Sept. 13, 1932. F. S. ROBINSON 1,877,053

SECTIONAL WALL PANEL CONSTRUCTION

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Fig 1.

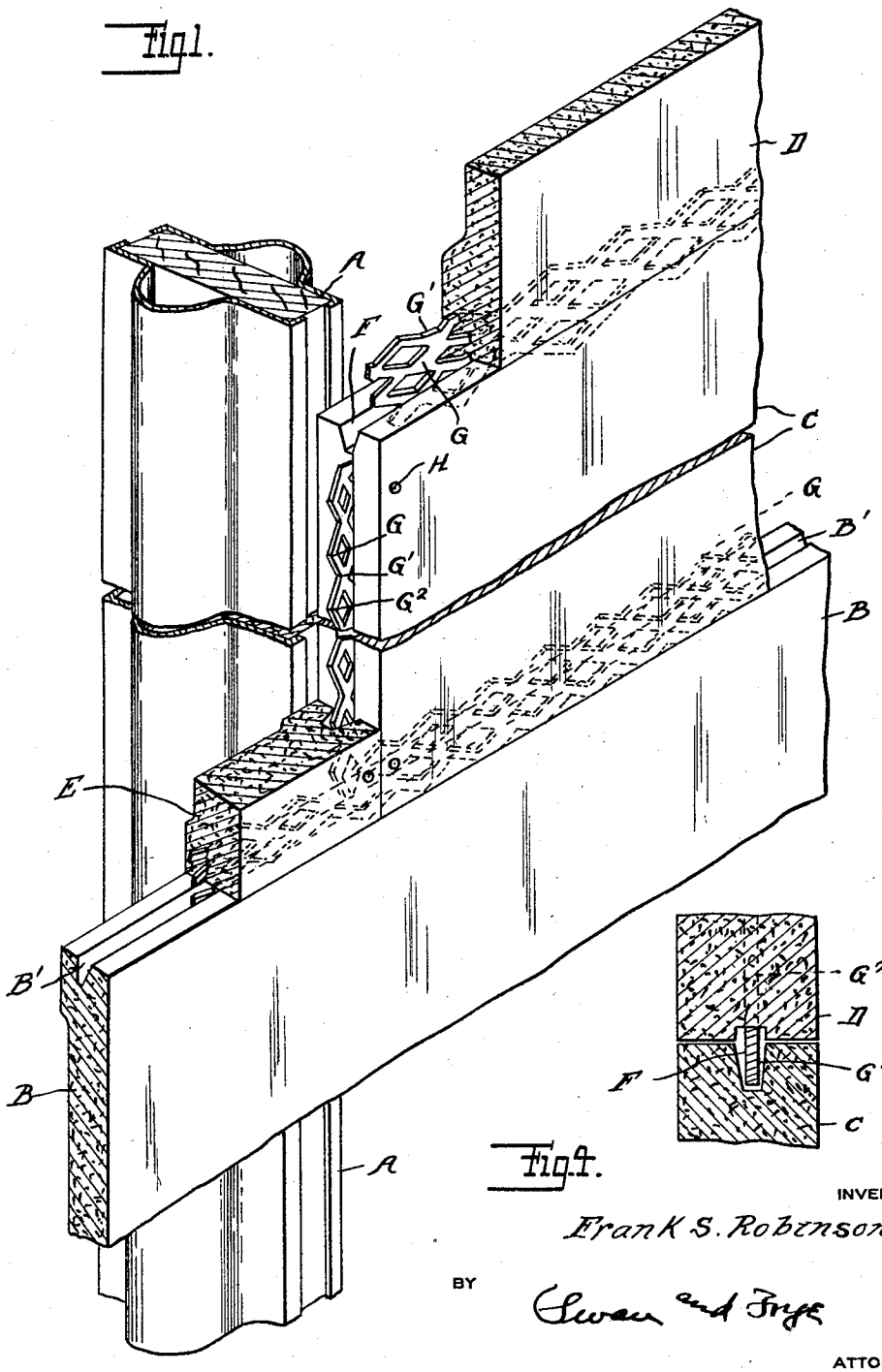


Fig 4.

