent its outer end is an interrupted gear 38 which meshes with and drives a smaller interrupted gear 39 mounted to rotate on a stud 40, which is secured in a boss 41 extending from the rear plate 3 of the frame.

Secured to the smaller interrupted gear 39 is a pair of gear locks 42 and 43 which ride upon the surfaces 44 and 45 secured to the interrupted gear 38 and cause two pauses in the operation of the mechanism actuated by the smaller interrupted gear 39.

Secured to the gear 39 and adapted to be rotated thereby is a crank arm 46 which has its end pivoted at 47 to a pitman 48, the upper end of which is pivoted at 49 in a lug 50. This lug 50 forms part of an arm 51 which extends over the upper end of the machine and is provided at its outer end with a clamping foot 52 which rests upon the successive cigars to be banded and forces the same downward to band wrapping mechanism. The foot 52 is provided with a central recess 53 in which the band wrapping fingers can act to secure the band about the cigar without interference from the foot 52. The arm 51 is secured on the upper end of a vertical shaft 54 which is arranged to vertically reciprocate in guides 55 and 56.

Also secured to the vertically reciprocating shaft 54 is an arm 57 which extends around one side of the machine and thence forwardly to the front thereof. This bent arm 57 is fixed to the shaft 54 and is accordingly movable therewith. At the front of the machine the arm 57 supports the band magazine 58 and raises and lowers the same as will be hereinafter described.

The band magazine, which is disclosed in detail in Figures 12, 13 and 14, comprises an adjustable band-supporting plate 59, on which is adapted to rest the stack of bands to be applied. Extending downward from the plate 59 is a stem 60 which is slidable vertically in guides 61 and 62 on the arm 57.

At 63 is shown the end guides for the band stack 64. These guides are movably mounted in guide-ways 65 on the arm 57 and in order to properly hold the bands of various sizes that may be placed between them, they are arranged to be adjusted to and from one another by means of the adjusting screws 66.

The end guides 63 are each provided with a pair of spaced guide strips 67 between which lies the narrowed end 68 at each end of the band-supporting plate, whereby said plate is prevented from becoming disaligned. Each guide 63 is provided with a pair of vertical, adjustable guide rods 69, which extend upwardly from arms 70 pivotally mounted on the pins 71. To cause the guide rods 69 to move towards one another or recede from one another I provide adjusting screws 72. It will be seen from the foregoing that the band magazine is adjustable to accommodate cigar bands of various lengths and widths. Furthermore, means is provided for raising the band support to a proper level to permit the uppermost band in the stack to be removed, regardless of the amount of bands in the stack, as will appear below.

The stem 60 depending from the band-supporting plate 59 is vertically slidable with friction in the guides 61 and 62. Resting on top of the guide 62 is a lifter plate 73, having a slot 74 in one of its ends in which projects a pin 75 extending upwardly from the guide 62. The plate 73 is perforated at 76 and this perforation loosely fits the stem 60.

At 77 is a bracket secured to and projecting from the front plate 2 of the frame. This bracket 77 comprises a projecting plate

79 and a plate 78, said plate having a pair of slots 80 through which extend screws 81 which fix the bracket in position. The slots 80 permit vertical adjustment of the bracket on the frame. As the arm 57 is carried downwardly the lifter plate 73 strikes against the projecting abutment formed by the plate 79. As the end of the plate 73 strikes the abutment 79 and downward movement of the arm 54 continues, the plate 73 is inclined at an angle and it grips the stem 60 and lifts the same consequently raising the stack of bands 64 supported on the plate 59. The stem 60 moves against frictional resistance in its guides 61 and 62 and is thus frictionally held in any position to which it is lifted.

Situated above the band stack and arranged to remove the successive uppermost bands therefrom, is the band-conveying and adhesive-applying mechanism which will now be described.

