

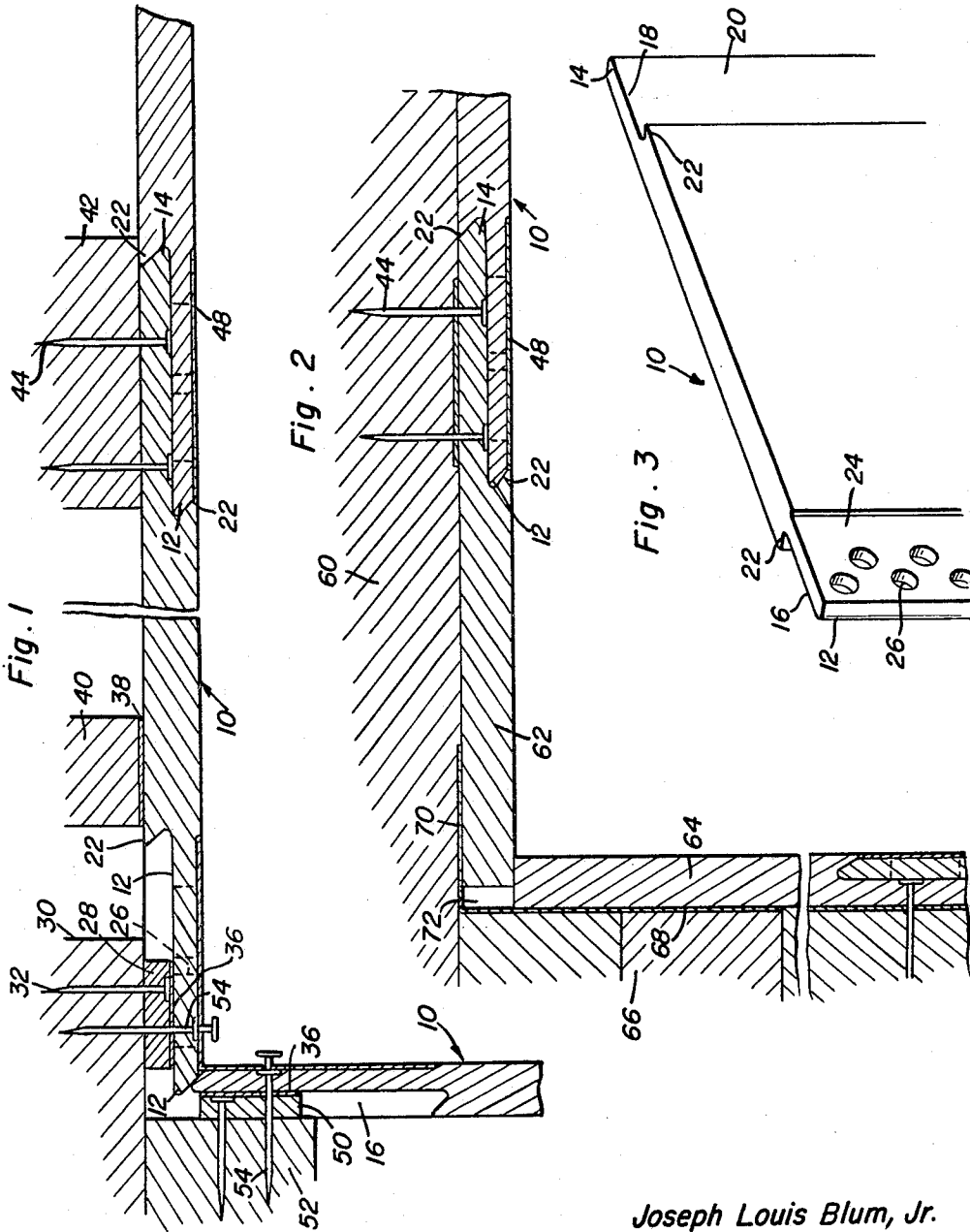
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J. L. BLUM, JR

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INTERLOCKING WALLBOARD

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Joseph Louis Blum, Jr.

INVENTOR.

BY *Alvanee A. Odion*
and Harvey B. Jackson
Attorneys

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INTERLOCKING WALLBOARD
Joseph Louis Blum, Jr., 109 E. Henfer Park,
New Orleans 23, La.
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This invention primarily relates to certain new and useful improvements in wallboards and wallboard joints.

