No. 829,711. PATENTED AUG. 28, 1906.

P. W. GAYLOR & W. DUBEE.

CONCRETE BUILDING BLOCK.

APPLICATION FILED AUG. 4, 1905.

Fig. 1.

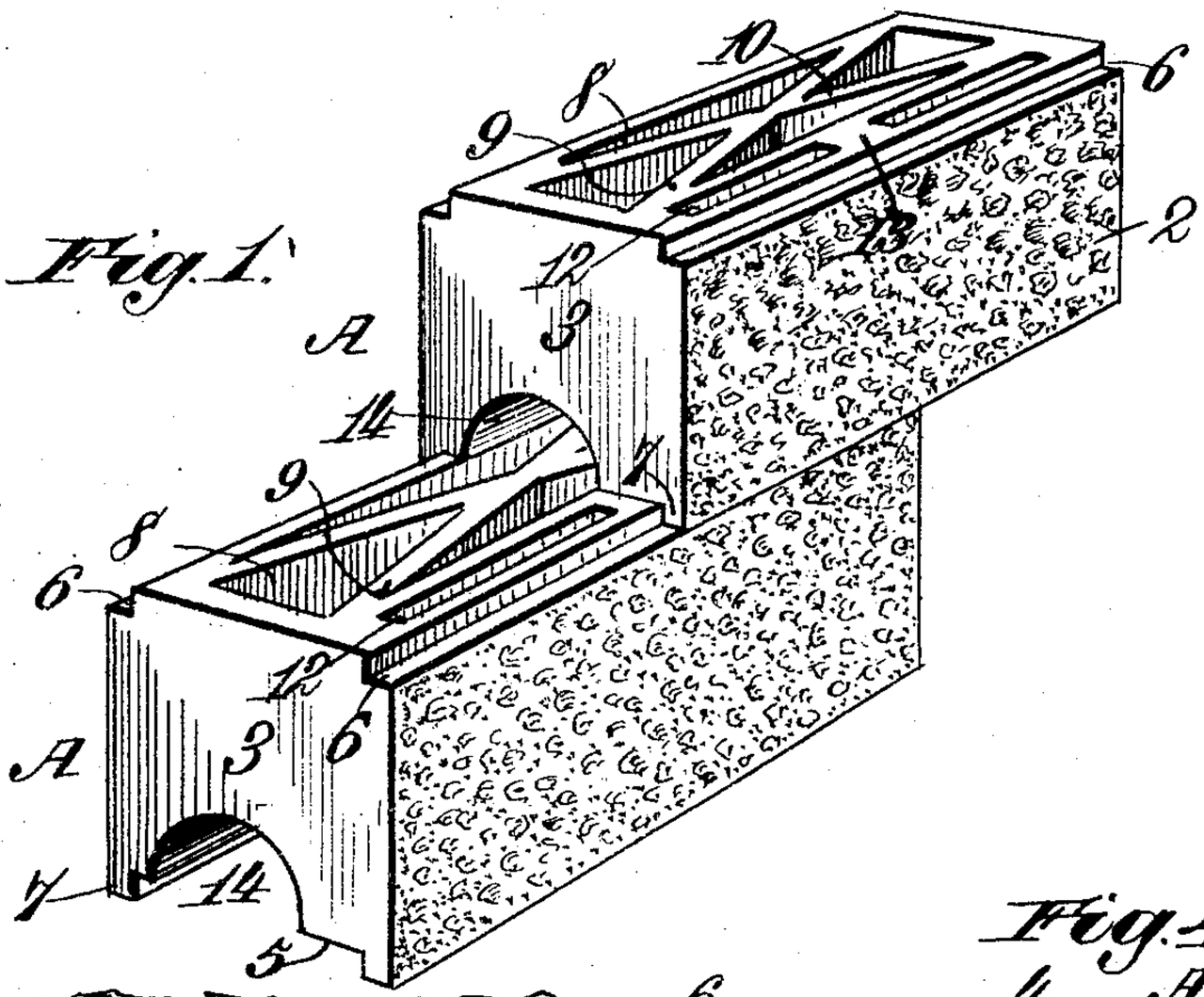


Fig. 2.

