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TAPE AND MUD DISPENSER

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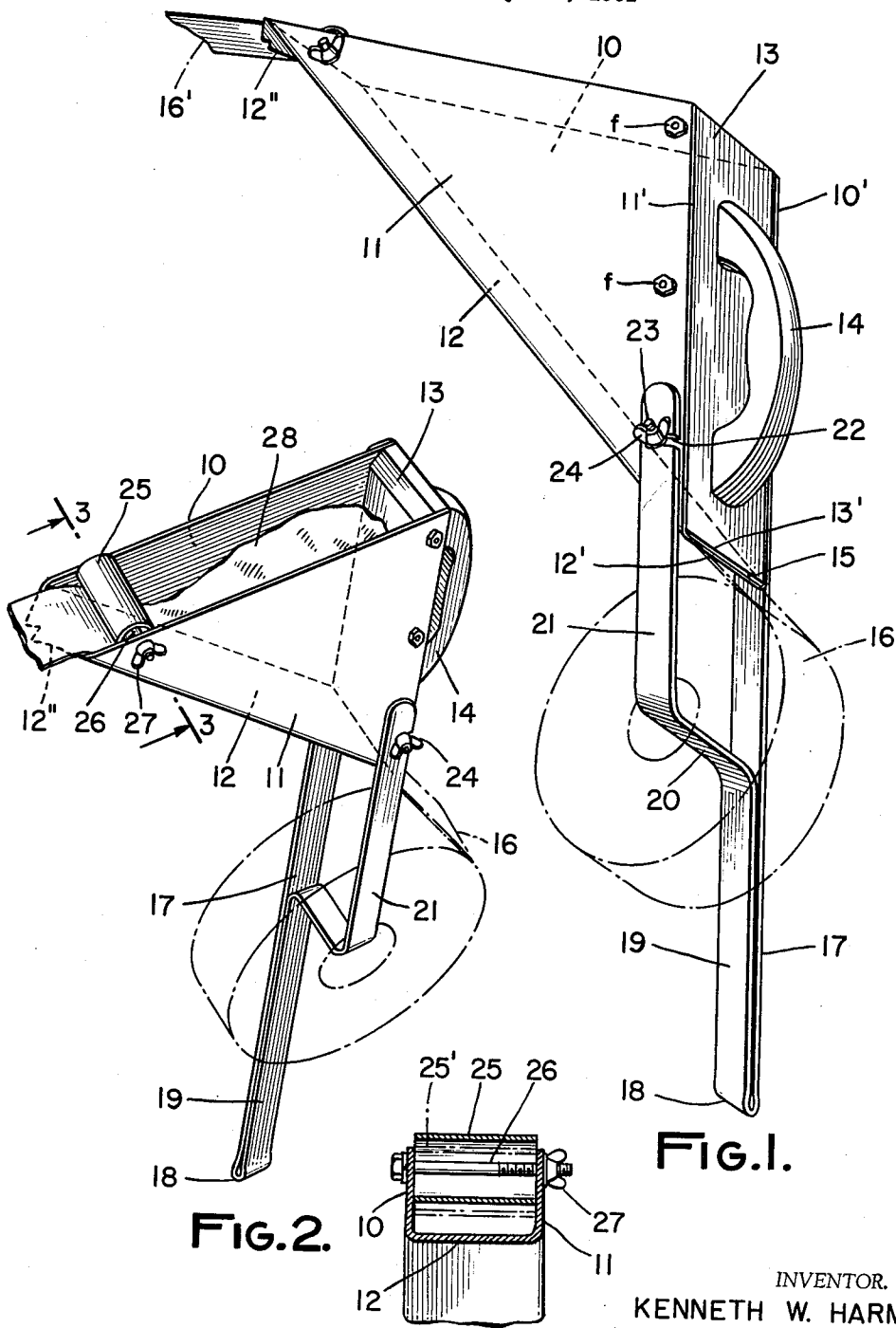


FIG. 1.

