

Dec. 2, 1941.

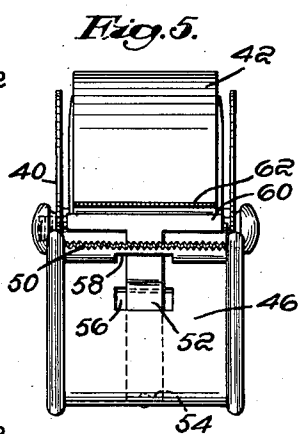
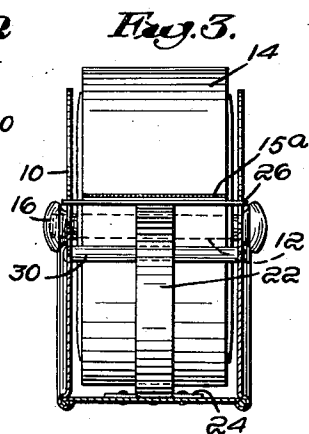
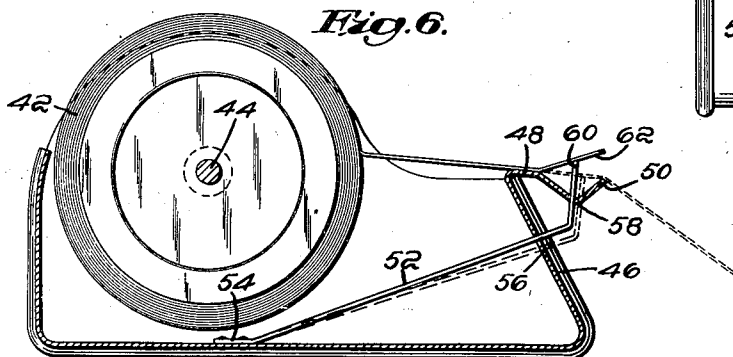
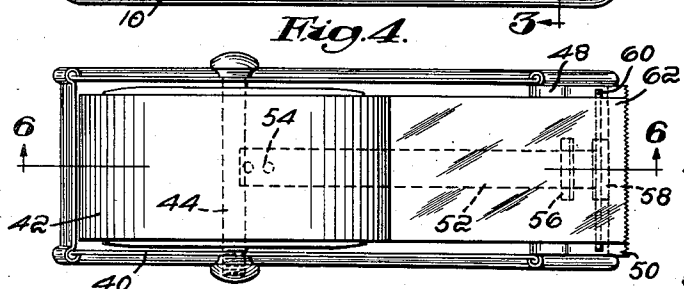
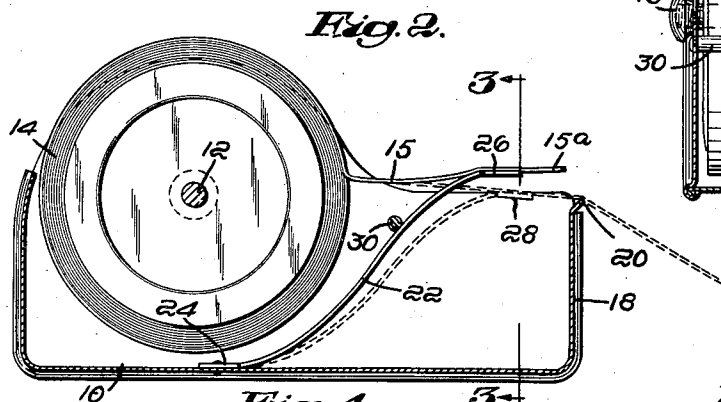
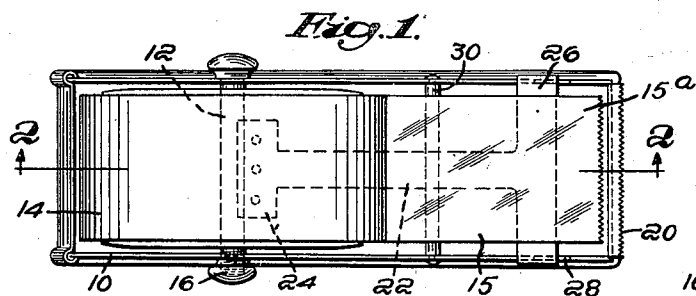
L. L. WITTER

2,264,425

TAPE DISPENSER

Filed Nov. 22, 1940

2 Sheets-Sheet 1



Inventor:
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2 Sheets-Sheet 2

Fig. 7.

