Aug. 27, 1963 J. RADEK 3,101,817

WALL PANEL STRUCTURE

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FIG. 1

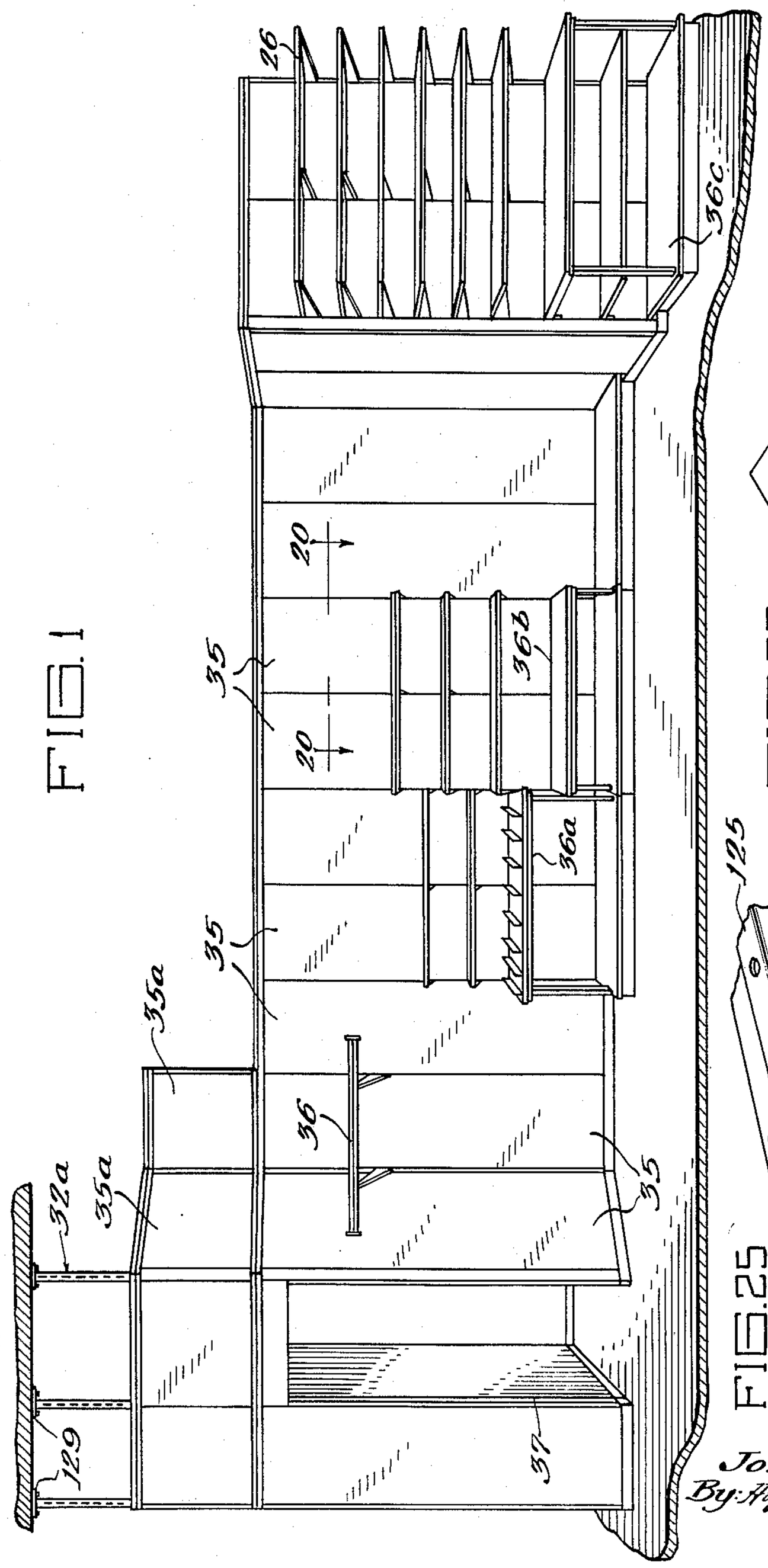

FIG. 2b

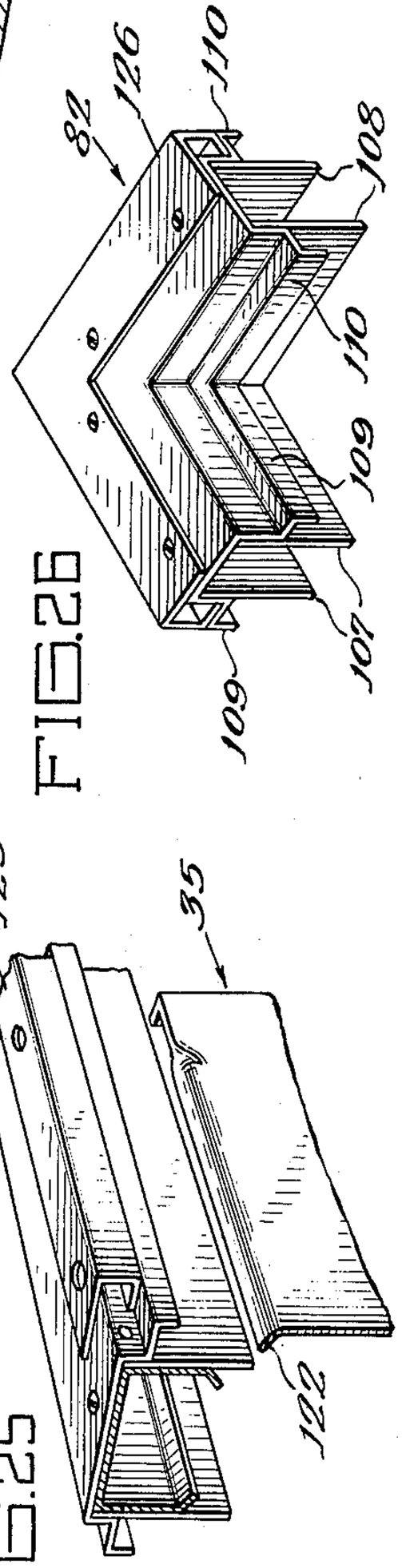

FIG. 2a

Inventor:
John Radek
By: Hofgren, Brady, Wegner, Allen & Stellmen
Attorneys

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WALL PANEL STRUCTURE

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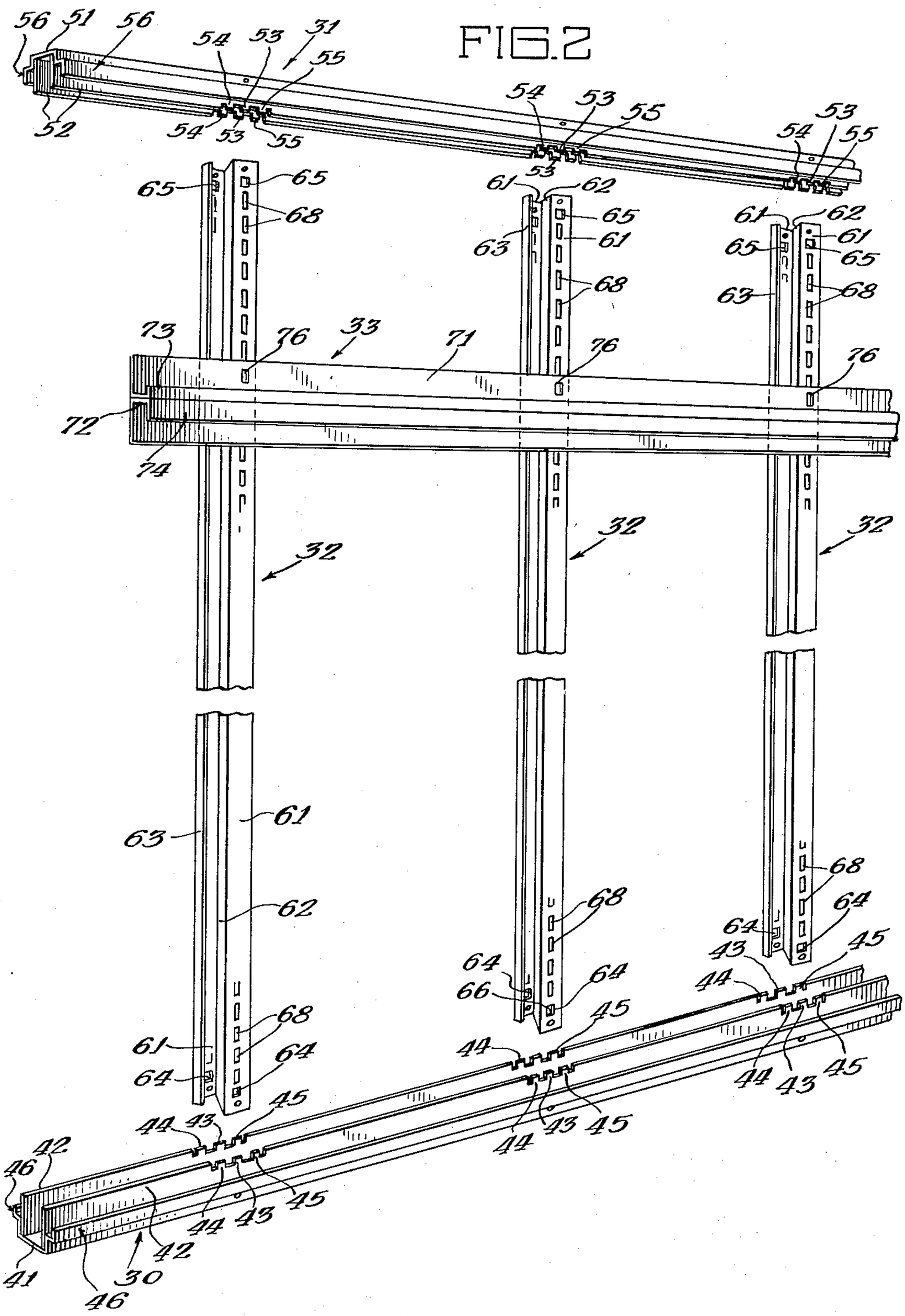
FIG. 2