FIG. 2.

FIG. 3.

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TAPE AND MUD DISPENSER

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This invention relate to a tape and mud dispenser for applying tape strips to wall joints and other similar structures in building operations.

Many devices are available for automatically dispensing tape and mud or adhesive paste material simultaneously to facilitate application of tape to wall, ceiling, or corner joints. Most of these devices are relatively complicated and therefore expensive. To effect the desired operations of dispensing the tape and applying the mastic or mud, as it is called in the art, to the tape generally required a large number of inter-connected components. As a consequence, most present day tape applicators are relatively difficult to clean and expensive to manufacture, and the average residential home owner generally cannot afford to purchase or rent such dispensers for one or two small jobs around his house.

With the above in mind, it is a primary object of this invention to provide an extremely simple and inexpensive combination tape dispenser and mud applicator primarily designed for use by the individual home owner to the end that the application of tape may be greatly facilitated without appreciably adding to the expense of the overall job.

More particularly, it is an object to provide a simple and inexpensive tape and mud dispenser which includes means for holding a roll of tape, controlling the quantity of mud applied to the tape, and means for severing the tape.

Another important object is to provide an improved tape and mud dispenser achieving the foregoing functions with a minimum number of components, and which is so designed and constructed that its manufacture may be carried out for relatively little expense.

Still another important object is to provide a tape and mud dispenser that is easy to clean.

Briefly, these and other objects and advantages of this invention are attained by providing a trough structure formed by folding together diagonally opposite corners of a flat sheet of metal about parallel fold lines to define triangular sides extending upwardly from an elongated rectangular bottom. Secured between adjacent sides by suitable fastening means, there is provided a rear block, the lower transverse edge of which defines with one end of the elongated rectangular bottom a slot for receiving tape from a roll. The other end of the rectangular bottom terminates in a tape severing means. Also provided is a single integral metallic strap defining means for holding the roll of tape so that the tape may be fed through the slot and along the bottom surface of the rectangular bottom of the trough. The dimensioning of the trough is such that the tape is properly guided over the tape severing means at the exit end of the recentagular bottom portion. A simple wiping means is then provided for metering the quantity of mud actually applied to the tape. A handle may be secured to the back block, if desired, to facilitate carrying the trough structure.

Except for the wiping means, fastening means for the block, and the handle, the entire structure constitutes only three basic components forming the rear block, trough, and tape roll holding means, respectively. Thus, the manufacture of the device may be carried out extremely inexpensive to the end that the ultimate consumer is able to purchase and use the dispenser without substantially increasing the cost of the particular job being car-

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ried out. Further, the assembly is such that the dispenser is very easy to clean.

A better understanding of the invention will be had by now referring to the preferred embodiment thereof as illustrated in the accompanying drawings, in which:

FIGURE 1 is a first perspective view of the tape and mud dispenser of this invention;

FIGURE 2 is a second perspective view taken from a different aspect from that shown in FIGURE 1; and,

FIGURE 3 is a fragmentary cross section taken in the direction of the arrows 3-3 of FIGURE 2.

Referring first to FIGURE 1, the tape and mud dispenser comprises generally a trough structure formed from a flat sheet of metal having diagonally opposite corners folded towards each other about parallel fold lines to define triangular sides 10 and 11 and an elongated rectangular bottom 12 of width corresponding to the width of tape to be dispensed. The rear adjacent edges 10' and 11' of the triangular sides 10 and 11 connect to a rear block 13 as by fasteners "f" closing the rear portion of the trough and holding the shape of the trough. A simple handle 14 may be secured to the rear block 13, if desired.

As shown, the lower transverse edge 13' of the rear block 13 defines with an entrance 12' of the rectangular bottom 12 an elongated slot 15 arranged to receive one end of a tape from a roll of tape indicated by the phantom lines at 16. This slot may be properly formed by securing the rear block 13 in a position between the adjacent sides 10' and 11' of the trough structure slightly above the terminating edge 12' of the rectangular bottom.