It is the primary object of this invention to provide a wallboard section, which will permit the formation of a novel joint between the several sections, which joint, when the wall formed from the sections of wallboard is completed forms a solid bond between sections, eliminates any nailing or fastening on the finished wall and gives a concealed joint without the use of tape material and thereby eliminates nail popping and beading of the joints.

Still another object of this invention resides in the provision of a joint in a wall section of the type indicated including improved means for assuring the proper bonding of plastic material used to conceal the joints between wall sections.

Yet another object of this invention resides in the disclosure of a novel corner joint for abutting wall sections wherein a smooth continuous corner may be formed between the abutting wall sections which effectively conceals the corner joint.

A further object of this invention is to provide a wallboard joint which is characterized by the ease and economy of erection of the wall sections connected by said joints and by their positive securement to a framing structure, and to each other.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a fragmentary cross-sectional view through a building wall section.

FIGURE 2 is a fragmentary cross-sectional view illustrating a ceiling installation embodying the principles of the invention, but illustrating a slightly modified corner joint.

FIGURE 3 is a partial perspective view of a prefabricated wallboard used in the instant invention.

Referring now to the drawings in detail, one of the wallboard panels used to form the joint and wall sections of the present invention is generally designated by the numeral 10. The wallboard panel 10 includes beveled marginal edge portions 12 and 14. Adjacent each of the marginal edge portions 12 and 14, is an elongated recess such as 16 and 18 which are identical except for the fact that they open in opposite directions from the planar surface of the wallboard 10. Each of the recesses 16, 18 define a flat vertical face such as 20 and a chamfered portion such as 22. Adjacent the marginal edge portion 12, the wallboard panel 10 is formed with a vertical depression such as 24 on the surface of the wallboard panel 10 remote from the face 20 defined by the elongated recess 16. A plurality of preformed spaced apertures 26 are formed through the wallboard panel 10 and are located adjacent the marginal edge portion 12 and in the depression 24, for a purpose which will hereinafter be described.

In forming a wall section, the first wallboard panel 10 is secured to a backing strip such as 28 which is fastened to a stud or joist such as 30 by means of fasteners such as 32. This may be accomplished by positioning the backing strip 28 within the first elongated recess 16 of the wallboard panel 10 and fastening the panel 10 to the backing strip and joist or stud 30 by means of a temporary

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double-headed fastener such as 54, the outer head of which may be removed from the wallboard panel 10 after the joint is complete. It is also usually desirable to place a layer of adhesive such as 36 between the backing strip 28 and the face 20 of the panel 10 to further assure rigid securement of the panel to the wall framework.

To further assure the securement of the panel 10 to the framework, adhesive layers such as 38 may also be disposed between the wallboard panel 10 and spaced joists or studs such as 40 contacting the wallboard on various edges along its length.

To form a joint between adjacent wallboards in order to form a continuous wall section, it is only necessary to interlock the wallboards by securing them together along the faces defined by the second elongated recess of the first panel and the first elongated recess of a second panel by the wedge-like abutment of the beveled marginal edges of the two adjoining panels in the respective chamfered portions defined by the recesses as clearly shown in the right hand portion of FIGURE 1. To assure a good joining of the adjacent panels 10, the first panel 10 may be fastened to a stud or joist such as 42 by means of fasteners such as 44 dimpled in the face 20 of the second elongated recess 18 of the first wallboard panel 10. Then, the second panel may be interlocked with the first panel. Also, if desired, a layer of adhesive may be placed between the mating faces for a further positive lock of the panels.

In order to conceal the aforementioned joints, a layer of plastic filler material, such as plaster 48, is placed in the depression 24 and is smoothed down to form a continuous surface between the adjoining panels 10. Due to the apertures 26, an excellent mechanical bond between the plaster or plastic material and the wallboard is formed. Further, the plastic material will be caused to contact the face 20 defined by the second elongated recess 18 of the first wallboard to aid adherence of said face to the second wallboard.

