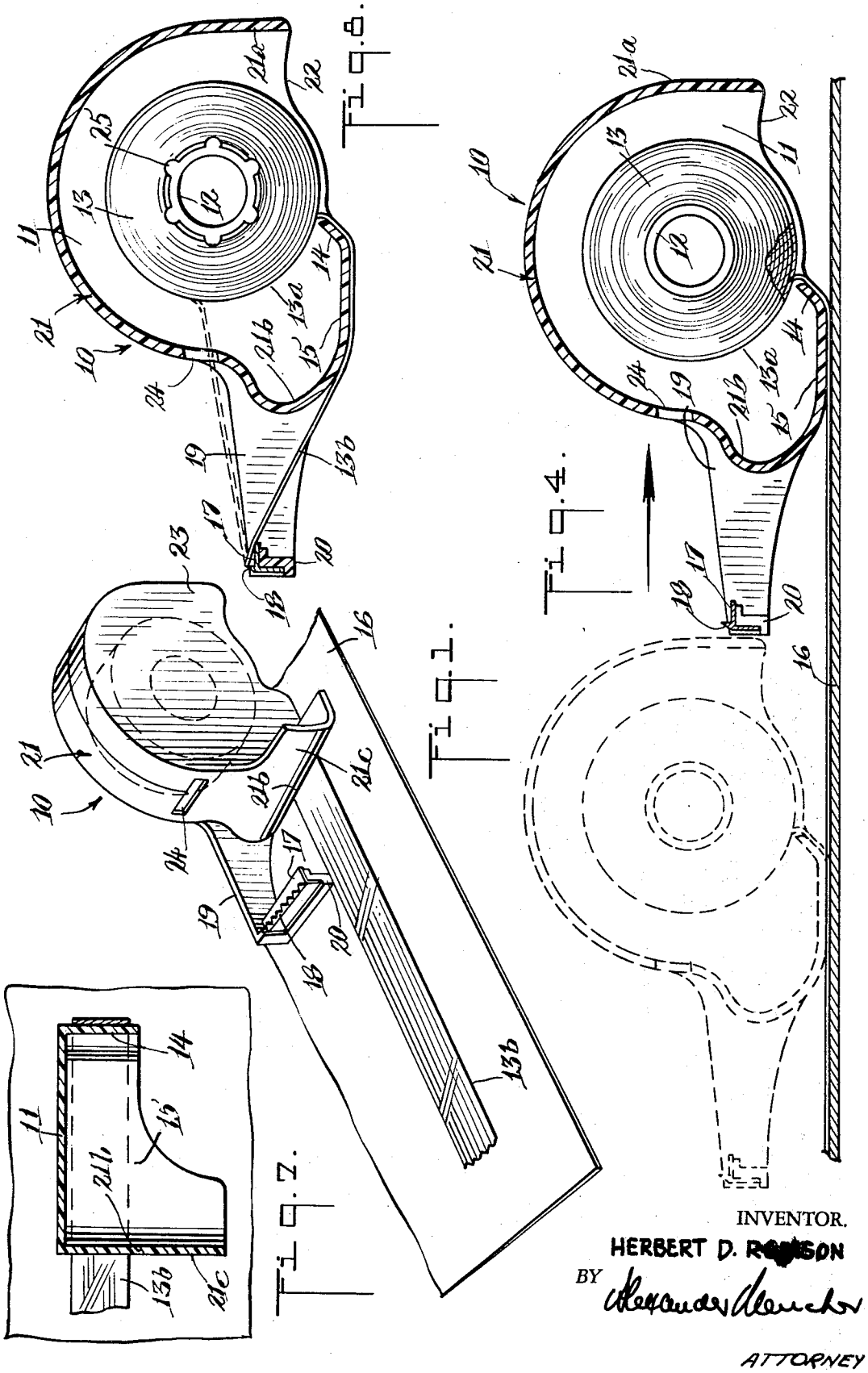
Dec. 26, 1972 H. D. ROBISON 3,707,426

COMBINED TAP DISPENSER AND APPLICATOR

Filed Jan. 6, 1971 2 Sheets-Sheet 1

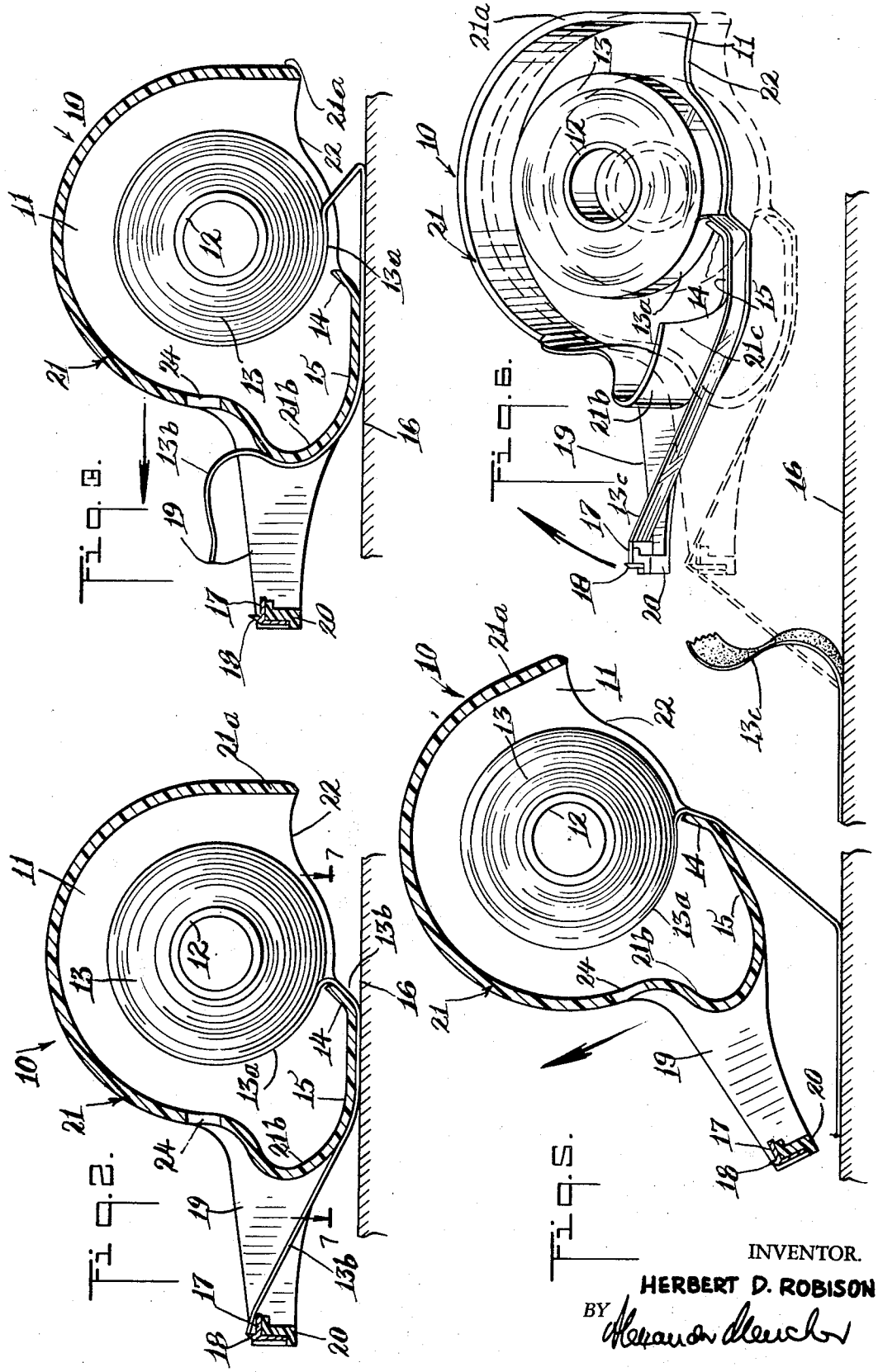


INVENTOR.
HERBERT D. ROBISON
BY Alexander Mercher
ATTORNEY

Dec. 26, 1972 H. D. ROBISON 3,707,426

COMBINED TAP DISPENSER AND APPLICATOR

Filed Jan. 6, 1971 2 Sheets-Sheet 2



INVENTOR.
HERBERT D. ROBISON
BY Alexander Mench
ATTORNEY

United States Patent Office 3,707,426
Patented Dec. 26, 1972

3,707,426

COMBINED TAPE DISPENSER AND APPLICATOR

Herbert D. Robison, Freehold, N.J., assignor of a fractional part interest to Edmund J. Thiele, Kenilworth, N.J.

