April 20, 1971 E. PADGETT 3,575,771

TAPE DISPENSER FOR PLASTERBOARD JUNCTIONS

Filed June 6, 1969 3 Sheets-Sheet 1

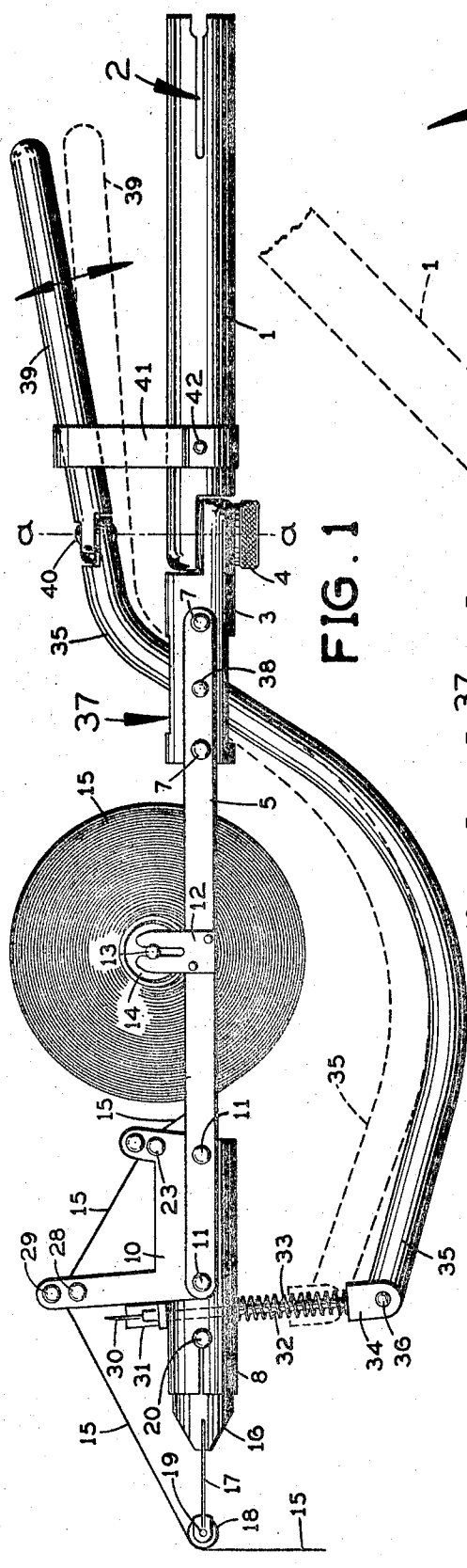


FIG. 1

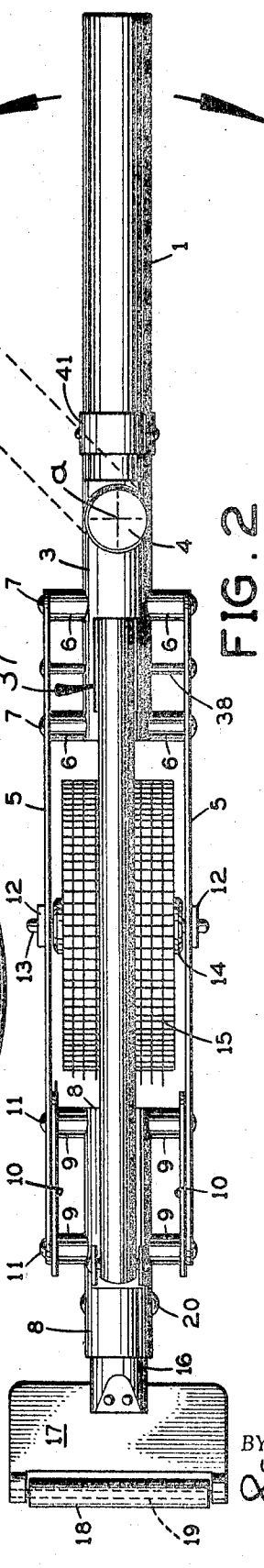


FIG. 2

