Dec. 20, 1955 B. R. DAVID 2,727,646

TAPE DISPENSER

Filed Jan. 23, 1953

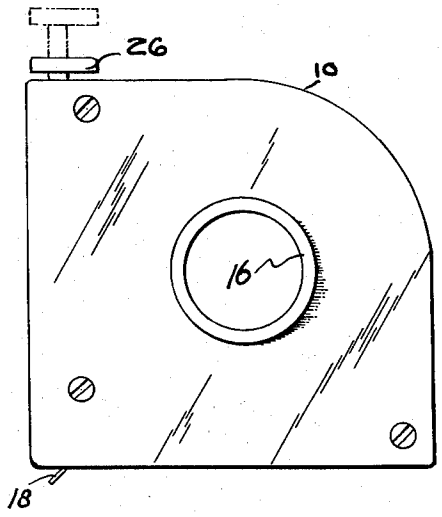


FIG. 1

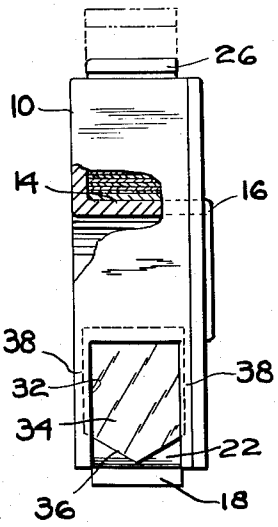


FIG. 2

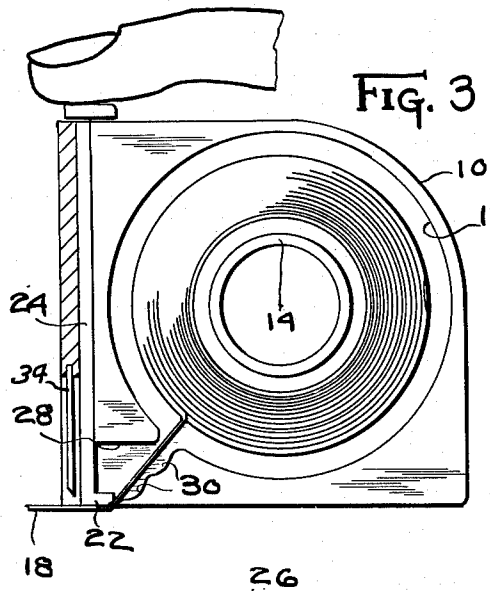


FIG. 3

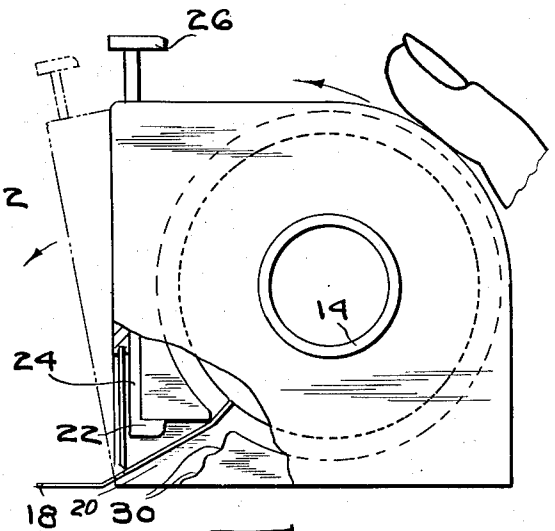


FIG. 4

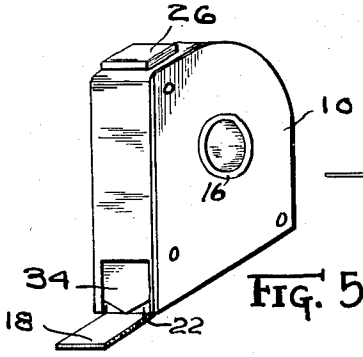


FIG. 5

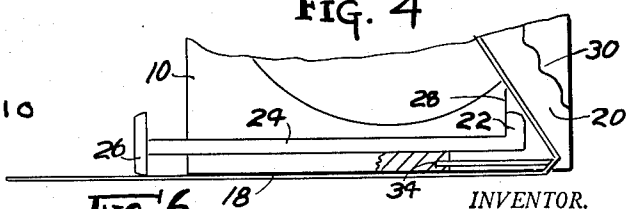


FIG. 6

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TAPE DISPENSER

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8 Claims. (Cl. 216—33)

This invention relates to new and improved tape dispensers particularly for pressure sensitive tapes which are provided with an adhesive side and a non-adhesive side, so that merely by pressing the adhesive side on an object or surface by means of the finger or the like applied to the non-adhesive side, the tape is affixed.

