Nov. 9, 1948. J. SLOBODZIAN 2,453,466

BUILDING CONSTRUCTION

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Fig. 1.

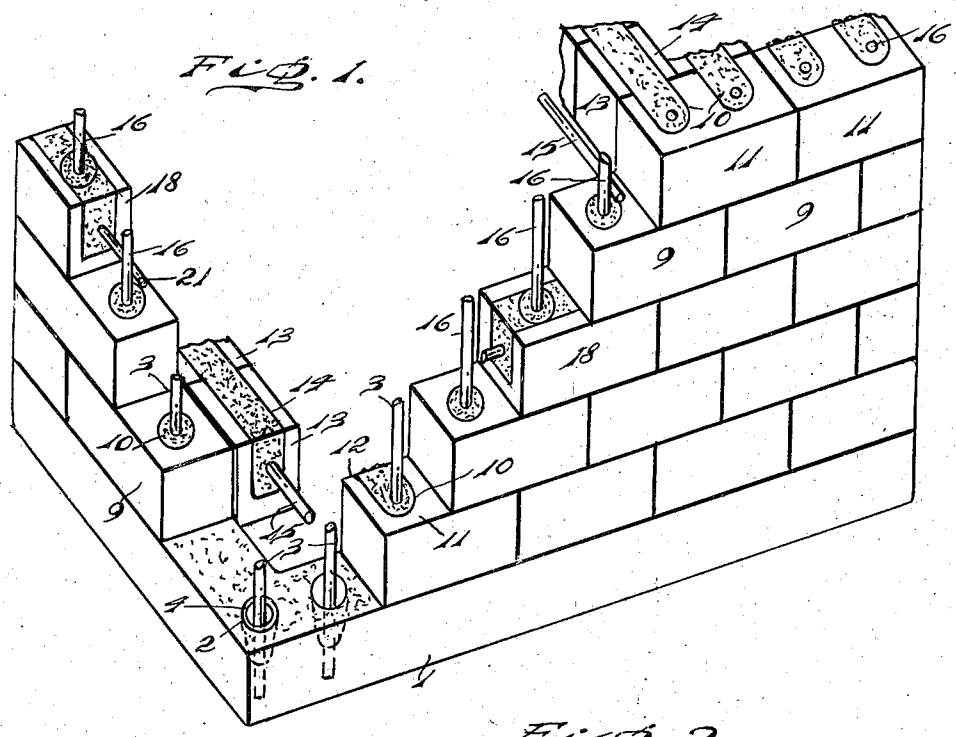
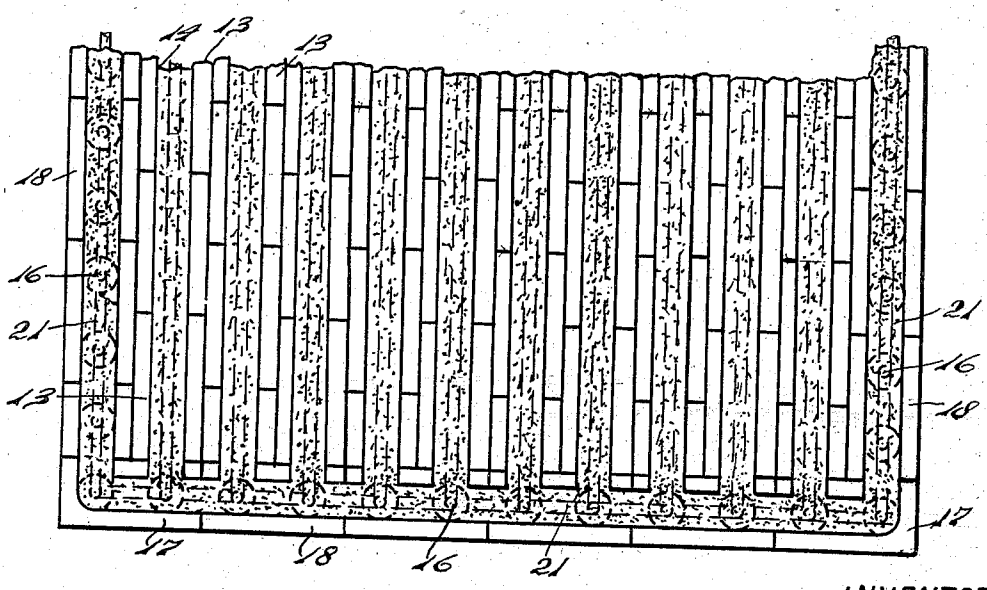


Fig. 2.



