Dec. 22, 1953 W. R. DORDEL 2,663,390

METAL CASING FOR DRY WALL CONSTRUCTION

Filed Feb. 10, 1950

Fig. 1

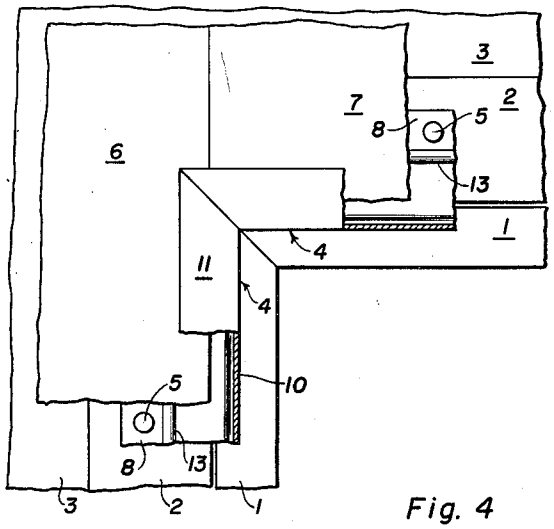


Fig. 2

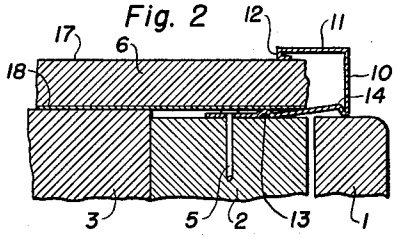


Fig. 3

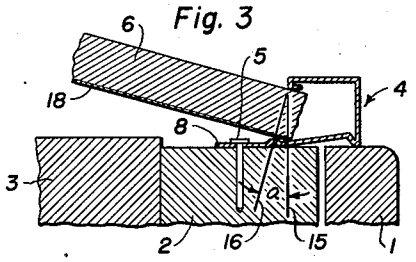


Fig. 4

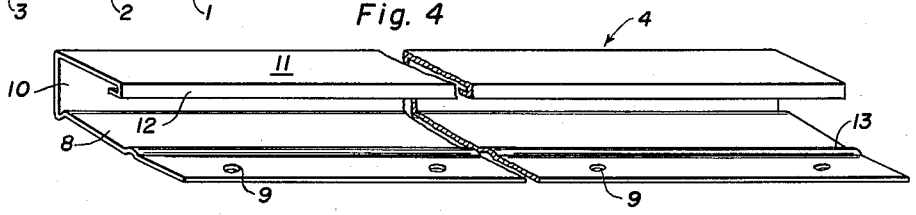


Fig. 5

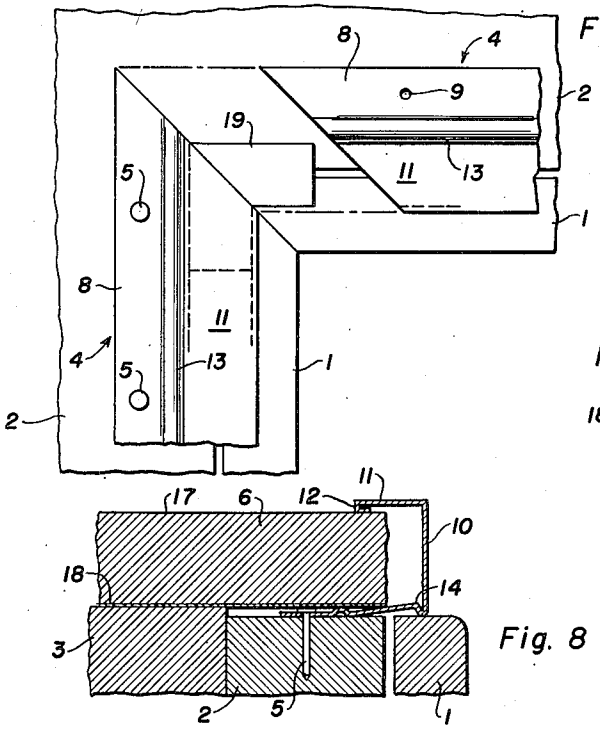


Fig. 6

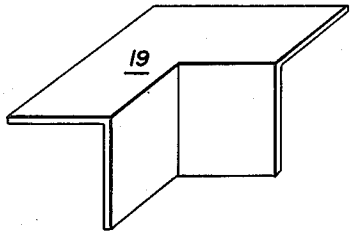


Fig. 7

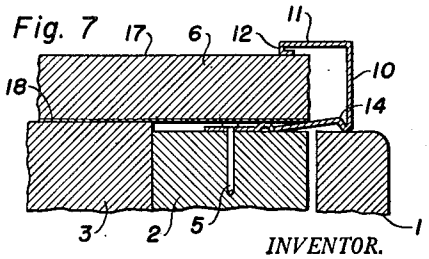


Fig. 8

INVENTOR.

