ADHESIVE TAPE DISPENSING APPLIANCES

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This invention relates to dispensing devices for adhesive tape.

Various forms of devices for dispensing pressure sensitive adhesive tape have been proposed. For example one such device comprises mounting means for supporting a roll of adhesive tape so that it is rotatable about its axis and a cutting edge whereby the tape can be severed and which also may serve to support the end of the adhesive tape remaining after a severing operation. In using such a device the end of the tape is held by hand and withdrawn to unwind the required length of tape from the roll. The tape is then severed on the cutting edge and the length of tape dispensed can be applied manually to an article, it usually being necessary to hold the tape at both ends in this last connection.

In another known device a roll of adhesive tape is similarly rotatably supported and is enclosed in a casing having a slot through which the tape can be withdrawn. A cutting edge is also provided near the slot and this type of dispensing device can either be used in the manner described above by withdrawing a length of tape, severing it and then applying it to an article, or by applying the short length of adhesive tape extending from the slot directly to an article, withdrawing the required length of tape from the roll and then severing the tape by altering the angle of application of the dispensing device. Even when this latter method of use of the device is employed, however, it is usually found to be necessary to employ some direct manual gripping means with side tape surfaces and in some cases the device tends to adhere to the bounding walls of the slot and then has to be freed manually. Moreover the tension applied to the tape in withdrawing further tape from the roll is great and if only the very short length of tape which is normally extending from the slot is applied to an article it is frequently found that the article cannot withstand the pressure that must be applied to it by the dispenser in order to ensure that said short length of tape adheres sufficiently firmly to withstand the aforesaid tension and also the friction at the application point of the tape. Hence it is frequently found to be necessary to withdraw a longer length of tape manually from the dispensing device before applying it to the article and withdrawing, by applying pressure to the device itself, the remaining required length of tape.

Thus with such devices it is found that manual contact with the adhesive tape being dispensed is usually necessary and such contact is undesirable due to the moisture and dirt transmitted to it by such contact, which may impair its adhesive properties, and due to the difficulty in controlling such tape manually, for example in applying a length of it to an article, which may lead to waste.

It is an object of this invention to provide an improved dispensing device for adhesive tape whereby the disadvantages indicated above of previously proposed such devices may be alleviated.

According to the invention there is provided a dispensing device for adhesive tape comprising means for rotatably supporting a roll of adhesive tape, a slide surface for the non-adhesive side of a length of tape, a slide surface for the non-adhesive side of a length of tape, from said roll, tape displacing means, actuating means coupled to said displacing means for displacing said displacing means in first and second opposite directions and whereby said displacing means is urged towards said slide surface when being displaced in said first direction to enable said dispensing means to engage and withdraw tape from said roll along said slide surface, and whereby said displacing means is removed from said slide surface when being displaced in said second direction, and unidirectional restraining means for the tape such that tape can be drawn past said restraining means during movement of said displacing means in said first direction, but which holds said tape in its moved position during movement of said displacing means in said second direction.

Preferably said displacing means comprises two displacing members for the tape, one on each side of the restraining means and both coupled to said actuating means.

In accordance with an embodiment of the invention said dispensing device incorporates two piercing and cutting members for severing adhesive tape, further actuating means coupled to said piercing and cutting members for moving said members into the path of adhesive tape supported on said slide surface, and whereby said piercing and cutting members are close together when moved into said path so that tape held under tension is pierced by said members at a position intermediate of its width, and said piercing and cutting members are moved apart whilst in said path so that pierced tape is severed across its width by said members.

It has been found that by employing a cutting edge of conventional type to sever the tape frequently the tape adheres to the edge and moreover it is necessary to apply a force to the tape in order to sever it which may be undesirably large. It has been proposed to employ cutting blades which perform a scissors action and cut the tape across its width, but it has been found that when such an action is employed frequently one of the blades becomes attached to the adhesive side of the tape, which has to be removed. By piercing the tape at a position intermediate of its width and then cutting across said width from said pierced position the problem of the adhesive side of the tape becoming attached to the cutting members can be greatly reduced.

