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APPARATUS FOR APPLYING FILLER TO TAPE

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Fig. 1.

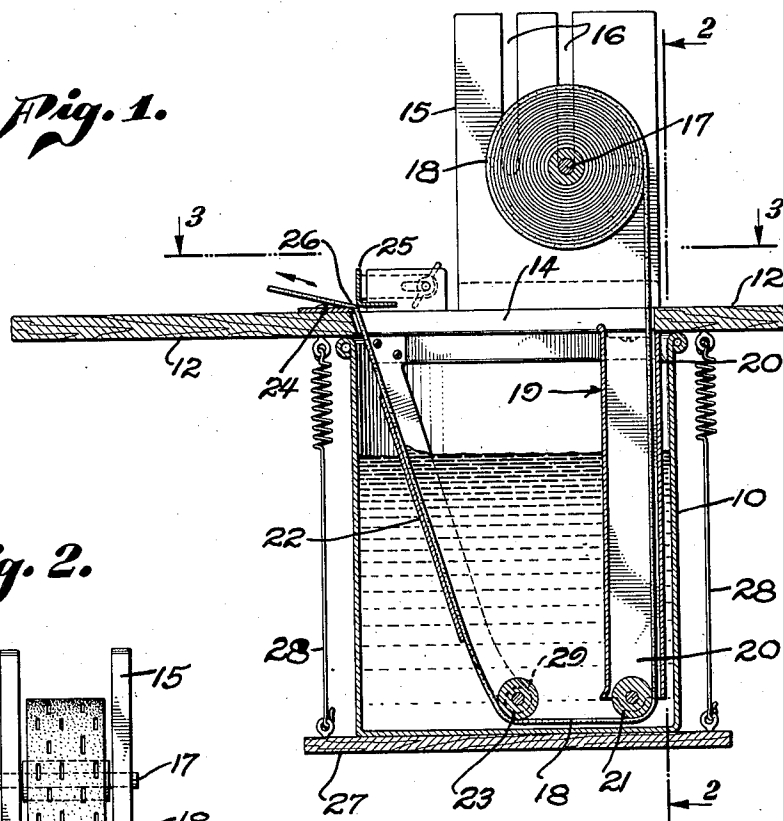


Fig. 2.

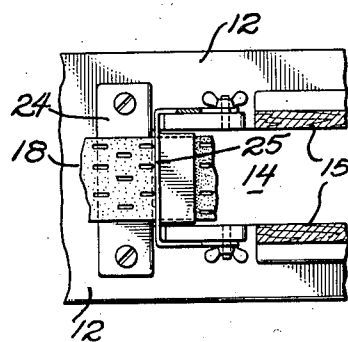
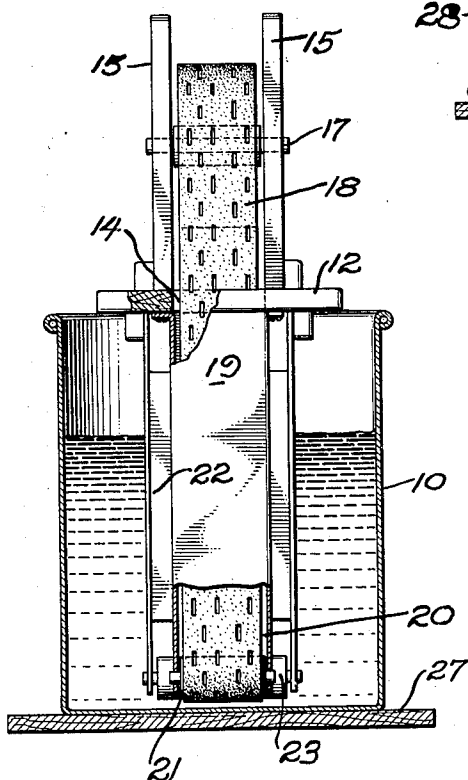


Fig. 3.

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APPARATUS FOR APPLYING FILLER TO
TAPEWalter T. Cavanaugh and George E. Viera,
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1 Claim. (Cl. 91—32)

This invention relates to machines for coating tape and particularly pertains to a machine for applying a viscous, mortar-like mixture to a paper tape prior to applying the latter over joints between slabs of so-called wallboard, after the latter has been erected on the surface of a building wall.

As is well known and common practice, a paper tape is applied over the seam formed at the meeting edges between slabs of so-called plaster board or wallboard, after the same have been erected. Prior to the application of the tape a thick coating of commonly called "mud," which is a plaster-like mixture, is applied to one side of the tape so as to fill the seam and make a flush surface at the junction of the slabs. Heretofore such application of the plaster or like substance was applied to the tape by hand by the use of a spatula. This is time consuming and very tedious work.

It is the principal object of our present invention to provide a very simple and inexpensive device by means of which a plaster-like mixture may be expeditiously and efficiently applied to paper tape and the like.

One form which the invention may assume is exemplified in the following description and illustrated by way of example in the accompanying drawing, in which:

Fig. 1 is a view in central vertical section through an apparatus embodying the preferred form of our invention.

Fig. 2 is a side elevation thereof with parts removed and in section to more clearly disclose certain features of construction, the section being taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary view in plan disclosing certain features of construction of the apparatus, being partly in section which is taken on line 3—3 of Fig. 1.

Referring more particularly to the accompanying drawing, 10 indicates a bucket or other open-mouthed container in which the viscous plaster-like mixture to be placed on the tape is contained. For use in conjunction with the container is an apparatus for feeding paper tape through the container so as to enable a coating of the contents of the container to be applied thereto.

