Aug. 21, 1956 F. E. RIZZA 2,759,545

TAPE CUTTING ATTACHMENT DEVICE FOR ADHESIVE TAPE ROLLS

Filed Aug. 18, 1954

Fig. 1.

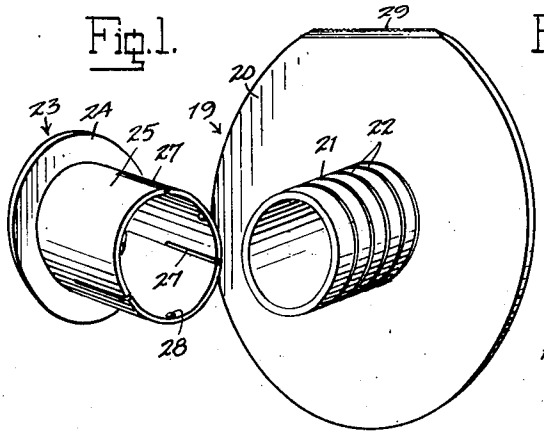


Fig. 2.

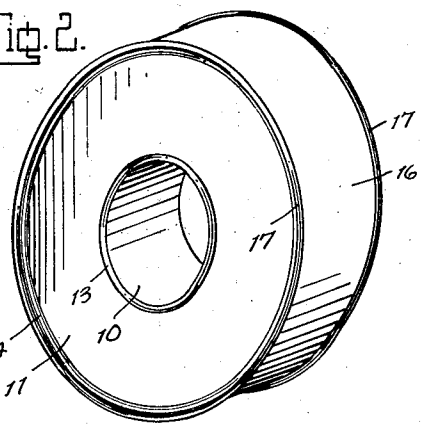


Fig. 3.

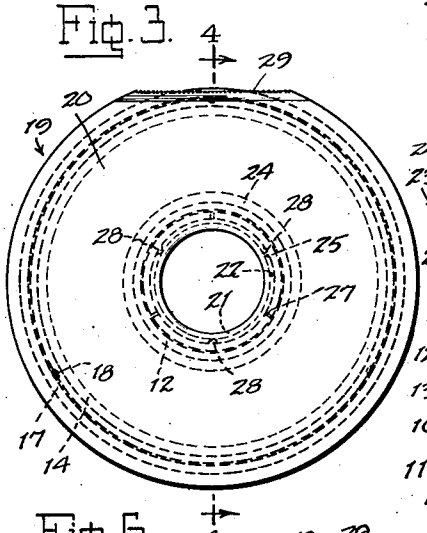


Fig. 4.

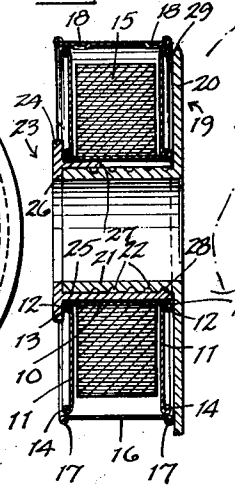


Fig. 5.

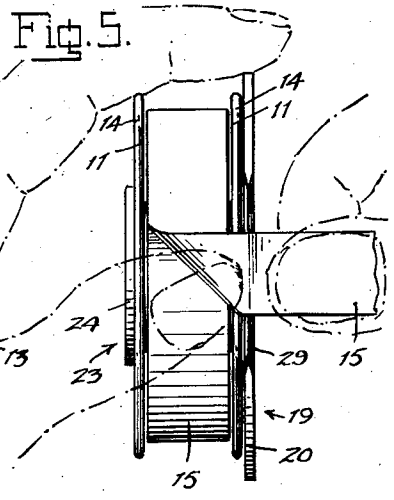


Fig. 6.