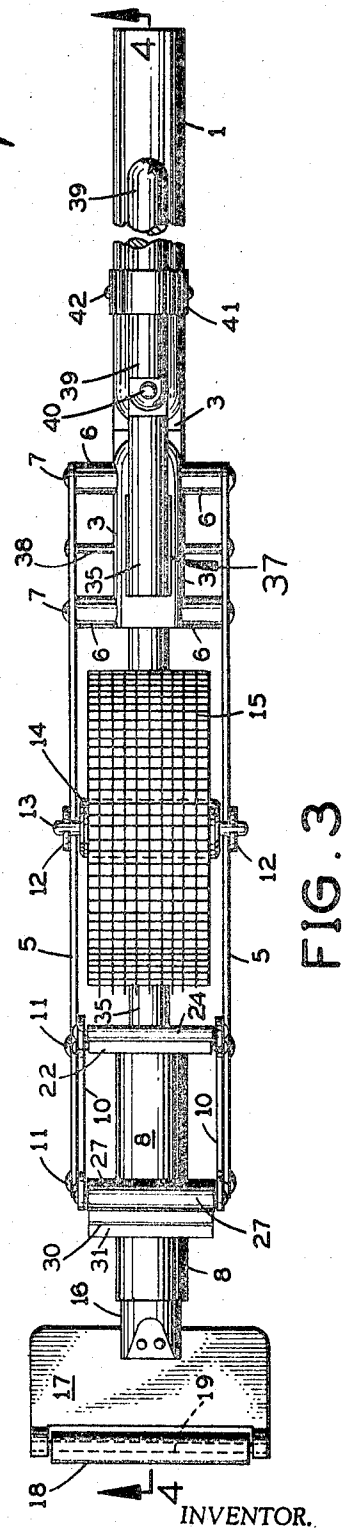


FIG. 3

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TAPE DISPENSER FOR PLASTERBOARD JUNCTIONS

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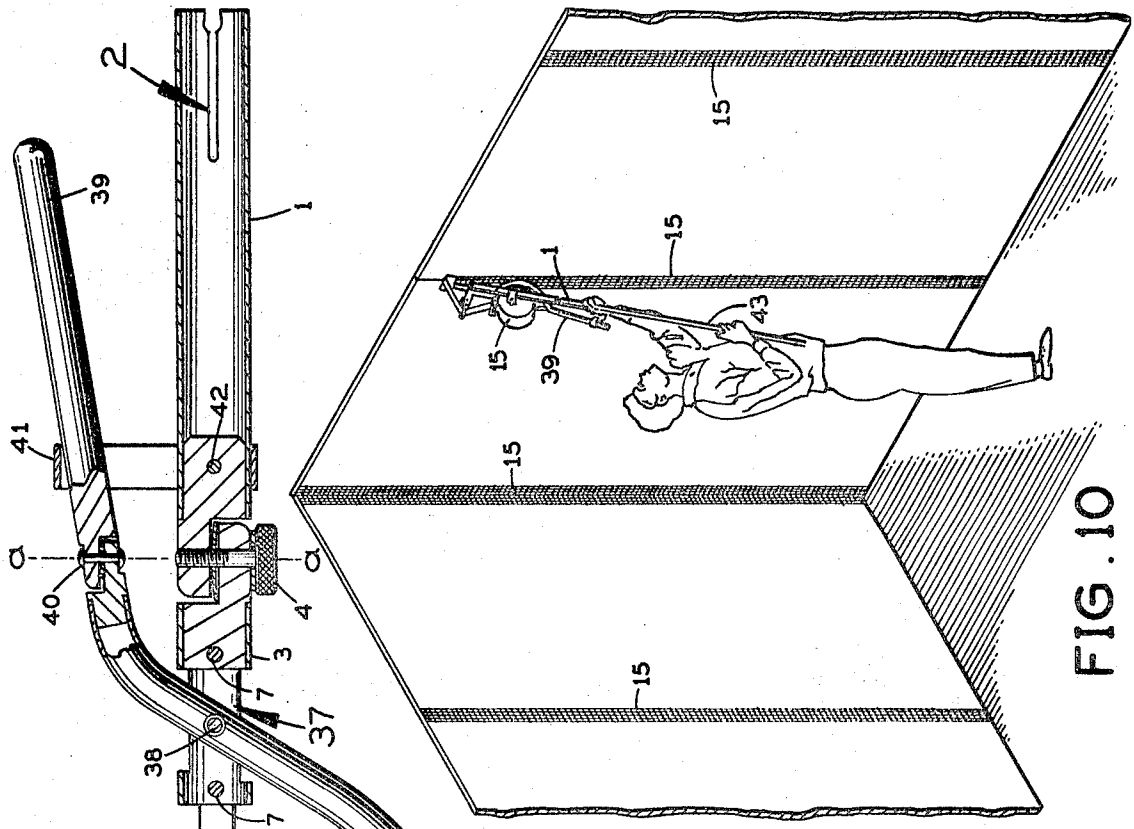


