D. McINTYRE.

BUILDING TILE.

APPLICATION FILED JAN. 18, 1917.

1,305,294.

Patented June 3, 1919.

Fig. 1.

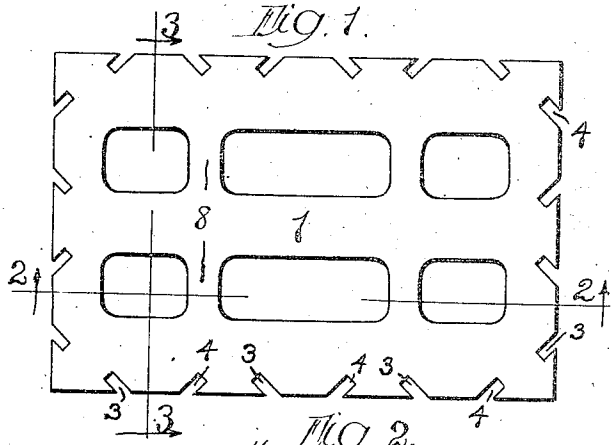


Fig. 2.

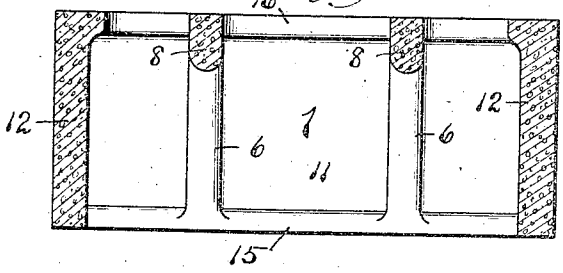


Fig. 3.

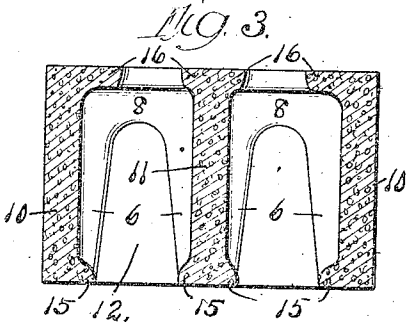


Fig. 4.

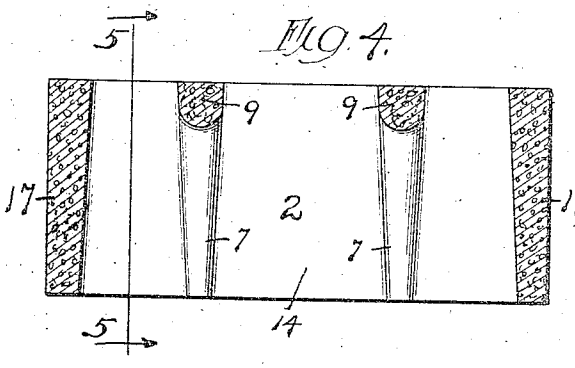


Fig. 5.

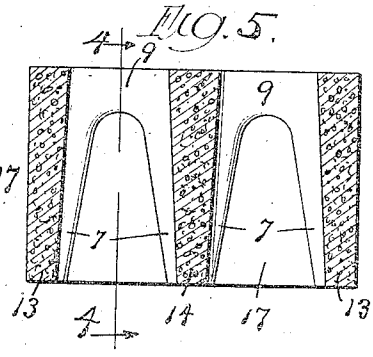
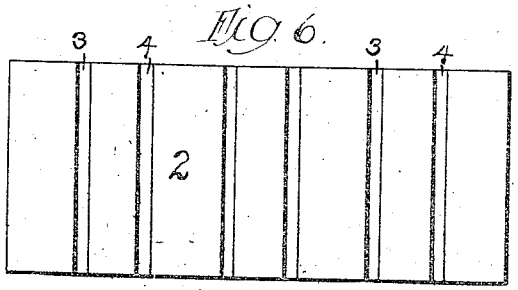


Fig. 6.



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BUILDING-TILE.

1,305,294. Specification of Letters Patent. Patented June 3, 1919.