On the front plate 2 of the machine is secured a plate 82 secured in position by screws 83. This plate 82 is provided with a bearing 84 in which is journalled at 85 a cam lever having a hub 86 from which extends an upwardly projecting arm 87 and a downwardly extending arm 88. A cam roller 89 is mounted on the lower arm 88 and this roller rides on the cam 16 forming part of and consequently driven by the worm gear 12. The roller 89 is held against the cam 16 by means of a spring 90 having one of its ends secured to the arm 88 and its other end secured to the frame. The upwardly extending arm 87 has its upper end pivotally secured at 91 to a sliding rod 92, said rod being slidable in a guide 93 secured on the rear plate 3 of the frame.

The rod 92 is arranged to carry the combined adhesive-applying and band picking mechanism which comprises an adhesive tape and means for moistening and carrying the same.

The rod 92 is provided with a pair of laterally extending supporting pins 94 and 95 which are carried by said rod and support the tape shifting and moistening means 96. The moistening trough indicated at 102 is provided with a forwardly extending arm 97 having a nose 98 in which is formed a recess 99 in which the front supporting pin 94 rests.

It will be seen that the pins 94 and 95 are provided on their upper face with a plurality of notches 100 and any one of these notches is adapted to receive a tooth 101 on the nose 98 located in the recess 99. This arrangement permits the moistening trough to be situated nearer to or further away from the rod 92. As the band stack is situated directly below the moistening means, it is necessary to have the nose 98, which carries an adhesive paper strip to be hereinafter described, directly above one end of the cigar band pile so that said pile can, on its upward movement, contact at one end with the adhesive strip which removes the uppermost bands. To compensate for bands of various lengths, the moistening device can be adjusted on the supports 94 and 95 by means of the notched arrangement comprising a trough 102 adapted to contain water 103 and within which rotates a moistening roller 104 having an absorbent covering 105.

At 106 is indicated an adhesive tape which is fed in the direction of the arrows by means hereinafter set forth. The tape 106 is generally supported in the form of a roll in any suitable manner near the machine, and passes upward through a curved guide 107, between rollers 108 and 109 which are supported on a weighted lever 110. The tape is held against the absorbent moisture supplying roller 104 by means of the roller 109 and receives on its under face which is the adhesive surface, moisture which moistens the adhesive thereon. The tape 106 extends forward to the nose 98 near which it extends over a roller 111. The nose 98 is provided with a downwardly projecting block 112 which provides a flat contacting surface for the bands in the stack as they are moved upwardly against the adhesive tape 106. As the adhesive tape is used it passes upwardly over the nose 98 thence rearwardly through a U-shaped guide member 113 in which rests a tension device consisting of a weight 114 provided with a pin 115 enabling the weight to be manually removed from its position in the guide 113 when desired. Passing from between the tension device 114, the tape extends rearwardly under a pivoted finger 116 provided with a laterally extending pin 117. This finger 116 is pivoted at 118 in a U-shaped bracket 119 secured on the curved guide 107. The finger 116 is normally held with its downwardly bent end 120 clamped down on the tape 106 by means of a spring 121 until lifted by means of a cam device 122.

The cam device 122 consists of a movable plate having an inclined cam surface 123 on which the pin 117 is adapted to ride to lift the finger 116 and permit the passage of used tape thereunder (see Fig. 10).

The plate 122 is moved by means of an ear 124 extending upwardly from the rod 92 and secured thereto. This ear is provided with a pin 125 which enters into a slot 126 in the end of the plate 121.

From the foregoing, the operation of the combined moistening and adhesive applying mechanism will be readily understood. Through the medium of the cam mechanism heretofore mentioned and consisting of the cam 16 and roller 89, the cam lever, consisting of the parts 87 and 88, reciprocates the rod 92, moving the moistening trough mem-

ber 96 forward and backward on the machine. On its forward movement, it reaches a position with the nose portion, and particularly the block 112 directly above the band stack. The band stack is then lifted upward and the uppermost band contacts with a portion of the moistened adhesive tape that is at that moment situated on the block 112 and the band stack descends leaving the uppermost band adhered to the tape. The moistening device 96 is then carried rearwardly until it reaches a position over the means for wrapping a band over the cigar, when the band is stripped from the adhesive tape leaving gum that has been removed from the tape on the band and folding mechanism then applies the band to a cigar.

