June 12, 1962 C. L. BUTLER 3,038,276

BUILDING CONSTRUCTION

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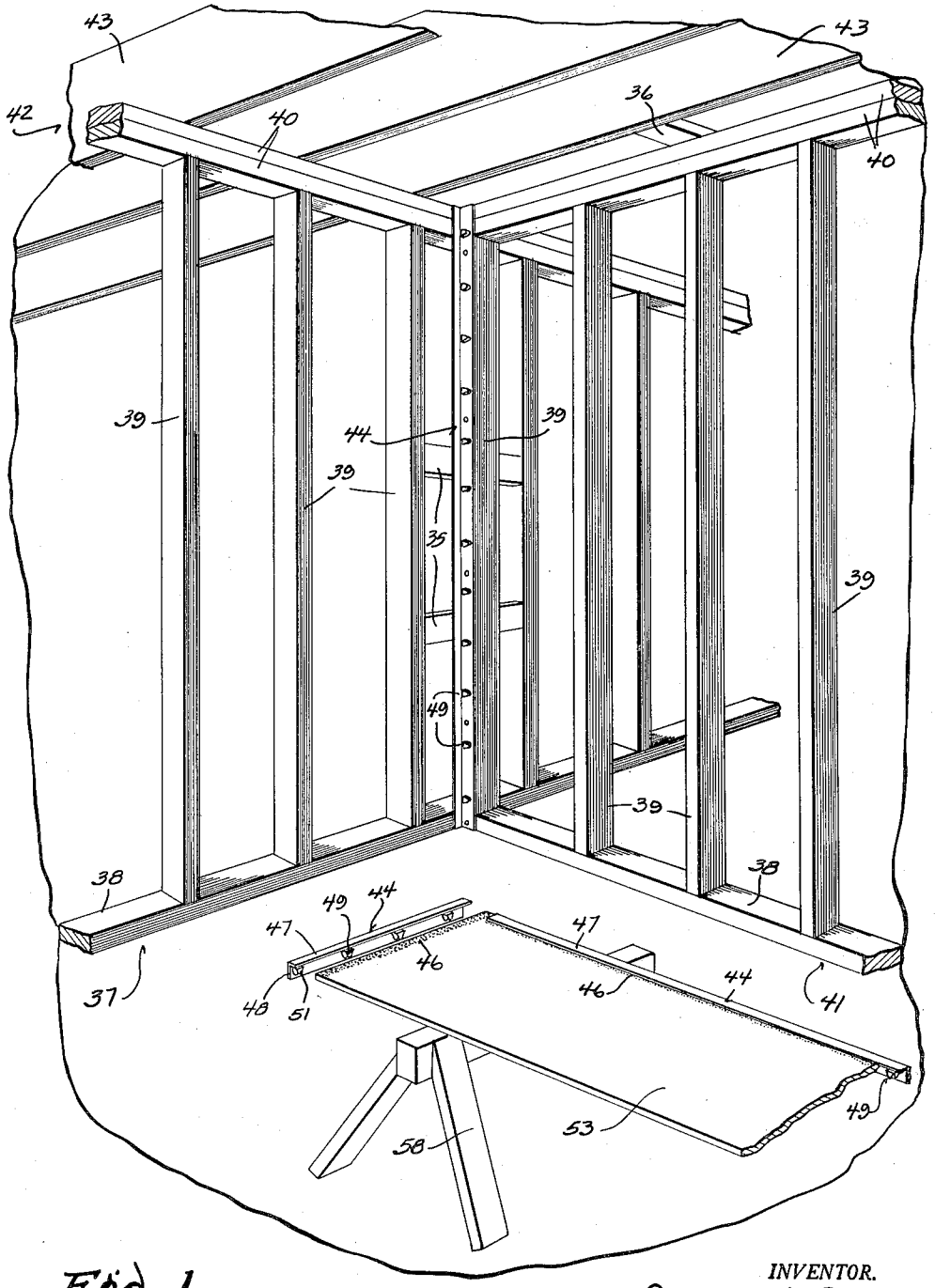


