

May 21, 1935.

H. AMEZCUA

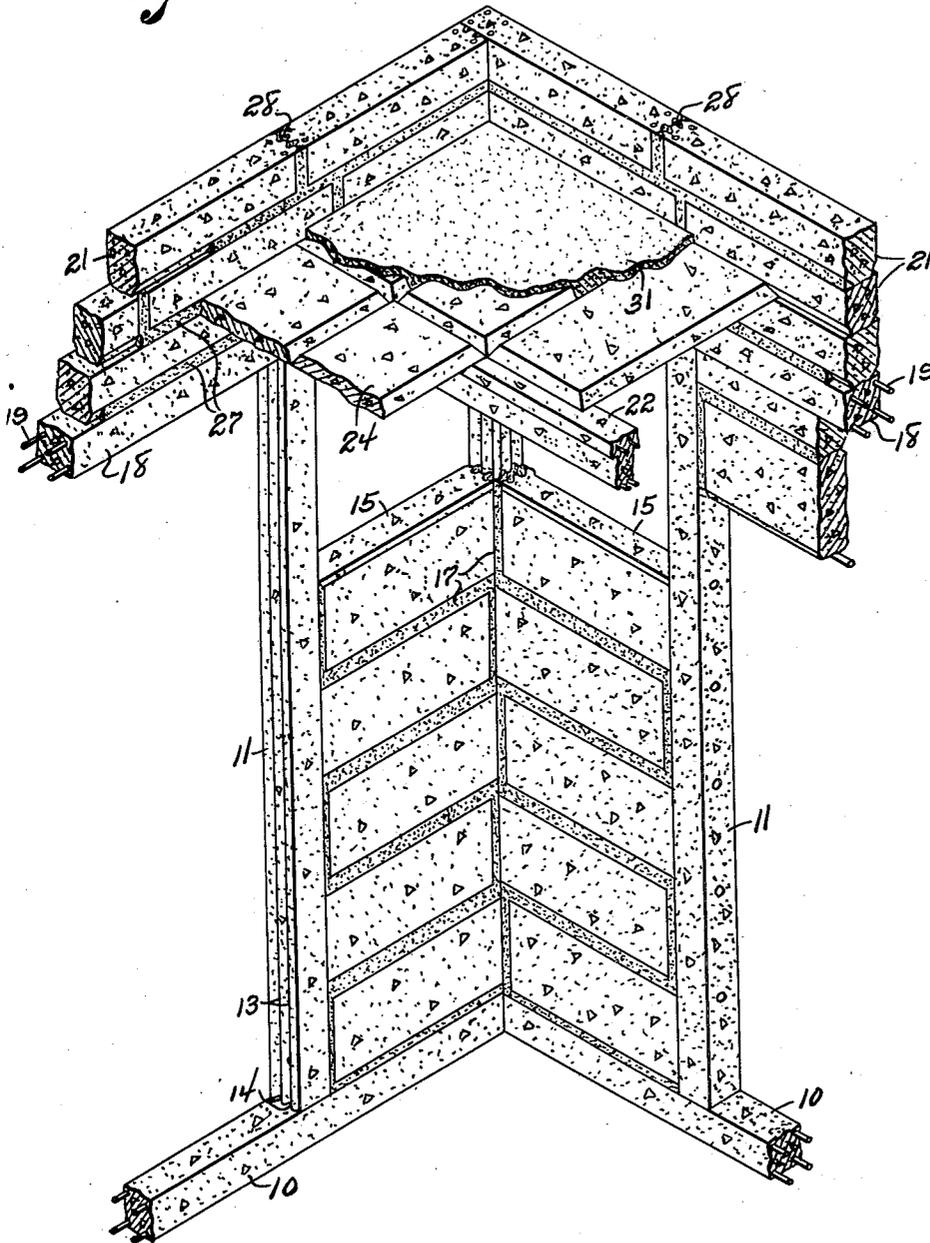
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CONCRETE BUILDING CONSTRUCTION

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Fig. 1.



