July 13, 1926. 1,592,070

J. T. BLAKE

METHOD FOR FORMING BUILDING SLABS AND MOLD THEREFOR

Filed Nov. 26, 1924 2 Sheets-Sheet 1

Fig. 1.

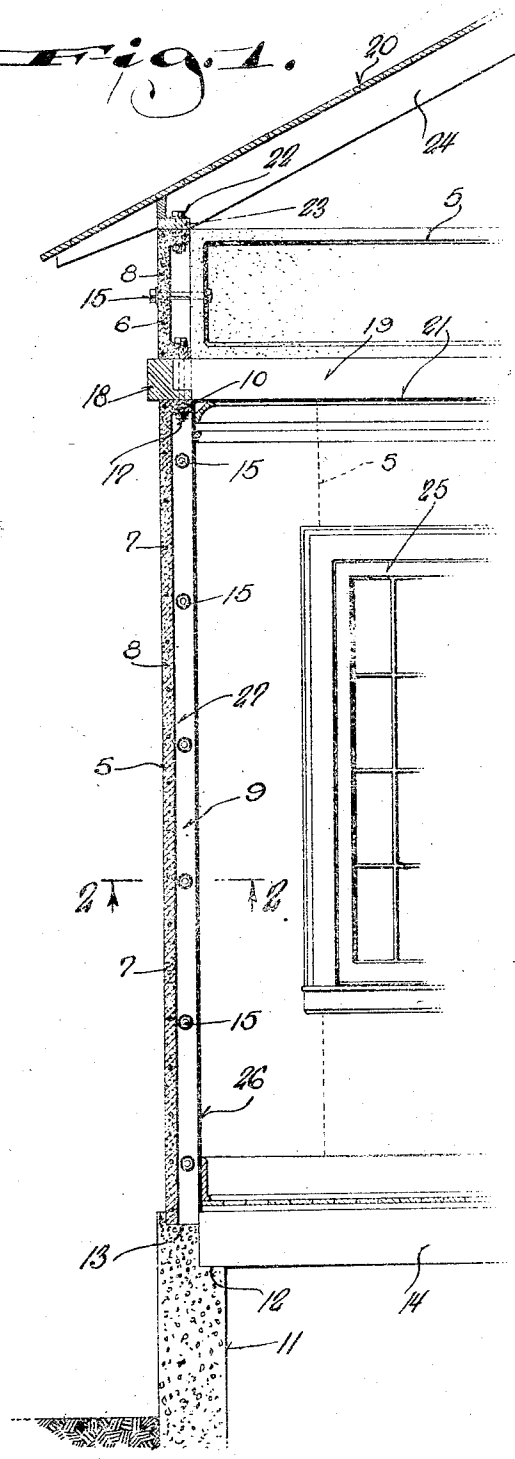
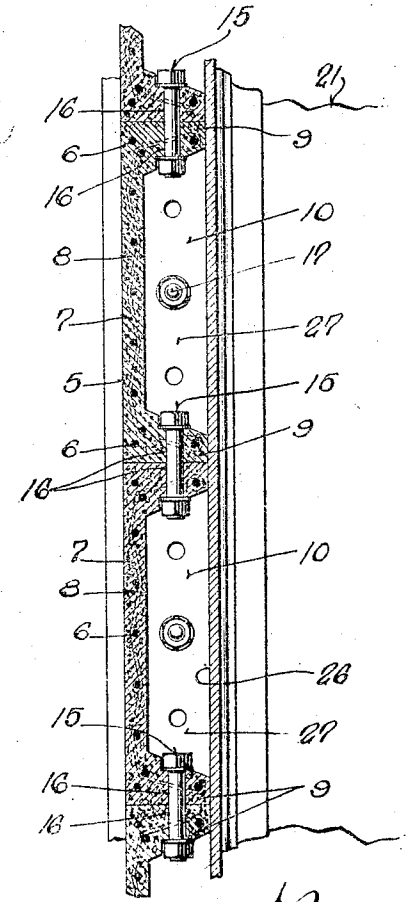


Fig. 2.