Fig. 1

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

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BUILDING CONSTRUCTION

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7 Sheets-Sheet 2

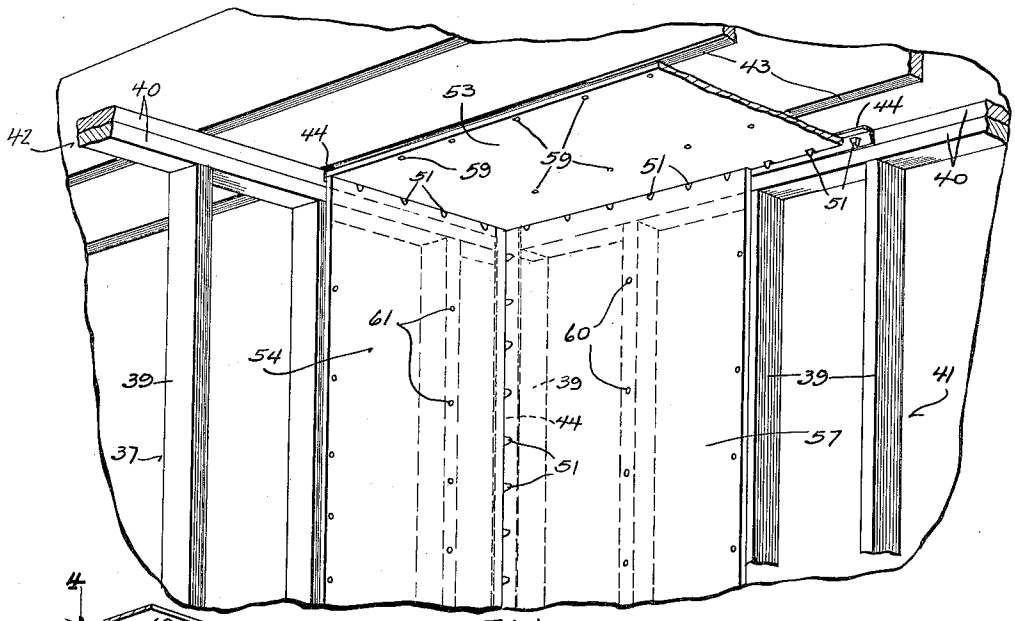


Fig. 2

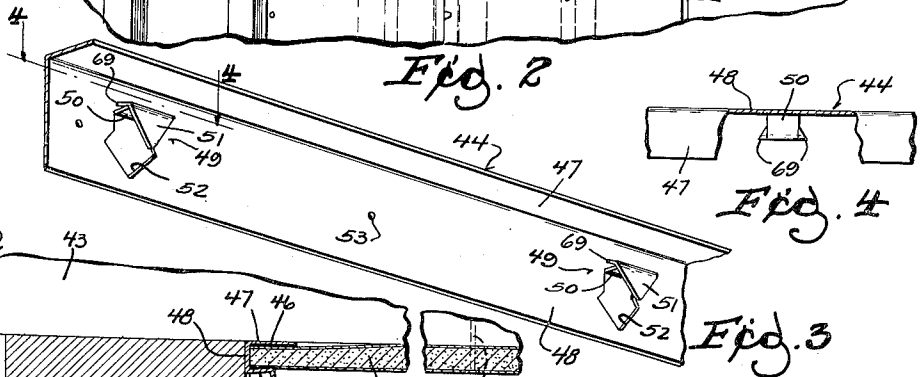


Fig. 4

Fig. 3

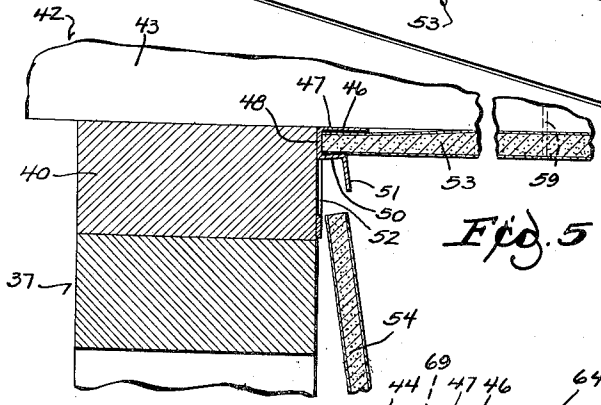


Fig. 5

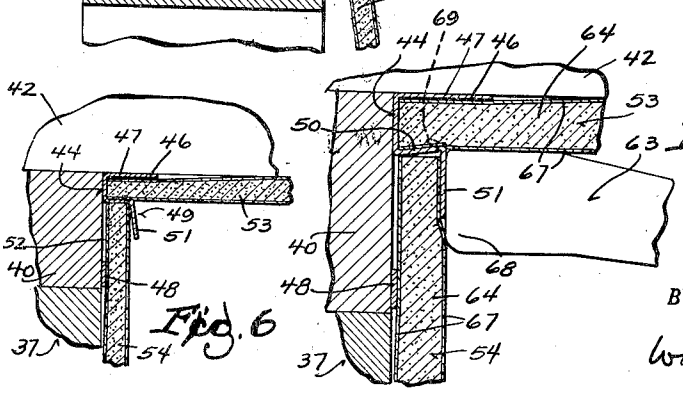


Fig. 6

Fig. 7

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

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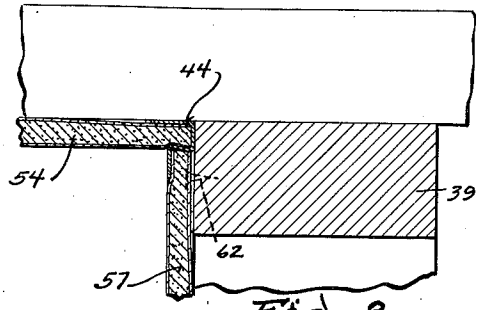


Fig. 8

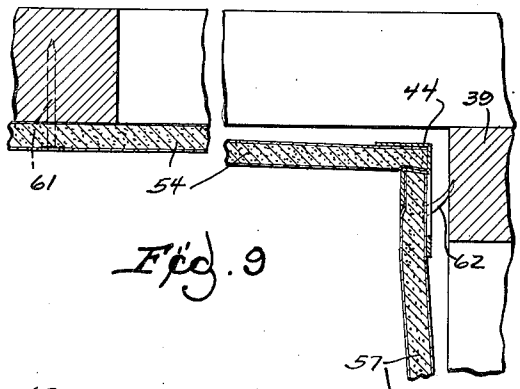


Fig. 9

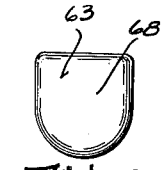


Fig. 10

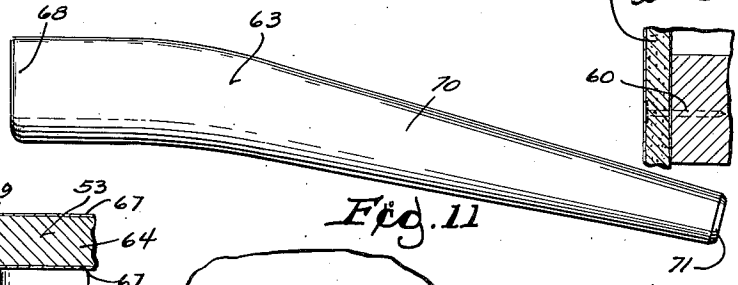


Fig. 11

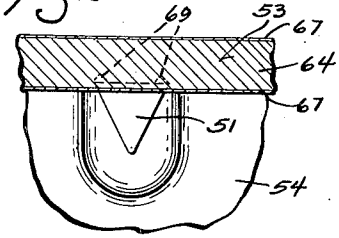


Fig. 12

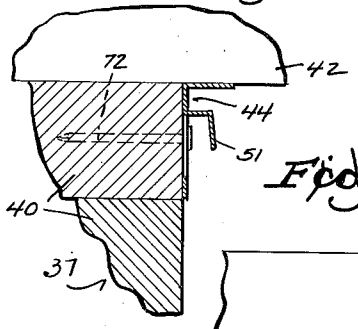


Fig. 14

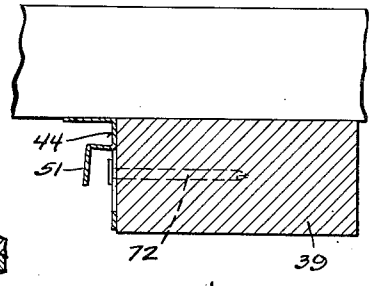


Fig. 15

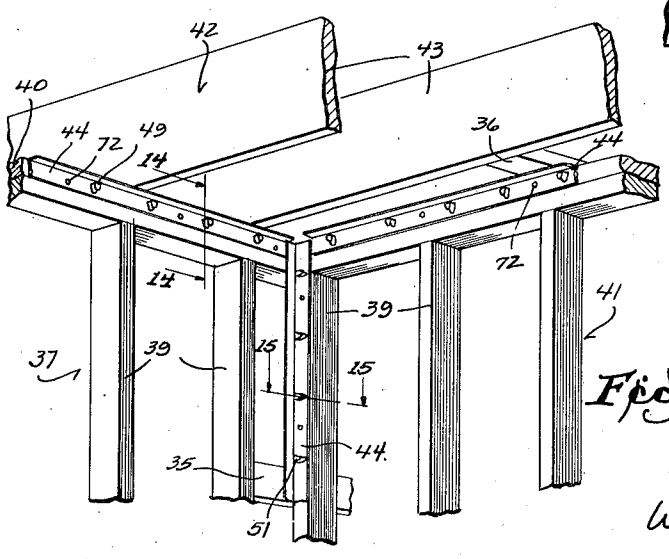


Fig. 13

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

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BUILDING CONSTRUCTION

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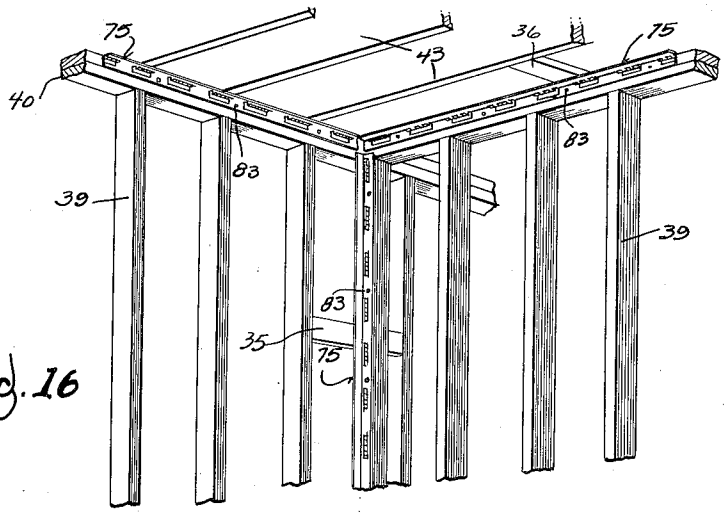


