J. Grimm,

Brick.

No. 86,664. Patented Feb. 9. 1869.

FIG. 1.

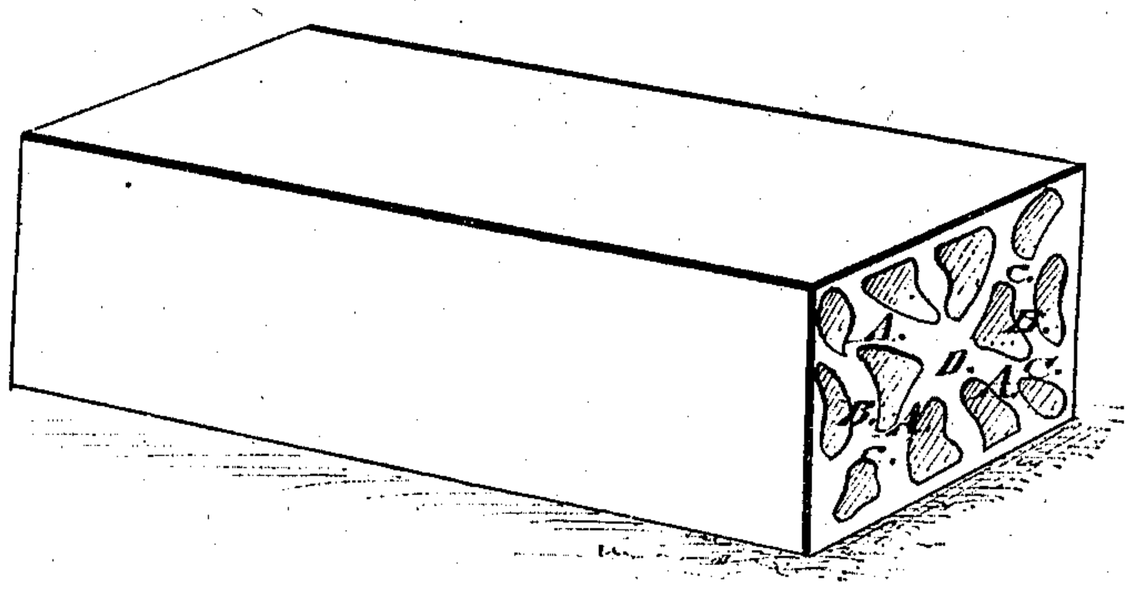


FIG. 2.

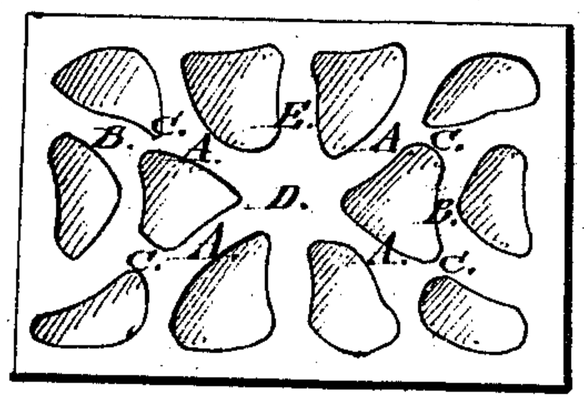
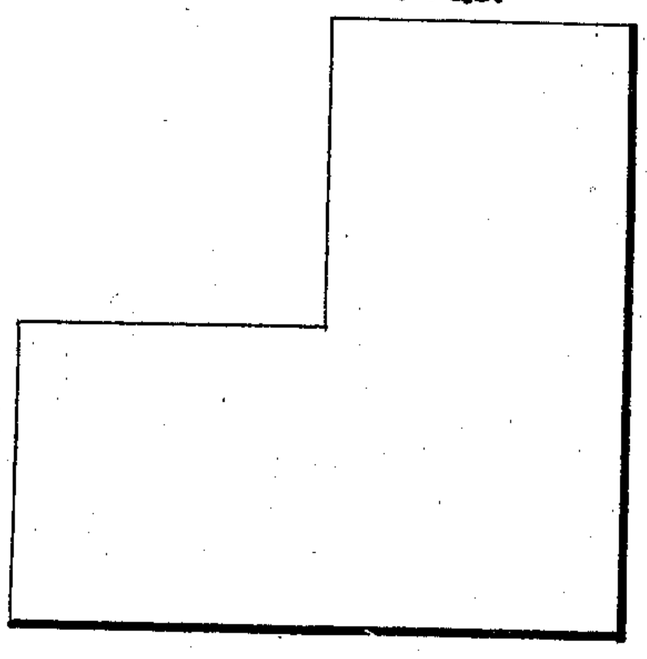