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Fig. 3.

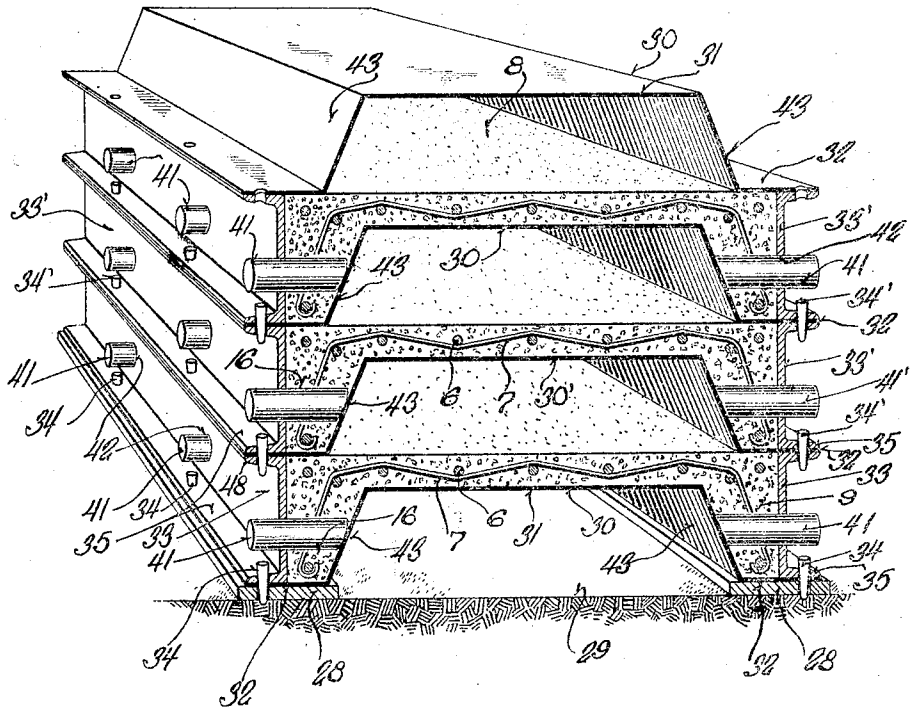
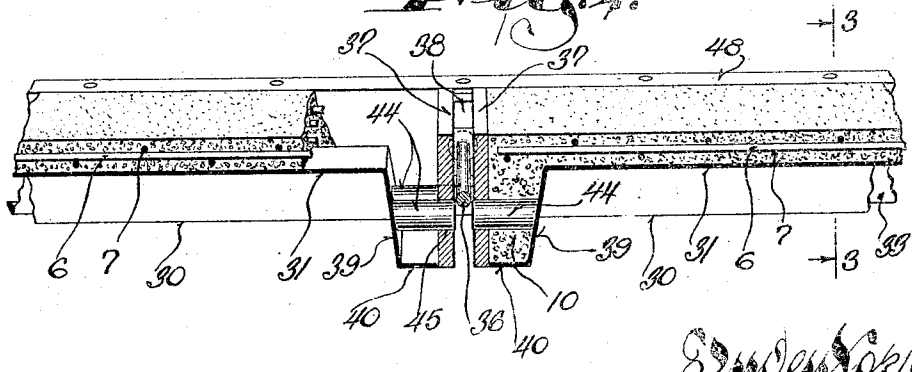


Fig. 4.



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UNITED STATES PATENT OFFICE.

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METHOD FOR FORMING BUILDING SLABS AND MOLD THEREFOR.

Application filed November 26, 1924. Serial No. 752,392.

This invention relates to certain new and useful improvements in building constructions and method for forming slabs used therein.

It is one of the objects of this invention to provide a building construction of substantial character and of various types of finish such as stucco, brick veneer, etc.

This invention has as another object the provision of an improved building construction wherein the necessity of high grade, skilled labor is greatly reduced, in that a large portion of the work may be done by unskilled labor.

