Oct. 7, 1969 S. DOMENY 3,470,781

POSITIVE FEED DEVICE FOR TAPE DISPENSER

Filed April 21, 1967

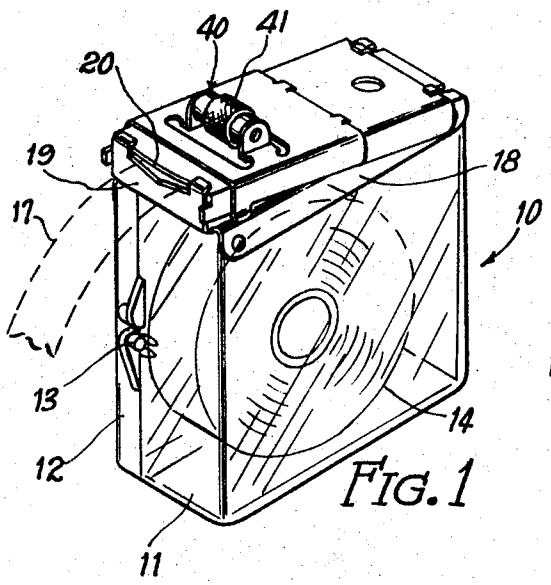


FIG. 1

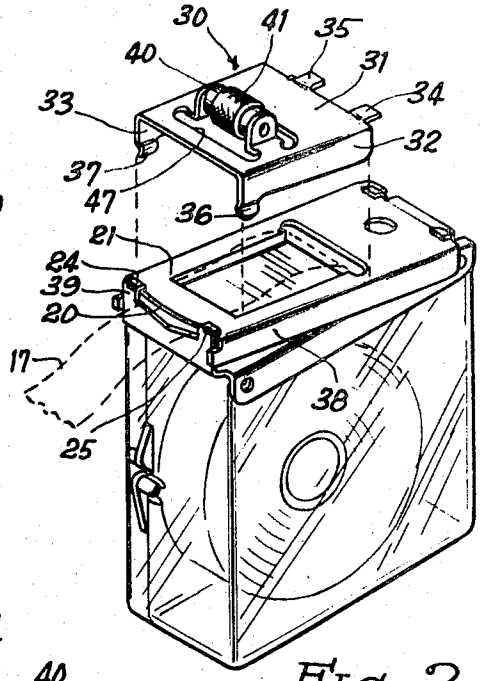


FIG. 2

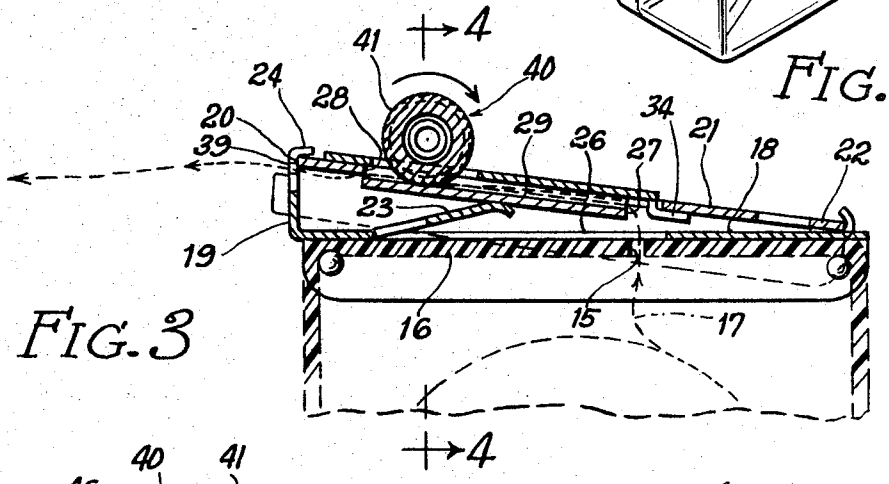


FIG. 3

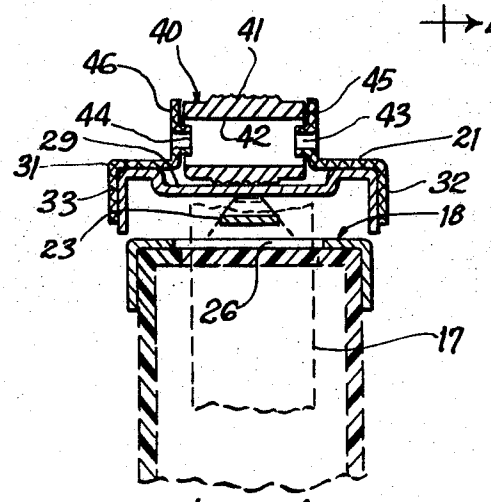


FIG. 4

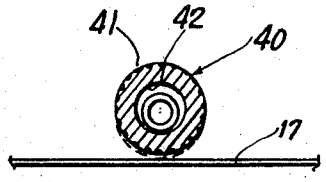


FIG. 5

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POSITIVE FEED DEVICE FOR TAPE DISPENSER

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U.S. Cl. 83—436 5 Claims

ABSTRACT OF THE DISCLOSURE

An attachment to a cutter-dispenser of slippery tape, with a thumb-operated knurled roller on the attachment for engaging and feeding the tape, the mounting means for the roller being loose enough to permit tape to be pulled out of the dispenser independently of the roller.

