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DEVICE FOR DISPENSING TAPE

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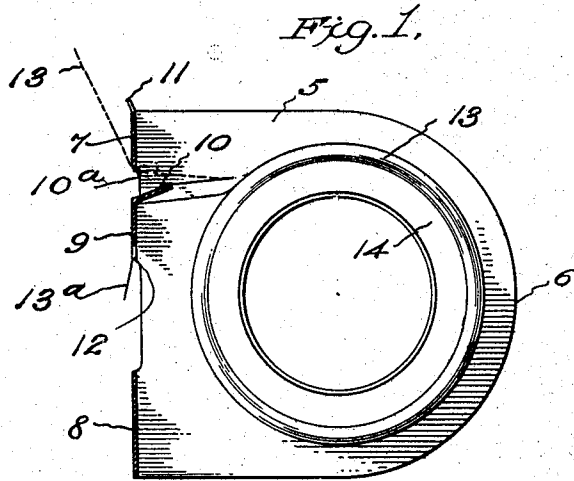


Fig. 5.

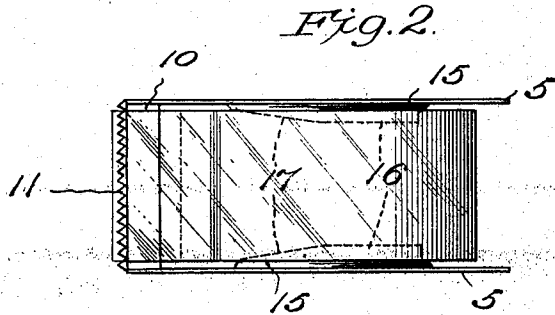
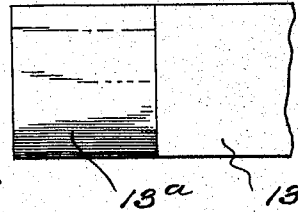


Fig. 3.

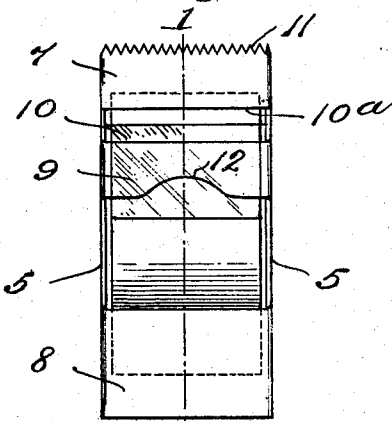
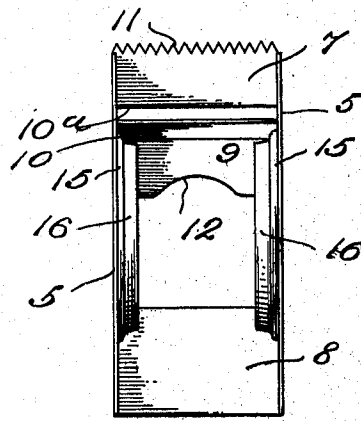


Fig. 4.



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DEVICE FOR DISPENSING TAPE

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2 Claims. (Cl. 242—55.5)

The invention relates to devices for dispensing tape and more particularly adhesive tape especially of the type known as transparent pressure sensitive adhesive tape sometimes referred to as "Scotch" tape and commonly used as a mending tape for torn documents and the like and for other purposes. Such tape is coated on one surface with an adhesive having a relatively high degree of adhesiveness which renders the tape inherently efficient for its intended purposes but at the same time makes the tape somewhat troublesome to handle.

The object of the invention is to provide a novel dispensing device for such tape whereby the latter, in the form of a roll, is rotatably supported in an efficient manner to enable the tape to be withdrawn as required without difficulty.

The invention contemplates further the provision of a novel dispensing device in which the initial free end and successive free ends of the tape are maintained in a position of easy accessibility for successive withdrawals of the tape from the device in such lengths or sections as may be required for use.

A further object of the invention is to provide a dispensing device of the indicated character in which the objections inherent in existing devices are avoided and whereby the handling and dispensing of the adhesive tape and the severing thereof into selective lengths or sections is facilitated.

Other objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

In the accompanying drawing, which illustrates a preferred form of the invention without defining its limits, Fig. 1 is a sectional elevation of the dispensing device on the line 1—1 of Fig. 3; Fig. 2 is a plan view thereof; Fig. 3 is a front elevation of the device; Fig. 4 is a rear view thereof with the roll of adhesive tape omitted therefrom, and Fig. 5 is a fragmentary face view of the initial free end of the adhesive tape on the roll.

As shown in the drawing the dispensing device comprises a container preferably made of suitable sheet metal and consisting of side members 5 located in spaced surface parallelism and of predetermined shape and dimensions; in the illustrated example the rear free edges of said members are curved in circular arcs as indicated at 6 in Fig. 1. At their front edges the members 5 are connected with each other by transverse outer members 7 and 8 spaced apart, and an intermediate transverse member 9 lying between

the members 7 and 8 in spaced relation thereto. A guide member 10 extends inwardly from the member 9 preferably at an upward inclination relatively thereto and in conjunction with the lower edge of the outer member 7 forms an axis slot 10^a through which the adhesive tape may be withdrawn from the device for use as needed.

