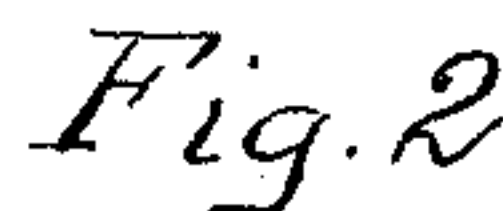
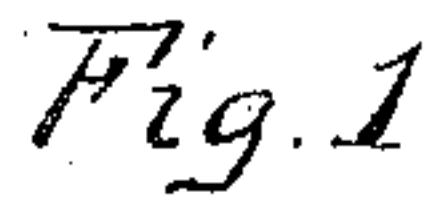


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WITNESSES:
Charles J. Woodberry
Josephine H. Ryan

Elbridge J. Forbes
BY
Roberts, Roberts & Musmann,
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELBRIDGE J. FORBES, OF REVERE, MASSACHUSETTS.

BUILDING-BLOCK.

989,344.

Specification of Letters Patent.

Patented Apr. 11, 1911.

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To all whom it may concern:

Be it known that I, ELBRIDGE J. FORBES, a citizen of the United States, and resident of Revere, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Building-Blocks, of which the following is a specification.

This invention relates to a building block of concrete, cement, or other suitable material, and its object is to provide an improved form of building block provided with air spaces, which shall be stronger and more durable than blocks heretofore used, and shall possess novel structural features best adapted to prevent radiation of heat or admission of frost, to facilitate the building of the same into a wall, and to improve the construction and appearance of the wall.

Other features will hereinafter be described and particularly pointed out in the claim.

In the accompanying drawings which illustrate one embodiment of my invention,—Figure 1 is a plan view of the top of a block embodying my invention; Fig. 2 is a perspective view of said block.

Referring to the drawings, A and A represent two opposite, flat, outer walls constituting respectively the front and back faces of the block. Between these outer walls A, A, are a plurality of curved arched walls, a, a , preferably arranged as shown in two pairs of curved arches, one pair springing from each of the flat walls A, A, and the curved tops of said pairs of arches opposed to each other and united at the crowns of the arches as shown at a' . The flat and arched walls form between them air spaces a^2, a^3 and a^4 . The air spaces a^4 between the arches at the ends of the block, each forms half of a complete air space when the blocks are built into a wall, the other half being formed by the corresponding opposed opening in the end of a similar block laid end to end therewith, as shown in Fig. 1. The space thus formed by the opposed openings a^4 and a^4 is identical with opening a^3 .

Projecting above one of the abutting faces of the block as the top and bottom faces may be called which are designed to abut against the next block above or below as the blocks are laid one on top of the other, and preferably projecting above the top face are the flanges b , the outer faces of which are flush with the faces of the flat front and back

walls A, the edge surfaces of which, b' , are parallel with the top face of the block, and the inner surfaces of which, b^2 , are beveled as shown, sloping in a flat plane from the edge of the flange to the top surface of the block. This beveled form of flange makes it possible to employ a flange comparatively thin at the edge, b' , but at the same time much stronger and less likely to become broken or chipped in handling than a flange having a like edge surface but no beveled inner face. Similar flanges, b^3 , having beveled inner surfaces are provided at each end of the block, projecting beyond the plane of the end of the block a^5 and flush with the outer or front and back faces of the block. Parallel with the flanges b^3 are the flanges b^4 extending across the end of the block adjacent to the end opening or air space a^4 , and like the other flanges provided with the flat bevel surface b^5 sloping from the edge of the flange to the end surface a^5 of the block.

When the blocks are built into a wall the end flanges of two blocks abutting each other end to end form the space c (see Fig. 1) for mortar or cement, and the top flanges similarly form between them and the block superposed thereon a space for mortar or cement. Thus it will be seen that when laid in a wall the outer faces of the blocks abut directly against each other edge to edge exposing no mortar or cement to view, and forming a substantially unbroken wall surface; and the air spaces of the superposed blocks register with each other forming continuous vertical air spaces through the wall separated by the curved, arched walls affording a very strong construction, and providing the most devious path possible within the compass of a block of given dimensions, for passage of frost.

In order to lock the blocks together and reinforce the wall, more effectively than could be done by the cement alone, I provide in the top of each block midway of its length, between the arches and in longitudinal alinement with the spaces c , the holes or cavities d . When the blocks are built into a wall, with the blocks of one tier in staggered relation with the blocks of the next tier, as is customary, the holes d will register with the spaces c of the tier next above; ordinary nails or pins (not shown) may then be inserted in these registering

holes and spaces and thus provide additional means for reinforcing and binding the entire structure together.

I claim:

- 5 A building block, comprising two opposite flat outer walls, and two pairs of opposed curved arched walls therebetween, the convex surfaces of said arched walls facing inward toward the center of the block, and
10 the concave surfaces thereof facing outward toward the flat outer walls and forming therewith the air spaces a^2 , the convex surfaces of said arched walls forming there-
15 between the central air space a^3 and the end air spaces a^4 , the latter open at the ends of the block and each air space a^4 in

conjunction with a similar air space in a similar block, when the two are placed end to end, adapted to form an air space substantially similar to the central space a^3 , 20 whereby when a number of said blocks are laid in courses in staggered or broken joint relation, the spaces a^3 will register with the spaces a^4 , and the spaces a^2 at one end of each block will register with the spaces a^2 25 at the opposite end of the adjacent block.

Signed by me at Boston, Massachusetts
this 27th day of March 1909.

ELBRIDGE J. FORBES.

Witnesses:

ROBERT CUSHMAN,

CHARLES D. WOODBERRY.