A. G. HIGGINS.

HOLLOW CONCRETE BLOCK.

APPLICATION FILED FEB. 20, 1914.

1,148,228.

Patented July 27, 1915.

2 SHEETS—SHEET 1.

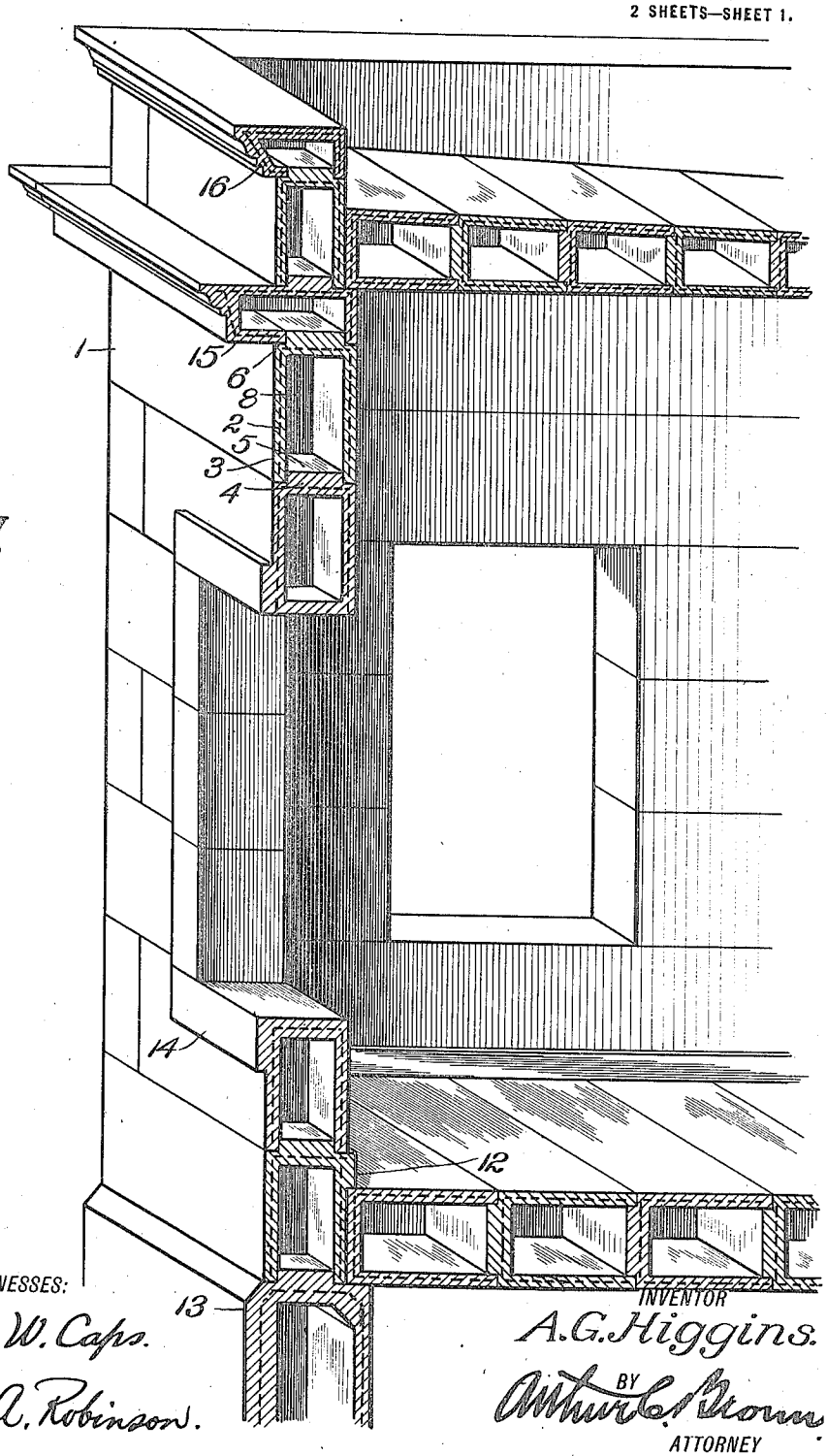


Fig. I.

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2 SHEETS—SHEET 2.

Fig. II.

