Feb. 24, 1970 L. BENNETT, JR 3,496,909

DRY WALL TAPE DISPENSER

Filed June 17, 1966

Fig. 1

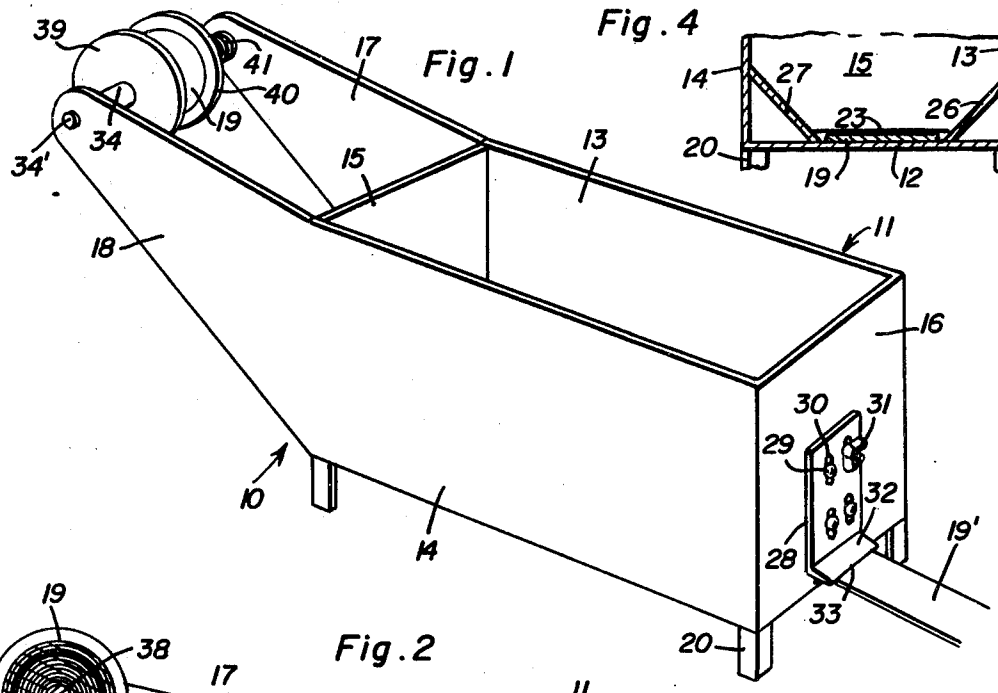


Fig. 4

Fig. 2

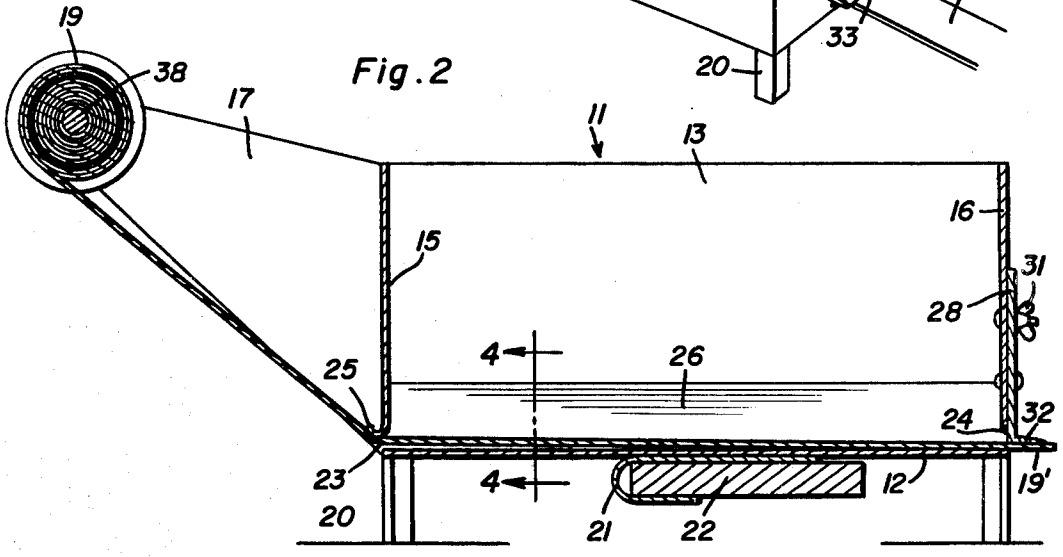
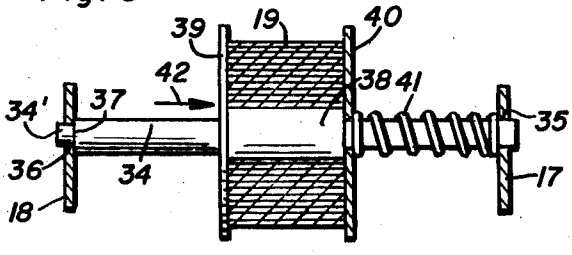