Fig. 16

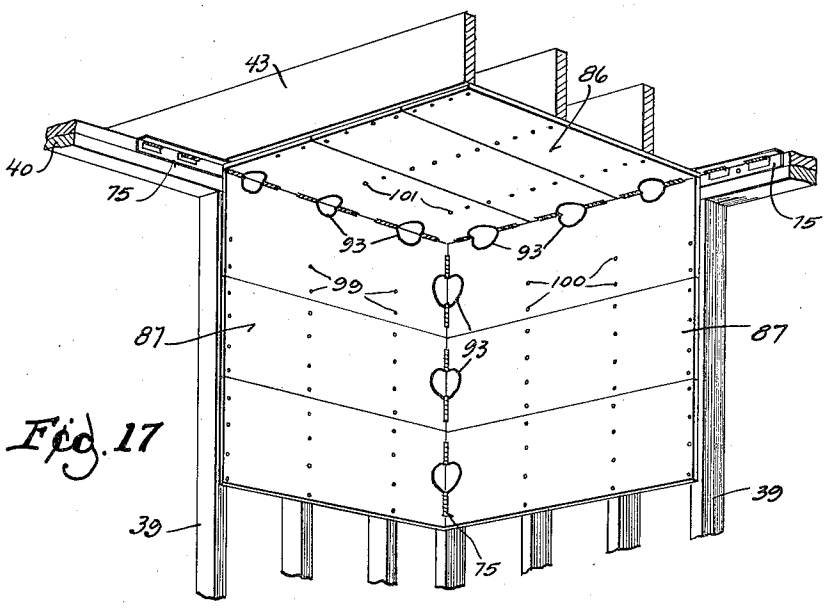


Fig. 17

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

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BUILDING CONSTRUCTION

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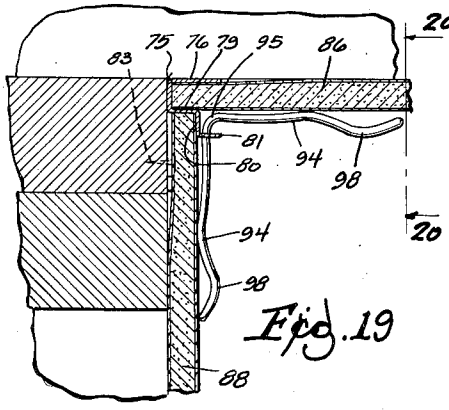


Fig. 19

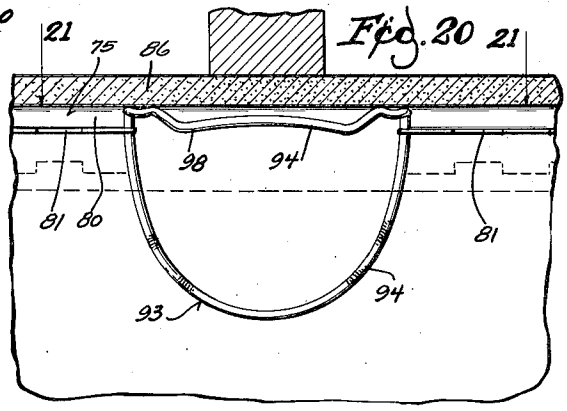


Fig. 20

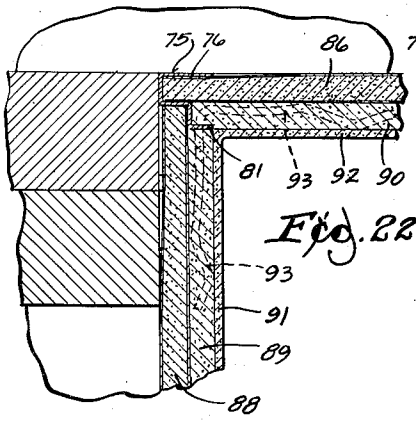


Fig. 22

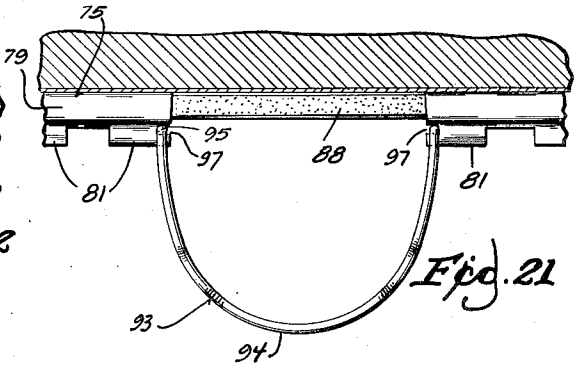


Fig. 21

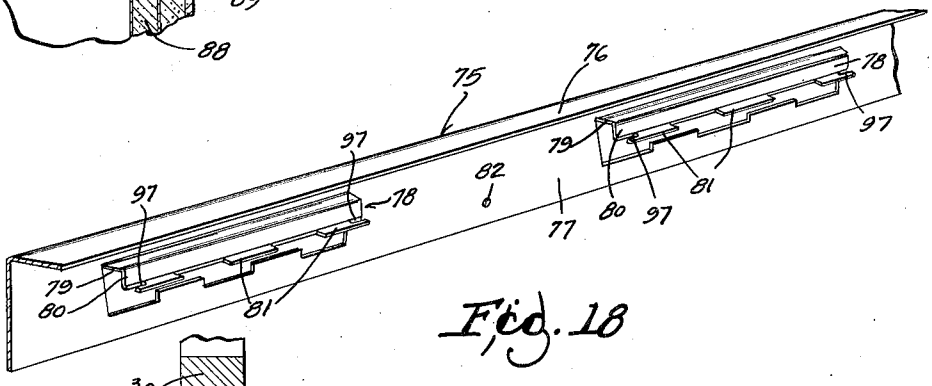


Fig. 18

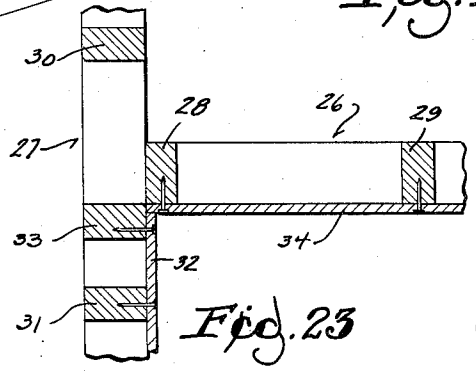


Fig. 23

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS.

June 12, 1962 C. L. BUTLER 3,038,276

BUILDING CONSTRUCTION

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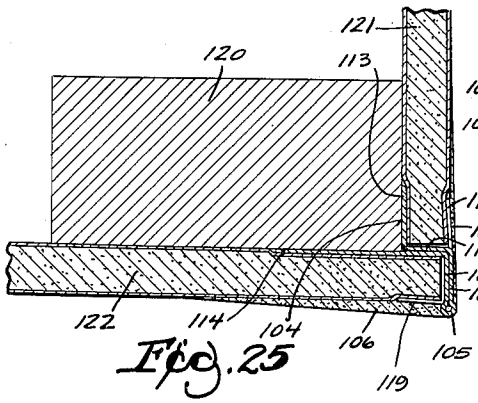