The principal object of the present invention resides in the provision of a dispenser which is extremely simple in operation and construction and easy to operate, and includes means for applying the leading end of the tape to the object to be taped, whereupon the dispenser itself is merely moved in the proposed direction of spread of the tape, and when sufficient tape is applied, the case is manipulated by being turned 90°, and upon continued motion in the same direction as before, the tape is quickly and easily severed, leaving a cut leading end for the next application of the tape.

A further object of the invention resides in the provision of a tape dispenser as above described comprising a small light-weight housing which may be made of plastic or metal or the like, the housing containing means for mounting the core of the roll of tape which is located wholly within the casing and no part of which is exposed, said casing providing a special serrated throat for exit of the tape from the housing to the exterior thereof at the point of application of the tape, there being a single movable element which is to be manually or digitally pressed and including a presser foot which applies pressure to the non-adhesive side of the tape to cause adherence of the cut end of the tape to the surface upon which the tape is to be spread, said presser foot acting as pressing means thereafter to spread the tape down upon the surface as the housing is drawn along in the direction of the tape, said dispenser also including a knife edge disposed on the housing in the throat adjacent the point of exit of the tape, so that the tape may be cut merely by rotating the casing 90° in a direction opposite to that in which the casing has been drawn to dispense the tape and then continuing the bodily motion thereof.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a view in elevation of a dispenser according to the invention;

Fig. 2 is a view in front elevation thereof, looking in the direction of the arrow 2 in Fig. 1, parts being cut away and in section;

Fig. 3 is a view in elevation illustrating the operation of the dispenser, with the cover plate thereof removed;

Fig. 4 is a view similar to Fig. 3 but showing the rotation of the dispenser for the severing of the tape;

Fig. 5 is a perspective view of the dispenser on a reduced scale; and

Fig. 6 is a view showing the dispenser completely rotated for severing the tape.

In carrying out the present invention, a housing generally indicated at **10** is provided. This housing may be

molded of plastic or cast of metal or plastic in any way desired, but it is preferably relatively small and capable of being held in the hand for manual operation. The housing provides a circular recess therein as indicated at **12** and centrally of this recess there is a lateral well or boss at **14** which extends slightly outwardly of the casing as at **16**, see Fig. 2. The roll of tape is disposed upon the boss **14** as clearly shown in Figs. 3 and 4 and the leading end thereof as illustrated particularly at **18** in Fig. 3 is disposed through a throat **20** to be more particularly described hereinafter.

The throat **20** leads from the circular depression **12** to the exterior of the housing and adjacent its point of exit there is positioned the presser foot **22** of a presser rod or plunger **24**. The plunger **24** extends through a passage in the housing **10** and outwardly thereof at a point opposite to the throat, and terminates in a finger-piece **26**. This plunger has a limited longitudinal travel as will be seen from a comparison of Figs. 3 and 4; Fig. 3 shows the limit of the travel of the plunger or rod towards the throat, positioning the presser foot **22** at the throat; and Fig. 4 shows the limit of travel of the plunger or rod in the opposite direction where the leading end **18** of the tape is free thereof and the pressure foot is stopped by a shoulder at **28**. The presser foot **22** is provided with a curved surface as shown, so that the tape will ride smoothly relative thereto.

One surface of the throat is serrated or arranged in a wavy construction as indicated at **30** and this serrated construction faces the adhesive side of the tape. The tape adheres only to the teeth of the serrated portion and will be easily detached therefrom as will be clear.

Adjacent the opening of the throat forwardly of the presser foot **28**, there is arranged an opening **32** in which a knife blade **34** is inserted, said knife blade having a cutting edge **36** which may be either serrated or inclined as shown for severing the tape. This blade may be held in position by any means desired, and is shown as having its edges held in undercut slots in the side portions of the housing at **38**.

In the operation of the device, the finger-piece **26** is depressed (see Fig. 3) and this action causes the presser foot **22** to engage the extreme end of the leading portion of the tape and causes the same to be pressed against a surface upon which the tape is to be spread, with the finger itself depressing the rod **24**. The entire dispenser is bodily moved rearwardly or to the right in Figs. 1 and 3. When the length of tape desired to be spread has been accomplished, the housing is rotated 90° in a counterclockwise direction as seen in the drawings (see particularly Fig. 4), this action bringing the length of tape directly up against the edge of the blade **34**, whereupon a further motion to the right will cause severing of the spread portion of the tape from the roll.

