

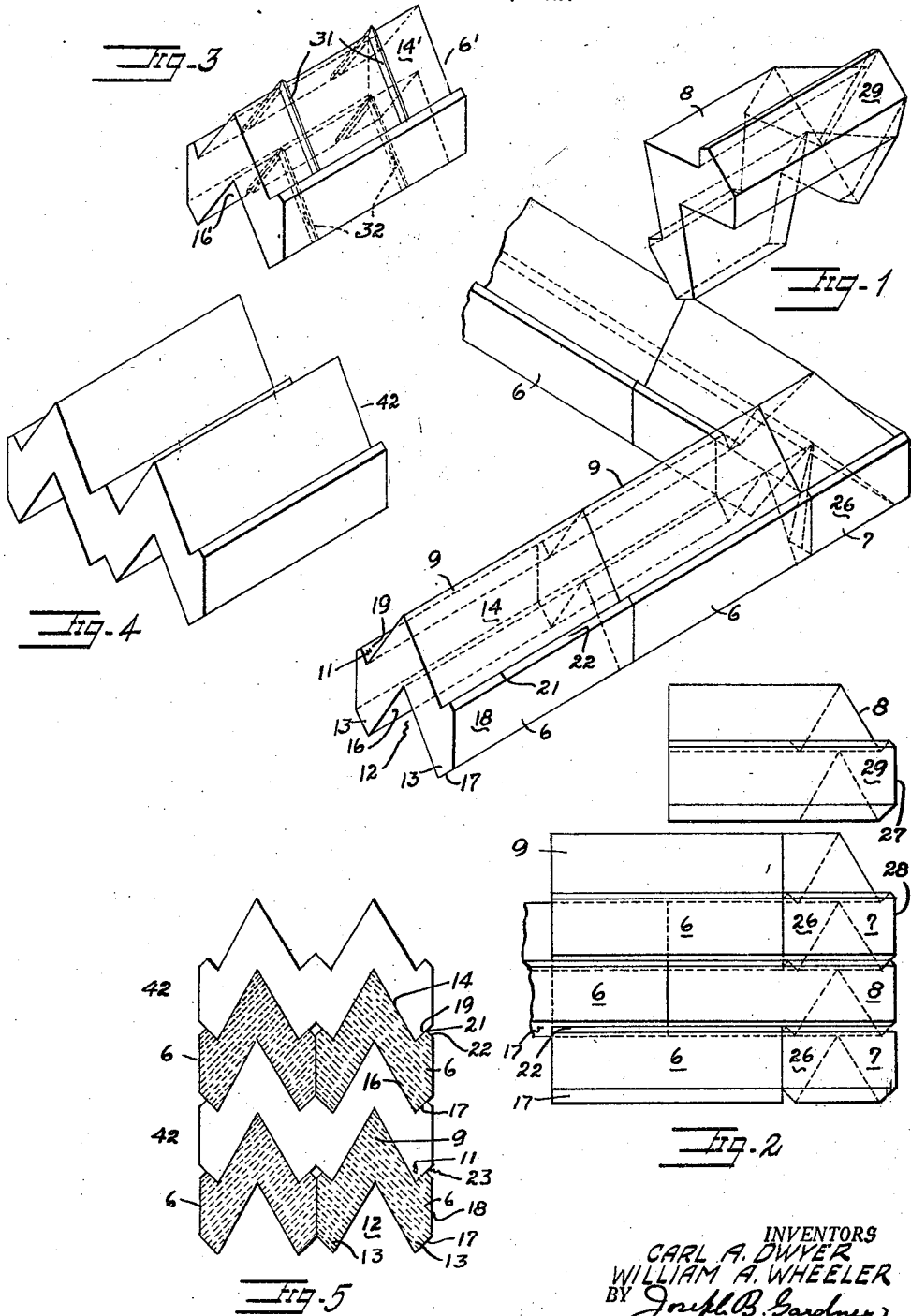
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BUILDING BLOCK

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BUILDING BLOCK.

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Our invention relates to blocks for use in building wall structures.