The arrangement is such that the end of the tape from the roll 16 may be received in the slot 15 at the entrance end of the rectangular bottom 12 and guided along the bottom to pass out the other or exit end of the rectangular bottom as shown by the numeral 16'. This exit end of the rectangular bottom terminates in a tape severing means as indicated at 12''.

As shown in both FIGURES 1 and 2, the roll of tape 16 is supported by a single elongated integral strap having a first leg 17 secured adjacent to the edge 10' of the triangular side 10. This leg 17 extends downwardly for a given distance at least twice as great as the diameter of the tape roll 16 and thence is folded back on itself at 18 and extends upwardly as at 19 for a distance substantially half of said given distance. The strap is then bent laterally to define an axle portion 20 for the roll 16. Finally, the elongated strap is bent upwardly from the axle portion to define a second leg 21 terminating adjacent to the other triangular side edge 11'. This second leg may be temporarily secured to the triangular side 11 by providing a small notch 22 arranged to receive a bolt 23 by securing the triangular plate to the rear block 13. A simple wing nut 24 is provided to clamp the second leg portion to the side as shown.

By the foregoing fastening means, it is a simple matter to loosen the wing nut 24 and slide the second leg 21 from the bolt 23. The roll of tape 16 may then be passed over the second leg 21 and onto the axle portion 20 and the second leg then reconnected by means of the wing nut 24.

The tape and mud dispenser is completed by a wiping means for limiting the quantity of mud applied to the tape as it is pulled from the trough. As shown best in FIGURES 2 and 3, this wiping means takes the form of a tubular member 25 having an inside diameter of given dimension positioned between portions of the triangular sides 10 and 11 adjacent the exit end of the rectangular bottom 12. A bolt 26 of outside diameter considerably less than the inside diameter of the tube 25 in turn passes through the tube and through the adjacent side portions

of the triangular sides of the trough and is secured by a simple wing nut 27.

With particular reference to FIGURE 3, the foregoing described arrangement permits the distance of the tube 25 from the exit surface of the rectangular bottom portion 12 to be varied by simply loosening the nut 27 and moving the tube 25 in a radial direction such as indicated by the dotted line position 25' in FIGURE 3. The wing nut 27 is then tightened to frictionally retain the wiping tube in position.

In the operation of the tape and mud dispenser, the end of the tape 16 is initially threaded through the slot 15 as shown in FIGURE 1 to lie along the rectangular bottom 12 and is passed under the wiping tube 25 and pulled out a short distance from the exit end over the cutting edge 12". The wiping tube itself is adjusted to define a given distance between its lower end and the top surface of the tape corresponding to the desired thickness of mud to be applied to the tape. The trough itself is then filled with mud as indicated at 28 in FIGURE 2.

The operator may then hold the trough either by the handle 14 or by grasping the rear block portion beneath the handle 14 and pulling the tape 16 from the exit end of the trough. In so pulling the tape, the mud on the top surface thereof will be leveled by the wiping means 25 so that a uniform thickness of mud is applied to the tape. Generally, the trough is held in an upright position and the tape twisted, for example, approximately ninety degrees when applying the same to a wall joint. The tape itself is simply urged onto the joint with the operator's free hand while pulling the same from the trough. When a desired length of tape has been applied, the operator may grasp the portion of tape adjacent the cutting edge 12" and sever the tape by pulling it downwardly over the cutting edge.

From the foregoing description, it will be evident that the present invention has provided an extremely simple tape and mud dispensing device. As mentioned heretofore, with the exception of the handle 14, the wiping roller 25, and the various fastening means, the entire structure comprises only three basic components: first, the sheet metal with its diagonally opposite corners folded to define the trough, the rear block 13, and the elongated strap defining a means for holding the roll of tape. Thus, the manufacture may be carried out extremely inexpensively. Moreover, it is a simple matter to clean the device since all surfaces are exposed. If necessary, the block 13 and tube 25 may be removed to facilitate cleaning of the slot and tube, respectively.

