

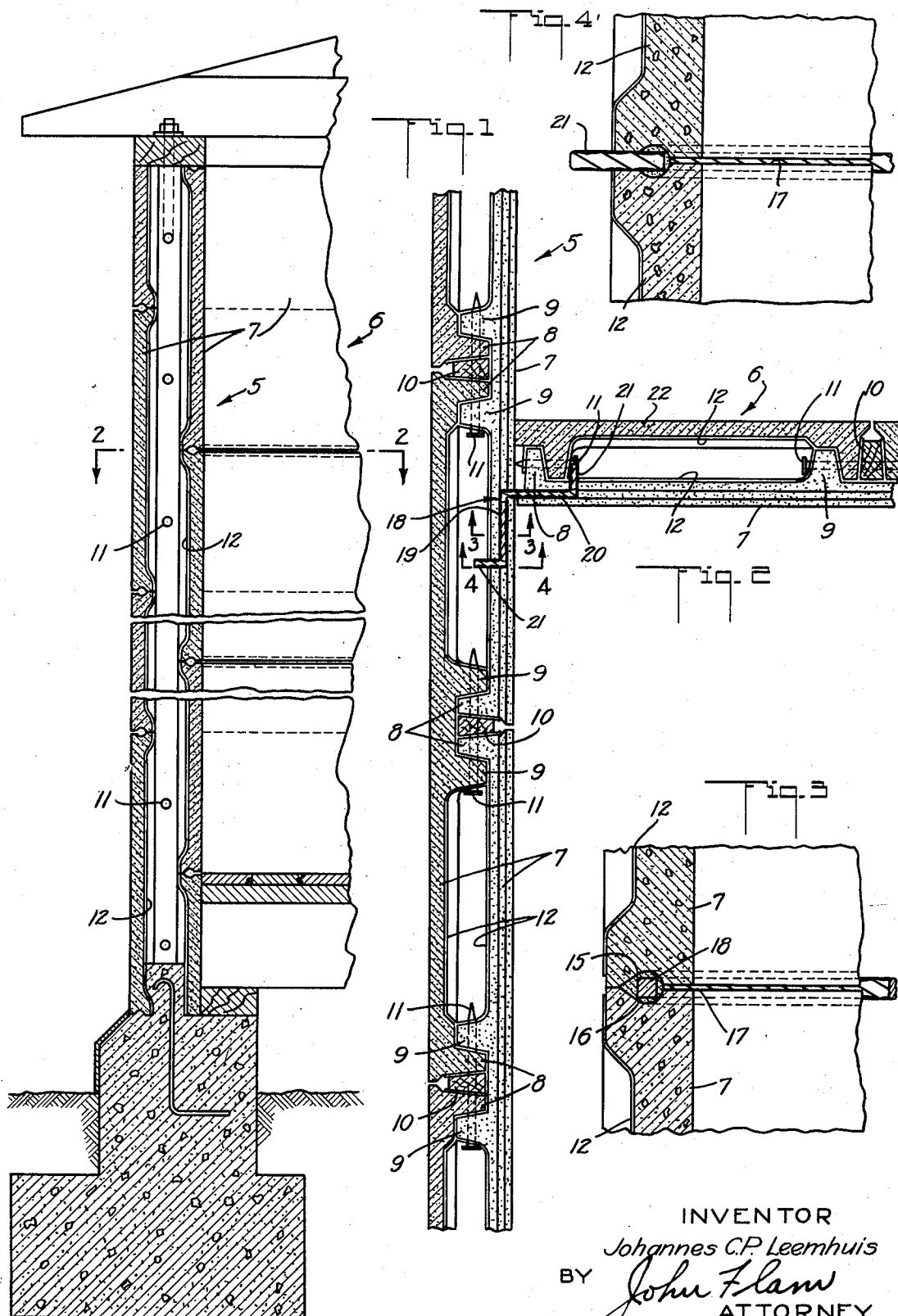
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TAKE-OFF WALL

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TAKE-OFF WALL

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8 Claims. (Cl. 72-16)

This invention relates to a building structure, and especially to one utilizing preformed blocks or plates.

