Feb. 10, 1942. F. A. ANDERSON 2,272,628

TAPE DISPENSER

Filed June 14, 1941

Fig. 1

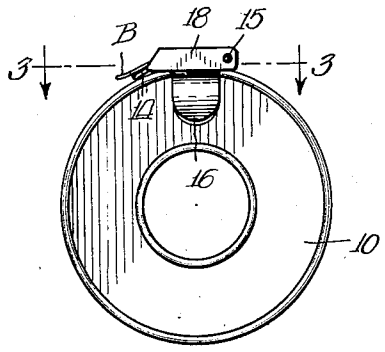


Fig. 2

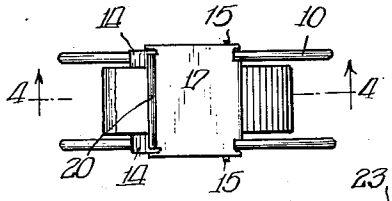


Fig. 3

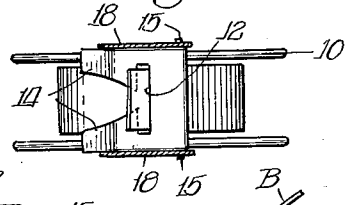


Fig. 5

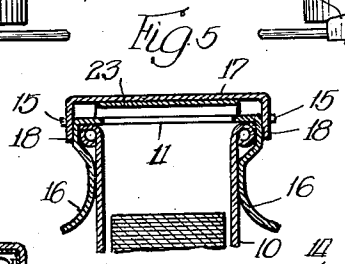


Fig. 4

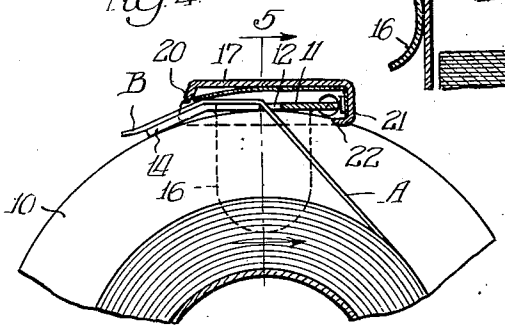


Fig. 6

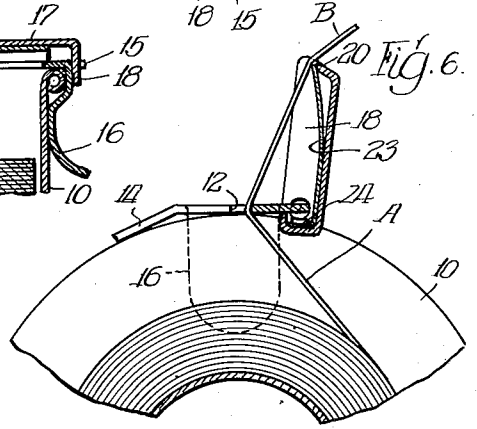


Fig. 8

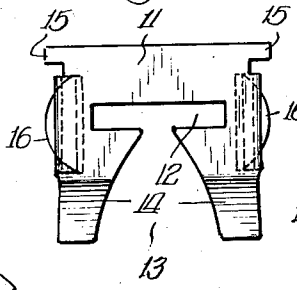


Fig. 9

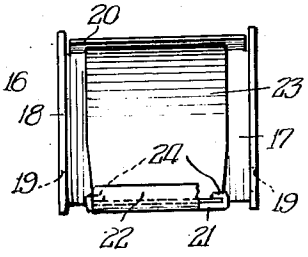
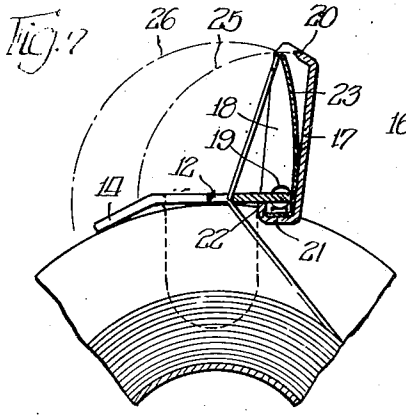


Fig. 7



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TAPE DISPENSER

Frank A. Anderson, Chicago, Ill.

