May 21, 1946. R. H. NORDEEN ET AL 2,400,776

TAPE DISPENSER

Filed Jan. 1, 1945 2 Sheets-Sheet 1

Fig. 1.

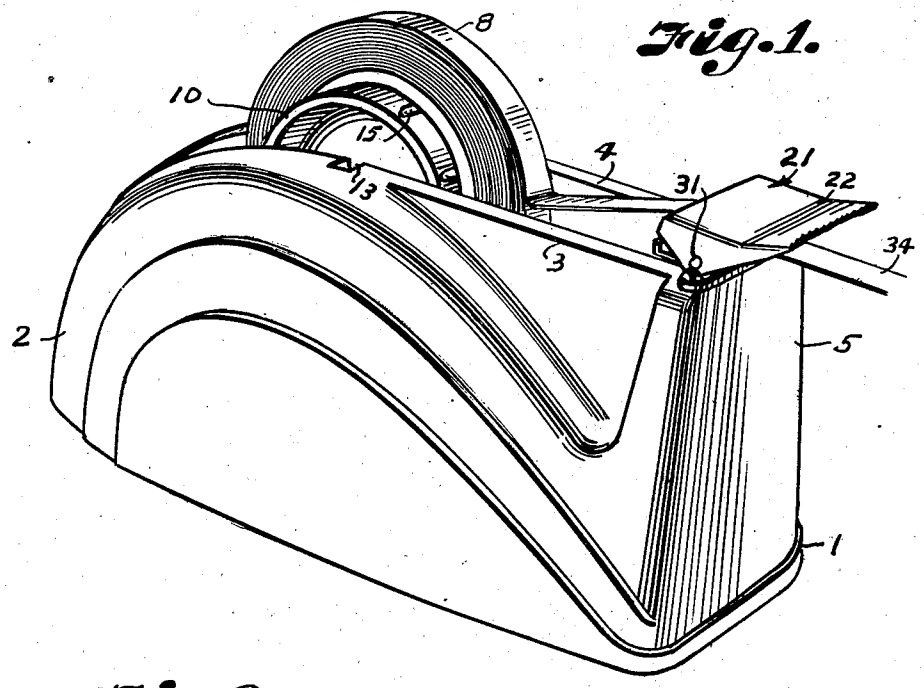
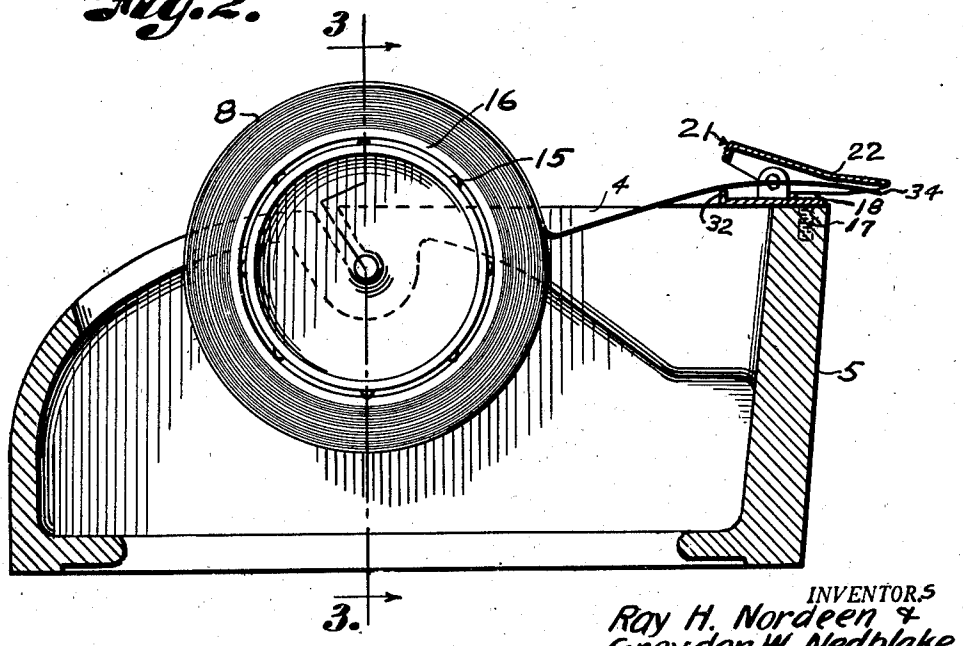


Fig. 2.