Summary of the invention

This invention relates to small, hand-held dispensers for slick or slippery tape made of plastic material such as polytetrafluoroethylene. The invention is particularly adapted for use with tape dispensers equipped with a hinged cutting device such as the one disclosed in my prior United States Patent No. 3,050,853.

Tape made of thin unsintered polytetrafluoroethylene has been found to be very useful as a thread sealant for pipe-joints, threaded fasteners, gages and fittings. In my aforesaid patent is disclosed a dispenser for such tape which is supplied with a cutter for severing the desired piece of tape from the roll in the dispenser. This prior dispenser and cutter relies upon physical contact by the thumb of the user upon the tape to feed the tape out of the dispenser and through the cutter. Because of the inherent slipperiness of polytetrafluoroethylene, a thumb feed was not always successful. However, when the end of the tape extended past the cutter so that it could be grasped by the user, the user, the tape could be readily and quickly pulled through the cutter, which is a desirable function where relatively long pieces are to be cut off.

Thus the principal object of this invention is to provide a positive feed device for a tape dispenser, which device nevertheless, releases the tape for optional dispensing thereof by pulling the tape from the exterior of the dispenser.

It is also an object of this invention to provide a releasable positive feed device for a tape dispenser, which device is in the form of a separate unit or assembly frictionally held on the dispenser for ready application thereto or removal therefrom.

These and other objects of this invention will become apparent from the following detail description thereof when taken together with the accompanying drawings in which

FIG. 1 is a perspective view of a tape dispenser to which the feed device of this invention has been applied;

FIG. 2 is an exploded perspective view of the dispenser and feed device of FIG 1;

FIG. 3 is an enlarged fragmentary side elevational view in section of the upper portion of the dispenser and feed device of FIG. 1;

FIG. 4 is a fragmentary front elevational view in section of the dispenser on the scale of FIG. 3 and taken along line 4—4 thereof; and

FIG. 5 is a side elevational view of a feed roller of the feed device showing the roller released from the tape.

Referring now to the drawings, the dispenser selected to illustrate this invention is shown at **10** and comprises a rectangular box **11**, having a removable cover **12** held thereon in a closed condition by a snap lock **13**. Within

said dispenser is a roll **14** of tape of slippery material such as polytetrafluoroethylene. For ease in determining when the roll is exhausted, the dispenser is made of a transparent plastic material. A slot **15** (FIG. 3) is formed in the top **16** of the box **11** through which the tape **17** is passed to the exterior of the box.

A cutter device is provided with box **11** to sever the tape that has been drawn out of the box. The cutter device is comprised of a flanged base stamping **18** which is sufficiently wide to embrace the upper end of box **11** and its cutter **12** and to be held frictionally thereon. The upturned end **19** on base stamping **18** has a V-notch formed in the upper edge thereof which functions as one blade of a scissors. The cooperating scissor blade is formed by the end **20** of a stamping **21** which is hinged at its opposite end **22** to base stamping **18**. A finger spring **23**, formed in base stamping **18** (FIG. 3), urges the scissor blades **19** and **20** apart, and a pair of bent-over tabs, **24**, **25**, disposed one on either side of blade **19**, act as a stop for blade **20**.

Base stamping **18** has an opening **26** communicating with slot **15** in box **11**, and hinged stamping **21** has a pair of transverse slots **27**, **28** disposed one at each end of a depressed area **29** formed in hinged stamping **21**. Tape **17** is threaded through slot **27** and then along depressed area **29** to and through slot **28**, after which it passes between scissor blades **19** and **20** to the exterior of the device.

The structure, substantially as described thus far, is disclosed in my aforesaid prior patent. In such structure tape is advanced toward the scissor blades **19** and **20** by having the user contact the tape with his thumb and then push the tape forward along the depressed area **19**. Because of the slippery nature of polytetrafluoroethylene, it is at times difficult to obtain sufficient friction grip on the tape to develop the forward force needed to advance the tape through the scissors. If some of the tape extends outwardly beyond the scissors, the extending end can be grasped and pulled out to the required length, which provides a fast and simple method of extracting tape from the dispenser. It is first necessary, however, to advance enough tape frictionally through the scissors to provide a piece that can be reached externally of the blade, and if this cannot be accomplished at the depressed area, considerable inconvenience results.