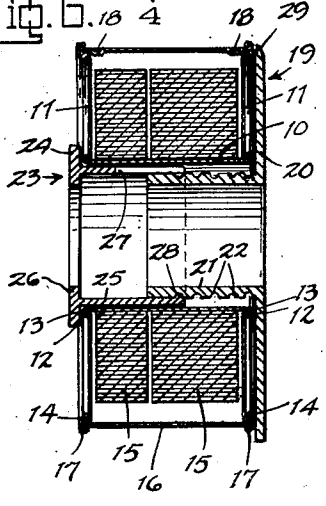
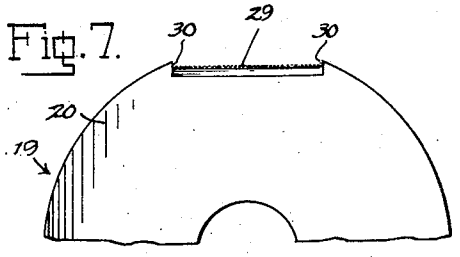


Fig. 7.



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TAPE CUTTING ATTACHMENT DEVICE FOR ADHESIVE TAPE ROLLS

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10 Claims. (Cl. 164—48.5)

The present invention relates to a tape cutting attachment device for adhesive tape rolls, and is a continuation-in-part of my application for Dispenser for Adhesive Tape, Serial No. 295,419, filed June 25, 1952, now Patent No. 2,699,251.

An object of the invention is to provide a tape cutting attachment device of simple and inexpensive construction, preferably formed of molded plastic material, and which may be conveniently attached to the standard commercial type spool of adhesive tape to provide a support for the spool about which the latter may be rotated to unwind a length of tape. It is further proposed to provide such device having a straight cutting edge disposed at one side of the spool tangential to a circle concentric to and of greater diameter than the spool, to the end that a length of tape to be severed, after being drawn from the spool by rotating the latter about the attachment device, may be disposed transversely across the cutting edge so that it may be effectually severed along a line transverse to the length of tape and parallel to the transverse strands of the woven cloth base of the tape, thus permitting a clean severance of the tape without producing ravels.

A further object is to provide a tape cutting attachment device which will not interfere with the normal engagement and disengagement of the drum closure or casing usually provided upon the standard commercial type tape spool.

A further object is to provide an attachment which is adjustable for attachment to spools of varying widths, thus enabling the same attachment to be employed with spools containing narrow and wide tapes, as well as spools containing a plurality of tapes of different widths.

In connection with the use of the attachment with spools containing tapes of different widths, it is a further object of the invention to provide an attachment which may be interchangeably engaged at either side of the spool, so as to dispose the cutting edge adjacent either of the plurality of tapes carried by the spool.

Other objects and advantages of the invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein a satisfactory embodiment of the invention is shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

Fig. 1 is a perspective view of the tape cutting attachment device according to the illustrated exemplary embodiment of the invention, the two parts thereof being shown in separated relation;

Fig. 2 is a perspective view of a standard commercial type spool of tape having the closure drum or casing engaged therewith;

Fig. 3 is a side elevation of the attachment device secured to a spool of tape with the covering drum or casing in place thereon;

Fig. 4 is a vertical sectional view taken along the line 4—4 of Fig. 3;

Fig. 5 is a top plan view with the closure drum or casing removed, and showing the position of the length of tape disposed across the cutting edge and about to be severed, the dotted lines indicating the position of the hand holding the device and the hand holding the length of tape to be severed;

Fig. 6 is a sectional view similar to Fig. 4 and showing the attachment device secured to a spool of greater width than the spool illustrated in Fig. 4, the particular spool shown having two different width rolls of tape carried thereby; and

Fig. 7 is a fragmentary side elevation of a modified form of the invention.

Similar reference characters indicate corresponding parts throughout the several figures of the drawing.