INVENTORS
Ray H. Nordeen &
Greydon W. Nedblake.
BY
Fishburn & Mullendore.
ATTORNEYS

May 21, 1946. R. H. NORDEEN ET AL 2,400,776

TAPE DISPENSER

Filed Jan. 1, 1945 2 Sheets-Sheet 2

Fig. 3.

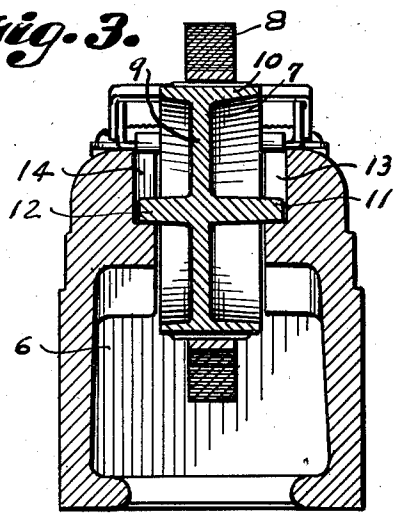


Fig. 4.

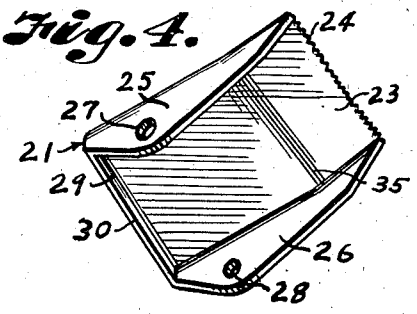


Fig. 5.

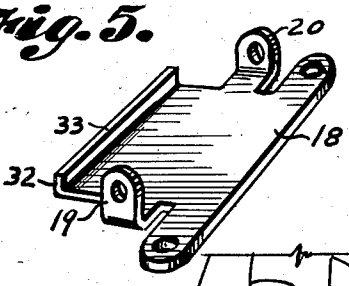


Fig. 6.

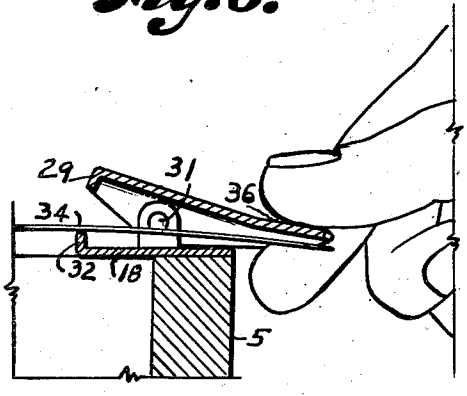


Fig. 7.

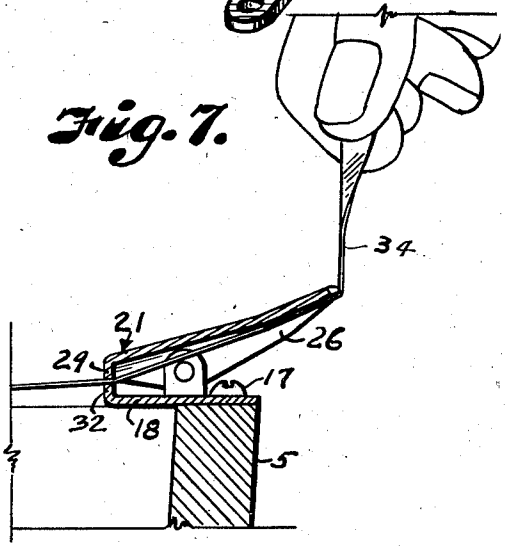
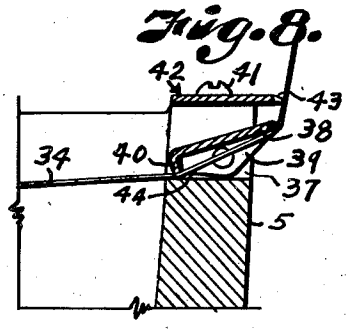


Fig. 8.