Using the preformed panels 10 disclosed in the present invention, a concealed corner joint in the building wall section may be easily formed. To form this joint, a third wallboard panel 10 is positioned 90° relative to the first wallboard panel 10 shown in FIGURE 1, and secured in a similar manner to a backing strip 50 which in turn is secured to a joist or stud 52 in normal relation to the stud or joist 30. The beveled partial edge portion 12 of the first and third wallboard panels 10 are adapted to abut and the depressions 24 in said wallboards form an L-shaped corner. To conceal the corner joint, a layer of plastic material is spread in the continuous L-shaped depression formed by the abutting depressions 24 on the first and third wallboard. The resultant appearance is a continuous corner joint pleasing in appearance. If desired, a double-headed fastener such as 54 may temporarily be used to hold the third wallboard to the backing 50 and joist or stud 52 until the adhesive 36 has set and it may then be removed. Also, if it is desired to strengthen the corner joint since the joint is not interlocked, tape containing apertures similarly spaced to the apertures 26 may be adhered in continuous strips in the continuous L-shaped depression prior to the application of the plastic material to the corner joint. There is no necessity for tape to be positioned at the joints between interlocked wall sections because the interlock and mechanical bond induced by the apertures 26 is more than adequate to form a rigid joint.

Referring to the embodiment of the invention shown in FIGURE 2, a ceiling installation is illustrated wherein the necessity of using backing strips such as 28 and 50 at the corner joint may be eliminated. While a ceiling installation has been illustrated, it should be under-

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stood that the principles illustrated are equally applicable to vertical wall joints as well as the embodiment of FIGURE 1 being adapted to either purpose.

In the embodiment of FIGURE 2, the same wallboard panels 10 as described in connection with the embodiment shown in FIGURE 1 may be used to form a ceiling which is connected to ceiling joists such as 60. However, the ceiling corner wallboards 62 and the corner wallboards 64 connected to the top wall plate 66 have their recesses 16 and depression 24 eliminated with solid wallboard used in its stead. These corner panels may be secured to studs or joists by temporary fasteners such as 54 after an adhesive layer such as 68 and 70 has been applied to the back surfaces thereof. The recessed portion of these wallboards will also contain dimpled fasteners 44. In the installation spaces 72 are left for expansion of the ceiling corner wallboards 62 to eliminate beading of the ceiling corner joints.

It shall now be apparent that a wall section has been disclosed wherein the joints between prefabricated panels used in constructing said wall are totally concealed. The joints disclosed result in a very economical structure inasmuch as there is very little wallboard waste and the installation procedure is greatly facilitated.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A prefabricated wallboard panel comprising an elongated planar member having a beveled marginal edge portion, an elongated recess adjacent said marginal edge portion defining a face and a chamfered portion, a depression formed in said wallboard adjacent said marginal edge portion in the face thereof remote from the recess, a plurality of preformed filler material receiving and bonding apertures in said depression through said planar member, said planar member being adapted to have said marginal edge portion thereof disposed in overlapped engagement with a marginal edge portion of a second planar member also having an elongated recess formed therein but opening in the opposite direction relative to the first mentioned recess.

2. A joint structure for wall sections constituted of prefabricated wallboards comprising a wallboard panel having an elongated recess adjacent a marginal edge portion thereof defining a face and a chamfered portion, the marginal edge of said wallboard being beveled, a second wallboard panel having a similarly beveled marginal edge portion and recess but said recess opening in an oppositely facing direction from the recess of said first wallboard, the two panels being secured together along the faces defined by the elongated recess in said first wallboard and the elongated recess in said second wallboard by the wedge-like abutment of the contiguous beveled marginal edges of the two adjoining panels in the respective chamfered portions of the recesses, a depression formed in said second wallboard adjacent the marginal edge portion thereof in a face of said wallboard remote from the face defined by the elongated recess therein, a plurality of spaced apertures in said depression through said wallboard, and filler material filling said depression, the apertures aiding in the bonding and setting of the filler material on said wallboard.

3. A corner joint structure for wall sections constituted of pre-fabricated wallboards comprising the combination of a backing strip adapted to be secured to a framing element of the wall section, a first wallboard panel having an elongated recess adjacent one of its marginal edge portions defining a face secured by a layer of adhesive to said backing strip, a second backing strip adapted to be

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secured to a framing element of the wall section disposed 90° relative to said first framing element, a second wallboard panel having an elongated recess adjacent one of its marginal edge portions defining a face secured by a layer of adhesive to said second backing strip, marginal edge portions of said first and second wallboard panels adjacent their respective recesses being in abutting engagement, a depression formed in each of said wallboard panels adjacent the marginal edge portion in a face of each of said wallboards remote from the face defined by the elongated recesses therein and defining together a continuous L-shaped corner, a plurality of spaced apertures in said depressions through each of said wallboards, and filler material filling said depressions to form a smooth continuous corner concealing said joint, the depressions aiding in the bonding and setting of the filler material on said wallboards.