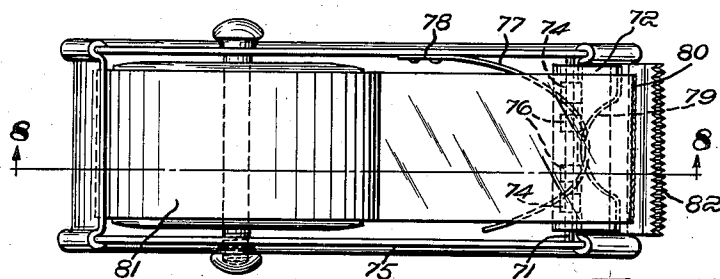


Fig. 10.

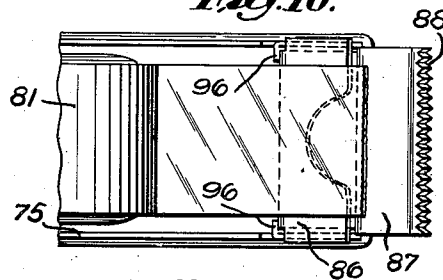


Fig. 8.

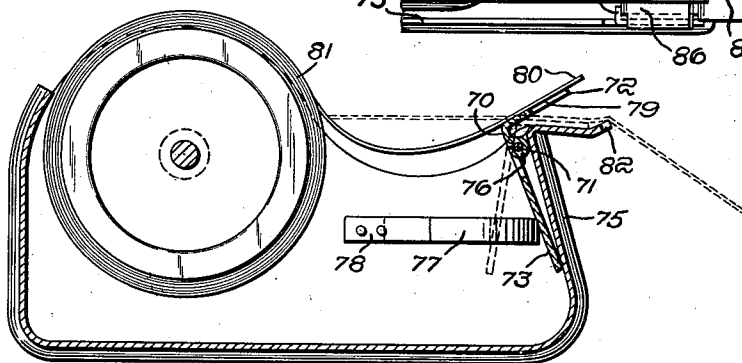


Fig. 9.

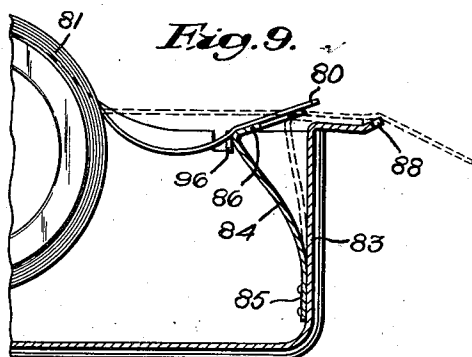
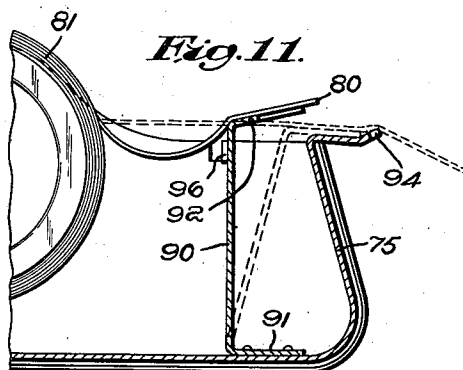


Fig. 11.



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UNITED STATES PATENT OFFICE

2,264,425

TAPE DISPENSER

Lawrie L. Witter, Auburndale, Mass.

Application November 22, 1940, Serial No. 366,653

10 Claims. (Cl. 164—84.5)

This application is a continuation in part of my copending application Ser. No. 328,038, filed April 5, 1940. This invention relates to tape dispensers and more particularly to dispensers for adhesive tape, such as "Scotch" tape, having one face coated with a dry adhesive which requires no moistening. The dispensers now in use for such tape employ a serrated knife across which the tape is severed, the dispensers also commonly employing a bar adjacent to the knife and against which the tape adheres while being torn off at the knife. When the tape is thus severed the remaining end thereof is left in close adhering contact with the bar and knife and the raising of this end to a position to be grasped for succeeding use is difficult and quite inconvenient. The primary object of my invention is the production of an improved dispenser constructed to leave this free end of the tape in position retracted or raised from the knife where it can be conveniently grasped for the succeeding operation.