Filed Jan. 6, 1971, Ser. No. 104,301
Int. Cl. B32b 31/18, 31/20
U.S. Cl. 156—527 3 Claims

ABSTRACT OF THE DISCLOSURE

A device which includes a manually operated combined dispenser and applicator for pressure sensitive tape and consists of a housing having a support for a roll of said tape. The leading end of the tape, when suitably threaded in the structure, is looped by a guide for slideable engagement on the nontacky side with an outside runner plate and continues for terminal engagement on the tacky side with a outside spaced and offset adhesion plate carrying a cutter for the terminal end of the tape. A cycle of operation is accomplished by setting the apparatus down and by having the runner plate in alignment and engagement with the surface to receive the tape whereby adhesion takes place between the tacky side of the tape on the outside of the runner plate and said surfaces. Thereafter, the apparatus is moved rearwardly to disengage the leading end from the cutter and the adhesion plate and then advanced forwardly for pullout of the tape and application of said tape by the runner plate on the applied surfaces. Near the end of the tape application area, the apparatus is lifted from said surfaces and sufficient free tape is pulled from the roll to enable the adhesion plate and cutter to the introduced under the tape for cutting the terminal end thereof and then applying the freed end of the tape by hand to the end of the surfaces of application.

The primary object of the invention is to provide a manually operated combined dispenser and applicator for adhesive or pressure sensitive tape of generally improved design.

Another object is to provide such a device which mechanically both releases the tape and successively applies the same to the receiving surface in a positive manner by manual movement of the device along said receiving surface.

Use of conventional dispensers for pressure sensitive tape involves a finger grasping of the tape for pulling same free from the roll, then cutting by a serrated cutting edge located on the roll housing and then applying the cut portion to a receiving surface. By the instant invention the fingers of the user are employed only for guiding and pressing the device along the receiving surface for tape release and application—an improvement of structure therefor not known in the art to the knowledge of applicant.

These and other objects of the invention will be set forth hereinafter in the progress of the disclosure and as set forth in the appended claims.

Accompanying the specification are drawings showing preferred forms of the invention and wherein:

FIG. 1 is a view in perspective of one form of the invention while in the process of applying tape to a receiving surface;

FIG. 2 is a sectional view of said device showing the tape extended on the device and in position for commencement of a cycle of operation on a receiving surface;

FIG. 3 is a sectional view similar to FIG. 2 showing rearward direction of movement by the hand of the device to release the tape for commencing a cycle of operation;

FIG. 4 is a sectional view similar to FIG. 3 showing the succeeding step of movement in the forward direction during the cycle of operation;

FIG. 5 is a sectional view of the device showing same tilted above the receiving surface at the end of the cycle of application with the terminal portion of the released tape free of the receiving surface.

FIG. 6 is a view in perspective showing the device twisted under the released and unapplied tape shown in FIG. 5 for cutting at the terminal end of the tape portion to be applied.

FIG. 7 is a sectional view of FIG. 2 across the plane 7—7 thereof; and

FIG. 8 is a sectional view of another form of the device.

As best seen in an embodiment of the invention in FIG. 2 wherein a roll of pressure tape (smooth on one side) has been applied and threaded or extended therethrough to commence a cycle of operation, the structure comprises a housing preferably formed of suitable plastic and molded therefrom, said housing being indicated generally by numeral **10**. A rear wall **11** of the housing carries a mounting such as spindle **12** for rotatable mounting of a roll of pressure sensitive tape **13**. As shown, the leading tape portion **13***a* is looped as at **13***b* by manually and axially first passing same along a guide member **14** for further passage along the outer surface of a runner plate **15** exterior of the housing **10** with the nontacky side slidably engaging said member **14** and plate **15**. The tacky side of the tape is adapted to adhere to the outer face of the receiving surface **16**.

As further seen in FIG. 2, leading end **13***a* of the tape proceeds from runner plate **15** to an adhesion plate **17** spaced from and above runner plate **15** and exterior of the housing **10** whereby the tacky side of tape **13***a* engages the upper surface of said adhesion plate, the terminal edge of the tape being across and attached to a suitable cutter such as serrated edge **18**. With the tape so disposed in conjunction with the described elements of the housing **10**, the device is ready to commence a cycle of operation. It is to be noted that plate **17** and cutter **18** are suitably mounted off the end of an arm **19** in a transversely disposed bracket **20**, said arm projecting off a lower corner of rear wall **11**.

As shown, guide plate **14**, runner plate **15** and adhesion plate **17** are arranged for alignment intermediate the widths thereof with tape roll **13**, and that the terminal tape portion comprises a free stretch **13***c* between runner plate **14** and adhesion plate **17** for terminating a cycle of operation to be hereinafter described in conjunction with FIG. 6.

Runner plate **15** preferably forms the bottom wall portion of a housing skirt extending transversely from the periphery of rear wall **11**, said skirt generally indicated by numeral **21** having at one end thereof an upwardly extending oblique flange constituting the guide plate **14**. Said skirt **21** terminates at the opposite end as at a leg portion **21***a* adjacent the outer corner of a rear wall indentation **22**. The outlet for tape roll **13** is thus formed between runner plate **15** and the end of skirt leg portion **21***a*.