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Fig. 3.

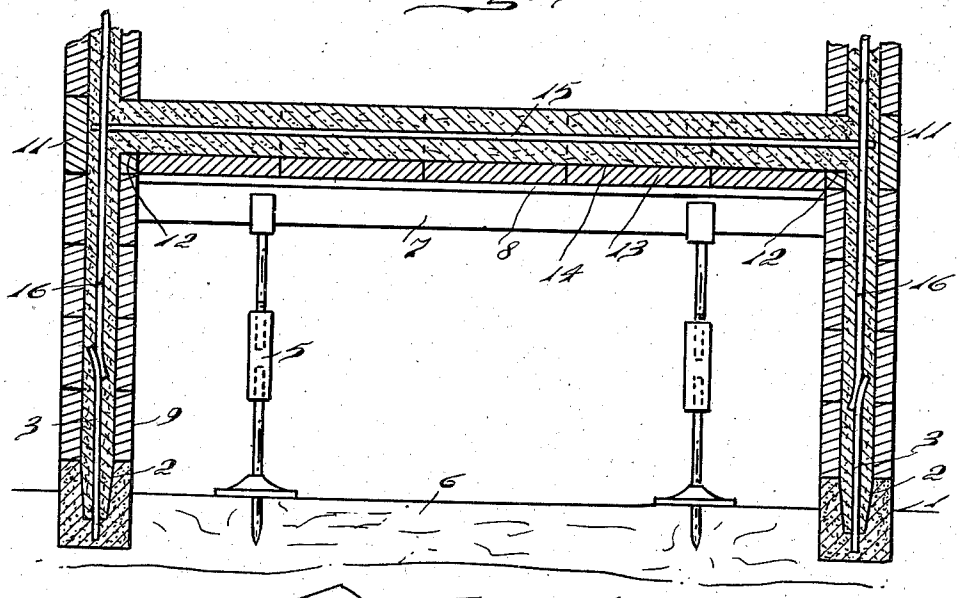


Fig. 4.

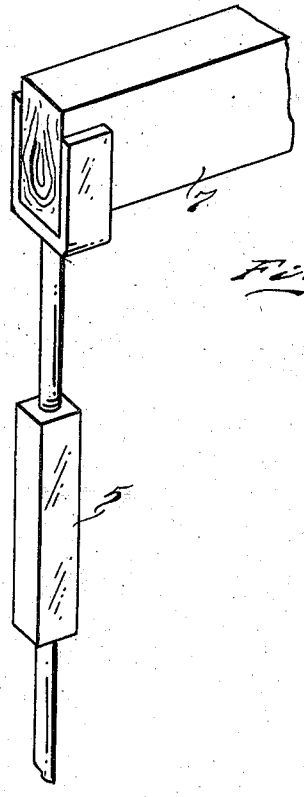
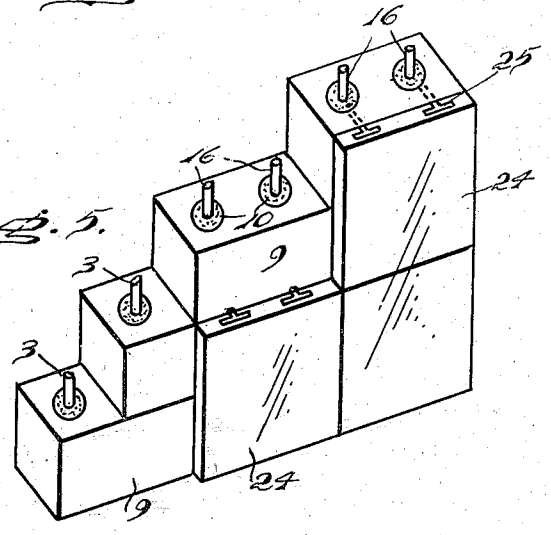


Fig. 5.



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Fig. 6.