INVENTORS
Ray H. Nordeen &
Greydon W. Nedblake
BY Fishburn & Mullendore.
ATTORNEYS.

Patented May 21, 1946 2,400,776

UNITED STATES PATENT OFFICE

2,400,776

TAPE DISPENSER

Ray H. Nordeen and Greydon W. Nedblake, North Kansas City, Mo., assignors to Package Service Company, Kansas City, Mo., a partnership

Application January 1, 1945, Serial No. 571,006

5 Claims. (Cl. 164—39)

This invention relates to dispensers for long strips of paper, or other suitable materials of any desired length, to be applied to packages, bottles, bundles or the like as a wrapping means or as a label or any other desired purpose. More particularly the device is adapted for retaining and dispensing rolls of adhesive tape, and particularly tape of pressure sensitive type, and other tape wherein the adhesive coating is of a normally tacky or other pressure sensitive nature.

Dispensers for such adhesive tape, of which we are aware, have many disadvantages from the standpoint of practical use in that they do not provide for easy access of the end of the tape after it is severed to be grasped by the user for further dispensing. Furthermore, in prior devices, it has been necessary to provide a surface to which the tape would adhere to hold it in place and prevent "flying" or unwinding of the tape from the roll. With such devices it has also been necessary to provide for grasping of the tape by the operator and feeding it to the cutting means, thus requiring an unusual amount of space in the frame work of the dispenser to provide room for such grasping of the tape.

The principal objects of the present invention are, therefore, to provide for retaining and dispensing a roll of tape which is simple, economical to manufacture and efficient in operation; to provide a device for retaining a roll of tape in dispensing relation with cutting means; to provide a device for dispensing tape by which the end of the tape may be easily and naturally grasped by the thumb and finger of the hand of an operator and severed in desired lehgths; to provide a device which will grip the tape and hold it while a piece is being severed therefrom; to provide a device having no large surface to which the tape may adhere while being dispensed; to provide a device having severing means to which the end of the tape may be quickly and easily threaded; to provide a dispenser for a roll of adhesive tape so constructed that replacement rolls of the tape can be easily and readily inserted; and to provide means for retaining the free end of the tape in a convenient position for removal of a following portion of the tape and to provide a device for dispensing tape, said device being light in construction and easily transported from place to place and which at the same time is capable of remaining firmly in place upon a supporting surface during use.

In accomplishing these and other objects of the invention we have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a tape dispenser embodying the features of our invention.

Fig. 2 is a longitudinal cross-sectional view of the tape dispenser.

Fig. 3 is a transferred cross-sectional view taken on a line 3—3, Fig. 2.

Fig. 4 is a perspective view of the cutting means embodying the features of our invention.

Fig. 5 is a perspective view of the mounting means for the severing device, particularly illustrating the means for engaging the tape for gripping same while it is being severed.

Fig. 6 is a cross-sectional view of the tape severing and gripping feature showing the tape about to be grasped by the operator.

Fig. 7 is a view similar to Fig. 6 showing a piece of the tape about to be severed from the dispenser while being held in gripping position by the cutter and mounting therefor.

Fig. 8 is cross-sectional view of a modified form of the invention showing the severing means mounted on top of the frame of the device and a modified form of gripping means holding the tape while it is being severed.