It is to be noted that terminal tape portion **13***b* extends off horizontal runner plate **15** from a curved formation **21***b* in skirt **21** for tangential extension thereof. Formation **21***b* as shown is extended as at **21***c* for finger grasping purposes. Extension **21***c* cooperates with rear wall indentation **22** for manipulating the device during operation thereof. Moreover, a removable front cover plate **23** seen in FIG. 1 may be applied to the edges of skirt **21** inside of extension **21***c*. An opening **24** is also provided in skirt **11** for an alternate and customary use of the

structure for hand drawing and cutting suitable lengths of tape prior to application to a receiving surface.

FIG. 8 shows the structure described without use of a front cover plate **23** and wherein the tape roll is prevented from removal off spindle **12** as by spindle edge lugs **25** thereby resulting in a throwaway device after consumption of tape from roll **13**.

As heretofore mentioned, a cycle of operation is accomplished by setting the device down after the tape from roll **13** has been extended therethrough as seen in FIG. 2 with the runner plate in alignment and engagement with the receiving surface **16**. At such time, the tacky side of the tape adheres to the receiving surface in the area of the lower surface of runner plate **15**. Thereafter, the device is held by the fingers of both hands, one hand being applied to the indentation **22** and the other hand being applied to extension **21***c*. Simultaneously, pressure is applied downwardly against receiving surface **16**, the apparatus is moved rearwardly as seen in FIG. 3 to disengage the end **13***b* of the tape from the cutter and adhesive plate **17** and then advanced forwardly for pullout of the tape and application thereof by the runner plate **15** onto surface **16**. Near the end of the tape application, the apparatus is lifted from the receiving surface and sufficient free tape **13***c* is drawn from roll **13** to enable the adhesion plate **17** and cutter **18** to be drawn forwardly and under said free tape **13***c* for cutting the terminal end thereof as seen in FIG. 6. Thereafter initial and terminal portions **13***b* and **13***c* of the applied tape are finger manipulated for application to the receiving surface and the device is ready for a new cycle of operation.

I wish it understood that minor changes and variations in the materials, integration of parts and location thereof may all be resorted to without departing from the spirit of the invention and the scope of the appended claims.

I claim:

1. An apparatus for applying tacky tape to receiving surfaces by manual reciprocal movement of the apparatus along said surfaces for each cycle of operation, comprising a casing including a support for a supply of tape to be fed, a rigid and elongated bottom tape supporting plate and a tape guide carried thereby at the inner end, said plate and guide forming an integral extension of said casing and to direct an inner portion of the leading end of the tape along the undersurface of said supporting plate with the nontacky side in engagement therewith, an adhesion plate connected to said casing spaced above and laterally of said supporting plate for engaging the outer portion of the leading end of the tape along the upper surface of said adhesion plate with the tacky side in engagement therewith, and a cutter carried by said adhesion plate and at the end thereof to sever the leading end of the tape with simultaneous application of finger pressure on the tape against said adhesion plate, said apparatus for a cycle of operation being adapted to have the supporting plate resting on the receiving surface with the tacky side of the tape thereagainst and with movement of the apparatus rearwardly being adapted to disengage the leading end of the tape from the adhesive support and with successive movement of the apparatus forwardly to apply tape to the receiving surface and to terminate the extent of tape application.

2. An apparatus as set forth in claim **1** wherein the casing has an outlet intermediate the height thereof for pullout of the tape directly to the adhesion plate and cutter.

3. An apparatus as set forth in claim **1** wherein said supporting plate has a curved portion for tangential progress of the tape to the adhesion plate and the cutter and has a projecting portion for grasping of the apparatus by hand.

References Cited

UNITED STATES PATENTS

3,586,587	6/1971	Boyce	156—527
2,683,547	7/1954	Fischer	156—527
2,809,761	10/1957	Delbert	156—527
3,027,292	3/1962	Rothenberger	156—522 X
3,187,968	6/1965	Favre	156—527 X
3,468,743	9/1969	Soriano	156—527 X
3,542,628	11/1970	Fink	156—527
3,565,727	2/1971	Guest	156—527
3,574,042	4/1971	McMullen et al.	156—577
3,625,799	12/1971	Way	156—530
3,649,419	3/1972	Anderegg et al.	156—522
3,658,628	4/1972	Zenter	156—527

HAROLD ANSHER, Primary Examiner

U.S. Cl. X.R.

156—577