Sept. 22, 1925. 1,554,405

H. E. CLOUSER

CONCRETE WALL CONSTRUCTION

Filed April 16, 1924

Fig. 1

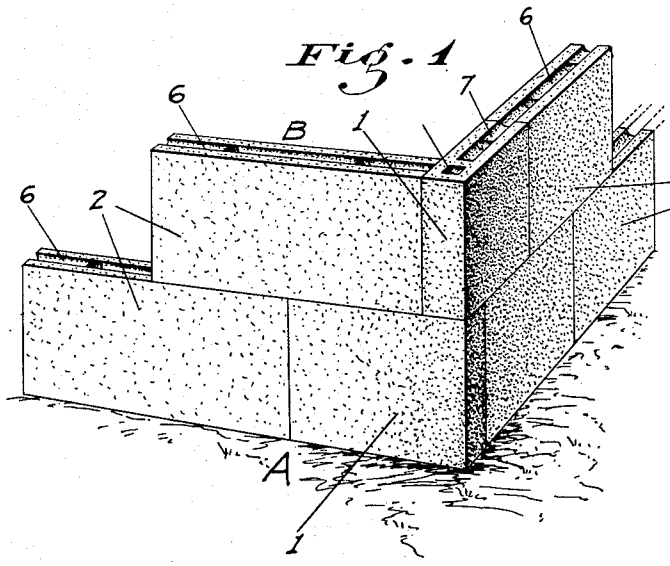


Fig. 4

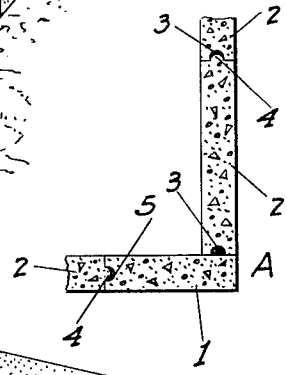


Fig. 2

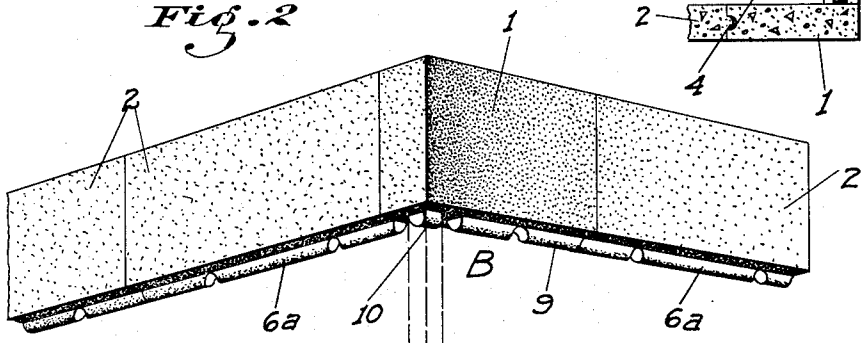
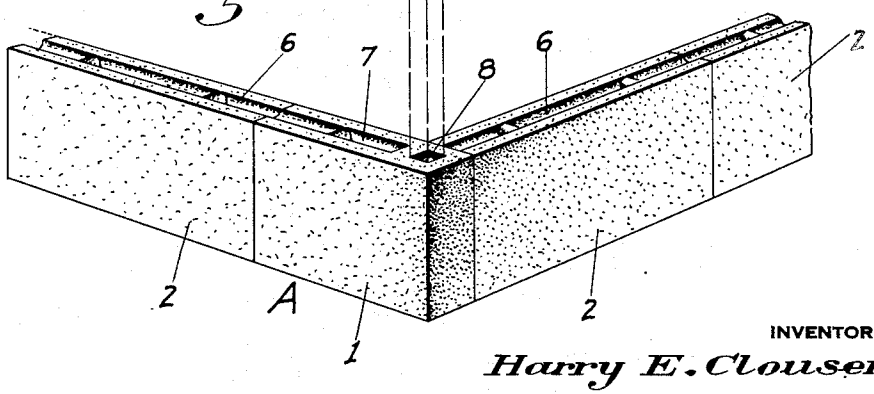


Fig. 3



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UNITED STATES PATENT OFFICE.

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CONCRETE WALL CONSTRUCTION.

Application filed April 16, 1924. Serial No. 706,800.

To all whom it may concern:

Be it known that I, HARRY E. CLOUSER, a citizen of the United States, residing at San Jose, county of Santa Clara, State of California, have invented certain new and useful Improvements in Concrete Wall Construction; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in the construction of walls built up of concrete blocks interlocked with each other against relative lateral and longitudinal movement, such as are shown for instance in Patent No. 1,374,356 dated April 12th, 1921, and Patent No. 1,465,421 dated August 21st, 1923.

It is a simple matter to interlock or tie the blocks in each wall together, and to arrange the blocks so that the blocks of each horizontal row of the wall are in centrally offset relation, in a longitudinal plane, to the blocks of adjacent rows. To similarly tie two right angled walls together at their ends, or in other words at a corner, presents however a different problem.

The principal object of my present invention therefore is to produce cooperating corner block construction of simple form, using only a single special form of block, so constructed and arranged with respect to the main blocks of the two walls, that said walls will be positively interlocked from top to bottom, said corner blocks being arranged to be disposed in staggered vertical alinement so that no continuous joint line between the blocks is had, thus providing a very strong corner construction.

Another object is to proportion the length of these corner blocks relative to that of the main wall blocks in such a manner that the centrally offset alinement of the main blocks of different rows, as above specified, is not interfered with.

These corner blocks are also made flat, avoiding the use of right angled corner blocks as shown in Patent No. 1,374,356 mentioned above, which blocks are relatively hard to make, and are hard to stack for shipment or storage.

