D. McINTYRE.

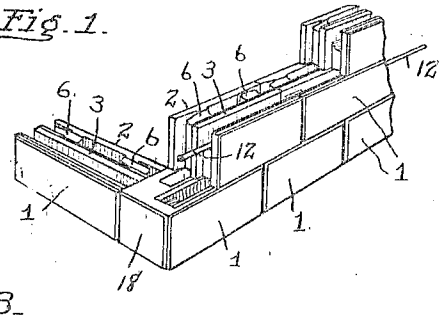
CEMENT BLOCK CONSTRUCTION.

APPLICATION FILED JUNE 27, 1912.

1,084,098.

Patented Jan. 13, 1914.

Fig. 1.



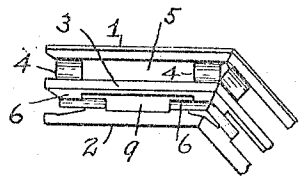
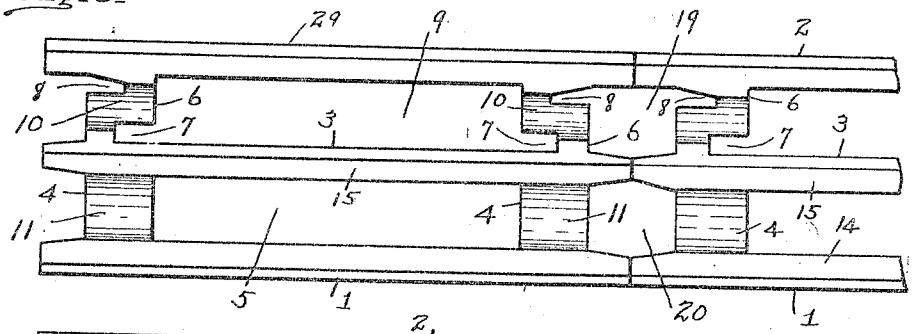


Fig. 2.

Fig. 3.



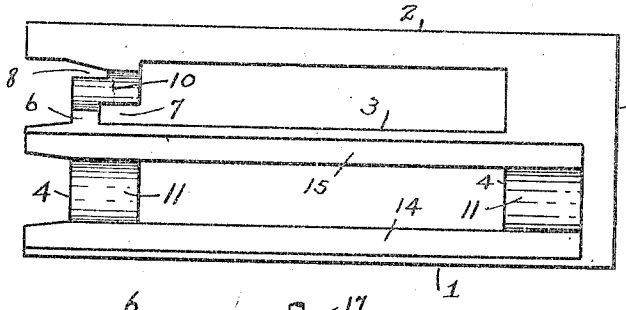


Fig. 4.

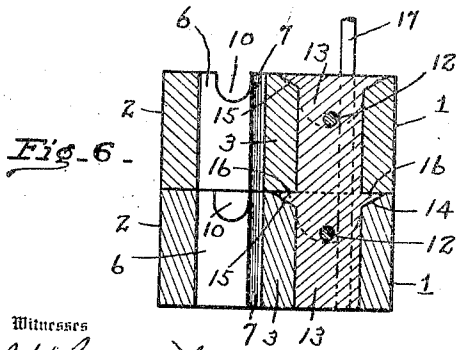


Fig. 6.

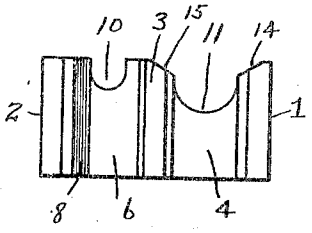


Fig. 5.

Witnesses

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CEMENT-BLOCK CONSTRUCTION.

1,084,098. Specification of Letters Patent. Patented Jan. 13, 1914.

Application filed June 27, 1912. Serial No. 706,152.

To all whom it may concern:

Be it known that I, DAVID McINTYRE, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Cement-Block Construction; 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 characters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in hollow building blocks designed for the erection of walls, and consists in the construction and arrangement of parts hereinafter more fully set forth and claimed.

The object of the invention is to produce a hollow building block wherein provision is made for preventing to a great extent the passage of moisture through said block, and wherein the arrangement is such as to enable a wall formed of said blocks to be securely bound together by pouring cement or mortar through registering vertical passages therein, and for tying the blocks of the wall together by the use of longitudinal and transverse reinforcing rods.

The above object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a fragmentary view in perspective of a portion of a wall formed of my improved blocks. Fig. 2 is a fragmentary view in plan, showing the manner of forming an angle in the wall other than a right-angle. Fig. 3 is a plan view of one of the intermediate blocks, also showing in plan a portion of the succeeding block laid end to end with respect thereto. Fig. 4 is a plan view of one of the corner blocks. Fig. 5 is an end elevation of one of the intermediate blocks. Fig. 6 is a sectional view through a portion of a wall laid up of said blocks.