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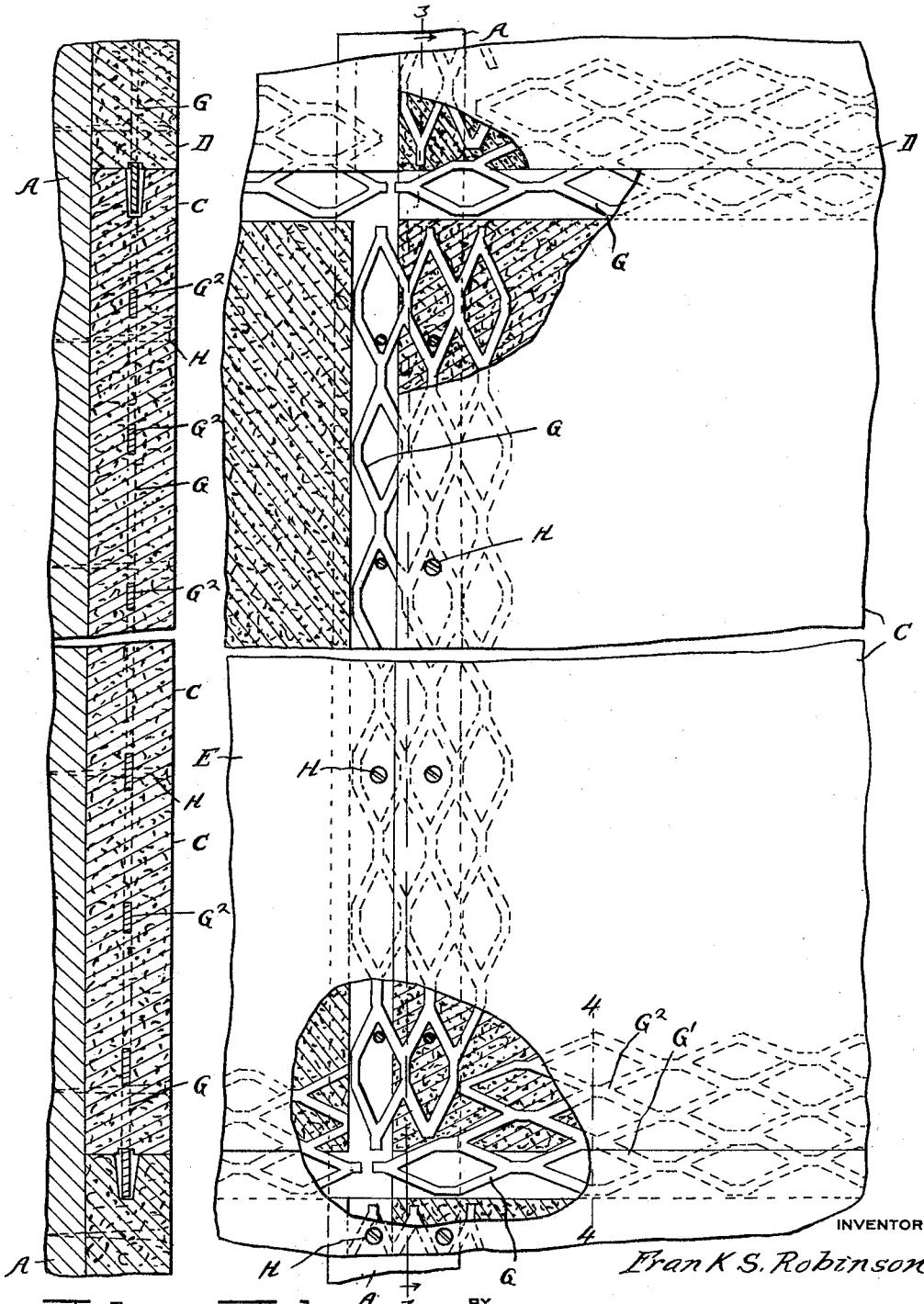


Fig. 3. Fig. 2.

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Fig. 5.

