March 6, 1962 W. ORT 3,023,728

WALL BOARD TAPE COATING AND DISPENSING DEVICE

Filed Aug. 21, 1958 2 Sheets-Sheet 1

Fig. 1

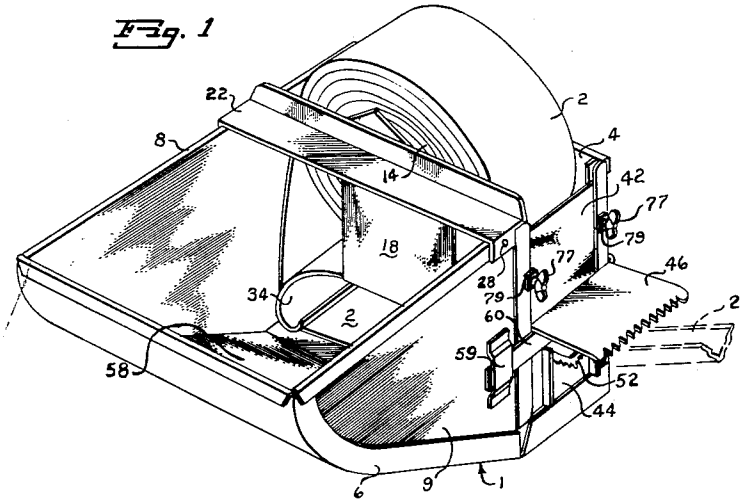


Fig. 2

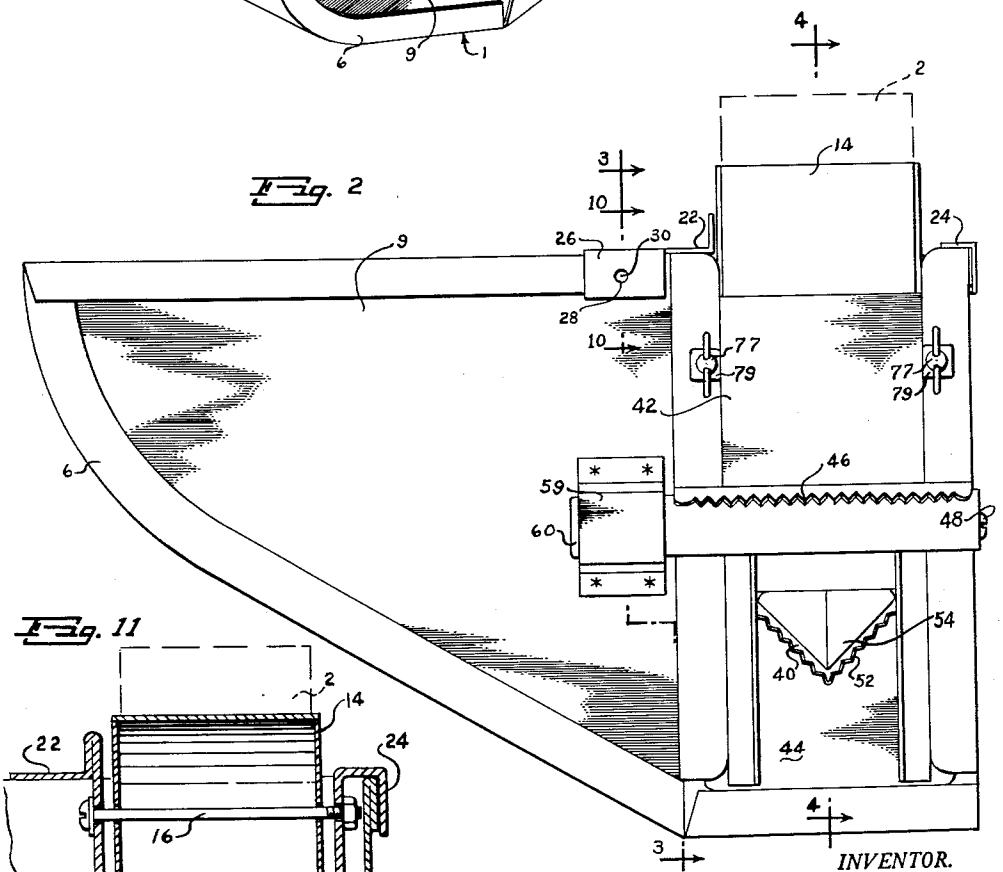


Fig. 11

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Fig. 3

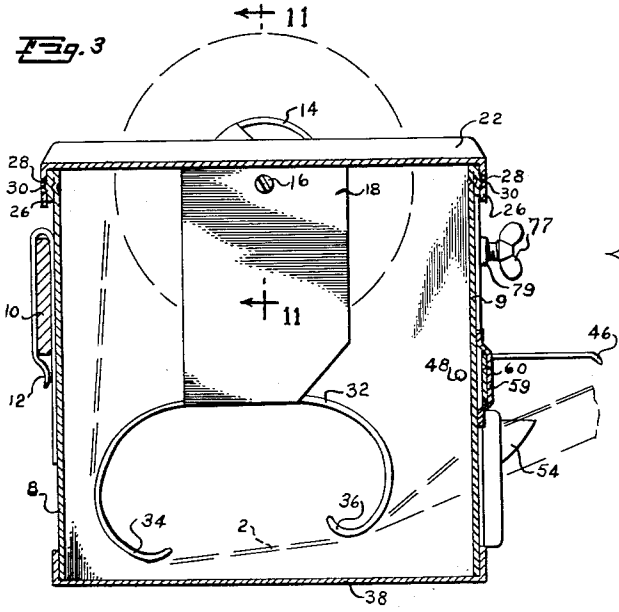


Fig. 6

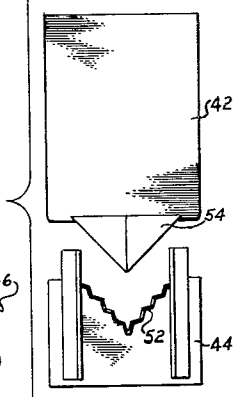


Fig. 7

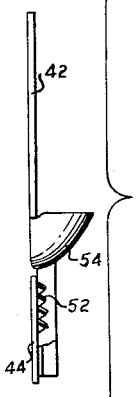


Fig. 4

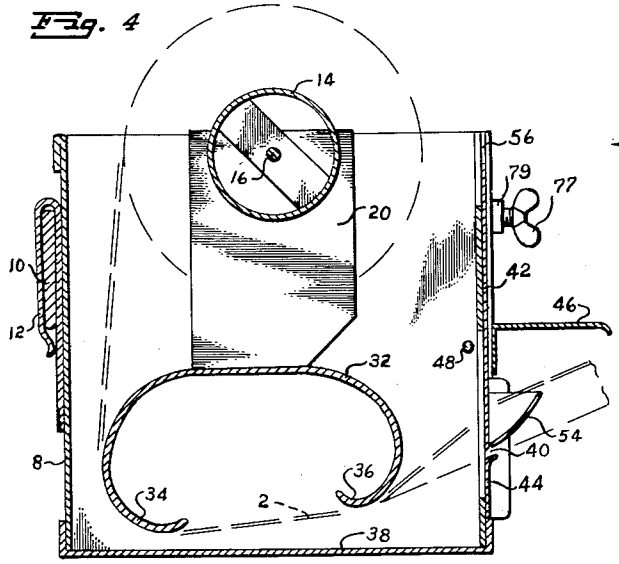


Fig. 8

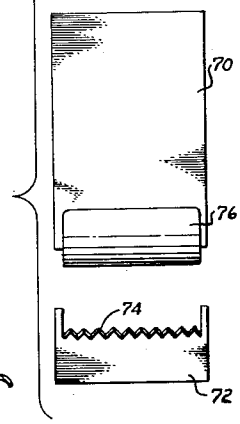


Fig. 9

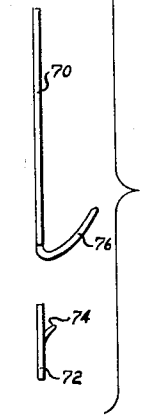


Fig. 10

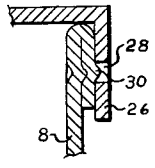
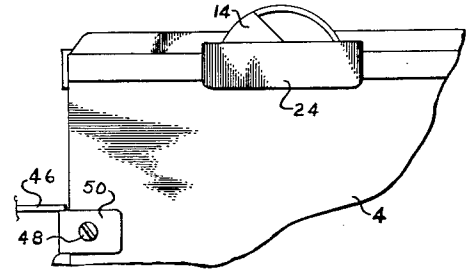


Fig. 5



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3,023,728

WALL BOARD TAPE COATING AND DISPENSING DEVICE

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3 Claims. (Cl. 118—32)

This invention relates to a combination tape dispensing and "mudding" device, and more particularly to a device for processing tape used by interior decorators for taping the joints of Sheetrock, wall board and the like.