Minor modifications that fall within the scope and spirit of the invention will occur to those skilled in the art. The tape and mud dispenser is therefore not to be thought of as limited to the exact embodiment disclosed merely for illustrative purposes.

What is claimed is:

1. A tape and mud dispenser comprising, in combination: a mud storage trough having an elongated rectangular bottom of width corresponding to the width of said tape, one end of said bottom constituting an entrance end and defining a slot with a rear portion of said trough for receiving said tape so that said tape is guided along said bottom, the other end of said rectangular bottom constituting an exit end from which said tape emerges; a wiping means disposed adjacent to said exit end in spaced relationship thereto so that said tape passes under said wiping means, said wiping means removing excess mud from said tape as it is pulled from said exit end; and a single integral strap having a first elongated side leg secured to one side of said trough, said first side leg extending downwardly a given distance beyond said slot greater than the diameter of a roll of said tape and thence folding back on itself to extend upwardly for a distance

equal to substantially half said given distance, said strap then being laterally bent to define an axle for a roll of said tape, said strap then bending upwardly from said axle to define a second side leg; and removable means securing said second side leg to the other side of said trough, whereby a roll of tape positioned about said axle between said legs is properly oriented to have the end of the tape fed into said slot.

2. A tape and mud dispenser according to claim 1, in which said exit end of said rectangular bottom terminates in a tape severing edge for cutting said tape.

3. A tape and mud dispenser comprising, in combination: a mud storage trough formed from a single metal sheet having diagonally opposite corners folded towards each other about parallel fold lines to define an elongated rectangular bottom and triangular sides extending upwardly from said bottom; a rear block disposed between adjacent edges of said triangular sides and having its lower transverse end defining a tape receiving slot with one end of said rectangular bottom, said one end constituting an entrance end, the other end of said rectangular bottom constituting an exit end and terminating in a tape cutting means; a holder for a roll of tape comprising a single integral strap of metal having a first elongated side leg secured to one of said adjacent edges and extending downwardly a given distance beyond said slot greater than the diameter of said roll of tape, and thence folding back on itself to extend upwardly for a distance equal to substantially half of said given distance, said strap then being bent laterally to define an axle for said roll of tape and thence bent upwardly to define a second leg terminating at the other of said adjacent edges; removable fastening means for securing said second leg to said other of said adjacent edges; and a wiping means disposed between the upper side portions of said triangular sides adjacent to said exit end of said rectangular bottom, whereby mud within said trough will be applied to one surface of said tape as said tape is drawn through said slot and guided along the surface of said rectangular bottom to pass under said wiping means and over said cutting means, said wiping means removing excess mud from said tape and said cutting means being adapted to sever said tape after a desired length has been pulled from said trough.

4. A tape and mud dispenser according to claim 3, including a handle secured to the rear surface of said rear block to facilitate carrying said dispenser.

5. A tape and mud dispenser according to claim 3, in which said wiper means comprises a tube having an internal diameter of given dimension; a bolt having an outside diameter of substantially smaller dimension than said given dimension passing centrally through said tube and through said upper side portions of said triangular sides; and a wing nut on said bolt whereby said bolt may be loosened to permit radial positioning of said tube to vary its distance from the exit end of said rectangular bottom.

6. A tape and mud dispenser according to claim 3, in which said removable fastening means comprises a threaded bolt passing through the other of said adjacent sides into said rear block, said second leg having a transverse notch in a position to receive said bolt, whereby tightening of said bolt will secure said second leg in position against said other of said adjacent sides and loosening of said bolt will permit removal of said second leg to insert a roll of tape thereover and onto said axle portion of said strap.

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