

Aug. 10, 1965

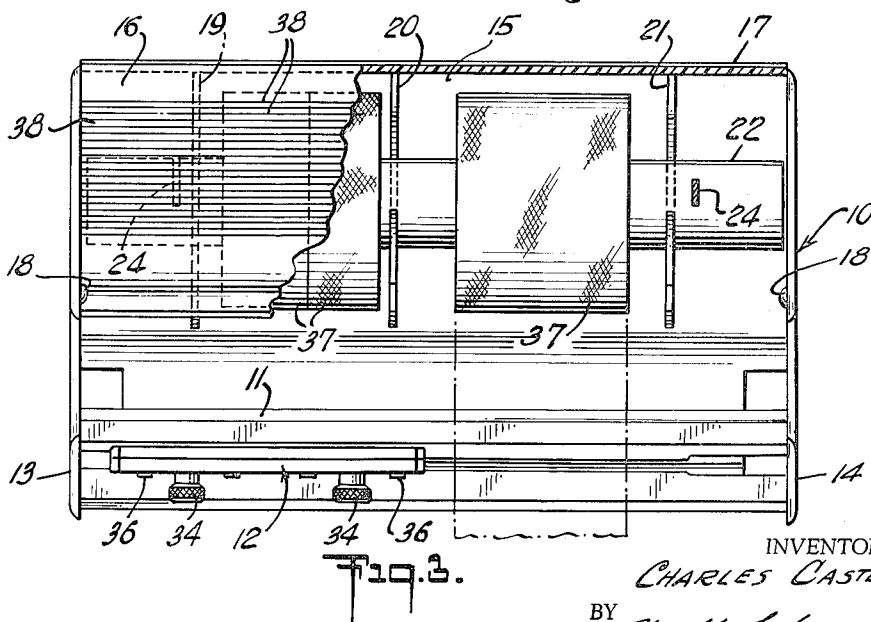
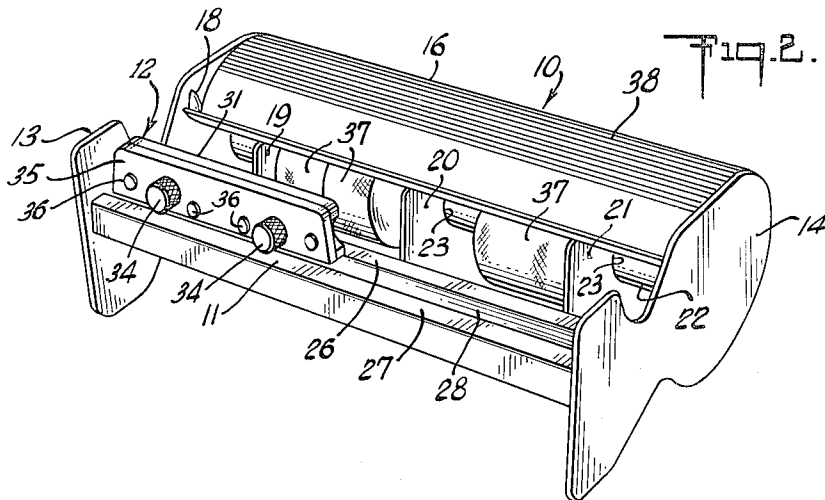
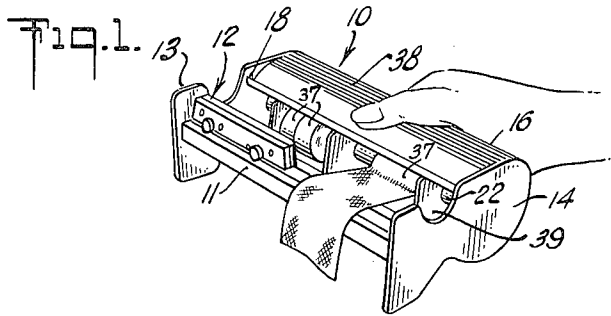
C. CASTELLI

3,199,394

DISPENSER FOR ADHESIVE TAPE

Filed Dec. 31, 1962

2: Sheets-Sheet 1



INVENTOR.
CHARLES CASTELLI
BY *Harold L. Warner*
ATTORNEY

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C. CASTELLI

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2 Sheets-Sheet 2

Fig. 4.