Each of the blocks, as shown in Fig. 3, comprises an outer face 1, an inner face 2, and a longitudinally extending partition 3. The portion 1 of the block forming the outer face thereof is connected to the partition 3 by the integral transverse members 4 extending between and connecting the ends of said parts, forming a vertical opening 5 extending through the block. The inner face portion 2 of the block is connected at its ends with the partition 3 by the zigzag transversely extending members 6. These members, it will be seen, have their points of connection with the partition 3 and the inner face portion 2 offset, leaving next to the partition 3 an air space 7, and next to the inner face portion 2 an air space 8. By this arrangement all of two sides of the connecting members 6 and a portion of the remaining sides are exposed to the circulation of air, whereby any moisture entering the member 6 will become to a great extent evaporated before reaching the inner face portion 2 of the block. By connecting the partition 3 and the inner face portion 2 through the medium of the transverse members 6, an air space 9 is formed, which, when the blocks are laid in a wall, as shown in Fig. 1, form vertical air flues for the circulation of air. It will be noted that the transverse members 6 are hollowed out on top longitudinally of the blocks, as shown at 10, thus providing for circulation of air between the spaces 9 of the blocks when the blocks are laid up in a wall, as shown in Fig. 6. It will also be noted that the transverse members 4 are provided in their upper edges with concavities 11, as clearly shown in Fig. 5. It is designed to place longitudinally extending tie rods 12 in said concavities, as shown in Figs. 1 and 6, to form a reinforcing connection or tie between the blocks in the wall.

When a wall is formed of these blocks they are so placed as to cause the openings 5 therein to register, thereby forming vertical passages into which mortar or cement 13 may be poured, as shown in Fig. 6, to bind the blocks in the wall together. In order to allow some of the plastic mortar or cement to enter between the edges of the bearing portions of the blocks, the inner edge of the outer face portion is inwardly beveled, as shown at 14, and the opposite edge of the partition 3 is correspondingly beveled, as shown at 15. This arrangement affords a V-shaped opening between the edges of the face portions 1 and the partitions 3 when the blocks are placed one upon another, the under face of each block being flat, allowing the mortar or cement 13 which is poured into the vertical passage of the block to fill said openings, as shown at 16 in Fig. 6, thereby serving to more firmly bind the

blocks together, and affording a partial cement bearing between the edges of the bearing members of the superimposed blocks. When the blocks are laid in a wall and the cement is poured, said blocks are united in a homogeneous mass with respect to the outer portions thereof. The inner half, however, of the blocks is left unfilled, thereby producing an air space or passage for the circulation of air vertically and transversely of the blocks, eliminating to a great extent the presence of moisture in the inner face portion 2 of the blocks, and keeping the wall comparatively free from dampness.

If it be desired the wall may be reinforced by vertical rods 17 which are passed downwardly through the vertical passages in the blocks before the cement or mortar is poured. Such use of said rods is illustrated in Fig. 6. Upon the pouring of the cement or mortar, the longitudinal rods 12, as well as the vertical rods 17, become embedded therein, thereby greatly strengthening the wall to resist lateral pressure.

To enable a wall to be properly finished at the corner, corner blocks are provided with smooth ends, as shown at 18 in Figs. 1 and 4.

In order to afford a circulation of air on both sides of the transverse members 4 and the transverse members 6, the end portions of the outer and inner faces 1 and 2, and the partition 3 are caused to project beyond said transverse members so that when the blocks are placed end to end, as shown in Fig. 3, vertical air spaces 19 are formed between said transverse members of the adjacent blocks.

By means of the block herein shown and described, a wall may be erected of great strength, wherein provision is made for a circulation of air therethrough in a manner to overcome dampness in the portion forming the inner face of the wall.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A hollow building block, oblong in form and substantially rectangular in cross-section, a longitudinal partition dividing the block centrally to form two openings therethrough, transverse members connecting said partition with the outer face of the block near the ends of said parts, and transverse zigzag members connecting said partition with the inner face of said block.

2. A hollow building block comprising a front face member, a rear face member, a longitudinal partition interposed between said members, a transverse connecting member between said partition and said front and rear members, the connecting members between the partition and the rear member having offset portions so as to afford a more extended evaporating surface and a less direct path for the travel of moisture between said partition and the rear face member.

In testimony whereof, I sign this specification in the presence of two witnesses.

DAVID McINTYRE.

Witnesses:
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M. E. Broesamle.