Jan. 2, 1945. W. PETTY 2,366,675

METHOD AND DEVICE FOR APPLYING BUILDING TAPES

Filed July 1, 1943

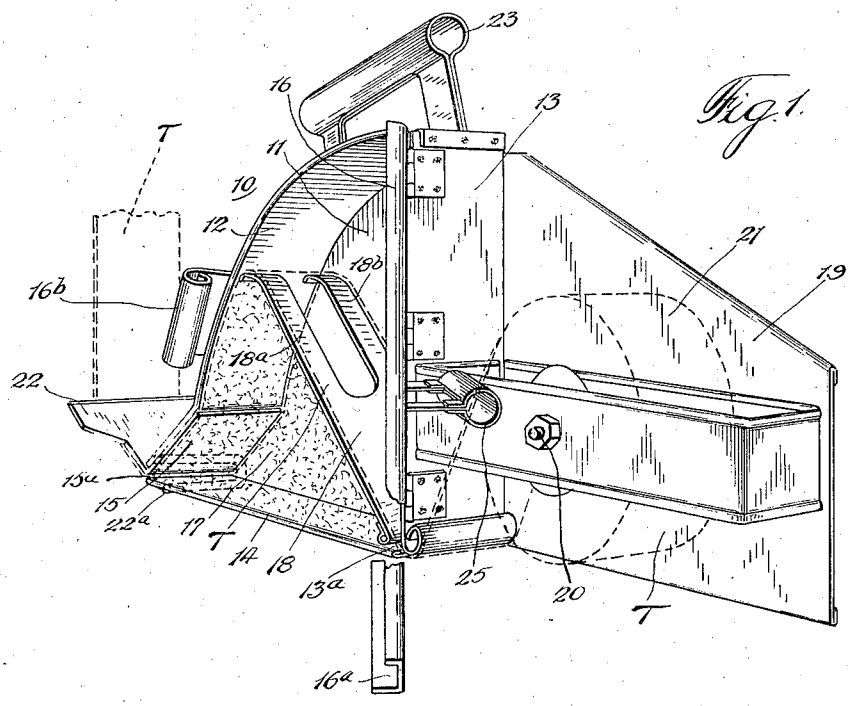


Fig. 1.

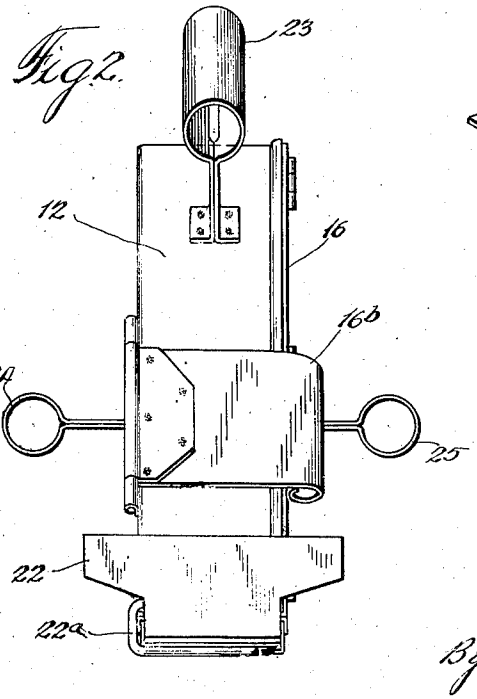


Fig. 2.

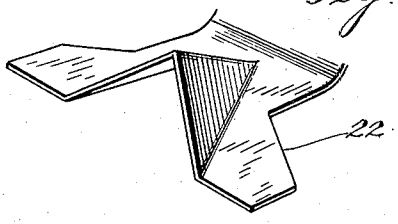


Fig. 3.

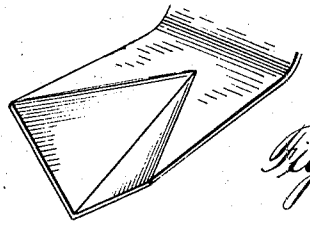


Fig. 4.

Inventor:
Wiley Petty
By: Thiess, Olson & Mackeben Burgess
Attys.

Patented Jan. 2, 1945 2,366,675

UNITED STATES PATENT OFFICE

2,366,675

METHOD AND DEVICE FOR APPLYING BUILDING TAPE

Wilcy Petty, La Grange Park, Ill., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois

Application July 1, 1943, Serial No. 493,022

8 Claims. (Cl. 216—20)

This invention relates to a method of cementing and applying building tape and to a device for practicing such method. One feature of the invention is the provision of a portable device embodying several desirable characteristics and with which the indicated method may be practiced.

The invention utilizes certain steps to apply adhesive under a pressure generated by the feed of the tape to its ultimate location. Because the indicated method is used, the device of this invention is capable of containing a fairly large volume of adhesive or cement thereby to insure the application of a maximum yardage of cemented building tape without the necessity of replenishing said adhesive. The tool has a supply of tape associated therewith as will hereafter be described.