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Fig. 4

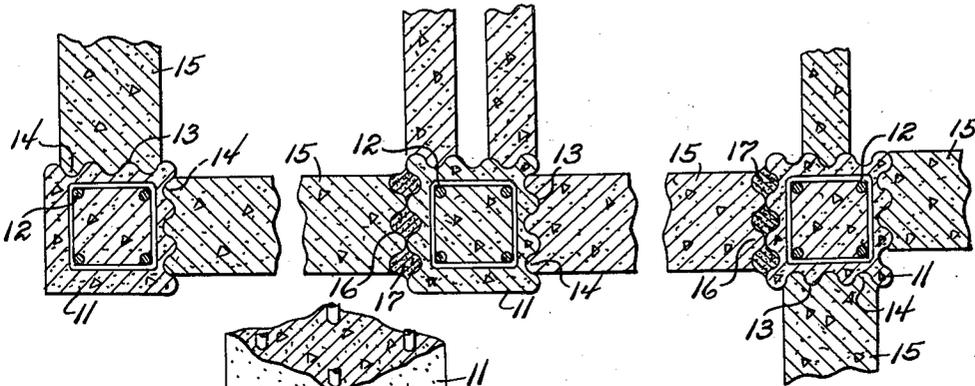


Fig. 6

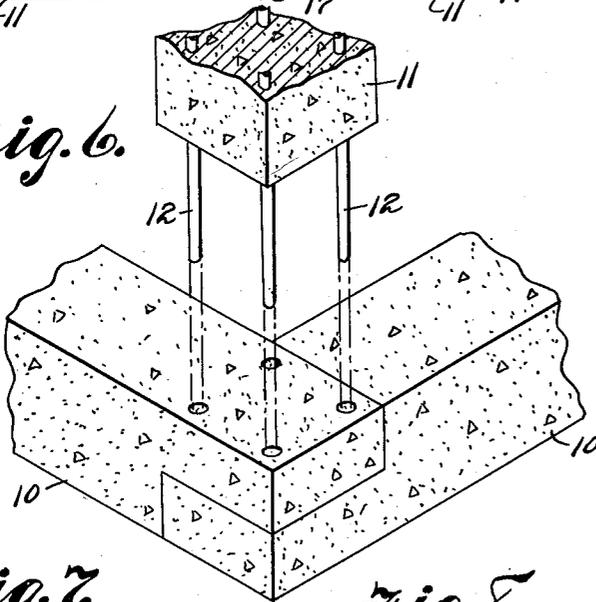


Fig. 5

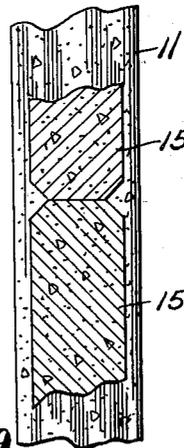


Fig. 7

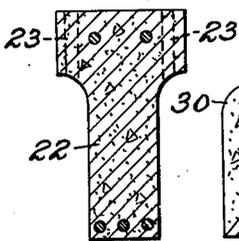


Fig. 8

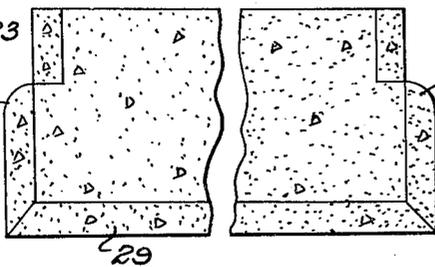
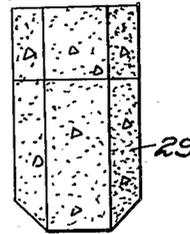


Fig. 9



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CONCRETE BUILDING CONSTRUCTION

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Application August 6, 1934, Serial No. 738,761

3 Claims. (Cl. 72-1)

The invention relates to a building construction and more especially to a system of construction by the use of which there is obtained an edifice of concrete, the reinforcement of which is continuous and in conformity with good engineering practice.

The primary object of the invention is the provision of a construction of this kind wherein it may be set up and completed without the use of bracing of any description, because as the construction proceeds, each and every part is self-contained and does not depend on outside agencies for stability and no lumber or wood is employed in the erection thereof.

Another object of the invention is the provision of a construction of this character, wherein the same is monolithic and fully reinforced concrete, the reinforcement being continuous and the units being precast.

Another object of the invention is the provision of a structure of this character, wherein the reinforcement results in continuity and once the frame of the structure is completed, the units being made light, there results a unification, thus rendering unnecessary bulk and weight and consequently waste of material and the erection of such structure being possible without skilled labor.

A still further object of the invention is the provision of a structure of this character which is extremely simple in its make-up, thoroughly reliable and efficient in its purpose, strong, durable, susceptible of assembly with the utmost ease and rapidity, withstanding the weather elements, and inexpensive to install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a fragmentary perspective view of a concrete construction in accordance with the invention.

Figure 2 is a view similar to Figure 1 looking from the outside of the structure.

Figure 3 is a fragmentary enlarged vertical transverse sectional view.

Figure 4 is a horizontal sectional view.

Figure 5 is a fragmentary vertical sectional view.

Figure 6 is a fragmentary exploded perspective view at a corner of the joist.

Figure 7 is a vertical sectional view through one of the tile supports.

Figure 8 is a side elevation of one of the assembly slabs.

Figure 9 is an end elevation thereof.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the reinforced concrete structure comprises a base including the required number of precast horizontally arranged base beams or sills 10, these being leveled and supported directly on the ground or by means of a sub-base of any adequate material, and each beam or sill has rod reinforcements longitudinally disposed and embedded therein, the meeting points of these beams or sills being joined in any suitable manner and such beams or sills being arranged with relation to each other according to the desired framing of an edifice.