This apparatus comprises a frame 11 which includes a rectangular flat platform 12 having a rectangular opening 14 formed therethrough centrally between its side edges and between its opposite ends so as to overlie the open mouth of the container 10. At the opposite sides of the opening 14 there are fixed two vertically extend-

ing standards 15 having bearing slots 16 for receiving a mandrel 17 which rotatably supports a roll of paper tape 18 of any standard or preferred type.

5 Fixed to the platform and depending therefrom downwardly into the bucket 10 to a point just short of the bottom thereof is a guide member 19 which enables the tape from the roll 18 to be led downwardly into the bucket and thence upwardly out of the bucket or container 10.

The guide member 19 includes an enclosed chute 20 which extends downwardly into the container to a point just short of the bottom of the latter. The opposite ends of the chute 20 are open and at its lower end a roller 21 is journaled with its axis parallel to the axis of the roll of tape, so that the tape may be led from the supply roll downwardly through the guide chute 20 and thence around the roller 21. The four sides of the chute 20 are enclosed so as to exclude the plaster mixture from the interior thereof.

We have found that due to its viscosity the said mixture will not rise into the chute 20 through the small clearance openings between the roller 21 and the adjacent edges of the lower end of the chute.

At the end of the opening 14 opposite the guide chute 20 is a flat guide 22 which depends on a slight angle to the vertical to the same point with respect to the bottom of the container as the chute 20. At its lower end the flat guide 22 is also fitted with a roller 23, so that the tape may be led under this roller 23 and thence upwardly through the opening 14 and thereafter along the platform as illustrated.

It is seen that as the tape emerges through the opening 14 and then is led along the platform, it assumes substantially a right angle bend. At this point along the transverse edge of the opening 14 there is positioned a scraper blade 24 arranged, of course, transversely to the line of movement of the tape 18, and over the scraping edge of which the tape passes and contacts as it is drawn through the bucket or container 10. Any plaster mixture on the side of the tape which engages the scraper edge of the scraper blade 24 will, of course, be scraped off and will drop back into the container 10.

A gauge member 25 is provided which is arranged transversely over the opening 14 just short of the scraping edge of the scraper blade 24 to form a rectangular throat 26 therebetween. The tape 18 passes through this throat 26 as illustrated. The gauge member 25 is adjustable longitudinally on the platform 12 toward and away

from the scraper blade 24 so that the thickness of the coating of plaster mixture on the one side of the tape may be varied to suit the user.

In operation of the device, the heavy, viscous, plaster mixture is placed in the bucket or container 10 and the platform 12 is placed thereover, with the opening 14 therein overlying the container as illustrated. In this position the guide member, which is composed of the chute 20 and the flat guide 22, depends downwardly into the bucket to a point just short of the bottom thereof as illustrated. To removably secure the frame 11 in this position a bottom plate 27 is arranged under the container 10 and is connected with the platform 12 by means of tension members 23.

Prior to arranging the tape coating device on the container, the tape is led from the supply roll downwardly through the chute 20, thence around the roller 21 and around the roller 23 upwardly over the flat guide plate 22 through the throat 26 and along the platform 12. The tape exposed in the container receives a heavy coating or deposit of the plaster mixture as it travels through the container toward the throat 26. As the tape passes through the throat and over the scraper blade 24, the plaster mixture on one side thereof is completely scraped off by the scraper blade 24. The material removed from the tape drops back into the container 10. The coating on the opposite side of the tape is spread evenly and gauged to a desired thickness by the gauge plate 25. This thickness may be varied to suit conditions by adjusting the gauge 25 toward and away from the scraper blade 24 to vary the width of the throat 26. The roller 23 is relieved at its center as at 29 so that it will not act to remove all the mixture from the tape when the level in the container lowers to a point below the level of the center of the roller 23.

It is obvious that as the tape passes through the container in the manner described that the mixture will adhere to both sides thereof and that the mixture on one side will be removed by the scraper blade 24 and that the mixture on the other side will be gauged to a proper thickness by the gauge 25. Therefore, the tape may be con-

tinuously moved through the device and will be properly coated until substantially all of the mixture in the container is used. By this means a proper coating of plaster-like mixture may be applied to tape expeditiously and efficiently.

If the tape is desired in certain lengths, it may be cut off each time that amount of tape has been drawn through the apparatus. Thus, tape may be quickly coated for application to the seams occurring at the meeting edges of plaster board slabs.

While we have shown the preferred form of our invention, it is to be understood that various changes may be made in its construction by those skilled in the art without departing from the spirit of the invention as defined in the appended claim.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

In combination with an open-mouthed container, a frame to overlie the container and rest upon the upper open end of the container, means on the frame for rotatably supporting a roll of tape thereon above the container, a guide member fixed to the frame and depending perpendicularly into said container to a point just short of the bottom thereof, roller means at the lower end of the guide member on an axis parallel to the axis of the roll of tape to enable tape from said roll to be led downwardly into the container and around said roller means and then upwardly out of the container, said guide member including a chute having four imperforate sides extending from said frame above the container to a point closely adjacent to said roller means and downwardly through which the tape is led to the roller means, said frame having a narrow throat formed therein above the container and through which the tape is to pass as it emerges from the container, a scraper blade at one side of said throat for removing any mixture adhering to one side of the tape, gauge means at the opposite side of the throat for removing any mixture adhering to the opposite side of the tape beyond a predetermined thickness.

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