W. O. JOHNSTONE.

BUILDING TILE CONSTRUCTION.

APPLICATION FILED JUNE 19, 1916.

1,325,249.

Patented Dec. 16, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

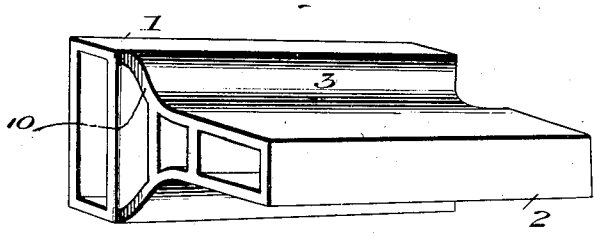


Fig. 2.

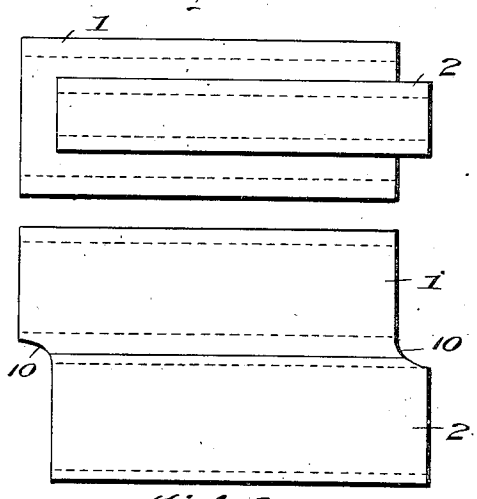
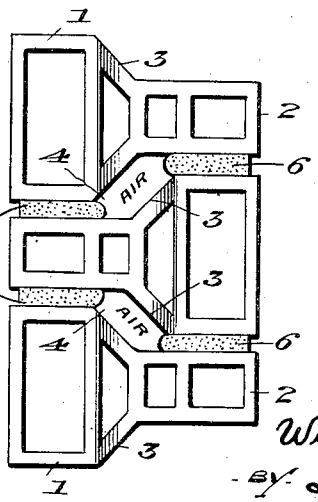


Fig. 3.

Fig. 4.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 5.

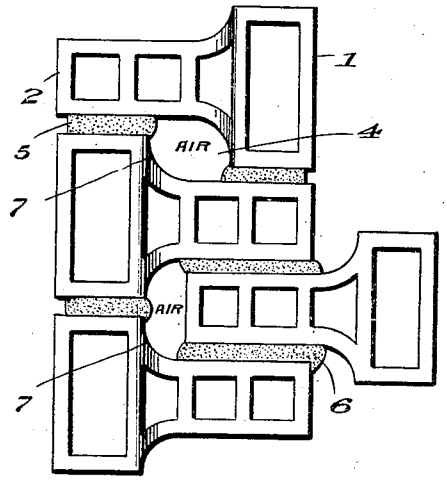
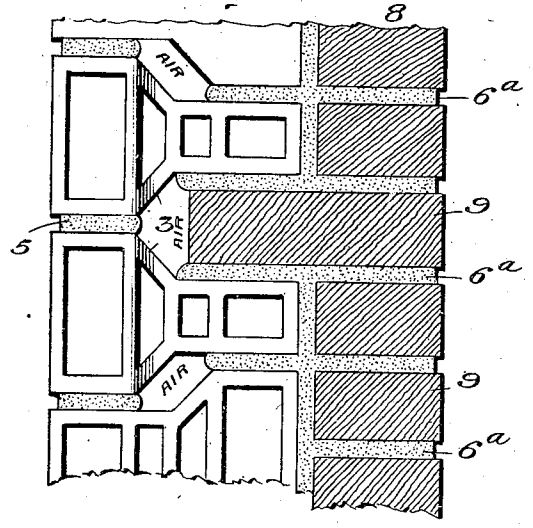


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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BUILDING-TILE CONSTRUCTION.

1,325,249. Specification of Letters Patent. Patented Dec. 16, 1919.

Application filed June 19, 1916. Serial No. 104,446.

To all whom it may concern:

Be it known that I, WILLIAM O. JOHNSTONE, a citizen of the United States, residing at North Tonawanda, county of Niagara, and State of New York, have invented certain new and useful Improvements in Building-Tile Construction, of which the following is a specification.

The present invention, which relates to building tile construction, has for its object the provision of, first, a tile of improved construction having an integral flange and stem, the latter being joined to the flange by splayed or curved walls for the purpose of breaking the mortar joint and eliminating the angular corner, thus strengthening the construction and rendering it less likely to be broken where the stem joins the flange, adapting it to withstand greater pressure than with an angular or square joint, and further, when the tiles are laid, adapting them for the provision of air spaces of relatively large size, where the splayed or curved joints are disposed opposite to each other.