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To all whom it may concern:

Be it known that I, DAVID McINTYRE, a citizen of the United States, and residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Building-Tile, of which the following is a specification.

This invention relates to building elements of concrete, terra-cotta, clay or other plastic material, and often known as blocks and bricks, but usually as tiles, and its object is to produce a building element that will have maximum crushing strength for its weight and which will retain its shape while being made.

This invention consists in a building element or tile having end walls and parallel longitudinal side and partition walls separated by air spaces, these longitudinal walls being reinforced by means of vertical ribs and held parallel to each other by means of arches. It further consists in forming flanges along the inner edges of these walls along both the top and bottom of the tiles in order to furnish increased bearing areas, if desired.

In the accompanying drawing, Figure 1 is a plan of a tile embodying the invention set forth herein. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 5 of a modified form of tile. Fig. 5 is a section on the line 5—5 of Fig. 4. Fig. 6 is a side elevation of both forms of the tile.

Similar reference characters refer to like parts throughout the several views.

Tiles and other forms of blocks are formed with air spaces in order to save material and also because building elements thus formed are better non-conductors of heat and cold than solid blocks. The walls in such tiles are placed vertically in the building in order that these air spaces may be continuous and in order that the load may be effectually carried. When the walls of tiles of plastic material are made thin, they are liable to warp while hardening and the edges of these walls sometimes settle undesired distances into the mortar used to secure the tiles together, because of the narrowness of the bearing edge of these walls of the tiles.

The present invention is incorporated in two forms of tiles, one shown in Figs. 4, 5 and 6 may be made on a machine having straight cores and the other shown in Figs. 1, 2 and 3 on a machine having collapsible cores. In both these forms of tiles 1 and 2, the outer faces of the walls are preferably formed with vertical longitudinally parallel grooves 3 and 4, each being cut in at an oblique angle to the face of the tile and adjacent grooves 3 and 4 are preferably cut at opposite angles. These grooves are of great advantage in holding mortar between the ends of adjacent tiles and stucco and plaster that may be applied thereto after the building wall is completed.

It has also been found that by forming the longitudinal walls of the tiles with the ribs 6 and 7 and connecting these ribs by means of arches 8 and 9 respectively, the walls 10 and 11 and 13 and 14 are not so liable to bulge and warp during the manufacture of the tiles and that their load-sustaining power is greatly increased. The number of these transverse arches may be varied as desired. The end walls 12 and 17 connect the longitudinal walls of these two tiles respectively.

When tiles of this general type are laid up in a wall, the weight thereof and the load carried thereby is liable to force the bottoms of the vertical walls of the tiles into the mortar and thereby destroy the alinement of the tiles in the walls. To prevent this, interior flanges 15 are formed at the lower edges of these walls, the bottom faces of the flanges being in the same plane as the lower edges of the walls of the tiles. In order to stiffen the tiles and to supply a goodly area to support the mortar, the flanges 16 may be formed along the upper edges of the walls of the tiles, these flanges being in the plane of such upper edges.

By forming the tiles with the upper flanges 16, means are provided whereby the tiles can be easily handled as the mason may grasp these flanges on the intermediate wall 11.

I claim:—

1. A hollow tile formed with continuous air spaces extending from top to bottom and having its walls formed with vertical ribs and with arches joining said ribs into pairs.

2. A hollow tile formed with continuous air spaces extending from top to bottom and

having its walls formed with pairs of vertical ribs and an arch joining the upper ends of each pair of ribs.

3. A hollow tile formed with continuous air spaces extending from top to bottom and comprising three longitudinal parallel walls and end walls connecting the longitudinal walls, each of said longitudinal walls being formed with vertical ribs and arches joining said ribs into pairs.

4. A hollow tile formed with continuous air spaces extending from top to bottom and comprising three longitudinal parallel walls and end walls connecting the longitudinal walls, each of said longitudinal walls being formed with vertical ribs and arches joining said ribs into pairs, the upper ends of the ribs and the tops of the arches being in the same plane with the upper edges of the walls.

DAVID McINTYRE.