In order that the invention may be clearly understood and readily carried into effect it will now be more fully described with reference to the accompanying drawings, in which:

FIGURE 1 is a section through an adhesive tape dispensing device according to one embodiment of the invention,

FIGURE 2 is a part sectional fragmentary view of the device of FIGURE 1, on an enlarged scale.

FIGURE 3 is a sectional view taken along the line III—III of FIGURE 2.

FIGURE 4 is a top elevation of a part of a tape dispensing device according to a modified embodiment of the invention.

FIGURE 5 is a side elevation of part of the device of FIGURE 4, and

FIGURE 6 represents a part modification to the embodiment of FIGURE 1.

In the embodiment illustrated in FIGURES 1 to 3 the device comprises a pair of spaced parallel side plates 1, the nearside plate 1a having been omitted from FIGURES 1 and 2 to show the parts of the device mounted between the plates. The two plates 1 are held in their spaced parallel relationship by means of suitable coupling members, for example incorporating rivets. Each plate 1 comprises a spool holder portion 1c, a body portion 1b and a hand grip portion 1a as shown in FIGURE 1. Mounted between the upper extremities, as viewed in the drawings, of the body portions 1b of plates 1 is an arm 2 predominantly of H-section, having parallel side members 2a joined by a web 2b which constitutes a slide surface for the tape
3,386,634

The arm 2 is rigidly coupled to the body portions 1b of the plates 1 in this embodiment by means of the clevis 4, some of which are visible in FIGURES 1 and 2. As can be seen most clearly in FIGURE 1, the arm 2 extends substantially from the spool holder portion 1a to beyond the remote end of the body portion 1b and the projecting end of said arm 2 is tapered as indicated in FIGURE 1. In this embodiment, the lowermost portions of the side member 2a are removed at said tapered end, and a corresponding portion 2c of the web 2b is curved upwardly and tapered to form a cutting edge 2d at its extremity. A further part of the lowermost portions of each of the side members 2a, namely that part which in FIGURES 1 and 2 is indicated between the lines 2e, 2e, is also removed and the slot thereby formed accommodates a shoe 13 of U-section having its base 13b in slidable contact with the web 2b, slidable movement of the shoe 13 with respect to said web 2b being permitted within the confines of the slot formed between the lines 2e, 2e. The U-shaped configuration of the shoe 13 is most clearly visible in FIGURE 3, and the side arms of this shoe are indicated by reference 13a in all FIGURES 1 to 3. As can be seen in FIGURES 1 and 2 the side arms 13a have corresponding inclined slots 13e for accommodating a pin 6a. As will become apparent hereafter, the pin 6a forms a disengaging member for the tape being dispensed.

A finger 6 of rectangular cross section, as can be seen most clearly in FIGURE 3, is disposed with its narrower cross sectional dimension across the space between the side plates 1. The finger 6 carries the pin 6a on its uppermost edge, as seen in the drawings, near the end of said finger 6 closer to the spool holder portion 1a. The other end of the finger 6 extends beyond the confines of the side plates 1, but not so far as the arm 2, and said other end has an upwardly directed projection 6b, which in this embodiment is substantially hemispherical. The projection 6b constitutes a tape displacing member and can be urged towards the web 2b. In the rest position of the device, shown in FIGURE 1, the projection 6b is displaced from the web 2b. The finger 6 has a substantially semi-circular projection 6c from its lower edge arranged concentrically to the pin 6a and said finger 6 is apertured concentrically with said semi-circular projection 6c, the aperture accommodating a pivot pin 7.

A manually operable lever forming actuating means for the device, is mounted between the plates 1 and comprises an outer sleeve 3 and an inner sleeve 4. The outer sleeve 3 projects from the plates 1 near the grip portion 3c so that said lever can be actuated in the manner of a trigger in a one-handed operation whilst gripping the portion 3c.