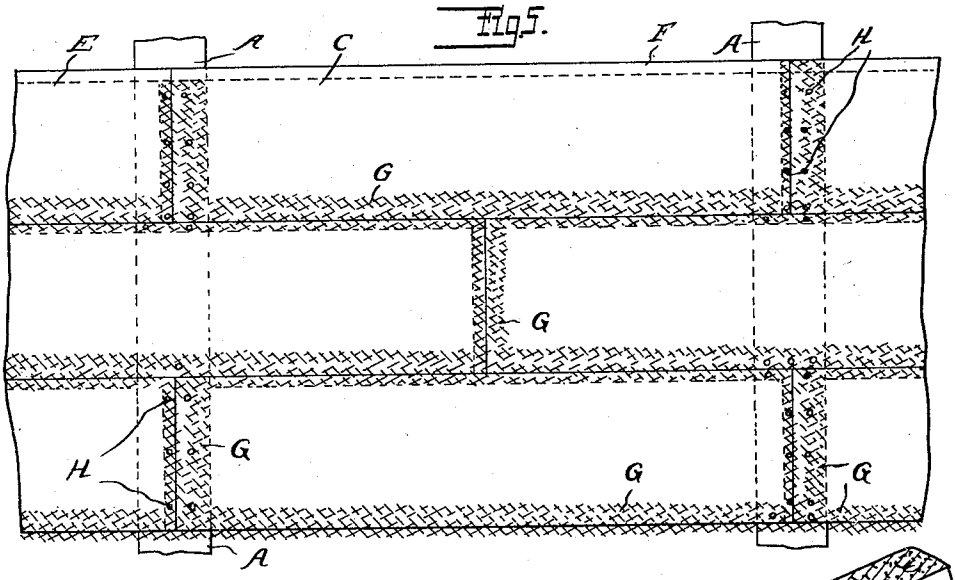
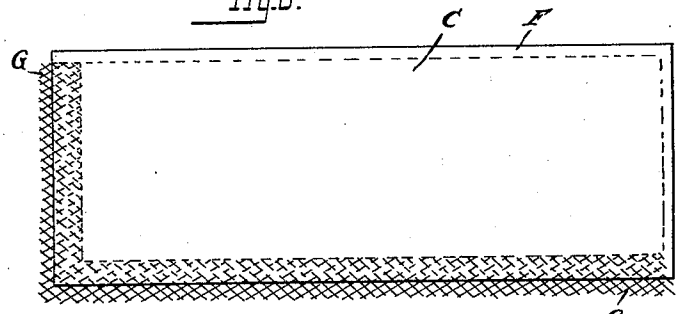


Fig. 6.



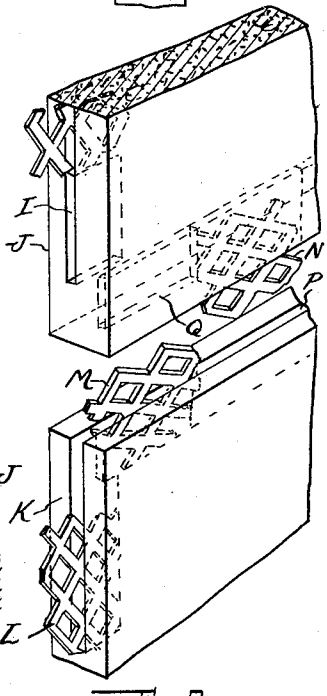


Fig. 8.

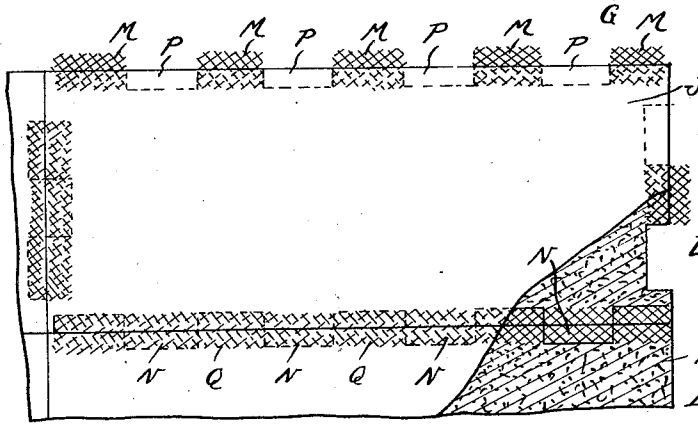


Fig. 7.

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Patented Sept. 13, 1932 1,877,053

UNITED STATES PATENT OFFICE

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SECTIONAL WALL PANEL CONSTRUCTION

Application filed November 14, 1931. Serial No. 575,113.

This invention relates to a sectional wall or ceiling panel construction, and has for its object an improved organization of parts capable of lending itself to quick and easy assemblage and installation, as well as to disassemblage with a minimum of loss or breakage, and yet which, in a position reinforced and indeed supported by more or less permanent uprights or skeleton pieces, serves very effectively as a temporary partitioning means.

In the drawings:

Figure 1 is a fragmentary perspective showing adjacent marginally interlocking panels and supporting framework pieces, to which the same are adapted to be secured as by nails or screws.

Figure 2 is a fragmentary view of the contiguous parts of two panels positioned with reference to a supporting upright which is shown in the background, selected parts of this figure being phantomed-in, while others are shown in full line elevation, the broken away portion of the surface thus involved being bounded by irregular lines.

Figure 3 is a sectional elevational view taken along the line 3—3 of Figure 2 and looking in the direction of the arrows there shown.

Figure 4 is a fragmentary sectional view of the meeting edge portions of two contiguous panels, being adapted to bring out a preferred method of inserting the locking webbing member.