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WALL PANEL STRUCTURE

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FIG. 3

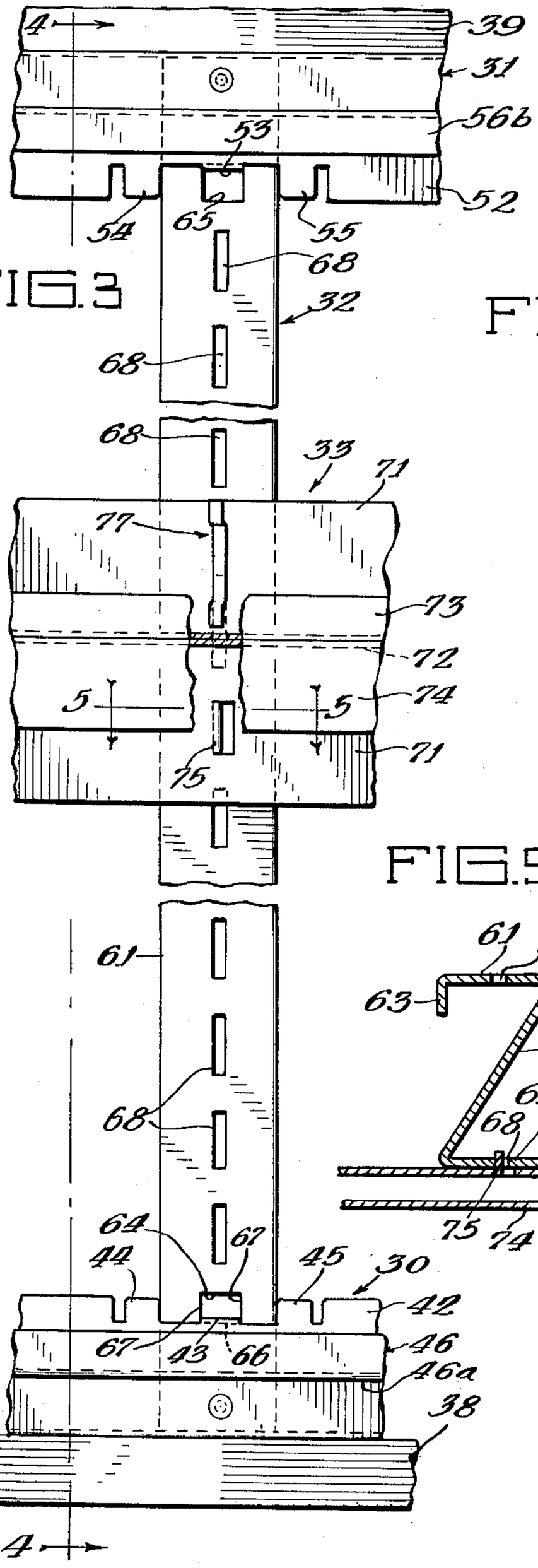


FIG. 4

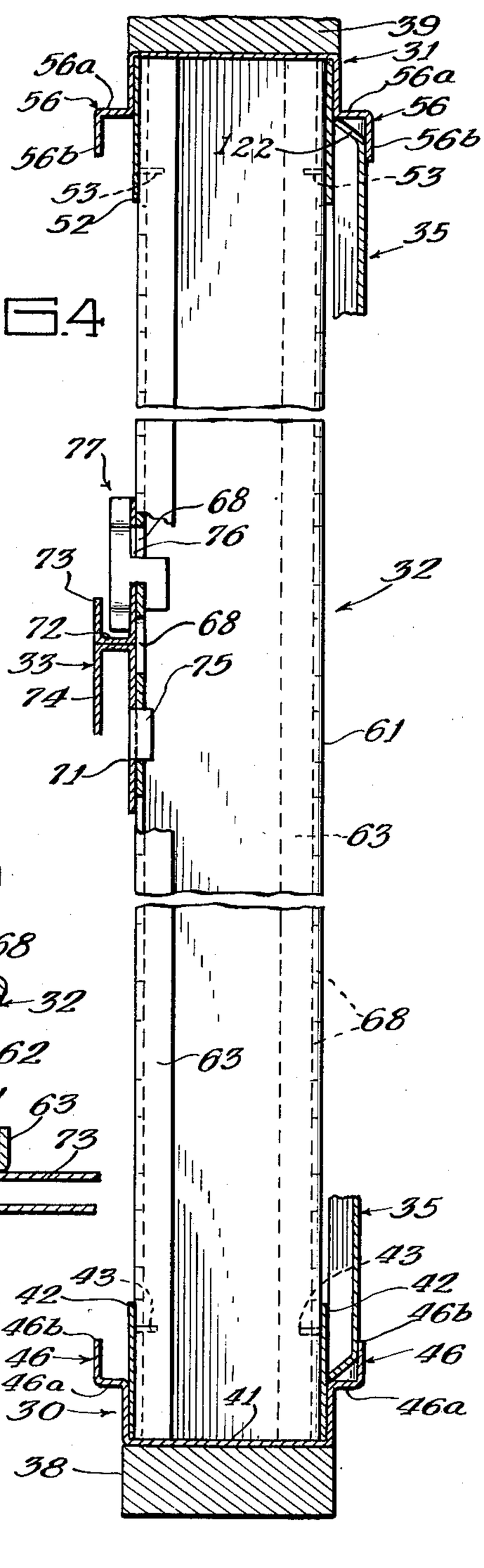
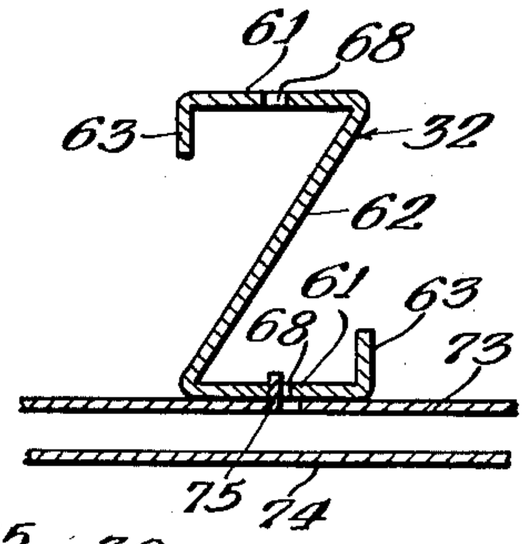