This application is a continuation-in-part of an application filed in the name of Johannes C. P. Leemhuis on May 31, 1938, Serial No. 210,921, and entitled "Building materials and methods." In this prior application a wall structure is shown as constructed of plates or slabs which are formed with interlocking vertical pillar sections, and which are so arranged as to provide an interior and an exterior flat wall surface, with an air space between the wall surfaces. The courses of the plates or slabs on opposite sides of the wall are staggered, and the vertical pillar sections of the plates on opposite sides of the wall structure overlap, being tied together as by pins. Due to the intimate contact of these pillar sections, the wall structure is particularly adapted to resist sagging, as well as vibratory shocks such as may be caused by earthquakes.

In order to render a construction of this kind thoroughly practical, a variety of the plates or slabs must be made as a standard assortment. For example, corner structures must be provided where two walls meet; and sections must be provided to make it possible to take off a right angle partition or wall from another wall.

It is an object of this invention to make possible a reduction in the variety of standard plates or slabs required, and at the same time to permit the construction of angles, take-offs, etc., in a simple and effective manner.

It is another object of this invention to provide a wall structure of the character described in which the take-off wall may be located at any desired position with respect to the main wall.

It is a further object of this invention to provide a wall structure of the character described in which the take-off wall may be securely anchored to the main wall with substantially no alteration in the main wall.

This invention possesses many other advantages, and has other objects which may be made more easily apparent from a consideration of one embodiment of the invention. For this purpose there is shown a form in the drawing accompanying and forming part of the present specification. This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of this invention is best defined by the appended claims.

In the drawing:

Figure 1 is a vertical section of a main wall structure, with a take-off wall constructed in accordance with the invention;

Fig. 2 is a cross sectional view on an enlarged scale as seen on plane 2-2 of Fig. 1; and

Figs. 3 and 4 are detail views on a further enlarged scale as seen on planes 3-3 and 4-4 of Fig. 2.

Referring to the drawing and particularly to Fig. 2, a main wall is indicated by 5, and a take-off wall, which may be an interior wall or partition, is indicated by 6. Each of these walls is constructed of a plurality of horizontal courses of substantially identical plates or slabs 7. Each plate has vertical pillars 8, adjacent its vertical edges, and intermediate pillars 9, spaced between edge pillars 8, all on one side of the plate. The other side of the plate is flat and forms one wall surface of the wall structure. The plates are assembled with the edge pillars of the plates forming one wall surface overlapping and cooperating with the intermediate pillars of the plates forming the other wall surface. Between adjacent edge pillars a stud 10 is accommodated, which stud may be of wood or other suitable material and extends continuously from the top to the bottom of the wall structure. Pins 11 pass through appropriate apertures formed in the pillars and the studs and serve to maintain the plates in assembled relationship. This wall construction is the same as that fully set forth in the previously mentioned prior filed application.

In order to insulate the wall structure to check transfer of heat by it, the inside of each slab is covered by a layer 12 of builders ply paper or other suitable material. This paper covers all surfaces of contact between the pillars on the inside plates and those on the outside plates. Thus the concrete of the slabs not being in direct contact, seepage of moisture through the wall is effectively prevented.

As clearly shown in Fig. 3, and as disclosed in said prior application, the horizontal edges of the plates are provided with grooves 15, 16 and are so formed that the inner portion of the edges of the plates are in contact while the outer portions are spaced apart, forming a slot 17 (Figs. 3 and 4). The space formed by the two grooves and the slot may be filled with cement grout, or it may be left open. In the latter case, moisture entering the slot will be trapped by the groove and thus prevented from getting into the wall structure. Or this space may be used to accommo-

date a reinforcing bar extending longitudinally of the wall.

In the present instance, the space adjacent the take-off wall is used to accommodate an anchor bar 18 having portions 19 and 20 bent at a suitable angle with each other, the portion 20 being accommodated in the corresponding space formed between courses in the take-off wall. In order further to anchor the walls, each portion 19 and 20 of bar 18 is provided at its extremity with a inwardly turned projection such as 21 (Figs. 2 and 4). The contacting edges of the plates 7 where these projections enter are appropriately cut away to accommodate them. The portions 19 and 20 are purposely made just long enough to cause them to be adjacent the side of a pillar section of an opposite plate (Fig. 2) on the take-off wall, or on the main wall. Since the portions 19 and 20 are of identical length, the bar 18 may be placed on an inside corner no matter where this corner may occur, and yet ensure that one of the extensions 21 will be adjacent a pillar section.