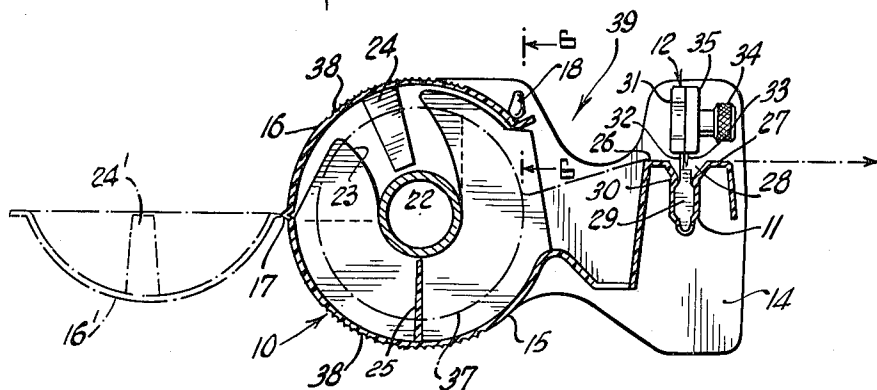


Fig. 5.

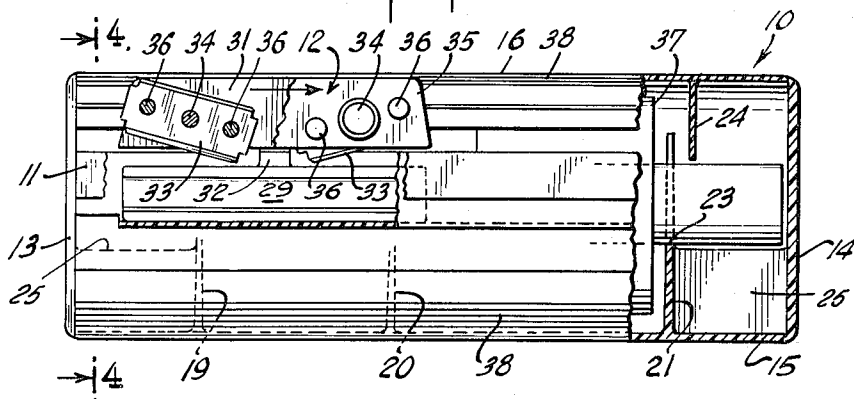


Fig. 6.

Fig. 6 is a cross-sectional view of a device. It shows a curved surface 14 on the right side. A horizontal layer 16 is positioned above a vertical layer 18. A hatched area is shown between the horizontal layer 16 and the curved surface 14. The bottom of the device is indicated by a wavy line 15.

INVENTOR.
CHARLES CASTELLI
BY *Harold L. Warner*
ATTORNEY

1

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DISPENSER FOR ADHESIVE TAPE

Charles Castelli, New Brunswick, N.J., assignor to
Johnson & Johnson, a corporation of New Jersey
Filed Dec. 31, 1962, Ser. No. 248,355

6 Claims. (Cl. 83-578)

The present invention relates to tape dispensers and more particularly to hand dispensers for dispensing and severing strips of adhesive tape from tape rolls.

Where pressure-sensitive adhesive tapes are used in substantial quantities, and particularly where surgical tapes are used, it is desirable to have the tape in a dispenser which can hold several rolls of tape of varying width and which contains a cutter for severing lengths of tape withdrawn from the dispenser. Such dispensers have generally been of substantial size. Also, tape dispensers for handling several rolls of tape have generally been built from separate parts which are constructed, fitted and assembled to form the complete dispenser. This manner of manufacture usually adds to the final cost of a product as compared with the cost of a product that can be made from a single casting or molding operation. It is an object of the present invention to prepare a dispenser for pressure-sensitive adhesive tape which will hold a plurality of rolls of adhesive tape and which is adapted to be held in the hand while removing and severing tape sections. A further object is to prepare a hand dispenser which will hold several rolls of tape, which dispenser is of such design that it can be molded, except for the cutter, all in one piece, such, for example, as by injection molding. It is a still further object of the present invention to make a molded hand dispenser which protects rolls of tape therein during use and which can be readily refilled with new rolls of tape.

Other objects and advantages of this invention will become apparent from the following description made in connection with the accompanying drawings wherein are set forth, by way of illustration and example, certain embodiments of this invention.

Referring to the drawings:

FIG. 1 is a perspective view showing a dispenser of the present invention grasped in the hand of a user;

FIG. 2 is a somewhat larger perspective view of the dispenser of FIG. 1;

FIG. 3 is a top plan view of the dispenser with a portion of the cover removed;

FIG. 4 is an end view of the dispenser taken along line 4-4 of FIG. 5;

FIG. 5 is a front view of the dispenser with portions cut away; and

FIG. 6 is a detail view taken along line 6-6 of FIG. 4.

Referring to the drawings, the dispenser can be considered as comprising a container portion 10, for holding and protecting rolls of tape, a cutter guide 11 and a cutter 12. The entire dispenser with the exception of the cutter 12 is molded at one time, as by injection molding, and may be formed of any suitable material which is adapted to molding techniques. Suitable materials of this type are, for example, polyethylene, polypropylene and plasticized polyvinyl chloride.