My improved dispenser more particularly embodies a novel element operating in conjunction with the tape severing knife when the tape is severed therealong for retracting or raising the remaining free end of the tape to a position wherein it can be conveniently grasped between the thumb and finger for the next use. The invention can be embodied in different forms wherein this element either performs the single function of thus raising the end of the tape or performs the additional function of serving as a tape anchoring bar during the severing operation. The latter form embodies a tape-receiving and anchoring element mounted for movement toward and from the tape-severing knife and adapted in one position to anchor the tape adjacent to the knife while it is being torn off and in its other position to support the free end of the tape sufficiently remote from the knife and so suspended that it can be conveniently grasped for the next use.

These and other features of the invention will be best understood and appreciated from the following description of preferred embodiments thereof, selected for purposes of illustration and shown in the accompanying drawings wherein:

Fig. 1 is a plan view of a tape dispenser embodying one form of my invention,

Fig. 2 is a sectional view longitudinally therethrough on line 2—2 of Fig. 1,

Fig. 3 is a sectional view transversely therethrough on line 3—3 of Fig. 2,

Fig. 4 is a plan view of a tape dispenser embodying another form of my invention,

Fig. 5 is a front end elevation thereof,

Fig. 6 is a sectional view longitudinally therethrough on line 6—6 of Fig. 4,

Fig. 7 is a plan view of a further form of the invention,

Fig. 8 is a longitudinal sectional view taken on line 8—8 of Fig. 7,

Fig. 9 is a fragmentary sectional view of another form of the invention,

Fig. 10 is a fragmentary plan view thereof, and

Fig. 11 is similar to Fig. 9 but shows a somewhat modified construction.

Referring first to Figs. 1-3 of the drawings, 10 indicates the base or body of the dispenser which may be constructed of sheet metal or otherwise. Means such as a bolt 12 is provided for supporting a roll 14 of adhesive tape 15, one head 16 of the bolt being removable to permit withdrawal of the bolt and the insertion of a new roll. The end wall 18 of the body remote from the roll has its top edge serrated to form a severing knife or edge 20 for the tape.

Within the body 10 is a resilient element 22 of sheet metal anchored at one end to the bottom of the dispenser at 24. The element extends upwardly and forwardly therefrom to a position above and rearwardly of the teeth 20 and has integral therewith at its forward end a bar 26. This bar is slightly longer than the width of the dispenser and is arranged to be received within two recesses 28 in the side walls when the bar is depressed. The resilient action of the element 22 normally holds the bar in retracted and raised position with its front edge spaced from the knife, this position being determined by a stop herein illustrated as a pin 30 secured at its ends to the side walls.

The operation of the dispenser is substantially as follows. The operator grasps the free end 15a of the tape, lifts it free from the bar 26 and draws it forwardly the desired length from the roll. He then pulls it down and shears it off along the serrated edge 20 in the usual manner. This operation contacts the tape adhesively with the bar and depresses the bar into the stop recesses 28 wherein its front edge is more closely adjacent to the knife and wherein and whereupon the bar serves to anchor the tape while it is being torn off along the edge 20. The resilient action of the element 22 thereafter raises the bar about its fixed end 24 to the posi-

tion illustrated wherein the free end of the tape has been lifted free from the knife and is held in position to be conveniently grasped for the next dispensing operation.

It will be apparent that after the severing operation at least a portion of the end of the tape must be left free to be grasped for the next use and, while in the drawings I have illustrated the element 26 as having a straight front edge spaced from the tape severing edge 20, it will be understood that such specific construction is not essential to the employment of the invention, it being common practice to recess the front edge of such an element for the purpose of permitting a thumb and finger grip on the end of the tape, as illustrated for example in Patent Nos. 1,173,795 and 1,332,194. Locating at least a portion of the front edge of the tape anchoring element 26 spaced from the tape severing edge 20 when the element is in the depressed position leaves an overhanging end portion of the tape to be grasped between the thumb and finger, in the manner illustrated in broken lines in Fig. 3 of Patent No. 1,332,194. The spacing of the bar 26 from the knife will be such as best to serve the anchoring and severing operation and leave sufficient end of the tape suspended in a position to be freely grasped between thumb and finger.

In Figs. 4-6 of the drawings is illustrated a somewhat modified form of the invention. The body 40 may be conveniently constructed of sheet metal and arranged to receive a roll 42 of adhesive tape at 44. The end wall 46 of the body is bent to form a fixed tape receiving and anchoring bar 48 and a serrated tape severing edge 50, the metal sheet being bent downwardly between the bar and severing edge as illustrated in Fig. 6.

