Oct. 10, 1939. L. W. GOLDSTEIN 2,175,959

TAPE DISPENSING AND MOISTENING MACHINE

Filed July 18, 1939 3 Sheets-Sheet 1

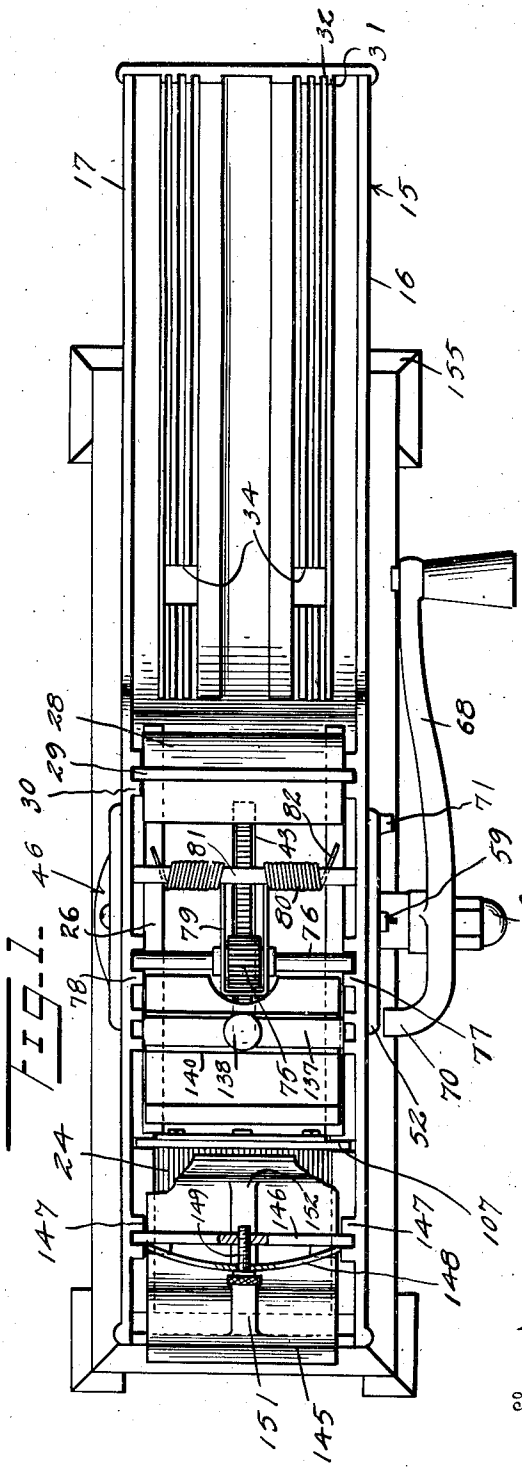


FIG. 1.

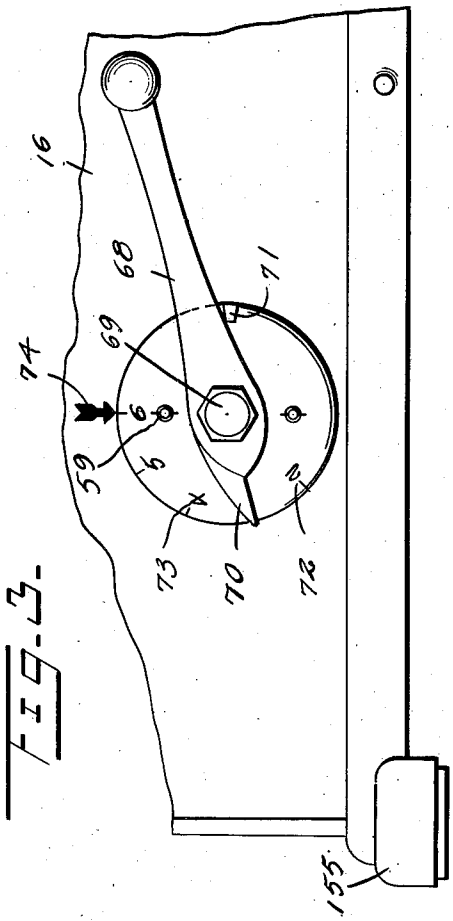


FIG. 2.

