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2,394,147

PANEL OR UNIT FOR BUILDINGS AND BUILDINGS CONSTRUCTED THEREFROM

Original Filed Feb. 2, 1942

FIG. 1.

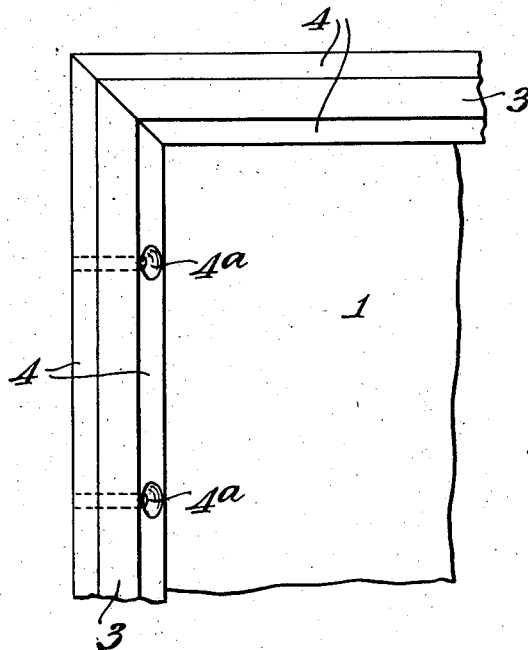
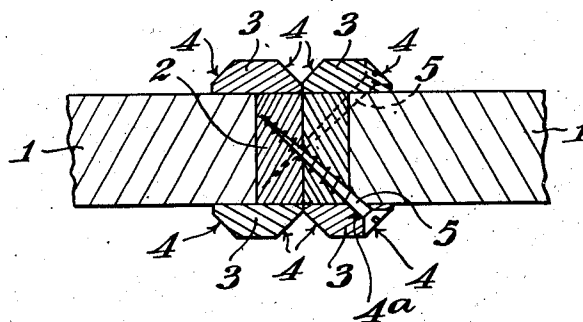


FIG. 2.



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PANEL OR UNIT FOR BUILDINGS AND BUILDINGS CONSTRUCTED THEREFROM

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Original application February 2, 1942, Serial No. 429,304. Divided and this application April 22, 1944, Serial No. 532,300. In Great Britain February 10, 1941

6 Claims. (Cl. 20-4)

This invention relates to improvements in panels or units for buildings as illustrated, for example, in my co-pending application, Serial No. 429,304, filed February 2, 1942, patented Nov. 7, 1944, No. 2,362,187 and of which this case is a division.

The primary object of this invention is to provide slabs or blocks which can be used for building walls and roofs of buildings such as hutments and the like. A further object is to provide panels which are light in weight and which possess a good degree of sound and heat insulation. Another object is to provide panels which lend themselves to the easy erection of buildings especially buildings of a temporary nature, such as hutments for barracks, billeting, hotels, club-rooms and the like.

Other objects will be apparent from the following description with reference to the accompanying drawing which illustrates a preferred construction of panel.

In the drawing:

Figure 1 is a fragmentary elevation of a corner portion of a panel made in accordance with the invention.

Figure 2 is a fragmentary horizontal cross section showing the manner of abutting and joining of marginal edges of adjacent panels.

The panels 1 each comprise a slab 1 which may be of composite form and which is bounded by a frame built up from wood strips 2 and having a depth corresponding to that of said slab 1 so as to be flush with the faces thereof. In the preferred construction the slab 1 is composed of a core of wood shavings or wood wool bound together by cementitious material, and facings of plaster, building board or the like secured to the opposite faces of said core; such built-up constructions are already known and this feature therefore is not illustrated.

In order to allow for the joining up of the panels, shaped strips 3 are provided on each side of the panel which span the joint between the slab and frame and which are secured to those parts, the said strips conveniently being chamfered along inner and outer edges as at 4, the said chamfering being at an angle of 45°. Panels can be joined in co-planar juxtaposed position by forming holes 4a in the margins through the chamfered faces and then uniting the panels by screws or other means 5 (Figure 2).