At the ends of the dispenser are vertically extending parallel end sections 13 and 14. The cutter guide 11 extends between the front portions of the end sections 13 and 14 and the rear portions of the end sections 13 and 14 form the closed ends of the container portion 10. The container portion 10 has a body section 15 and a cover

2

16 which is secured to the body with a molded hinge 17 formed of the same material as body 15 and cover 16 and molded simultaneously therewith. The body 15 and cover 16 when the cover is closed form a substantially cylindrically-shaped structure which extends between the rear portions of the upright end sections 13 and 14, the ends of the body 15 being integrally molded with the end sections 13 and 14 while the ends of the cover 16 are free so that the cover can be readily moved to open or closed position. Raised detents 18 on the inner sides of end sections 13 and 14 serve to keep the cover closed when in closed position until the same is again open.

The body section 15 has raised spacers 19, 20 and 21 all integrally molded therewith. These spacers serve to support a removable spindle 22 and also position the rolls 37 of tape so that sections of tape withdrawn therefrom can be readily cut by cutter 12. In severing tape, a tape section is withdrawn from a roll, secured to the cutter guide 11 by the adhesive on the tape and the cutter then moved across the tape, as hereinafter more fully described. Spacers 19 and 21 are spaced respectively from ends 13 and 14 to permit the cutter 12 to travel completely across a withdrawn section of tape. This leaves an appreciable space at each end of the body 15 between the raised spacers 19 and 21 and the ends 13 and 14. As the spindle 22 extends into this space, there would be occasions, particularly where inexperienced assistants may be refilling the dispenser with fresh rolls of tape, to place rolls of tape on the spindle in these sections. Such tape so placed, as previously indicated, could not be properly cut. Accordingly, raised ridges 25 are provided at each end of the body 15. These raised edges which extend between the raised spacers 19 and 21 and the adjacent end sections 13 and 14 make it impossible to insert a roll of tape in these sections.

In removing and severing a section of tape, tape is withdrawn from a roll 37 in the container, the withdrawn section of tape being drawn across cutter guide 11 and the pressure-sensitive adhesive-coated underside secured to the top of ridges 26 and 27. The cutter 12 is then moved across the tape, the cutter blades, which extend down into the slot between the tops of ridges 26 and 27, severing the tape as the cutter passes across the same. The severed tape section is then removed from where it is adhered to the top of ridge 27. The other end of the severed piece of tape remains secured to the top of ridge 26 where the same can be grasped for withdrawing another strip of tape. The vertically-extending ends 13 and 14 are accordingly each provided with depressions or cut-out areas 39 to enable one to more readily insert his finger under the edge of a tape end secured to the top of ridge 26 for grasping the same preparatory to withdrawing another strip of tape.

Raised spacer 20 is spaced from end 14 a distance slightly greater than the over-all length of cutter 12 and is spaced from end 13 a distance at least as great. By this spacing the cutter can always be moved out of the way to permit tape to be withdrawn.

Each of the raised spacers 19, 20 and 21 has formed therein a slot 23 in which the spindle 22 rests. The edges of the slots 23 are curved away from the front of the dispenser, as best illustrated in FIG. 4, to maintain the spindle in the slot while tape sections are being withdrawn.

The raised spacer 20, as illustrated in the drawings, is not midway between spacer 19 and spacer 21. This provides a space between spacer 20 and spacer 19 sufficiently wide to receive a relatively wide roll of surgical tape.

3

The remaining space between spacers 20 and 21 may then be used to contain narrower rolls. By this arrangement, a compact hand dispenser is provided which can contain a number of tape rolls of different sizes, both wide and narrow.

The cover 16 is provided with downwardly extending projections 24 which are of such length as to terminate just above the spindle 22 when the cover 16 is in closed position. This is best illustrated in FIG. 4 wherein the cover is shown in solid lines in closed position and in dotted lines in open position. In the open position, the cover and projections are designated respectively 16' and 24'. These projections 24 are positioned one at each end of the cover and spaced with respect to the cover ends so as to project over that portion of the spindle 22 that extends beyond the spacers 19 and 21. The projections 24 prevent the spindle 22 when the cover 16 is closed from coming out of the slots 23, even when the dispenser is inverted during handling. Both the outer surface of the cover 16 and the outer surface of the body portion 15 are provided with ridges or other roughening 38 to provide a better grip for one using the dispenser.