FIG. 5



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WALL PANEL STRUCTURE

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FIG. 6

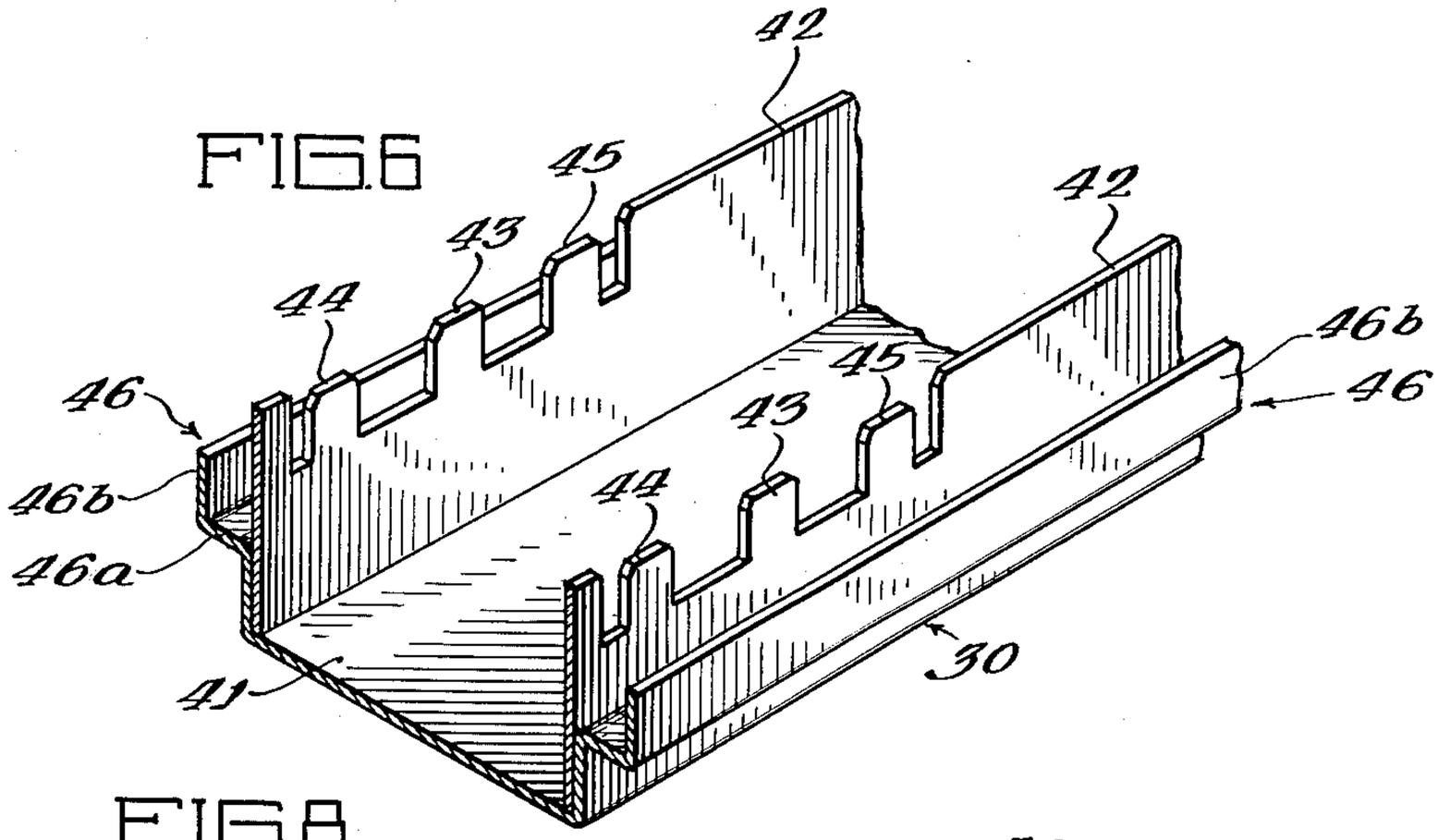


FIG. 8

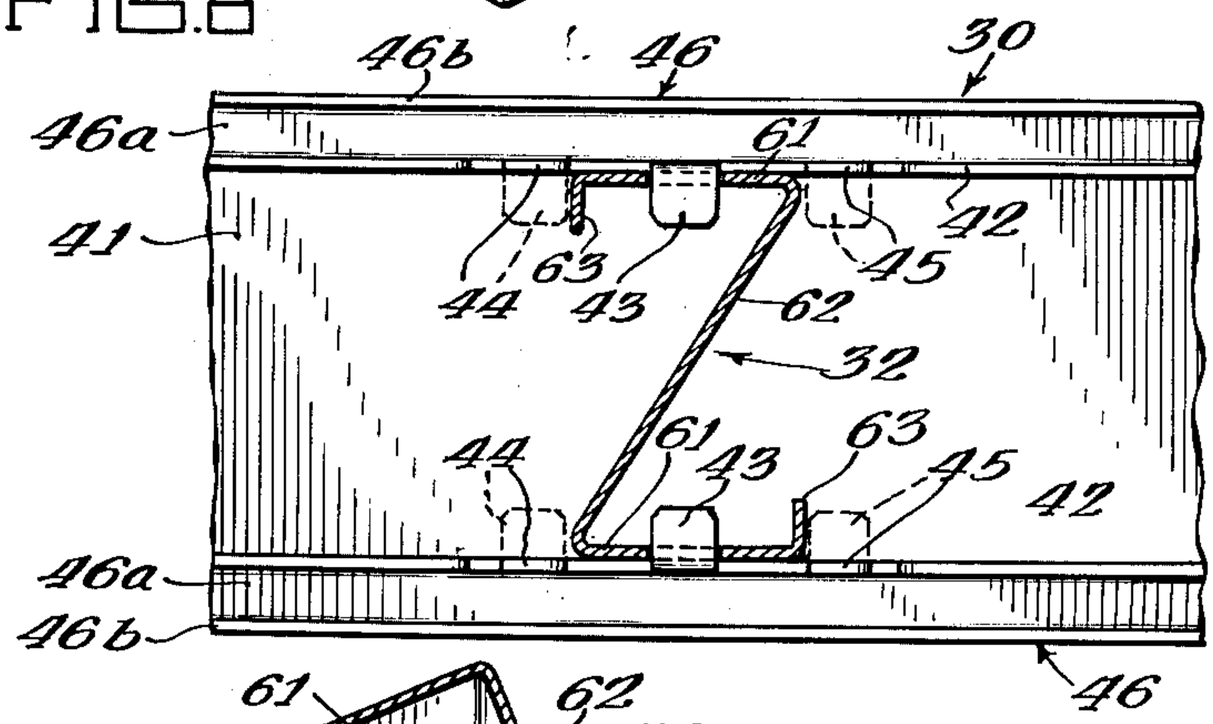
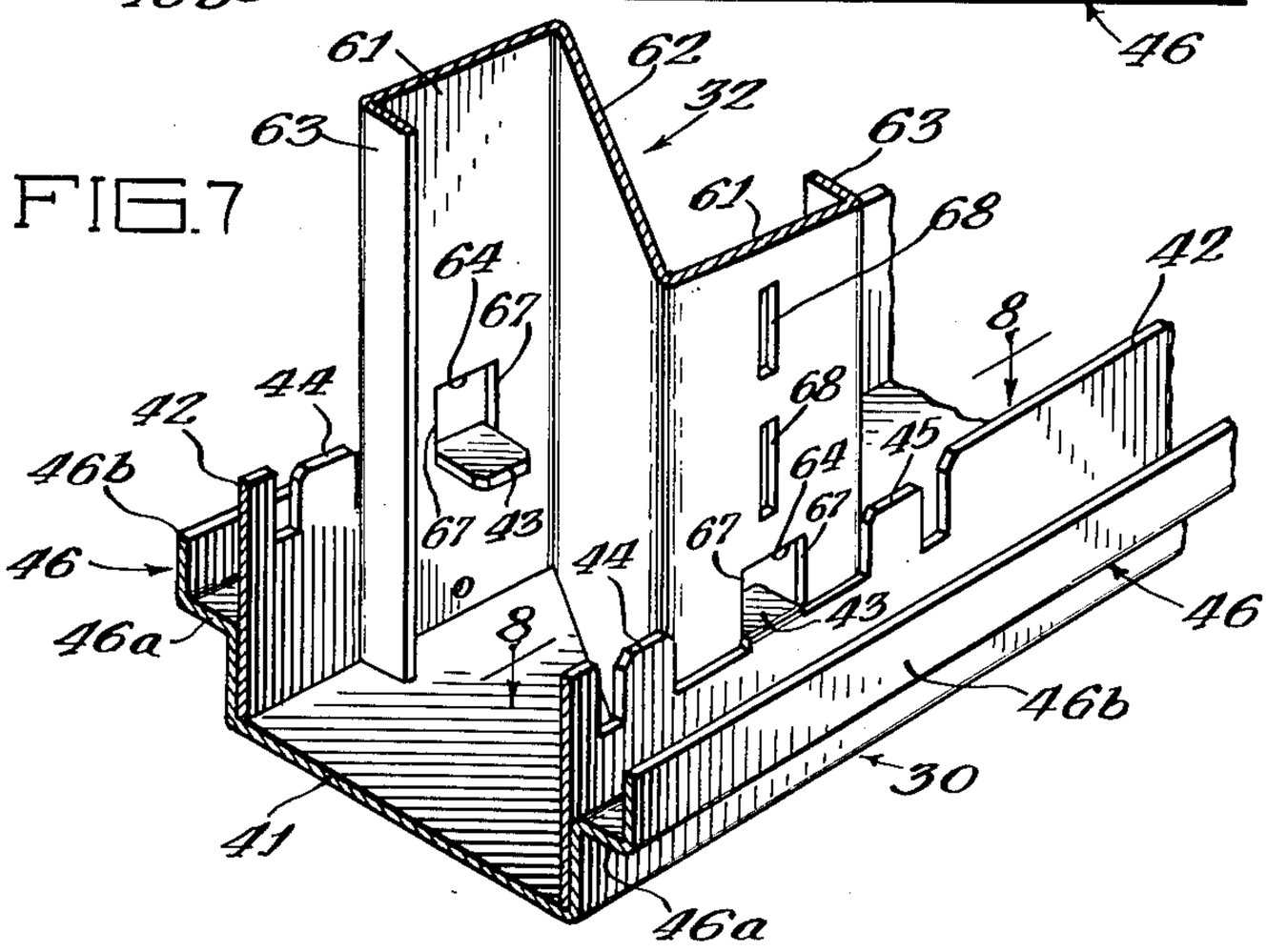


