May 3, 1960 G. N. VERNON 2,934,936

TAPING TROWELS

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Fig. 1.

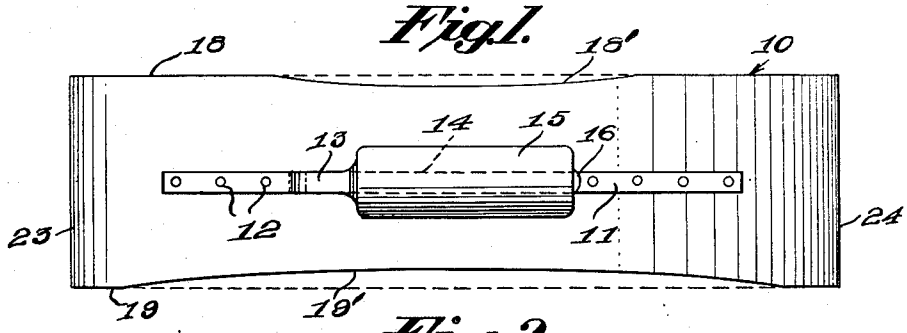



Fig. 2.

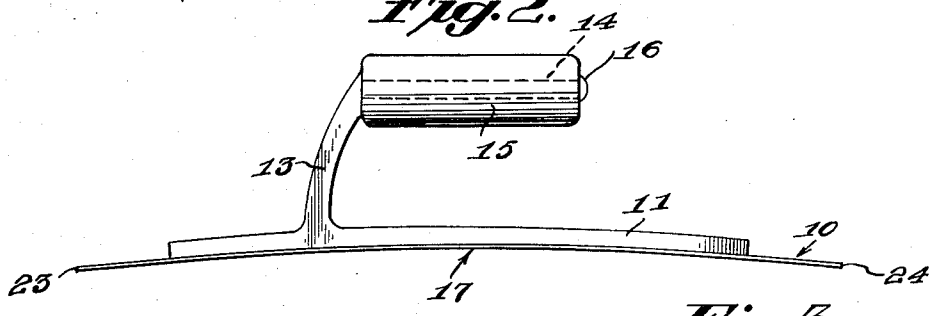



Fig. 3.

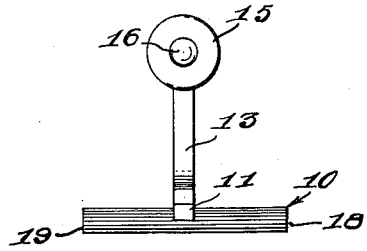



Fig. 5.

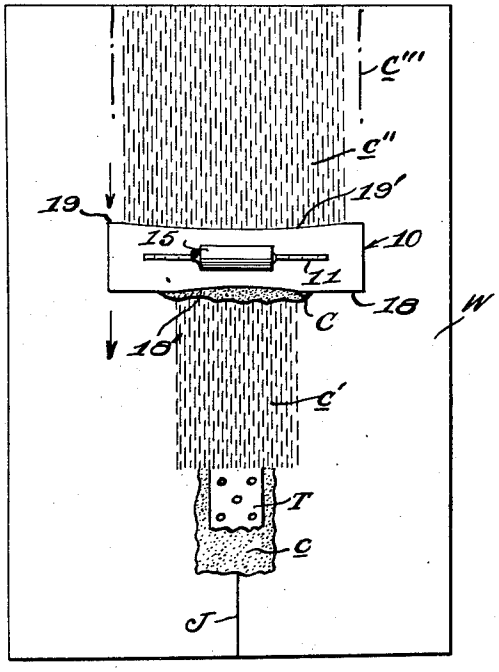
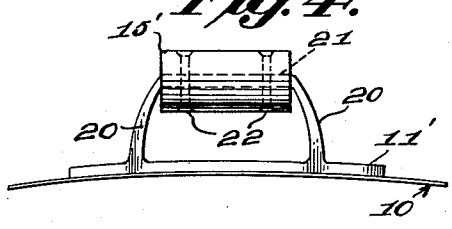



Fig. 4.




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Fig. 6.