The edge of the grooves at the point where the portion 20 of the bar projects from the main wall may be chipped or otherwise broken away to clear the bar. After the walls and tie bars have been assembled, the space about the bar in each groove may be filled with cement to firmly hold the bar in place.

From the foregoing, it will be clear that the tie bars form an anchor between the walls firmly securing them together. The take-off wall may meet the main wall at any point without regard to the position of the vertical pillars. Obviously that portion of the tie bar in the main wall, can equally as well extend in the other direction from the take-off wall; that is, referring to Fig. 2, it could extend upwardly instead of downwardly.

One side of the take-off wall structure is formed by a full length or standard plate adjacent the main wall. In accordance with the described wall construction wherein vertical joints on opposite sides of the wall are off-set by half a plate length, the opposite side of the wall structure must start with a special plate 22 corresponding to half a standard plate, both in length and other details. Such half plates are the only special plates required for the take-off wall.

What is claimed is:

1. In a take-off wall structure, a main wall composed of preformed plates, a take-off wall composed of similar preformed plates and meeting the main wall, said plates being so formed as to define horizontally extending cavities between adjacent plates in the main wall and between adjacent plates in the take-off wall, and a bent bar having one portion disposed in the cavity in the main wall and the other portion disposed in the cavity in the take-off wall, whereby the two walls are anchored together.

2. In a take-off wall structure, superimposed courses of preformed plates forming one side of one wall, the horizontal edges of the plates having concave grooves, the adjacent courses thus defining a cavity between the courses, similar courses of preformed plates forming one side of another wall, the adjacent courses also defining a cavity between the courses, said walls meeting

at an angle, and an angled anchor bar having its legs disposed respectively in said cavities.

3. In a take-off wall structure, superimposed courses of preformed plates, forming one side of one wall structure, similar plates forming the other side and joined to the said first mentioned plates, the horizontal edges of the plates having concave grooves, the adjacent courses thus defining a cavity between the courses, similar courses of preformed plates defining the sides of a take-off wall structure and an angled anchor bar disposed partially in a cavity in the take-off wall and partly in a cavity in the main wall.

4. In an angle take-off for a wall structure, superimposed courses of preformed plates forming one wall, the horizontal edges of the plates having concave grooves, the adjacent courses thus defining a cavity intermediate the opposite sides of the plates, similar courses of preformed plates defining a take-off wall, and an anchor bar having portions accommodated respectively in the cavities in both walls.

5. In a take-off wall structure, a main wall composed of preformed plates, a take-off wall composed of similar preformed plates and meeting the main wall, said plates being so formed as to define horizontally extending cavities between adjacent plates in the main wall and between adjacent plates in the take-off wall, and a bent bar having one portion disposed in the cavity in the main wall and the other portion disposed in the cavity in the take-off wall, whereby the two walls are anchored together, there being extensions at each end of the bar projecting inwardly of the wall.

6. In an angle take-off for a wall structure, superimposed courses of preformed plates forming one wall, the horizontal edges of the plates having concave grooves, the adjacent courses thus defining a cavity intermediate the opposite sides of the plates, similar courses of preformed plates defining a take-off wall, and an anchor bar having portions accommodated respectively in the cavities in both walls, said preformed plates having respectively overlapping pillar sections, and said bar having an extension that projects inwardly and that lies adjacent one of the pillar sections of the plate forming the opposite wall surface.

7. In a take-off wall structure, a main wall composed of preformed plates, a take-off wall also composed of preformed plates and meeting the main wall, and means for fastening the walls together, comprising an anchor member having parts respectively disposed in cavities formed between said preformed plates.

8. In a take-off wall structure, a main wall formed of a series of plates having grooves at one edge so that a cavity is formed between the edges of the plates, a take-off wall also formed of a series of plates having grooves at one edge so that a cavity is formed between the edges of these plates, the respective grooves in the main wall and the take-off wall extending toward a common point at the junction of the walls, and an anchor member having parts disposed respectively in said cavities.

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