4. The joint of claim 3 including fastening elements driven through the wallboards and backing strips covered by said filler material in said depression.

5. A prefabricated wallboard panel comprising an elongated planar member having a pair of beveled marginal edge portions, a first elongated recess adjacent one of said marginal edge portions defining a face and a chamfered portion, a second similar elongated recess adjacent the other marginal edge portion of said wallboard but opening in an opposite direction from the recess associated with said first marginal edge portion, a depression formed in said wallboard adjacent the first marginal edge portion thereof in a face of said wallboard remote from the face defined by the first elongated recess therein and a plurality of filler material receiving and bonding apertures in said depression through said wallboard.

6. In a building wall section constituted of prefabricated wallboards, the combination of a backing strip adapted to be secured to a framing element of the wall section, a wallboard panel having an elongated recess adjacent one of its marginal edge portions defining a face and chamfered portion secured by a layer of adhesive to said backing strip, the marginal edge of said wallboard being beveled, a second elongated recess adjacent the other marginal edge portion of said wallboard but opening in an opposite direction from the recess associated with said first marginal edge portion, said second marginal edge portion also being beveled, a second wallboard panel having similarly beveled marginal edge portions and recesses, the two panels being secured together along the faces defined by the second elongated recess of the first panel and the first elongated recess of the second panel by the wedge-like abutment of the continuous beveled marginal edges of the two adjoining panels in the respective chamfered portions of these recesses, a depression formed in said second wallboard adjacent the marginal edge portion thereof in a face of said wallboard remote from the face defined by the elongated recess therein, a plurality of spaced apertures in said depression through said wallboard, and filler material filling said depression, the apertures aiding in the bonding and setting of the filler material on said wallboard.

7. In a building wall section constituted of prefabricated wallboards, the combination of a backing strip adapted to be secured to a framing element of the wall section, a wallboard panel having an elongated recess adjacent one of its marginal edge portions defining a face and chamfered portion secured by a layer of adhesive to said backing strip, the marginal edge of said wallboard being beveled, a second elongated recess adjacent the other marginal edge portion of said wallboard but opening in an opposite direction from the recess associated with said first marginal edge portion, said second marginal edge portion also being beveled, a second wallboard panel having similarly beveled marginal edge portions and recesses, the two panels being secured together along the faces defined by the second elongated recess of the first panel and the first elongated recess of the second

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panel by the wedge-like abutment of the contiguous beveled marginal edges of the two adjoining panels in the respective chamfered portions of these recesses, a depression formed in said second wallboard adjacent the marginal edge portion thereof in a face of said wallboard remote from the face defined by the elongated recess therein, a plurality of spaced apertures in said depression through said wallboard, and filler material filling said depression, the apertures aiding in the bonding and setting of the filler material on said wallboard, a second backing strip adapted to be secured to a framing element of the wall section disposed 90° relative to said first framing element, a third wallboard panel having an elongated recess adjacent one of its marginal edge portions defining a face secured by a layer of adhesive to said second backing strip, the first marginal edge portion of said first wallboard panel and the marginal edge portion of said third wallboard panel adjacent their respective recesses being in abutting engagement, a depression formed in each of said first and third wallboard panels adjacent these marginal edge portions in a face of each of said wallboards remote from the face defined by the elongated recess therein defining together a continuous

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L-shaped corner, a plurality of spaced apertures in said depression through each of said wallboards, and filler material filling said depressions to form a smooth continuous corner concealing said joint, the depressions aiding in the bonding and settling of the filler material on said wallboards.

References Cited by the Examiner

UNITED STATES PATENTS

10	1,534,142	4/1925	Rolfe	52-443
	1,582,721	4/1926	Adams	52-417
	1,942,946	1/1934	Stewart	52-448
	2,068,098	1/1937	Elmendorf	52-483
15	2,107,240	2/1938	Eilertsen	52-474
	2,276,071	3/1942	Scull	52-592
	2,305,247	12/1942	Fischer	52-417 X

FOREIGN PATENTS

20	1,123,293	1956	France.
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FRANK L. ABBOTT, *Primary Examiner.*JOHN E. MURTAGH, *Examiner.*