FIG. 7



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WALL PANEL STRUCTURE

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FIG. 9

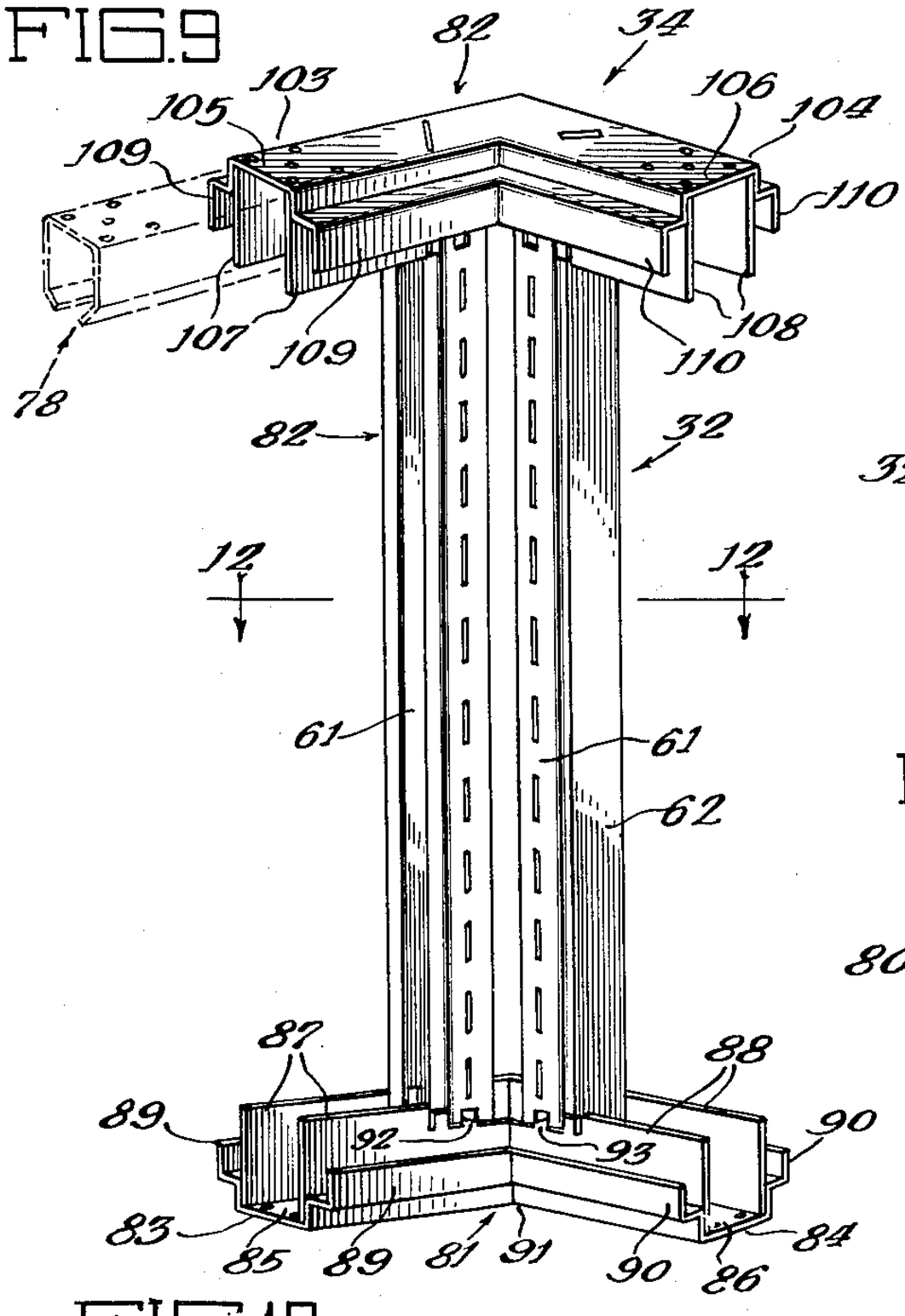


FIG. 10

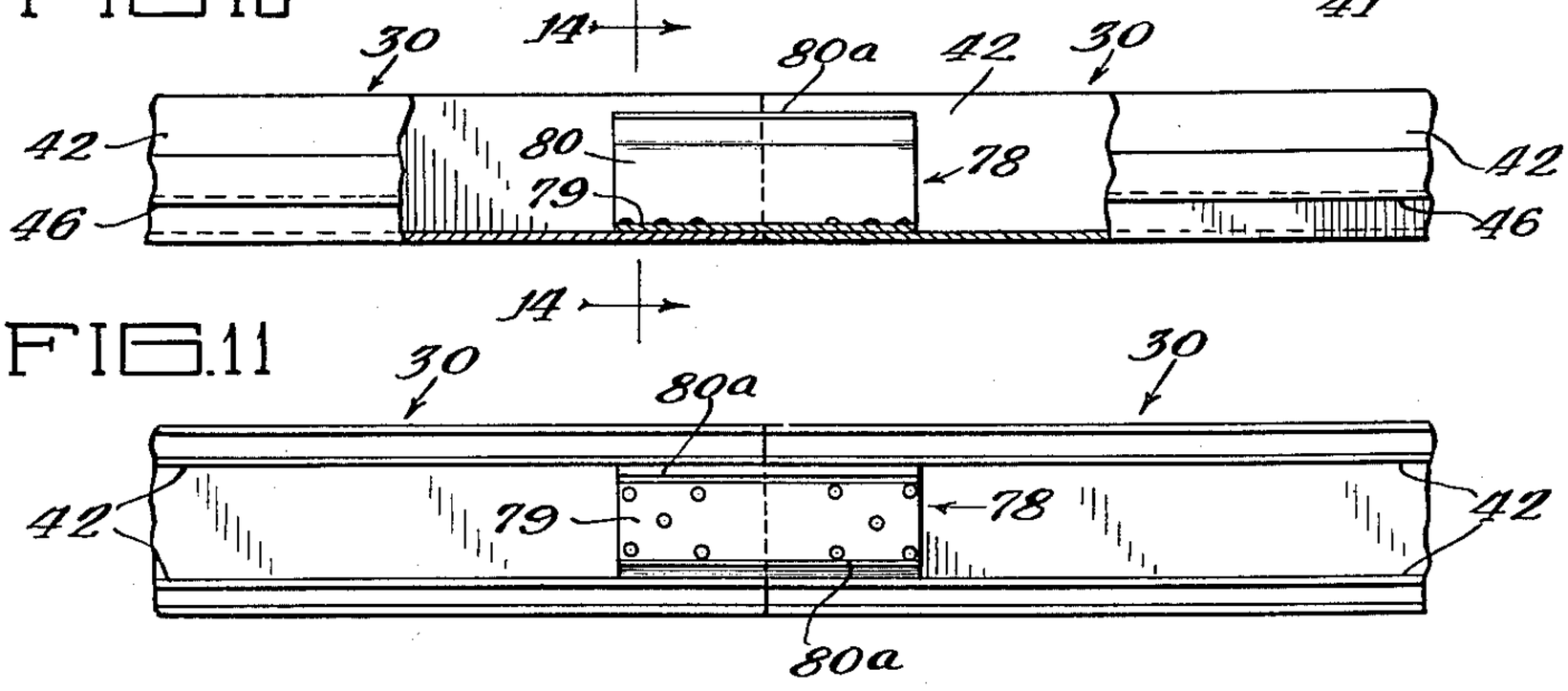


FIG. 11

FIG. 12

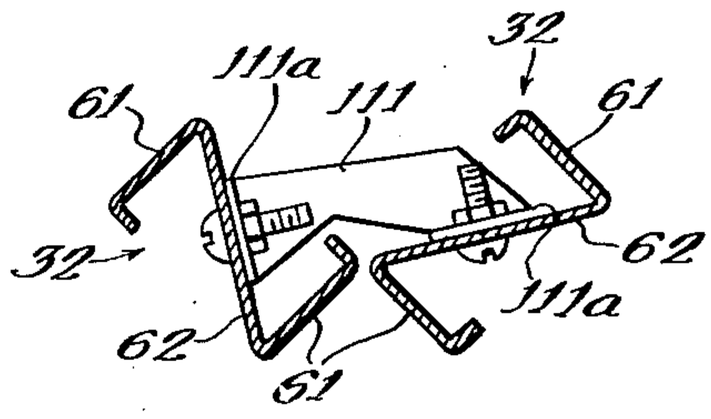


FIG. 13

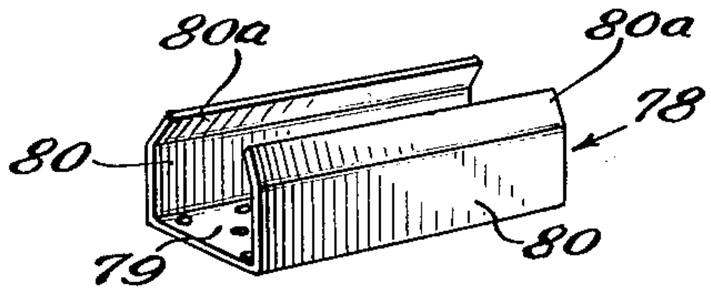
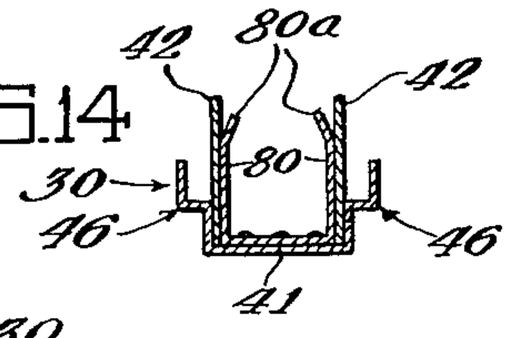


FIG. 14



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WALL PANEL STRUCTURE

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FIG. 17

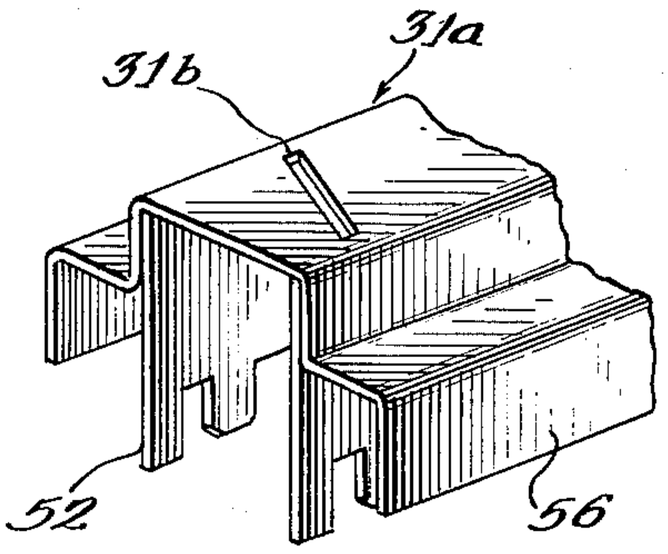


FIG. 19

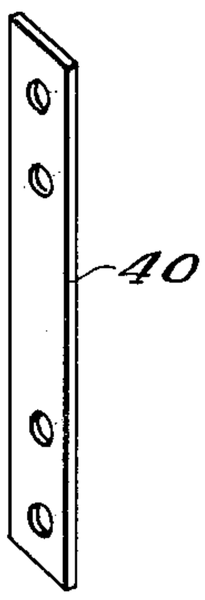


FIG. 15

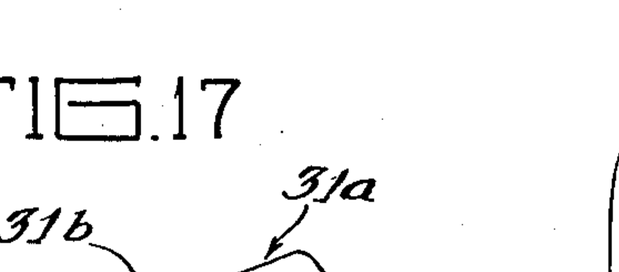
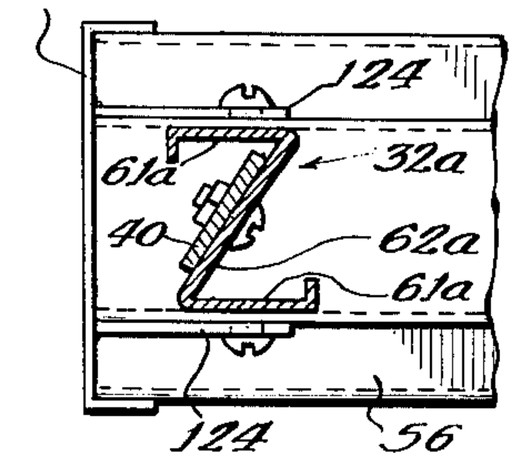