In order to provide means for supplying a fresh section of tape for each band, means for shifting the tape is provided so that a fresh section of tape is in registration with the band stack on each of its upward movements. This shifting movement of the tape occurs on the forward movement of the moistening means 96. In Figure 10 the device is shown at the extreme limit of its forward movement just after the shifting movement of the tape has occurred. When the device is in its rearward position, the parts are as shown in Figure 9 with the finger 116 clamped down on the used portion of the tape. As the moistening means 96 moves forward towards the front of the machine, it shifts the tape, bringing a fresh section under the block 112 for contact with the uppermost band in the stack. As the forward movement continues the pin 125 reaches the end of the slot 126 in the cam-plate 122 and accordingly moves said cam plate, causing the pin 117 on the finger 116 to ride upward on the inclined cam face 123 lifting the finger and permitting the used tape to pass beneath it and out of the machine on the upper plate 127 of the tape guide.

At 128 is shown the cigar-receiving platen which receives the cigar during the banding operation. This platen is provided with an upper plate 129 which extends rearwardly and terminates in a bearing 130 in which is pivotally mounted a cigar-supporting table 131. The table 131 is provided with a cut-away portion 132 through which band-folding fingers operate as will be hereinafter set forth. A spring 133 (Figure 7) normally forces the table upward and this upward movement of the table is restricted by means of a pin 134. To enable the cigars to be properly positioned on the table to receive the application of the cigar band, an end guide 135 and a side guide 136 is provided. Set screws 137 permit these guides to be adjusted to compensate for cigars of various sizes; and each guide is provided with a slot 139 below each guide and pins 140 project from each guide into these slots, preventing the guides from pivoting about the set screws 137 and getting out of alignment.

The platen 128 is vertically movable and is provided with a downwardly extending stem 141 which moves in guides 142 and 143 against the resistance of a spring 144, upward movement of the platen being restricted by means of a pin 146 extending through the stem 141. A guide pin 202 extends downwardly from the platen and retains the platen in proper alignment.

On each side of the platen 128 is secured a projecting blade 147 which receives the looped end of a band applying tape 148, said tapes extending over fingers 149 and 150, and thence downwardly, having their lower ends secured to tension springs 151 attached to the frame front plate 2. The tapes are thus under tension at all times.

The band wrapping finger 150 is pivoted at 152 at the upper end of an arm 153. A spring 154^a bears against a projection 155^a on the arm and holds the end of said arm downward. The arm 153 is secured on a stud shaft 154 on which is secured a bell crank cam lever having arms 155 and 156. The arm 155 is provided at its end with a cam roller 157 which rides on a cam 158 secured on the shaft 37. The cam roller 157 is held against the cam by means of a torsional spring 159 surrounding the shaft 154.

The band wrapping finger 149 is pivoted at 160 at the upper end of an arm 161 and a spring 154^a similar to that used in connection with the finger 150 bears against a similar projection 155^a.

The arm is secured upon a shaft 162 and also secured upon said shaft is a lever 163. The lower end of this lever is provided with a cam roller 164 which rides on a cam 165 secured on the shaft 37. A torsional spring 203 holds the cam roller 164 on the cam 165. The lever 163 is fixed to another lever 166 by means of a bolt 167 which extends through a slot 168 in the lever 166. By this arrangement, the lever 166 is secured to and is caused to move with the lever 163 under the influence of the cam 165. The slotted arrangement of the lever 166 permits it to be adjusted with respect to the lever 163 to take up for wear between the parts and particularly wear on the cam 165. To the upper end of the lever 166 is pivoted a link 169 which is provided at its end with a slot 170 which embraces a pin 171 in the end of the arm 156 of the bell crank cam lever. From the foregoing, the operation of the folding mechanism will be readily understood.