A resilient arm 52 within the body has one end anchored to the bottom of the body at 54 and the arm extends through a slot 56 in the wall 46. The free end of the arm outside the body extends upwardly through a slot 58 and carries a T-head 60 integral therewith. The arm normally raises the head 60 to the position illustrated in Fig. 6 wherein it holds the free end 62 of the tape above and free from the edge 50 where it can be freely grasped.

The operation is substantially as follows. The operator grasps the free end 62 of the tape (Fig. 6), lifts the tape free from the bar 48 and draws the desired length from the roll. He then pulls the tape down and shears it off along the teeth 50. This pulling down operation contacts the tape adhesively with the bar 48 and depresses the head 60 to the position shown in broken lines in Fig. 6. After the severing operation, the resilient arm raises the head 60 to the position shown in Fig. 6 wherein the free end of the tape has been raised from the knife and is ready to be conveniently grasped. The spacing between the bar 48 and the knife will be such as best to serve the anchoring and severing operation and leave sufficient end of the tape suspended in a position to be freely grasped between thumb and finger.

A further and preferred form of the invention is illustrated in Figs. 7 and 8. In this construction a member 70 pivoted to the base at 71 has a tape-receiving bar 72 at its upper end and integral therewith is a downwardly extending portion 73. The pivot pin 71 is supported by a pair of ears 74 struck from the base 75 and the member 70 has a pair of ears 76 struck therefrom and embracing the pin. The member 70 is normally

held in the position illustrated by a spring 77 fixed to the base at 78 and engaging the downwardly extending portion 73 of the member. The intermediate front portion of the bar 72 is also preferably cut away at 79 for permitting the tape to be grasped between thumb and finger in a manner well understood.

The severed tape normally rests on the bar 72 with the bar held in the raised position illustrated. The operator grasps the end of the tape 30 between thumb and finger, within the cutout area 79, lifts the tape from the bar, draws the desired length from the roll 81, and brings the tape down to the position shown in broken lines in Fig. 8. This action brings the tape into adhesive contact with the bar, swings the member 70 to the broken line position, and the end of the tape is then torn off on the knife 82. The spring 77 thereupon swings the member 70 back to the normal position illustrated wherein the tape end is ready again to be grasped for the next use.

In another form of the invention, illustrated in Figs. 9 and 10, a resilient element 84 is secured at its bottom end 85 to the front wall of the base 83 and its top end provides a tape receiving bar 86. The element is normally in the retracted position illustrated in full lines and when the tape is contacted therewith and drawn forwardly to the severing position, the element is drawn forwardly therewith to the broken line position wherein the front edge of the bar is adjacent to the knife 88. After the tape has been torn off on the knife, the element springs back to its normal position and supports the tape in readiness to be grasped for the next use. In this normal position, the front portion of the element extends upwardly whereby presenting the end of the tape for convenient grasping.

The form of invention illustrated in Fig. 11 is of similar construction but the bottom end of the element 90 is secured to the bottom wall of the base at 91 and preferably in such position that the recessed front portion of the bar 92 is tilted upwardly when the element is in the normal position. When the bar is drawn forwardly by the tape adhering thereto, the pivoting of the element about the fixed axis 91 causes the front portion of the bar to tilt downwardly and engage the base adjacent and in predetermined relation to the severing knife 94. Forward movement of the elements 84 and 90 is limited by engagement of the bars with the base of the knife and stops 96 are preferably provided for limiting rearward movement of the elements.

The bars 72, 86 and 92 can be cut out as shown at 79 in Fig. 7 if desired or this cut-out can be omitted and the bars spaced sufficiently from the knife to leave a portion of the tape extended beyond the bars as shown in Figs. 8, 9 and 11.

It will be understood that the drawings serve only to illustrate certain embodiments of the invention and that the same can be modified within the scope of the appended claims without departing from the spirit of the invention. For example, it may be quite possible and practicable to stamp the resilient tape lifting element from the metal sheet which forms the base or body, the element being left integral with the sheet at the fixed end.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. An adhesive tape dispenser comprising the

combination of a base, means thereon for supporting a roll of tape, a tape severing knife carried by the base in position to receive tape from the roll, a tape receiving and anchoring bar adjacent to the knife between the knife and the roll supporting means and having a surface of a width substantially commensurate with that of the tape for adhesively receiving and holding the tape while its end portion is being torn off at the knife, the arrangement being such that a substantial area of the extreme end of the tape is normally exposed at both faces for grasping between thumb and finger, and a metallic spring cooperating with the dispenser in position normally to lift said area of the tape free and away from the knife.

