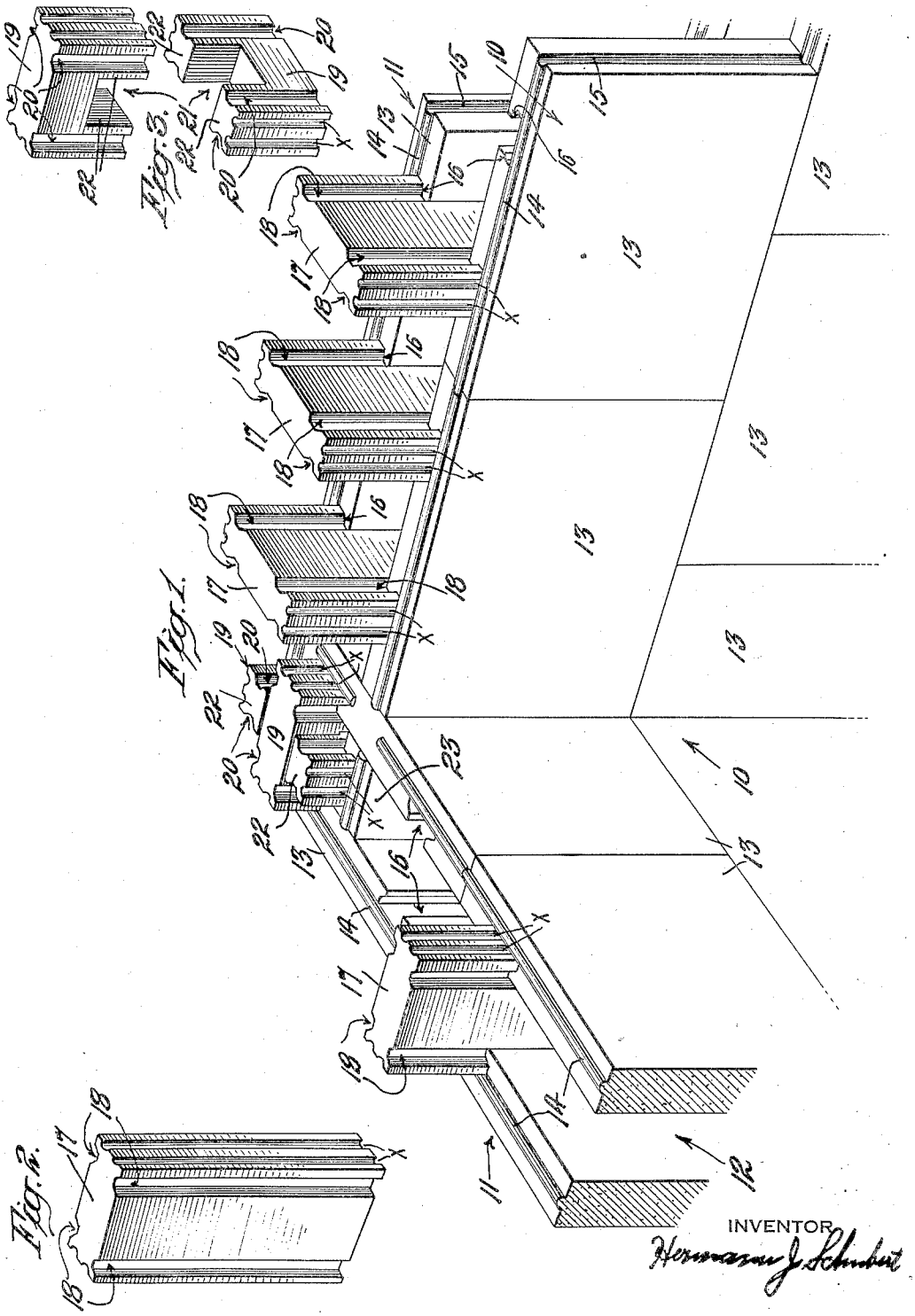
Nov. 1, 1938. H. J. SCHUBERT 2,134,894

WALL CONSTRUCTION

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Nov. 1, 1938. H. J. SCHUBERT 2,134,894