The other sleeve 3 is mounted on a fulcrum 5b secured to the body portions 1b of the plates 1, and the inner sleeve 4 is slidably mounted with respect to the outer sleeve 3 and projects from the upper end of said sleeve 3 as seen in FIGURES 1 and 2. The inner sleeve 4 has a bifurcated upper end 4a, as can be seen in FIGURE 3, which embraces the semi-circular projection 6c and carries the aforesaid pivot pin 7. The sleeve 4 is thus coupled to the finger 6 via said pivot pin 7. The finger 6 is urged by a compression spring 8 against the shoe 13, the spring 5 being retained between a closed end 3a of the sleeve 3 and the periphery of said projection 6c of finger 6 as can be seen in FIGURE 1.

A return spring 9 is provided for the lever comprising sleeves 3 and 4, the spring 9 being coupled at one end to a slidable saddle 8 on the part of the sleeve 4 which projects from the sleeve 3, and the other end of said spring 9 is fixed in position by being coupled to a rod 12, secured between the plates 1 and visible in FIGURE 1. The spring 9 is also passed over a guide roller 16 mounted on the axis to the plates 1. If desired, more than one, for example two, return springs may be provided, both coupled to the saddle 8, passing over the same or separate guide rollers, and being fixed at their other ends.

Also mounted between the body portions 1b of the plates 1 is a pawl 15, forming restraining means for the tape being dispensed, and which in the present embodiment is in the form of a strip of material having one end 15a pivoted on pivot pin 15c and having its other end 15b bifurcated as can be seen in FIGURE 1. The extremities of the bifurcated end 15b are urged towards the web 2b by means of a spring 15f, and the finger 6 extends between the forks of said bifurcated end 15b. The arch formed by the forks of said bifurcated end 15b conveniently acts as a stop for finger 6 as will become apparent hereafter.

A saddle 1d is mounted between the spool holder portions 1a and is detachable from said portions 1a so as to be suitable for carrying a spool of adhesive tape to be dispensed. Moreover, as can be seen in FIGURES 1 and 2 a closure member 14 may be provided where indicated substantially to enclose the space between the plates 1.

In order to use the device described above a length of adhesive tape, indicated by reference 16, is unwound from a spool of tape and is applied between the pin 6a and the base 13b of the shoe 13 and then directed along the web 2b between said web 2b and the pawl 15, the adhesive side of the tape facing downwardly as viewed in the drawings. To facilitate the return of the tape into the device the end 16b of the tape may be adhesively connected to a thin strip of rigid material (not shown) which is threaded through the path required for the tape until the end 16b extends beyond the cutting edge 2d. The tape is then severed on said edge 2d to detach it from the aforesaid strip. The roll carrying the adhesive tape is then aligned with the spool carrying portions 1a of the plates 1 so that the spindle 1d can be inserted in apertures in said spool carrying portions 1a and through the roll. Alternatively the spindle 1d may be inserted through the roll and then applied to the spool carrying portions 1a by the provision of suitable radial slots (not shown) in said portions 1a. Once threaded as described above the adhesive tape is held in position on the web 2b by the pawl 15, but if desired guide members may be provided for the tape beyond said pawl 15. The adhesive tape 16 is then ready to be dispensed. The end 16b of the tape is applied with its adhesive side in contact with an article and the hand grip portion 3c is held in one hand. One or more fingers of this hand are applied to the lever comprising sleeves 3 and 4, for example the forefinger may be used for this purpose. The lever is actuated in the direction of the arrow in FIGURE 2 by dispensing a length of tape. This actuation of the lever causes a toggle action of the finger 6 by virtue of the pin and inclined slot connection 6a, 6c and the compressive coupling between finger 6 and shoe 13, and also displaces said shoe 13 and finger 6 in the direction indicated by the arrow in FIGURE 2, i.e. from right to left in the drawing. Initially the shoe 13 is at the extreme right hand end of the slot formed between lines 2e, 2e, and the pin 6a is at the right hand end of the slot 13c. This initial position is shown in FIGURE 1. Displacement of the lever applies a force to the finger 6, which causes said finger 6 to pivot in the clockwise direction and the projection 6b comes into pressing contact with the adhesive side of the tape. This occurs in the first part of said displacement and said displacement also initially causes the pin 6a to traverse the slot 13c to the other end thereof whereupon said pin 6a comes into engagement with the adhesive side of the tape 16. Continued displacement of the lever then displaces the finger 6 and with it the shoe 13 in the direction of the arrow in FIGURE 2, this displacement being limited by the shoe 13 bearing against the end of the slot formed between lines 2e, 2e. During this displacement the projection 6b and the pin 6a being in contact with the adhesive side of the tape 16 displace said tape 16 by a corresponding amount, causing a length
of tape to be drawn past the pawl 15 and withdrawn from the spool. In FIGURE 2 the lever, finger 6 and shoe 13 are shown at an intermediate position during displacement.