The device includes a mechanical combination that insures the application of the cement to the tape under constant pressure, this pressure being supplied by the feed of the tape itself. By utilizing such a method, and apparatus for practicing the same, a relatively large body of adhesive may be initially placed in the device and thereafter utilized in its entirety without the possibility that said adhesive will dry out or become unusable as it is gradually used up. This latter disability exists in many of the now used devices.

Either the devices have to be made quite small so that the adhesive body contained therein is used up before it starts to dry or the device must be used with a pressure creating means associated therewith to prevent such contingency. However, in the latter case the devices are inevitably large and substantially nonportable. The herein proposed device utilizes the feed of the tape to keep the adhesive continually under pressure as it is applied to the tape and while it may contain a sizable volume of adhesive, the entire device is easily portable, being so constructed that the operator can use both hands to manipulate it. The application of the adhesive to the tape is entirely automatic, wherefrom the operator can devote his undivided attention to the disposition of the tape as desired.

The tape which is applied through the medium of the about-to-be described device may, for instance, be such as described in Page and Southwick Patent No. 2,180,433, issued November 21, 1939. Such tape is formed of various kinds of fiber and is provided with a plurality of perforations throughout the length of the tape so that when adhesive is applied to one side of the tape and the same is then pasted over a wallboard joint, the adhesive will oozse out through the perforations and be available for leveling off at the outer surface of the tape to provide a smooth surface for the reception of paint, paper or other wall decorations. This tape may be provided with beveled or feathered edges in order to provide a substantially invisible wall joint.

The portable device which is hereinafter described includes a spatula-like device which may be utilized in applying the cemented tape to the wall. These spatulas may be interchangeable to provide means for applying the tape either to flat surfaces or to inner or outer wall corners.

Other objects and advantages of the invention will appear from a consideration of the following detailed specification.

Accordingly, for a more complete understanding of the invention, reference is made to the accompanying drawing, in which

Figure 1 is a perspective view of a device embodying the hereinafter claimed invention, the cover thereof being shown in open position and partially cut away so as to reveal substantially all of the working parts of the device,

Fig. 2 is an elevational view taken from the left-hand side of Fig. 1, and

Figs. 3 and 4 are perspective views of outside and inside corner trowels, respectively, adapted to be interchangeably associated with the straight edge trowel shown in the Fig. 1 device.

Referring now to the drawing, the device comprises a substantially quadrantal metal case 10 having a rear wall 11, a combined top and side wall 12, another side wall 13 and a bottom wall 14. The lower left-hand portion of the quadrantal wall 12 terminates in a straight portion 15 for purposes hereafter to be described. The side walls 13 and 15 terminate just short of the bottom wall 14, thereby to provide slots 13a and 15a.

Hingedly mounted on the front edge of the side wall 13 is a door 16 of such outline as to form a sealing closure for the front of the casing 10, edge sealing members 16a being formed on said closure 16. When the door 16 is closed, the casing 10 comprises a substantially tight enclosure and it is in this casing that the body of adhesive material 17 is contained.

Pivotally mounted at the lower right-hand corner of the casing 10 is a follower member 18 which is of bifurcated construction at its outer end (18a and 18b) to provide for certain desirable actions hereinafter to be explained. Secured to the right-hand side of the casing 10 is

a plate 19 which carries a spindle 20 on which may be mounted a roll of building tape 21.

A spatula-like member 22 is mounted at the left-hand side of the casing 10. This member may be so mounted, by means of a clip 22a, as to be readily removed, thereby to permit spatulas to be interchanged therewith which are individually adapted for troweling tape into place on the outside and inside wall corners. Spatulas adapted for the latter purpose are shown in Figs. 3 and 4, respectively.

A door latch 16b of any desired character, exemplarily shown as one having a rolled spring at the latching end, is mounted on the casing and is adapted to hold the door 16 tightly in enclosing relation with said casing. Handles 23, 24 and 25 are mounted on the top and rear walls of the casing and on the door, respectively, thereby enabling the one operating the portable device easily to grasp the latter with the left and right hands.

The hereinafter claimed method of applying tape comprises using the tape itself (as it is fed) as a means for insuring a pressure supply of the adhesive to the tape as the latter is directed over a wallboard joint or other desired wall location. Accordingly, the tape T from the roll 21 is led through the slot-like aperture 13a and upwardly over the follower 18, then downwardly close to the left-hand side walls 12 and 15 and out through the aperture 15a. The tape then passes under the spatula 22 and thence over the troweling edge of said spatula and upwardly into applied position at the desired location on the wall. When the follower member 18 is in its extreme right-hand position, i. e., substantially in contact with the wall 13, a body of adhesive 17 of maximum volume (substantially filling the interior of the casing 10) can be placed in the taping device. Parenthetically it will be noted that the follower 18 in Fig. 1 is not in such just described position, it having been necessary to show said follower in the indicated position in order fully to illustrate the elements in this perspective view.