At its upper edge the outer member 7 is provided with severing or tearing means illustrated in the form of teeth or serrations 11 projecting upwardly beyond the upper edges of the side members 5 and preferably in an outward direction at an inclination to the outer face of said member 7 as shown in Fig. 1. For the purpose to be more fully set forth hereinafter the intermediate transverse member 9 is made of reduced width at an intermediate point for instance by being formed with a curved finger recess 12 as illustrated in Figs. 3 and 4.

Adhesive tape 13 of the kind for which the dispensing device is specially adapted is generally coiled in rolls upon tubular cores 14 of any suitable material in the well-known and conventional manner. In the instant case the initial free end of the tape 13 contained in the roll is preferably provided with a protecting cover of suitable material on its adhesive coated surface to facilitate handling of said tape and to prevent objectionable adherence thereof to the fingers of the person when operatively adjusting said tape 13 in the dispensing device as will be more fully described hereinafter. The protecting cover may comprise a section 13^a of Cellophane, paper or other non-adhesive material which is adhesively attached in surface engagement with the adhesive coated surface of the tape 13 at the initial free end thereof as shown in Fig. 5. The protective section 13^a preferably is of a color which contrasts with the color of the tape 13 so as to be readily distinguishable and serves, in addition to its other functions, to prevent adhesion of said free end of said tape 13 to the roll and thereby render said initial free end easily available for operatively combining said tape 13 with the dispensing device. In addition to the parts so far described the dispensing device therefore includes means for rotatably positioning such a roll of the tape therein, which means is constructed in a novel manner to facilitate the introduction of a roll of tape into the device and the removal of an empty core 14 therefrom. In its illustrated form the aforesaid means comprises annular beads 15 located on the inner surfaces of the side members 5, and annular flanges 16 projecting from said beads 15 in directions to-

ward each other as shown in Figs. 2 and 4. The beads 15 and flanges 16 of the side members 5 are located in axial registry with each other and preferably though not necessarily in concentric relation with the curved rear edges 6 of said side members 5 as illustrated in Fig. 1. Preferably the outer diameter of the flanges 16 is such as to fit within the cores 14 of the rolls of tape 13 for which the device is designed, in a manner to enable said cores 14 and associated roll of tape 13 to be easily rotated thereon. To facilitate the introduction of a roll of tape 13 into the device and the removal of any empty core 14 therefrom, the flanges 16 are formed with sloping sections 17 which, in the normal condition of the device diverge outwardly with respect to each other toward the front thereof or toward the transverse members 7, 8 and 9 as shown in Fig. 2.

In the preferred construction the side member 5 and the transverse members 7, 8 and 9 as well as the guide member 10 and the teeth or serrations 11 comprise integral parts of each other and are stamped or otherwise produced from suitable sheet metal blanks. Similarly the beads 15 and flanges 16 may be stamped from the side members 5 to constitute integral parts thereof. It will of course be understood that the device may be otherwise produced than by stamping to include the parts illustrated in the drawing and described herein.

In practice when it is desired to insert a roll of tape 13 into the device the side members 5 are spread apart against their inherent resiliency on their lines of connection with the transverse members 7, 8 and 9, preferably to an extent to bring the sloping sections 17 of the flanges 16 into substantial parallelism with each other, or at least far enough to spread the remaining portions of the flanges 16 apart sufficiently to enable the roll of tape 13 to pass inwardly between the same. The said roll of tape 13 is then inserted into the device from the rear thereof and is adjusted therein to bring the core 14 into axial registry with said flanges 16, whereupon the flanges 15, because of the inherent resiliency of the side members 5 will cause said flanges 16 to snap into the hollow bore of said core 14 at its opposite ends. At this stage the roll of tape 13 is accordingly rotatably positioned in the dispensing device in an efficient and reliable manner with the opposite ends of the core 14 in engagement with the beads 15 which provide bearings for said ends of the core 14. The free end portion of the tape 13 is then withdrawn from the roll, which is easily possible because of the protecting cover 13^a at said free end, and said tape 13 is passed over the guide member 10 and threaded outwardly through the slot 10^a, this threading of said tape 13 being facilitated by the protecting cover 13^a. The withdrawal of the tape 13 is continued and the adhesive coated surface thereof contiguous to the protecting cover 13^a is then pressed into temporary adhesive connection with the surface of the transverse member 9. It will be understood that this is easily possible because the inner surface of the tape 13 on the roll is the adhesive coated surface while the outer surface of said tape 13 is free of adhesive and generally, in the type of tape under discussion is very smooth and highly polished. When the tape 13 has been withdrawn through the slot 10^a to an extent sufficient to enable the free end thereof to be adhesively attached to the member 9 as described, the end with the protective cover 13^a projects beyond the same as indi-

cated in Fig. 1. Successive free ends of the tape 13, as the latter is withdrawn for use, will likewise be adhesively attached to the member 9 so as to extend beyond the same or to at least lie over the finger recess 12 of said member 9. In any case a free end portion of the tape 13 is temporarily fixed in easy accessibility and said tape 13 is prevented from becoming unintentionally unwound or undesirably adhering to the device.