Referring more in detail to the drawings:

1 designates a tape dispenser embodying the features of our invention comprising a base or body portion 2 preferably made from a single casting of iron or other suitable material having sufficient weight so that it will not easily move or slide on a supporting surface while the device is being operated. While we illustrate the body portion as having a flat bottom surface it will of course be obvious that the base may be provided with some suitable material that would adhere to the top of a table or other support to prevent the device from sliding, or may be provided with suction cups or the like (not shown) for this purpose.

The base or body portion 2 is provided with side walls 3 and 4, their forward ends being substantially horizontal and terminating in an end wall 5. The side walls 3 and 4 are spaced apart a sufficient distance forming a hollow portion 6 in said body portion adapted to receive a roller or drum 7, upon which a roll of tape 8 may be placed for dispensing as later described. The drum or roller 7 may be of any suitable form, but here illustrated to be of substantially circular form comprising a body 9 flanged at its outer circumference as indicated at 10 to provide a surface for receiving the roll of tape 8. At substantially the center on each side of the body portion 9 we preferably provide hubs 11 and 12 for engaging in

notches 13 and 14 on the inner faces of the side walls 3 and 4 of the body 2 for supporting the roller in said body. Around the outer circumference of the roller, we also preferably provide spaced ribs or the like 15 for engaging the core 16 of the roll of tape 8 for snugly securing the roll of tape on the drum 7 to prevent turning of the roll on the drum when the tape is being dispensed.

Mounted on the body 2 by screws or the like 17 is a tape gripping member or plate 18 provided with laterally turned apertured ears 19 and 20 upon which a cutting member 21 may be mounted. The cutting member 21 may be of any desired shape but we preferably show the top surface thereof to be substantially square and slightly depressed at the transferred center thereof as indicated at 22 providing a slightly inclined surface 23. The forward edge of the cutting member 21 is preferably provided with saw teeth 24, although any suitable sharpened surface may be employed. The respective sides of the cutting member are provided with depending sides 25 and 26 and have apertures 27 and 28 therein, the rear face of the cutting member being also provided with a downwardly turned flange 29 having a plane surface 30 on its lower edge. The cutting member 21 with its depending sides is of a width to fit over the ears 19 and 20 on the plate 18 so that the apertures 27 and 28 will align with the apertures in the ears and may be fastened thereto by rivets or the like 31. The rear portion of the plate member 18 is provided with an upwardly turned flange or jaw portion 32 having a plane surface 33 adapted to align with the plane surface 30 of the downturned flange 29 on the cutting member 21 for a purpose later described. It will thus be seen that when the cutting member 21 is mounted on the plate member 18 there will be a pivot connection between the two members and the mounting of the cutting member being slightly to the rear thereof, providing a longer forward portion, the normal position of the member will be slightly downwardly as shown in Figs. 3 and 6.

Operation of a dispenser assembled and constructed as described is as follows:

The core 16 of a roll of tape is first placed around the outside circumference of the drum or roller 7 so that the inner circumference of the core 7 will engage the ribs 15 on the roller and the roll of tape will snugly engage on said roller. The roller with the roll of tape thereon is then inserted in the hollow portion 6 of the body of the device and the hubs 11 and 12 of the roller will engage in the notches 13 and 14, respectively, of the inner sides 3 and 4 of the body member. The cutting member 21 may be tilted slightly downwardly and the end 34 of the tape may be inserted between the plate 18 and the cutting member 21. Referring to Fig. 2 of the drawings it will be noted that the end 34 of the tape will pass over the surface 33 of the jaw 32 on the plate 18 and the top surface of the tape will loosely engage the under surface 35 opposite the depression 22 in the cutter member 21.

When it is desired to cut a piece of tape from the roll for use the under or gummed side of the tape is grasped by the finger of the hand as shown in Fig. 6, and the thumb may contact the top surface 36 of the cutting member 21. The gummed tape will adhere to the finger and by exerting pressure on the tap a desired portion may be unrolled from the roll of tape. Upward pull on the tape as shown in Fig. 7 will cause the cutting member 21 to tilt backwardly so that the tape is gripped between the mating jaws 30 and 33 so that by giving a quick jerk to the end of the tape to sever the same by the edge 24 of the cutting member an undesired amount of tape will not be unrolled from the roll and thus "fly" loosely and become tangled. When a piece of tape is severed the cutting member will again tilt downwardly so that the end of the tape will again be loose from the gripping members and ready for further manipulation of the device.