Reference to Figures 15 to 18 inclusive will show the manner in which the band is applied to the cigar. Assuming that a cigar has reached a position on top of a band, and the band 172 and cigar 173 are rest-

ing upon the cigar platen 128. As the platen descends as will be hereinafter pointed out, the cigar band is partially folded as indicated in dotted lines in Figure 15 by the tapes 148. Under the influence of the cam 158, the finger 150 moves across the cigar and folds down the ungummed end thereof (see Figure 16). The cam 165 then causes the finger 149 to move across the cigar and fold down the gummed end of the band over the ungummed end. As the cam 165 performs this function and moves the lever 166, the lever thrusts the link 169 over towards the lever 156 causing the pin 171 to reach the end of the slot 170 and thereafter lifting the cam roller 157 from off the cam 158 and causing the finger 150 to move backwards from over the cigar.

The shape of the cam 165 causes the finger 149 to move backward and forward across the cigar several times over the over-lapped ends thereof with a rubbing pressure which tends to secure together the over-lapped ends of the band. Thereafter pressure applying means comes into action and causes the over-lapped ends of the band to adhere more securely together as will now be pointed out. The degree of vertical movement of foot 52 is such that if no article rested on table 131, said foot would move the table down to a point where fingers 149 and 150 could just move over said table. If, now, an article of, say, half an inch in height is positioned on the table, the latter would be moved down by foot 52 engaging said article to a point half an inch lower than in the first case, and fingers 149 and 150 would just be able to move over said article. Similarly, if the article were one quarter or one eighth of an inch in height, the table would be moved down one quarter or one eighth of an inch further than if said article were not positioned thereon and in each case the fingers 149, 150 would just be able to move over the article regardless of its thickness. The mechanism for positioning the cigars in banding position is thus self-adjusting for cigars of various thicknesses.

The pressure applying means consists of a block of resilient material 174, such as soft rubber. To aid in providing a greater amount or resiliency, the block 174 is centrally apertured as at 175. The aperture is preferably of triangular form and the manner in which it acts, especially when used upon a cigar of small diameter, is disclosed in Figure 19. It will be seen that when the block 174 is brought down on the cigar with pressure its under surface flexes or conforms to the contour of the cigar, providing an even pressure on the applied band without distorting or injuring the cigar. The resilient pressure applying means consisting of the block 174 is secured on one end of a pivoted arm 176 which is pivoted at 177. The arm 176 is provided with a rearwardly projecting portion 178 which is placed directly above a push rod 179 which is movable in a guide 180 forming part of the movable arm 57.

At 181 is provided a bell crank cam lever having a cam roller 182 which rides on the face of a cam 183 secured on the end of the shaft 34. The bell crank cam lever 181 is provided with an arm 184 which engages the lower end of the push rod 179 and lifts the same to cause it to raise the lever 178 and thus pivots the lever 178 about its axis causing the resilient block 174 to be brought down upon the banded cigar and apply pressure to the over-lapped ends of the cigar band.

Means for frictionally retaining the push rod 179 in any position to which it is moved by the lever 181 is provided in the nature of a spring pressed spool 185 which engages the surface of the push rod through a recess 186 in the guide 180. The spool 185 is thrust against the face of the push rod 179 by means of a spring 187. At 188 is provided a bracket which is adapted to act as an abutment for a collar 189 secured on the push rod 179 and limit the upward movement of the rod 179. The push rod 179 is provided with a notch 190 with which the spool 185 engages to limit the upward movement of the push rod 179.

After the band has been applied and the parts have reached the position shown in Figure 18, the push rod is thrust upward and caused to bring the rubber block 174 down upon the banded cigar and apply a downward pressure thereon which tends to affix the over-lapped bands securely together.

When the push rod has reached its highest position, the spool 185 is forced into engagement with the notch 190 thus limiting the upward movement of the rod. Thereafter, the shaft 54 moves upwardly and as it moves upwardly it carries the push rod with it until the collar 189 on the push rod 179 strikes the bracket 188 and the spool 185 is moved out of engagement with the notch 190 so that the rod is held stationary while the guide 180 moves upward.

From the foregoing, the operation of my improved banding machine will be readily understood.