An object of the invention is to provide blocks of the class described which are so interlocked in a structure built thereof that they will be held together without the use of a binding medium such as mortar or the like.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adopted within the scope of the invention as set forth in the claims.

Referring to said drawings,

Figure 1 is a fragmentary perspective view showing a course of the blocks at a right corner, with a corner block of the next course disposed above said corner in spaced relation therefrom.

Figure 2 is a fragmentary face view of several courses of the side of a wall formed with the blocks and including a right corner, a corner block being also shown disposed in unseated relation above the upper course.

Figure 3 is a perspective view of a modified form of the block.

Figure 4 is a perspective view of a form of the block for use in binding walls built with more than one row of the blocks.

Figure 5 is an end sectional view of a wall disclosing the manner in which the block shown in Figure 4 is utilized.

One of the principal items in the cost of erecting walls of blocks or brick structure has heretofore been encountered in the making and placing of bedding mortar between the blocks. In accordance with our invention, however, a building block is provided which may be used to erect a wall structure without necessitating the use of mortar or other binding material, whereby much time will be saved and a marked economy result. And since the blocks are to be held together without the use of a separate binding medium, they are made of a special interlock-

ing form whereby they are arranged to nest together in a structure in such a manner that displacement of the individual blocks from the structure is prevented, and the load of the structure is evenly distributed through its members.

As herewith particularly disclosed, the device of our invention is incorporated with blocks 6, and special corner blocks 7 and 8, which latter are arranged for use in constructing the corners of walls formed with the blocks 6. One bearing face of each block 6 is formed with a rib or tongue 9 extending longitudinally and centrally of the block for the entire length thereof and with like grooves 11 adjacent and parallel to the tongue at either side of its base, while the other bearing face is formed with a groove 12 and ribs 13 which are respectively complementary to the rib 9 and grooves 11 whereby the blocks may be nested together in superposed relation with the entire surfaces of the ribs and grooves in bearing contact. Preferably, and as here shown, the various surfaces defining the different ribs and grooves are plane and such ribs and grooves are of V section. Furthermore, the inner walls of the grooves 11 are coterminous and coplanar with the adjacent walls of the ribs 9 whereby such surfaces form part of a common surface 14, it being noted that the corresponding surfaces of the groove 12 and ribs 13 define surfaces 16 for engagement with the surfaces 14. The outer surfaces 17 of the ribs 13 are obliquely disposed to and terminate at the side faces 18 of the blocks, while the outer surfaces 19 of the grooves 11 extend parallel to the surfaces 17—preferably, and as here shown, the surfaces 19 terminate inwardly of the block faces 18 at an edge 21 from which edge surfaces 22 extend angularly to the faces 18, such latter surfaces being arranged to define with the planes of the faces 18 angles which are equal to those defined by the surfaces 17 with said planes. In this manner an isosceles groove 23 is arranged to be defined at the juncture of superposed blocks whereby an ordinary mortar joint is suggested on the wall face and sharp outer block edges are avoided.

By disposing the various pairs of surfaces which define the ribs and grooves in like an-

gular relation to vertical planes through the vertices of such ribs and grooves, as is here- with particularly shown, a structure results which, in transverse cross-section, is symmet- 5 rical to a plane extended vertically through the edge of the central rib. In this manner, the blocks are reversible so that either face 18 may be disposed in a given wall face. Furthermore, the angles of the ribs and 10 grooves are preferably not less than about 70 degrees and may in some cases be advantageously made as great as about 100 de- grees—it being noted that the tendency of a rib 9 of one block to wedge open the block 15 in which it engages is counteracted by the engagement of the ribs 13 of the latter block in the grooves 11 of the former. In this manner, a maximum engagement of the bear- ing surfaces of superposed blocks is effected 20 to insure an even distribution of the load through the blocks of different courses.