2. An adhesive tape dispenser comprising the combination of a base, means thereon for supporting a roll of tape, a tape severing knife carried by the base in position to receive tape from the roll, a tape receiving and anchoring bar adjacent to the knife between the knife and the roll supporting means and having a relatively broad surface for adhesively receiving the tape, the arrangement being such that a substantial area of the extreme end of the tape normally projects beyond the bar for grasping between thumb and finger, and metallic spring means cooperating with the bar normally to lift it and the end of the tape to a position elevated above the knife, the bar being depressible by pressure of the tape on said surface when severing the tape on the knife.

3. An adhesive tape dispenser comprising the combination of a base, means thereon for supporting a roll of tape, a tape severing knife carried by the base in position to receive tape from the roll, a tape receiving and anchoring bar adjacent to the knife between the knife and the roll supporting means and having a relatively broad surface for adhesively receiving the tape, the bar being so related to the knife that a substantial area of the tape is located between said surface and the knife while the tape is being severed at the knife, a tape lifting element between the bar and knife, and means normally raising the element to a position elevating said area of the tape free from and above the knife while the tape remains in adhesive contact with the bar, the element being depressible by pressure of the tape on said surface when severing the tape on the knife.

4. An adhesive tape dispenser comprising the combination of a base, means thereon for supporting a roll of tape, a metal sheet on the base shaped to provide a tape severing knife and a tape receiving and adhesively anchoring bar both in alignment with and positioned to receive tape from the roll, the bar being located between the knife and roll supporting means and spaced therefrom with a gap between the knife and bar, and means in the gap for lifting the end of the tape free from and above the knife while the tape remains in adhesive contact with the bar.

5. A dispenser for "Scotch" tape comprising the combination of a base, means thereon for supporting a roll of said tape, a tape severing

knife carried by the base in position to receive tape from the roll, a sheet metal bar carried by the base between the knife and roll supporting means and having a surface adapted to receive the tape in adhesive contact when the tape is brought to the knife, and metallic spring means normally holding the bar in retracted position with its front edge spaced from the knife for the purpose described but permitting movement of the bar to a position wherein its front edge is more closely adjacent to the knife, the bar being so related to the knife that a substantial area of the tape is located between said surface and the knife while the tape is being severed at the knife.

6. The tape dispenser defined in claim 5 in which the said bar is mounted on the base for swinging movement about a fixed position located rearwardly of the knife and in which the spring means normally pivots the bar upwardly about such position as an axis.

7. A dispenser for "Scotch" tape comprising the combination of a base, means thereon for supporting a roll of said tape, a tape-severing knife carried by the base in position to receive tape from the roll, and tape handling mechanism including a member mounted at a relatively remote point on the base and having a portion extending upwardly therefrom and providing a substantially inflexible surface between the knife and roll-supporting means for adhesively receiving the tape, the member being movable about said point to two positions locating the surface respectively adjacent to and more remote from the knife and said mechanism including metallic means normally holding the member in the said more remote position, and the member being so related to the knife that a substantial area of the tape is located between said surface and the knife while the tape is being severed at the knife.

8. A dispenser for "Scotch" tape comprising the combination of a base, means thereon for supporting a roll of said tape, a tape-severing knife carried by the base in position to receive tape from the roll, and an upwardly extending resilient element of sheet metal having its bottom end rigidly affixed to the base and having on its upper portion a surface of substantial area between the knife and roll-supporting means for adhesively receiving the tape and movable with the element to two positions locating the surface respectively adjacent to and more remote from the knife, the resiliency of the element normally locating said surface in the more remote position and the element being so related to the knife that a substantial area of the tape is located between said surface and the knife while the tape is being severed at the knife.

9. The dispenser defined in claim 8 plus stop means for limiting movement of the element toward the knife.

10. The dispenser defined in claim 8 wherein the element is so mounted that upon movement thereof to said more remote position the front portion of said surface tilts upwardly away from the knife, and stop means for limiting said movement of the element.

LAWRIE L. WITTER.