FIG. 10

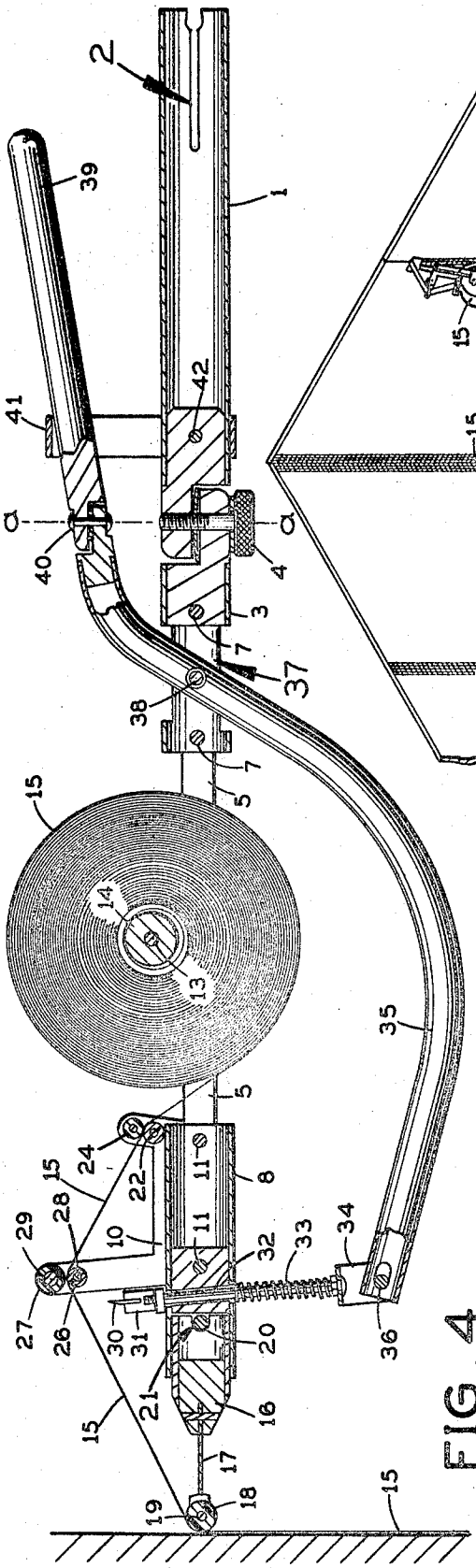


FIG. 4

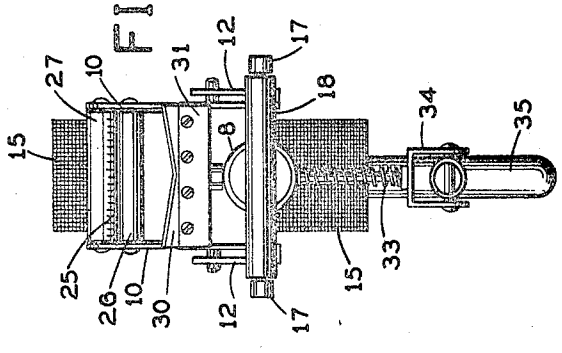


FIG. 5

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TAPE DISPENSER FOR PLASTERBOARD JUNCTIONS

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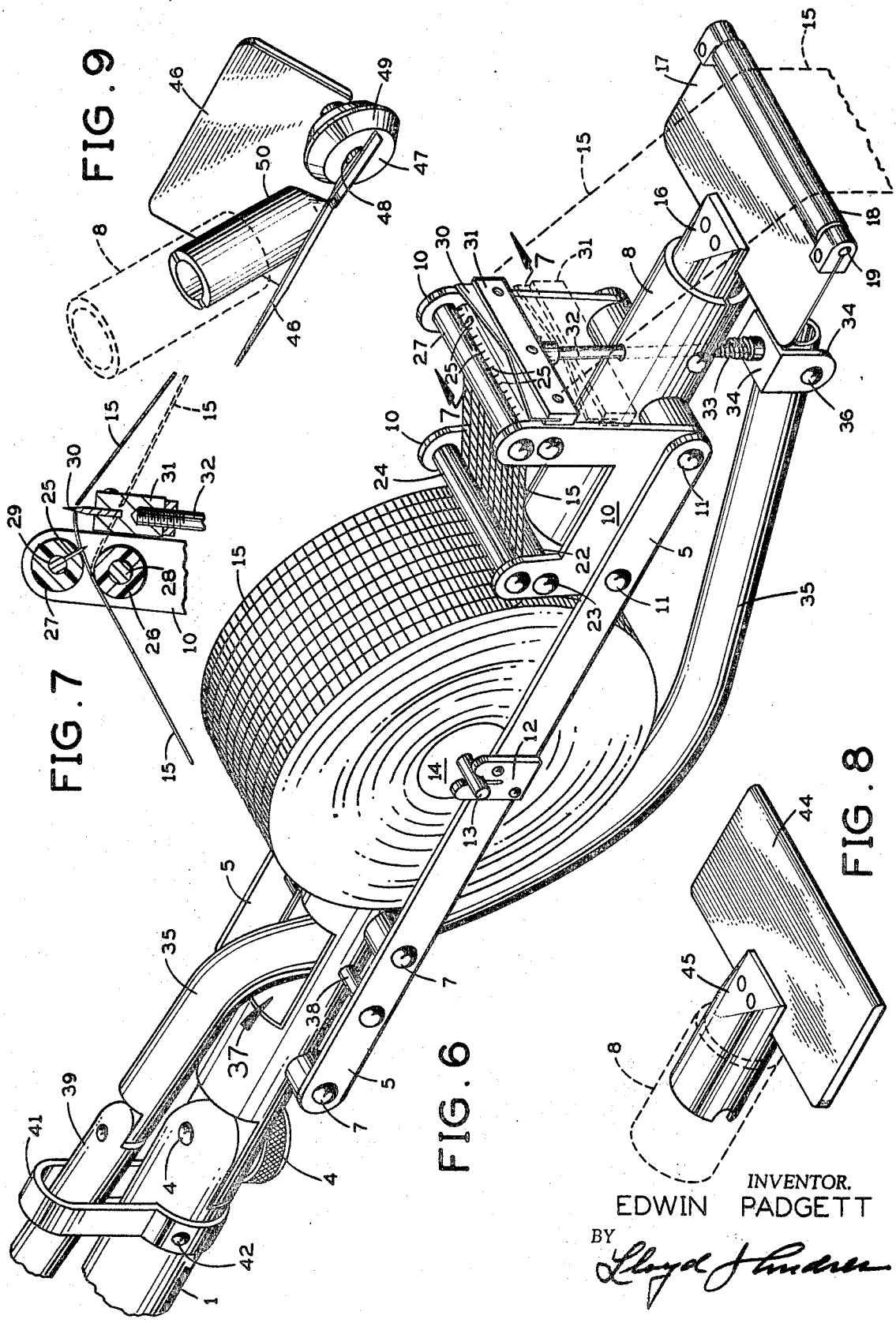


FIG. 9

FIG. 7

FIG. 6

FIG. 8

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United States Patent Office 3,575,771
Patented Apr. 20, 1971

3,575,771

TAPE DISPENSER FOR PLASTERBOARD JUNCTIONS

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Filed June 6, 1969, Ser. No. 830,986
Int. Cl. B32b 31/18; B44c 7/02
U.S. Cl. 156—523 5 Claims

ABSTRACT OF THE DISCLOSURE

A manually operated device for applying pressure sensitive adhesive reticular tape from a roll retained thereon to the junctions of plasterboard, commonly called wallboard or hard lath, over which a coating of plaster or other coating is applied. The device is adapted for rapid smooth application of the tape over the junctions of lath on the walls, ceilings and corners of a room by manual manipulation of the device.

This invention relates in general to tape dispensers and more particularly to a manually operated device for rapidly and precisely applying pressure sensitive adhesive tape over all junctions of plasterboard or wallboard on walls and ceilings of a room.

Prior tape dispensers for covering the junctions of wallboard prior to plastering were generally ineffective, particularly since they included no means for precisely and smoothly applying and severing the tape near or at the end of the junction covered. Furthermore, the prior devices were not provided with means for effectively covering the lath junctions in the corner junctions of walls and ceilings of rooms.

The present invention overcomes the above objections and disadvantages by the provision of a dispenser for a roll of pressure sensitive tape of either planar or reticular type, including a convenient handle for operating same including a blade operated by an auxiliary handle for severing the tape at the ceiling or other junction ends, which construction is a principal object of the invention.

Another object of the invention is the provision of roller means for applying pressure sensitive tape from the supply roll of tape and including an additional roller means of small diameter for rolling the tape in contact over planar junctions and in close proximity to corners.

