July 23, 1940. L. W. GOLDSTEIN 2,209,266

PRESSER PLATE FOR TAPE DISPENSING MACHINES

Original Filed July 18, 1939

Fig. 1.

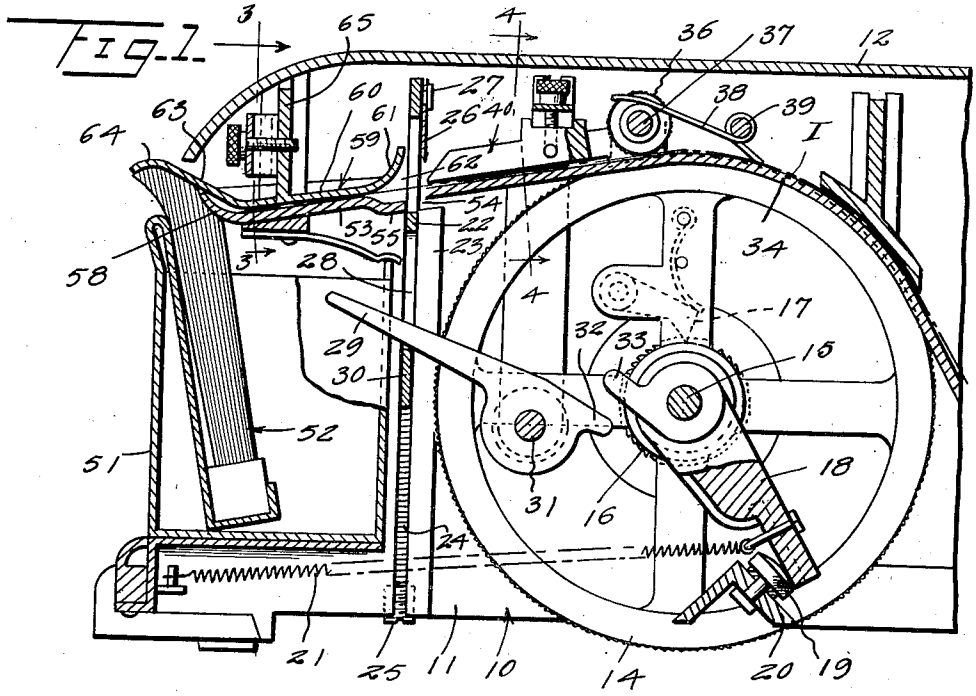


Fig. 3.

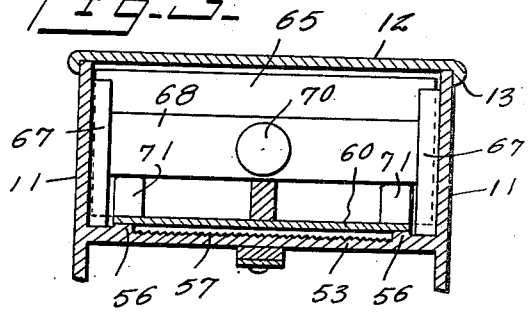


Fig. 2.

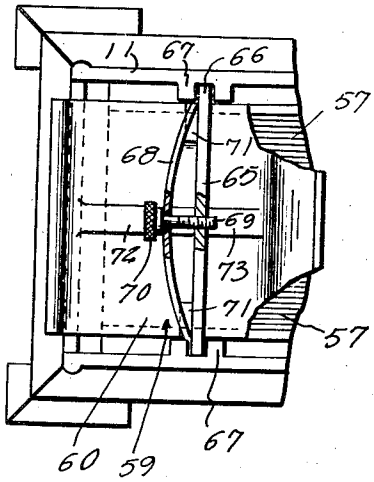
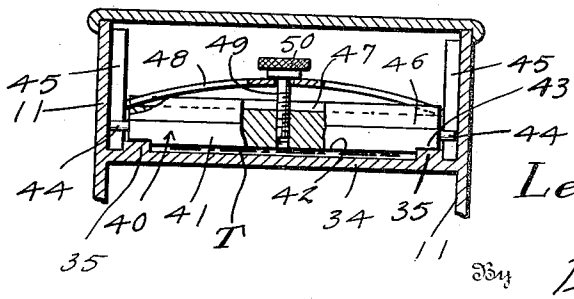


Fig. 4.