FIG. 16



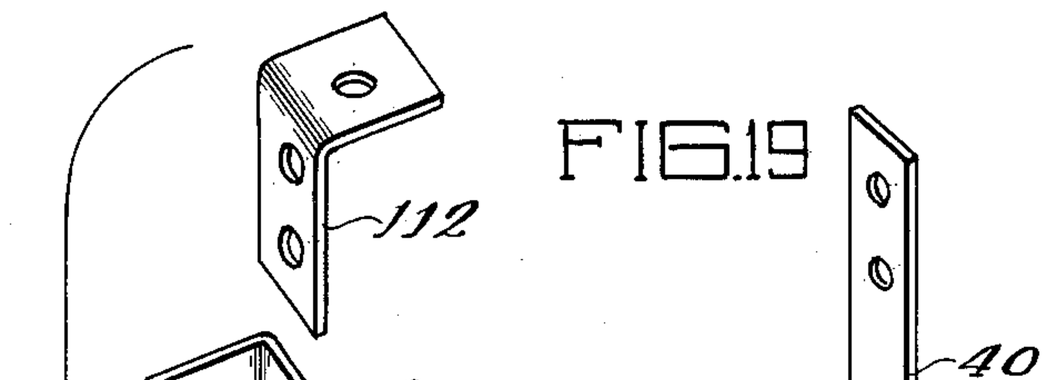
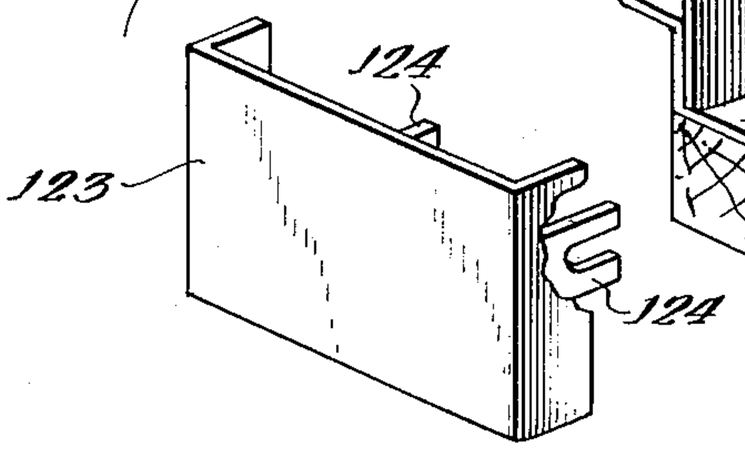
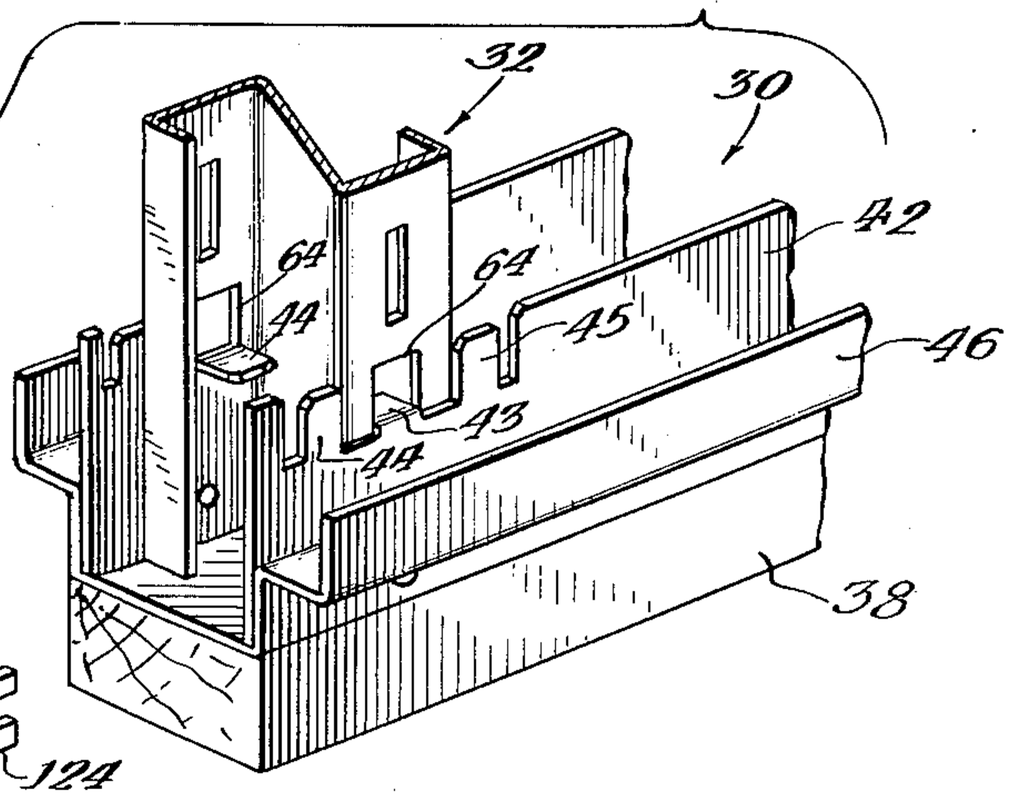


FIG. 18





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WALL PANEL STRUCTURE

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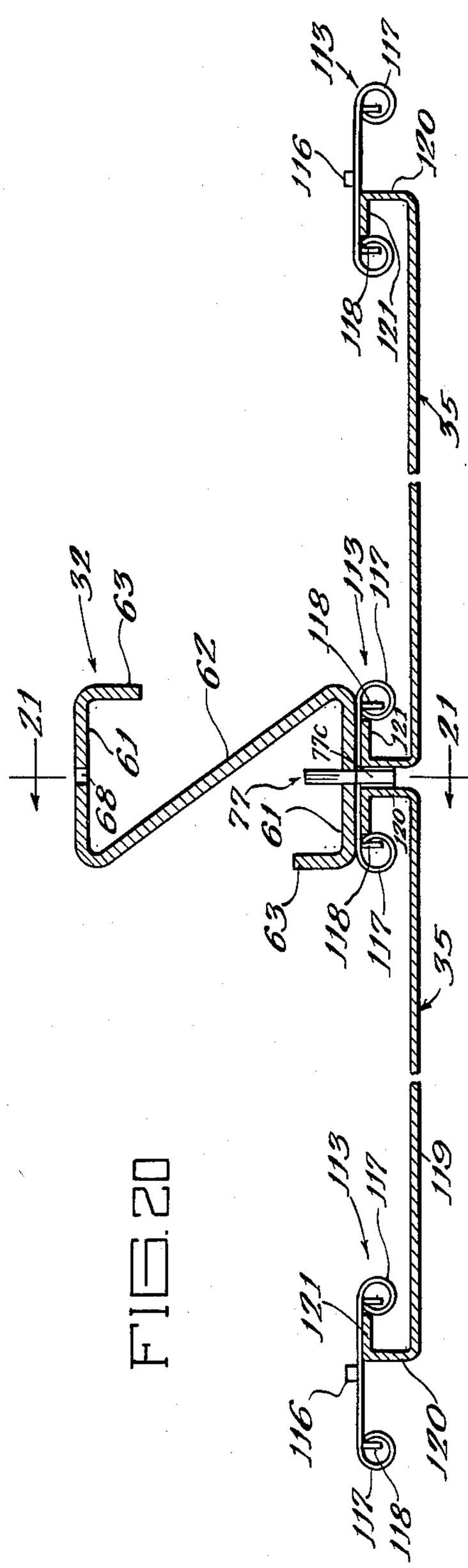

FIG. 20

FIG. 21

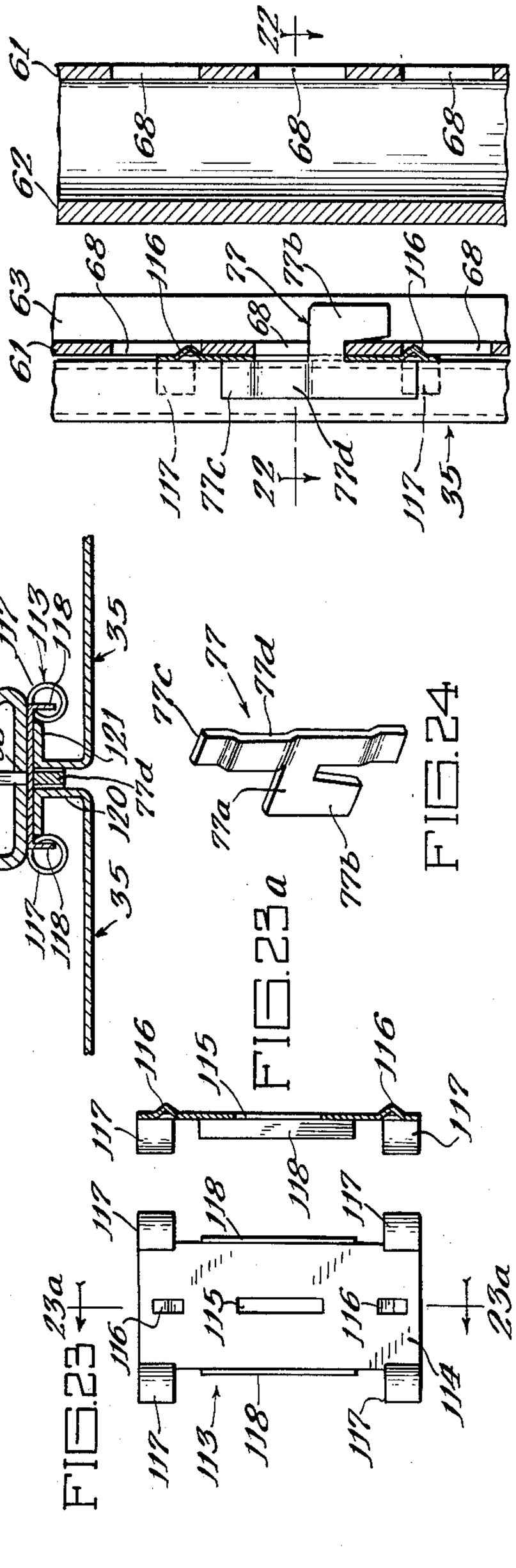

FIG. 22

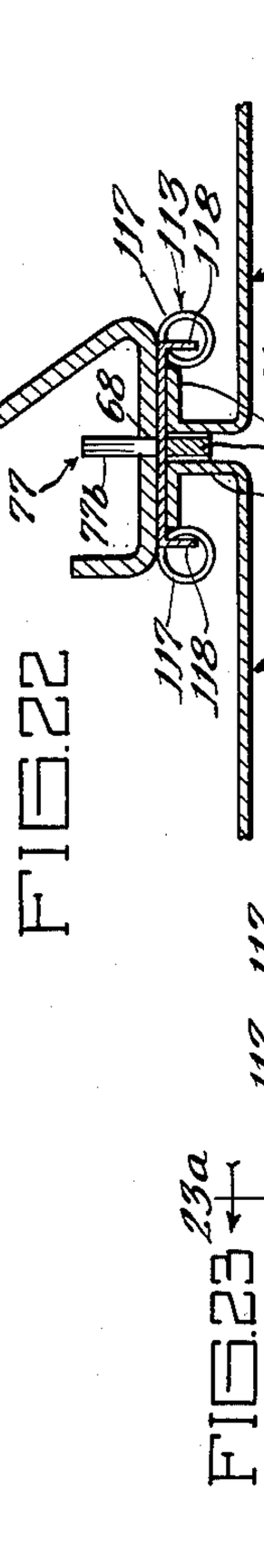

FIG. 24

FIG. 23a

FIG. 23

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3,101,817
Patented Aug. 27, 1963

3,101,817

WALL PANEL STRUCTURE

John Radek, % Ready Metal Mfg. Co.,
4320 S. Knox Ave., Chicago, Ill.