WALL CONSTRUCTION

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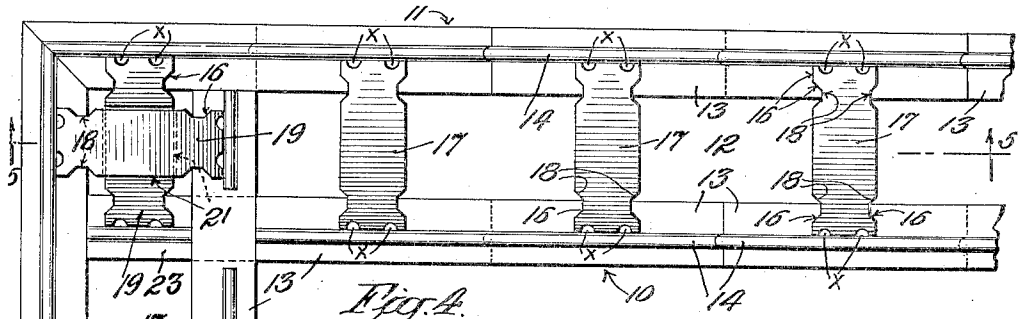
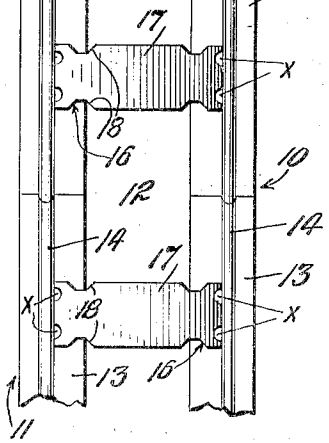


Fig. 4.



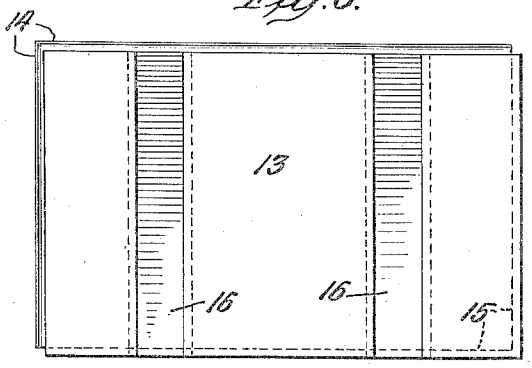


Fig. 6.

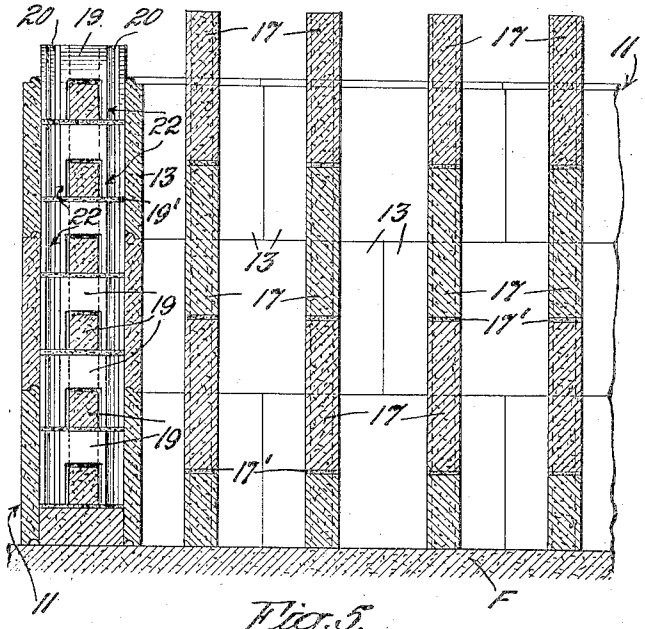


Fig. 5.

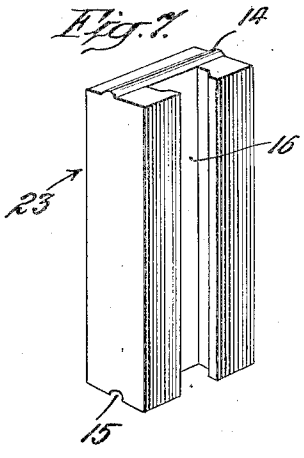


Fig. 7.

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Patented Nov. 1, 1938

2,134,894

UNITED STATES PATENT OFFICE

2,134,894

WALL CONSTRUCTION

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Application March 29, 1937, Serial No. 133,574

5 Claims. (Cl. 72—102)

This invention relates to the construction of walls for buildings and has for its object simplicity, cheapness, durability, strength and speed in construction regardless of weather conditions. But the supreme objective being the introduction of interlocking devices in the construction of walls, adapted to eliminate the use of mortar as a means of bonding one unit to each other vertically and horizontally.

The material consisting of cast or pressed interlocking tiles or slabs and interlocking uprights pre-manufactured. The tiles or slabs are used in my improved wall construction for the outer and the inner walls. The interlocking uprights, manufactured in suitable widths, are used for the spacing and interlocking of outside to inside walls and for the aligning and interlocking of all vertical superposed courses of slabs to a homogeneous structure.

The annexed drawings illustrate my invention.

