

April 22, 1941.

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2,239,545

PANELED WALL CONSTRUCTION

Filed March 1, 1939

2 Sheets-Sheet 1

Fig. 1.

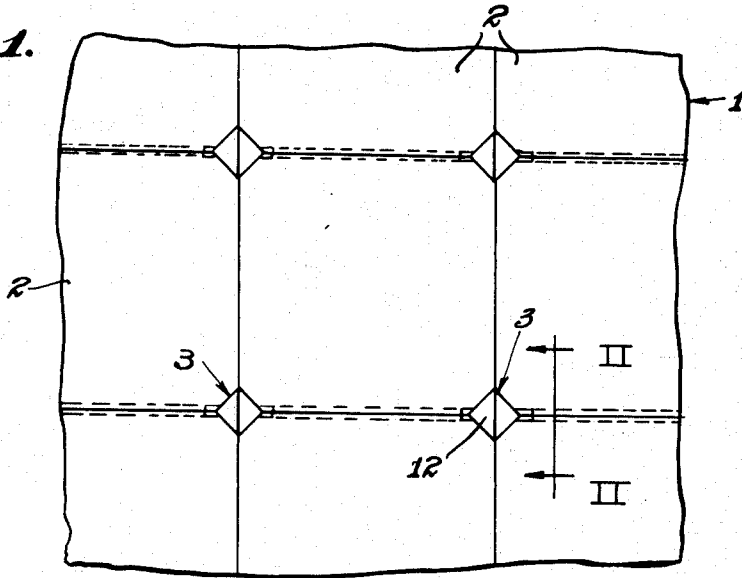
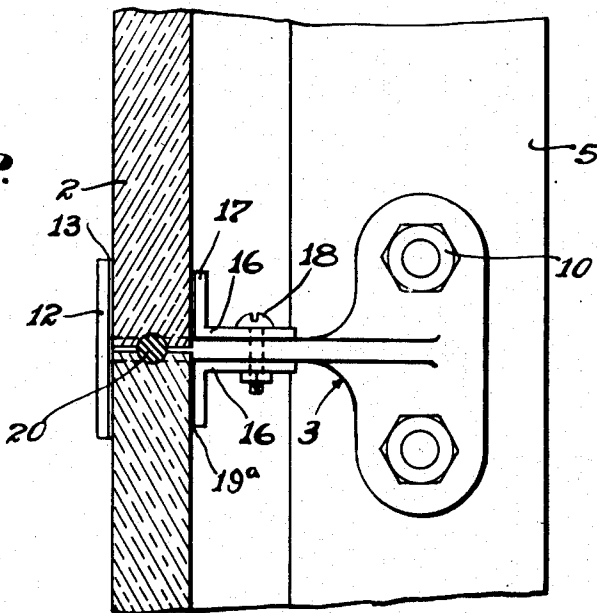


Fig. 2.



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Fig. 3.

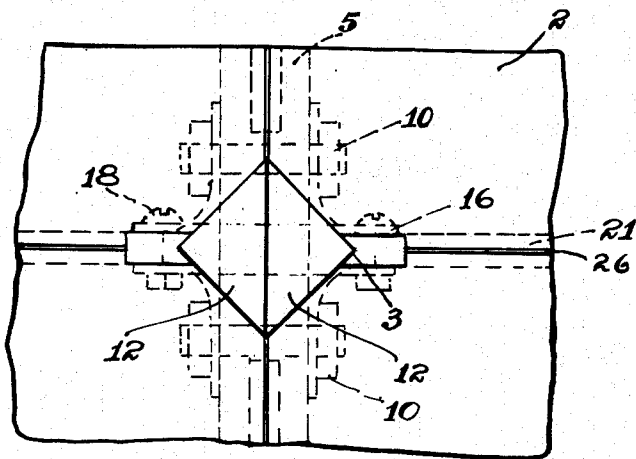


Fig. 5.

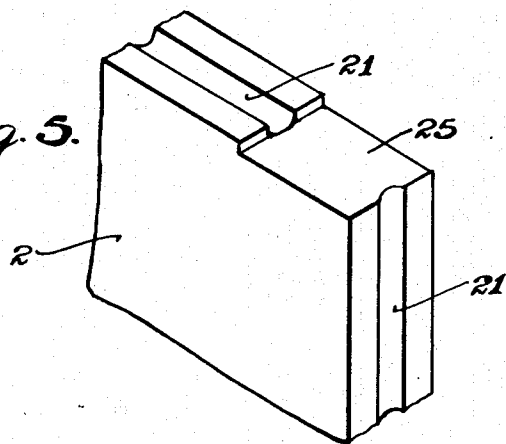


Fig. 4.

