March 1, 1960 J. H. PARK 2,926,807

TAPE DISPENSER

Filed June 13, 1955

FIG 1

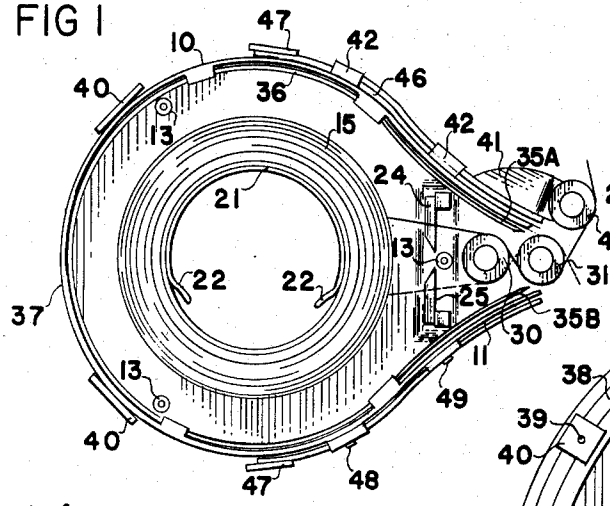
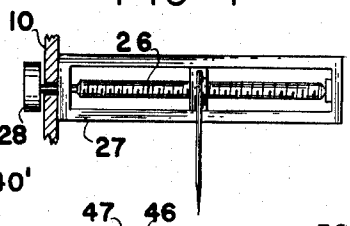


FIG 4



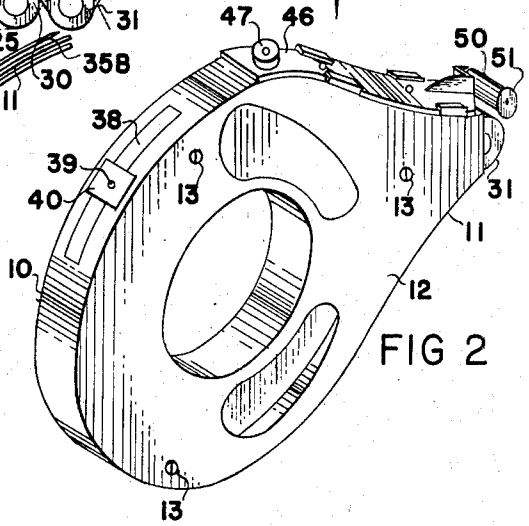


FIG 2

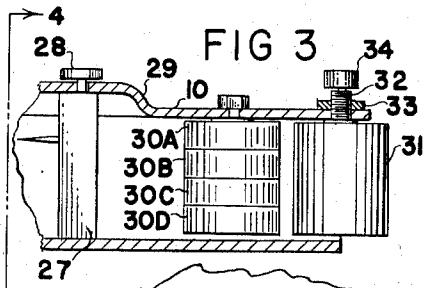


FIG 3

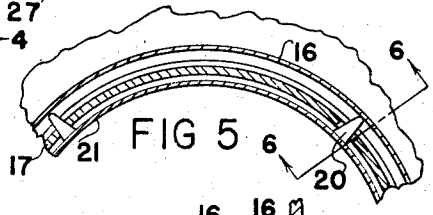


FIG 5

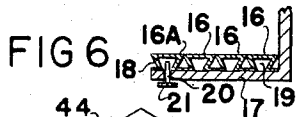


FIG 6

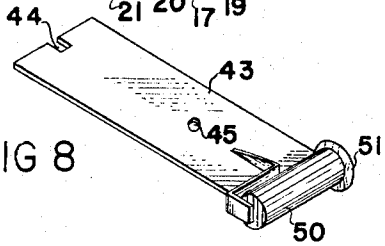
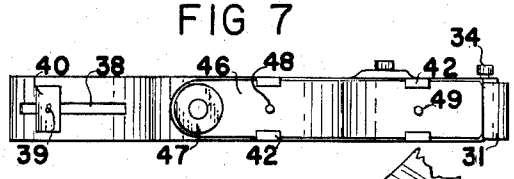


