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F. MACHATE ET AL
TAPE DISPENSING PACKAGE

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Fig. 1.

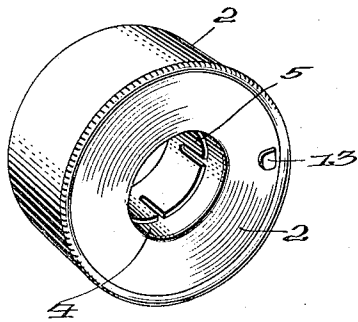


Fig. 6.

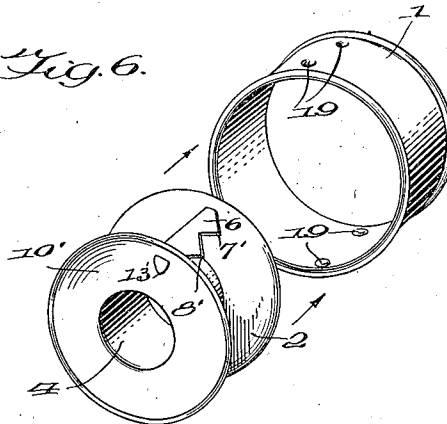


Fig. 2.

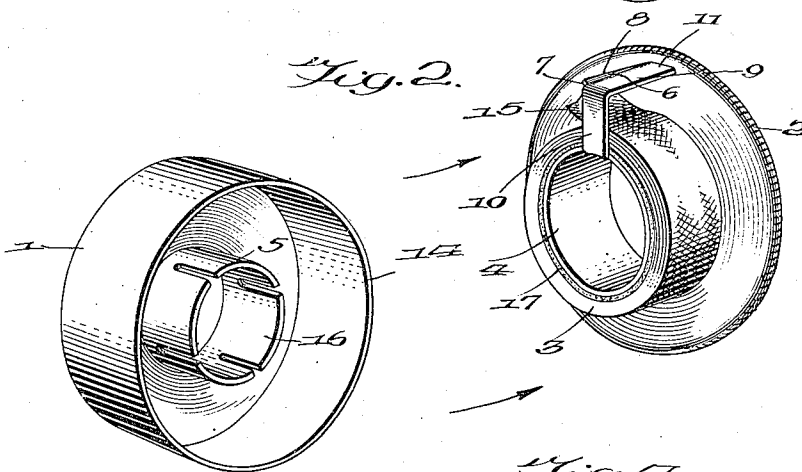


Fig. 3.

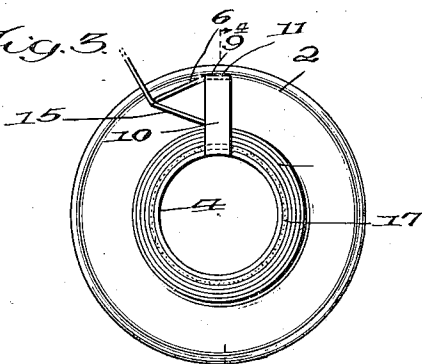


Fig. 4.

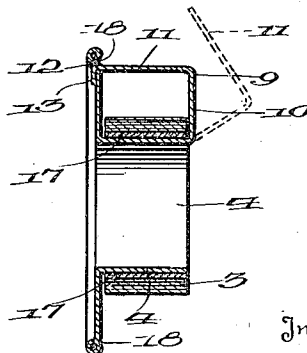
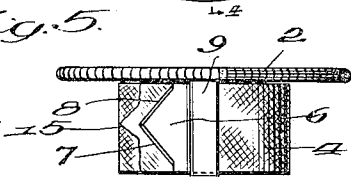


Fig. 5.



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TAPE DISPENSING PACKAGE

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5 Claims. (Cl. 206—52)

This invention relates to packages or containers for storing and dispensing roll or strip material such as adhesive or surgical tape and the like, and more particularly to containers employing cutting off devices for severing the material in desired lengths as dispensed from the roll.