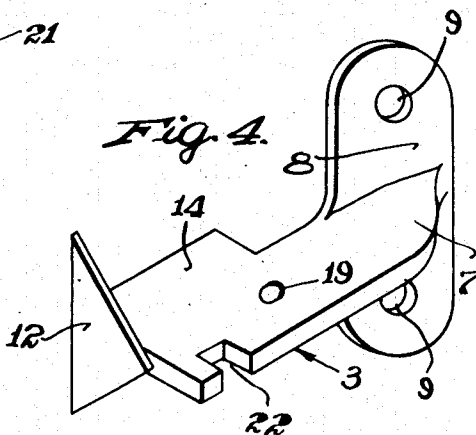
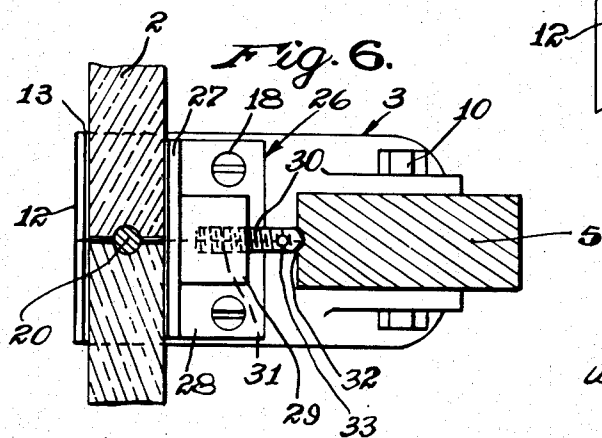


Fig. 6.



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PANELED WALL CONSTRUCTION

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Application March 1, 1939, Serial No. 259,176

2 Claims. (Cl. 72—19)

The present invention relates to wall constructions and more particularly to a construction in which a plurality of sections of uniform size are so positioned as to form a vertical partition or wall.

The primary object of the invention is the provision of a special construction by means of which a plurality of sections of regular shape may be combined into a wall and from which any one of the individual sections may be removed or replaced with a minimum of labor.

A second object of the invention is to provide a mounting for the support of structural sections in which each section is positively secured in position without the use of nails, screws or bolts entering or penetrating the sections themselves.

Other objects and advantages of the invention will become more apparent from the following detailed description of certain preferred embodiments thereof.

Ordinarily the construction of a wall or other partition entails merely the positioning of panels upon the studding or other framework and the use of nails as securing means. A suitable trim is applied over the joints to complete the installation. It will be seen that in the event one section of the paneling becomes damaged it is rather difficult to effect the removal thereof and a replacement by a new section without damaging the adjacent sections.

Where, also, it is desired to use sections of glass plate to form the wall, the ordinary method of installation is not applicable. For opaque glasses, the general practice has been to use plaster or an asphaltic mastic as a means for securing the sections of glass in place. In this instance succeeding tiers of glass plate rely at least partially for support upon the lower tiers, and even where the glass plates are positioned with their meeting edges in staggered relation the removal of one plate is rather difficult.

In the event it is desired to use transparent or translucent glass in the formation of a wall through which some light is to be transmitted, it will at once be obvious that mastic or plaster could not be used. Ordinarily in this connection the wall is made of a single plate secured in an annular frame or in perhaps two or three large sections with the joints being sealed as in leaded window constructions. A more favored method has been to use glass bricks for the fabrication of light-transmitting walls, but there is a serious limitation in the decorative effects possible with such medium.

Briefly stated, the present invention contem-

plates the formation of walls or other partitions from small sections of glass or other material in which each section is individually supported at its corners upon brackets extending from a framework, special provision being made to hold the sections against lateral movement and reinforcing beams or rods being positioned to increase the strength of the installation.

A preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a fragmentary front elevational view of a panel wall constructed in accordance with the provisions of the invention.

Figure 2 is a fragmentary vertical sectional view taken substantially along the line II—II of Figure 1.

Figure 3 is a fragmentary front elevational view, on an enlarged scale, showing in detail one of the supporting elements.

Figure 4 is an isometric view, on an enlarged scale, of one of the supporting brackets.

Figure 5 is a fragmentary isometric view of one of the paneled sections; and

Figure 6 is a fragmentary horizontal sectional view, showing in detail another form of the invention.

Referring to the drawings, a wall or partition 1 is composed of a plurality of sections 2 of uniform size which may be of any suitable material, although it is preferred that they be formed from structural glass. The sections 2 may have plain surfaces or may carry any suitable design. The sections are mounted in substantially edge to edge relationship upon pairs of spaced brackets 3 which are secured to and project from a supporting framework of spaced vertical members 5.