Fig. 3



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United States Patent Office 3,496,909 Patented Feb. 24, 1970

3,496,909

DRY WALL TAPE DISPENSER

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Filed June 17, 1966, Ser. No. 558,511
Int. Cl. B05c 11/122, 11/12
U.S. Cl. 118—43 5 Claims

ABSTRACT OF THE DISCLOSURE

A dispenser for dry wall tape including an enlarged hopper through which the tape passes and within which a coating of adhesive is applied thereto. The exit of the tape from the hopper is effected through a gate controlled opening for varying the amount of adhesive on the tape, the gate including an outwardly projecting sharp edged cut-off flange. The tape is mounted in a roll on the dispenser with the roll and mounting shaft therefor being spring-loaded so as to prevent a free rolling thereof.

This invention relates to new and useful improvements in devices for adhesively coating and dispensing wall joint tape such as is used in the construction or repair of so-called dry walls.

The principal object of the invention is to provide a device of the character herein described which may be effectively employed for dispensing desired lengths of tape from a roll and applying a coating of adhesive paste to the tape automatically during the dispensing operation.

An important feature of the invention resides in the provision of means whereby the thickness of adhesive paste applied to the tape may be varied as desired.

Another important feature involves the provision of novel means for supporting a roll of tape on the dispenser.

Still another feature resides in providing the dispenser with supporting legs for positioning on a flat surface, as well as with clamp means whereby the dispenser may be removably attached to a suitable support, as for example, the step of a ladder.

The device of the invention is simple in construction, efficient and time-saving in operation, and lends itself to convenient and economical manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the dry wall tape dispenser of the invention;

FIGURE 2 is a vertical, longitudinal sectional view thereof;

FIGURE 3 is a fragmentary sectional detail illustrating the tape roll mounting means; and

FIGURE 4 is a fragmentary cross-sectional view, taken substantially in the plane of the line 4—4 in FIGURE 2.

Referring now to the accompanying drawings in detail, the dry wall tape dispenser of the invention is designated generally by the reference character **10**. The same comprises a substantially rectangular hopper **11**, having an open top and including a bottom **12**, a pair of side walls **13**, **14**, and a pair of end walls **15**, **16**. The side walls **13**, **14** are formed integrally with extensions **17**, **18**, respectively, which project outwardly beyond the end wall **15** and constitute a pair of arms for supporting a roll of tape **19**, as will be hereinafter described.

The hopper **11** is equipped at the bottom thereof with a set of legs **20** for supporting the same at an elevation above a flat surface on which the dispenser may be positioned. Also, a clamp **21** is secured to the underside of the hopper bottom **12**, whereby the dispenser may be removably attached to a suitable support, as for example, a step **22** of a ladder, as will be apparent from FIGURE 2.

The hopper end wall **15** is provided at the bottom **12** with a tape entrance slot **23**, and similarly, the end wall **16** is provided at the bottom **12** with a tape outlet opening **24**. Thus, the tape may extend from the roll **19** through the entrance slot **23**, along the bottom **12** of the hopper, and then outwardly through the outlet opening **24**, as indicated at **19'**. It will be observed that the end wall **15** is rolled at the upper edge of the slot **23** as indicated at **25**, so as to eliminate a sharp edge by which the tape could otherwise be damaged.

Preferably, the transverse spacing of the hopper side walls **13**, **14** is substantially greater than the width of the tape to be accommodated. A pair of elongated side plates **26**, **27** are secured to lower end portions of the respective side walls **13**, **14** and extend downwardly in convergent relation to the bottom **12**, as illustrated in FIGURE 4. The side plates **26**, **27** thus provide a trough in the bottom portion of the hopper and the transverse distance between the lower edges of the side plates is only slightly wider than the tape, so that adhesive paste placed in the hopper may be effectively deposited on the upper surface of the tape as the latter travels through the hopper.

A vertically adjustable gate **28** is provided on the outer surface of the hopper end wall **16** for varying the height of the outlet opening **24** and thereby correspondingly varying the thickness of adhesive paste which is deposited on the tape as the latter is pulled outwardly through the opening. The gate **28** is slidably mounted in position on the end wall **16** by a plurality of bolts or rivets **29** extending through vertical slots **30** in the gate, one of such bolts being equipped with a wing nut **31** which, when tightened, serves to hold the gate in an adjusted position.

It will be also noted that the lower edge of the gate **28** is formed integrally with an outwardly projecting, substantially horizontal flange **32** having a sharp cutting edge **33** against which the tape may be torn after a desired length of the tape has been pulled through the hopper.