Various devices have been proposed heretofore for dispensing tape and for applying bedding material, commonly known as mudding of the tape. Great skill is required to properly apply the tape in the correct lengths, so as to make uniform joints.

The usual method of removing the tape from a roll is by tearing the tape off with a putty knife or the like, in approximately the length required and applying the bedding material with a broad blade putty knife. This involves much lost motion, and the manner of attaching the rolls of paper tape to the person of the workman makes it difficult to obtain a strip of the correct length, whereas, with the present device "mudded" tape is removed directly from a dispenser and may be either dispensed flat or the tape may be creased in a right angle conformation to fit within an interior corner or about an exterior corner.

The present device is so constructed that it is secured to a belt, which belt is secured about the waist of the workman in such manner that it does not impede the movements of the workman, or require the use of his hands to hold the tape, yet the tape is held readily available and may be removed in lengths required for application to a joint, with the tape already mudded and without the necessity of applying additional mud thereto.

An object of this invention is to provide a tape dispensing and mudding device which will dispense tape which is creased medially at a right angle for use on either exterior or interior corners.

Another object of the invention is to provide a mudding device, whereby the roll of tape may be readily removed and replaced with a minimum of disassembly.

A still further object of the invention is to provide a tape dispensing device whereby tape may be severed in the desired lengths with a minimum of effort.

Still another object of the invention is to provide an inclined hopper from which the mud may be removed, when desired, and which will direct the mud onto and around the tape being mudded.

A final object of the invention is to provide a device which is simple in construction, easy to use, and low in the cost of manufacture, and which is readily usable by anyone skilled in the art of applying tape and bedding material to wall board joints.

With these objects in mind and others which will become manifest as the description proceeds, reference is to be had to the accompanying drawings, in which like reference characters designate like parts in the several views thereof, in which:

FIG. 1 is a perspective view of the device taken from a side, an end and the top, and showing a roll of tape mounted therein and threaded downward therethrough, in full outline, and showing a dispensed piece of tape as extending outward therefrom, in dashed outline, which tape is shown to have been creased at a substantially right angle;

FIG. 2 is an enlarged, front elevational view of the device shown in full outline, and showing the position of the tape in dashed outline, the die within the device for forming the tape at a right angle is shown, so the tape may be used on either interior or exterior corners;

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 2, but on a reduced scale, and looking in the direction indicated by the arrows, and showing the tape, in dashed outline, threaded therethrough;

FIG. 4 is a sectional view taken on the line 4—4 of FIG. 2, but on a reduced scale, and showing the construction of the interior of the tape holding spool, and showing the tape, in dashed outline, thereon and threaded therethrough;

FIG. 5 is a fragmentary, elevational view taken from the opposite end of the device from that shown in FIG. 1;

FIG. 6 is an enlarged, exploded, elevational view of the complementary die plates used for forming a right angle crease medially of the tape as it is dispensed;

FIG. 7 is a view similar to FIG. 6, but taken at right angles thereto;

FIG. 8 is a view similar to FIG. 6, but of a different form of complementary die plates for dispensing tape in a plane condition;

FIG. 9 is a view similar to FIG. 8, but taken at right angles thereto;

FIG. 10 is a fragmentary, sectional view taken on the line 10—10 of FIG. 2, looking in the direction indicated by the arrows, showing a detent latching arrangement for holding the spool holding member in place, and

FIG. 11 is a sectional view taken on the line 11—11 of FIG. 3, looking in the direction indicated by the arrows.

With more detailed reference to the drawing, the numeral 1 designates generally a housing which forms a reservoir for the plastic bedding material or "mud" for coating the tape 2 with the desired amount of such material. The housing 1 has an upright wall 4 at one end and an inwardly and downwardly sloping wall portion 6 at the other end, with a side wall 8 which is substantially vertical on one side and a wall 9 on the opposite side so as to form an open top hopper in a portion of said housing. The device is adapted to be attached to a belt 10 and worn with the wall 8 adjacent the body of the wearer. A pair of hook members 12 is provided on wall 8, which hooks are adapted to engage belt 10 in such manner that the housing 1 may be readily removed therefrom. A roll of tape 2 is mounted on a spool 14, which spool has an axle 16 provided therethrough, which axle passes through downwardly depending members 18 and 20, which members are secured to angle members 22 and 24, which are attachably connected to the upper edge of walls 8, 9, and 4 of the housing.

The angle member 22 is down-turned at each end, as indicated at 26, and has hole 28 formed in each end thereof to complementally register with projections 30 which are pressed outward from sides 8 and 9, so as to hold the angle member 22 against lateral movement with respect to walls 8 and 9.