Fig. 25

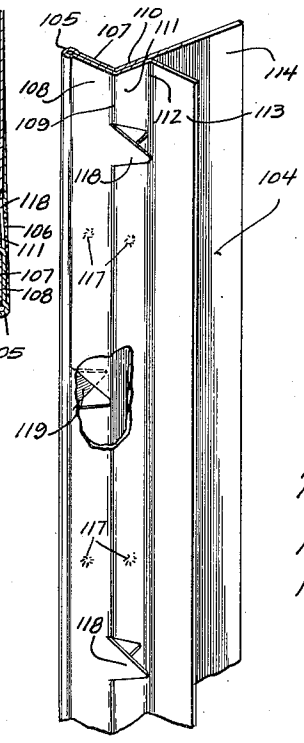


Fig. 24

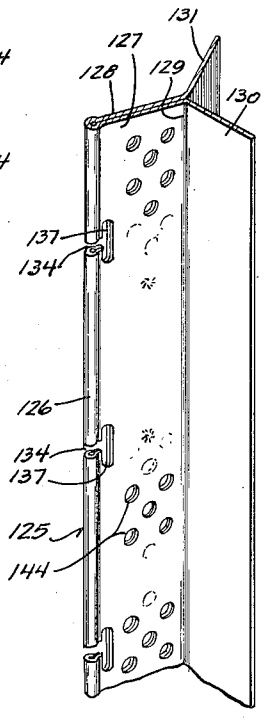


Fig. 26

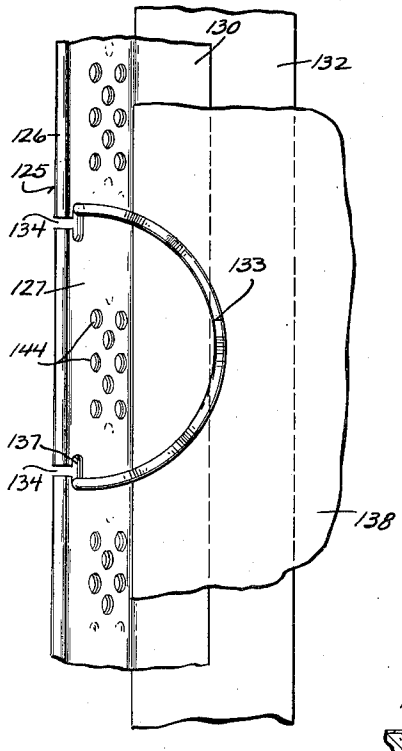


Fig. 28

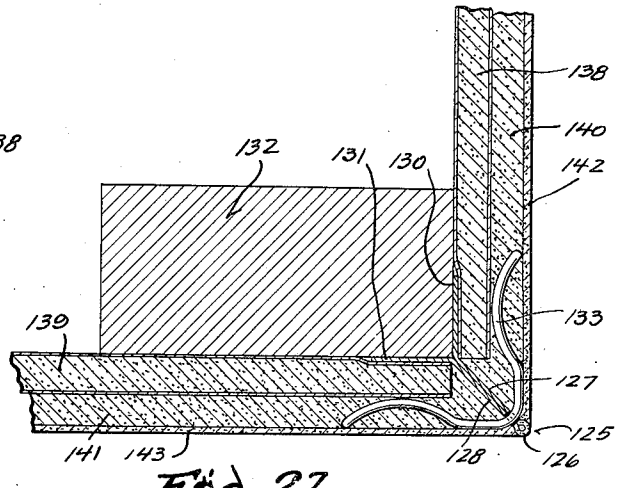


Fig. 27

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

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BUILDING CONSTRUCTION

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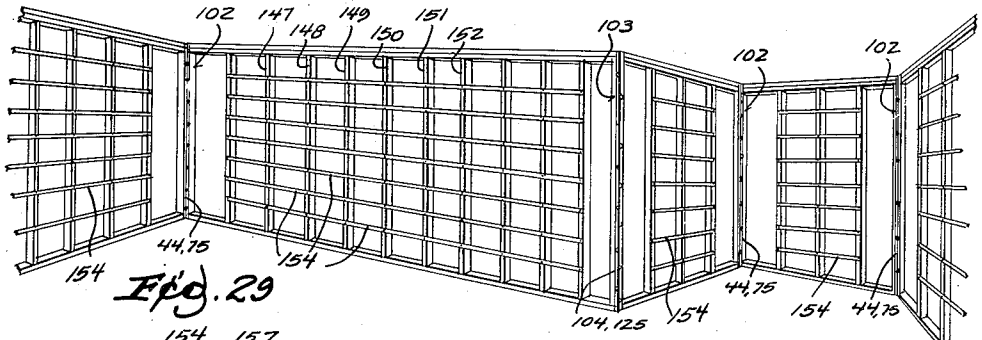


Fig. 29

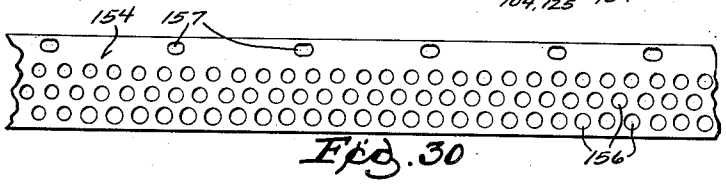


Fig. 30

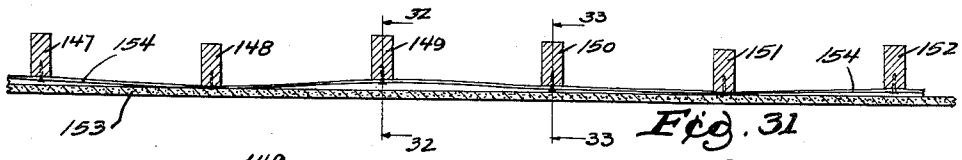


Fig. 31

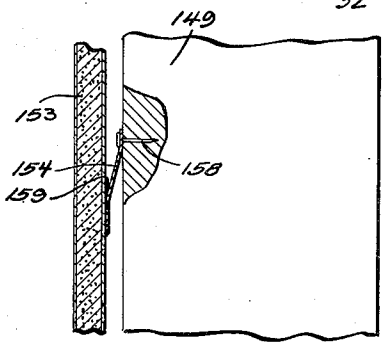


Fig. 32

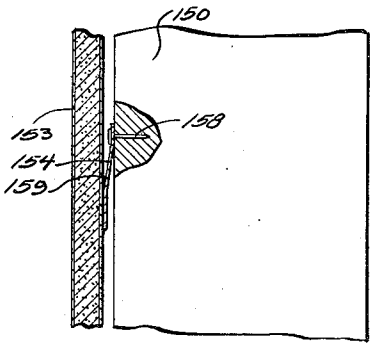


Fig. 33

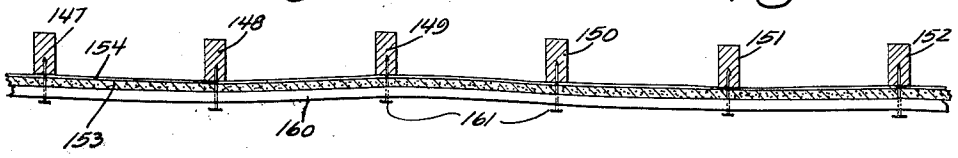


Fig. 34

INVENTOR.
CHARLES L. BUTLER
BY
Wheeler, Wheeler & Wheeler
ATTORNEYS

United States Patent Office 3,038,276 Patented June 12, 1962

3,038,276

BUILDING CONSTRUCTION

Charles L. Butler, Oshkosh, Wis.
(P.O. Box 736, Pacifica, Calif.)

Filed July 11, 1956, Ser. No. 597,156
3 Claims. (Cl. 50—183)

This invention relates to building construction, and more particularly to the construction, installation and mounting of wallboard or panels which line room interiors.

While several embodiments of my invention as disclosed herein are adapted to accommodate certain conventional room finishing practices, it is my broad purpose to basically change and modify conventional practice.

It is my primary purpose to build room walls having surfaces finishes which will not crack as the building ages and settles. In the preferred practice of my invention, substantially the entire area of the wall panels to which the finish is applied is so mounted or hung as to "float" with respect to its supports. Accordingly, relative movement between the wall structure and the wall panels mounted thereon may occur to relieve stresses which might otherwise be transmitted therebetween.

The problem of cracking is particularly acute in the room corners where one wall joins another and where even slight shifts in the position of one wall with respect to the other will usually crack the plaster or other finish material in a conventional corner.