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TAPE DISPENSING AND MOISTENING MACHINE

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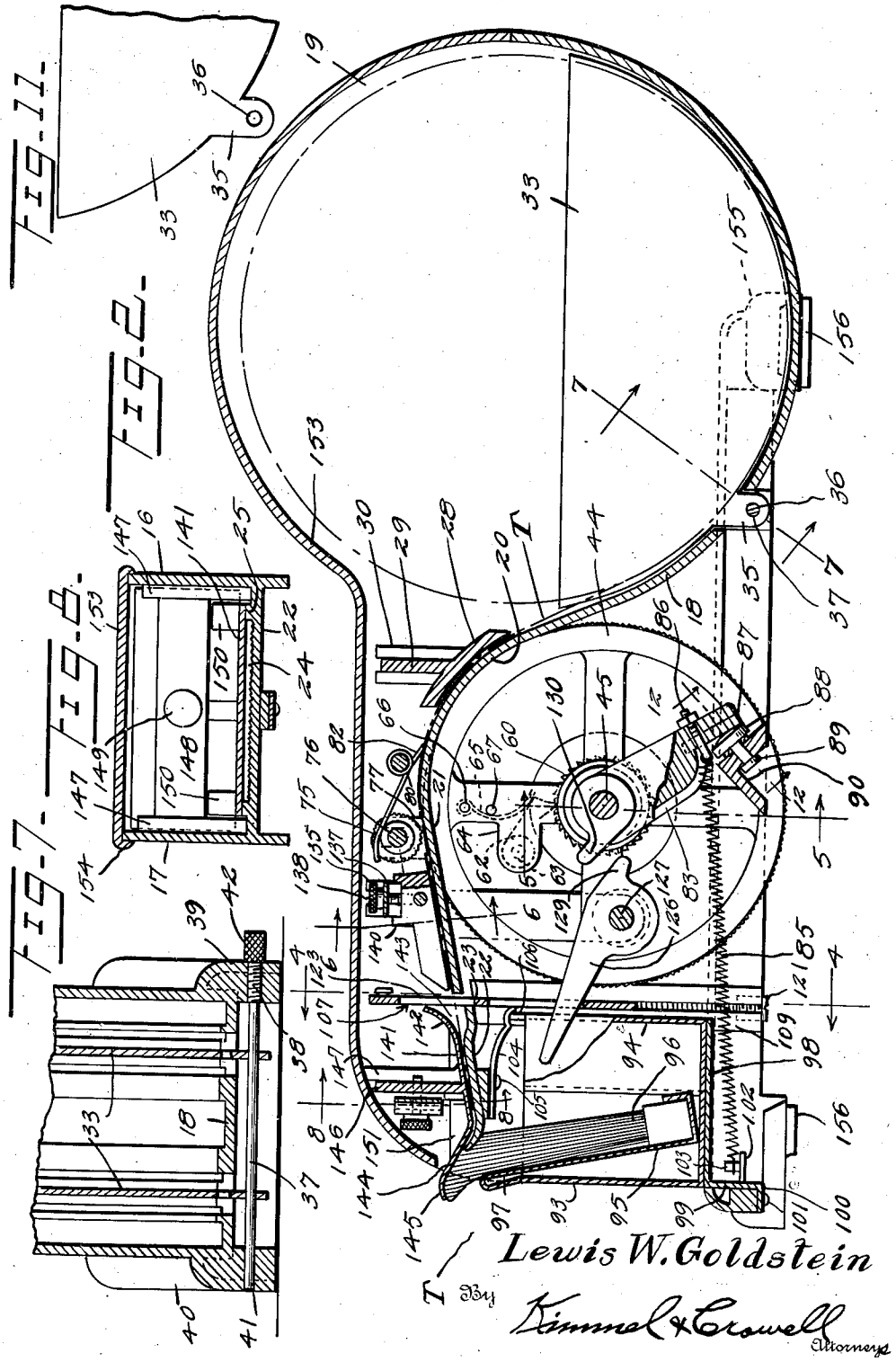


Fig. 1.

Fig. 2.

Fig. 4.

Fig. 7.

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TAPE DISPENSING AND MOISTENING MACHINE

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Fig. 4.

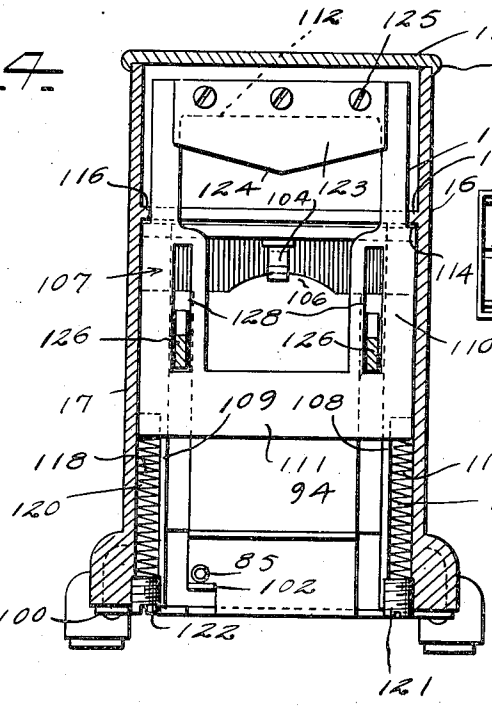


Fig. 9.