Various types of containers and devices have been heretofore proposed for dispensing adhesive coated strips from a roll enclosed in the container, and severing the strip, but these devices are oftentimes unsatisfactory because the knives employed frequently become gummed up with adhesive and furthermore the adhesive sticks to the container walls thereby making it very difficult to catch up the severed roll end and continue feeding strips to the cutter. The cutter blades heretofore proposed for such container packages have been located on the exterior portion of the container and this construction necessitates the provision of an opening in the casing through which the adhesive strip must extend to engage the cutter. In handling surgical tape for example, tape containers having openings therein are unsanitary because the casings are always open and the contents are exposed to dust and dirt as well as the drying effect of the atmosphere. Furthermore, in containers heretofore proposed where the knife element is on the outside of the container the severed end of the strip frequently drops back into the casing with a result that it is very difficult to fish it out because of the adhesive characteristics of the material.

The primary object of the present invention is to provide a novel adhesive roll storage and dispensing package having a cutter attachment which shall be more efficient and satisfactory in operation than any similar devices heretofore proposed.

Another object of the invention is to provide a novel form of container having an attached strip cutter which shall handle the tape during the feeding and severing operation in an expeditious manner to obviate any danger of gumming up the knife or material sticking to the container walls.

Another object of the invention is to provide an adhesive-tape dispensing package of the character designated which shall be enclosed in a dust and moisture proof casing and also permit ready access to the tape and roll.

Another object of the invention is to provide a dispensing package of the character designated having a novel form of cutting off knife

having a blade which shall sever only from the back of the tape and also produce a free end of severed material which shall be accessible for the next feeding movement of the strip.

Another object of the invention is to provide a tape dispensing container of the character designated having a cutting blade which shall maintain the alignment of the material by engaging the strip at the mid portion and severing outwardly toward the edges thereof.

Another object of the invention is to provide a dispensing package of the character designated having a cutter blade which shall prevent bunching or disfiguring of the strip during the severing operation.

A further object of the invention is to provide a sheet metal adhesive tape container and cutter as an article of manufacture which shall be simple and durable in construction and reliable in operation to efficiently dispense and protect the contents in a proper, sanitary and usable condition.

These and other objects of the invention will be more manifest from the following specification and illustrated in the drawing.

In the drawing:

Figure 1 is a perspective view of a roll container package constructed and arranged in accordance with the present invention;

Figure 2 is a perspective view showing the telescopic relation of the roll supporting base and cover member;

Figure 3 is a view in elevation of the base showing the position of the knife severing a strip of tape;

Figure 4 is a sectional view on line 4—4 of Figure 3;

Figure 5 is a plan view of the arrangement shown in Figure 3, and

Figure 6 is a modification of the device shown in Figure 2 in which the roll support is in the form of a spool.

Referring to Figures 1 and 2 of the drawing, there is shown a preferred embodiment of a container package constructed and arranged in accordance with the present invention wherein cooperating annular sheet metal casing members 1 and 2 engage each other to form a dust and moisture proof casing for dispensing strip material, from a roll indicated by the numeral 3. The roll 3 is supported on the disc member 2 by an inwardly projecting annular hub member 4 which forms a component part of the package. This hub member is also adapted to receive a similar annular member 5 formed on

the casing member 1 which may be designated as a cover.

An important feature of the present invention is the provision of a novel form of knife 6 located entirely within the package container and adapted to sever any desired lengths of material from the roll in an efficient and expeditious manner. The severing operation is accomplished by rigidly mounting the knife 6 within the periphery of the roll supporting or casing members and adjacent to the peripheral surface of the strip, and merely pulling the strip against the knife. The knife 6 is preferably in the form of a blade having angularly disposed or V-shaped cutting edges 7 and 8 and mounted on or formed integrally with a supporting bracket 9. The bracket 9 is rigidly connected to the hub 4 and disc 2 by arm members 10 and 11 which are preferably formed integrally with the hub as shown in Figures 3 and 4. The important feature of this construction is that the base disc 2, hub 4 and cutter blade 6 together with the bracket 9 may be made from a single blank of sheet material and thereby provide a very rigid and durable roll retainer and cutter at a minimum cost.

The assembly operation of the commercial package embodying our invention is carried out as shown in Figure 4, wherein a roll of adhesive material 3 is assembled to the hub 4 and then the bracket shown in dotted line position is bent upwardly and over the roll so that the end shall project through an opening 12 in the disc 2 and be crimped over to form a retaining lip 13. This construction enables the bracket arm 10 to serve as a retaining guide for the roll and the arm 11 as a rigid support for the knife blade 6.

Another important feature of the particular knife structure is that when the strip is drawn in contact with the V-shaped blade, the point engages and pierces the mid-portion of the strip and causes the blades to sever the strip transversely toward the edges thereof. By commencing the severing at the mid-portion of the strip, creeping, bunching or otherwise disfiguring the strip is eliminated.