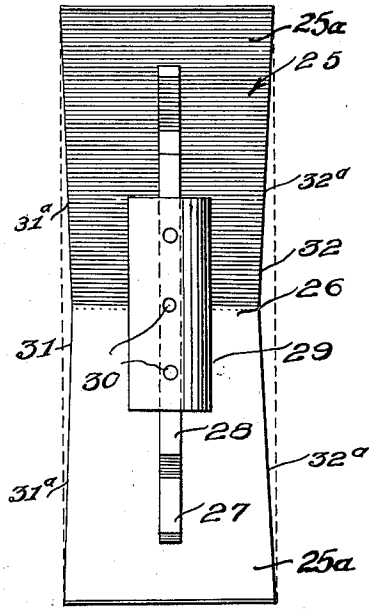



Fig. 7.

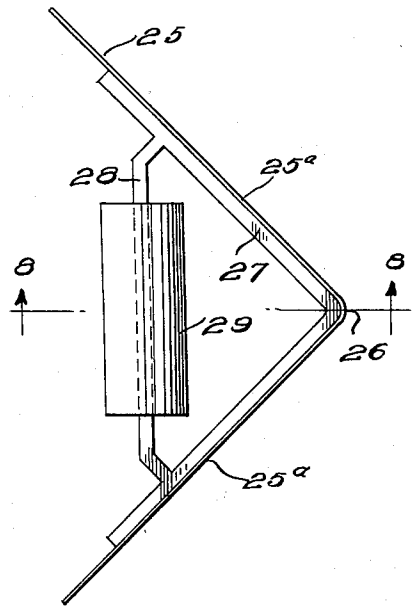



Fig. 9.

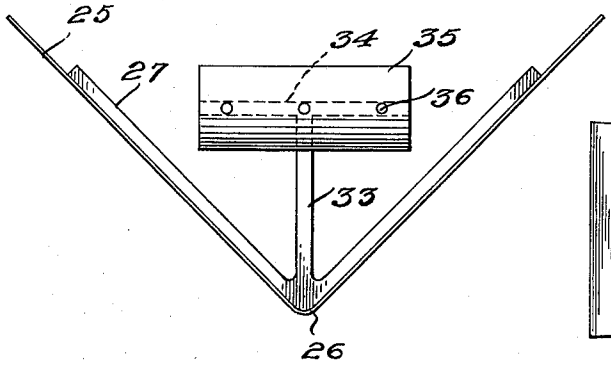
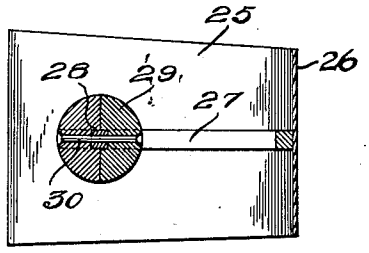



Fig. 8.




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# TAPING TROWELS

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Application July 16, 1956, Serial No. 598,213

2 Claims. (Cl. 72—136)

This invention relates to trowels, especially to trowels for taping sheetrock or gypsum board or similar panel units, and is more particularly concerned with trowels for spreading taping cement over tape in the taping of joints between panels in the construction of houses or other buildings.

In the application of sheetrock, gypsum board and other types of wall board to the studs of buildings, it is the practice to tape the joints between the wall board sheets and to cover the tape with a plastic or cement layer of predetermined dimensions, these joints occurring both on the plane walls or ceiling as well as to the angular junctions between walls and between walls and ceilings. In the process of taping the joints, an elongated tape is first applied thereover, after which taping cement is applied over the joints and the tape with the cement covering the tape and extending substantially beyond each edge thereof.

Heretofore, it has been the practice to apply the taping cement with an ordinary trowel, the trowel being disposed at a slight angle to the wall surface to build up a layer of cement with bevelled edges and having a maximum thickness substantially along the center line of the tape. As in plastering walls, the cement is usually applied in at least two layers, a base layer and a finishing layer. In applying the cement over the tape, the usual flat trowel with straight edges is employed, the trowel being positioned at a slight angle to the plane of the wall board with a corner of the trowel bearing against the wall board laterally of the edge of the tape, operating first along one side and then along the other side of the tape. Obviously, even with the most skilled operators, this process results in an uneven taping job, especially when applying the finishing coat or layer which is relatively thin. Consequently, it is usually necessary to sand over the taping cement to provide a thin, uniform, smooth taping job that is not conspicuous, even to the casual observer, and this sanding operation may be necessary for both the first and the finishing coats. Moreover, the corner of the trowel bearing against the wall board frequently marks or scores the board.

Having in mind the defects of the prior art apparatus, it is the primary object of the present invention to provide a taping trowel whereby the taping cement may be applied in easily regulatable columns as well as in symmetrical relation to the tape.