Another object of this invention is to provide an improved method of forming slabs for use in constructing buildings wherein a number of slabs may be formed with a minimum of floor space.

And a still further object of this invention resides in the provision of an improved slab which is of very durable construction and which may be used in various ways.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a vertical sectional view through one wall of a building constructed in accordance with my invention;

Figure 2 is an enlarged, fragmentary sectional view taken transversely through Figure 1 on the plane of the line 2—2;

Figure 3 is a sectional view in perspective, taken through a tier of slabs in the molds, and

Figure 4 is a fragmentary view, partly in longitudinal section and partly in perspective, taken through the central portion of a mold.

Referring now more particularly to the accompanying drawings, in which like numerals designate like parts throughout the several views, the numeral 5 designates a monolithic slab preferably of concrete, reinforced by longitudinal rods 6 and transverse rods 7. The slab is longitudinally channeled to define an outer wall 8, side walls 9 and an end wall 10 closing the channel at one end. The slabs may be made in various lengths, although when used in the manner illustrated in Figure 1, practice has demonstrated approximately ten feet lengths to be the more desirable.

In the building construction illustrated in Figure 1 and employing monolithic slabs such as above described, the numeral 11 designates a foundation wall of any suitable character and stepped along its top surface, as at 12 and 13, to receive the floor joists 14 and the lower open ends of the monolithic slabs, respectively. The slabs 5 are set vertically with their lower open ends resting on the step 13, adjacent slabs being secured together by the bolts 15 passed through apertures 16 in the longitudinal or side walls 9 thereof.

The end walls 10 of the slabs are provided with apertures through which tie bolts 17 pass to secure a lintel beam 18 along the top thereof, the tie bolts 17 also passing through the adjacent ends of the ceiling joist 19 to secure them in position, if desired. When a building of the type illustrated in Figure 1 having a single floor is constructed, it is often desired to provide a considerable air space between the roof 20 and the ceiling 21, which may be obtained by placing several of the slabs horizontally along the lintel beams 18 to which they are secured by extending the tie bolts 17 upwardly through the apertures 16 in the lower side walls thereof. The upper or other side walls of the horizontally disposed slabs have bolts 22 passed through the apertures 16 therein to secure the usual rafter plates 23 in place, to which the roof rafters 24 are secured.

The windows and doors 25, but one window being shown, are secured in place by having their jams, not shown, confined between the slabs and the space below and above the jams filled with, brick, tile, concrete, or in

any other suitable manner. The inner wall of the building is formed by wall board, plaster, or the like 26 on the inner side thereof, leaving a dead air space 27, which is desirable.

The exterior of the slabs 5 may be left plain, may be suitably painted, or may be provided with a suitable veneer of brick, stucco or any other means, such as one skilled in the art may elect.

The above describes but one form of building construction, although it will be understood that this invention may be used in any other type of building. The slabs 5 may also be constructed in various forms and ways, although in Figures 3 and 4 I have illustrated the method of forming the same which has proven very economical in practice, both from the point of labor, materials and the amount of floor space required.

Referring now more particularly to Figures 3 and 4, the numeral 28 designates one or more base boards adapted to be placed on the ground or floor 29 and on which a metal form 30 is mounted. The form 30 is longitudinally channeled, as at 31, and has longitudinal side flanges 32, the channel 31 thereof being of the shape of the channel of the slabs and the flanges 32 being of a width greater than the width of the outer marginal edge of the side walls 9 thereof. After the metal form 30 has been placed in position, two beams 33, preferably of the channel type, are positioned on the flanges 32 with their inner smooth faces properly spaced from the channeled portion 31 of the form by dowels 34 passed through registered openings or apertures in the lower flanges 35 of the channel beams and in the flanges 32 and the base members 28. The beams are then braced against spreading by tie rods 36, but one being shown, extending across the channel beams 35 at a medial point and near the ends thereof, transverse end plates 37 being provided against which the beams 35 are drawn by the tie rods.