Referring to the drawing, the spool of tape to which the cutting attachment device of the invention is adapted to be attached, is of the standard commercial type and comprises a cylindrical hub **10** having a pair of circular side flanges **11—11** secured thereon adjacent its ends, these flanges being in the form of centrally apertured discs having their inner peripheral edges flared outwardly as at **12** and secured within a curled bead **13** at each end of the hub, the outer peripheral edge of each of the flanges having an outwardly disposed curled bead **14**. The roll of tape **15** is wound about the hub and is non-rotatable thereon by virtue of the fact that the adhesive side of the innermost winding of the tape is adhered to the hub **10**. Thus, in order to unwind a length of tape it is necessary to rotate the entire spool and this sometimes proves awkward, in view of the fact that the spool is being rotated while held in the hand and is very apt to be accidentally dropped. This disadvantage in unwinding the tape is mentioned at this point in view of the advantage of the present invention in rotatably mounting the spool upon the attachment device, which latter may be firmly held in the hand as the tape is unwound and the spool rotated, as will presently more fully appear.

A closure drum or casing **16** is detachably engaged about the spool and is provided with outwardly disposed curled beads **17—17** at its edges which, in the engaged position, are disposed slightly outwardly of the beads **14** of the spool. The drum is provided upon its inner surface at suitable points with inwardly pressed bosses or lugs **18**, which, in the engaged position, are disposed adjacent the inner sides of the respective flanges **11—11**. The drum has a slight clearance with respect to the outer periphery of the spool, which, combined with its slight resilience, permits the bosses **18** to be snapped over the periphery of the flange **11** to engage or dis-engage the drum.

The tape cutting attachment device of the invention comprises a cutter member **19** consisting of a generally circular disc-like flange portion **20** provided centrally with a cylindrical hub **21** having a series of annular axially spaced grooves **22** formed upon its outer surface, this hub adapted to be telescopically engaged by a retaining member **23** consisting of a circular flange portion **24** having a cylindrical hub **25**, the inside diameter of which is such as to be slidably engaged upon the hub **21**. The length of the hub **25** substantially corresponds to the length of the hub **21** so that in the fully engaged position, as shown in Fig. 4, the end of the hub **25** will engage the inner surface of the flange **20** and the end of the hub **21** will engage an inwardly extending annular abutment portion **26** of the flange **24**.

The hub **25** is slightly resilient and for this purpose is provided with suitably spaced longitudinal slots **27**,

and between these slots at points adjacent the outer end of the hub there are provided upon its inner surface a plurality of projecting bosses 28 which are adapted to snap into the annular grooves 22 of the hub 21, the particular groove engaged by these bosses determining the axial spacing between the flange 20 and the flange 24.

The flange portion 20 is provided with a straight cutting edge 29, preferably of sharp toothed form, extended as a cord between two spaced points of the peripheral edge of the flange portion. As shown in the modification in Fig. 7, the cutting edge may be slightly downwardly offset to provide shoulders 30—30 at the ends of the cutting edge, so that when the tape to be severed is positioned upon the cutting edge it will be prevented from slipping off of the cutting edge in the event that it is not held with sufficient firmness.

In operation, the closure drum 16 is removed, as shown in Fig. 5, and a length of tape to be severed is drawn from the roll 15 by gripping the flange member 20 so that the spool is free to rotate about the hub (formed by the telescoping hub portions 21 and 25), as the tape is unwound, the free rotation of the spool permitting the tape to be pulled off of the roll at a point in proximity to the cutting edge.

The thumb of the hand holding the tape spool is pressed against the tape at the inner side of the cutting edge so that it may be firmly held against the inner side of the flange 20, and thereupon the length of tape gripped by the other hand may be readily severed across the cutting edge. By arranging the direction of winding of the tape in relation to the cutting edge such that the non-sticky side will engage the cutting edge, the adhesive upon the tape is prevented from packing into the cutting edge teeth and also the end of the tape at the inner side of the cutting edge is free to be readily re-engaged about the tape roll.

The cutter member 19 may be disposed at either side of the tape spool, as desired, for the more convenient operation of the device by right or left handed users.