Fig. 4.

Fig. 3.

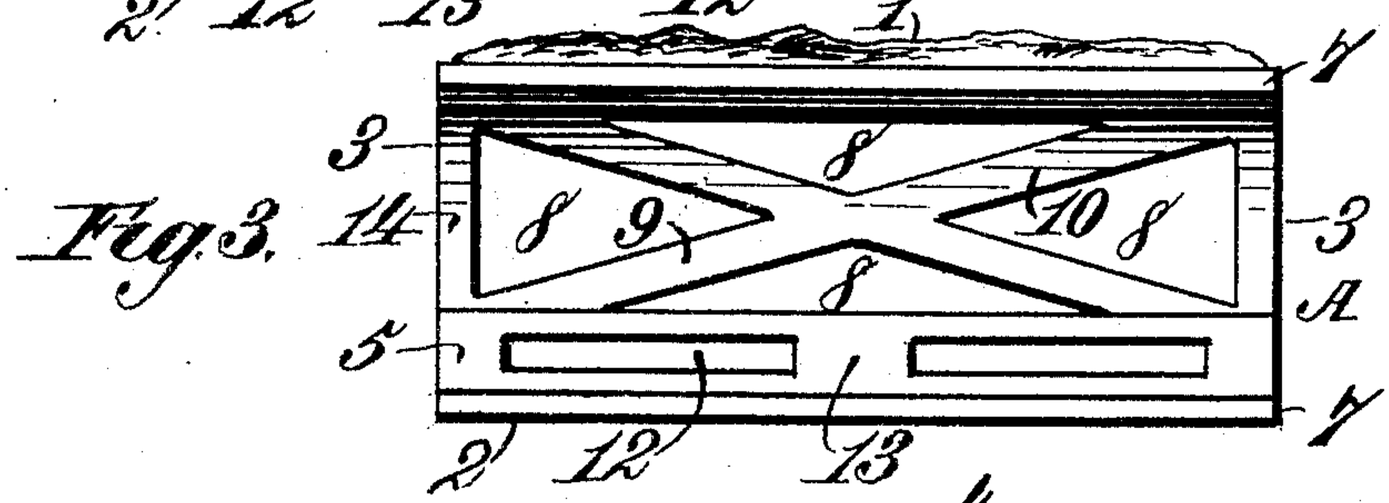
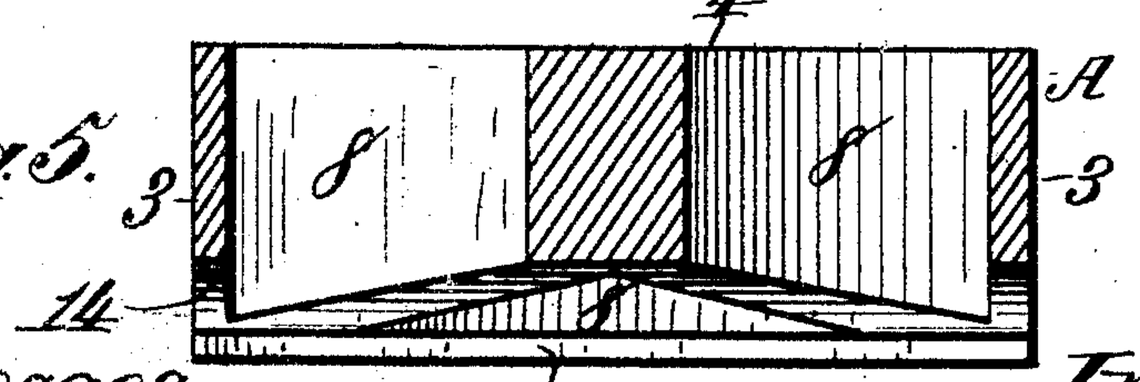


Fig. 5.