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PRESSER PLATE FOR TAPE DISPENSING MACHINES

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Original application July 18, 1939, Serial No. 285,153. Divided and this application September 18, 1939, Serial No. 295,536

4 Claims. (Cl. 91—38)

This invention relates to tape dispensing and moistening machines and is a division of my copending application, Serial No. 285,153 filed July 18, 1939, now Patent No. 2,175,959, which issued October 10, 1939.

An object of this invention is to provide an improved tape guiding means for a dispensing machine which is so constructed that the tape may freely move along the guiding table provided in the machine.

Another object of this invention is to provide an improved presser plate engaging over the tape guiding table and also engaging the upper end of a tape moistening brush to frictionally hold the gummed side of the tape in contact with the brush.

Another object of this invention is to provide an improved presser means including a plate engaging over the tape guiding table and means for adjustably holding the presser plate relative to the guiding table and to the moistening element disposed at the forward end of the guiding table.

A further object of this invention is to provide an improved guiding plate positioned rearwardly of the tape severing means which may be fixedly secured in adjusted position relative to the guiding table so that the tape may freely move therebeneath.

A still further object of this invention is to provide an improved holding means for a presser plate including a yieldable clamping member which is adapted to engage the vertical guides for the presser plate in order to hold the presser plate in vertically adjusted position relative to the tape guiding table and to the moistening element positioned at the forward end of the table.

Embodying the foregoing aims 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 illustrated in the accompanying drawing, wherein are shown embodiments of the 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 drawing:

Figure 1 is a fragmentary longitudinal section of a tape dispensing and moistening machine embodying my invention,

Figure 2 is a fragmentary top plan partly broken away and in section of the forward end of the machine, the cover of the machine being removed,

Figure 3 is an enlarged fragmentary sectional view taken on the line 3—3 of Figure 1, and

Figure 4 is an enlarged fragmentary sectional view taken on the line 4—4 of Figure 1.

Referring to the drawing numeral 10 designates generally a housing structure including a pair of vertical side walls 11 and a cover 12 provided with depending flanges 13 on the opposite longitudinal edges thereof which are adapted to engage over the side walls 11. A tape feeding wheel 14 is rotatably carried by a drive shaft 15 which is journaled through the side walls 11 and the feeding wheel 14 is progressively rotated in one direction by means of a ratchet member 16 which is fixed to the shaft 15. A spring pressed pawl 17 is carried by the wheel 14 and engages the ratchet 16. A shaft returning lever 18 is fixed to the shaft 15 and is adapted to abut against a stop member 19 carried by a support 20 which is fixed to one side wall 11 of the housing 10. The lever 18 is constantly urged in the direction of the stop member 19 by means of a lever return spring 21.

A knife carrier 22 is slidable in guide members 23 carried by the side walls 11 on the inner side thereof and is constantly urged to an uppermost inoperative position by means of a spring 24 tensioned by means of a screw 25. The carrier 22 has a blade 26 detachably secured thereto by fastening devices 27 and the carrier 26 includes vertically disposed slots 28 within which the free ends of carrier operating levers 29 loosely engage. The lower end of the carrier 26 includes a transversely disposed bar 30 which is engaged by each lever 29 on downward rocking of a lever 29 so as to move the carrier 26 downwardly to an operative position. Each lever 29 is pivotally mounted on a stub shaft 31 carried by side wall 11 and each lever 29 is provided with an extension or trigger 32 extending rearwardly of the stub shaft 31. The tripping member 33 is provided for each lever 29 and is fixedly mounted on the shaft 15.

The housing 10 includes a tape guiding table 34 which is provided with a pair of longitudinally extending ribs 35 and the feeding wheel 14 is adapted to project through a slot provided in the table 34 for engagement with the tape moving over the table 34. A serrated idler feeding wheel 36 is carried by a shaft 37 and a spring 38 mounted on a bar 39 constantly urges the feeding wheel 36 downwardly into engagement with the tape T passing over the table 34.

A presser plate generally designated as 40 is disposed on the rear side of the carrier 22 and comprises a plate 41 having a downward offset

portion 42 extending downwardly between the guiding ribs 35. The outer portions 43 of the plate 41 are adapted to engage on the upper surfaces of the guiding ribs 35 when the presser plate 40 is in its lowermost position.