As is best shown in FIGURE 3, the tape roll **19** is supported by a shaft **34** extending transversely between the aforementioned arms **17**, **18**. One end portion of the shaft **34** is rotatably and removably journaled in an aperture **35** in the arm **17**, while the other end portion of the shaft is diametrically reduced as at **34'** and is rotatably and removably journaled in an aperture **36** in the arm **18**. The diametrically reduced shaft portion **34'** provides an annular shoulder **37** on the shaft, for abutting the arm **18**.

The intermediate portion of the shaft **34** is either formed integrally with or has rigidly secured thereto a cylindrical hub **38** on which the tape roll **19** may be positioned, the hub **38** having a fixed flange **39** at one side of the tape roll. The other side of the roll of tape is abutted by a flange **40** which is slidably positioned on the shaft **34** and is urged against the adjacent side of the roll of tape by a compression spring **41** which is positioned on the shaft **34** between the slidable flange **40** and the aforementioned arm **17**.

It will be understood that the spring **41** serves not only to retain the flange **40** against the tape roll **19**, but it also presses the shoulder **37** of the shaft **34** against the arm **18** and thus frictionally restricts free rotation of the shaft so that the tape is unwound only as fast as it is pulled through the hopper **11**.

When the supply of tape on the roll **19** has been exhausted, it may be replenished by simply pressing the shaft **34** in the direction of the arrow **42** so as to withdraw the shaft end portion **34'** from the aperture **36**. The shaft may then be moved in the relatively opposite

direction to withdraw the same from the aperture **35** and with the shaft thus removed from the arms **17, 18,** the spring **41** and the flange **40** may be slipped off the shaft to facilitate positioning of a new roll of tape on the hub **38.**

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A dry wall tape dispenser comprising, in combination, a paste receiving hopper including a bottom, a pair of side walls and first and second end walls, the first end wall being provided at the bottom of the hopper with a tape entrance slot, the second end wall being provided at the bottom of the hopper with a tape outlet opening, means provided on the hopper exteriorly of the first end wall for supporting a roll of tape whereby the tape may extend from the roll through said entrance slot along the bottom of the hopper and outwardly through said outlet opening, a vertically adjustable gate provided on said second end wall for varying the height of said outlet opening, whereby to correspondingly vary the thickness of paste deposited from the hopper on the tape, and a substantially horizontally outwardly projecting flange provided on and along the full width of the lower edge of said gate in overlying relation to the outlet opening, said flange having a sharp cutting outer edge by which the tape may be severed.

2. The device as defined in claim **1** together with a pair of downwardly convergent side plates extending from lower portions of said side walls, along the full length thereof, to said bottom and forming a flat tape receiving trough of a width substantially equal to that of the tape in the bottom portion of the hopper.

3. The device as defined in claim **2** together with a set of four vertical legs extending downwardly from the corner portions of the bottom of said hopper for sustaining the same at an elevation above a supporting surface, and a clamp provided centrally on the underside of the bottom of said hopper and in laterally spaced relation to the surrounding legs for removably attaching the same to a support, said legs extending below said clamp for engagement with a flat supporting surface without interference by said clamp.

4. In a dry wall tape dispenser, the combination of a paste receiving hopper including a bottom, a pair of side walls and first and second end walls, the first end wall being provided at the bottom of the hopper with a tape

entrance slot, the second end wall being provided at the bottom of the hopper with a tape outlet opening, and means provided on the hopper exteriorly of the first end wall for supporting a roll of tape whereby the tape may extend from the roll through said entrance slot along the bottom of the hopper and outwardly through said outlet opening, said means comprising a pair of arms constituted by extensions of said side walls of the hopper outwardly beyond the first end wall, said arms being formed with a pair of transversely aligned apertures, a shaft having one end portion thereof removably and rotatably journaled in the aperture of one of said arms and also having a diametrically reduced other end portion removably and rotatably journaled in the aperture of the other arm, said diametrically reduced shaft end portion providing a shoulder on said shaft in abutment with said other arm, a fixed flange and a slidable flange provided intermediate the ends of said shaft and adapted to receive a roll of tape therebetween, and a compression spring provided on said shaft and acting between said slidable flange and one of said arms for urging said flange toward said roll, so as to clamp the roll between the flanges for rotation with the shaft, and said shoulder against the other arm and for frictionally restricting rotation of said shaft.

5. The device of claim **4** including a vertically adjustable gate provided on the second end wall above said outlet opening for varying the height of said outlet opening and thereby varying the thickness of paste deposited from the hopper on the tape, and a substantially horizontally outwardly projecting flange provided on and along the full width of the lower edge of said gate in overlying relation to the outlet opening, said flange having a sharp cutting outer edge by which the tape may be severed.

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U.S. Cl. X.R.

118—415; 156—577, 578; 242—75.4