Another object of the invention is the provision of a tape dispenser for covering the junctions of wallboard by manually moving the device over the junction with the dispenser including a shear blade for manually and precisely severing the tape in register with the end of the junction at a corner, such as a ceiling.

A further object of the invention is the provision of a right angled attachment for replacing the pressure roller in the aforesaid tape dispenser for precisely and smoothly applying the tape along both marginal sides of a corner junction of a room and the junction between the ceiling and wall of a room.

Another object of the invention is the provision of blade-like replacement for the pressure roller to smooth cut-off ends of the tape into adhesive register on the junction of the plasterboards.

These and other objects and advantages in one embodiment of the invention are described and shown in the following specification and drawings, in which:

FIG. 1 is a side elevation of the device in reduced scale.

FIG. 2 is a bottom plan view of the device shown in FIG. 1.

FIG. 3 is a top plan view of the device shown in FIG. 1.

FIG. 4 is the same as FIG. 1 in tape applying position.

FIG. 5 is a front elevation of the device shown in FIG. 4 with tape withdrawn.

FIG. 6 is an enlarged left hand perspective view of the device shown in FIG. 1 in cut-off position.

FIG. 7 is a fragmentary cross sectional side view taken through section line 7—7, FIG. 6.

FIG. 8 is a perspective view of a blade attachment for replacing the roller applicator shown in FIG. 6.

FIG. 9 is a perspective view of a replacement attachment for the roller applicator shown in FIG. 6 for bonding the tape along corner junctions of walls and ceiling.

FIG. 10 is a perspective illustration of the device shown in FIG. 1 in use.

Referring to FIGS. 1, 2, and 3, a handle socket **1** is provided with a slot means **2** for retaining detachable handles of different length. A frame support member **3** is pivotally secured to the socket **1** by a transverse screw **4**, which provides for pivotal adjustment, illustrated by broken lines in FIG. 2.

A pair of frame members **5** are secured in parallel spaced relation on member **3** by four spacers **6** secured thereto by riveted studs **7**. An outer socket member **8** is secured parallel and midway between said frame members **5** by four bushings **9** and a pair of spaced guide roller supports **10**, which elements are rigidly retained by riveted studs **11**. A pair of uprights **12** removably support an axle **13** which is coaxial with a tape roll hub **14** journalled on axle **13** positioned between the frame members **5**, as shown. A standard roll of reticular tape **15**, having a pressure sensitive adhesive on one side thereof, is supported by hub **14** for rotation therewith.

The applicator for applying the tape **15** to a planar surface consists of a detachable connector plug **16** adapted to be frictionally retained in the outer end of socket member **8**. The plug includes a clevis member **17** secured in the end thereof, best shown in FIGS. 1 and 2. A cylindrical roller **18** is journalled for rotation on an axle **19** secured in a flat clevis member **17**, as shown.

The roller **18** is prevented from movement about the axis of plug **16** by the engagement of a transverse pin **20** engaging a slot **21** across the end of the plug **16**, shown in FIG. 4.

Referring to FIG. 4, a lower guide roller **22** is journalled on axle **23** with the opposite ends retained in supports **10**, as shown. A fixed guide shaft **24** is riveted between supports **10** in parallel predetermined close spaced relation to roller **22**.

An upper guide roller **26** is journalled for rotation on a shaft **28** which is secured parallel with roller **22** on upward extensions of the supports **10**, as shown in FIGS. 6 and 7. It is now apparent that the tape will be guided from the roll over roller **22** and roller **26** onto and around roller **18** with the adhesive side positioned for placement over a junction.

A shaft **27** having a linear row of needles **25** axially extending radially therefrom is positioned above and in spaced relation to roller **26** and retained in fixed relation between the upper end portions of supports **10** with the needles therein extending obliquely downward, as shown in FIG. 7.

Referring to FIGS. 4 and 6, a tape severance blade **30** has a cutting edge in the form of a wide angle V and is removably secured in a holder **31** centrally supported by a shaft **32** for vertical reciprocation which is transversely journalled through socket member **8** for reciprocation therethrough and normally held in the position shown in FIG. 4 by a spring **33** around the shaft. The lower end of the shaft **32** is secured to a clevis assembly **34** which is pivotally connected to one end of the cutter lever **35** by a pin **36**. The lever **35** centrally extends through an opening **37** through support member **3** and is pivoted for oscillation therein on a transverse pin **38**. A cutter handle **39** is pivotally secured to the upper end of lever **35** by a pin **40** for providing lateral rotation of the handle

39 with respect to lever 35 about axis *a—a* which coincides with the axis of lateral movement of handle socket 1. Both handle socket 1 and handle 39 are laterally moved together by a guide member 41 secured to socket 1 by pin 42, better shown in FIG. 6.