The lever is subsequently released whereupon it returns to its initial position by means of the return spring 9. Initially release of manual pressure on the lever removes the pressure on finger 6 causing said finger 6 to pivot in the anti-clockwise direction whereby the projection 6d moves away from the web 2b and so no longer applies a pressure on the tape 16. This anti-clockwise pivotal movement of the finger 6 is limited by engagement of said finger 16 on the arch between the forks of the bifurcated end 15b of the pawl 15. The action of the return spring 9 causes the pin 6a to move from left to right in the slot 13c, thereby releasing the pin 6a from its pressing contact with the tape, and causes the shoe 13 and finger 6 to be returned to their initial positions. During the return of shoe 13 and finger 6 to the initial position, the pin 6a and projection 6b, being released from their pressing contact with the tape 16, do not displace said tape 16 in the reverse direction, said tape being held in its withdrawn position by the pawl 15. The lever comprising sleeves 3 and 4 can be actuated subsequently to withdraw further lengths of tape 16 until the required length is obtained. The tape 16 may then be severed by orientating the device so that the cutting edge 2d is applied to the tape 16 to sever it.

If the lever comprising sleeves 3 and 4 is actuated through an angle smaller than its largest permitted angle the shoe 13 is displaced by a distance less than that permitted by the slot defined by lines 2e, 2a. Thus a shorter length of tape is withdrawn from the spool. In this way, by controlling the angle through which the lever is actuated the length of tape dispensed may be regulated up to a maximum length corresponding to the maximum possible displacement of said lever.

In order to facilitate the threading of adhesive tape 16 through the path required for said tape in order that the device described above may be used to dispense said tape, the device may be modified by providing a hinged panel in one of the side plates 1 which can be displaced to provide access to the shoe 13. By way of example said shoe 13 may be provided with a further slot communicating with the slot 13c and leading to the lowermost extremity of each sleeve 13b so that the pin 6a may be removed from the slot 13c whilst the tape 16 is being applied to the device, by depressing the sleeve 4, and then introducing into said slot 13c over the tape 16.

In a modified embodiment of the invention the cutting edge 2d is replaced by a cutting mechanism comprising means for piercing the tape at an intermediate position of its width with a pair of piercing and cutting members and for displacing said members away from each other to sever the tape across its width. A tape dispensing device having such cutting mechanism is illustrated in FIGURES 4 and 5 in which parts of the device which correspond to parts of the device of FIGURES 1 to 3 are given the same reference numerals. The device is similar to that of FIGURES 1 to 3 except that the end of the web 2b of arm 2 is not turned upward and tapered to form a cutting edge. Instead the side members 2a are provided on their exterior surfaces with extenders plates 20 which extend beyond the end of the web 2b and may be tapered as indicated in FIGURE 5. The extension plates 20 carry at their free ends between them a pin 21 on which is mounted a roller 22, the roller 22 being spaced from the end of the web 2b as shown.