Application June 14, 1941, Serial No. 398,017

7 Claims. (Cl. 30—126)

My invention relates to dispensers for adhesive tape, and particularly to an improvement on the construction shown in my Patent No. 2,203,073 dated June 4, 1940.

One of the objects of my invention is to greatly simplify the construction of a device of this character and to substantially reduce the cost thereof. The first cost is an important element in devices of this character, which are intended as an adjunct to a commodity that retails for a very low price.

One of the important improvements that has resulted in material lessening of the cost of manufacture, is that of simplifying the steps of assembly. In the device here disclosed, the assembling is accomplished with a minimum of labor and without the use of special tools.

One of the important points of advantage in the present construction is that the device is composed of but three parts, each a stamping. Thus the device is extremely light, flexible, simply and economically constructed and will operate for a long period of time without repairs or adjustment.

An important advantage is that by my new arrangement the cutting blade is not at any time in a dangerous position relative to the user. Even though the blade should accidentally swing open while the spool is being carried in the pocket, the blade will not be in position to cause injury by cutting.

My invention will be more readily understood by reference to the accompanying drawing; in which,

Fig. 1 is a side elevation of a device constructed in accordance with my invention and applied to a spool or reel of adhesive tape;

Fig. 2 is a plan view thereof;

Fig. 3 is a sectional plan view on the line 3—3 of Fig. 1;

Fig. 4 is an enlarged sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a sectional view on the line 5—5 of Fig. 4;

Fig. 6 is a view similar to Fig. 4 except that the cutting arm has been moved to elevated position and the adhesive tape is ready to be severed;

Fig. 7 is the same view as that of Fig. 6 showing the position immediately after the severing of the tape;

Fig. 8 is a plan view of the base or support; and,

Fig. 9 is a front elevation of the cutting arm separated from the base, this view serving to show the means of attachment of the leaf spring to the arm.

In the drawing a tape spool is indicated at 10, the spool having the usual annular sides which terminate in a rolled periphery. The dispenser or cutter of my invention is intended to snap over the periphery of the spool and to ride freely around the periphery thereof.

The dispenser comprises a base in the form of a plate 11 having a transverse slot 12 therein, open at one side by reason of the flaring notch 13 therein. The portions 14 alongside of the notch 13 are bent downward as indicated in Figs. 5 and 7 to lie against the rim of the spool. At the opposite end the blade is provided with side projections 15 which act as pivot points for the arm, about to be described. At the sides the base is provided with depending ears 16 suitably flared to facilitate the placing of the device on a spool. Preferably the base and associated parts are formed from a single piece of light gauge spring metal. The slot 12 and the flared opening facilitates the entrance of the tape into operative position without attempting to thread it through an opening.

The cutting arm of my device is in the form of a flat member 17 having side flanges 18 containing openings 19 at their lower ends to engage the pivot projections 15 on the base. It will be seen that by merely spreading the side flanges the parts may be brought into engagement, and as the arm will be composed of a single section of spring metal there will be no likelihood of disengagement of the parts. At its upper end the plate 17 has an angularly arranged flange 20 which terminates in a sharp cutting edge. The cutting flange is of less length than the height of the side flanges 18, thereby providing a shield at each side of the plate to prevent possible injury.

At the lower end of the arm 17 I provide a flange 21 having a rebent short flange 22 at its end. This construction provides a limit stop for the arm in its elevated or operating position as shown in Figs. 6 and 7. The channel thus formed serves also as a simple means for fixing the leaf spring 23 in position. The said spring has a flanged lower end fitting into the channel, and ears 24 are struck from the flange 21 and bent over the flange of the leaf spring. Of course, the spring may be riveted or otherwise held in place, the only requirement being that it shall be permanently and rigidly secured.