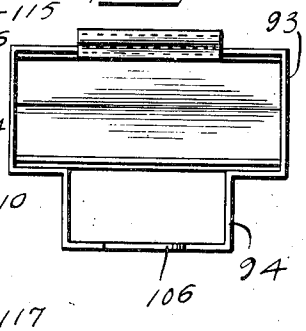


Fig. 5.

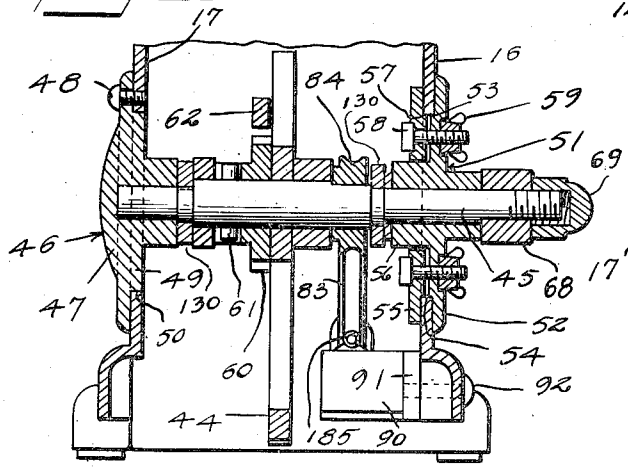


Fig. 6.

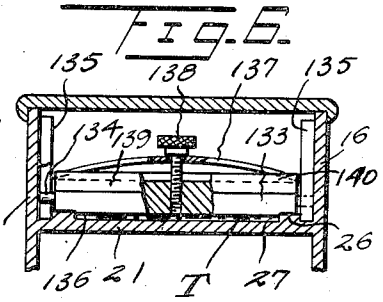


Fig. 12.

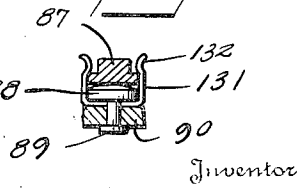
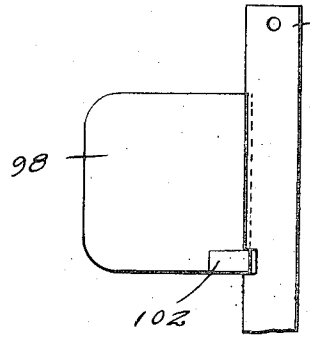


Fig. 10.



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UNITED STATES PATENT OFFICE

2,175,959

TAPE DISPENSING AND MOISTENING MACHINE

Lewis W. Goldstein, New York, N. Y., assignor to Lipton Manufacturing Co., Inc., New York, N. Y.

Application July 18, 1939, Serial No. 285,153

9 Claims. (Cl. 164—49)

This invention relates to tape dispensing and moistening machines.

An object of this invention is to provide a simplified tape dispensing and moistening means whereby a selected length of tape may be disposed from the machine, the selected length being moistened as it is discharged from the discharge end of the machine.

Another object of this invention is to provide in a machine of this kind an improved tape guiding means which is positioned between the feeding means and the severing means, the guide means being so constructed that it may be readily removed for cleaning or other purposes.

A further object of this invention is to provide in a machine of this character an improved tape discharging means positioned forwardly of the tape severing means, the tape discharging means including a guiding device and means for removably mounting the guiding device over the tape.

A further object of this invention is to provide in a machine of this character an improved guide means from the tape feeding means to the tape moistening means which is so constructed as not to contact with the tape as is at present the case with tape dispensing machines where a presser device engages the upper surface of the tape.

A still further object of this invention is to provide an improved operating means for the tape severing blade which is actuated upon return movement of the operating handle, the blade operating means including a pair of pivoted levers and a lever tripping means operatively connected to the handle and operable only on return movement of the handle.

A further object of this invention is to provide an improved tape severing machine of this character which is so constructed that it will not get out of order during the use thereof and which includes the use of a minimum number of parts so that the machine may be manufactured at a relatively small cost and at the same time will stand up under hard usage.

A further object of this invention is to provide in a machine of this type an improved tape roll holding compartment and means in said compartment for adjustably holding tape rolls of different widths so that the tape will be fed centrally through the machine.

A further object of this invention is to provide an improved tape moistening reservoir and means for supporting the reservoir in the machine.