After the tape has been drawn out through the aperture 15a and applied to the wall at an initially selected point, the device is moved to cause the outer edge of the spatula 22 to trowel the tape into jointing position as it is unrolled from the roll 21 and fed through the casing 10. As said feeding progresses, the adhesive 17 is gradually exhausted by being applied to the tape. The tape is kept under constant pressure due to the pulling force exerted by said tape as it passes upwardly over the follower 18. The pull thus exerted moves the follower 18 around its pivoted mounting and maintains it in constant pressure applying position with the only free side of the adhesive, it being noted that the bottom 14 of the casing and the tape at the left-hand side of the casing bound the other two sides of the substantially triangular adhesive body while the front and back of said casing also confine the adhesive body in the indicated directions. Thus a desirable steady application of adhesive to the tape results.

The pressure exerted by the pulling of the follower 18 constantly into contact with the adhesive body will also cause some adhesive to squeeze through the tape perforations at the space between the bifurcations 18a and 18b, thereby to insure a controlled amount of adhesive oozing through the tape at the upper end of the follower 18.

It should be understood that the steps hereinbefore described in connection with the supplying of adhesive to building tape and the subsequent application of said adhesived tape to a building wall may be secured with mechanical elements other than those here disclosed. The steps which are hereinabove disclosed constitute what is thought to be an appreciable advance in this art because of the manner in which a relatively large body of adhesive may be portably utilized and the same applied to building tape with the same facility when the body of adhesive is nearly exhausted as when said body is first utilized.

Therefore it is not intended that the description heretofore given of the invention and/or the showing thereof set forth in the drawing is limiting in any respect of the monopoly claimed. It is on the contrary intended that all claims hereinafter allowed, whether made initially or to be added (assuming that they are properly supportable by the drawing and/or specification and/or claims originally made herein), shall be the measure of the scope of the invention herein set forth. Accordingly, and with the foregoing in mind, what is claimed as new and is desired to be secured by Letters Patent is (remembering that claims broader than those now included may hereafter be found properly includable herein):

1. In the art of applying adhesive to building tape and thereafter applying said tape to a desired location, the method which comprises causing said tape constantly to press against one side of an otherwise confined body of adhesive through the interposition of a solid pressure applying member and permitting some of the adhesive to be applied to the tape as said pressure is being exerted.

2. In connection with a building tape applicator comprising means for holding a supply of tape and for holding an adhesive body wherein a movable member is adapted to follow one unconfined side of said adhesive body as the latter is exhausted, the method of causing the applied tape to be simultaneously adhesived and to maintain said body under pressure which comprises passing said tape over said movable member to maintain the latter constantly in pressure-developing contact with the adhesive body.

3. A building tape applicator comprising means for supporting building tape threaded therethrough, means for containing a body of adhesive and means operated by the tension of the tape as it is drawn from said supporting means for insuring a pressure supply of adhesive to said tape and for progressively confining the body of adhesive irrespective of the volume of the latter.

4. A building tape applicator comprising means for supporting building tape threaded therethrough, means for containing a body of adhesive and means operated by the tension of the tape as it is drawn from said supporting means for insuring a pressure supply of adhesive to said tape and for progressively confining the body of adhesive irrespective of the volume of the latter, comprising a member adapted to be forced constantly into contact with the adhesive body as the tape is progressed to the point of application.

5. A building tape applicator comprising roller means for supporting building tape to be threaded through said applicator, means for containing a body of adhesive and means operated by the tension of the tape as it is drawn from said supporting means for insuring a pressure supply of adhesive to said tape and for progressively confining the body of adhesive irrespective of the volume of the latter.

6. A building tape applicator comprising an adhesive containing chamber, a member situated in said chamber and adapted to be movable constantly into contact with said adhesive body irrespective of the size of the latter, and means for holding a tape supply in such manner that the tape may be drawn into the chamber then over said member and thence out of said chamber in such direction that said tape is maintained in positive relation with said member to force the latter constantly against one side of the adhesive body as the latter decreases in volume.

7. A building tape applicator comprising an adhesive containing casing of substantially quadrantal shape, means for supporting a tape roll outside of said casing, a flat pivotally mounted member arranged to swing from one to the other of the flat sides of said casing, and means for guiding the tape from said roll into said casing over said member and out of said casing.

8. A building tape applicator comprising a casing adapted to contain adhesive, said casing being of substantially quadrantal shape and substantially equal in depth to the width of the tape to be applied and having two intersecting flat edge walls and one substantially arcuately shaped wall joining the outer ends of the flat walls, a plate extending from the back of said casing and comprising means for supporting a tape roll outside of said casing, and a flat member pivotally mounted at the intersection of said two flat walls and arranged to swing from one to the other of said walls with its outer end describing an arc near to and substantially parallel with said arcuate wall, said edge walls forming slots for guiding the tape from said roll into said casing over said pivotally mounted member and out of said casing.

WILCY PETTY.