The plate 40 is provided at each side thereof with a pair of trunnions or slide members 44 engaging between a pair of vertically disposed guide members 45 which are carried by the side walls 11. The plate 40 adjacent the rear thereof is provided with an upwardly projecting body 46 having a channel 47 extending transversely of the plate 40. A longitudinally curved clamping member 48 is adapted to be disposed in inverted position with the opposite ends thereof engaging in the channel 47 and this clamping member 48 is preferably formed of resilient material such as a bowed spring which at the opposite ends thereof is adapted to engage the inner surface of the vertical guides 48 so as to hold the presser plate 40 in vertically adjusted position relative to the table 34. The spring or clamping member 48 is tensioned by means of a threaded tensioning member 49 which is threaded into the body 46 and is provided with a knurled head 50.

The housing 10 at its forward or discharge end is provided with a receptacle 51 in which a moistening brush 52 engages. The bristles of the brush 52 are adapted to project upwardly above the top of the receptacle 51. A forward table 53 is carried by the housing 10 and the rear edge of the table 53 is disposed in forwardly spaced relation to the forward end of the table 34 thereby providing a slot or opening 54 between the two table members 34 and 53. Preferably the rear end of the table 53 is downwardly offset as at 55 to form a mouth for the free end of the tape T. The table 53 is provided on the opposite longitudinal edges thereof with a pair of upwardly projecting ribs 56 and preferably the upper surface of the table 53 is also longitudinally ribbed as at 57. The forward end of the table 53 is upwardly curved as at 58 and the rear portion of the brush 52 engages the upwardly curved portion 58 of the table 53.

A vertically adjusted pressure plate generally designated as 59 is disposed over the table 53 and comprises a flat body or plate 60 having an upwardly curved rear portion 61 which forms with the downwardly offset portion 55 a mouth 62 which is flared rearwardly and within which the end of the tape T is adapted to be received. The forward end of the plate member 59 includes an upwardly and obtusely inclined portion 63 terminating in the downwardly curved portion 64. The outer portion of the straight obtuse portion 63 engages over the upper end of the brush 52 and in like manner the downwardly curved portion 64 engages over the upper end of the brush 52.

A vertically disposed slide member or plate 65 is formed with the plate 60 and at the opposite ends thereof projects beyond the longitudinal edges of the plate 60 as shown in Figure 2. These projecting portions 66 slidably engage in a pair of vertically disposed guide members 67 which are carried by each side wall 11 and which extend upwardly from the table 53. In order to provide a means whereby the plate member 59 may be held in vertically adjusted position relative to the table 53, I have provided a longitudinally curved resilient clamping member 68 which is disposed on the forward side of the plate or guide member 65 and is formed of resilient material. A clamping screw 69 provided with a knurled head 70 engages through the center of the clamp 68 and is threaded into the plate 65. Inward movement of the clamping screw 70 will distort the clamping member 68 so that the opposite ends thereof will bind against one of the guide members 67 on each side of the housing 10. In the lowermost position the presser plate 59 will engage on the longitudinal ribs 56 as shown in Figure 3. However, the presser member 59 if desired may be raised upwardly from the ribs 56 in the event too much pressure will be applied to the tape when the presser member 59 is contacting with the ribs 56.

The plate 65 on the forward side thereof is provided with a pair of lugs 71 which are carried by the plate 65 inwardly from the guide members 67. The lower edge of the clamping member 68 is adapted to engage the upper ends of the lugs 71. A centrally disposed bracing member 72 is carried by the plate 60 forwardly of the plate 65 and terminates in the upper extension 63 as shown in Figures 1 and 2. A rear bracing member 73 is carried by the plate 60 in alignment with the bracing member 72 and extends from the rear side of the plate 65 and terminates in the upwardly curved member 61.