Figure 5 is an elevational view of a plurality of panels in position relatively to their supporting framework, bringing out the possible staggering of adjacent rows of panels and the variance in positioning of their nail-effected attachment to the uprights accordingly.

Figure 6 is an elevational view of a single panel designed to bring out the projection of the metal webbing from two of its edges and the grooving of the other two edges.

Figure 7 is a partly broken away elevational view of a slightly modified form of panel, with fragmentary marginal portions of adjacent panels interlocked therewith.

Figure 8 is a fragmentary perspective of two of such modified forms of panels in somewhat spaced relation preparatory to their marginal association.

A indicates an upright which may be of any desired contour and which for purposes of this disclosure may be looked upon as a structural piece of a more permanent character than the sectional wall or ceiling panels forming the subject-matter of this disclosure, that is, uprights A and horizontal beams B may be looked upon as representative elements of the partition or ceiling supports for the slabs here in question. Each of these slabs shown in Figures 1 to 6 inclusive, as C, D, and E, is preferably fabricated to desired surface shaping and size either from a pulp or similar mass or, if desired, integrally from sheet metal, and two of the four marginal edges of each individual slab are grooved, as at F, and what might be looked upon as grooves are provided in the other two marginal edges; these would be grooves, could the inset expanded metal pieces G be removed therefrom without breakage. These marginally projecting webbing pieces, are preferably of the expanded metal character shown, so that when two or more panels are assembled in the same place, the webbing pieces G are adapted to engage in the complementarily grooved edges of the neighboring panel units already referred to. Thus, in the fragmentary installation shown in Figure 1, and in elevational Figure 6, it might be said that the bottom edge and the left hand edge of the panel C are thus equipped with this marginally projecting webbing G, while the right hand edge and the top edge are grooved in the manner described. Being thus integrated with the body or mass of the panel at the time of manufacture, each strip of expanded metal may thus be relied upon to transmit to its panel proper any supporting influence such as would be imparted to it by the driving therethrough of nails or screws H, penetrating into the mass of the upright A or of the beam B as the case might be. Thus when two panel sections, as for example C and E, are brought into terminal propinquity, as indicated in Figure 1, and with their thus meet-

ing edges in registry with the upright A, not only will the projection of the webbing into the adjacent groove of the panel E function with the same efficiency as though these panel ends were edges of tongued and grooved boards, but as well the extent of the expanded metal webbing an appreciable and adequate distance into the mass of each panel permits the described driving of nails or screw H through them and into the upright A in a way that not only secures each panel piece in desired relation to its companion panel pieces and to the upright, but as well reinforces the wall structure and effects a distribution of the holding influence of these nails or screws throughout the adjoining mass of the respective panels as a whole, in a way that would by no means be the case if the panels were placed in terminal relation to one another in the same plane and each nailed independently to the supporting upright.

In case for any reason it is desired to rest the lower row of such a series of panels upon a beam, as B, or similar structural elements, rather than upon the floor of the room whose subdivision is thus in progress, the upper edge of this beam, as B′, may be grooved in a manner similar to the corresponding edge of a panel unit, for engagement therein of the webbing piece G projecting from and along the bottom edge of the adjacent panel unit, as C. Generally speaking, however, it has been my experience that nailing only along the meeting ends of the panel units and to a vertical upright, as A, is all that is necessary; and it is of course to be understood that in the sense here used the use of nails or screws is designed to be interchangeable. The main objection to nails is that in case it is desired to disassemble the structure thus built up, it is often necessary to deformingly dig into the surface of the panel slab surrounding the nail head as a condition precedent to exposing enough of the mass thereof for the claws of a withdrawing instrument to take effect. Screws therefore seem to be preferable to nails where subsequent salvage and reuse of the panel units is a consideration.

In large scale Figure 4 I have emphasized the keying influence of the metallic webbing piece G relatively to the edges of two adjacently positioned slabs, particularly when these edges have been "buttered" or thinly coated with plaster. This section being taken along the line 4—4 of Figure 2, and passing through the center, as G′, of one of the expanded metal loops, has required the showing of the metal part in full lines only to about the level of the meeting edges of the panels; the part extending further up into the mass thereof, and which if the panel were transparent would be seen only elevationally, to the rear of the line along which the section is taken, is therefore shown in dotted lines, as G^2. This plaster-effected coating or "buttering" of the ends especially of such panel units is of particular utility in securing the proper alignment thereof in case it is desired, for any reason, to stagger the alignment of certain rows of these panels in a wall or ceiling structure as suggested in Figure 5; as to these rows the nail-effected attachment of the panels to the supporting upright or beam would be merely through the central portion of the slab which as far as such nail penetration is concerned, would contain no metal webbing reinforcement except along the bottom edge.