Moreover, in conventional corner construction, whether dry wall or plaster wall, it is necessary to provide wall panel supports along both sides of each corner. These provide backing members to which the respective wall panels are nailed in a rigid assembly. Where corner forming walls happen to intersect with their studs or joists disposed exactly in the corner to receive nails for the wall panels, additional backing supports are not needed unless otherwise required to meet building specifications. However, where corner forming walls intersect on a line remote from the studs or joists normally a part thereof, and this condition obtains in most cases, conventional practice requires additional wall panel support and backing members to be disposed in the corner even though these would not otherwise be necessary for structural support of the wall.

Accordingly, a further object of the present invention is to eliminate the need for at least one of the wall panel supports in any given corner of a room. According to my invention this support is replaced by a specially prefabricated corner strip which has transversely related flanges which provide backing for the wall panels and which tie the wall panels together in the room corner.

In conventional construction aforesaid, any tendency for the wall panel supports to shift position as the building ages or is subject to settling, etc., will normally be manifested by cracking of the plaster or other wall panel finish, particularly in the corners of the room. If one wall shifts with respect to another, shear forces therebetween will be exerted at the corner. In conventional rigid corner construction the wall panel supports simply transfer the shear stress to the wall panels and the corner will rupture.

An important feature of one embodiment of my invention is to provide a floating panel corner in which the wall panels are tied together at the room corners by corner strips which are not fixedly attached to the wall panel supports. Accordingly, the wall panel corner is free to yield with respect to its supports and dislocation and shifting of the wall panel supports will have no substantial visible effect upon th plaster or the other finish of the wall panels. In other embodiments of the

invention the entire area of wall panel is yieldably supported on the wall.

In this application I disclose different embodiments of the invention which are variously adapted for use specifically with dry wall construction and with plaster lath or wet wall construction. The specific corner strips disclosed herein differ somewhat because of different problems encountered in dry wall and plaster lath wall construction. However, the basic construction is the same in both instances and I am able to eliminate backing members in the corner and also provide for a floating corner both for dry wall panel and for plaster lath wall panel construction.

Other features and advantages of the invention will be apparent to one skilled in the art upon an examination of the following disclosure in which:

FIG. 1 is a view in fragmentary perspective of a room corner in process of construction.

FIG. 2 is a fragmentarily perspective view similar to that shown in FIG. 1 in which sections of dry wall panels have been mounted in the room corner.

FIG. 3 is a perspective view of a preferred corner strip used in connection with dry wall technique.

FIG. 4 is a cross sectional view taken along the line 4—4 of FIG. 3.

FIG. 5 is a fragmentary cross section taken through the corner between a top and side wall and showing an early stage in the method of installing dry wall panels according to my invention.

FIG. 6 is a view similar to FIG. 5 but showing the corner more nearly completed.

FIG. 7 is a further view similar to FIG. 5 and showing the step in which the prongs of my corner strip are set to interlock with the dry wall panels.

FIG. 8 is a fragmentary cross sectional view similar to that of FIG. 7 but showing the use of a tack to temporarily hold the corner strip to a wall panel support stud.

FIG. 9 diagrammatically illustrates how the corner strip of my invention may float and yield with respect to its support.

FIGS. 10 and 11 are end and side elevation respectively of a preferred prong setting tool used according to my method of installing wall panels.

FIG. 12 is a fragmentary cross sectional view showing the relative dimensions of the prong and head of the setting tool.

FIG. 13 is a fragmentary perspective view showing a modification of the invention in which the corner strips may be nailed into the corners of a room, as distinguished from the floating corner aforesaid.

FIG. 14 is a cross sectional view taken along the line 14—14 of FIG. 13.

FIG. 15 is a cross sectional view taken along the line 15—15 of FIG. 13.

FIG. 16 is a fragmentary perspective view of a modified embodiment of the invention adapted to mount plaster lath panels in a room corner.

FIG. 17 is a perspective view showing a partially completed corner embodying the corner strips shown in FIG. 16 and plastic lath panels.

FIG. 18 is an enlarged perspective view of the corner strip shown in FIGS. 16 and 17.

FIG. 19 is a fragmentary cross sectional view taken through a corner of a room embodying the corner strip of FIG. 18 and with respect to which plaster lath panels have been mounted in readiness for the application of plaster thereto.

FIG. 20 is a cross sectional view taken along the line 20—20 of FIG. 19.

FIG. 21 is a cross sectional view taken along the line 21—21 of FIG. 20.

FIG. 22 is a view similar to FIG. 19 but showing rough and finished coats of plaster applied in the corner of a room embodying the corner strip of FIG. 18.

FIG. 23 is a fragmentary horizontal cross section through a conventional corner construction between two room side walls and with respect to which the device of the present invention is an improvement.

FIG. 24 is a perspective view of a specially fabricated corner strip adapted to connect dry wall panels about an outside corner in a room.

FIG. 25 is a fragmentary horizontal cross section taken through an outside room corner embodying the strip of FIG. 24.

FIG. 26 is a perspective view of a modified embodiment of an outside wall corner strip adapted for use in plaster lath wall construction.

FIG. 27 is a fragmentary horizontal cross section taken through an outside room wall embodying the strip of FIG. 26.

FIG. 28 is a side elevation of the strip of FIG. 26 showing an anchor engaged therewith.

FIG. 29 is a fragmentary perspective view of a room showing both inside and outside corners thereof and illustrating the use of horizontal strips for hanging wall panels from room studs intermediate the corners.

FIG. 30 is a fragmentary view of one of the horizontal strips aforesaid.

FIG. 31 is a fragmentary horizontal cross section taken through a wall embodying the strips of FIG. 30.

FIG. 32 is a fragmentary cross section taken along the line **32—32** of FIG. 31.

FIG. 33 is a fragmentary cross section taken along the line **33—33** of FIG. 31.

FIG. 34 is a fragmentary horizontal cross section taken through a wall embodying the strips shown in FIG. 30 and showing an intermediate stage in the preferred method of cementing the wall panels to said strips.

I will first describe my invention as it relates to corner construction.

FIG. 23 diagrammatically illustrates typical conventional practice. Walls **26**, **27** which intersect at right angles are conventionally provided with upright wall panel supports or studs **28**, **29**, **30** and **31** which may be spaced on sixteen-inch centers. As usually happens wall **27** abuts wall **26** at a point intervening between the regularly spaced studs **30**, **31**. Accordingly, to provide backing in the corner to which wallboard **32** may be nailed, the carpenter must install an extra stud **33**. Wallboards **32** and **34** are then conventionally nailed as indicated in FIG. 23 to studs **28**, **29**, **31**, **33** in a rigid corner assembly.

Not only does the conventional technique aforesaid require the installation of stud **33** which would otherwise be unnecessary, but the wall panels **32**, **34** are fixedly connected to the wall panel supports **28**, **33** at the corner so that any tendency of the walls **26**, **27** to shift as aforesaid will stress the wall panels, particularly at the corner, and cause cracking of the panels and any plaster thereon.

While FIG. 23 illustrates a conventional corner between two side walls, a similar construction in which an extra joist is usually required is conventional in the corner between a side wall and a top wall.

In FIGS. 1 through 15 I illustrate a dry wall panel corner strip embodiment of my invention which replaces the conventional construction typified by FIG. 23. In FIGS. 16 through 22 I disclose a plaster lath wall panel corner strip embodiment of the invention. The present invention contemplates no change in conventional dry wall panels and plaster lath wall panels.

FIG. 1 illustrates an unfinished corner between two side walls of a room and between the side walls and the top wall or ceiling. Side walls **37** and **41** respectively comprise floor plates **38**, upright wall panel supports or studs **39** and double-ply top plates **40**. FIG. 1 illustrates a construction in which the studs are spaced on twenty-four inch centers. The top wall or ceiling **42** comprises correspondingly spaced horizontally disposed wall supports or joists **43**. Note that at the junction of side walls **37**, **41**, there is no stud **39** in wall **37** which is proximate the corner formed by the junction of the two side walls. Under conventional practice as shown in FIG. 23 an additional stud **33** would have to be disposed as indicated in that figure to form a backing for wall panels **32**. However, in the practice of my invention as shown in FIG. 1, such a stud **33** is not needed.