When it is desired to obtain a length or section of tape 13 for use, the free end portion thereof is first detached from the member 9, the detachment of the initial free end of the tape 13 is facilitated by the protecting cover 13^a, while subsequent detachment is made easily possible by the successive overhanging free end portions of said tape 13 and by the finger recess 12 of said member 9. In any event, after the free end of said tape 13 has been detached from the member 9, the withdrawal through the slot 10^a is continued in an upward direction as indicated by dotted line in Fig. 1 and said tape 13 is brought into engagement with the teeth or serrations 11 and transversely torn across the same to provide the severed length or section of tape 13 desired at the time. The resulting free end of the tape 13 which remains on the roll in the dispensing device may then be adhesively attached in surface engagement with the member 9 as previously described, in ready accessibility for detachment therefrom when another length or section of tape 13 is desired to be withdrawn from the dispensing device.

When all the tape 13 has been withdrawn from a given roll in the dispensing device, the side members 5 are spread apart as hereinbefore set forth which automatically withdraws the flanges 16 from the opposite ends of the empty core and at the same time enables the latter to be easily removed from the dispensing device. A new roll of tape 13 may then be inserted into and rotatably supported in the device as previously mentioned and the free end of said new roll of tape 13 may be threaded through the slot 10^a and adhesively attached to the member 9 in the same way as described whereupon the dispensing device is again ready for another period of use.

The novel dispensing device is simple in construction and correspondingly easy to produce at low cost and enables the adhesive tape to be efficiently handled without difficulty and without any of the objections inherent in existing devices. The insertion of rolls of tape into the device and the removal of empty cores therefrom is accomplished without difficulty and with a minimum expenditure of time and effort. In all of its forms the novel device is of attractive appearance and makes the adhesive tape contained therein easily available for use at all times.

In addition the novel device enables the tape to be torn against the ungunmed surface thereof and thereby insures clean tearing and severing of said tape and avoids difficulties which are present in existing devices in which the tearing is effected against the adhesive coated surface of the tape.

Although the present invention has been described in conjunction with a preferred embodiment, it is to be understood that modifications and variations may be resorted to without departing from the spirit and scope of the invention, as those skilled in the art will readily understand. Thus it will be observed that in place of the dispensing device specifically illustrated and described, said dispensing device may be otherwise

constructed and arranged for instance as set forth hereinbefore. Such variations and modifications are considered to be within the purview and scope of the appended claims.

I claim:

1. A device for dispensing adhesive tape comprising a holder consisting of spaced, parallel side members, transverse outer members spaced apart and extending between and connected with said side members at one end edge thereof, a transverse intermediate member extending between and connected with said side members at said one edge thereof and located in spaced relation with said outer members, said intermediate member in association with one of said outer members forming an exit slot and being provided at one edge with a finger recess, a guide member projecting inwardly from the opposite edge of said intermediate member at an upward inclination, tearing teeth at the upper edge of said one of said transverse outer members, and annular flanges on the opposed inner faces of said side members in axial registry with each other to rotatably support a roll of adhesive tape in said holder, said flanges having sloping sections normally diverging outwardly relatively to each other toward the front of the holder and being adjustable into approximate parallelism by spreading said side members apart to thereby facilitate the introduction of a roll of tape into said holder and the removal of an empty core therefrom, the tape from said roll passing over said guide member and outwardly through said exit slot and having its free end adhesively attached in surface engagement with said transverse intermediate member and overlying the finger recess thereof in accessible position for

ready detachment from said intermediate member at will for withdrawing said tape through said exit slot for transverse severing along said tearing teeth into selective lengths.

2. A device for dispensing adhesive tape comprising a holder consisting of spaced, parallel side members, transverse outer members spaced apart and extending between and connected with said side members at one end edge thereof, a transverse intermediate member extending between and connected with said side members at said one edge thereof and located in spaced relation with said outer members, said intermediate member in association with one of said outer members forming an exit slot and being provided with a finger recess, annular flanges on the opposed inner faces of said side members in axial registry with each other to rotatably support a roll of adhesive tape in said holder, said flanges having sloping sections normally diverging outwardly relatively to each other toward the front of the holder and being adjustable into approximate parallelism by spreading said side members apart to thereby facilitate the mounting of a roll of adhesive tape on said flanges within said holder and the removal of an empty core therefrom, the tape from said roll passing outwardly through said exit slot and having its free end adhesively attached in surface engagement with said transverse intermediate member and overlying the finger recess thereof in accessible position for ready detachment from said intermediate member at will for withdrawing said tape through said exit slot, and means on said holder for enabling the withdrawn tape to be transversely severed into selective lengths.

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