To the above objects and to others which may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically referred to and as illustrated in the accompanying drawings wherein is illustrated an embodiment of this invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a detailed top plan, partly broken away and in section, of a tape serving device constructed according to this invention the top or cover being removed,

Figure 2 is a longitudinal section of the device,

Figure 3 is a fragmentary side elevation of the device,

Figure 4 is a sectional view taken on the line 4—4 of Figure 2,

Figure 5 is a sectional view taken on the line 5—5 of Figure 2,

Figure 6 is a sectional view taken on the line 6—6 of Figure 2,

Figure 7 is a fragmentary sectional view taken on the line 7—7 of Figure 2,

Figure 8 is a fragmentary sectional view taken on the line 8—8 of Figure 2,

Figure 9 is a detailed top plan of the fluid reservoir,

Figure 10 is a detailed top plan, partly broken away of the reservoir supporting member,

Figure 11 is a fragmentary side elevation of one of the supply roll spacing members, and

Figure 12 is a sectional view taken on the line 12—12 of Figure 2.

Referring to the drawings, the numeral 15 designates generally a housing comprising vertical side walls 16 and 17 which are connected together adjacent one end thereof by an arcuate bottom wall 18 forming the lower portion of a supply roll compartment 19. The bottom wall 18 is substantially semi-cylindrical in configuration and at its inner end is provided with an arcuate upwardly curved or arched extension 20 which is continued as at 21 so as to form a tape guiding table. The table 21 is inclined downwardly and forwardly toward the front end of the housing 15 and preferably the table 21 is provided with a forward table member 22 having a downwardly offset inner end portion 23 which is spaced forwardly from the forward end of the table member 21. The upper surface of the forward table member 22 is longitudinally ribbed as at 24 and the table member 22 at each longitudinal edge thereof is provided with a longitudinal rib 25. The table 21 at each longitudinal edge thereof is also

provided with a longitudinal rib 26 forming a tape guiding channel 27 therebetween.

A longitudinally arcuate presser plate 28 is disposed between the side walls 16 and 17 and engages over the tape T on the arcuate table portion 20. The presser plate 28 is provided with a vertically disposed slide member 29 which slidably engages a pair of guide members 30 carried by the walls 16 and 17 on the inner side thereof. The presser plate 28 is adapted to gravitatingly engage over the ribs 26.

The arcuate bottom wall 18 on the inner side thereof is provided with a plurality of spaced apart ribs 31 forming grooves 32 therebetween and a pair of supply roll holding plates 33 are adapted to engage in selected pairs of the grooves 32. The bottom wall 18 is provided with a pair of spaced apart openings 34 adjacent the forward portion thereof and each plate 33 is provided with downwardly extending lugs 35 which are adapted to project through the openings 34. The lugs 35 are each provided with an opening 36 through which a pin 37 is adapted to engage. The pin 37 as shown in Figure 7 is provided with a threaded portion 38 at one end thereof which is threaded through an outwardly offset lower portion 39 carried by the side wall 16. The side wall 17 is also provided with an outwardly offset portion 40 and a recess 41 within which the opposite end of the pin 37 engages. A knob or head 42 is carried by the pin 38 at one end thereof and projects outwardly of the offset portion 39 so that the two roll spacer plates 33 may be released when desired.

The table 21 is provided in the longitudinal center thereof with a slot 43 through which the periphery of a serrated tape feeding wheel 44 engages. The feeding wheel 44 is rotatably mounted on a drive shaft 45 which at one end is journalled in a bearing 46. The bearing 46 comprises a plate 47 which is fixed to the outer side of the wall 17 by means of fastening devices 48. An inwardly projecting annular boss 49 is carried by the plate 47 and engages in an annular opening 50 provided in the wall 17. The opposite end of the shaft 45 is journalled through a bearing 51 which engages the wall 16. The bearing 51 comprises a plate 52 engaging the outer face of the wall 16 and an annular boss 53 extends inwardly from the plate 52 and is of a diameter less than the diameter of the plate 52. The boss 53 engages in an annular opening 54 provided in the wall 16 and the depth of the boss 53 is less than the thickness of the wall 16. A clamping plate 55 is disposed about a reduced boss 56 carried by the bearing plate 52 within the housing 15 and engages against the inner face of the wall 16. The clamping plate 55 is provided with an outwardly extending boss 57 engaging in the opening 54 and confronting the boss 53. A pair of plate clamping bolts 58 engage through the plates 55 and 52 within the opening 54 and thumb nuts 59 are threaded onto the outer ends of the bolts 58 so that the bearing member 51 may be rotatably adjusted about the shaft 55, the purpose for which will be hereinafter described.