Another object of the invention is to provide a taping trowel whereby successive coats of cement of different widths and thicknesses may be applied to the tape under relatively easy manipulation of the trowel.

Still another object of the invention is to provide a taping trowel capable of applying finished coats of cement that do not require further treatment such as sanding.

A further object of the invention is to provide a taping trowel adapted for use on plane walls or ceilings.

A still further object of the invention is to provide a taping trowel adapted for use in corners, as at the junction of walls or of walls and ceilings.



Yet another object of the invention is to provide a taping trowel having simplicity of design, economy of construction and efficiency in operation.

The novel features that are considered characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in connection with the accompanying drawings, wherein like reference characters indicate like parts throughout the several figures and in which:

Fig. 1 is a top plan view of one embodiment of a trowel in accordance with the present invention;

Fig. 2 is a side elevational view of the trowel shown in Fig. 1;

Fig. 3 is an end elevational view as observed from the right of Fig. 2;

Fig. 4 is a side elevational view of the trowel provided with a modified form of handle;

Fig. 5 is a plan view showing the improved trowel in use;

Fig. 6 is an outer plan view of a modified embodiment of the invention;

Fig. 7 is a side elevational view of the trowel shown in Fig. 6;

Fig. 8 is a cross-sectional view as observed in the plane of line 8—8 of Fig. 7, and

Fig. 9 is a view corresponding to Fig. 7 showing the trowel provided with a modified form of handle.

Referring now in detail to the drawings, specifically to Figs. 1 to 3 thereof, an improved taping trowel in accordance with the present invention comprises a blade 10 which is of generally rectangular form as indicated in Fig. 1 and is of relatively thin sheet metal. An elongated rib 11 is disposed substantially in the longitudinal center line of the blade and suitably rigidly secured thereto as by rivets 12. An arm 13 unitary with the rib 11 projects upwardly therefrom adjacent one end thereof and is slightly inclined toward the other end thereof. A cylindrical shank 14 projects from said arm 13 toward the other end of the rib and a cylindrical handle 15 is supported on the shank by any suitable means as by a nut 16 or a heading over of the shank. The handle 15 is thus disposed substantially centrally of the blade 10 and in sufficiently spaced relation thereto as to provide hand room between the blade and handle.

A predominating feature of the trowel, in accordance with the present invention, resides in the formation of the blade 10 in an arc longitudinally of the blade, as is clearly indicated in Fig. 2, that is, the working surface 17 of the blade is longitudinally, upwardly arched whereby only the opposite ends thereof rest on a plane surface. Furthermore, the opposite side edges 18 and 19 of the blade 10 include recessed or inwardly curved edge portions 18' and 19' which are symmetrical to the transverse center line of the blade. The curved edge portion 19' is longer than the curved edge portion 18' and the edge portion 19' is deeper than the edge portion 18' with respect to corresponding otherwise straight edges 18 and 19, as is indicated by the broken lines in Fig. 1. The opposite end edges 23 and 24 of the blade 10 are straight and square with the side edges 18 and 19.

In Fig. 4 is shown a modified form of handle structure wherein the rib 11' is provided with a pair of longitudinally spaced, upwardly projecting arms 20 whose upper ends are rigid with a longitudinal shank 21 to which a two-part handle 15' is connected, as by rivets 22. This form of handle serves to strengthen and reinforce the blade 10 and maintain the curvature thereof. Other forms of handles may, of course, be attached so far as

the operative efficiency of the blade **10** is concerned.

The operation of the improved trowel is illustrated in Fig. 5 wherein W indicates a wall formed of juxtaposed wall boards having a joint J therebetween. In the taping process, a quantity *c* of cement C is spread over the joint J in an excess of the amount required to fill all of the cracks. A tape T, which comprises a strip having a plurality of small holes therethrough, is then placed over the joint J and the cement coating *c* and a straight end edge **23** or **24** of the trowel is drawn lengthwise over the tape T to squeeze out as much of the excess cement as possible. While the coating *c* is still wet, the tape T is covered with a first coating *c'* of cement which is left to dry. After the coating *c'* is dry, a second cement coating *c''*, and possibly a successive third coating *c'''*, are applied over the first coating *c'*.