Rising from the beams or sills 10 at the required distances apart are columns 11 of concrete, these being precast and having embedded reinforcements therein, these being indicated at 12. The columns have formed on certain faces thereof the longitudinally directed flats to provide alternate ribs 13 and channels or grooves 14, respectively, while between these columns are located the wall slabs 15, the columns and slabs being precast. The said slabs 15 are formed with the fluted ends 16, these matching the ribs and grooves 13 and 14 and being bound one with the other through the use of cementitious filling 17, this filling being also located between the slabs in their vertical arrangement. The columns 11 have their reinforcements carried into the beams or sills 10 to effect a continuity of reinforcement.

Upon the columns 11 are arranged the beams 18, these having rod reinforcements 19 longitudinally thereof, the beams at their ends being arranged with an overlap joint 20 and such beams being precast from concrete which is the material making up each and all of the units of the structure.

Carried upon the beams 18 are the precast spacer blocks 21, the reinforcements 12 of the columns being passed upwardly through the said blocks 21, as is clearly shown in Figure 3 of the drawings.

Carried by the beams 18 are substantially T-shaped tile supports 22, these being precast and having the passages 23 for the reinforcements 12 of the columns 11.

Upon the support are arranged the roof or floor tiles 24, these being precast and formed with beveled marginal edges 25. The tiles 24 at those edges next to the spacer blocks 21 fit with the beveled portions 26 of said blocks at the inner sides thereof and in the plane with the said tiles. The unfitted beveled portions 26 of the blocks are occupied by cementitious filling 27 and likewise the ends of the blocks next to each other have therebetween the filling 28.

Between the supports 22 and the spacer blocks 21 outermost thereto are arranged filler slabs 29, certain of these having end edgings 30 conforming in contour to the T-shaped supports 22, and the lower edges of these slabs 29 rest upon the beams 18, with their end edgings confronting the supports 22 and the spacer blocks 21 next thereto, the lay of the tiles 24 being shown in Figures 1 and 2 of the drawings.

Adapted to cover the tiles 24 is a layer of concrete 31, it being poured when in semi-solid state onto the tile to the required thickness and when hardened presents a smooth surface and a covering for said tiles.

Under the structure described there is obtained a truly monolithic edifice of fully reinforced concrete, the reinforcement of which is continuous notwithstanding the fact that there is used the precast forms or units in the erection of the edifice. The embedded reinforcements in the respective units will project therethrough into cavities in adjacent or meeting units of the structure and the meeting portions of these units are bound by cementitious substances.

What is claimed is:

1. A structure of the kind described comprising precast concrete base beams overlapping each other at their meeting ends and having reinforcements longitudinally therein, precast concrete columns rising from the base beams and having reinforcements projected thereinto, wall slabs arranged between the columns, fluted portions on the columns and slabs, certain of the fluted portions being interlocked with each other, cementitious filling between other fluted portions, upper horizontal beams carried by said columns and overlapped at their meeting ends, spacer blocks carried by the upper horizontal beams and having contracted portions forming ledges, T-shaped supports related with the said horizontal beams, tiles upon said supports and en-

gaged with the ledges formed by the spacer blocks, the reinforcements of the columns being engaged in the said supports, and beveled marginal edges on said tiles and interfitting the spacer blocks.

2. A structure of the kind described comprising precast concrete base beams overlapping each other at their meeting ends and having reinforcements longitudinally therein, precast concrete columns rising from the base beams and having reinforcements projected thereinto, wall slabs arranged between the columns, fluted portions on the columns and slabs, certain of the fluted portions being interlocked with each other, cementitious filling between other fluted portions, upper horizontal beams carried by said columns and overlapped at their meeting ends, spacer blocks carried by the upper horizontal beams and having contracted portions forming ledges, T-shaped supports related with the said horizontal beams, tiles upon said supports and engaged with the ledges formed by the spacer blocks, the reinforcements of the columns being engaged in the said supports, beveled marginal edges on said tiles and interfitting the spacer blocks, and a concrete covering over the said tiles.

3. A structure of the kind described comprising precast concrete base beams overlapping each other at their meeting ends and having reinforcements longitudinally therein, precast concrete columns rising from the base beams and having reinforcements projected thereinto, wall slabs arranged between the columns, fluted portions on the columns and slabs, certain of the fluted portions being interlocked with each other, cementitious filling between other fluted portions, upper horizontal beams carried by said columns and overlapped at their meeting ends, spacer blocks carried by the upper horizontal beams and having contracted portions forming ledges, T-shaped supports related with the said horizontal beams, tiles upon said supports and engaged with the ledges formed by the spacer blocks, the reinforcements of the columns being engaged in the said supports, beveled marginal edges on said tiles and interfitting the spacer blocks, and a concrete covering over the said tiles, the said reinforcements of the columns being extended through the spacer blocks.

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