In operation, the roll of tape is secured on axle 13 in the frame, as shown in FIG. 1, and threaded over rollers 22 and 26 and terminating over roller 18 with the adhesive side outward as shown in FIG. 1. Then, for example in covering a vertical junction, the roller is manually positioned over the junction of the wallboards at the base thereof and the device moved upward, which will smoothly and securely place the tape over the junction. At a predetermined distance from the upper end of the junction, the lever 39 is operated which will sever the tape just beyond roller 26 and permit the roller 18 to smoothly apply the tape over the remaining upper portion of the junction.

When a workman encounters a position when the manipulation of the device is beyond the manual handling of the handle socket 1 then an extension handle 43 is secured in the handle socket 1 for convenience, as illustrated in FIG. 10.

Referring to FIG. 8, a blade type applicator 44, centrally secured to connector plug 45 in place of plug 16, is used in the socket member 8 for moving the cut-off end portion of the tape into adhesive contact with the end of the lath junction.

Referring to FIG. 9, a blade 46 is formed at ninety degrees with a roller 47 journalled on an axle 48 in a central slot in one end of the junction of the blade 46, as shown. The roller is provided with a substantially ninety degree convergent V-shaped rim 49 and a connector plug 50, secured midway between the blades 46 and extending rearward at an angle from the roller 47, to manually move the tape into smooth contact with the corner junction in a room.

This invention comprehends certain modifications in construction that come within the teachings and spirit of the above specification.

Having described my invention, I claim:

1. A dispenser for applying pressure sensitive adhesive tape over marginal edge junctions of coplanar plasterboards comprising a means forming an elongated frame with an operating handle at one end thereof and a tape applicator at the opposite end thereof,

a roll of pressure sensitive adhesive tape of predetermined width removably journalled for rotation in said frame about an axis transverse and central of the width of said frame and positioned between said handle and said applicator,

said first applicator including a detachable coupling means for engagement to the said opposite end of said frame and having a transverse cylindrical tape application roller journalled for rotation at the outer end of said applicator parallel said axis and transversely aligned with said roll of tape,

an upper intermediate guide roller journalled for rotation in said frame positioned in transverse alignment above and between said axis and said application roller for guiding said tape withdrawn from said roller in a predetermined path over said application roller,

a tape impailing member secured in said frame positioned above and in parallel transverse aligned spaced relation with respect to said intermediate roller having a plurality of transversely spaced pointed impailing members extending downward parallel said guide roller and spaced a predetermined distance therefrom,

a tape cutting blade means journalled for reciprocation in said frame substantially normal thereto adjacent said guide roller between the latter and said tape applicator for movement from an idle position below said path of said tape to a predetermined shear position above said path,

lever means pivotally secured in said frame connected to said blade means for manually moving the latter from said idle to said shear position and for moving said tape upward in said path for temporary impailment on said impailing members and severing same between said guide roller and said application roller when operated at the completion of the covering of one of said junctions by the manual operation of said dispenser.

2. The construction recited in claim 1 wherein said blade means includes a blade member removably secured in the upper end of the movable element and having a wide angle V-shaped cutting edge on the upper edge thereof for laterally severing said tape impailed on said impailing members above said tape path from its opposite outside edges toward the center thereof.

3. The construction recited in claim 1 including a second applicator comprising a straight smoothing outer edge of predetermined width and thickness with a coupling means central of one side portion thereof for interchange with said first applicator with the said outer edge positioned parallel said axis for applying and smoothing the cut off end portion of said tape over the end portions of said junctions.

4. The construction recited in claim 1 including a third applicator interchangeable with said first applicator comprising a substantially right angle V-shaped member of predetermined length with the opposite outer planar sides of predetermined width terminating in a linear junction, a roller having a convergent V-shaped periphery journalled for rotation in a clearance slot centered in said member at one end of said junction with the axis of rotation of said roller transverse said V-shaped member including a said coupling means central of the inner sides of said V-shaped member at a predetermined angle with respect to said junction and said junction positioned normal and central to said path of said tape for applying and smoothing said tape over the corners of wall and ceiling junctions of wall and ceiling plasterboards.

5. The construction recited in claim 1 including an auxiliary handle means adjustably secured to the end of said first mentioned handle for lateral positioning with respect thereto for using said device in restricted areas.

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U.S. Cl. X.R.

156—526, 575, 576