Figure 1 is a perspective view of a corner section of my improved building construction.

Figure 2 is a perspective view of an interlocking upright.

Figure 3 is a perspective view of a two part interlocking corner upright.

Figure 4 is a horizontal sectional corner plan as shown in Figure 1.

Figure 5 is a cross cut of the vertical longitudinal corner section of Figure 4 on line 5,5.

Figure 6 is an innerside elevation of one of the slabs or tiles.

Figure 7 is a perspective view of a short slab.

The tiles or slabs 13 and uprights 17 are cast or molded in any desired manner from any species of concrete or other suitable composition employing ingredients that are proper to create these artificial stone units of a building wall. I claim a wide latitude of shape and material for their manufacture. They are provided as completed units, ready for use in my improved building construction.

Figure 6 shows one of these slabs 13 in detail. Its outer surface is preferably smooth, the inner surface is also smooth but having dovetailed vertical grooves 16 spaced in proper distance to each other being the means to anchor said slab 13 to dovetailed uprights 17 as shown in Figure 1 and Figure 4. These slabs 13 also having a tongue 14 on one longitudinal and on one transverse edge, while the other edges have grooves 15.

Figure 1 shows a plurality of these slabs 13 properly assembled to a corner of a wall as would be required in the construction of a building, with tongues 14 and grooves 15 interlocking on all edges with the corresponding tongues 14 and grooves 15 of adjoining slabs 13, fitting neatly together without mortar. The slabs 13 comprising the outer wall 11, are composed preferably of a composition of cement, sand and crushed stone and having a waterproof veneer of any desired color on its outer surface. The slabs 13 comprising the inner wall 10 are in shape and formation the same as slabs 13 for outer walls but its composition consists of cement and cinders or other suitable ingredients to produce a strong but soft porous wall to permit a finishing coat to be applied directly to the walls, eliminating furring and lathing, also permitting the fastening of trim and mouldings.

Figure 2 shows the interlocking upright 17 having dovetailed grooves 18 and half round vertical grooves X which serve as airchannels by which contact with walls are reduced to a minimum. A plurality of the interlocking uprights 17 are used in the construction of a wall, the height equals that of the slabs 13, the width depends upon the required thickness of the wall. The function of the uprights 17 are manifold. They are adapted to space and interlock the inner wall 10 to outer wall 11 by the insertion of dovetailed ends 18 into the dovetailed groove 16 in slabs 13 and to align and interlock superposed vertical, horizontal rows of slabs 13 to each other into a rigid wall.

Figure 3 is two sections of interlocking corner uprights 19 with legs 22 and space 21 between legs and dovetailed grooves 20 and half round end grooves X. Section 19 with legs 22 down, is placed crosswise into space 21 between legs 22 of lower section 19, sliding one into the other, interlocking both sections in form of a cross. In this manner they are placed in the space between the inner and outer walls at the corners as shown in Figure 1 and Figure 4 in superposed vertical series, engaging the dovetailed grooves 16 in outer and inner walls and dovetailed groove 16 in short slab 17, spacing and interlocking all parts firmly into a rigid corner.

Figure 4 is a horizontal view of a corner section as shown in Figure 1 with a plurality of slabs 13 in position forming the outer and inner wall of a corner, with uprights 17 placed between the walls spacing and interlocking outer to inner walls and with corner uprights 19 and short slab 23 in proper position spacing and interlocking corner slabs. It will be noted that one of the slabs 13 forming the inner corner is extending through air space between the walls abutting slab 13 in outer wall of opposite angle, while inner corner slab 13 in transverse angle is cut short abutting former slab 13, while short slab 23 placed between the walls takes the place of short cut slab 13 if such had continued. The placing of inner corner slabs 13 and short slab 23 is alternated in every superposed course.

Figure 5 is a crosscut of the corner section shown in Figure 4 on line 5—5 showing the relative positions of uprights 17 in Figure 2 and the

corner uprights 19 in Figure 3 when assembled in a wall in proper manner. It will be noted that the uprights 17, as shown in Figure 5 at the bottom row are only one half in size of height for the obvious reason to provide a starting point for the normal units of uprights 17 which lie in the vertical center of slabs 13. From this point the uprights 17, mounted one upon another with mortar between each unit, extend in vertical superposed rows from center to center of superposed vertical rows of slabs 13, engaging dovetailed grooves 16 thereby alining and interlocking all superposed vertical rows of slabs firmly to each other.