In the use of this improved structure the rear presser plate 40 is secured over the table 34 rearwardy of the knife carriage 22, the vertical position of the presser member 40 being adjusted by means of the clamping member 48 and the tensioning screw 49. Under certain conditions, namely when the thickness of the tape T and the adhesive carried thereby will permit the tape T to readily slide beneath the plate 40, this plate may have the outer portions 43 thereof resting on the longitudinal ribs 35. However, in the event the thickness of the tape and the adhesive carried thereby will not permit the tape to readily pass beneath the presser member 40 this member may be vertically raised by loosening the screw 49 and clamping the plate 40 in a position upwardly from the ribs 35. This plate 40 forms with the table 34 a relatively narrow or thin guideway within which the tape T is adapted to move. When the feeding wheel 14 has been turned forwardly to feed the tape through the knife carriage 22 the free end of the tape will enter the mouth 62 between the upwardly projecting lip 61 and the downwardly offset lip 55. This free end of the tape will then pass in the guideway formed between the presser member 59 and the table 53. The free end of the tape will be forced between the upper end of the moistening brush 52 and the extensions 63 and 64 of the plate member 60. The presser member 59 may be adjusted in the same manner as the presser member 40, that is loosening of the clamping member 68 will permit vertical adjustment of the presser member 59 relative to the table 53 and to the moistening brush 52. By having an adjustable presser member 59 which is vertically adjustable this presser member may be readily adjusted to provide the necessary pressure between the gummed side of the tape T and the brush 52 in order that a sufficient quantity of moisture or water will come in contact with the gummed surface of the tape. Under certain conditions the tape T is readily gummed by having only a very light pressure between the tape and the moistening brush and under other conditions it is necessary to have an additional amount of pressure on the tape in order that the gummed side thereof will be moistened sufficiently so that the tape will readily adhere to the article to which it is to be applied.

In tape dispensing machines at present available it is the general practice to have a presser plate over the moistening element which is pivoted to the housing and gravitatingly holds the tape in contact with the moistening element. However, with a construction of this kind the amount of pressure which may be applied to the tape cannot be varied without changing the pivoted presser member and in other respects this type of presser plate has been found unsatisfactory. With a construction as hereinbefore described the pressure exerted on the tape to frictionally hold the tape in contact with the moistening element may be readily and quickly varied by the user of the device so that the user of the device can have any desired amount of moisture applied to the tape which is considered necessary or desirable. Where the brush **52** is new and the bristles are straight the presser member **59** may be initially raised from the table **53**, but as the bristles of the brush **52** wear down or bend over the presser member **59** may be easily and quickly lowered so that a uniform pressure will be applied to the tape irrespective of the condition of the moistening element.

By having the two presser members **40** and **59** mounted in guideways carried by the side walls of the housing these members may be easily and quickly removed where it is considered necessary without affecting the position or arrangement of the other parts of the machine.

What I claim is:

1. In a tape dispensing machine, a housing including parallel side walls, a tape guiding table between said walls, a tape moistening member at on end of said table, a presser plate engaging over said table and having a portion thereof engaging said moistening means, an upwardly projecting part fixed to said plate, a resilient bowed clamping member engaging said part, and a threaded tensioning member engaging through said clamping member and threaded into said part for tensioning the opposite ends of said clamping member against said walls to thereby hold said plate in adjusted position relative to said table and said moistening member.

2. In a tape dispensing machine, a housing including parallel side walls, a tape guiding table between said walls, a tape moistening member at one end of said table, a presser plate engaging over said table, said plate including an arcuate end portion overlying said member, vertical guides carried by said side walls, an upwardly projecting part carried by said plate, the opposite ends of said part projecting laterally of said plate and slidably engaging said guides, a resilient bowed clamping member, and a tensioning member for said clamping member, the opposite ends of said clamping member engageable with said guides for holding said plate in adjusted position relative to said table and said moistening member.

3. In a tape dispensing machine, a housing, having parallel side walls, a tape guiding table, a tape moistening member disposed relatively to said table, a presser plate engaging over said table forwardly of said slot and also engaging said moistening member, said plate comprising a flat body, an upwardly curved rear portion integral with said body forming a tape guiding mouth, a downwardly curved forward portion integral with said body engaging over said moistening member, guides carried by said walls, a vertical part rising from said body and projecting laterally of the longitudinal edges of said body, said projecting portions of said part slidably engaging said guides, a bowed resilient clamping member having the concave side thereof confronting said part, and a threaded tensioning member engaging through said clamping member and threaded into said part for disposing the opposite ends of said clamping member into contacting engagement with said guides to thereby hold said plate in adjusted position relative to said table.

4. In a tape dispensing machine provided with a housing having parallel side walls, a tape guiding table and a tape moistening member at the discharge end of the table; a tape presser plate for holding the tape in contact with said member, said plate comprising a flat body disposed between the side walls, an arcuate upturned part at one end of said body, a flat obtusely inclined part at the opposite end of said body, a portion of said latter part engaging a portion of said moistening member, a down-turned part carried by said obtusely inclined part engaging another portion of said moistening member, and tensionable holding means carried by said body engageable with said side walls to adjustably secure said body relative to said table and said moistening member.

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