The same is true for the junction between the respective side walls **37**, **41** and top wall **42**. There are no joists which normally run along the top plates **40** to provide a backing in the corner for top wall panels. Under conventional practice an additional joist would be needed adjacent top plate **40** of wall **41** and blocking would be required between joists **43** adjacent top plate **40** of wall **37** to furnish a backing into which the edge margins of the top wall panels are nailed. In the structure of the present invention, however, the additional blocking and extra joist are not needed and can be eliminated.

I may, of course, provide conventional braces **35**, **36** in walls **37**, **42** to brace wall intersections. However, these braces are not provided as wall panel backing and may be used in building construction embodying my invention.

According to my invention I dispose in the corners between side walls **37**, **41** and between side walls **37**, **41** and top wall **42**, corner strips **44** which for dry wall panel construction may be of the form shown in FIG. 3 and for plaster lath wall panel construction may be of the form shown at **75** in FIG. 18.

Considering first the form of the strip shown in FIG. 3, it is noted that the corner strip **44** consists of an angle strip having flanges **47**, **48** at a right angle. The strip is desirably fabricated of sheet metal. From the material of flange **48** are formed a plurality of longitudinally spaced prongs **49** which respectively have tongues **50** generally paralleling flange **47** and tongues **51** generally paralleling flange **48**. The apertures remaining in flange **48** after formation of prongs **49** are indicated by reference characters **52**. Flange **48** may also be provided with longitudinally spaced nail holes **53**.

As best shown in FIGS. 5 through 7 the respective spaces between flange **47** and prong tongues **50** and the respective spaces between flange **48** and prong tongues **51** are adapted to receive dry wall panels at a right angle. Dry wall panels may come in sheets four feet by eight feet in size. They normally range in thickness from three-eighths to one-half inch in thickness. Depending upon the specific thickness of panel material the dimensions of the strip **44** will be varied accordingly.

FIG. 2 shows a partially completed room at the junction of a corner between the side walls **37**, **41** and a junction between the side walls **37**, **41** and the top wall **42**. A top wall panel **53** and side wall panels **54** and **57** are illustrated in position in the respective corners aforesaid, the connection between the respective panels being made by corner strips **44**. Broadly any convenient procedure may be adapted for positioning the corner strips **44** in the respective room corners and disposing the panels **53**, **54** and **57** therein. However, I have found that the procedure illustrated in FIG. 1 for dry wall panels is expeditious.

I find it desirable to first attach the corner strips **44** which will fit in the corners between the side and top walls to the top wall panels **53** before these panels are lifted by the workmen into the corner and against the joists **43**. Accordingly, the top wall panel **53** destined for its position shown in FIG. 2 may, in the step shown in FIG. 1, be supported on a horse **58**. To the side margins of the top wall panel **53** I may cement the flanges **47** of the strips **44**, the edges of the panel **53** being inserted fully into the spaces between the flange **47** and prong tongues **50**. I find that the cement **46** will provide a particularly good bond be-

tween the strip flanges 47 and wall panel 53 which is over and above the anchorage of these parts afforded by the setting of the prongs 49 in the manner hereinafter described more in detail. The cementing step is optional but is preferred.

As also illustrated in FIG. 1 a corner strip 44 may be stood upright on its end in the corner between side walls 37, 41. If desired I may tack the strip through its holes 53 to the exposed edge of the corner stud 39 in wall 41 to hold the strip in place during wall panel installation.

The top wall panel 53 shown in FIG. 1 may then be lifted against the joists 43 and nailed thereto as shown at 59 in FIG. 2. The top panel 53 carries with it corner strips 44 for the corners between the respective side walls 37, 41 and top wall 42. Accordingly, the room corner is now in condition for installation of the side wall panels 54, 57 which may simply be slipped into position between the respective flanges 48 of the corner strips and the prong tongues 51 thereof. The panels 54, 57 are concurrently similarly engaged with corner strip 44 in the corner between side walls 37, 41. I also prefer to cement side wall panels 54, 57 to the corner strip 44.

In the preferred embodiment of my invention I do not fasten any wall panel 53, 54, 57 to any wall panel support 39, 43 closer than about twelve inches from a corner strip 44. Nails 60 in wall panel 57 will conventionally be a full twenty-four inches from the corner strip 44 in the corner between walls 37, 41. Nails 61 in panel 54 will be somewhat closer than twenty-four inches because of the construction shown in FIG. 1. However, if the stud 39 in wall 37 next to the corner is materially less than about twelve inches from the corner, panel 54 is not nailed to that particular stud. The same practice is followed with respect to nails 59 in panel 53.

Accordingly, inasmuch as the corner strips 44 in the corners between the respective side walls and the side walls and the top wall are not permanently fastened in any way to the walls, these corners "float" and are free to yield with respect to respective walls as aforesaid. Even if the corner strip 44 is tacked lightly as indicated at 62 in FIG. 8 to the stud 39, the connection of the corner strip to the stud is releasable upon relative movement between the stud 39 and the wall panel. As indicated in FIG. 9 the tacks 62 will simply pull out and permit the corner to float.

In actual tests in which one wall was subjected to a deflection of one inch, the floating corner showed no evidence whatever of cracking or other damage. Even when one wall was deflected for two inches there was very little evidence of wall panel damage, the only visible effect being a hairline crack in the corner and a slight dimpling of the wall surface adjacent the nail heads at 60 and 61 as shown in FIG. 9. Similar tests on conventional corner construction showed severe cracking and panel damage at both one and two inch deflections. As shown in FIG. 9 the wall panel corner is resilient between its connections at 60 and 61 to the walls and is free to yield and flex therebetween. Where the four side walls and top wall of a conventional room have floating corners aforesaid, each wall is free to yield and cracking is virtually eliminated. In effect the respective walls are provided with expansion joints at the intersections thereof.

The next step in the practice of my invention after the panels have been positioned and nailed as shown in FIG. 2 is to "set" the prongs 49 to interlock the respective wall panels with the corner strips 44. This interlocking is desirably over and above the cement interlock aforesaid.

FIG. 7 illustrates the step of setting the prongs. The several parts are interlocked by positioning a setting tool 63 of the type shown in FIGS. 10 and 11 against the tongue 51 and striking the end of the setting tool 63 with a hammer to indent and interlock tongue 51 with the side margin of side wall panel 54.

As best shown in the cross sectional views of FIGS. 5 through 7, conventional dry wall panels 53, 54 and 57 respectively consist of a gypsum filling 64 with paper plies 67 at both sides thereof. The gypsum 64 is relatively deformable as shown in FIG. 7 and the pressure of the setting tool 63 will dimple the entire area beneath its head 68, thereby interlocking the tongue 51 of the strip 44 with wall panel 54. Tongue 51 is desirably indented by an amount about equal to the thickness of a paper ply 67.

As shown in FIG. 12 the area of toolhead 68 is considerably larger than the area of tongue 51. Accordingly the pressure of the setting toolhead is applied not only to the tongue 51 but to the portions of the panel peripherally surrounding the tongue 51 and beneath the head 68. Accordingly, the tongue 51 will not tear the paper ply 67 in the course of its interlocking therewith.