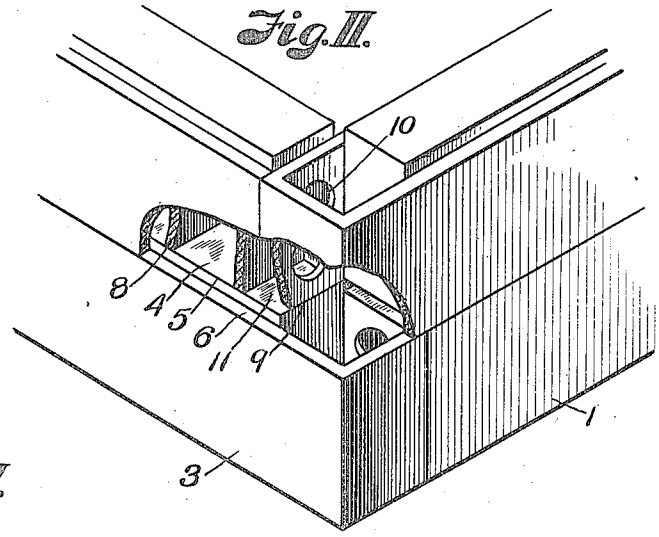


Fig. III.

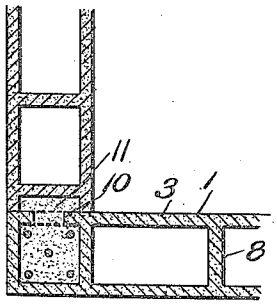


Fig. V.

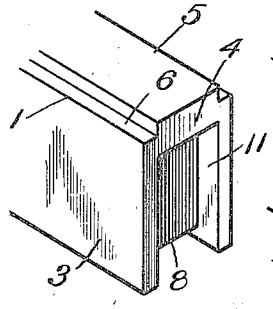


Fig. VI.

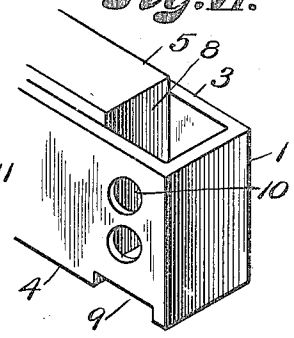


Fig. VII.

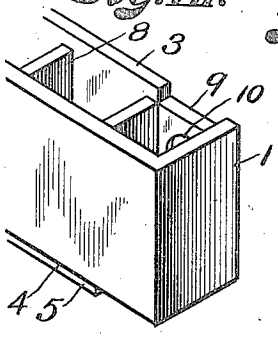


Fig. IV.

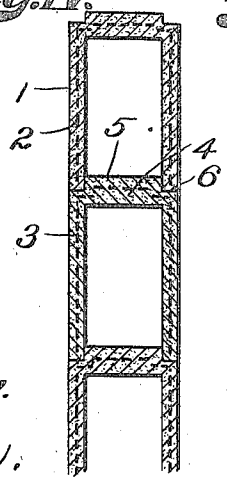
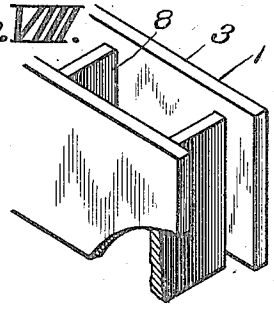


Fig. VIII.



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UNITED STATES PATENT OFFICE.

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HOLLOW CONCRETE BLOCK.

1,148,228. Specification of Letters Patent. Patented July 27, 1915.

Application filed February 20, 1914. Serial No. 819,965.

To all whom it may concern:

Be it known that I, ALBERT G. HIGGINS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Hollow Concrete Blocks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to concrete building structures, and more particularly to a hollow concrete building block for use in buildings, walls, or the like; the principal object of the invention being to provide a hollow concrete block, and to provide a block of that character, which may be keyed to a like abutting block. In accomplishing this object, I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:—

Figure I is a sectional perspective of part of a building, illustrating the use of my improvement in various parts of the same. Fig. II is a perspective view of a corner of a building, or the like, illustrating the interlocking arrangement of the blocks; parts of the blocks being broken away for better illustration. Fig. III is a horizontal section of the parts shown in Fig. II, but illustrating reinforcement in the corner channel. Fig. IV is a vertical section of a number of superimposed blocks. Fig. V is a detail perspective of a portion of one of the blocks showing the internal web spaced to adapt the block for use at the corner of a building. Fig. VI is a perspective view of the corner channel end of a block. Fig. VII is an inverted perspective view of the same. Fig. VIII is a perspective view of a modified form of block.