A ratchet member 60 is fixed as by a pin 61 to the shaft 45 at one side of the feeding wheel 44 and a pawl 62 is pivotally carried by the wheel 44 being mounted on a pin 63 carried by an ear 64 which is formed integral with the wheel 44. A spring 65 is mounted at one end on a pin 66 and at the opposite end bears against the pawl 62 so as to constantly urge the pawl 62 into engagement with the teeth of the ratchet 60. A spring tensioning pin 67 is carried by the wheel 44 intermediate the ends of the spring 65 as shown in Figure 2.

An operating handle 68 is secured to the projecting end of the shaft 45 which projects beyond the wall 16 being removably mounted on the shaft 45 by means of a nut 69. The handle 68 is provided with an inwardly offset extension 70 which confronts the plate 52 and the plate 52 is provided with a fixed stop member 71. The stop member 71 is positioned in the path of the handle extension 70 so as to limit the swinging movement of the handle 68 during the feeding stroke thereof.

The plate 52 is provided with a plurality of circumferentially spaced apart graduations 72 and indicia 73 are associated with the graduations 72. A pointer 74 is carried by the outer side of the wall 16 of the housing and the graduations 72 are adapted to determine the degree of swinging of the handle 68 so as to thereby eject a predetermined length of tape. An idler feed wheel 75 is rotatably carried by a shaft 76 which loosely engages between guide members 77 carried by the wall 16 on the inner side thereof. The idler feed wheel 75 is positioned forwardly of the vertical axis of the feeding wheel 44 and is constantly urged to engaging relation with the tape engaging over the wheel 44 by means of a U-shaped spring 79. The spring 79 at the free ends thereof is provided with coils 80 engaging about a transversely disposed pin 81 which is carried by the side walls 16 and 17 rearwardly of the wheel 75. The ends of the coils 80 terminate in extensions 82 which engage the upper surfaces of the ribs 26 laterally of the longitudinal edges of the tape.

The lever or handle 68 is returned to an inoperative position by means of a lever 83 which is fixed to the shaft 45 at one side of the wheel 44 and is provided with a groove 84. The lever 83 has one end of a spring 85 secured thereto by means of an eye bolt 86. The lever 83 is also provided with a substantially T-shaped head 87 which is adapted to engage a rubber bumper or stop member 88 which is fixed by means of a bolt 89 to a triangular supporting member 90. The supporting member 90 is provided with a base plate 91 fixed by means of bolts 92 to the side wall 16 adjacent the lower end thereof.

A water container 93 is disposed in the forward end of the housing 15 engaging between the side walls 16 and 17 and the container 93 is provided with a reduced extension 94 extending inwardly in a direction of the feeding wheel 44. A brush holding member 95 is disposed in the reservoir or water container 93 and a brush 96 is removably engaged with the holder 95 and is inclined upwardly and forwardly, the upper end of the brush 96 projecting above the reservoir or container 93 and engaging against a supporting wall 97 formed with the holder 95 and the front wall of the container 93. The reservoir 93 is supported within the housing 15 by means of a supporting plate 98 which is carried by vertical member 99 provided with a horizontally disposed base member 100. The base member 100 projects laterally of each side of the plate 98 and is secured to the housing 15 by fastening members 101. The vertical extension 99 is provided with a horizontally and inwardly projecting lug 102 on which a pin 103 is mounted. The opposite end of the spring 85 is secured to the pin 103. The container 93 is yieldably held in the housing 15 by means of a spring 104 which is secured by fastening members 105 to the under side of the table member 22.

The spring or catch 104 engages an upwardly projecting member 106 carried by the rear wall of the extension 94 of the reservoir 93.

A knife carrying frame 107 is slidably mounted between guide members 108 and 109 carried by the side walls 16 and 17 respectively and comprises vertically disposed side members 110 connected together at their lower ends by a connecting bar 111. A connecting bar 112 connects the upper ends of the vertical members 110 together and preferably the upper end portions of the side members 110 are inwardly offset as at 113 providing a shoulder 114 downwardly from the upper end thereof which is adapted to engage stop members 115 and 116 carried by the side walls 16 and 17 respectively. The knife carrying frame 107 is constantly urged upwardly to an inoperative position by means of a pair of springs 117 and 118 mounted in openings 119 and 120 which intersect the channels or guide members 108 and 109 respectively and the springs 119 and 120 are tensioned by means of set screws 121 and 122 respectively. The carrier or knife frame 107 is provided with a knife 123 having a V-shaped keen edge 124 and the knife 123 is secured to the upper bar 112 by means of fastening members 125. The carrier 107 is positioned between the forward end of the table 21 and the rear end of the downwardly offset table portion 23 and is adapted to cut off a predetermined length of tape at the forward end of the table 21.