Walter R. Dordel

BY Lawyer & Kennedy

ATTORNEYS

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METAL CASING FOR DRY WALL CONSTRUCTION

Walter R. Dordel, West Hempstead, N. Y., assignor to Casings, Inc., New York, N. Y., a corporation of New York

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3 Claims. (Cl. 189—88)

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This invention relates to casings for dry wall constructions.

In dry wall construction, prefabricated panels of gypsum board or other material are utilized instead of wet plaster. The general object of the invention is to provide a metal casing for receiving and covering the panel which surrounds a door or window, which will be economical and easy to apply.

With this and still other objects which will appear, in mind, the casing embodying the invention in a preferred form will now be described with reference to the accompanying drawing and the features forming the invention will then be pointed out in the appended claims.

In the drawing:

Figure 1 is an elevation view of the upper left corner of a doorway with parts progressively broken away;

Figure 2 is a typical horizontal cross section through the doorway of Figure 1;

Figure 3 is a view similar to Figure 2 but showing the panel in process of insertion;

Figure 4 is an isometric of the casing of the invention;

Figure 5 is a view similar to Figure 1, but showing the casing elements being assembled to form a corner;

Figure 6 is an isometric detail of a clip used in the corner; and

Figures 7 and 8 are views similar to Figure 2 but showing casings used with panels of different thicknesses.

The usual door construction includes a jamb 1 and door frame 2 adjacent which is a stud 3 of the rough studding for the wall. The metal casing 4 is fixed to the frame by means of nails 5 and overlaps the jamb 1, as indicated. A panel 6 is held under the casing and this panel will normally extend from floor molding to ceiling molding. A piece 7 extending from the casing to the ceiling molding is utilized to cover the top of the door. The casing as shown in Figures 2, 3 and 4 is formed of sheet steel of sufficiently heavy gauge to be fairly rigid. It is generally channel shaped, having an inner or bottom flange 8 provided with nail holes 9 at intervals for taking the nails 5, a web 10 and an outer or top flange 11. Flange 8 is considerably wider than flange 11, so that the nail holes are located well out from the overhang of the top flange 11, so as to permit free use of a hammer in driving the nails. The marginal edge of the top flange 11 is turned under to provide a panel-engaging lip 12, the underside of which is spaced down

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from the undersurface of the flange 11. This lip not only provides a smooth-surfaced reinforced marginal edge for the top flange 11 to improve the appearance of the casing, but, as will appear hereinafter, by virtue of its being spaced down from the undersurface of the top wall, it plays a part in assuring against unsightly gaps between the edge of the casing and the panel.

A longitudinally extending bead 13 is pressed or formed in the bottom flange 8 just outside the overhang of the flange 11. Under the overhang of flange 11 the flange 8 is formed with a slant or ramp 14 rising as it approaches the web 10, and the corner between the web 10 and this ramp is formed at an acute angle so that the junction between the web 10 and the flange 8, often termed the nose of the casing, presents a sharp corner which lies on the level of the underside of the projecting portion of the bottom flange in which the bead 13 is pressed or formed. This provides substantially edge or line contact between the nose of the casing and the jamb 1, thus permitting a close fit therebetween despite irregularities in the frame and jamb.

The casing is sold in convenient lengths and in different sizes for use with different thickness of wall board, thus the casing of Figure 2 might be used with three-eighths inch board while the casings of Figures 7 and 8 would be used with half inch or three-quarter inch board. In every instance the top of the bead 13 is so spaced from the panel-engaging lip 12 that the distance between them as measured perpendicularly to the bottom flange and through the panel 6 (along line 15 of Figure 3) is equal to the thickness of the panel. The bead, however, is positioned slightly out from under the marginal edge of the lip 12. Hence its distance from this edge as measured in a direct line (line 16 of Figure 3) will be somewhat greater. Thus by placing the bead about one-eighth inch out from under the lip 12, a clearance of about one sixty-fourth inch will exist, when inserting the panel in the manner indicated in Figure 3. This prevents crumpling of the board. Since the angle between the board and the wall during insertion is equal to the angle a between lines 15 and 16 in Figure 3, the board may be held in a natural position starting, in the case of a four foot wide panel, with the opposite edge of the panel about a foot out from the wall and then sliding the edge under the casing and pressing the panel flat against the wall. It will be noted that since the bead 13 projects or rises above the adjacent