A pair of levers 23 one on each side of the plates 1 as shown are mounted on a common fulcrum 24 which passes through the plates 1 and is each provided with a handle 25. The levers 23 are integral at their upper ends as viewed in FIGURE 5 forming a cross member 23a which is most clearly seen in FIGURE 4 and which can bear against the spool carrying portion 1a of the plates 1 as shown, which portion forms a stop for the levers 23 as will become apparent hereinafter. The cross member 23a has coupled to it one end of a bar 26 which extends lengthwise above the arm 2 as viewed in FIGURE 5 and is coupled at its other end to a slide 27. The slide 27 is urged towards the right hand end of the arm 2 by means of a tension spring 28 coupled at one end to said slide 27 and at the other, for convenience, as can be seen in FIGURE 5. The slide 27 is shown mounted between the plates 1 above the web 2b as viewed in FIGURE 5 serves as a stop for movement of the slide 27 from left to right. The bar 29 also pivotally supports one end of a pair of piercing and cutting members 30 each of which is in the form of a rod having a downwardly turned free end 30a which is tapered to a point and arranged to lie substantially over the space between the end of the web 2b and the roller 22. The rods 30 are tensioned, for example by spring means not shown, so that the ends 30a are urged together. The slide 27 contains a pair of grooves one on each side thereof which are arranged to accommodate the rods 30, said slide 27 having a central portion 27a which resides between the rods 30. This can be seen most clearly in FIGURE 4. The rods 30 have oppositely directed projections 30b which in the initial position of the cutting mechanism, shown in FIGURE 4, lie just to the left of the central portion 27a of slide 27. In order to use the cutting device, when the required length of tape has been dispensed in the manner hereinbefore described with reference to FIGURES 1 to 3, the device is held with the non-adhesive side of the tape passing over the roller 22 and in engagement with the web 2b and so that the tape is under tension. The levers 23 are then actuated employing one of the handles 25 to pivot said levers anti-clockwise about the fulcrum 24. This may be effected by a finger or fingers of the hand holding the hand grip portion 1c. Initially, due to the effect of the tension spring 28, the slide 27 is held in engagement with the web 2b and so that with the rods 30, is held inclined upwardly from the arm 2 as can be seen in FIGURE 5 so that the cutting ends 30a of said rods 30 are spaced from the tape 16 and are close together. The first part of the pivotal movement of the levers 23 causes the bar 26 to pivot the slide 27 about the bar 29 thus moving the ends 30a of rods 30 into engagement with the tensioned tape 16 and causing said ends to pierce said tape intermediate its width. Pivotal movement of the slide 27 is stopped when said slide and the rods 30 bear against the top surface of the web 2b, or other stop means provided on said surface. Thereafter further actuation of the levers 23 in the same direction moves the slide 27 against the action of the spring 28 from right to left along the arm 2. This causes the central portion 27a of the slide 27 to come between the projection 30b on the rods 30 thereby urging said rods 30 apart so that the cutting ends 30a are also moved apart and sever the tape 16 across its width. When the levers 23 are released the spring 28 returns the slide 27 to its initial position. At first the slide 27 moves from left to right along the web 2b thereby allowing the cutting ends 30a of the rods 30 to come together again, this movement of the slide 27 being terminated when the slide 27 reaches the bar 29. Thereafter continued action of the spring 28 causes the slide 27, and with it the rods 30, to pivot about the bar 29 in the clockwise direction until the cross-member 23a of the levers 23 bears against the spool carrying portion 1a of the plates 1. This is the initial position of the cutting mechanism as shown in the drawings.

In a further modified embodiment of the invention, the form of pin 6a and its attachment to finger 6 may be advantageously modified from that described above with reference to FIGURES 1 to 3. Such an embodiment is illustrated in FIGURE 6 which shows pin 6a rotatably coupled, rather than fixably secured, to the finger 6 by pass-
3,386,634

ing through a hole made in an upward projection 6d from the rear end of finger 6. In addition, the pin 6a is provided with roller means 6e on each side of projection 6d, the rollers in question preferably being of coil spring or like form, as shown in FIGURE 6. The radial extent of the roller means 6e exceeds that of the projection 6d so that the latter does not contact the tape during a tape feeding operation.

Regarding the advantage of this further embodiment: the roller means provide a smoother and facilitated release action from the tape when spring 9 is operating by virtue of rolling action, and this is enhanced with use of coil form compared to sleeve form roller means. Naturally, it is not essential for this action that both the pin 6a be rotatable in finger 6 and the roller means 6e on the pin 6a, but the latter facilitates assembly and the former is useful for other purposes.