According to this invention, an automatically releasable positive gripping means is provided for tape **17** in the form of a clamp-on attachment, shown generally in FIG. 2 at **30**. Said attachment is comprised of a base stamping **31** having downwardly bent flanges **32**, **33** which frictionally embrace the sides of stamping **21**, so as to be retained thereon. A pair of rearwardly extending offset tabs **34**, **35** pass into slot **27** and serve to locate attachment **30** on stamping **21**. Resilient friction latches for locking attachment **30** to stamping **21** are provided at the ends of downwardly extending tabs **36**, **37** on the forward ends of flanges **32**, **33** which engage the bottom edges of the side flanges **38**, **39** of stamping **21** in the manner shown in FIG. 1.

The gripping means itself is a roller **40** (FIG. 4) made of hard material and having a central knurled region **41** on its cylindrical outer surface which is raised or of slightly larger diameter than the remainder of the roller. Said roller **40** has an axial opening **42** therethrough into which extend inwardly turned circular flanges **43**, **44** on upwardly struck spaced tabs **45**, **46** on stamping **31**. The diameter of opening **42** is appreciably larger than the outside diameter of the circular flanges **43**, **44**, so that although the latter serve as supports for roller **40** about which is can rotate, the roller can move freely a short distance transversely of its axis. Roller **40** is thus loosely mounted on circular flanges **43**, **44**.

Tabs **45**, **46** extend over an opening **47** (FIG. 2) in stamping **31** which, when said stamping **31** is mounted on pivoted stamping **21**, is directly over depressed area **29** along which tape **17** passes. Thus roller **40**, and particularly knurled region **41** thereof, is directly over tape **17**, and when the roller is pressed downwardly by the user's thumb, the knurled region is brought into contact with tape **17**. Rotation of roller **40** in a clockwise direction, as viewed in FIG. 4, by the user's thumb therefore, causes the tape to be advanced toward and through the cutter where the free end of the tape may be grasped and the tape then pulled through the cutter, if desired. Release of roller **40** renders it loose and it then interposes no resistance to the movement of the tape.

The roller **40** and its mounting are readily removed when it is desired to thread a tape initially through opening **27** over depressed area **29** and through opening **28**. In this event, the base stamping **31** is simply raised until the latching tabs **36**, **37** are released from the side flanges **38**, **39**, and then pulled forwardly to withdraw tabs **34**, **35** from opening **27**.

The single-piece construction of base **30** and its attaching and roller-supporting tabs results in a very inexpensive stamping which may be readily attached to a dispenser or omitted therefrom where tape of a more frictional character is to be dispensed. The roller **40** can be readily made of brass as a screw machine part, and in view of the softness of the tape, it will last indefinitely.

I claim:

1. A dispenser for tape comprising a container for the tape having an opening through which the tape is passed, a cover for the opening having an opening therein aligned with the opening in the container, means for securing the cover to the container, a movable shear blade hinged to the cover, and a stationary shear blade on the cover cooperating with the movable shear blade to sever a length of tape from said container, said movable shear blade having slots therein through which the tape is threaded to expose the tape, characterized in that means are provided on the movable shear blade over the exposed tape to engage the tape and feed said tape toward the stationary shear blade, said tape feed means comprising a roller adapted to contact the tape, means loosely rotatably supporting the roller on said feed means, and means for removably mounting the tape engaging and feeding means on said shear blade.

2. A dispenser as described in claim **1**, characterized further in that said roller supporting means comprises a base, and means on the sides of the base engaging the sides of said movable shear blade to hold said base on said movable shear blade, said base being provided with a tab along an edge removed from said shear blade and extending into a slot in the movable shear blade and under said movable shear blade to removably lock said base to said movable shear blade.

3. A dispenser as described in claim **1**, said loosely rotatably supporting means comprising a base, a pair of spaced upwardly extending tabs, said base having an opening therein between said tabs, opposed inturned protuberances on said tabs, said roller having an opening adjacent the protuberances to receive said protuberances and be supported thereon, said protuberances fitting loosely in said opening to allow said roller to move transversely of its axis toward and away from the tape through said opening between said tabs.

4. A dispenser as described in claim **3**, said opposed inturned protuberances on said tabs comprising circular flanges formed integrally with said tabs.

5. A dispenser as described in claim **1**, characterized further in that said roller supporting means comprises a base, and resilient holding means on the sides of the base engaging sides of the said removable shear blade to hold said base on said movable shear blade, said base being provided with a pair of spaced offset tables extending from the rear edge of the base into the slot in the movable shear blade to interlock the rear portion of the base with the movable shear slade.

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WILLIAM S. LAWSON, Primary Examiner

U.S. Cl. X.R.

83—437, 611, 649; 225—23

PO-1050
(5/69)

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3470781 Dated October 7, 1969

Inventor(s) S. DOMENY

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Col. 1, line 38, "the user" (second occurrence) should be deleted;

col. 1, line 53, "detail" should be --detailed--;

col. 2, line 11, "The" should be --An--;

col. 2, line 69, "is" should be --it--;and

CLAIM 5, col. 4, line 30, "tables" should be --tabs--.

SIGNED AND
SEALED
APR 28 1970

(SEAL)
Attest:

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Commissioner of Patents