In Fig. 6 there is illustrated a tape spool of sufficient width to accommodate two tape rolls 15—15 of different width, the telescoping hub portions 21 and 25 of the attachment device being extended to fit the wide tape spool.

What is claimed is:

1. In a cutting device for tape rolls, a hub for rotatably receiving a tape roll, a flange part connected to an end of said hub and extending radially for disposition at one side of said tape roll and having a radially outwardly disposed tape cutting sharpened edge extending along a straight line tangential to a circle concentric to said hub, a drawn length of tape from said roll adapted to be placed over said cutting edge with a straight transverse line of said tape in engagement therewith for severing along said straight transverse line.

2. The invention as defined in claim 1, wherein said cutting edge is substantially in the central plane of said flange part.

3. The invention as defined in claim 1, wherein said flange part is of generally circular form with said cutting edge extending along a straight line cord between spaced points of its periphery, the periphery of said flange part extending from one end of said cutting edge about said flange to the other end of said cutting edge being a continuously circumferential edge free of cutting sharpness.

4. The invention as defined in claim 1, further characterized by abutment shoulders at each end of said cutting edge.

5. The invention as defined in claim 1, further characterized by retaining means connected to the other end of said hub to retain said tape roll thereon.

6. In a cutting device for tape rolls, a hub for rotatably receiving a tape roll and comprising a pair of telescoping hub parts, a flange part connected to the outer end of one of said hub parts and extending radially for disposition at one side of said tape roll, and a tape roll retaining flange part connected to the outer end of the other of said hub parts, said first flange part having a radially outwardly disposed tape cutting sharpened edge extending along a straight line tangential to a circle concentric to said hub, a drawn length of tape from said roll adapted to be placed over said cutting edge with a straight transverse line of said tape in engagement therewith for severing along said straight transverse line.

7. The invention as defined in claim 6, further characterized by releasable means for securing said telescoping hub parts in a plurality of axially adjusted positions.

8. In a tape cutting attachment device for a tape dispenser of the type having a tubular hub and a pair of parallel flanges rigidly joined to the respective ends thereof, a hub for rotatably engaging within the tubular hub of said dispenser, a flange part connected to an end of said hub and extending radially for disposition at one side of one of said parallel flanges, and having a radially outwardly disposed tape cutting sharpened edge extending along a straight line tangential to a circle concentric to said hub, a drawn length of tape from said roll adapted to be placed over said cutting edge with a straight transverse line of said tape in engagement therewith for severing along said straight transverse line.

9. In a tape cutting attachment device for a tape dispenser of the type having a tubular hub, a roll of adhesive tape non-rotatably mounted on said tubular hub, and a pair of parallel flanges rigidly joined to the respective ends of said tubular hub, a hub for rotatably engaging within the tubular hub of said dispenser and comprising a pair of telescoping parts, flanges respectively connected to the outer ends of said hub parts, and extending radially for disposition at one side of one of said flanges of said dispenser, at least one of the said flanges having a radially outwardly disposed tape cutting sharpened edge extending along a straight line tangential to a circle concentric to said hub, a drawn length of tape from the said roll adapted to be placed over said cutting edge with a straight transverse line of said tape in engagement therewith for severing along said straight transverse line.

10. In a tape cutting attachment device for a tape dispenser of the type having a tubular hub, a pair of rolls of adhesive tape non-rotatably mounted on said tubular hub, and a pair of parallel flanges rigidly joined to the respective ends of said tubular hub, one of said tape rolls being adjacent each of the said flanges, a hub for rotatably engaging within the tubular hub of said dispenser and comprising a pair of telescoping parts, flanges connected to the outer ends of the said hub parts and extending radially for disposition at one side of each of the said parallel flanges of said dispenser, at least one of the said flange having a radially outwardly disposed tape cutting sharpened edge extending along a straight line tangential to a circle concentric to said hub, a drawn length of tape from the said roll adjacent said flange adapted to be placed over said cutting edge with a straight transverse line of said tape in engagement therewith for severing along said straight transverse line.

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