Filed Aug. 11, 1961, Ser. No. 130,836
10 Claims. (Cl. 189—34)

This invention relates to a wall panel structure, and in particular it relates to the supporting framework for the panels of such a structure.

Present-day building costs, and the need for frequent reorganization of retail selling and office areas, has greatly increased the desirability of relatively inexpensive internal wall structures which may be rapidly and easily assembled from standard components, and which may also be rapidly disassembled and rearranged. The present invention is directed to such a structure.

The use of the present wall panel structure permits an attractive and well arranged retail merchandising or office layout to be set up within an inexpensive shell type of building, and also permits quick and easy rearrangement of the interior of such a building.

Basically, the structure here disclosed comprises a supporting framework having a base channel and a top channel which are adapted to be mounted in vertically aligned relationship on the floor and ceiling of a room. The channels are identical, and include upright, parallel walls which are flanked by panel receiving flanges. Any required number of base channels and top channels may be secured together by channel-like splice members which secure the channels in abutting end-to-end relationship and also maintain their lateral alignment. Corner structures are provided by one-piece channel members which are identical with the base channel and top channel but have two arms disposed at an angle to one another.

Extending between the base channel and the top channel is a series of spaced, upright supporting posts, and each post has parallel faces adjacent the ends of which are aligned openings. The parallel faces of the posts fit closely between the parallel walls of the base and top channels, and opposed, integral tabs on the parallel channel walls are bent inwardly to impale the openings in the posts so as to firmly join the posts with the base and top channels to create a structural framework that may be moved about as a unit and fastened in place in any desired location between the floor and ceiling of a room.

A strong corner structure is provided by positioning two posts very close to one another in the two angularly related arms of the corner channels, said posts being rigidly secured to the channels by tabs in the usual way. The posts themselves are then joined by one or more corner connector plates that have a central web and lateral flanges which are detachably secured to both posts in the corner assembly.

The posts of the framework are provided with aligned, vertical slots; and clips for detachably securing panels to the posts are received in the slots. The lower ends of the panels are supported in the flanges which flank the parallel walls of the base channels, and their upper ends extend into the flanges of the top channels. In many cases a wall requires panels only on one side, since the rear side of the wall is toward the building wall and the space between the panel wall and the building wall may be used for storage of merchandise. However, where a panel wall forms an internal partition, or a room divider type of structure, panels may be mounted on both sides of the post and channel framework.

To accommodate the panel wall structure to rooms or buildings of varying heights, a system of intermediate hangers and extension arrangements for the posts is provided, and may be used in conjunction with short panel

sections which are cut to fill the space between a standard height post and panel and the ceiling of a room which is higher than the standard available components of the panel wall system.

A major advantage of the present system is that there is a narrow space between adjacent sides of the panels in the wall structure, and cantilever-type arms may be hooked into the slots between the panels to support adjustable display shelves on the panel wall.

The invention is illustrated in a preferred embodiment in the accompanying drawings in which:

FIG. 1 is an elevational view of a typical arrangement of a wall and associated display shelves employing the wall panel structure of the present invention;

FIG. 2 is a perspective view of the base channels, top channels, posts, and intermediate aligning bracket, with the channels and posts disassembled but correctly aligned with one another;

FIG. 3 is a fragmentary front elevational view of an assembled base channel, top channel, post and intermediate aligning bracket;

FIG. 4 is a section taken substantially as illustrated along the line 4—4 of FIG. 3, with a panel mounted on the assembly;

FIG. 5 is a section taken substantially as illustrated along the line 5—5 of FIG. 3;

FIG. 6 is a fragmentary perspective view of a base channel member cut off immediately adjacent the fastening tabs for a post;

FIG. 7 is a view similar to FIG. 6 with the lower part of a post illustrated as fastened to the base channel;

FIG. 8 is a fragmentary section taken substantially as illustrated along the line 8—8 of FIG. 7;

FIG. 9 is a perspective view of a corner assembly consisting of a base corner member, a top corner member, and two posts assembled with said corner members, a splice member being illustrated in broken lines extending from one end of the top corner channel;

FIG. 10 is an elevational view partly in section illustrating two channel members connected by a splice member;

FIG. 11 is a fragmentary plan view illustrating two channel members secured together by a splice member;

FIG. 12 is a sectional view through the posts of a corner assembly, taken substantially as illustrated along the line 12—12 of FIG. 9;

FIG. 13 is an elevational view of a splice member;

FIG. 14 is a section taken substantially as illustrated along the line 14—14 of FIG. 10;

FIG. 15 is an exploded view of a top channel assembly for a room in which the ceiling height is substantially greater than the length of a standard post;

FIG. 16 is a fragmentary section taken substantially as illustrated along the line 16—16 of FIG. 15;

FIG. 17 is a fragmentary elevational view of the top channel member illustrated in FIG. 15;

FIG. 18 is a view similar to FIG. 7, on a smaller scale, illustrating the relationship between the end of a base channel and a cover member which closes the exposed end of the channel;

FIG. 19 is a perspective view of a post splice plate;

FIG. 20 is a fragmentary section on an enlarged scale taken substantially as illustrated along the line 20—20 of FIG. 1;

FIG. 21 is a fragmentary section taken substantially as illustrated along the line 21—21 of FIG. 20;

FIG. 22 is a fragmentary section taken substantially as illustrated along the line 22—22 of FIG. 21;

FIG. 23 is a front elevational view of a mounting clip by means of which a panel is supported upon a post;

FIG. 23*a* is a section taken substantially as illustrated along the line 23*a*—23*a* of FIG. 23;

FIG. 24 is a perspective view of a hook which is used to assemble a panel mounting clip on a post;

FIG. 25 is a fragmentary perspective view, partly in section, showing the relationship between a top channel, a splice plate, a panel and a top channel filler piece; and

FIG. 26 is a perspective view of a top corner channel assembled with a top filler piece for such a corner channel.

Referring to the drawings in greater detail, and referring first to FIGS. 1 to 11, the wall panel structure of the present invention is seen to include a supporting framework (illustrated in FIG. 2 with the major framework components in their normal positions relative to one another but not assembled), said framework including a base channel, indicated generally at **30**, a top channel, indicated generally at **31**, a plurality of upright posts which are Z-shaped in cross-section, indicated generally at **32**, and an intermediate alignment bracket indicated generally at **33**. The framework components are assembled as hereinafter described, together with corner assemblies, indicated generally at **34** (see FIGS. 9 and 26) to provide a supporting structure for wall panels **35**.

One of the principal uses of the present wall panel structure is in retail stores, and accordingly the structure makes provision for various types of shelves and display racks which form no part of the present invention, but which are illustrated in FIG. 1 and given general reference numerals **36**, **36***a*, **36***b*, and **36***c*.

The wall panel structure also makes provision for doorways, such as the doorway **37** in FIG. 1; and these doorways may be provided with doors or not, as desired. While the doorways and door mounting structures are a part of the entire wall panel structure assembly as commercially provided, they do not specifically form a part of the present invention and accordingly are not illustrated in detail.

The wall panel structure is a modular system, so the base and top channels **30** and **31** are constructed to receive the supporting posts **32** at regular intervals of 2 feet, and the panels **35** are furnished in 2-foot widths so that the upright margins of each panel abut two adjacent posts. Where conditions require a deviation from the 2-foot modulus, the base and top channels may be cut to any desired length and the panels may be cut to any desired width. Corners of the structure, whether inside or outside corners and whether forming a right angle or an obtuse angle, may be provided with special corner filler panels in accordance with the disclosure of my copending application 681,505 filed September 3, 1957, issued February 27, 1962, as Patent No. 3,022,869.

As seen in FIG. 1, the complete installation provides a very flexible wall layout which may be readily adapted to any available space, and which permits the use of shelves of various types in any desired location of the entire layout.

Referring now to FIGS. 2 to 8, the base channels **30** and top channels **31** are seen to be identical in construction, with the base channels mounted upon a wooden runner **38** attached to the floor of a room and the top channels **31** similarly attached to a wooden ceiling runner **39** mounted upon the ceiling of a room.

It is shown in FIGS. 1 and 15–19 that there are variations in the structure which depend upon the height of a room in which the wall panel system is installed. The panels are furnished in two basic heights, with lower panels **35** which are approximately 7½ feet high and upper panels **35***a* which are approximately 2 feet high. Referring to FIG. 2, the panels **35** may extend from the base channel **30** to the intermediate alignment bracket **33**, while the upper panels **35***a* may extend from the alignment bracket **33** to the top channel **31**. In the commonest type of installation, a panel **35** and a panel **35***a* fill the entire space from floor to ceiling. In higher rooms, the supporting posts **32** may be extended as seen at the extreme left of FIG. 1, utilizing special top channels **31***a*, upper extension posts **32***a*, and post splice plates **40** (FIGS. 15–19). In that case any suitable filler panels may be used between the upper ends of the panels **35***a* and the ceiling, and screwed or nailed to the top channel **21** and ceiling runner **29**. In a very low room, or in a section where only a room divider rather than a complete wall is desired, the panels **35** may be used without the panels **35***a* as seen in the right-hand portion of FIG. 1.

The base and top channels **30** and **31**, together with the Z-posts and alignment bracket **33** afford a supporting framework on which the panels **35** and **35***a* are detachably mounted by means of a system of clips illustrated in FIGS. 20 to 24 and claimed in my copending application 681,505.

