

UNITED STATES PATENT OFFICE.

LESTER R. FRANKLIN, OF NEW YORK, N. Y.

BUILDING-BLOCK.

No. 866,351.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LESTER R. FRANKLIN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Building-Blocks, of which the following is a full, clear, and exact description.

The object of the invention is to provide interlocking building blocks, of cement, artificial stone, or other material, of such construction that they may be laid in courses and the several blocks and the courses bonded together by mortar or other cementing material applied interiorly in grooves and passages made in the blocks themselves.

The invention is embodied in a building block of suitable material, having its ends provided with reversely constructed combined tongues and grooves, so that several blocks may be interlocked end for end in courses, each block having its opposite horizontal faces grooved longitudinally, the bottom and sides of the grooves converging towards the middle of the block and to a central hole through the block, in such way that when the blocks are laid in courses in a break-joint manner, the holes in the blocks of the upper course will stand over the most shallow parts of the grooves of two adjacent blocks in the adjacent lower course, and the channel thus formed will slant away downwardly from a hole in an upper course block to the holes in two adjacent blocks of an adjacent lower course, and then when mortar or other cementing material is poured into the hole in the block of the upper course, it will flow down said hole and into the grooves and holes in the blocks below and bond the blocks of the two courses severally and in courses. Preferably no mortar or other cementing material will be used between the contacting edges of the blocks of the several courses, since the blocks themselves and the bonding mortar or cementing material will practically make a solid wall. Preferably also, the edges of the blocks on the face side will be rabbeted to receive pointing material, so as to make the external joints weather-tight. Preferably also, the central holes in the blocks will be of spiral formation, in order to increase the bonding effect.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is an elevation of three blocks in two courses. Fig. 2 is a longitudinal section of the parts shown in Fig. 1, with the mortar or other cementing material in part in position. Fig. 3 is a top plan view of one of the blocks. Fig. 4 is a vertical cross-section of one of the blocks. Fig. 5 is a horizontal cross-section of one of the blocks.

The block 1 may be of any suitable shape and dimensions and of any suitable material. Each end of the block is provided with a combined tongue and

groove member, one of such members consisting of a tongue portion 2 having in it a groove 3, and the other member consisting of a groove 4 having a tongue 5, extending vertically and substantially centrally of the ends, and these two members being of reverse construction so that when the blocks are laid in courses, the parts 2 and 3 of one block will match accurately the parts 4 and 5 respectively, of the adjacent block, and the flat ends 6, 6 will come into close contact with the opposite flat ends 7, 7 of the adjacent block. The horizontal edges of the block are provided with longitudinal grooves 8 and 9, and these grooves are deepest at the center and slant upwardly to the opposite edges of the block and run out to nothing at said edges, in such way that the walls of the groove converge toward the center of the block and are intersected by a vertical opening or hole 10 through the block. The ends of the combined tongue and groove 2, 3, are preferably beveled or inclined to correspond with the inclined edges of the grooves 8 and 9 when the blocks are placed together.

When a series of blocks are arranged in courses with the blocks of the upper course arranged to break joints with the blocks of the lower course, the holes 10 in the blocks of the upper course are arranged over the meeting edges of the blocks of the lower course, and as a result the bottom grooves of the blocks of the upper course and the top grooves of the blocks of the lower course form channels, as shown in Fig. 2, which slant downwardly from the holes in the blocks of the upper course to the holes in the two adjacent blocks of the lower course, these channels communicating with the holes in the two adjacent blocks of the lower course so that, as shown in Fig. 2; when mortar or other cementing material 11 is poured into the hole in the block of the upper course, it will flow down through said hole and into the channels and then into the holes in the blocks of the lower course and into the lower bottom grooves of said blocks and serve to bond the blocks.

In order to avoid repetition, it will be understood that in using the term "mortar" herein, I mean to include any suitable cementing material.

It will be understood that the inclination of the grooves facilitates the flow of the mortar from one course to the lower. In order to increase the bonding effect, the holes 10 may be made with a screw-thread or spirally arranged groove 12, and this spiral arrangement also facilitates the flow of the mortar. For pointing purposes the edges of the faces of the block may be rabbeted, as at 13, and in this way the exposed faces of the wall may be made weather-tight without any conspicuous lines of pointing.

A wall constructed of blocks bonded interiorly in the manner described, becomes a practically solid wall, and the solidity of the wall, as well as its stability, is increased by the fact that no mortar is used between the

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contacting edges of the blocks of the several courses. Settling of the wall, therefore, is practically eliminated.

5 The use of the combined tongue and groove vertical joints serves to increase the effectiveness of the longitudinal union of the several adjacent blocks, and also greatly facilitates the alining of the blocks in courses.

10 By the use of the grooves in the blocks, the blocks can be laid in a bed of mortar without the use of a trowel, and thereby there is a great saving of labor and time in laying the blocks and there is also a saving in the expense of cleaning off the usual splashes of mortar from the finished wall.

15 The blocks, if made of composition, may be produced in suitable molds and with great accuracy and very economically.

What I claim is:—

20 1. A building block, having complementary tongues and grooves at its opposite ends, adapted to interlock with similar blocks when laid end-for-end, and grooved longitudinally at the top and bottom and provided with a central hole toward which the top and bottom grooves converge, such blocks adapted to be laid in courses with the blocks of each successive course breaking joints with the blocks of the next lower course and with the central holes in the blocks of each course coming over the meeting edges of the blocks of the next lower course and thereby forming channels through and into which binding material may be introduced to bind the blocks in courses.

2. A building block, having complementary combined 30 tongues and grooves at its opposite ends, adapted to interlock with similar blocks when laid end-for-end, and grooved longitudinally at the top and bottom and provided with a central spirally grooved hole toward which the top and bottom grooves converge, such blocks adapted to be laid in courses with the blocks of each successive course breaking joints with the blocks of the next lower course and with the central holes in the blocks of the next lower course and thereby forming channels through 40 and into which binding material may be introduced to bind the blocks in courses.

3. A wall constructed of building blocks, each block having complementary tongues and grooves at its opposite ends to interlock when laid end-for-end, and provided with a longitudinally at the top and bottom, and provided with a central hole toward which the top and bottom grooves converge, said blocks laid in courses with the blocks of each successive course breaking joints with the blocks of the next lower course, so that the central holes in the blocks of each course come over the meeting edges of the blocks of the next lower course, whereby channels are formed between the courses and through the blocks, adapted to convey mortar through the holes in the blocks of the upper course to bind the blocks and courses below. 55

In testimony whereof I have hereunto set my hand this 13th day of February A. D. 1907.

LESTER R. FRANKLIN.

Witnesses:
LILLIAN FRANKLIN,
THERESA BAZANT.