The carrier 107 is moved downwardly by means of a pair of pivoted levers 126 which are mounted on trunnions 127 carried by the side walls of the housing 15 on the inner side thereof. The levers 126 at their forward ends engage in slots 128 formed in the side members 110 below the knife 123. Each lever 126 at its rear end and rearwardly of the trunnion 127 is provided with a trigger engaging member 129 and a trigger or tripping member 130 is fixedly mounted on the shaft 45 in the path of the lever tripping member 129. During the rotation of the shaft 45 in the feeding cycle wherein the feeding wheel rotates in a counter clockwise direction as viewed in Figure 2, the trigger 130 is adapted to engage the lever tripping member 129 to thereby raise the lever 126 within a slot 128. At this time the lever 126 is inactive relative to the carrier 107 but after the tripping member 130 passes the lever extension 129, the lever 126 will drop downwardly by gravity to engage the lower end of a slot 128. When the handle 68 is released for return under the tension of the spring 85, the trigger 130 will rotate in a clockwise direction with the wheel 44 stationary and will then strike the lever operating member 129 so as to swing the opposite end of the lever 126 downwardly. This will move the carrier 107 downwardly and move the knife 123 across the tape which engages between the upper portions of the side members 110. Downward movement of the carrier 107 will contract the springs 119 and 120 and after the trigger 130 passes the lever operating member 129, the springs 119 and 120 will return the carrier 107 to an upper inoperative position. The lever 83 is held against the resilient bumper or stop member 88 by means of a U-shaped catch 131 which is provided with flared free end portions 132 engaging about the head 87.

A removable guide plate 133 is disposed between the side walls 16 and 17 above the table 21 and is provided with outwardly projecting trunnions 134 engaging in guide members 135 carried by the inner sides of the side walls 16 and 17 above the table 21. The plate 133 is adapted to engage on the ribs 26 and is provided with a downwardly offset intermediate member 136 engaging in the guide-way 27 about the tape T. The under surface of the extension 136 is positioned in upwardly spaced relation to the upper surface of the table 21 so that the tape T may freely slide in the space between the extension 136 and the top of the table 21. The plate 133 is fixedly held in adjusted relation relative to the table 21 by means of a longitudinally curved clamping member 137 in the form of a bowed spring which is tensioned by means of a bolt 138 which is threaded into the plate 133. The plate 133 is provided with a transversely disposed boss 139 having upwardly projecting flanges 140 between which the clamping member 137 engages. The ends of the clamping member 137 are adapted to abut against the inner sides of the guide members 135 so as to thereby hold the plate 133 against movement relative to the housing 15.

A plate 141 is disposed over the table 22 and is provided with an upwardly curved rear end portion 142 confronting the knife carrier 107 thereby forming a mouth 143 to receive the end of the tape T as it passes from the table 21. The plate 141 is adapted to engage the ribs 25 with the under surface thereof spaced from the upper surface of the table 22 as shown in Figure 8 and the forward end of the plate 141 is provided with an upwardly inclined extension 144 terminating in a downwardly curved forward end 145. The extension 144 and the downwardly curved portion 145 are adapted to engage over the upper ends of the brush 96 so as to hold the tape T in contact with the moistening member or brush 96.

The plate 141 is provided with a vertically disposed plate 146 which engages in guide members 147 carried by the side walls 16 and 17. A clamping member 148 of resilient construction, which as shown in Figure 1 is longitudinally bowed is tensioned by means of a tensioning bolt 149 which is threaded into the bar 146 and the opposite ends of the clamping member 148 are adapted to engage against the guide members 147 so as to tightly hold the plate 141 in adjusted position relative to the table 22. The forward side of the plate 146 is provided with a pair of stop members 150 on the upper ends of which the clamping member 148 is adapted to engage. The plate 141 is also braced by means of ribs 151 and 152 extending forwardly and rearwardly respectively of the plate 146.

A cover 153 engages on the upper edges of the side walls 16 and 17 and is provided on the opposite longitudinal edges thereof with downwardly extending flanges 154 which engage on the outer sides of the side walls 16 and 17 so as to frictionally hold the cover 153 on the housing 15. The lower ends of the side walls 16 and 17 are provided with feet 155 which are adapted to receive cushioning members 156.