FIG 8

FIG 7



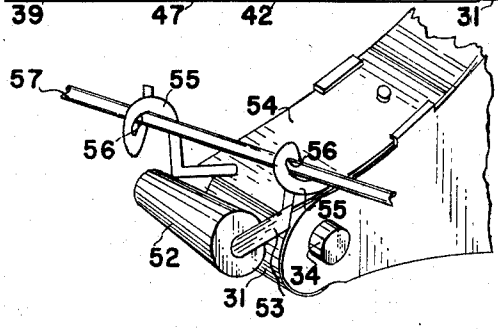


FIG 9

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TAPE DISPENSER

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4 Claims. (Cl. 216—22)

This invention relates to tape dispensers and is particularly concerned with the dispensing of adhesive or like tape, such as that used in the masking of surfaces for painting and decorative operations. While certain aspects of the present invention may be broadly applicable to various types of tape dispensers, the invention is here presented as a device for dispensing tape from a roll thereof and includes a container for such roll.

While dispensing containers for rolls of adhesive or like tape have long been known and successfully employed, such devices are usually adapted to the dispensing of a single width of tape. In many taping operations and particularly those used in connection with masking of surfaces prior to painting, it is frequently desired to provide various widths of tape for application in a single masking operation. Devices as heretofore provided for dispensing of such tape have also been limited in their design to require either right-handed or left-handed operation and it is obviously desirable that means may be provided by which either a right-handed or left-handed individual may conveniently apply the tape from such device. Problems have also arisen as to the provision of means for severing the tape after application and it is desirable to provide apply means and guiding devices to assist in the use of the tape as it is applied to a surface.

It is therefore among the primary objects of the present invention to provide a novel and improved tape dispensing means for use in applying adhesive tape for masking operation.

It is also an object of the present invention to provide a novel and improved tape dispensing means including structures by which the width of the tape dispensed may be conveniently varied without requiring a change in the width of the tape enclosed within the device.

Another object of the present invention is to provide a device of the character set forth which may be universally operable by either the right or left hand by the user and by which the apparatus may be readily adjusted to conform to either such use.

Still another object of the present invention is to provide for attachment of accessory devices for applying the tape and for guiding the same in its application.

A further object of the present invention is to provide novel and improved means for severing the tape from the roll and in the present invention such means is operable from either side of the device so as to permit use thereof by either the right or the left hand of the operator.

Numerous other objects, features and advantages of the present invention will be apparent from consideration of the following specification taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevation of one preferred form of the invention showing the side of the housing thereof removed.

Fig. 2 is a perspective view of the apparatus shown in Fig. 1.

Fig. 3 is a partial sectional view showing details of tension roller and adjustable roller viewed from the top.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a detail fragmentary view of the central roll supporting structure of the present invention.

Fig. 6 is a sectional view taken on line 6—6 of Fig. 5.

Fig. 7 is a top plan view of the device.

Fig. 8 is a perspective view of an attachment for the device, by which the tape may be guided in its application.

Fig. 9 is a perspective view of an attachment for the device used for the application of tape to wires or rods.

In general terms, that form of the present invention here shown by way of example may be generally defined as comprising a roll casing of generally circular flat form provided with an extended nose portion through which the tape is dispensed. Within the casing, there is provided one or more knives operable to sever the tape as it is dispensed, such knives being transversely adjustable with respect to the casing so as to provide ready means by which the width of the tape to be applied may be readily adjusted by the user. An important feature of the present invention is the fact that multiples of knives and severing means are provided on either side of the apparatus so that by reversing the position of the roll therein the device may be adjusted for use either by the right or the left hand of the user. It is also an important feature of the invention to provide readily removable and detachable means for facilitating the application of the tape and/or for guiding the tape in specific applications thereof.