Another important advantage of the particular knife arrangement is that the free severed end 15 of the strip between the knife and roll hangs free of the knife so that by turning the roll slightly the free end is accessible for further feeding of the strip to the knife. If for any reason the severed end should adhere to the knife blade, it may be easily loosened by turning the roll on the hub, thereby eliminating any manual handling of the tape. Furthermore, after the tape is severed the free end may be removed from the proximity of the blade and thereby prevent any gummy substance from accumulating on the blade as well as maintaining the free end of the strip always accessible for further use. The tape roll 4 is usually mounted on a cardboard hub 17 which facilitates ready turning or rotating movement of the roll on the hub.

The container is made dust and moisture proof by the close cooperating engagement of the annular casing parts 1 and 2. The parts are assembled and held in frictional engagement by telescoping the annular members 4 and 5, and the peripheral engagement of rim 14 with a peripheral groove 18 adjacent the knurled rim formed on the supporting base member 2. The annular hub member 5 formed on casing part 1, is provided with a plurality of resilient sections 16-16 which enable the casing parts to be read-

ily assembled or separated with ease and facility. For example, whenever a length of tape is desired, the container package may be grasped by the knurled base edge 2 and the cover 1 removed and laid aside. The hand is then free to grasp the free end of tape 15 and the desired amount of tape is pulled from the roll and severed by drawing it against the rigid knife blade 6.

From the foregoing it will be apparent that our novel tape dispensing package possesses many advantages over the devices now in use and some of these are as follows:

The roll support and cutter parts are made from a single sheet metal blank thereby reducing the manufacturing cost to a minimum. The cutting blade contains no moving or adjacent parts to contact with adhesive material and therefore any gumming up of the blade to impair its cutting operation is entirely eliminated. The feature of enclosing the cutter blade within the casing so that it is exposed only when in actual use, reduces to a minimum any danger of accident. The position and arrangement of the knife blade so that by simply pulling the strip into contact with the blade insures a proper cut without bunching or distorting the tape. The particular position and action of the knife always insures a free end of tape accessible and ready for further use.

Having thus described a preferred embodiment of a tape dispensing package it is obvious that various changes may be made therein without departing from the scope of the invention as set forth in the claims. For example, our invention contemplates a commercial package for dispensing any size tape and the size and proportions of the container and cutter will be commensurate with the size of material to be handled.

The roll and knife support may be in the form of a spool forming a component part of the package as shown in Figure 6. In this construction the roll is supported and retained on the hub 4 by disc members 2 and 10' secured thereto and forming a spool. This spool may be made of stiff cardboard if desired. Whichever construction is employed, the knife 6 is rigidly mounted between the spool heads 2 and 10' by clip ends as indicated by the numeral 13'. The knife blades may comprise a serrated edge having several V-shaped blades indicated by the numerals 7' and 8'. A blade of this type is particularly desirable when relatively wide strips are severed as it reduces the depth of the knife blade.

A tight enclosure for the roll and knife is provided by a band casing member 1' frictionally engaging the peripheries of the spool heads 2 and 10' and yieldably retained in position by a plurality of inside projections 19 spaced from the edge of the band 1'.

Having thus fully described our said invention, what we claim as new and desire to secure by Letters Patent is:

1. A roll-strip dispensing package comprising in combination, a support for a roll of material including a supporting hub having a side disc rigidly secured to one end of said hub, means for retaining the roll on the hub and in contact with said disc including a right angle bracket having a side arm rigidly secured to the outer end of said hub and a top arm overlying the periphery of the roll and rigidly secured to the disc below the periphery thereof, and a cutting blade rigidly mounted on the top bracket arm.

2. A roll-strip dispensing device of the charac-

ter designated in claim 1 in which the cutting blade is formed integrally with the top bracket arm.

3. A roll-strip dispensing device of the character designated in claim 1 in which a V shaped cutting blade is formed integrally with the top bracket arm.

4. A roll-strip dispensing device of the character designated in claim 1 including a cover adapt-

ed to engage the periphery of the side disc and enclose the roll and cutting blade to provide a dust proof package.

5. A roll strip dispensing device of the character designated in claim 1, in which the disc base, hub, bracket and knife members are made integral from a single blank of sheet metal.

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