These holes can be preformed, that is to say formed in the course of manufacturing the slab, and will be directed to extend at right angles to

the chamfered faces and to pass through the frame strips 2.

Further, the panels can be united in right angular disposition, the thickness of a complete margin, i. e., from face to face, being twice the thickness, i. e., the distance from the inside to the outside thereof. This means that one panel can be butted at a right angle against the co-planar and united panels and secured thereto by screw means as aforesaid, to provide, for example, three or four panels relatively radially disposed and at angles of 90° to each other.

The construction of panel herein described readily lends itself to the formation of buildings of differing design regarding the size (within limits) of room, number of rooms, layout and the like, while embodying a general or basic cross-section or unit. For example, panels of standard size may be used as walling or built with suitable framing as windows, doors or the like and assembled as herein mentioned.

The principal advantages of buildings made with the panels aforesaid is that the panels are strong and possess good heat and weather insulation whilst a standard panel (say approximately 7 feet by 3 feet) can be lifted and handled by two persons. Further, the buildings can be dismantled easily.

The invention may also be applied to single-room buildings without any internal partitions, the roofing being supported by beams or other suitable members.

Also, it will be apparent that the structural features herein described provide a joint of general application to connect slabs, sheets, or equivalent sections 1, wherein, the juxtaposed edge portions are provided with the reinforcing joint sections consisting of the strips 2 and 3, the latter having the beveled faces 4 for receiving the fastenings 5. That is to say, the panel and its frame 2 are provided with reinforcing joint sections 3 fastened to both faces of the abutting slabs, sheets or panels 1 so that the edges of said sections meet at a single transverse plane normal to said section faces, and the fastening means 5 extends from each joint section to the diagonally opposite joint section.

We claim:

1. A panel adapted for edge to edge juxtaposition with adjacent panels to provide a wall, said panel comprising a wall slab, a frame of substantially the same thickness as the wall slab and surrounding the marginal edges of the same, the outer face of the sides of said frame being adapted for abutting engagement with the correspond-

ing face of the frame of an adjacent panel, facing strips having their inner faces spanning the joint between the frame and the wall slab and having their inner side walls beveled to provide a fastening receiving ground for directing a fastening through the side frame at such an angle that the fastening will pierce the frame of an adjacent panel aligned therewith.

2. A panel for use in constructing buildings, comprising a slab of suitable material mounted in a surrounding frame which is thicker than the thickness of the slab to provide a projecting marginal portion at one side, said marginal portion being chamfered along its inner edge, and holes preformed in said one or each projecting marginal portion and extending from the chamfer face to enable fastenings to be passed through the frame of the panel at a predetermined angle and driven into a juxtaposed frame of another panel or other member.

3. A panel as claimed in claim 2, wherein said marginal portions of the frame at each side of the slab are chamfered along both inner and outer edges.

4. A panel adapted for edge to edge juxtaposition with adjacent panels to provide a wall, said panel comprising a wall slab, a frame of substantially the same thickness as the wall slab and surrounding the marginal edges of the same, the outer face of the sides of said frame being

adapted for abutting engagement with the corresponding face of the frame of an adjacent panel, facing strips having their inner faces spanning the joint between the frame and the wall slab and having chamfered inner side walls, and holes preformed through said facing strips and extending from the chamfered faces and passing through the frame at such an angle that the fastening will pierce the frame of an adjacent panel aligned with said first panel.

5. A joint for abutting panels or the like, comprising, reinforcing strips fastened to the meeting edges and both faces of each of the abutting panel sections, the inner faces of the adjacent edge strips meeting in a single transverse plane normal to said panel faces, and fastening means extending diagonally inward from the strips on the opposite faces of a panel into the edge reinforcing strips of the adjacent panel to draw both panels into coupled relation.

6. A joint for abutting panels or the like, comprising, the panels, marginal strips at the opposite faces of the meeting edges of the panels, said strips having beveled edges, and fastenings piercing the beveled edges of said strips and having their leading ends imbedded in the edge portion of the next adjacent panel.

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