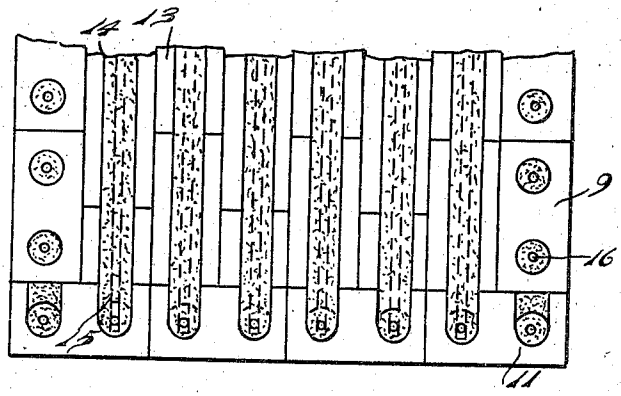


Fig. 7.

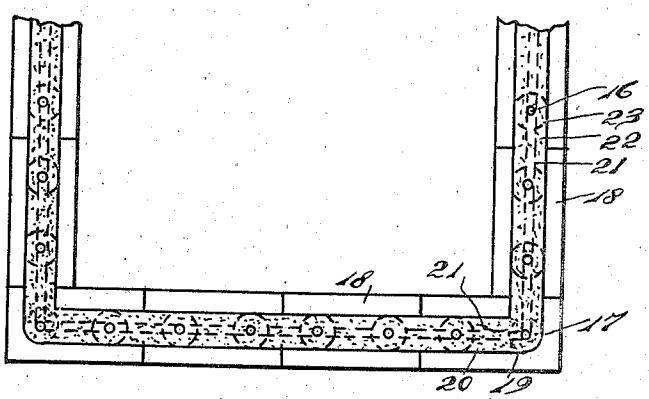
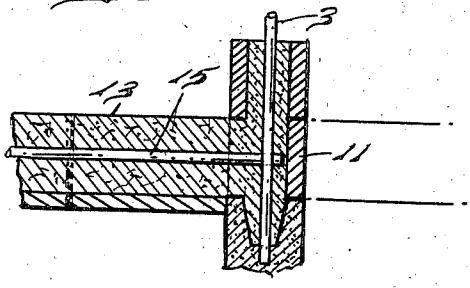


Fig. 8.



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Patented Nov. 9, 1948

2,453,466

UNITED STATES PATENT OFFICE

2,453,466

BUILDING CONSTRUCTION

Joseph Slobodzian, Phoenixville, Pa.

Application April 20, 1944, Serial No. 531,864

2 Claims. (Cl. 72—15)

1

The object of this invention is to devise a novel building construction and a novel method of making it.

A further object of the invention is to devise a novel building construction wherein insulating blocks are employed which are self-sustaining but have insufficient structural strength to carry the load to which the building is to be subjected. One example of a block of this character is known in the trade as "Foam Glass" and does not have sufficient structural strength to carry roof weights and to take care of wind stresses and shocks.

Insulating, cellular, glass blocks have many valuable characteristics, for example:

1. They insulate from heat and cold.
2. They are fireproof.
3. They are vermin proof.
4. They are light in weight.
5. They are easily machined (sawed or drilled).
6. They are waterproof.

Since the blocks are self-sustaining but not load sustaining, the walls, floors, ceilings and roof are made of columns, lintels, joists and rafters formed by pouring concrete into holes and slots in the blocks to surround and embed reinforcing materials in such holes and slots.

Large blocks can be used, due to their lightness, and since the concrete is used in a plastic state, buildings can be erected at speeds equal to that of fabricated buildings with the advantages of utilizing fewer workmen and with less fabrication at the factory.

Since the blocks can be readily machined, unlimited architectural designs can be employed.

With the foregoing and other objects in view as will hereinafter clearly appear, my invention comprehends a novel building construction and a novel method of making it.

It further comprehends novel wall, floor, ceiling and roof constructions.

Other novel features of construction and advantage will appear in the detailed description and the appended claims.

For the purpose of illustrating the invention, I have shown in the accompanying drawings preferred embodiments thereof which, in practice, will give satisfactory results. It is, however, to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and the invention is not limited to the exact arrangement and organization of these instrumentalities as herein shown.

Figure 1 is a perspective view of a building construction, embodying my invention.

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Figure 2 is a plan view of a roof construction.

Figure 3 is a sectional elevation.

Figure 4 is a perspective view of a staging.

Figure 5 is a perspective view of a wall construction with an exterior facing.

Figure 6 is a plan view at a floor level.

Figure 7 is a plan view of a tie in course at the bottom of a window level.