Referring now more particularly to the drawings, it will be seen that the casing of the present device constitutes a generally circular housing **10** provided with a forwardly protruding nose portion **11** which is open for the dispensing of the tape therethrough. The casing **10** may be conveniently formed of pressed metal and includes a cover **12** which may be removably secured as by bolts **13** to permit positioning and removal of one or more adhesive tape roll therein. As more clearly illustrated in Fig. 1, a roll of adhesive tape is indicated by the numeral **15**. In the preferred form of the invention, such rolls are used in multiples as indicated in Fig. 6, each roll being mounted upon a freely rotatable metal sleeve **16** seated for free rotation upon a hollow hub **17** formed with the casing **10**. Each of the sleeves **16** is formed with inwardly inclined side walls **18** defining therebetween an annular open space **19**. The end sleeve **16**–A is adapted to be secured on the hub **17** by detent **20** extending radially outward from a semi-circular spring clip **21**, the terminal ends **22** of which as shown in Fig. 1 may be engaged to be moved inwardly to withdraw the detents from their location within the space **19** and thus permit withdrawal of the sleeves over the open end of the hub **17**. By this arrangement, it will be seen that the usual inner paper core of the roll may be engaged with and frictionally retained upon the outer surface of the sleeve **16**; however, the sleeve **16** is mounted for free rotation on the hub **17** and thus a metal contact is provided by which the roll may be readily rotated with respect to the hub **17**.

Mounted transversely across the casing and inwardly from the open end of the nose portion **11**, there is provided upper and lower strip severing knives **24** and **25**, respectively. Each of the knives **24** and **25** are mounted for threaded engagement upon a rotatable threaded bolt **26** carried within a knife bracket **27** and rotatable by an external knurled knob **28**. As seen more clearly in Fig. 3, the casing **10** is extended outwardly as at **29** so as to receive the knives within the projection thus formed when such knives are in fully retracted position and thus out of the path of travel of the tape. When it is desired to cut the tape in some width other than that of the roll, the knob **28** is adjusted to bring the selected knife in

registration with the tape and transversely adjusted with respect to the casing so as to sever the tape longitudinally as it is withdrawn from the casing.

As shown in Fig. 1, as the tape is moved from the roll, it passes over a tension roller 30 and therefrom over a transversely adjustable rubber coated roll 31. Roll 31 is transversely adjustable by means of an externally threaded axle 32 threadedly engaged within a nut 33 whereby rotation of the knurled head 34 will provide for a transverse adjustment of the rubber covered roller 31 so as to permit the edge of said roller to accurately register with the edge of the tape being dispensed. While the roller 30 may be formed as a single unit, it is preferable that the roller be formed in individual segments 30–A, 30–B, 30–C and 30–D, thus conforming to the individual sleeves 16. In use, a plurality of individual tape rolls may be installed, as for instance four ¼" rolls may be mounted individually on the sleeve 16 and may individually pass over the roller segments 30–A, 30–B, 30–C and 30–D. If desired, one or more such tapes may be simultaneously withdrawn so as to provide for the application of a masking area of any multiple of the ¼" tapes. It will further be noted that should tape of intermediate width be desired, the knife may be adjusted so as to longitudinally split one of the tapes as it is being dispensed, so as to accommodate the device to any desired width of tape to be applied.

For severing the tape after dispensing of the desired length thereof, a double severing knife having end severing blades 35–A and 35–B is provided, the body of the knife consisting of an intermediate continuous flexible band 36 seated within the inner face of the side walls 37 of the housing 10. At convenient spaced points, as indicated at 38, the side wall of the housing is cut away to permit the extension therethrough of pins 39 secured to the body of the knife and having on the exterior surface of the casing finger grips 40. By engagement of the thumb with the grip 40, the knife may be rotated within the casing to project either one of the ends 35 forwardly across the path of the tape after it has passed the roll 31, thus to sever the roll. As indicated by the dotted lines of Fig. 1, it will be seen that the tape may be secured either to pass from the top portion of the roll over roller 30 and rollers 31 and in the path of the upper knife 24 and in the path of movement of the upper cutting blade 35–A or from below the roll in the path of the knife 25 and under rolls 30 and 31 to be severed by the knife 35–B.