Concerning this last point of pin 6a being journalled, or rather removably located in finger 6, this is useful in connection with yet further arrangements in accordance with the present invention whereby the lower or actuating part of the device can be connected with upper or slide parts of different width for use with tapes of respectively different widths. Thus a common trigger part can be removably connected with any of a set of slide parts and several of the parts involves removal of pin 6a.

Although the invention has been particularly described with reference to the specific embodiments thereof shown in the accompanying drawings various modifications may be made to said embodiments without departing from the scope of the invention as set out in the appended claims. For example, in one alternative construction, the effectively reciprocatory tape feed driving movement of pin 6a may be replaced by a pawl or stepping operation by use of a different element pivoting in holes in place of slots 13-15c.

I claim:

1. A dispensing device for adhesive tape comprising means for rotatably supporting a roll of adhesive tape, an arm, a sliding surface on said arm for the non-adhesive side of a length of tape from said roll, tape displacing means, actuating means coupled to said tape displacing means for displacing said displacing means in a first direction relatively to the slide surface away from said roll supporting means and a second direction opposite to said first direction and for urging said displacing means towards said slide surface when said displacing means is being displaced in said first direction in that said displacing means can engage and withdraw tape along said slide surface from said roll, and for removing said displacing means from said slide surface when said displacing means is being displaced in said second direction, unidirectional restraining means for the tape, and means urging said restraining means towards said slide surface so that said restraining means can engage tape on said slide surface with such a pressure that tape can be drawn past said restraining means by the displacing means during displacement of said displacing means in said first direction, but said tape is held in its moved position and detached from the displacing means by the restraining means on displacement of said displacing means in said second direction.

2. A dispensing device according to claim 1 comprising two displacing members in said displacing means, said actuating means coupled to both displacing members, one displacing member on one side of said restraining means and the other displacing member on the other side of said restraining means.

3. A dispensing device according to claim 2 comprising a U-shaped shoe, a base and opposed side arms of said shoe, the base mounted to slide along said slide surface in said first and second directions, stops limiting the sliding movement of said base along said slide surface, a corresponding slot in each of the side arms of said shoe inclined to said base, an elongate member forming one of said displacing members and having its different end portions engaged in respective ones of said slots, means urging said pin to the end of said slot nearer said base when said shoe is in displacement in said first direction, so that when adhesive tape is applied between said base and pin said tape is gripped between said pin and base and said tape is moved with said shoe in said first direction, and means urging said pin to the end of said slot more remote from said base when said shoe is displaced in said second direction.

4. A dispensing device according to claim 1 wherein the displacing means comprises a finger, a replaceable pivot for said finger, and a portion of said finger, remote from said pivot, for engaging the adhesive side of adhesive tape supported along said slide surface, the actuating means being connected to the finger to effect displacement of the pivot and to lock the finger about said pivot.

5. A dispensing device according to claim 2 comprising a U-shaped shoe, a base and opposed side arms of said shoe, the base mounted to slide along said slide surface in said first and second directions, stops limiting the sliding movement of said base along said slide surface, a corresponding slot in each of the side arms of said shoe inclined to said base, a finger, forming a displacing member, a replaceable pivot for said finger, a portion of said finger, remote from said pivot, for engaging the adhesive side of adhesive tape supported along said slide surface, an elongate member carried at an intermediate portion thereof by said finger near said pivot and having its end portions engaged one each in said slots, means urging said portion of said finger towards said slide surface and said elongate member to the ends of said slots nearer said base when said shoe is being displaced in said first direction, so that when adhesive tape is supported on said slide surface and between said base and elongate member said tape is engaged by said portion of said finger and is gripped between said elongate member and base so that said tape is moved with said shoe and finger in said first direction, and means removing said portion of said finger from said slide surface and urging said elongate member to the ends of said slots remote from said base when said shoe is being displaced in said second direction.

6. A dispensing device according to claim 5 wherein said elongate member end portions carry roller means for engaging the adhesive side of adhesive tape supported along said slide surface.

7. A dispensing device according to claim 5 comprising a lever carrying said pivot and means urging said finger compressively against said shoe.