In the modified form of my invention illustrated in Figures 7 and 8, in place of having two of the grooved edges of a slab filled with the thus held metal webbing, and the other two grooves empty, for the reception of the projecting edges of this webbing which form parts of adjacent slabs, I partly and spacedly fill each marginal groove of each panel, as J and K, with pieces of such metal webbing as M and N between which are alternated unfilled spaces or complementary sockets P in the marginal grooves for the engagement of similar projections from the adjacently positioned slabs or panels, so that when two panels are juxtaposed these projections M and N and their alternated spaces P will permit interfitting similarly to the fingers of one's two hands and the spaces between them when made to terminally approach and interfit. It will be noted that the metal webbing projections M at the top of the panel or slab are positioned in registry with the spaces Q on the lower edge of the panel, and conversely the projections N at the bottom of the panel are opposite the spaces P at the top thereof; this is of course similarly true as to the projections L and spaces I at the ends of the several panels.

What I claim is:

1. A fabricated sectional wall unit, comprising a marginally grooved panel and an inserted metallic webbing positioned in the grooves on selected edges of the panel, with its outer edge projecting beyond the confines of the panel for interfitting engagement in the complementarily grooved adjacent edge of a companion panel, said metallic webbing and the adjacent portions of the panel being adapted to be traversed by penetrating holding members driven into suitably positioned permanent structural pieces.

2. In combination with suitably positioned supporting beams, a plurality of wall panels adapted for interfitted attachment thereto, each panel comprising a fabricated body portion having certain of its edges grooved, and metallic webbing inserts positioned projectingly in grooves on the outer edges thereof and adapted to fit within the initially unoccupied grooves on the adjacently positioned panels and to share with them and transmit to them the anchorage to said supporting beams afforded by the driving

through them and into said beams of holding pins perpendicularly to the planes of the several panels.

3. In combination with a supporting framework, a plurality of initially separate panel members adapted for screw-effected support thereon, each of such panel members comprising a fabricated unit provided with marginal groovings along certain of its edges and having projectingly integrated with the other edges metallic webbing pieces adapted for engagement in a grooved edge of an adjacently positioned panel, and through which, as well as through the panel body material on either side thereof, securing screws may be driven.

4. In combination with a supporting frame whose members are designed to be overengaged by the meeting ends of adjacent panel units, a plurality of marginally correlated wall panels, each having a side edge and one end edge grooved and from the other edges of which a metallic webbing projects for engagement in the adjacent grooved portion of an adjacent panel, and holding screws passing through those portions of each panel adjacent its ends wherein the metal webbing is present and into the adjacent mass of the supporting frame.

5. The combination, with a supporting frame, of a plurality of wall panels positioned in the same plane and with their meeting ends overlapping some portion of the supporting frame, and metal webbing units, each of which, when the panels are in their described assembled position, bodily overlaps intermediate their surfaces the suitably grooved ends of a pair of adjoining panel units, and screws driven through said panel ends and their contained metallic webbing into the mass of the adjacent portion of the supporting frame.

6. In combination with a supporting frame, a plurality of initially separate panel members positioned thereon in the same plane, each of said panel members having selectively positioned marginal grooved portions and integrated webbing portions adapted to interfit with corresponding though diversely positioned projecting and grooved portions of adjacent panels, and screw members penetrating such portions of each of said panels as are positioned opposite parts of said frame, said screw elements supportingly extending thereinto as well.

7. A superficially correlated and externally supported wall panel construction, comprising, in combination with spacedly located supporting studs, a plurality of individually fabricated panel members each provided with marginally interfitting portions which when brought into juxtaposition effect the presentation of relatively unbroken surface planes in the panel structure as a whole, and correlating nail members passing through the interfitted edges of adjoining panels and into the correspondingly located supporting studs whereby the component elements are structurally and supportingly integrated.

8. In combination with spacedly arranged and relatively permanent supporting uprights, a plurality of fabricated panel members having selectively interlocking marginal portions adapted as well to overlap, with certain of such last recited portions, one or another of said supporting uprights, and penetrating nails adapted to be driven through each of the interlocking marginal portions of the several panel members and into the correspondingly positioned one of said supporting uprights, thereby assembling the several interengaged panels into a correlated surface structure which is supported in desired position by the recited attachment of its component members to the uprights.

In testimony whereof I sign this specification.

FRANK S. ROBINSON.