As best shown in FIGS. 3 and 4, tongue 51 is desirably provided with rearwardly and upwardly extending teeth 69 which, when tongue 51 is set by tool 63, pivot somewhat about the junction of tongues 51, 50 and bite into and through the exposed paper ply 67 of wall panel 53. Moreover, tongue 50 is predisposed to pivot somewhat about its junction with flange 48 to indent and interlock with panel 53 as shown in FIG. 7. This may be accomplished in the fabrication of the strip by forming tongue 50 at a slight oblique angle to flange 48 and inclined toward flange 47 and forming tongue 51 at an acute angle to tongue 50. Accordingly, the lobes are predisposed to yield in a direction to interlock with both wall panels 53, 54 when a single blow is delivered against tool 63. The interlock aforesaid is adequate under most circumstances to securely anchor the respective panels to the corner strip 44, although as aforestated I may optionally and in addition cement flange 47 of the corner strip 44 to panel 53.

Moreover, I may prefer to rely solely on a cemented connection between the panels and corner strips. In such a case the prongs 49 would be omitted entirely.

As shown in FIG. 11 the shank 70 of tool 63 is desirably at an angle to its head 68. Accordingly, when the tool is positioned as shown in FIG. 7 adjacent the top wall, the end 71 of the tool against which the hammer is directed is spaced from panels 53.

In dry wall construction the dimples left by setting of the prongs 49 may be filled with spackle putty, as is conventional in the case of nailhead dimples, etc.

As aforestated corner strips 44 may be left entirely unconnected with the wall panel supports in the corners or they may be connected lightly thereto by tacks 62 merely to hold them in place during the installation procedure. FIGS. 13 through 15 show a modification of this procedure in which the corner strips 44 may be securely nailed to the respective corner stud 39 and top plates 40 of the side walls. The nails are indicated at 72 in FIGS. 14 and 15. While in this construction the corners do not "float," the wall panel supports which would otherwise be required to back up the wall panels along the margins thereof in the side and top walls may be eliminated.

In FIGS. 16 through 22 I disclose a plaster lath wall panel construction in which the specific corner strip 75 shown in FIG. 18 is preferred. Strip 75 has flanges 76, 77 at a right angle. Flange 77 is provided at spaced intervals longitudinally thereof with elongated prongs 78 desirably struck out of the material of flange 77. The prongs 78 comprise elongated tongues 79 which parallel flange 76 and elongated tongues 80 at a right angle to tongues 79 and which parallel flange 77. The edges of tongues 80 may be further provided with plaster ground or screed lugs 81. While the screed flanges may be continuous along the edge of tongue 80, I prefer to form them as multiple teeth as illustrated in FIG. 18. This configuration provides more edges for interlocking engagement with the plaster, as will hereinafter appear.

The flanges 77 are also provided with nail holes 82

to receive tacks 83 as shown in FIG. 19 to lightly mount the corner strips 75 in the corners between the side walls and between the side walls and top wall of the room as shown in FIG. 16.

As aforestated the construction shown in these figures is adapted to receive plaster lath wall panels 86, 87 and 88 along the respective walls of the room. These panels are conventionally supplied in sixteen inch by forty-eight inch sheets and are of standard three-eights or one-half inch thickness. As shown in FIG. 19 the edge of top wall plaster lath wall panel 86 is disposed between flange 76 and tongue 79 of the corner strip 75. The edge of side wall plaster panel 88 is disposed between the flange 77 and tongue 80 of corner strip 75.

As shown in FIG. 22 layers of rough plaster 89, 90 can then be applied to the respective panels 88, 86, the ground or screed lugs 81 providing a gauge for the thickness of the plaster layers 89, 90 and a guide for the plasterer's trowel. The plaster 89, 90 interlocks with the lugs 81 as well as to the exposed surface of the plaster lath wall panels to securely fasten the plaster lath wall panels and the plaster layers in a relatively rigid corner assembly.

Layers 91, 92 of finished plaster may subsequently be applied to complete the plastering of the room.

I may optionally provide ring-shaped plaster anchors 93 for further interlocking of the rough plaster with the corner strips 75. The anchor rings 93 may be made of wire and have semi-circular portions 94 connected at a right angle bend at 95. The respective end lugs 81 in each set of prongs 78 are notched out at 97 to receive the rings in interlocking engagement with the prongs. As shown in FIGS. 19 through 22 the anchors 93 are substantially completely embedded in the rough plaster layers 89, 90 and further insure rigid connection of the plaster, plasterboard and corner strips.

The semi-circular portions 94 of the rim 93 may optionally be contoured as indicated at 98 to provide undulations for firm interlocking of the plaster with the anchors and additional plaster ground or screed surfaces for guidance of the plasterer's trowel.

As is clearly shown in FIG. 17, no backing strips need be provided in the respective side and top walls, the respective flanges of the corner strip 75 providing all the backing that is needed. Moreover, as indicated in FIG. 17, the nails 99, 100 and 101 used to respectively mount the panels 88, 87 and 86 to their respective wall panel supports are desirably no closer than twelve inches to the corner strips 75. Accordingly, subject only to the releasable connection of tacks 83, the corners of the wall panels "float" as aforesaid and the corners may yield to prevent cracking of the plaster, etc., as aforestated.

The plaster lath wall panel corner strips 75 may, of course, be nailed permanently to the wall supports as suggested in FIGS. 13–15, although for the reasons aforestated I prefer the floating corner construction.

The foregoing description relates to corner strips in an "inside" corner of a room, such as those shown at 102 in FIG. 29. For an "outside" corner of a room, such as that shown at 103 in FIG. 27, I provide the corner strips 104 and 125 shown in FIGS. 24 and 26.

FIG. 24 shows a corner strip used in dry wall construction. The strip 104 is desirably formed of a single sheet of metal bent intermediate its ends to form a bead 105 which provides a ground for spackle putty cover layers 106 as shown in FIG. 25.

Rearwardly from bead 105 the strip is formed in double plies 107, 108 in face contact. The plies are bent at a right angle at 109 and continue in double-ply construction at 110 and 111 to the right angle bend 112 in ply 111 where the plies diverge to form flanges 113, 114 at a right angle.

The double ply portions of the strip are desirably spot-welded together as suggested at 117. Ply 111 is provided at spaced intervals therealong with prongs 118 struck therefrom and which are bent at right angles thereto to substantially align with ply 108 and parallel flange 113. Ply 107 is similarly provided with prongs 119 formed therefrom and which extend at a right angle to ply 107 and which parallel ply 110 and flange 114. The respective prongs 118, 119 are spaced on about eight-inch centers longitudinally of the strip and are desirably longitudinally staggered as shown in FIG. 24.

As shown in FIG. 25 the corner strips 104 are placed against a corner wall panel support stud 120 with the flanges 113, 114 in face contact with the corner of stud 120. While these flanges could be nailed to the stud as suggested in FIGS. 13 through 15, I prefer to "float" the corner strip 104 with respect thereto. Accordingly, the strip may simply be tacked lightly to the stud in such a manner that dislocating stresses exerted between the wall panels and the stud will easily release the tacked connection. In practice I find it necessary only to tack the corner strip 104 to the corner stud 120 at the bottom thereof.

Dry wall panel 121 may then be inserted between flange 113 and the series of spaced prongs 118. Dry wall panel 122 may be inserted between flange 114 and the series of spaced prongs 119. Cement may optionally be applied between the flanges 113, 114 and the respective wall panels 121, 122 as a desirable preliminary step.

After the wall panels 121, 122 are in place the prongs 118, 119 are "set" to indent and interlock with the wall panels 121, 122 as shown in FIG. 25. Cover layers of spackle putty 106 may then be applied over the indented prongs 118, 119 to the level of the ground bead 105, the spackle putty layers 106 being tapered to a feathered edge remote from bead 105.

As in the inside corner shown in FIG. 2 I prefer not to nail the wall panels 121, 122 to the wall panel support studs any closer than about twelve inches from the corner. Accordingly, the corner formed by the connection of the panels 121, 122 with the strip 104 is free to "float" in the manner aforesaid.