A wall constructed with my present form of block can be readily set up with unskilled labor without danger of the workers making mistakes in the laying of the blocks, so that building operations are very inexpensive.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicated corresponding parts in the several views:

Fig. 1 is a perspective view of a wall-corner built with my improved form of corner blocks.

Figs. 2 and 3 are perspective views of cooperating corner blocks of adjacent rows, positioned in spaced relation to show the interlocking features.

Fig. 4 is a sectional plan of the blocks at a corner.

Referring now more particularly to the characters of reference marked on the drawings, the numeral 1 denotes the special block used in my corner construction, only this one block being any different in form or size from the main wall blocks 2, while the height of all said blocks is the same.

In one course or row A, a block 1 overlaps and abuts against a block 2 at one end of the later to form a right angle corner therewith, so that the outer face of the block 1 and the corresponding end edge of the block 2 are in alinement.

The end faces of the block 2, and of all the other main blocks, are grooved as at 3 at one end and tongued as at 4 at the other, so that the various main blocks in a course will be tied together against lateral deflection. Said block 2 is alined with respect to the block 1 so that the groove 3 in the former is adjacent the block 1, thereby providing ample space between the two blocks for the necessary bonding material such as cement or the like, while allowing them to have a close fit against each other.

The end face of the special block 1 farthest from the corner is grooved as at 5 to receive the tongue 4 of an ordinary main block 2 abutted thereagainst in alinement therewith, this main block being of course followed by others of the same kind until another corner is reached. The length of the special block 1 is equal to half the length of a main block plus the thickness of the latter, for the purpose as will hereinafter appear.

The upper faces of the main blocks 2 are longitudinally grooved in a certain spaced manner, as shown at 6, and similarly tongued as at 6^a on their lower faces. The upper faces of the blocks 1 are similarly grooved as at 7 from their ends alined with the main blocks to a point in alinement with the inner face of the block 2 which makes the corner with said block 1. An additional short groove or socket 8 is formed in the block 1 at right angles to the grooves 7 and in alinement with the groove 6 in the abutted corner forming block 1, as shown in Fig. 3.

In the course of blocks B above that just described, the position of the corner blocks 1 relative to that of the row below is reversed. In other words, the block 1 of course B is placed at right angles to the block 1 in course A below and extends to the outer side face of said lower course block 1, as shown in Fig. 1, resting both on said lower course block 1 and on the adjacent block 2 and alined with the latter. The adjacent corner block 2 of course B abuts against the inner face of the corresponding block 1 and rests both on the block 1 in course A and on the block 2 in said course alined with the block 1 thereof.

The corner blocks 1 being all of the definite length hereinbefore specified, the main or common length blocks-abutted thereagainst in the particular manner set forth, will overlap each other for exactly half their length, as will it is thought be evident without further explanation.

In this manner, the other main blocks of each course, throughout the extent of the wall, will also be maintained in a central offset staggered relation to the blocks of adjacent courses.

To cause the corner blocks 1 of adjacent courses to be interlocked with each other, the under or bottom faces of each block 1 is tongued as at 9 to cooperate with the corresponding portions of the grooves 6 of the block 2 on which said block 1 rests. Said block 1 has also an additional short tongue or knob 10, alined with but spaced from the tongues 9 (see Fig. 2) which knob is positioned to seat in the recess 8 of the block 1 below.

The main cooperating tongue and groove members of the different blocks being so arranged that no longitudinal movement between the blocks in a wall can be had, and the additional end cooperating knobs and recesses on the blocks 1 forming a positive lock between said blocks, the two walls are securely held together and no parting of said walls at the corner line can take place.

In a succeeding course, the block 1 thereof would be parallel to and positioned the same as the block 1 in the first row, and so on in alternate or staggered arrangement from top to bottom of the wall, all the corner blocks 1 being locked to each other both at top and bottom, thereby making a very strong corner.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A corner construction for walls comprising, in each course, a pair of blocks of equal height arranged to form a corner with the end of one block abutting against the inner face of the other block; one of the corner blocks on the succeeding course above extending from the outer face of the second named block in the lower course along the first named block in said course, and means formed integral with the blocks between the horizontally abutting faces of the three blocks for locking the blocks in the lower course against both lateral and longitudinal movement relative to each other and to the block above.

2. A corner construction for walls comprising, in each course, a pair of blocks of equal height arranged to form a corner with the end of one block abutting against the inner face of the other block; one of the corner blocks on the succeeding course above extending from the outer face of the second named block in the lower course along the first named block in said course, said first named block having a longitudinal groove in its upper face, interrupted intermediate its ends, and the other block in the same course having a socket alined with the groove in the first named block; a longitudinal tongue on the under face of the upper block composed of separated sections to fit into the interrupted groove of the block below, and a knob on the upper block beyond the tongue disposed to fit into the socket of the other block in the lower course.

3. A corner construction for walls comprising, in each course, a pair of blocks of equal height arranged to form a corner with the end of one block abutting against the inner face of the other block; one of the corner blocks on the succeeding course above extending from the outer face of the second named block in the lower course along the first named block in said course, said first named block having a longitudinal groove in its upper face, interrupted intermediate its ends, and the other block in the same course having a similar groove extending lengthwise from the plane of the inner face

of the other lower-course block, and a socket spaced from the groove and alined with the groove in said other block; the cross-sectional shape of the socket in a plane parallel to the groove with which it is alined being the same as that of said groove, a longitudinal tongue on the under face of the upper block to fit into the groove of the first named block below, and a knob on said upper block beyond and alined with the tongue and of the same cross sectional shape as said tongue, adapted to fit into the socket.

In testimony whereof I affix my signature.

HARRY E. CLOUSER.