In the form of invention shown in Fig. 8 we have provided a modified form of gripping and cutting means wherein the gripping member is located below the cutting member and the cutting member is rigidly secured to the top of the body member. With this form of invention a portion of the front end 5 of the body member will necessarily be cut away between the side members 3 and 4, as indicated at 37, to provide room for a gripping member 38 to be anchored therein. The gripping member 38 is provided with depending sides 39 provided with apertures adapted to receive pins or the like and be pivotly mounted between the sides 3 and 4 of the body. The rear portion of the locking member is provided with a downturned flange 40 providing a jaw for engaging the top surface of the tape as later described. Mounted on the top of the side members 3 and 4 by screws or the like 41 is a cutting knife 42 having a forward cutting edge 43 which may be saw-toothed or of straight edge type.

Operation of the form of invention shown in Fig. 8 is as follows:

The pivoted gripping member 38 is tilted downwardly at its outer edge and the end 34 of the tape is inserted between the downturned flange 40 and the plane surface 44 of the forward end 5 of the body of the device. The end of the tape is extended past the outside edge of the device slightly so that it may be grasped by the user. When it is desired to dispense tape with this form of invention the tape may be grasped with the finger and thumb as in the preferred form of the invention and the desired amount of tape pulled from the roll by exerting outward pressure thereon. When the desired portion is unrolled upward pull on the end of the tape will cause the locking member 38 to tilt backwardly so that the downturned flange 40 will engage the top of the tape and press it downwardly on the face 44 of the base and thus hold the tape while it is being severed by the knife 42. When the tape has been severed, the end remaining attached to the roll will hang loosely from the locking member 38 until it is again grasped for further use.

It will be obvious from the foregoing that we have provided improved details of structure for dispensing tape so that the end of the tape may be easily contacted for use and the tape may be held in locking position when it is desired to sever a portion from the roll. It is also obvious that we have provided a tape dispenser simple and inexpensive in construction and which is adapted to operate in an efficient manner.

What we claim and desire to secure by Letters Patent is:

1. A tape dispensing device including, a support, means for carrying a coil of tape on the support, means on the support including an upstanding jaw on its rear portion for engaging one face of the tape, and means for severing the tape, said severing means having a jaw for engaging the face of the tape opposite the first

named jaw when a severing pressure is applied to the tape.

2. A tape dispensing device including, a support, means for carrying a coil of tape on the support, means on the support including an upstanding jaw on its rear portion for engaging one face of the tape, and means for severing the tape, said severing means being pivoted on the first named means and having a jaw for engaging the face of the tape opposite the first named jaw when a severing pressure is applied to the tape.

3. A device for dispensing tape, a frame, a roller for rotatably supporting a roll of tape in said frame, a plate mounted on the frame, a cutter pivotably mounted on said plate, and oppositely facing jaws on said plate and said cutter for preventing unwinding of the tape from said roll while the end is being severed.

4. A sensitized tape dispensing device including, a support, means for carrying tape on the support, means on the support having a jaw for engaging one face of the tape and upstanding ears on each side thereof, and severing means rotatably mounted in said ears and having a jaw for engaging the opposite face of said tape, said jaws gripping said tape when a severing pressure is applied to the tape and said severing means being mounted so that its jaw will be released from the tape when the severing pressure is released.

5. A tape dispensing device including, a support, means for carrying a roll of tape on the support, said support including upstanding arms at its forward end, a cutter mounted on said arms, and means pivotally mounted between said arms below said cutter, said means including a downwardly turned jaw for gripping the tape when a severing pressure is applied to said tape and being mounted so that the jaw will disengage from said tape when the pressure is released.

RAY H. NORDEEN.
GREYDON W. NEDBLAKE.