FIG. 3.



WITNESSES:

J. W. Burridge

C. E. Waite

INVENTOR:

John Grimm

United States Patent Office.

JOHN GRIMM, OF CUYAHOGA FALLS, OHIO.

Letters Patent No. 86,664, *dated February* 9, 1869.

IMPROVED BRICK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN GRIMM, of Cuyahoga Falls, in the county of Summit, and State of Ohio, have invented certain new and useful Improvements in Making Bricks, as a new article of manufacture; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the brick.

Figure 2, an end view.

Figure 3, a view of a brick intended for corner-work.

Like letters refer to like parts in the different views presented.

This invention relates to the construction of hollow bricks, by forming within said bricks a series of air-chambers and supporting-arches, whereby the brick is capable of resisting a greater incumbent weight, in proportion to the amount of clay, than a longitudinally-perforated brick, with a single or a series of round perforations for the retention of dead air, whereby the walls composed of said bricks are less liable to become damp than walls built up in the ordinary way with solid ones.

The drawing, fig. 1, represents a brick having the usual external shape and size, but which, however, may be constructed in larger blocks, if so desired. For ordinary use, it is proposed to make them of much larger size than the common brick, the peculiar construction being such that they cannot be crushed by the weight of the superimposed wall.

It will be observed that each of the four sides of the brick is supported by arches A B, and that between the two arches, A B, is a fillet, C, whereby they are connected and mutually support each other.

It will be also observed that the several arches have a common centre or core, D, and that the arches A are divided by a wall, F, dividing the arches from the centre of the chord to the crown, thereby supporting the chord when subjected to compression.

By this peculiar arrangement and combination of arches, great strength of resistance is given to the brick, as the arches, by their mutual relation to each other, and supported by their central core and wall E, combine the greatest possible strength with lightness of structure and the smallest amount of material.

These perforations also provide a large amount of room for the retention of dead air.

The tubular air-chambers, or interstices, twelve in number, though thus numerous, in no way lessen the strength of the brick, which is found, by practical test, to be stronger than those that are solid.

Also, by thus providing so large a space for the retention of air, the bricks are more thoroughly and evenly burned, as the heat, in burning, can readily pass through the interior, and thereby burn them to a more uniform temper or hardness without reducing their strength.

Fig. 3 shows a brick for building up the corners of the work, and which is also constructed with the same arrangement of perforations and arches as above described.

I am aware that hollow bricks, or bricks with a single longitudinal perforation, have been made; such construction I do not claim. I am also aware that bricks have been perforated, both horizontally and perpendicularly, as ordinarily laid; such brick I do not claim. Nor do I claim simply a longitudinally-perforated brick, with a series of perforations, as I wish to limit myself to the special arrangement of perforations shown in my brick, which gives greater strength, in proportion to the amount of material, and, for the same size, a much lighter brick.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

The arrangement of the perforations with relation to the arches A B, walls C, core D, and the exterior of the brick, in the manner and for the purpose as set forth.

JOHN GRIMM.

Witnesses:

WILLIAM A. TAYLOR,

E. L. BABCOCK.