The lower ends of downwardly extending members 18 and 20 have a transverse member 32 thereon, the ends of which are inturned to form a pair of arcuate members 34 and 36, with a space therebetween.

The lower-most curvature of the arcuate members 34 and 36 is in close proximity to the bottom 38 of housing 1. Normally the bedding material, cement or mud fills the hopper until the level of the material almost reaches the lower side of the roll of tape 2. The tape 2 passes downward beneath arcuate members 34 and 36, and thence outward through a slotted opening 40 between die members 42 and 44, if it is desired to dispense the tape in angular conformation, as shown in FIGS. 1, 3 and 4. A cutter element 46 is provided directly above the slotted opening 40 for severing the dispensed tape at the desired length. The cutter element 46 is attached to the wall 4 by means of a screw 48, which passes through a lug 50 and the side wall 4. The die plate 44

has serrations **52** along the upper side thereof, which prevent an undue amount of plastic material, such as bedding material or mud, from passing out. However, the serrations cause the mud to be dispensed in the form of longitudinally aligned ridges, with sufficient mud to fill the depressed portion of the joint and to form a bonding joint with the adjacent edges of the wall board. The lower portion of the die plate **42** has a downwardly extending triangular portion **54** thereon, which is so contoured as to convert the flat tape into a trough-like shape of substantially a 90 degree angle, with the center being creased so as to enable the tape withdrawn from the housing **1** to be fitted into the inner corner or onto an outer corner between wall boards, without the creasing having to be done by hand.

The die members **42** and **44** are adapted to fit within slots **56** formed on the forward side of wall **9** of housing **1**.

The housing **1** has a reservoir **58** which extends outwardly from the roll of tape **2** so that the plastic material may be readily removed therefrom by the use of a putty knife or the like, so that odd crevices and other places not covered by the tape may be treated in the usual way. By moving the die plate **42** upward, the size of the slotted opening **40** will be increased to allow a greater amount of "mud" to be dispensed onto the tape. It is to be appreciated that the size of the opening **40** may be readily varied to dispense a predetermined amount of mud onto the tape **2**.

An alternate form of die plate is shown in FIGS. 8 and 9. These particular die plates **70** and **72** are so constructed as to dispense the tape flat, with the serrations **74** forming a longitudinally aligned row of mud on the lower face of the tape being dispensed. The upper die plate **70**, having a downwardly extending portion **76** which is rounded, as will best be seen in FIG. 9, will enable the desired amount of tape **2** to be withdrawn through the slotted opening formed between the serrations **74** and the member **76**, to cover the joints of the wall board. The die plates **42** and **44** are readily interchangeable with die plates **70** and **72**, so as to perform the desired "mudding" and shaping action on the tape. The cutter element **46** is preferably serrated so that the tape **2** may be readily severed, to provide a strip of the desired length. Wing screws **77** threadably engage strips on wall **9**, to form slots **56**, so that the screw will bindingly engage the die member **42** or **70** to hold the die member in correctly adjusted position to form slot **40**.

A loop **59** is secured to wall **9**, as by welding, to provide support for one end of bar **60** on which cutter element **46** is mounted. This enables the cutter element to be readily removed by removal of the screw **48**.

Operation

To use the present device, the hooks **12** are hooked over a belt **10**, which belt is fastened about the waist of the workman so that the housing **1** will be approximately at waist height. A roll of tape **2** is mounted on tape holder spool **14**, and with the tape threaded downward over arcuate member **34** and abridging across to arcuate member **36**, as indicated in dashed outline in FIGS. 3 and 4, the tape then passes out through slotted opening **40** between die plates **42** and **44**, which plates are shown in detail in FIGS. 6 and 7, which die plates crease the tape medially thereof into a substantially right angle, trough-like conformation, and with the tape passing through plastic mud or plastic bedding material within the reservoir **58** is such that the mud will flow between arcuate members **34** and **36**, as well as therebelow, to mud the tape on all sides. As the tape is withdrawn through slot **40**, longitudinally aligned rows of plastic material will be deposited on the lower face of the tape. However, the upper face of the tape will be wiped substantially free of mud, thereby dispensing tape which may be readily handled without getting the hands on the mudded face thereof. The cutter element **46** is used to sever the tape to the desired length, so the tape may be ready to apply to a joint of wall board, which joint is slightly recessed, so when the tape is applied therein, and the mud is evenly distributed, the tape may be smoothed on so that the joint between the wall board will be substantially in a plane surface with the wall board, thereby performing a uniform job, even though the artisan may not have the skill to mud the tape by the conventional hand method.