The spring 23 serves two purposes: When the arm is in lowered or locked position the side arms

18 frictionally engage the sides of the base with a rather firm engagement. As the arm is pressed into this position the spring is slightly compressed as shown in Fig. 4. When, however, the arm is pulled away, the spring acts to throw it towards its open position.

The other important function of the spring is illustrated in Figs. 6 and 7. When a strip of tape, indicated at A in Fig. 6, has been pulled out to the required extent, the tension exerted by the tape against the cutting arm will force the leaf spring into the position shown in Fig. 6. When the tape has been cut off by the blade 20 the spring will disengage the uncut section of tape from the blade leaving it free to fall back onto the base.

It will be noted on reference to Fig. 7 that since the arm which carries the blade pivots on a center substantially removed from the slot through which the tape is delivered, the return of the arm to its locked position results in a projecting end of tape, indicated at B in Fig. 4, ready to be grasped when the next section of tape is to be delivered. The arc of movement of the arm is indicated at 25—Fig. 7—while the arc of movement of the tape is indicated at 26. As the result of this simple arrangement there is always a projecting end of tape ready to be engaged. The user need pay no attention to the detail of lifting the cutting arm, since the pulling force necessary to separate the tape from the roll will raise the arm to the position of Fig. 6.

An important point of advantage in the use of the disclosed device is that even in open or raised position the knife blade is not in position to cause injury to a user. The blade in that position is arranged at an angle and is guarded at its two sides by side flanges.

I claim:

1. In combination, a base having an opening for tape, an arm pivoted on the frame and having a tape-cutting blade at its extremity, said blade being arranged at an angle to said arm, whereby when said arm is in vertical or operating position said blade is in a substantially horizontal position.

2. In a tape cutter, the combination of a base having an opening for tape, an arm on the frame pivoted for substantially 90° of movement, said arm having a blade at its end extending at substantially a right angle to the arm and located at the side of the arm within the included angle of movement of the arm, whereby when the arm is perpendicular to the base, the blade is substantially parallel thereto.

3. In combination, a base having an opening for tape, an arm pivoted on the frame and having a tape cutting blade at its extremity, said blade being arranged at an angle to said arm, whereby when said arm is in vertical or operating position said blade is in a substantially horizontal position, and a spring mounted for pivotal movement with the arm, said spring being adapted to be tensioned by the tape as it is pulled over and cut by the blade and acting to separate the inner end portion of the tape from the blade when an outer portion has been cut from the strip.

4. In a tape cutter, the combination of a base having an opening for tape, an arm on the frame pivoted for substantially 90° of movement, said arm having a blade at its end extending at substantially a right angle to the arm and located at the side of the arm within the included angle of movement of the arm, whereby when the arm is perpendicular to the base, the blade is substantially parallel thereto, and a spring mounted for pivotal movement with the arm, said spring being adapted to be tensioned by the tape as it is pulled over and cut by the blade and acting to separate the inner end portion of the tape from the blade when an outer portion has been cut from the strip.

5. A tape cutter comprising, in combination, a U-shaped frame providing a base and side arms adapted to pass over the periphery of a spool, said base having an opening for a strip of tape, a flat arm pivoted on the base and provided with a blade projecting angularly from the free end of the arm, and a curved spring tongue mounted on a common pivot with the arm and acting to free the tape from the blade after cutting.

6. A tape cutter comprising in combination, a frame providing a base, said base having an opening for the tape, an arm pivoted on the base and provided with a blade projecting angularly from the free end of the arm, side flanges on said arm overlying the ends of said blade and a curved spring mounted on a common pivot with the arm and acting to free the tape from the blade after cutting.

7. In a tape cutter, the combination of a base having a slot to receive a strip of tape, an arm on the frame pivoted for substantially 90° of movement, the pivot point of the frame being substantially removed from the slot, said arm having a blade at its extremity, said slot being located within the included angle of movement of the arm whereby when a length of tape has been severed by the blade and the arm returned to closed position, the uncut end of the tape will fold back and extend outside of the end of the arm to provide material to be grasped.

FRANK A. ANDERSON.