The corner uprights 19, Figure 3, are mounted in a similar manner but crosswise as shown in Figure 1 and Figure 4 in vertical series with mortar between joints, one section engaging outer and inner wall slabs 13, the other outer slab 13 and short slab 23. Figure 1 and Figure 4 illustrate plainly the constructions of the outer and inner corner of a building. It will be noted that in forming the inner corner, that slab 13 in one angle does not stop at the point of intersection but continues through air space to outer wall, whereas the slab 13 in the other angle stops at point of intersection, but is continued through air space by the use of short slab 23. This formation is alternated in each superposed series. The portion of slab 13 extending through air space in the one angle and the short slab 23 in the other angle are the means to interlock outer to inner corner slabs. The corner slabs of outer walls are preferably mitered.

For the construction of a building a perfectly level footing must be provided. After setting up the cellar walls, the airspace of that portion lying below grade must be filled with rich concrete to produce a waterproof wall.

Having thus fully described my invention, what I claim is:

1. In the construction of buildings of hollow walls, composed of precast fluted dovetailed uprights of suitable lengths, placed vertically in horizontal rows upon a level footing course, spaced uniformly with dovetailed sides facing inwardly and outwardly and one row upon the other extending progressively through the full heights of the walls, of premanufactured slabs or tiles of suitable composition having tongue and grooves on their edges and dovetailed vertical grooves on inner surface; applied vertically in superposed horizontal staggered rows to the inner and outer sides of uprights with dovetailed grooves engaging dovetailed sides in uprights in such a manner that the joints in uprights will be in the center of a horizontal superposed row.

2. In the construction of hollow walls for buildings the combination of outer and inner walls, composed of a plurality of precast interlocking unit slabs, having tongue and grooves on the edges and vertical dovetailed continuous grooves on the inner surface, arranged in superposed horizontal staggered rows, of precast interlocking dovetailed starter uprights being one half of unit height placed between outer and inner walls engaging dovetailed grooves in lower half of first row of slabs, of precast interlocking dovetailed unit uprights mounted upon the starters and one upon another with mortar between the joints in vertical rows extending from starters to center of upper row of slabs and from center to center of superposed rows engaging dovetailed grooves in slabs, spacing and interlocking outer to inner walls and interlocking and aligning consecutive superposed rows of slabs and all adjoining slabs one to another.

3. In the construction of hollow walls for buildings the combination of outer and inner walls, composed of a plurality of precast interlocking unit slabs having tongue and grooves on the edges and vertical dovetailed continuous grooves on the inner surface, arranged vertically in horizontal staggered rows without mortar, outer walls slabs composed of waterproof concrete or composition, inner slabs composed of cinder concrete or other porous composition, of vertical air ducts between the walls, of interlocking dovetailed starter uprights between the walls engaging dovetailed grooves in lower half of first row of slabs of precast interlocking dovetailed unit uprights mounted upon the starters and one upon another with mortar between the joints in vertical rows, extending from starters to center of upper row of slabs and from center to center of superposed rows, engaging dovetailed grooves in slabs, spacing and interlocking outer to inner walls, and interlocking and aligning consecutive superposed rows of slabs and all adjoining slabs one to another.

4. In the construction of hollow walls for buildings the combination of outer and inner walls, composed of a plurality of precast interlocking unit slabs having tongue and grooves on the edges and vertical continuous dovetailed grooves on the inner surface placed vertically in superposed horizontal staggered rows without mortar, of precast interlocking dovetailed uprights between the walls mounted upon starters and one upon another with mortar between the joints in vertical rows engaging dovetailed grooves in walls, of air ducts between the walls, of a short slab having a dovetailed groove on the inner surface and a tongue on the upper and a groove on the lower edge, arranged at right angle between the walls and in line with intersecting inner corner slabs, of superposed interlocking sectional corner uprights arranged crosswise between walls at corners, one section engaging dovetailed grooves in outer and inner walls, the transverse section engaging groove in outer wall and groove in the short slab spacing and interlocking all corner forming slabs rigidly.

5. In the construction of building walls and corners the combination of outer with inner walls, composed of superposed interlocking dovetailed slabs of superposed interlocking dovetailed uprights between the walls, of an outer corner composed of premanufactured mitered slabs placed at the vertex or point of intersection of outer walls slabs, of an inner corner, composed of slabs emanating from point of intersection in one angle with slabs at the other angle emanating from the outer wall, transversing point of intersection, alternating in superposed sections, of a short slab having dovetailed vertical groove, tongue on upper and groove on lower edge arranged at right angle between outer and inner walls of interlocking dovetailed corner uprights, composed of two interengaging sections, arranged crosswise in corner space between inner and outer walls, engaging dovetailed grooves in outer and inner walls and dovetailed groove in short slab, spacing and interlocking all corners forming slabs rigidly.

HERMANN J. SCHUBERT.