The present invention also provides removable attaching means to facilitate the operation of the device, one of such means is indicated in Fig. 1 as a roller 40' carried by bracket 41, which bracket is slideably receivable under spaced lugs 42. Each of the attachments are provided with a mounting plate 43 having a terminal recess 44 and a detent receiving aperture 45. Slideably mounted on the outer face of the side walls of the casing, there is provided an attachment securing member 46 of flexible material having a terminal finger grip 47 and being secured under the brackets 42. The member 46 is provided with a projecting detent 48 adapted to receive the terminal recess 44 and a companion detent 49 adapted to be received within the aperture 45. In securing the attachments in position the grip 40 is operated to force the member 46 forwardly so as to bring the pins 48 and 49 forwardly free from registration with brackets 42. The plate 43 of the attachment may then be placed thereon, the detent 48 receiving the recess 44 and the detent 49 being received through the aperture 45. The securing means is then withdrawn by manipulation of the handle 47 whereby the detents brought into registration with the brackets 42 which engage over the plate to preclude movement thereof from the detents 48 and 49.

That attachment indicated in Fig. 1 comprises an applying roller mounted parallel with the roller 31 but outwardly spaced therefrom and thus operable to bear against the outer face of the tape while the adhesive surface thereof is laid upon the surface to be masked. It will of course be noted that the attachment securing means is duplicated on both sides of the device so as to give a left-handed or right-handed operator opportunity to secure the roller as desired for use in either upright or inverted position of the device.

In that form of attachment shown in Fig. 8, a roller 50 is provided having an end flange 51 which may be disposed against a bevel or corner of the surface to which the tape is being applied so as to guide the tape for accurate alignment at such surface edge.

In that form of attachment shown in Fig. 9, a slightly conically formed roller 52 is provided mounted from a bracket 53 and the body 54 of the attachment is provided with a pair of turned wire, rod or cord receiving horns 55, the bights 56 of which are out of alignment with the surface of the terminal roller 31 of the apparatus as is the axis of the roller 52. By this arrangement, a rod or wire passed through the bights 56 may receive tape from the roller 52 which will apply the tape in a spiral manner as the device is turned about the rod 57 and moved longitudinally thereof.

From the foregoing, it will be seen that the present invention provides a novel, simple and convenient device for accurately dispensing tape of selected width and by means readily converted from right- to left-hand operation. It will of course be understood that the invention is not limited and confined to the specific structural details herein presented and that numerous changes, modifications and the full use of equivalents may be resorted to in the practice of the invention without departing from the spirit or scope as outlined in the appended claims.

I claim:

1. A tape dispenser including a circular walled casing, means for mounting a tape roll within said casing, means transversely adjustable with respect to said casing for guiding tape for delivery from said casing, a flexible elongate circular knife slideably mounted within said circular walls of said casing for severing tape from a tape roll after it has traversed said guiding means, and manual means for sliding said knife within said casing, said manual means being characterized by external finger grips connected inwardly through said casing to said knife, the ends of said knife being mounted to protrude from and be retractable within the confines of said casing to selectively sever said tape on one side and the other.

2. A tape dispenser including a generally circular casing defining a tape dispensing opening, means for mounting a roll of tape within said casing, means for guiding tape for delivery from a roll within said casing through said tape dispensing opening and a flexible elongate severing knife formed with a blade at each end thereof slideably mounted within said casing encircling the tape mounting means, both ends of said knife being disposed adjacent said opening for selective movement thereto for severing tape.

3. A tape dispenser including a generally circular casing defining a tape dispensing opening, means for mounting a roll of tape within said casing, means for guiding tape for delivery from a roll within said casing through said tape dispensing opening, a flexible elongate severing knife formed with a blade at each end thereof slideably mounted within said casing encircling the tape mounting means, both ends of said knife being disposed adjacent said opening for selective movement thereto for severing tape, and manual means for operatively sliding said knife to sever tape at said opening.

4. A tape dispenser including a generally circular casing defining a tape dispensing opening, means for mounting a roll of tape within said casing, means for guiding tape for delivery from a roll within said casing through said tape dispensing opening, a flexible elongate severing knife formed with a blade at each end thereof slideably mounted within said casing encircling the tape mounting means,

both ends of said knife being disposed adjacent said opening for selective movement thereto for severing tape, and manual means for operatively sliding said knife to sever tape at said opening, said manual means being characterized by external finger grips connected inwardly said casing to said knife.

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