Referring more in detail to the parts:— 1 designates a block, or the like, which may be constructed or molded of concrete and provided with reinforcing 2 of any suitable character; the detail construction of the block comprising side walls 3 and a base 4; the latter being provided with a tongue 5, which is inset from the sides of the block to provide seats 6 of the same width as the sides of the block, so that the longitudinal edges of one block may set on the seats 6 of a lower block and be held in position thereon by the tongue 5.

In order that the blocks may be made of substantial length without weakening their structure, I prefer to provide the same with webs 8, which are arranged within the block channels at suitable intervals and are formed integral with the sides and base; the free end of each of the webs being set in from the edges of the sides, a distance equal to the depth of the tongues 5, so that when blocks are placed one upon another, the ends of the webs may seat on the tops of the tongues.

With some structures it may be possible, or advantageous, to eliminate the portions 9 of the tongue between the webs and allow the projecting ends of the webs to serve as keys, although in most cases it is advisable to extend the tongue the entire length of the block.

When the blocks are to be used in the wall of a building, or other structure, some of the blocks may be specially constructed for use as corner blocks, by spacing a web 8 from the closed end of a block, a distance equal to the width of the block, and thereby forming a square channel vertically therein, which may overlie a like channel in a lower block and thereby provide a vertical channel throughout the height of the building. When the blocks are to be used in this way, it is necessary to groove the side wall of the block at the under edge of the portion inclosing the square corner channel, so that when the grooved block is applied to the end of a block in the abutting side wall of the building, the grooved portion may overlie the end of the tongue in said abutting wall, and lock the two blocks together.

In order to further lock the abutting blocks, I preferably provide the grooved side wall with apertures 10, and arrange the web of the block that abutts against the apertured wall near the end to form a shallow chamber 11, so that when the corner is formed, the corner channel may be poured with cement, which fills the corner channel and flows through the apertures 10 into the shallow chambers 11 and effects a lock between the corner blocks.

In arranging the blocks in the wall, of a

building or the like, I preferably set the blocks with the open ends of their chambers down and the tongues at the top, so that water draining down the side of the wall may not enter the interior of the blocks.

It is apparent that this construction is adapted for use in floors or ceilings, as well as in the walls of a building, and that by providing the webs 8 I stiffen the blocks and strengthen the sides thereof. It is also apparent that the structure is not limited to ordinary blocks, and that a block containing the improvements, when used as the wall of a building, may have its face extended inwardly to form a base-board 12, or outwardly to form a belt course 13, or window frame rail 14, and that the block may be shaped to adapt it for use as a cornice 15, or coping 16; it being apparent that the tongues may be formed on the ends, as well as on the longitudinal edges of the blocks to adapt the structure for particular uses.

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

1. The combination of blocks arranged in superimposed tiers and comprising corner blocks having vertical end channels having the same cross sectional area, with one of the side channel inclosing walls provided with an opening, and other blocks having shallow end chambers adapted for communication with the said end channels through said openings with the said blocks alternating throughout the height of the structure, whereby a continuous vertical channel is formed in said structure and wherein the corner blocks are bonded to both of the walls, substantially as described.

2. The combination of blocks arranged in superimposed tiers and comprising corner blocks having vertical end channels, and raised tongues extending over the bodies of the blocks from the end channels, and the said corner blocks having apertures in their sides leading to the end channels, other corner blocks abutting against the apertured sides of the first named corner blocks, and having open end chambers communicating with the end channels of the first named blocks through said apertures, and superimposed blocks supported on the first named corner blocks, and having side members overlying the tongues, with a side of the channel end of the first named blocks grooved to receive the tongues of lower corner blocks.

3. The combination of blocks arranged in tiers and at an angle, each of said blocks having a tongue closing its upper edge, and some of the blocks having corner channels with the sides thereof provided with grooves in their under edges for receiving the tongues of lower blocks and with the said grooved sides apertured, and other blocks arranged in tiers in end abutment with the apertured sides of the corner channels, and having interior webs forming an end chamber in communication with the corner channel, and a cement seal filling the corner channels and extending through the aperture in the channel sides into the end chamber of abutting blocks.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT G. HIGGINS.

Witnesses:
R. F. THOMAS,
L. E. COATS.