As the worm gear 12 is continuously driven directly from the drive shaft 5, the combined adhesive supplying and band picking mechanism is continuously in operation. This is desirable for the reason that it does not give the adhesive material on the face of the tape 106 an opportunity to set. By a downward pressure on the pedal which draws downwardly the rod 26, the clutch release member 22 is moved out of the recess 21 in the clutch dog 18 whereby the spring 19 forces said clutch dog into the re-

cess 31 in the worm gear 12 whereby the shaft 13 is caused to rotate, thereby causing the other mechanisms in the machine to be actuated.

A cigar 173 is placed upon the table 131 directly below the foot 52 and directly above the band wrapping fingers 149 and 150. Then the adhesive tape mechanism moves forward to the position shown in Figure 10 shifting a fresh section of tape under the block 112 on the nose portion 98 as such movement takes place. When the extreme forward movement of the adhesive tape mechanism has been reached the block 112 is situated directly above one end of the band stack 64. The arm 57 carrying the band magazine is then moved upwardly causing the uppermost band in the stack 64 to be brought into contact with the moistened section of the tape lying on the underside of the block 112. The arm 57 then starts downwardly and the uppermost band adheres to the tape and the tape mechanism carrying said band then starts its rearward movement and reaches a point directly over the platen 128 and the band applying tapes extending therefrom. In order that the band carried by the adhesive tape may be guided in its movement to the band wrapping fingers, each finger 149 and 150 is provided with a plate 204 having a downwardly bent edge 205. As the bands are sometimes irregular or "warped" this downwardly bent end directs the band properly to its position over the band wrapping fingers.

As the lowering of the arm 57 continues, the arm 51 which is on the same shaft 54 as the arm 57, carries its foot 52 into contact with the cigar resting upon the table 131. The table 131 is thus swung downwardly and the central portion of the cigar strikes the band held on the adhesive tape and strips the same therefrom, removing the adhesive which is on the tape and leaving the same on the end of the band removed from the tape. Then the band folding fingers 149 and 150 come into operation and through the medium of the tapes 148 apply the band to the cigar as indicated in Figures 15 to 18 inclusive as has been heretofore explained.

The pressure-applying resilient block 174 then descends and applies additional pressure to the banded cigar after which the machine assumes the position disclosed in Figure 4 with the banded cigar resting upon the table 131. To aid in providing a resilient movement of the arm 57 during its vertical reciprocation, I provide a spring 191 which abuts against the lower side of the arm 57 and which surrounds a vertically extending rod 192 which passes through the arm 157 and acts as a guide therefor.

It will be seen that release of the clutch pedal will cause the clutch member 22 to move into the recess 21 and withdraw the clutch dog 18 throwing the machine out of operation with the exception of the adhesive tape mechanism which is continuously in operation as has been heretofore set forth. Thus the operator can release the clutch after the application of each band, or in other words can regulate the speed of the banding operations accordingly by means of the clutch. The banding operation is continuously repeated as long as the machine is in operation.

From the foregoing, it is obvious that my invention is not to be restricted to the exact embodiment shown but is broad enough to cover all structures coming within the scope of the annexed claims.

What I claim is:

1. In a machine of the character described, means for folding a cigar band about a cigar with ends in overlapped relation, means for causing said first means to reciprocate a plurality of times on said overlapped ends and means operating subsequent to said folding and reciprocating means to apply resilient pressure to said band.

2. In a machine of the class described, band applying means comprising a pair of band-wrapping fingers, means for causing one of said fingers to be reciprocated a plurality of times over the lapped ends of the applied band and a resilient means adapted to be brought to bear on the overlapped ends of the band.

3. In a machine of the character described, band applying means comprising a pair of fingers and means for actuating the same, a pair of tensioned tapes extending over said fingers and actuated thereby to apply the band, means for causing one of said fingers to reciprocate a plurality of times over an end of the band and in engagement therewith and means for applying pressure to the lapped ends of the band subsequent to said reciprocating.