This of course leaves the part **18** of the tape in the throat **20** and this will naturally become lightly adhered to the serrations in the throat, so that the tape is ready for the next application and the extreme end thereof is engageable by the presser foot **22** to provide the action described above.

In the operation of the device, the severing step will actually take place somewhere between the position of the device as shown in Fig. 4 and as shown in Fig. 5, depending upon the speed which the operator uses in dispensing the tape and following the severing operation above described.

I claim:

1. A dispenser for pressure sensitive tape comprising a housing, means for holding a supply of tape thereon, a throat for the housing leading from the interior to the exterior thereof and providing for the passage of the tape from the supply to the surface to be taped, a digit-

ally operable freely slidable plunger mounted in the housing for limited rectilinear longitudinal motion thereon, a rigid foot on the plunger adapted to intersect the throat in position to engage the tape when the plunger is operated, said housing being provided with two straight edges angularly disposed with reference to each other for sliding along the surface to be taped, the throat lying at the juncture of the edges and the plunger being parallel to one said edge, said foot being unobstructed by the housing and the foot-engaged tape being expelled thereby to a slight extent from the housing for application to the surface to be taped, so that the tape is dispensed by adherence to the surface under pressure of the plunger as the housing is drawn along in the direction of spreading of the tape.

2. The tape dispenser of claim 1 including a serrated portion in the throat for application thereto of the sticky side of the tape.

3. The tape dispenser of claim 1 including a serrated portion in the throat for application thereto of the sticky side of the tape, said serrated throat portion being on the side of the throat opposite the plunger.

4. The dispenser of claim 1 including a severing blade in the housing parallel with the plunger and adjacent the exterior end of the throat for contact with the tape beyond the plunger foot as regards the tape supply.

5. A tape dispenser comprising a housing, means therein to hold a supply of tape, a throat leading from the tape supply to the exterior of the housing for directing the tape to a surface to be taped, an elongated vertical finger depressible plunger freely slidable rectilinearly in the housing, said plunger having a rigid foot in the throat in a position to engage one side of the tape at the extreme leading end thereof in depressed condition of the plunger, said housing being provided with two straight edges angularly disposed with reference to each other for sliding along the surface to be taped, the throat lying at the juncture of the edges and the plunger being parallel to one said edge, said foot applying pressure to the tape to cause adherence thereof to the surface to be taped, the tape paying out from the housing upon withdrawal of the latter from the point of initial tape adherence, and means to sever the tape adjacent the plunger foot.

6. The tape dispenser of claim 5 wherein said tape severing means comprises a fixed blade at the exterior end of the throat parallel with the plunger and normally free of the tape regardless of the position of the plunger but engaging and severing the tape upon rotation of the housing to a position wherein the plunger is horizontal.

7. A dispenser for pressure sensitive tape comprising a housing, means to hold a supply of tape therein, a pair of adjoining straight edge surfaces angularly disposed with reference to each other on the housing for selective sliding on a surface to be taped, a passage for the tape at the juncture of the two edge surfaces of the housing, a blade arranged at one edge surface to intersect the passage, movable means comprising a rectilinearly slidable plunger mounted in the housing for limited longitudinal movement with reference thereto and having a rigid foot in the passage to press the tape away from the blade in a direction toward the other edge surface and onto the surface to be taped, the tape paying out as the housing is drawn along the said other edge surface thereof while the tape pressing means is continuously actuated, said tape engaging the blade upon retraction of the tape pressing means and rotation of the housing oppositely to the direciton of motion thereof to pay out the tape with the said one housing edge surface in contact with the surface being taped.

8. A dispenser for pressure sensitive tape comprising a tape carrying housing having a side wall, means carried by the side wall for rotatably mounting a roll of tape thereon, a pair of edge walls perpendicular to each other and lying in planes perpendicular to the side wall, a tape exit throat adjacent the intersection of said edge walls connecting the interior of the housing with the exterior to permit tape to be drawn therethrough from said roll, a tape severing blade carried at the end of one edge wall adjacent the throat, and a manually operable plunger mounted for limited rectilinear movement parallel to the edge wall carrying the knife, and having a pressure foot portion movable across the throat opening.

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