Witnesses.
Robert Everitt.
Gertrude M. Stucker.

Inventors.
Percy W Gaylor
William Dubbe
By J. Granville Meyers
Atty.

UNITED STATES PATENT OFFICE.

PERCY W. GAYLOR, OF RYE, AND WILLIAM DUBEE, OF BROOKLYN, NEW YORK.

CONCRETE BUILDING-BLOCK.

No. 829,711. Specification of Letters Patent. Patented Aug. 28, 1906.

Application filed August 4, 1905. Serial No. 272,738

To all whom it may concern:

Be it known that we, PERCY W. GAYLOR, residing at Rye, in the county of Westchester, and WILLIAM DUBEE, residing at Brooklyn, in the county of Kings, State of New York, citizens of the United States, have invented new and useful Improvements in Concrete Building-Blocks, of which the following is a specification.

This invention relates to certain new and useful improvements in concrete building-blocks, and has for its purpose to provide a block possessing the various desirable features of strength, lightness, and cheapness.

A further purpose of the invention is to provide a strong and durable building-block having one face thereof finished to imitate any desired color or character of natural stone.

Another purpose of the invention is to provide a building-block that may be easily and quickly set in building a wall structure, each block being provided with interlocking for mations, so that one block will interlock with the one above and below it when in set position, whereby a strong and durable wall will be provided.

A still further purpose of the invention is to provide a building-block having vertical openings therethrough of peculiar shape and arrangement, whereby to give increased strength and rigidity to the block and to provide for the reception of strengthening rods or bars, some of said openings being also arranged to provide air-spaces in the finished wall, which has come to be recognized as a desideratum of no small importance in wall structures.

The invention has in view other features of importance and desirability in a building-block, all of which will be more fully pointed out in the detailed description which follows this general statement of objects.

In the annexed drawings, Figure 1 is a perspective view of two blocks constructed in accordance with the invention, said blocks being shown in the position they will assume in a wall structure. Fig. 2 is a top plan view of one of the blocks. Fig. 3 is a bottom plan view. Fig. 4 is a transverse vertical section taken through one of the blocks. Fig. 5 is a longitudinal section taken vertically through one of the blocks.

In practice the blocks are made of some suitable cementitious material, preferably composed of ordinary cement, sand, and water, and may be of any size suited to the particular structure being erected.

In the drawings the block is designated generally by the reference-letter A and consists of a rectangular body having the side walls 1 and 2, the end walls 3, the top 4, and the bottom 5. The front side wall 1 is preferably roughened, as shown, to imitate cut stone, while the rear side wall 2 is by preference grooved, pitted, or roughened in a special manner, so that no brown or scratch coat of plastering will be required, it being understood that the regular white coat of plaster will be applied directly to this grooved, roughened, or pitted face of the block to form the finished interior wall-surface.

It is very desirable in a block of the character described to provide means whereby one block may be set or placed into interlocking engagement with its adjacent companion block, so that the finished wall structure will not only be true, but will be all the more firm and rigid. To accomplish this end, we provide a stepped recess 6 of right-angled formation along each longitudinal edge of the block at the top 4 thereof and also provide correspondingly-shaped ribs or projections 7 along the longitudinal edges at the bottom 5 of the block. These stepped recesses 6 and ribs or projections 7 are so shaped and spaced as that the projections on the bottom of one block will interlock with the stepped recesses in an adjacent block when the blocks are superposed one upon another. Thus it will be seen that no special care need be exercised in setting the blocks, as when they are placed in interlocked position perfect alinement will be assured.

In order that the blocks may be made as light as possible and yet be sufficiently strong to withstand the strain and weight to which they are subjected and, furthermore, to provide for the use of vertical tie-rods in the wall structure and for air-spaces we make the blocks hollow in the following peculiar manner.