Figure 8 is a sectional elevation of a floor at the ground level.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings:

In carrying out my invention, I first pour a concrete foundation.

The foundation is indicated at 1 and has conical holes 2 into which reinforcing rods 3 are inserted. The holes 2 may be made by forms 4 similar in construction to a flower pot. The concrete foundation is allowed to set.

Turnbuckle jacks 5 are supported on the ground 6, and carry beams 7 on which a temporary floor 8 is laid.

I employ different types of wall blocks. Wall blocks 9 have two spaced apertures 10 extending through them from top to bottom, and are used in the regular courses of the wall.

Wall blocks 11 are used at a floor level and in addition to the apertures 10 they are provided with slots 12 which extend inwardly from the apertures and open through the top faces of the blocks. Floor blocks 13 have longitudinally extending slots 14 opening through their top faces. Reinforcing rods 15 are placed in the slots 14.

After the foundation has set, the first course of wall blocks 9 and 11 is laid and concrete is poured into the apertures and slots in the blocks to embed their reinforcing rods. If the ground floor is to be laid, the blocks 13 are placed in position with the reinforcing rods in their slots, and the concrete is poured into the apertures and slots and allowed to set.

Additional reinforcing rods 16 are placed in the apertures 10 and the laying of the wall courses with the blocks 9 may be continued to a ceiling or roof height. As the building up of the wall courses is continued, the concrete is poured into the apertures of the blocks and allowed to set.

An upper floor is formed the same as the ground floor, using the temporary floor of the jacks as a support.

At the bottom of the window levels, I preferably employ a tie in course as shown in Figures 1 and 7, using corner blocks 17 and intermediate blocks 18. The blocks 17 have spaced openings

19 which are connected by slots 20 which extend at right angles through such blocks to receive reinforcing rods 21 which also extend into the slots 22 in the blocks 18, which latter have apertures 23 to receive the reinforcing rods 16.

The tie in course at the roof is shown in Figure 2 where corner blocks 17 and intermediate blocks 18 are employed with their reinforcing rods. The roof is cemented and waterproofed.

When the concrete has set, a solid, stressed framework of reinforced concrete is provided within the blocks which now in reverse is supporting the insulating blocks.

The bearing partitions between the walls are built up in the same manner as the outer walls.

The non-bearing partitions are built up of the same material but of lesser diameter and smaller columns.

The walls may be routed out or grooved for the reception of electric wiring or plumbing.

The interior and exterior walls may be finished in any desired manner, for example they may be plastered or have stucco applied to them.

The reinforcing rods may be connected in any desired or conventional manner with each other to provide for the proper tie in of the floor, ceiling and roof reinforcement with those of the outer walls.

The blocks are machined to size and shape and may be cemented together as they are laid.

If desired, a facing 24 may be applied to the outer walls as shown in Figure 5 to interlock with fastening devices 25 carried by the wall blocks.

As shown in Figure 8, the insulating blocks for the ground floor are deeper than the floor blocks of the upper floors between opposite side walls and may extend a desired distance below them. The ground floor is supported on the foundation walls.

The lower horizontal line extending beyond the wall indicates the foundation line, and the upper line indicates the floor level.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A building construction, having the regular courses in its walls formed of rectangularly shaped, solid blocks of Foam Glass, machined to size and having spaced apertures opening through their tops and bottoms, the wall blocks at a floor level being formed of rectangularly shaped blocks of Foam Glass machined to size with apertures opening through their tops and bottoms to register with the apertures in the blocks of the regular courses and having slots extending laterally from their apertures and terminating above the bottoms of the blocks at a floor level, rectangularly shaped floor blocks having longitudinally extending channels opening through their tops, metal reinforcements in said apertures of the blocks of the regular courses, metal reinforcements in the channels of the floor blocks extending through said slots and into apertures of the blocks of the regular courses at opposite walls, and concrete embedding said reinforcements and bonded with said wall and floor blocks.

2. The construction specified in claim 1 having at the bottom of the window levels in its wall a tie-in course having intermediate blocks between opposite side walls with channels opening through their tops, and corner blocks having apertures to register with the apertures in the blocks of the regular courses and having channels opening from their apertures through their tops and ends to register with the channels of the intermediate blocks, and reinforcements in the channels of the intermediate and corner blocks of the tie course and embedded in concrete.

JOSEPH SLOBODZIAN.

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