portions of the bottom flange 8 there is clearance behind the bead to receive the lower leading edge of the panel as it is inserted into the casing. As the panel is brought into position flat against the wall, it rocks about the bead and becomes snugly wedged or gripped between the bead and the panel-engaging lip 12. This assures a good tight fit between the lip 12 and the outer face of the panel, and since the bead 13 is in that part of the bottom flange which is nailed to the jamb the panel is solidly supported. It should also be noted that the attainment of the desired tight fit between the lip 12 on the top flange and the panel is the result of the relative placement of the bead and the lip and the fact that the underside of the lip is spaced down from the undersurface of the top flange.

Gaps between the nose of the casing and the jamb are prevented by the engagement of the lower leading edge of the panel with the ramp, and to assure that the panel will engage and ride up on the ramp, the ramp must be slightly higher than the bead 13 and its gradient should be such that the lower edge of the panel will contact with some medial portion of the ramp and well before the edge of the panel reaches the web. The bottom of the ramp, as shown, is substantially directly below the outermost edge of the lip 12.

The commonly used gypsum board panel 6 has a paper finish 17 on its face and a heavy paper backing 18 on its reverse. It is cut, where this is necessary, by scoring the paper 17 in a straight line and then breaking the board, the backing 18 being torn in a more or less irregular way. The gypsum material of the board itself is friable and tends to crumble. With the casing of the invention, the clearance provided for during insertion of the board at an angle to the wall protects its edge from crumbling and it is nevertheless securely held when flattened against the wall. It is not essential that the board be cut with extreme accuracy. Figures 2, 7 and 8 indicate the board inserted to about the minimum extent suitable, but the board may also be inserted more deeply and until it comes against the web 10.

In forming corners, the casing sections are sawed at 45° or mitered as indicated and may be simply butted against each other without further finishing. A clip 19 may, however, be used as shown in Figures 5 and 6. In using this fastening element, one leg of the clip is inserted into the vertical casing member as shown in Figure 5 and then the horizontal casing element may be slipped onto the other leg of the clip. An angular clip such as shown may fit inside the bent over edge 12 of the outer flange and will hold the edges of the cut casing elements in accurate alignment. In a larger size casing, such as shown in Figures 7 and 8, no change of dimensions is required by comparison with the casing of Figure 2 other than an increase in the width of the web 10.

What is claimed is:

1. Metal casing adapted to provide a protective trim for the edge of a dry wall panel and also secure the panel at said edge to a door or window jamb or other backing, said casing comprising: an elongated sheet metal strip generally channel shaped in cross section with spaced top and bottom flanges connected by a web, the bottom flange being considerably wider than the top flange and projecting beyond the marginal edge of the top flange so that the bottom flange may be nailed to a jamb or other backing; an upwardly projecting longitudinally extending bead pressed into that part of the bottom flange which projects beyond the top flange; a longitudinally extending panel-engaging lip on the marginal edge of the top flange, the underside of said lip being spaced down from the undersurface of the top flange and from the top of the bead a distance, measured generally perpendicularly to the bottom flange, equal to the thickness of the panel for which the casing is designed; said bead being located at a distance spaced outwardly beyond the panel engaging lip on the top flange so that the shortest distance between the bead and the outermost edge of the lip is greater than the thickness of the panel for which the casing is designed to facilitate insertion of a panel between the flanges and guard against crumpling the edge of the panel during its insertion; the junction of the bottom flange with the web being on a level with the projecting portion of the bottom flange; and a portion of the bottom flange between the bead and the web being inclined upwardly from a line substantially directly below the outermost edge of the lip towards the top flange providing a ramp rising from said line, the gradient of said ramp being such that a medial portion thereof crosses the level of the top of the bead, so that the bottom leading edge of a panel inserted between the flanges and moved edgewise towards the web will engage and begin to ride up the ramp while still spaced from the web and thereby press the junction between the web and the bottom flange firmly against a jamb or other backing to which the casing is secured.

2. The metal casing of claim 1 wherein the marginal edge portion of the top flange is folded under and provides the panel-engaging lip and at the same time reinforces the edge of the top flange.

3. The metal casing of claim 1 further characterized by the fact that the junction between the web and the bottom flange comprises a narrow wall portion forming an acute angle with the web and joining the top of the ramp thereby giving said junction a relatively sharp edge.

WALTER R. DORDEL.

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