The tile, when laid up, provide an air space which is much larger than the space occupied by the mortar joint, and hence, even should the workmen be careless in spreading the mortar promiscuously there would still remain a considerable air space and the horizontal mortar joint would be broken. The air spaces thus provided between the laid tile afford all the advantages incident to air spaces in wall construction, and the hollow form of the flange and stem of the tile provide advantages well known in building construction such as great strength, insulation, etc.

A second object of my invention is to provide a tile whose stem is laterally off-set in relation to the flange, by a splayed or curved joint to thereby break the vertical mortar joints in the wall.

Breaking both the vertical and horizontal mortar joints in the laid wall effectively prevents moisture from following the mortar joints to the inner side of the wall.

Where the tile has a laterally off-set stem the curved or splayed joint, as distinguished from a square or angular joint, between the off-set stem and flange, increases the strength of the tile and its adaptability to withstand pressure, while obtaining the advantage of breaking the vertical mortar joint.

I wish it understood, however, that the tile can be used without the lateral off-setting of the stem and still retain the advantages obtained by the splayed or curved joint between the flange and stem. On the other hand, advantages inhere in the off-set stem having a splayed or curved joint.

When all of the improved features are embodied in the tile, a wall built therefrom has interlocked joints, air spaces between the tile, breaks in both the horizontal and vertical mortar joints, the different walls or webs lie one above the other; there may be used a brick veneer or facing; and, great strength and adaptability to withstand pressure result.

The embodiments of the invention and wall constructions built by the use of the tile hereinafter set forth are to be deemed as illustrative, rather than restrictive, of the scope of the invention which is susceptible of various modifications.

In the accompanying drawings:

Figure 1 is a perspective of the tile;

Fig. 2, an elevation looking toward the stem;

Fig. 3, a plan view;

Fig. 4, an end elevation where the tiles are built into an eight-inch wall;

Fig. 5, a similar view for an eight or twelve inch wall, the tiles being provided with a curved joint; and

Fig. 6, an end elevation of the tiles built into a wall having a brick facing.

Referring first to Figs. 1, 2, 3, the hollow flange 1 is of a height substantially twice the thickness of an ordinary brick, while the hollow stem 2 which is integral therewith is of substantially the thickness of a standard brick.

The stem 2 is connected to the flange 1 by splayed or beveled joints 3 which, in the built wall (Figs. 4 and 6) provide air spaces 4 extending longitudinally thereof. The splayed joint 3, as distinguished from an angular or square joint such as heretofore known to the art, not only adapts the tile for the provision of the air spaces in the built wall, but such air spaces are relatively large and greater in size than the mortar joint; furthermore, the tile is given great strength by this joint at a point which is usually weak in a hollow tile. An additional advantage is that even if the workman is careless in spreading the mortar at 5 and 6, there will still remain considerable air space and the joint between the layers 5 and 6 will be broken, thus preventing

moisture from following the mortar layers horizontally.

In Fig. 5 the joint 7 between the stem 2 and flange 1 is curved or "coved," thus obtaining an even larger air space 4 than with the splayed or beveled joint 3.

In both forms the results obtained are not possible with a tile having an angular or square joint between the stem and flange.

The adaptability of the tile to be laid with stems and flanges alternating, as in Figs. 4, 5, 6, results in an interlocking of the tiles which affords great strength in the wall to resist transverse pressure.

The splayed, or the coved, joint in each tile adapts them, when built into a wall, to stand tremendous vertical pressure.

In Fig. 6, the tiles are shown built with a brick facing or veneer 9 whose mortar joints 6^a continue as the joints 6 between the tile and, at intervals, certain of the brick 9 are bonded with the tile.

The tile may be constructed with or without lateral off-setting of the stem 2 and while the lateral off-set form is shown in Figs. 1, 2, 3, I wish it understood that I do not limit myself to such off-setting.

I find it preferable, however, to provide the stem in lateral off-set form as in Figs. 1, 2 and 3, where the vertical edges of the joint between the stem and flange are beveled or curved, as at 10. When the tile is thus formed, the mortar joints are broken vertically in addition to being broken horizontally.

The dimensions of the stem and flange may be varied according to the size of the bricks in the facing 8, where such facing is employed.

The tile is adapted for use with a common brick face and preferably, where thus used the face of the stem 2 is equal to the thickness of a standard brick or of the brick used for the facing, while the width of the face of the flange 1 is twice the thickness of the brick used for the facing, plus one mortar joint.

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

A substantially T-shaped hollow building block whose flange and stem are joined by intersecting horizontal and vertical surfaces, said stem being also laterally offset in relation to said flange, said intersecting surfaces being cut away so that when said blocks are set one above another vertical and horizontal air spaces are provided between the blocks, said air spaces breaking the horizontal and vertical mortar joints.

In testimony whereof I hereunto affix my signature.

WILLIAM O. JOHNSTONE.

Witnesses:
F. A. McCoy,
Chas. S. Orton.