It has been found practical when slabs of approximately ten feet lengths are being formed to have the beams 35 of a length slightly in excess of twenty feet to permit the forming of two slabs at a time, in which case the inner ends of the slabs are defined by the transverse end plates 37, which are spaced to accommodate the tie rods 36 by spacer members 38, see Figure 4. The forms 30 have the inner ends of their channels 31 preferably closed by a wall 39 from which a flange 40 similar to the flanges 32 extend to the inner end plates 37, the space between the wall 39, flange 40 and adjacent plate 37 defining the end wall 10 of the slab.

With the frame thus set in position, core pins 41 are passed through openings 42 in the beams 33 to engage against the sides 43 of the channel portion of the form in order to form the openings 16, and core pins 44 are passed through openings 45 in the inner end plates 37 to define the openings through which the bolts 17 pass. With the forms thus set up, the reinforcing rods are positioned within the mold and the proper batch poured therein being leveled off by a straight edge or other means passed over the top edges or flanges 48 of the channel beams.

Immediately after the first block or blocks have been formed, a second form 30', similar to the form 30, is placed thereover without waiting for the previously poured slabs to set, its flanges 32 resting on the flanges 48 of the beams 33 and a pair of beams 33', similar to the beams 33, are placed thereon with their lower flanges 35 resting on the form flanges 32 and the flanges 48 of the lower beams. Dowel pins 34', similar to dowel pins 34, are then passed through registered apertures in the flanges of the form 30' and the adjacent flanges of the beams 33 and 33'. As the following steps are identical with those described in connection with the forming of the first layer or slabs, further description is deemed unnecessary.

As will be readily apparent, as many slabs may be formed in a single tier as may be desired, thus materially reducing the amount of floor space necessary. When the slabs have set, the forms are then removed beginning with the upper-most one and the slabs then properly cured before being used.

With the foregoing description taken in connection with the accompanying drawing it will be readily apparent to those skilled in the art to which an invention of this character appertains that I provide a building construction and method for forming slabs for use therewith which is practical, economical and which may be employed in connection with various types of buildings.

What I claim as my invention is:

1. A slab mold of the class described, comprising a support having positioned thereon a form member adapted to receive thereon material, material retaining walls positioned upon said member, and core pins passing through said retaining walls and supported by said form member to form openings in the finished product.

2. A slab or the like mold of the character described, comprising a support, longitudinal mold frames, a form member, longitudinal flanges extended laterally from the form member, the form member being adapted to be positioned on the support and the mold frames being disposed on the flanges of the form member and longitudinally with respect thereto, means securing the mold frames in proper relation with respect to the form member, a second form member adapted to be positioned over the top surface of the first-mentioned mold

frames after the slab has been poured, additional mold frames adapted to be secured on the flanges of said second form member and confining the same between it and the first-mentioned mold frames, means for securing said frames in proper position, and removable core pins extending through said mold frames to the form member to provide openings in the finished slabs.

3. A slab mold of the class described, comprising a support having positioned thereon a form member, a material retaining frame positioned upon said member and adjacent its marginal edges, said form member projecting upwardly within said frame and at an angle to its walls, and core pins passing through the walls of said retaining frame and resting upon the inclined walls of the form member to form openings in the finished product.

4. The herein described method of forming composition slabs which consists in placing upon a support a form member the central portion of which is struck upwardly, surrounding the same with a retaining wall and pouring therein a plastic composition, and supporting core pins in the space between the retaining wall and the central portion of the form member to form openings in the finished product.

5. A slab mold of the class described, comprising a support having positioned thereon the marginal flanges of a form member adapted to receive thereon material, material retaining walls positioned upon said flanges, and core pins passing through said retaining walls at spaced intervals to form openings in the finished product.

6. A slab mold of the class described, comprising a support having positioned thereon the marginal flanges of a form member adapted to receive material thereon, a material retaining frame positioned upon said flanges, said form member projecting upwardly within said frame, and core pins passing through the walls of said frame and lying flush adjacent the projecting portion of said form member to form openings in the finished product.

In testimony whereof I affix my signature.

JOHN T. BLAKE.