Referring now particularly to FIGS. 2 to 8, and more especially to FIGS. 6 to 8, the base channel **30** is seen to have a horizontal plate **41** and parallel upstanding walls **42** which are sheared to provide opposed integral fastening tabs **43**, and which are flanked by opposed tabs **44** and opposed tabs **45**. The upright parallel walls **42** are flanked by angular panel receiving flanges **46** which include a base web **46***a* and an upright web **46***b*. As seen in FIG. 2, the top channels **31** are identical in construction with the base channels **30** and are assembled in an inverted position surmounting the posts **32**. Accordingly, the top channels **31** are not described in detail, but are given reference numerals **51** to **56** which correspond, respectively, to the reference numerals **41** to **46** of the base channels.

The Z-posts **32** are best seen in FIGS. 2, 7, and 8 to have parallel legs **61** connected by a diagonal web **62**, and side flanges **63** which extend along the free edges of the parallel legs **61**. The parallel legs of each post **32** are provided adjacent their lower ends with aligned openings **64**, and adjacent their upper ends with aligned openings **65**; and as best seen in FIGS. 3, 4, 7, and 8 each post is rigidly connected to the base channel **30** and top channel **31** by turning the opposed tabs **43** of the base channel downwardly into the aligned openings **64**, and turning the corresponding opposed tabs **53** of the top channel upwardly into the opposed openings **65** adjacent the top of the post. Thus, each of the bottom tabs **43** bears on the bottom margin **66** of one of the openings **64**, and edges **43***a* of the tab substantially abut opposite upright sides **67** of the opening so as to effectively lock the posts against lateral movement in the channel. Similarly, the tabs **53** of the top channel **31** bear upon upper margins of the holes **65** in the upper ends of the posts, and lock the posts and top channel against relative longitudinal movement by bearing upon the upright sides of the openings **65**.

Each of the two parallel legs **61** of the Z-posts **32** is provided with a vertical line of hanger slots **68** which are used in co-operation with hooks, or a combination of hooks and clips, to support the intermediate alignment bracket **33** and the panels **35** upon the Z-posts.

Reference is made particularly to FIGS. 3, 4, and 5 for the mounting of the intermediate alignment bracket **33**, from which it is seen that the bracket **33** has an upright fastening web **71** which abuts corresponding legs **61** of a group of adjacent Z-posts **32**, while extending outwardly from fastening web **71** is a horizontal spacing web **72**. At the outer margin of web **72** is an upright flange **73** which extends above the spacing web a distance slightly less than the depth of the upright web **56***b* of the panel-receiving flange upon the top channel **31**. Also at the outer edge of spacing web **72** is a downwardly extending flange **74** which is somewhat longer than the upright web **46***b* on the base channel **30**.

The center alignment bracket **33** is supported on the posts **32** by means of a line of integral tabs **75** which are struck from the fastening web **71** and are so spaced that each tab extends into one of the slots **68** of a Z-post; and

immediately above each of the tabs **75** the fastening web **71** is provided with a series of mounting slots **76** each in register with a slot **68** in the **Z**-post which is immediately above the slot occupied by the tab **75**. A mounting hook, indicated generally at **77**, impales the registering slots **68** and **76** to clamp the fastening web **71** of the center alignment bracket firmly against the leg **61** of the post with which it is associated.

As previously stated, the present system is modular, and the tabs on the walls of the base channel and top channel are set two feet apart so that when the posts **32** are assembled with the channels the posts are on two-foot centers. If a wall is to be longer than the length of a single channel member, the channels must be spliced together end-to-end, and the means for accomplishing this is illustrated in FIGS. 10 to 14. FIGS. 10 and 11 illustrate a pair of channels **30** positioned with their ends in abutment, and a channel splice member **78** is seen to be mounted across the joint between the two channel members and secured to the channels by metal screws. The splice member **78** has a base **79** and a pair of side walls **80** which are seen in FIG. 14 to fit closely within the parallel walls **42** of the channel. The splice member side walls **80** have inturned upper margins **80***a* which simplify the insertion in and removal of the splice members from the channel members.

The present wall panel system also makes provision for corners, and a corner assembly is illustrated in FIGS. 9 and 12, while a single corner channel member is illustrated in FIG. 26. Referring first to FIG. 9, a base corner channel, indicated generally at **81**, and a top corner channel, indicated generally at **82**, are identical in construction, and are assembled in relatively inverted positions at the opposite ends of a pair of posts **32**. The base corner channel **81** has first a channel arm **83** and a second channel arm **84** which, in the particular member illustrated in FIG. 5, are at right angles to one another. The same type of corner assembly is also used where two wall panels **35** are to occupy an obtuse angle with respect to one another, as in the area immediately to the right of door opening **37** in FIG. 1. In that event, the base channel member and the top channel member have arms which have the desired angular relationship for the particular installation.

Each of the channel arms **83** and **84** is relatively short, and the two arms are identical in construction, thus, the arms are provided, respectively, with horizontal plates **85** and **86**, and parallel upright walls **87** and **88**, and the walls **87** and **88** are flanked, respectively, by panel-receiving flanges **89** and **90**. The corner channels are identical in width and height with the straight channels **30**, and a corner channel **81** may be fastened to a straight channel **30** by the use of a standard splice member **78**. Immediately adjacent a junction **91** of the arms **83** and **84**, the channel walls **87** and **88** are provided with opposed tabs, numbered, respectively, as **92** in the walls **87** and **93** in the walls **88**. The top corner channel **82** is identical in construction with the bottom corner channel **81**, and corresponding parts are correspondingly numbered beginning with numbers **103** and **104** which correspond to **83** and **84** in the bottom corner channel.

It is seen in FIGS. 9 and 12 that the two corner posts **32** are rigidly secured to the bottom corner channel **81** and the top corner channel **82** with a very small space between them, and the two posts are firmly secured together by means of one or more corner connectors **111** each of which includes a connecting web and a pair of upright attaching webs **111***a* which attach to the diagonal webs **62** of the two corner posts. Accordingly, each of the corner assemblies **34** is very strong and rigid, and is easily connected at the ends of both of the arms **83** and **84** and **103** and **104** with the adjacent ends of a straight base channel and a straight top channel by means of splice members **78**.

The present system makes special provision for the

situation where the ceiling height of a room in which a wall is erected is less than the full height of a post **32**. To fit the post **32** into a relatively low ceilinged room it is necessary to cut the upper ends off the posts, and that eliminates the opposed openings **65** in the post legs **61** which ordinarily receive the integral tabs **53** on the top channel. Under these circumstances, the opposed tabs **54** and **55** which flank the post **32** are bent inwardly so that the post is clamped between them, and the post and the top channel are thus locked against relative longitudinal movement.

Where a ceiling is higher than the maximum length of the posts **32**, extension posts **32***a* are positioned surmounting the posts **32** and the top channel **131**, the posts **32***a* being cut to any necessary length to fill the space between the top channel and the ceiling of the room. Under these conditions, the top channel is positioned on top of the posts **32** in the usual manner, and the posts and top channel are secured together in the usual way. As best seen in FIG. 17, the top channel **31***a* which is used under these conditions have a diagonal slot **31***b* which is so positioned with respect to the tabs on the channel walls that when the post occupies its normal position secured to the top channel by means of the tabs the shot **31***b* lies along on face of the diagonal web **62** of the **Z**-post. Accordingly, when the extension post **32***a* is positioned directly above the post **32**, the flat splice plate **40** may be inserted through the slot **31***b* and lies along corresponding faces at the abutting, or aligned posts **32** and **32***a* where is may be secured to both posts by means of screws.

The extension post **32***a* is cut off to any desired length to fit below the ceiling of the room, and is conveniently fastened to the ceiling by means of an angle bracket **112** (FIG. 15).

In making a wall installation, the wooden runners **38** and **39** are first attached to the floor and ceiling of a room, respectively, following the exact line of the wall installation. A pre-assembled structure unit consisting of a base channel, a top channel and supporting posts, is then placed upon the wooden runner **38** with the top channel substantially abutting the wooden runner **39** on the ceiling. The channels are attached to their respective runners by means of wood screws, and another similar structural unit is then positioned in abutment with the end of the first section and the sections are secured together by a splice member. The entire framework is mounted in this fashion, including any necessary corner assemblies. The center alignment brackets are then mounted on the posts as previously described, and the assembly is ready to receive the wall panels.

The mounting of the wall panels is illustrated in FIGS. 20 to 24, which show that each panel is mounted upon two adjacent posts **32** by means of clips, indicated generally at **113**, each clip secured to a post by a hook **77** like that which is used to secure the center alignment brackets to the post. As best seen in FIGS. 23 and 23*a*, each clip has a generally planar base portion **114** which is provided with a central slot **115** of substantially the same dimensions as the slots **68** in the posts **32**. Aligned with the ends of the slot **115** is a pair of rearwardly convex deformed tensioning pieces **116**. At the four corners of the base portion **114** are integral spring clips **117** which are formed by rolling the marginal portions of the base forwardly and in upon themselves to bring the extreme ends of the rolled marginal portions against the base, and laterally a short distance outside the vertical margins of the base. Between the spring clips **117** on each of the longitudinal margins of the base is a forwardly extending stop flange **118** which is seen in FIG. 20 to lie slightly to the inside of the end of each of the spring clips **117**.

The hook **77** has a shank **77***a* which extends through the slot **115** in the clip member and through a post slot **68** aligned with the slot **115**, and a depending retaining

lug 77*b* hooks over the lower portion of the slot 68 to hold the clip in place. An upright forward lug 77*c* overlies the front of clip 113 so as to clamp the clip firmly against the post, and the tensioning pieces 116 extend into the slots 68 above and below the slot occupied by the lug 77*b* so as to tension the clip and prevent it from sliding up and down on the post.

Each of the panels 25 consist of a central body portion 119 which has its upright margins bent rearwardly at 120 and provided with return bends 121 affording attaching flanges which have their outer ends lying behind the spring clips 117 when the panels are mounted upon the posts. The upright marginal flanges 118 on the spring clips prevent a panel margin from locking behind the open end of the rolled spring clip 117. The upright forward lug 77*c* of each hook 77 has an offset portion 77*b* which bears against a panel flange 120 so that the flange is clamped firmly between the hook and the roll spring clip 117. Thus, the panels are firmly held in place by a series of spring clips and hooks on each post, but are readily removed when it is necessary to change panels.