The corner blocks 7 and 8, it will now be noted, are of the same length as the blocks 6 and are also provided with ribs and grooves 25 corresponding to those of such blocks, but each of the ribs and grooves of the former blocks are generally L shaped, with a major portion thereof extending longitudinally of 30 the block and with the remaining portion thereof making the desired corner angle with the first portion and terminating at a side face of the block, it being noted that the lat- ter portions extend oppositely with respect to the former portions in the different blocks 7 35 and 8. In this manner, rectangular end faces 26 and 27 are provided on the blocks 7 and 8 whereby, in combination with the adjacent side faces 28 and 29 respectively, the desired corner is defined and the joint is at the same 40 time completely concealed. It will now be noted that in the present embodiment of the invention, the blocks 7 and 8 are of the same length as the blocks 6 and are twice as long 45 as they are wide so that those of successive courses may be disposed in cross-lapped relation at a corner in the same manner in which ordinary rectangular brick are disposed at a corner, it being noted that the corner proper 50 is thus built up of halves of the blocks 7 and 8 and that the half-lapping of blocks in the successive courses terminating at the corner is thus provided for. And it will be further noted that the inter-engagement of ribs and grooves of the successive blocks 7 and 8 now 55 provided interlocks the wall ends together at the corner.

In the embodiment of the block 6 disclosed in Figure 3, means are provided for prevent- 60 ing the longitudinal shifting of the blocks over each other, and as there shown, each block 6' is provided with tongues 31 formed on the surfaces 14' thereof and grooves 32 in their surfaces 16', such tongues and grooves of a block being correspondingly positioned 65 so that successive blocks may be nested to-

gether with a tongue 31 of one registered in a groove 32 of the block against which it bears. To provide for the half-lapping pre- viously referred to, the tongues 31 and 70 grooves 32 are disposed at distances from the block ends equal to one-fourth of the length of the block.

When a wall is to be constructed with more than one row of blocks, it is obviously desir- 75 able to tie the rows together, and means are provided for effecting such tying. As here shown, such means comprises the use of a block 42, which block is formed as though a pair of the blocks 6 or 6' are fixed 80 together at a common side face. In this man- ner, a tying means is provided which also provides a pair of blocks in the structure and may be readily placed in operative position, such means cooperating with the tie provided 85 at the corners to produce a particularly rigid structure.

It will be noted that the blocks now de- scribed may be made of any suitable mate- rial, such as a brick clay or cement composi- 90 tion, and that the exposed side surfaces thereof may be finished in any desired man- ner.

We claim:

1. In a building block, a bearing face pro- 95 viding a rib defined by angularly related plane surfaces and like grooves defined at opposite sides of said rib by angularly re- lated plane surfaces, and a second bearing face providing a groove and ribs respectively 100 complementary to said first rib and grooves, the height of the rib of said first face being greater than the depth of the grooves of said face with respect to a plane defined by the top edges of said grooves.
2. In a building block, a central longitudi- 105 nal rib provided on a bearing face thereof, and like ribs at either side of the first ribs, said last ribs terminating at side faces of the block and being of less height than the former rib and cooperating therewith to de- 110 fine grooves at the base of the latter.
3. In a building block, a central longitudi- nal rib provided on a bearing face thereof, like ribs at either side of said first rib hav- 115 ing oblique outer side faces terminating at the longitudinal side faces of the block, a central longitudinal groove provided in the other bearing face of said block and comple- mentary to said first rib, and bearing faces 120 extending obliquely from the edges of said groove in parallel relation to the inner faces of said side ribs and terminating at said lon- gitudinal side faces of the block.
4. In a wall structure, like blocks arranged 125 in adjacent courses and each having a cen- tral longitudinal rib on a bearing face there- of, like ribs at either side of said first rib having oblique outer side faces terminating at the longitudinal side faces of the block, a central longitudinal groove provided in the 130

other bearing face of said block and complementary to said first rib, and bearing faces extending obliquely from the edge of said groove in parallel relation to the inner faces of said side ribs and terminating at said longitudinal side faces of the block; and binder blocks composed of integrally related portions each shaped as are said first blocks and engaged in and between adjacent courses of said first blocks. 10

In testimony whereof, we have hereunto set our hands at Oakland, California, this 7th day of January, 1927.

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