While the form of the invention, as shown in FIGS. 1 to 7, disclose the creasing of the tape to form a right angle, the tape thus dispensed can be readily used on a plane surface, as the fold in the tape enables it to be centered along the adjacent edges of the wall board, but the tape thus creased may also be used either in interior or on exterior corners.

The form of the invention as shown in FIGS. 8 and 9 may be used for performing taping and bedding operations on walls and ceilings where the greater portion of the taping or bedding does not require working in corners.

It is to be pointed out that, by the removal of the one screw **48**, the cutter element **46** may be readily removed, however, if it is desired to remove the tape holding spool and associated mechanism, it is necessary only to lift the angle members **22** and **24**, then the entire assembly, including spool **14**, axle **16**, downwardly depending members **18** and **20**, transverse member **32** and arcuate members **34** and **36**, may be removed as a unit. This enables the tape **2** to be rethreaded, or a new spool of tape to be inserted, conversely, the mechanism may be reassembled by pressing downward until holes **28** engage projections **30**, which will securely hold the spool holding assembly in place.

If it is desired to use the housing **1** as a receptacle or reservoir for mud, the spool holding assembly, above mentioned, may be removed, and the reservoir will form an ideal mud carrying case having a sloping bottom **58**, which enables the mud to be readily removed with a putty knife, broad knife, or the like.

While the invention has been illustrated and described in some detail in one embodiment thereof, it is to be understood that changes may be made in the minor details of construction without departing from the spirit of the invention or the scope of the appended claims.

Having thus clearly shown and described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A portable device for receiving plastic bedding material and wall board joint tape for dispensing said tape coated with said plastic bedding material, said device being adapted to be secured about the person of a workman; which device comprises a bottom, three substantially vertical walls secured to said bottom, a fourth wall joined to said bottom and to two of said vertical walls and extending outwardly to form an open top receiving chamber for said plastic bedding material, a tape holding assembly attachably positioned between two of said substantially vertical walls and being adjacent said third substantially vertical wall and lying adjacent said receiving chamber, said tape holding assembly comprising a pair of apertured, depending, spaced apart members, a spool positioned between said apertured, depending, spaced apart members, an axle passing through said apertures and mounting said spool to rotatably support said spool between said depending members, an angle member on each side of said spool, a downwardly extending member secured to the respective angle members, one of said angle members having a down-turned projection on each end thereof, which projections attachably engage two of said vertical walls, the other of said angle members having a down-turned portion on a side thereof to complementally engage the other of said vertical walls, said downwardly depending members having a transverse member extending therebetween to hold said depending members in

spaced apart relation, the ends of said transverse member being arcuate and inturned with a space therebetween over which said tape extends in guided relation, one of said substantially vertical walls lying in a plane parallel to the axis of said spool, which wall has an opening formed therein which is in aligned relation with said tape passing over said arcuate portions of said transverse member so tape positioned on said spool and extending therefrom downward between said vertical walls will pass below said arcuate portions of said transverse member, which tape is adapted to pass out through said opening in said vertical wall.

2. A device as defined in claim 1; wherein said opening formed in said vertical wall has an attachable die plate fitted therein, which die plate has an angle portion thereon, the angle of which portion is substantially 90 degrees, a further die plate attachably fitted within said opening, which further die plate has an angular portion which is complementary to the angular portion of said first mentioned die plate, the respective angle portions of said die plates being mediate the sides thereof, said complementary die plate having the angular portion thereof serrated and spaced from said first mentioned die plate so as to form a substantially 90 degree angle slot through which tape may be drawn to convert flat tape into a trough-like shape of a 90 degree angle.

3. A portable device for receiving plastic bedding material and wall board joint tape for coating and dispensing said tape, which device is to be worn on a belt about the person of the individual using same, which device comprises a housing having sides and a closed bottom to form a fluid tight chamber in the lower portion of said housing, a tape holding spool mounted in said housing above the normal level of said plastic bedding material therein, downwardly depending members disposed beneath said tape holding spool so as to be in close proximity to the bottom of said housing, said housing having a slotted opening formed in a side wall thereof above the normal level of said plastic bedding material, through which slotted opening said tape is adapted to pass, means on said housing to secure said housing to said belt, and said slotted opening in said housing being formed by a pair of die plate members removably fitted in said wall, one of said die plate members having a serrated edge thereon, the other of said die plate members having a rounded surface which curves in the direction which said tape is normally withdrawn.

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