Each block is provided with four triangular-shaped openings 8, said openings extending vertically through the block, two of the walls of each triangular opening being formed

by the diagonally-arranged webs or partitions 9 and 10, which cross each other or intersect one another, as shown, and the third wall of each opening formed by the sides and ends of the block. This diagonal arrangement of the webs or partitions 9 and 10 gives strength to the block, as will be apparent.

In addition to the triangular openings just described we prefer to form one, two, or more elongated openings arranged parallel to the longitudinal inner face 2 of the block in order to provide air channels or spaces in the finished wall. In the present instance we have shown each block as provided with two of such openings that are indicated by the numeral 12, the openings being separated by the web or partition 13.

By referring to the drawings it will be seen that the bottom wall 5 of each block is concaved transversely throughout its length, as at 14, whereby the block is more shallow along its longitudinal center than along its outer edges. This is done to provide openings at the ends of the blocks when they are set in position, so that the cement employed in setting the blocks may enter these openings and form a firm tie or lock.

Another end accomplished by this construction is that in setting the blocks in position a hoisting-rope may be passed through two of the openings 8 and around the diagonal webs or partitions 9 and 10 and tied. The rope with the block attached may then be swung to proper position on the wall, the rope being then untied and pulled through in an obvious manner, thus leaving the block in the exact position it is to assume in the finished wall. In view of the fact that the diagonal webs 9 and 10 are of less depth at the points of intersection than the maximum depth of the block from top to bottom (which is due to the concave 14) it will be apparent that the rope when passed around said webs will not project below the extreme lower face of the block, and no gripping or binding of the rope between the blocks can take place.

When the blocks are set in place in the formation of a wall, it will be apparent that some of the vertical openings 8 and 12 in one block will register with corresponding openings in the block above and below it. In these registering openings 8 vertical tie-rods may extend, if desired, or some or all of the openings 8 may be filled with concrete and tamped in order to provide a more solid wall. The openings 12 are designed primarily for air-spaces, but when needed will accommodate the various water, gas, and steam pipes as well as electric wires used in the building. As these openings are located adjacent the inner face 2 of the block, it is a simple matter to cut through for the purpose of forming connections with the pipes or wires therein.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A hollow rectangular building-block having diagonally-arranged intersecting webs cast integral with the block and extending from opposite diagonal corners thereof to provide between them and the vertical walls of the block vertically-disposed triangular openings, portions of the end walls of the block and the said diagonal webs being cut away to provide a channel in one face of the block which extends longitudinally throughout the length thereof.

2. A hollow building-block having diagonally-arranged intersecting webs extending from opposite diagonal corners thereof and forming between them and the vertical walls of the block vertically-disposed triangular openings, said block being provided along its opposite longitudinal edges with corresponding recesses and projecting ribs.

3. A hollow building-block having diagonally-arranged intersecting webs extending from opposite diagonal corners thereof and forming between them and the vertical walls of the block vertically-disposed triangular openings, the intersecting portions of said diagonal webs being of less depth than the maximum depth of the block.

4. A hollow rectangular building-block having diagonally-arranged intersecting webs cast integral with the block and extending from opposite diagonal corners thereof to provide between them and the walls of the block vertically-disposed triangular openings, and an elongated opening arranged parallel with and in close proximity to a side wall of the block.

5. A hollow rectangular building-block having intersecting webs cast integral therewith to provide between them and the walls of the block vertically-disposed openings, an elongated opening arranged parallel with and in close proximity to a side wall of the block, and corresponding recesses and projecting ribs arranged along opposite longitudinal edges of the block.

In testimony whereof we have hereunto set our hand in presence of two subscribing witnesses.

PERCY W. GAYLOR.
WILLIAM DUBEE.

Witnesses:
JOHN MCMAHON,
WILLIAM SANDERS.