The brackets 3, die-cast or molded, include a horizontal section 7 from one end of which projects a vertical flange 8 provided with openings 9 through which screws or bolts 10 may be passed to secure the brackets to the framework 5. At the opposite end of the horizontal section 7 a face plate 12 is provided against which one corner of the section 2 will lie, being separated therefrom by a cushion 13 of rubber or cork. The horizontal section 7 is provided with an offset portion 14, from which the plate 12 extends, in order that the face plates 12 of adjacent brackets will contact when the brackets are in position upon the supporting framework. Braces 16 substantially of L-shape in cross-section and included vertical sections 17, which are offset sufficiently to lie behind the plates 12, are secured to the upper and lower surfaces of the horizontal section 7 of each

bracket 3 by means of a bolt 18 passing through an opening 19 provided in the section 7. The opening 19 is somewhat elongated to permit adjustment for variations in thickness of the sections 2 held thereon and to permit the interposition of a cushioning pad 19a of rubber or other resilient material between the brace 16 and the glass panels.

In order that greater strength may be imparted to the wall construction, reinforcing bars 20 lying within peripheral grooves 21 provided within the sections 2 extend vertically and horizontally between the several brackets. Openings 22 adjacent the outer edges of the brackets are adapted to receive the ends of the horizontal reinforcing bars 20. Very little strain is placed on the vertical bars 20 and, as shown, they merely rest on the brackets 3. If it is desired, however, they may be interlocked with the brackets in a manner similar to the horizontal bars, sockets being provided in the offset portions of the brackets for this purpose.

As shown in Figure 5, the corners of the upper and lower edges of each section 2 are provided with notches 25 in order that the horizontal edges of the sections will fit closely together. The slight space which may still be present between the edges of the adjacent sections 2 may be sealed with a layer 26 of mastic or other suitable caulking material.

The installation of a panel wall as contemplated by the invention may be accomplished very readily. The dimensions of the sections 2 having been established the vertical members 5, forming the supporting framework, are positioned to lie along the vertical lines of junction of the sections. The brackets 3 are then secured in spaced relation along the vertical members of the supporting frame, each succeeding tier being spaced a distance slightly greater than the height of the sections 2. The panel sections are then positioned upon the brackets temporarily, clamps being utilized to hold them in proper relationship until the permanent angle braces 16 may be secured in place. The reinforcing rods 20 are added at the sides and top of the sections as the wall is progressively built up and after the last section 2 has been placed and the permanent angle braces 16 secured, the spaces between the individual sections are filled with the mastic or caulking compound.

In the event replacement of one of the sections becomes necessary such operation may be accomplished very readily without disturbing the remainder of the wall. The broken section is removed, the angle braces 16 at the four corners thereof are also removed from the structure, and any of the mastic adhering to the edges of the adjacent sections cleaned therefrom. The new section is installed by slipping it into place from the back of the wall, there being sufficient clearance to permit this even when the reinforcing

rods 20 are in place. The angle braces 16 at the corners are again positioned and the joints are sealed with mastic. This procedure is applicable to any of the sections.

It will be seen that each bracket 3 bears only one-half of the weight of the section mounted thereon. This distribution of weight is of great value, when heavy structural glass is used in the construction. Outward displacement of the sections is prevented by the face plates 12 on the brackets and inward displacement is prevented by the angular braces 16. Because of this feature a paneled wall will resist considerable pressure from either side thereof. Since the face plates are comparatively small they will not detract from the appearance of any design impressed upon the surface of the panel sections.

A second form of supporting structure is illustrated in Figure 6, wherein a single brace 26 serves to secure the sections 2 in place. The brace 26 is substantially of L-shape in cross-section and has a vertical section 27 which lies against the inner faces of the glass panels and a horizontal section 28 which is secured to the brackets 3 by means of the bolts 18. A block 29, positioned centrally of the brace 26 and made a part thereof, carries a set screw 30, threaded at one end to engage a threaded socket 31 in the block. The opposite end of the set screw is pointed and fits within a recess 32 formed in the vertical member 5 of the framework. An opening 33 in the set screw permits rotation thereof by a suitable tool (not shown) and the brace 26 may in this way be forced against the glass panels 2 before the bolts 18 are tightened.

It will at once be obvious that various modifications in the formation of the several elements and the arrangement of the component parts are possible without entailing a departure from the spirit of the invention or the scope of the appended claims.

What we claim is:

1. A paneled wall construction comprising a plurality of wall sections of uniform size, a supporting framework of spaced vertical members, spaced brackets secured to and projecting from said framework and supporting the wall sections, reinforcing members extending vertically and horizontally between the several brackets engaging the edges of the wall sections and lying within peripheral grooves provided therein, a face plate integral with each bracket engaging a small portion of the corner of the section resting thereon and preventing outward displacement thereof and clamps substantially of L-shape in cross section secured to each bracket to prevent inward displacement of the sections therefrom.

2. A construction as defined in claim 1 in which the wall sections are composed of structural glass plates.

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