4. In a machine of the class described, band feeding means comprising a movable adhesive member, means for moistening the same, a band stack, means for bringing a portion of said adhesive member in contact with a band in said stack, band-wrapping fingers, means for moving said adhesive member to cause the same to carry a band to the band wrapping fingers, means for actuating said fingers to cause the same to apply the band about a cigar, means for reciprocating one of said fingers a plurality of times to exert a rubbing pressure over lapped ends of the cigar band and additional pressure-applying means for said band and means for actuating the same.

5. In a machine of the class described, band applying mechanism, means for applying pressure to the lapped ends of the applied band, said pressure applying means

comprising an oscillating arm having a resilient end and means for oscillating said end in a direction normal to the band.

6. In a machine of the class described, band-applying mechanism, means for applying pressure to the lapped ends of the applied band, said pressure-applying means comprising a pivoted arm having a hollow resilient block secured to its free end adapted to be brought into contact with the applied band.

7. In a machine of the character described, band applying means and an oscillating arm to apply pressure to the band, said arm being provided with a pressure block of resilient material, said block provided with an internal chamber of triangular cross-section to increase the distortability of said block.

8. In a machine of the class described, band wrapping means comprising a pair of tensioned tapes, a finger for actuating each of said tapes, an arm on which each of said fingers are mounted, a cam for actuating each of said arms, a link connecting said arms for causing one of said arms to force the other arm away from its cam during a stage in the band-applying operation.

9. In a machine of the class described, band wrapping means comprising a pair of fingers, arms on which said fingers are mounted, tapes extending over said fingers, tension means for said tapes, a cam for actuating each of said arms, a link connecting said arms, said link having a slotted end and a pin on one of said arms entering the slotted end on the link.

10. In a machine of the class described, fingers for folding a cigar band about a cigar, said fingers having a plate secured on their upper face, and a downwardly bent edge on said plate.

11. In a machine of the class described, fingers for folding a cigar band about a cigar, a tape extending over said fingers and actuated thereby and a cigar band guide plate secured on each of said fingers above the tape.

12. In a machine of the class described, a band stack, means for receiving bands therefrom and carrying the same to the banding mechanism, a pair of band folding fingers for applying bands to cigars, and a guide plate on each of the fingers adapted to guide bands while being carried to a position over the band applying fingers.

13. In a machine of the class described a vertically movable platen, a cigar-receiving table pivoted on and carried by the platen, means for holding said table away from the platen and means for contacting with a cigar resting on the table and moving said cigar down on the platen.

14. In a machine of the class described, a movable platen, a cigar-receiving table pivoted on and carried by the platen, means for holding said table away from the platen, band-wrapping fingers adjacent the platen, means for contacting with a cigar resting on the table and moving the table and cigar downward so that the central portion of the cigar is brought to rest on the platen, and means for causing the band-wrapping fingers to fold a band about a cigar so held.

15. In a machine of the class described means for holding a band stack, conveying means for removing successive bands therefrom, a platen, a pair of tensioned tapes extending from said platen, fingers over which said tapes extend, a cigar-receiving table pivotally mounted on the platen and carried thereby, means for causing the conveyor to carry successive bands from the band stack to the platen, means for forcing the table downward to cause a cigar held thereon to be supported with its central portion resting over a band on the platen and means for actuating the band-wrapping fingers to cause the same to apply the band about the cigar.

16. In a machine of the class described, means for applying pressure to the overlapped ends of an applied band comprising an arm, a resilient perforated contacting member on said arm, a vertically movable push rod for moving said arm and cam mechanism for actuating said push rod.

17. In a machine of the class described, pressure-applying means comprising a perforated rubber block and means for causing the same to exert a direct downward pressure on the lapped ends of an applied cigar band.

18. In a machine of the class described, pressure-applying means comprising a rubber block having a central triangular-shaped aperture and means for causing the same to exert a direct downward pressure on the lapped ends of an applied cigar band.

19. In a machine of the class described, pressure applying means comprising a rubber block having a central triangular aperture and a flexible under face adapted to conform to the contour of an article to which a band is applied.

Signed at the city, county and State of New York, this 22nd day of June, 1921.

FRANCIS X. MALOCSAY.