In the use and operation of this dispensing machine, the roll of tape T is placed in the tape compartment 19 and then passed beneath the plate 28 in the guide-way 27 and then moved forwardly beneath the idler feed roll 75 and beneath the plate 133. The handle 68 may then be swung forwardly in a counterclockwise movement so as to rotate the wheel 44 and draw the tape T beneath the knife 123 and over the table 22. The under side of the tape T is adapted to have an adhesive and this adhesive is moistened as the tape T passes over the upper end

of the brush 96. The handle 68 may be rotated to the limit permitted by the position of the stop 71 whereupon the handle is released permitting the spring 85 to return the handle 68 to its initial position which is shown in Figure 3. During the forward or feeding movement of the handle 68, the trigger 130 will move past the lever tripping member 129 raising the levers 126 in the slots 128 of the knife carrier 107.

When the handle 68 is released and is returned to its inoperative position by the spring 85 the trigger 130 will strike the lever tripping members 129 so as to swing the opposite ends of the lever 126 downwardly. Downward movement of the levers 126 will move the knife carrier 107 downwardly and cause the knife 123 to cut off the tape at the forward end of the table 21.

When the brush 96 is new this brush may at its upper end project above the table 22 and at this time the plate 141 may be positioned so that the extensions 144 and 145 will not press unduly on the upper end of the brush 96. As the bristles of the brush 96 wear down or bend over, the plate 141 may be lowered by releasing the clamping bar 148 and lowering the plate 141 to the limit permitted by the ribs 25.

The plate 141 and brush 96 coact with the feeding wheels 44 and 75 in frictionally holding the tape T against movement relative to the slot between the table members 21 and 22 so that the blade or knife 123 will effectively sever the tape. This holding feature permits the use of only a single cutting blade which, in its cutting position, may be positioned in spaced relation to the longitudinal edges of the slot between the table members 21 and 22.

The length of the tape which is cut off by the knife 123 may be varied by rotary adjustment of the bearing member 51. This is accomplished by loosening the thumb nuts 69 and then rotating the bearing 51 to the desired position indicated by the indicia 73. Rotary adjustment of the bearing 51 will adjust the position of the handle stop 71 so that the handle 68 will be limited in its feeding movement.

A tape dispensing machine constructed according to this invention embodies the use of relatively few parts which are simple in construction and which may, therefore, be made more substantially than machines heretofore produced. As shown in Figure 2, all of the operating parts of this invention are enclosed in the housing 15 with the exception of the operating handle 68 so that the interior of the machine will not collect dust. The machine hereinbefore described embodies the use of a single knife blade 123 which has a V-shaped keen edge 124 thereby eliminating use of a stationary and a movable blade as is the case with a number of machines now in operation. In the event the blade 123 becomes dull it may be easily and quickly replaced by loosening the bolts 125 and inserting a new blade on the carrier 107.

What I claim is:

1. A tape dispensing means comprising a housing, a tape dispensing means in said housing including a drive shaft, a feed wheel loose on said shaft, a spring-pressed idler feed wheel, pawl and ratchet means carried by said shaft and said first wheel to rotate said first wheel upon rotation of said shaft in one direction, a vertically movable blade carrier, means slidably mounting said carrier in said housing, a carrier operating lever pivotally carried by said housing, said carrier having an elongated vertical slot in which an end of said lever loosely engages, a blade fixed to said carrier, an extension carried by said lever projecting in the direction of said shaft, and a lever operator fixed to said shaft engageable with said extension.

2. A tape dispensing means comprising a housing, a tape feeding means in said housing including an operating shaft and a handle fixed thereto, a substantially rectangular blade carrier, vertical guide means for said carrier, an elongated slot in each vertical side of said carrier, a V-shaped blade fixed to the upper portion of said carrier, a pair of carrier operating levers, means pivotally mounting said levers in said housing in a position with an end of each lever slidable in a slot in a side of the carrier, coacting means carried by said shaft and each lever for rocking said levers upon rotation of said shaft, and yieldable means holding said carrier in an uppermost inoperative position, downward rocking of said levers effecting downward movement of said carrier to thereby cut the tape.

3. In a machine of the class described, a tape guiding table having transverse slot, a vertically reciprocal blade carrier movable through said slot, a V-shaped cutting blade fixed to said carrier and normally overlying said slot, spring means normally holding said carrier in a position with the blade above said slot, an operating shaft, and means engageable with said shaft and said carrier to move said carrier downwardly upon rotation of said shaft in only one direction to thereby sever that portion of the tape overlying said slot, the opposite faces of said blade being spaced from the longitudinal edges of said slot when said blade is moved downwardly into a cutting position.