As previously stated, the slide portion 11 extends between the front portion of the end sections 13 and 14 and is integrally formed therewith. The cutter guide 11, as formed, contains two raised ridges 26 and 27 with a channel 28 between. The ridges and channel extend from one end section 13 to the other end section 14. The cutter 12 is essentially the same as the cutter disclosed in co-pending application Ser. No. 731,658 to issue January 1, 1963 as Patent No. 3,071,034. The cutter comprises a slide section 29 and a blade holding section 31 connected by a relatively narrow neck 32. The slide portion 29 of cutter 12 is adapted to be inserted into the channel 28 and maintained in the channel between the ridges 26 and 27 during the normal tape dispensing and cutting operation. The upper portion 30 of the channel 28 is somewhat narrower than the main portion thereof so that the slide section 29, which is wider than the upper portion 30 of the channel, will be maintained in the channel until it is desirable to remove the same. As the plastic material of which the dispenser is made is flexible in nature, when the slide section 29 is inserted or removed from the channel, the sides of the channel flex outwardly to permit the slide section 29 to be passed through the narrow upper portion 30.

The blade holding section 31 of cutter 12 contains cutting elements 33, such as conventional razor blades. When replacing the razor blades, the cutter 12 is removed by lifting the slide portion 29 out of the channel 28. Screw lugs 34 are then removed and the cover 35 lifted off the blade holding portion 31 to expose the razor blades 33. The blades are then removed and new blades placed on the projections 36 which are adapted to pass through the holes in the blade and align the same. The cover is then replaced and the screw lugs again secured after which the slide section 29 is again inserted into the channel 28.

With a slidable cutter having cutting blades on an angle, as illustrated in the drawings, a smoother cutting operation is obtained because of the slanting surface of the cutter edge. However, there is a section near the ends 13 and 14 where tape would not be severed since the cutting edge in these sections would not extend down into the channel 28. As cutting is obtained by withdrawing a section of tape from a tape roll 23 across channel 28, adhering its adhesive surface to the top of raised ridges 26 and 27 and then moving the cutter 12 across the tape, any roll of tape placed too near to either of the end sections 13 or 14 would not be completely severed. It is important accordingly that the raised spacers 19 and 21 be spaced a sufficient distance from the end sections 13 and 14, as previously described, to obtain a complete cutting of the tape.

Having thus described my invention, I claim:

1. In a tape dispenser

4

a pair of end sections disposed parallel to each other, each end section having a rear portion and a front portion,

a cutter guide extending between and secured to the front portions of said end sections,

a tape container comprising a body section, a cover and the rear portions of said end sections,

a hinge connecting said cover to said body section, a plurality of spacers in said body section for positioning rolls of tape placed in said container, said spacers having slots therein for removably supporting a spindle thereon, means carried by said cover for maintaining said spindle in said slots when said cover is in a closed position, and

a cutter movable along said cutter guide for severing sections of tape.

2. A tape dispenser of claim 1 in which said means carried by said cover is at least one projection extending downwardly from said cover when said cover is in a closed position, said projection terminating slightly above said spindle.

3. In a tape dispenser

a pair of end sections disposed parallel to each other, each end section having a rear portion and a front portion,

a cutter guide extending between and secured to the front portions of said end sections,

a tape cutter adapted to move on said cutter guide,

a tape container comprising a body section, a cover and the rear portions of said end sections,

a flexible hinge connecting said cover to said body section,

a first spacer spaced from one of said end sections,

a second spacer spaced from the other of said end sections, and

a third spacer positioned between said first and second spacers, the distance between said third spacer and each of said end sections being slightly greater than the length of said cutter, said spacers having slots therein for supporting a spindle,

and a projection carried by said cover and extending downwardly therefrom to maintain said spindle in said slots when said cover is closed,

said projection being positioned with respect to said spacers and said end sections so that said projection extends downwardly into the space between one of said first and second spacers and the end section adjacent thereto.

4. A tape dispenser of claim 1 in which said cutter guide comprises a pair of parallel spaced flexible ridges and in which said cutter has a slide section adapted to be inserted between said ridges to removably hold said cutter on said cutter guide.

5. A tape dispenser of claim 1 in which said cutter guide comprises a pair of parallel flexible spaced ridges containing a valley in between, said valley narrowing at the upper portion thereof, and in which said cutter has a slide section and a blade holding section connected by a narrow neck, said slide section being adapted to be inserted between said parallel ridges into said valley and said neck extending upwardly through said narrow upper portion of said valley.

6. A tape dispenser of claim 3 which comprises a first projection carried at one end of said cover, a second projection carried at the other end of said cover, said projections extending downwardly when said cover is closed and being spaced with respect to said end sections and said spacers so that one of said projections extend downwardly between said first spacer and the adjacent end section and the other of said projections extends downwardly between said second spacer and the adjacent end section when said cover is closed to secure said spindle in said slots.

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5 WILLIAM FELDMAN, *Primary Examiner.*EDWARD V. BENHAM, *Examiner.*