In FIGS. 26 through 28 I show a corner strip 125 particularly adapted for use in an outside corner for plaster lath wall construction. Strip 125 is formed from a single sheet of material, desirably metal, which is bent intermediate its ends to form a plaster ground bead 126. Rearwardly from bead 126 the strip is formed in double plies 127, 128 in face contact. At corner 129 the plies 127, 128 diverge at a right angle to form flanges 130, 131. As shown in FIG. 27 the flanges 130, 131 may be set against a corner stud 132 and may be tacked lightly thereto as aforedescribed.

In this embodiment of the invention I may use plaster anchor rings similar to those shown in FIGS. 19 through 22. To receive such rings 133 the corner bead 126 is slotted at spaced intervals therealong at 134. The material of plies 127, 128 is undercut at 137 and the rings 133 may be snapped into place therein under their own resilient bias as shown in FIG. 28.

The plaster lath panels 138, 139 are positioned as shown in FIG. 27 between the flanges 130, 131 and the curved arms of the ring 133. Layers of rough plaster 140, 141 may then be applied, elevated portions of the ring 133 acting as a ground therefor and as a guide for the plasterer's trowel. The bead 126 may serve as a ground for the layers 142, 143 of finish plaster. In this embodiment of the invention the plies 127, 128 are at an oblique angle to the corner stud 132, the plaster layers 142, 143 filling in between the ends of the panels 138, 139 and the plies 127, 128.

I may also optionally cement the panels 138, 139 to the respective flanges 130, 131 of the strip 125. However, inasmuch as the plaster layers 140, 141 provide an extremely rigid bond between the panels 138, 139 and the strip 125, cement is usually not required.

To improve the bond between the plaster layers 140, 141 and the strip, I may perforate the double ply portions 127, 128 of the strip as shown at 144.

As in the previous embodiments of the invention I de-

sirably do not nail the panels **138**, **139** to any wall panel support stud closer than about twelve inches to the corner stud **132**. Accordingly, the corner formed as shown in FIG. 27 will "float" with respect to the wall panel supports.

I may also optionally insert between the respective studs **120**, **132** and the flanges **113**, **114** of corner strip **105** and the flanges **130**, **131** of corner strip **125** strips of felt or other cushioning material to add resiliency to the floating corner.

In FIGS. 29 through 34 I show a further modification of my invention in which all the wall panels along any particular wall in a room may be made to float with respect to the wall panel supports thereof. The construction illustrated in these figures not only has the advantage of relieving substantially all stresses which might otherwise be transmitted from the wall supports to the panels, but provides for a perfectly flat and smooth wall finish regardless of the common failure of the wall studs to have their edges aligned in a common plane.

Under present day construction procedures it is extremely rare to find a wall which is perfectly flat. The respective studs thereof may be as much as a half an inch or more out of line. Accordingly, unless furring strips, etc., are used to line up the studs before the wall panels are applied thereto, or unless the plasterer applies the rough coat of plaster to an unequal depth to compensate for the unevenness in stud alignment, the finished wall will be wavy and uneven. In the device of the present embodiment of the invention, however, the wall panels will be perfectly flat and even, as well as being free to float with respect to the wall panel supports on which they are mounted.

FIG. 31 is a horizontal cross section taken through a wall in which the respective studs **147**, **148**, **149**, **150**, **151**, **152** have their corresponding edges misaligned with the common plane of the wall. However, because of the device of my invention, the wall formed by panels **153** supported thereon is perfectly flat and even.

According to this embodiment of the invention the wall panels **153** are supported on horizontal strips **154** ranging in width from about one and one-half inches to about three inches and desirably formed of light gauge sheet metal. The strips are laid crossways of the studs **147–152** and span the spaces therebetween. The strips are desirably spaced on about sixteen-inch centers. Corresponding side margins of the strips **154** are provided with nail holes **157** through which nails **158** may be driven to fasten the strips to the studs. Corresponding opposite margins of the strips may be cemented or otherwise fastened to the wall panels **153** at **159**. For the purpose of improving the bond of the cement **159** with the strips, the strip margins may be perforated as shown at **156**.

Strip portions intermediate marginal portions respectively fastened to the studs **147–152** and to the panels **153** are sufficiently resiliently flexible to yield to permit the panels **153** to occupy a plane, notwithstanding misalignment of the studs. For example the portion of the strip **154** which supports a panel **153** from stud **149** which is materially rearwardly offset from panel **153**, as shown in FIG. 32, will bend materially. The portion of strip **154** which supports a panel **153** from stud **150** which is less materially rearwardly offset from the panel, as shown in FIG. 33, will not flex as much. The strip **154** does not flex at all in the vicinity of the foremost studs **148**, **151**.

Accordingly, regardless of misalignment of the studs **147–152**, panels **153** will be supported in a common plane which is perfectly flat and even. Moreover, because of the flexibility of the strips **154** it is clear that relative movement between the panels **153** and studs **147–152** may occur without transmission of cracking stresses therebetween. Panels **153**, of course, may be either dry wall panels or plaster lath panels.

The technique for cementing panels **153** to the perforated margins of strips **154** is broadly immaterial. However, I have found that an expeditious way for cementing the panels to the strips is follow the procedure suggested in FIG. 34. First the strips **154** are nailed to the studs as shown in FIG. 29. Note that the ends of the strips are spaced from the corners of the room in my preferred construction in which the corners also float. The perforated margins of the strips are then coated with adhesive and the wall panels **153** laid flat thereagainst. In order to apply bonding pressure between the strips **154** and the panels **153**, I prefer to nail cleats **160** directly over the panels and aligned with the adhesively treated strips **154**. Nails **161** are used for this purpose and are driven through the panel, strip and into the backing stud.

In this stage of the installation of the wall panels the cleats **160** will force the panels **153** against the adhesively treated strips **154** and will clamp the panels and strips together while the adhesive sets. At this time the panels may be uneven because they are forced to conform to the studs. However, after the cement is dried the cleats **160** and nails **161** are removed, thus permitting the resiliency of the panels **153** to spring them away from the studs wherever necessary, as shown in FIGS. 32, 33. The nail holes in the panels left by removal of the nails **161** may be filled with spackle putty.

The perspective view of FIG. 29 illustrates how the various embodiments of my invention may be applied in a single room. The respective room walls are provided with the horizontal strips **154**. The inside room corners **102** may be provided with corners strips **44** or **75**, depending on whether dry wall or plaster lath construction is used. The outside room corner **103** may be provided with corner strips **104** or **125**, depending on whether dry wall or plaster lath construction is used. In the construction shown in FIG. 29 all wall panels "float" with respect to the wall supports thereof.

I claim:

1. In a corner construction for a building having intersecting walls respectively comprising wall panels and spaced wall supports therefor, a corner angle strip having transversely related flanges extending substantially continuously along the walls in said corner and means for fastening wall panels along both said flanges to connect the wall panels at said corner, said means comprising multiple tongues spaced longitudinally of said strip, said tongues extending in spaced relation along said flanges for reception of said panels between said tongues and flanges, in further combination with separately fabricated corner anchors having portions interlocked with said tongues and portions extending along said panels, said anchors comprising rings having portions extending along said panels, said portions being connected at substantially a right angle to fit into said corner.

2. In combination, a corner strip of the character described and comprising transverse flanges, tongue forming means struck out of flange material and spaced longitudinally of said strip, the tongues thereof extending in spaced relation along said flanges for reception of wall panels between said tongues and flanges, said tongue forming means comprising prongs having right angle bends intermediate the ends thereof to define one set of tongues spaced from one flange and another set of tongues spaced from the other flange, and a separately fabricated corner spanning plaster anchor, said prongs being provided with facing notches in which portions of said corner anchor is disposed in interlocking engagement therewith.

3. The device of claim 2 in which said anchors comprise rings having portions extending along said panels, said portions being connected at substantially a right angle to fit into said corner.

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