4. In a tape dispensing means, a housing, opposed guide members carried by said housing, a blade carrier vertically slidable in said guide members and including an upper bar and a pair of vertical side bars, a pair of carrier operating levers, means pivotally mounting said levers in said housing, said side bars being provided with means whereby downward swinging of said levers will move said carrier downwardly, a blade fixed to said upper bar, a shaft journalled through said housing, a handle on said shaft, and coacting means carried by said shaft and said levers whereby to rock said levers downwardly upon rotation of said shaft in one direction.

5. In a tape dispensing means, a housing, opposed guide members carried by said housing, a blade carrier vertically slidable in said guide members and including an upper bar and a pair of vertical side bars, a pair of carrier operating levers, means pivotally mounting said levers in said housing, said side bars being provided with means whereby downward swinging of said levers will move said carrier downwardly, a blade fixed to said upper bar, a shaft journalled through said housing, a handle on said shaft, a pair of lever tripping members carried by said shaft, and an extension carried by each lever in the path of said tripping member whereby to rock said levers downwardly upon rotation of said shaft in one direction.

6. In a tape dispensing machine, a housing, opposed guide members carried by said housing, a blade carrier engaging said guide members, a blade fixed to said carrier, means constantly urging said carrier upwardly to inoperative position, said carrier having a pair of vertically disposed elongated slots inwardly of said housing, a pair of carrier operating levers pivotally carried by

said housing and having a portion thereof loosely engaging in said slots, a shaft journalled in said housing, a handle on said shaft, a pair of lever tripping members fixed to said shaft, and an extension carried by each lever projecting in the direction of said shaft and disposed in the path of rotation of said tripping members, rotation of said shaft in one direction effecting engagement of said tripping members with said extensions to thereby raise said levers in said slots without movement of said carrier, rotation of said shaft in the opposite direction effecting engagement of said tripping members with said extensions to thereby swing said levers downwardly and simultaneously lower said carrier to operative position.

7. In a tape dispensing machine, a housing, opposed guide members carried by said housing, a rectangularly shaped blade carrier slidably engaging said guide members, said carrier including vertical side bars, and upper and lower bars connected to said side bars, means constantly urging said carrier upwardly to inoperative position, said side bars each having an elongated slot therein inwardly of said housing, a pair of carrier operating levers pivotally carried by said housing and having a portion thereof loosely engaging in said slots, a shaft journalled in said housing, a handle on said shaft, a pair of lever tripping members fixed to said shaft, and an extension carried by each lever projecting in the direction of said shaft and disposed in the path of rotation of said tripping members, rotation of said shaft in one direction effecting engagement of said tripping members with said extensions to thereby raise said levers in said slots without movement of said carrier, rotation of said shaft in the opposite direction effecting engagement of said tripping members with said extensions to thereby swing said levers downwardly and simultaneously lower said carrier to operative position.

8. In a tape dispensing machine, a housing, opposed guide members carried by said housing, a rectangularly shaped blade carrier slidably engaging said guide members, said carrier including vertical side bars, and upper and lower bars connected to said side bars, means constantly urging said carrier upwardly to inoperative position, said side bars each having an elongated slot therein inwardly of said housing, a pair of carrier operating levers pivotally carried by said housing and having a portion thereof loosely engaging in said slots, a shaft journalled in said housing, a handle on said shaft, a pair of lever tripping members fixed to said shaft, an extension carried by each lever projecting in the direction of said shaft and disposed in the path of rotation of said tripping members, rotation of said shaft in one direction effecting engagement of said tripping members with said extensions to thereby raise said levers in said slots without movement of said carrier, rotation of said shaft in the opposite direction effecting engagement of said tripping members with said extensions to thereby swing said levers downwardly and simultaneously lower said carrier to operative position, and yieldable means constantly urging said shaft to rotate in said opposite direction.

9. In a tape dispensing machine, a housing, opposed guide members carried by said housing, a rectangularly shaped blade carrier slidably engaging said guide members, said carrier including vertical side bars, and upper and lower bars connected to said side bars, means constantly urging said carrier upwardly to inoperative position, said side bars each having an elongated slot therein inwardly of said housing, a pair of carrier operating levers pivotally carried by said housing and having a portion thereof loosely engaging in said slots, a shaft journalled in said housing, a handle on said shaft, a pair of lever tripping members fixed to said shaft, an extension carried by each lever projecting in the direction of said shaft and disposed in the path of rotation of said tripping members, rotation of said shaft in one direction effecting engagement of said tripping members with said extensions to thereby raise said levers in said slots without movement of said carrier, rotation of said shaft in the opposite direction effecting engagement of said tripping members with said extensions to thereby swing said levers downwardly and simultaneously lower said carrier to operative position, a lever fixed to said shaft, and a spring fixed at one end to said latter lever and to said housing, said spring constantly urging said shaft to rotate in said opposite direction.

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