To apply the first coat *c'* of cement, a quantity of cement C is spread over the tape T in the usual manner and the trowel is then placed with its edge **18** against the wall W at an angle to the wall and with the recessed portion **18'** astraddle and substantially symmetrical with respect to the tape T. With the trowel transverse the tape, the trowel is then moved longitudinally of the tape T, the recessed portion **18'** leaving a smooth, bevelled edge, uniform layer or cement coating *c'*. To apply the second coat *c''*, the operation is repeated with the edge **19** of the blade **10** bearing on the wall W with the recess **19'** substantially symmetrically astraddle the first coat *c'*. Normally, the third cement coating *c'''* is not added but to apply it, the blade **10**, which is slightly flexible, is placed with less pressure against the wall W with its working surface **17** straddling the second coat *c''*.

The curvature of the working surface **17** of the blade facilitates the operation of the recessed edge portions **18'** and **19'** and enables these edge portions to smooth rather than merely scrape off the excess cement. The trowel is shown in Fig. 5 in the application of the second coat *c''* and in which operation the cement C, disposed within the concave side **17** of the trowel, is caused to flow through the space provided by the inwardly curved edge portion **19'** of the trowel edge **19**, the blade **10** being slightly tipped in the application of the cement coating. In the application of the coatings, as shown in Fig. 5, the trowel is drawn in the direction of the arrows.

While the trowel disclosed in Figs. 1 to 4 is adapted for use on plane walls or ceilings, the trowel shown in Figs. 6 to 9 is adapted for use in the taping of corners between walls or between a wall and a ceiling. This corner trowel comprises a blade **25** including a pair of right angularly disposed wings **25***a* diverging substantially at right angles from a slightly rounded apex **26**. A right angular rib **27** is rigidly secured to the blade **25** and this rib is subtended by a shank **28** which braces the wings **25***a* of the blade **25** and to which a two-part handle **29** is secured, as by rivets **30**. From Fig. 7, it will be seen that the handle **29** is so disposed as to provide sufficient hand room between it and the blade **25**. In the modified construction shown in Fig. 9, a single arm **33** extends from the apex **26** in bisecting relation to the angle between the blade wings and is formed with a T-head **34** to which a handle **35** is rigidly secured, as by rivets **36**. Other forms of handles may be used within the spirit of the invention.

In accordance with the present invention, the wings **25***a* are substantially plane and the blade is narrower at the apex **26** than at the opposite ends thereof as is more clearly shown in Fig. 6 wherein it will be seen that the edge **31** of the blade includes portions **31***a* converging from the opposite end portions of the blade **25** toward



the apex **26**, and at relatively small angles to the broken line which is normal to the opposite ends of the blade. The opposite edge **32** includes portions **32***a* converging from the opposite end portions of the blade **25** to the apex **26** at relatively small angles to the broken line which is normal to the opposite ends of the blade, these latter angles, however, being greater than the first named angles.

In the use of the corner trowel, the apex **26** thereof is disposed within a corner and the opposite ends of the blade **25** engage adjacent walls, or a wall and a ceiling, and the blade is slightly tipped transversely for exudation of the cement beneath one edge thereof. By the provision of the angle edges of the blade, as desired, less tipping of the trowel is required for a given flow of cement from beneath the trowel into covering relation to the tape.

Although certain specific embodiments of the invention have been shown and described, it is obvious that many modifications thereof are possible. The invention, therefore, is not to be restricted except insofar as is necessitated by the prior art and by the spirit of the appended claims.

What is claimed is:

1. A taping trowel comprising an elongated blade of substantially rectangular form in plan, said blade being arched throughout its length, and a blade manipulating handle secured to the convex surface of said blade, said blade including opposite elongate side edges each having an elongate shallow recess converging to a point substantially centrally thereof with the recess in one edge slightly deeper and longer than the recess in the other edge, said recesses extending over a major portion of the length of each side edge, whereby the edge with the shallower recess may be used for applying an undercoat and the edge with the deeper recess may be used for applying an outercoat.

2. A corner taping trowel comprising a blade including a pair of right angularly disposed wings converging to an apex, and a handle secured to said blade and disposed within the angle of said wings, said wings being plane and having opposite straight end edges and opposite side edges at least portions of which converge from said end edges to said apex to form shallow recesses in the side edges of said blade, said recesses extending over a major portion of the length of each side edge, the side edges at one side of said blade being disposed at an angle to the longitudinal center line of the blade different from the angle of the side edges at the opposite side of said blade relative to said longitudinal center line to provide one of said recesses with a greater depth than the other, whereby the edge with the shallower recess may be used for applying an undercoat and the edge with the deeper recess may be used for applying an outercoat.


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