As seen in FIGS. 4 and 25, each panel 35 has a central portion at its upper and lower end which is rolled inwardly to provide a stabilizing flange 122, and when the panels are mounted upon the post the stabilizing flanges 122 are frictionally gripped between a base channel wall 42 and the upright arm 46*b* of the base channel panel-receiving flange 46.

It will be recalled that in most installations panel 35 has its lower end seated in a flange 46 and its upper end extending into the space between the fastening web 71 and the depending web 74 of an intermediate alignment bracket 33; and the greater length of the depending web 74 as compared with the upright web 46*b* of the panel-receiving flange permits the upper end of the panel to be slid upwardly into the space between the webs 71 and 74 until the lower end of the panel clears the top margin of web 46*b*, whereupon the panel is slid downward to seat upon the horizontal web 46*a* of the flange, leaving the top of the panel spaced from the spacing web 72 of the intermediate alignment bracket 33. Similarly, the top panels 35*a* are mounted between the upright flange 73 of the center alignment panel and the depending arm 56*b* of the panel-receiving flange 56 on the upper channel member 31.

The complete panel structure also includes certain finishing pieces which are illustrated in FIGS. 15, 18, 25, and 26. Thus, for example, the open ends of the base and top channels, in case they do not abut against a wall, are concealed by end caps 123 having bifurcated arms 124 which slide over the ends of the horizontal arms 46*a* of the base channel panel-receiving flanges 46, or over the horizontal arms 56*a* of the corresponding parts of the top channel. Elongated channels (not shown) are used to cover the posts between the caps 46.

In an assembly such as this illustrated in the right-hand part of FIG. 1, where the top channels are not against a ceiling, filler pieces 125 and 126 (FIGS. 25 and 26) are screwed to the top channel and the top corner channel, respectively, to provide a trim piece that is flush with the depending arms of the panel-receiving flanges. On the other hand, where the assembly is as illustrated in the extreme lefthand portion of FIG. 1, with extension posts 32*a*, a panel-holding filler piece 127 is used on top of the top channel as illustrated in FIG. 15 so that a filler panel of plywood or the like may have its lower end held between the posts and the upright web 128 of the filler piece 127, with the upper end of the panel screwed or nailed to pads 129 which are secured to the ceiling to receive the brackets 112 for the tops of extension ports 32*a*.

Also included in the trim and finishing components are suitable upright members and cross members to frame a doorway such as the doorway 37. Such members are supported on the adjacent posts 32 in any desired manner, but particularly by the use of special mounting clips by means of which they are secured to the diagonal webs 62 of the Z-post.

When an installation is completed as above described, plywood trim pieces may be mounted to fill the space below the panel-receiving flanges 46 of the base channels and conceal the lower runner 38; and in a case such as illustrated in FIG. 4 where a top channel is mounted directly upon a ceiling, runner 39, a similar plywood trim panel is cut to conceal the runner 39 and fill the space between the ceiling and the top panel-receiving flange 56.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

1. In a panel wall structure, in combination: a base channel assembly including a base channel extending along a floor, said channel having a horizontal plate and parallel, upright walls, a one-piece base corner channel having a short first arm and a short second arm at an angle to said first arm, both arms having a horizontal plate and parallel, upright walls with the plate and walls of said first arm abutting the ends of corresponding elements of a base channel, a channel-like splice member resting on the horizontal plates of the base channel and of the first arm of the corner channel, said splice member having upright walls which make a snug sliding fit between said abutting ends of the upright walls, and means securing the splice plate to said horizontal plates; a top channel assembly supported on a ceiling, said assembly including a straight top channel aligned with the base channel and having a horizontal plate and parallel, depending walls, a one-piece top corner channel aligned with the base corner channel, said top corner channel having a short first arm and a short second arm at an angle to said first arm, both arms having a horizontal plate and parallel, upright walls, and a channel-like splice member in said first arm of the top corner channel and in said straight top channel, said splice member connecting said top channel and said top corner channel with their ends abutting; a plurality of upright posts spaced from one another, each post having parallel legs, the lower and upper ends of said posts being seated, respectively, in said base channel assembly and in said top channel assembly with their parallel legs between and abutting said parallel channel walls, two of said posts being corner posts which are immediately adjacent one another in the first and second arms of the base corner channel; opposed, integral tabs on the parallel walls of the base channel and the base corner channel and associated with each post, each tab having an edge substantially abutting an upright portion of a post, said tabs effectively locking the posts against lateral movement; means securing the upper end of each post in the top channel assembly; a corner connector plate joining said corner posts; a plurality of panels, each panel having upright margins against two adjacent posts; clip means secured to all of said posts and engaging the upright margins of each panel to secure the panels to the posts; and a corner filler assembly including a panel having faces parallel to both arms of the corner channels, said filler assembly having upright margins against the two corner posts and secured to said posts.

2. The combination of claim 1 in which the legs of the posts have aligned openings near their lower ends, and each tab on the base channel impales one of said openings, each tab bearing on the bottom of the opening and having edges substantially abutting opposite upright portions of the opening.

3. In a panel wall structure, in combination: identical straight base and top channels occupying opposed positions supported on a floor and ceiling, respectively, each

channel having a horizontal plate and parallel walls; identical one-piece base and top corner channels, each corner channel having a short first arm and a short second arm at an angle to said first arm, both arms having a horizontal plate and parallel, upright walls with the horizontal plate and walls of said first arm abutting the ends of corresponding elements of a straight channel; a pair of channel-like splice members, one seated in the base channel and one seated in the top channel, each of said splice members having upright walls which make a snug sliding fit between the abutting upright walls of a straight channel and a corner channel, and having a base against the horizontal plates of said channels; means securing each splice member to the straight channel and the corner channel in which it is seated; a plurality of upright posts spaced from one another, each post having parallel legs provided with aligned openings near their lower and upper ends, said posts having their lower and upper ends seated, respectively, in said base and top channels with the parallel post legs between and abutting the parallel channel walls and spaced from the splice members, two of said posts being corner posts which are immediately adjacent one another in the first and second arms of the two corner channels; opposed, integral tabs on the parallel walls of each straight channel and both arms of each corner channel, each tab impaling an opening in a post to secure the posts and said straight channels and corner channels firmly together; a corner connector plate joining said corner posts; a plurality of panels, each panel having upright margins against two adjacent posts; clip means secured to all of said posts and engaging the upright margins of each panel to secure the panels to the posts; and a corner filler assembly including a panel having faces parallel to both arms of the corner channels, said filler assembly having upright margins against the two corner posts and secured to said posts.

4. In a panel wall structure, in combination: a base channel extending along a floor, said channel having parallel, upright walls defining the sides of a post support, and having a right angle panel receiving flange on the outside of one of said walls; a top channel supported on a ceiling and vertically aligned with said base channel, said top channel having parallel, depending walls and having a right angle panel receiving flange on the outside of one of said walls and opposed to the flange of the base channel; a plurality of upright posts spaced from one another, each post having parallel legs, the lower and upper ends of said posts being seated, respectively, in said base channel and in said top channel with their parallel legs between and abutting said parallel upright and said depending channel walls; opposed integral tabs on the parallel walls of the base channel and associated with each post, each tab having an edge substantially abutting an upright portion of a post, said tabs effectively locking the posts against lateral movement; means securing the upper end of each post in the top channel; an elongated center alignment bracket coextensive with and parallel to said base channel and top channel, said bracket having an upright fastening web abutting corresponding legs of the posts intermediate the channels, a horizontal spacing web, and an upright flange at the outer edge of the spacing web, said flange extending below the spacing web a distance greater than the depth of the panel receiving flange on the base channel and extending above said spacing web a distance less than the depth of the panel receiving flange on the top channel; means detachably securing said alignment bracket to the posts; a plurality of lower panels, each lower panel having upright margins against two adjacent posts and having its lower and upper end portions seated, respectively, in said base channel flange and in said alignment bracket below the spacing web; an upper panel aligned with each lower panel, each upper panel having its lower and upper end portions seated, respectively, in the alignment bracket above the spacing web and in the top channel flange; and

clip means secured to all of said posts and engaging the upright margins of each lower panel and each upper panel to secure the panels to the posts.

5. The combination of claim 4 in which the face of each post adjacent the panels and center alignment bracket contains a line of upright slots, the fastening web of the center alignment bracket contains a slot registered with a slot in each post, and the means detachably securing the alignment bracket to the posts consists of a plurality of hooks, there being a hook impaling the registered slots in each post and in the bracket.

6. The combination of claim 5 in which the center alignment bracket includes integral tabs on the fastening web, each tab extending into a post slot below the registered slots to support the bracket, and in which the hooks extend downwardly from the registered slots to secure the bracket against the faces of the posts.

7. In a panel wall structure, in combination: a base channel extending along a floor, said channel having parallel, upright walls defining the sides of a post support; a top channel supported on a ceiling and vertically aligned with said base channel, said top channel having parallel, depending walls; a plurality of upright posts spaced from one another, each post having parallel legs, the lower and upper ends of said posts being seated, respectively, in said base channel and in said top channel with their parallel legs between and abutting said parallel upright and said depending channel walls; opposed integral tabs on the parallel walls of the base channel and associated with each post, each tab having an edge substantially abutting an upright portion of a post, said tabs effectively locking the posts against lateral movement; means securing the upper end of each post in the top channel; a base panel receiving flange on the outside of one of the base channel walls, said flange having a transverse base web and an upright web which extend from a median line between adjacent posts toward both said posts; a top panel receiving flange on the outside of a top channel wall, said top flange being identical with, and opposed to said base flange; a plurality of panels, each panel having upright margins against two adjacent posts and its lower and upper marginal portions seated, respectively, in the panel receiving flanges of the base and top channels, each said panel being supported on the web of the base flange and having its extremities confined between the upright webs and the upright walls; and clip means secured to all of said posts and engaging the upright margins of each panel to secure the panels to the posts.

8. The combination of claim 7 in which the base panel receiving flange and the top panel receiving flange are coextensive in length with the respective channel walls.

9. The combination of claim 7 in which each panel has inturned marginal portions at its lower and upper ends which terminate inwardly of the upright panel margins and are gripped between the upright webs of the panel receiving flanges and the upright walls of the channels.

10. The combination of claim 7 in which the base channel and the top channel each has identical panel receiving flanges integral with both upright channel walls, and in which there are panels seated in both flanges on each channel.

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