8. A dispensing device according to claim 7 comprising spring means urging said lever to carry said pivot in a direction away from said shoe is in engagement with the stop at the end of its movement in said second direction, the pin at the end of the slot remote from said base, and said finger remote from said slide surface.

9. A dispensing device according to claim 8 comprising a hand grip, so that said lever can be actuated against said spring means by a finger of a hand holding said hand grip.

10. A dispensing device for adhesive tape comprising means for rotatably supporting a roll of adhesive tape, an arm, a sliding surface on said arm for the non-adhesive side of a length of tape from said roll, and a U-shaped shoe, a base and opposed side arms of said shoe, the base mounted to slide along said slide surface in a first direction relatively to said slide surface away from said roll supporting means and in a second direction opposite to said first direction, stops limiting the sliding movement of said base along said slide surface, a corresponding slot in each of the side arms of said shoe inclined to said base, an elongate member forming one of said displacing means and having its different end portions engaged in respective ones of said slots, means urging said pin to the end of said slot nearer said base when said shoe is in displacement in said first direction, so that when adhesive tape is applied between said base and pin said tape is gripped between said pin and base and said tape is moved with said shoe in said first direction, and means urging said pin to the end of said slot more remote from said base when said shoe is displaced in said second direction.
towards said slide surface and said pin to the end of said slot nearer said base when said shoe is being displaced in said first direction so that when adhesive tape is supported on said slide surface and between said base and said pin, said tape is engaged by said portion of said finger and gripped between said base and pin so that said tape is moved with said shoe and finger in said first direction, means removing said portion of said finger from said slide surface and urging said pin to the end of said slot remote from said base when said shoe is being displaced in said second direction, a bifurcated pawl, two arms and a bridge between the arms of said pawl, means urging the ends of said arms against said slide surface to restrain adhesive tape supported on said slide surface from movement in said second direction, said finger passing between said arms of said pawl and said bridge forming a stop for said finger when it is removed from said slide surface.

11. A dispensing device according to claim 1 in which the roll supporting means are displaced at one end of the arm and including a cutting edge at the end of said arm remote from said roll supporting means for severing dispensed adhesive tape.

12. A dispensing device according to claim 1 further comprising two piercing and cutting members for severing adhesive tape, further actuating means coupled to said piercing and cutting members for moving said members into the path of adhesive tape supported on said slide surface, means urging said piercing and cutting members together whilst said members are being moved into said path so that tape held under tension is pierced by said members at a position intermediate of its width, and means for urging said piercing and cutting members apart whilst in said path to sever pierced tape across its width.

13. A dispensing device according to claim 12, said piercing and cutting members each comprising an arm having a pointed cutting end, and means urging the cutting ends of said arms out of the path of adhesive tape supported on said slide surface.

14. A dispensing device according to claim 13 comprising a pivotal slide, a slidable coupling between said slide and said arm and means on said slide for urging said ends of said arms apart.

15. A dispensing device according to claim 14 comprising a lever coupled to said slide for pivoting said slide in a sense to move said ends of said arms into the path of adhesive tape supported on said slide surface, and for subsequently displacing said slide with respect to said arms to cause urging means to urge said ends apart.

16. A dispensing device according to claim 15 comprising return spring means for returning said slide to a position in which said ends of said arms are close together and urged out of the path of adhesive tape supported on said slide surface.

17. A dispensing device according to claim 9 further comprising two piercing and cutting members for severing adhesive tape, means urging said piercing and cutting members together, a lever coupled to said piercing and cutting members for moving said members into the path of adhesive tape supported on said slide surface so that tape held under tension is pierced by said members at a position intermediate of its width and for urging said piercing and cutting members apart to sever pierced tape across its width, and said lever disposed so that it can be actuated by a finger of a hand holding said hand grip.

References Cited

UNITED STATES PATENTS

1,200,003 10/1916 Marshall 226—162 X
1,650,556 11/1927 Weber 226—162 X
2,364,051 12/1944 Berridge 226—164
3,140,031 7/1964 Fitch 226—167 X

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