

G. H. JOHNSON & W. FREEBORN
Improvement in Hollow-Tile Walls.

No. 132,291.

Patented Oct. 15, 1872.

FIG. I.

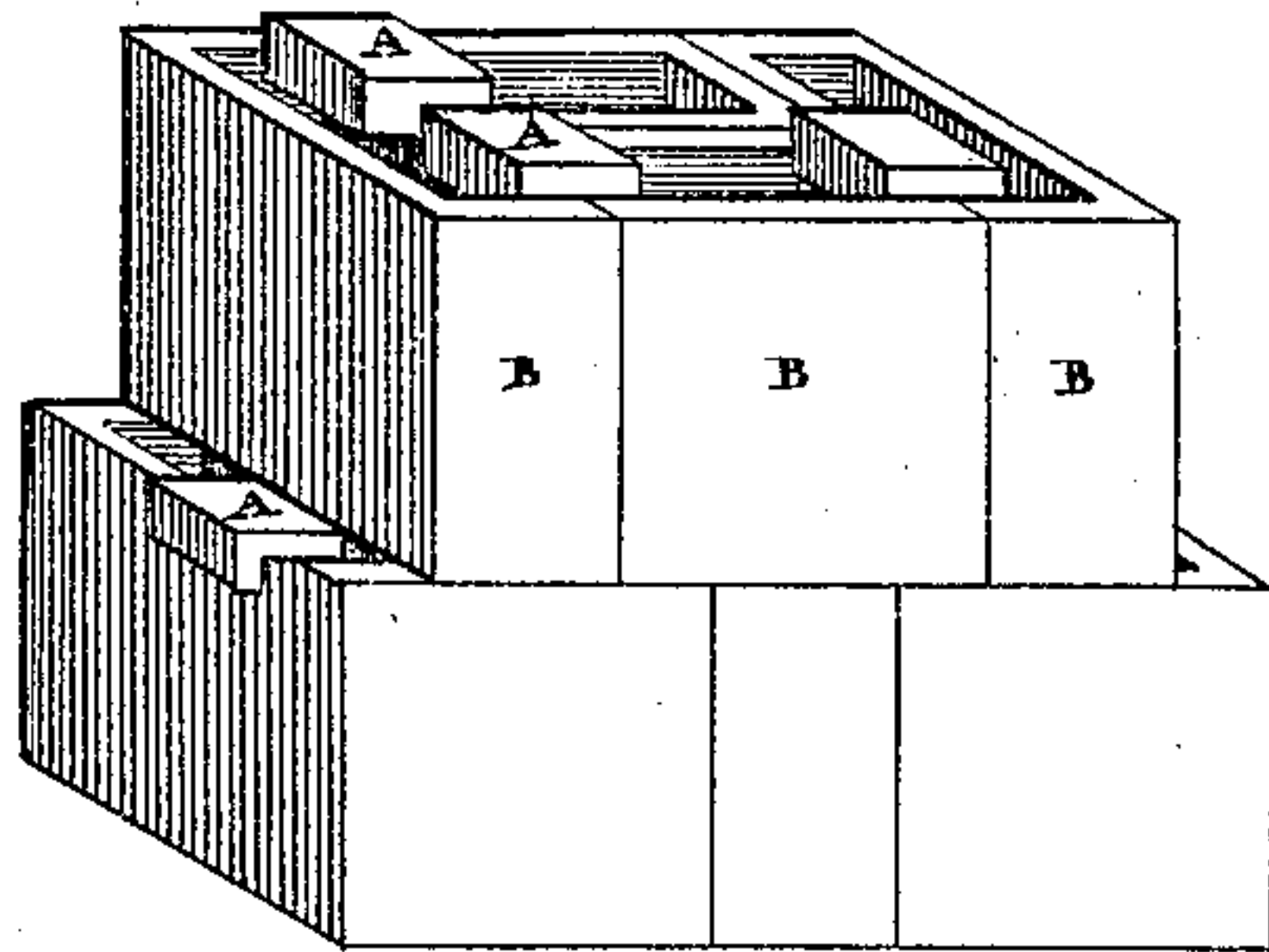


FIG. II.

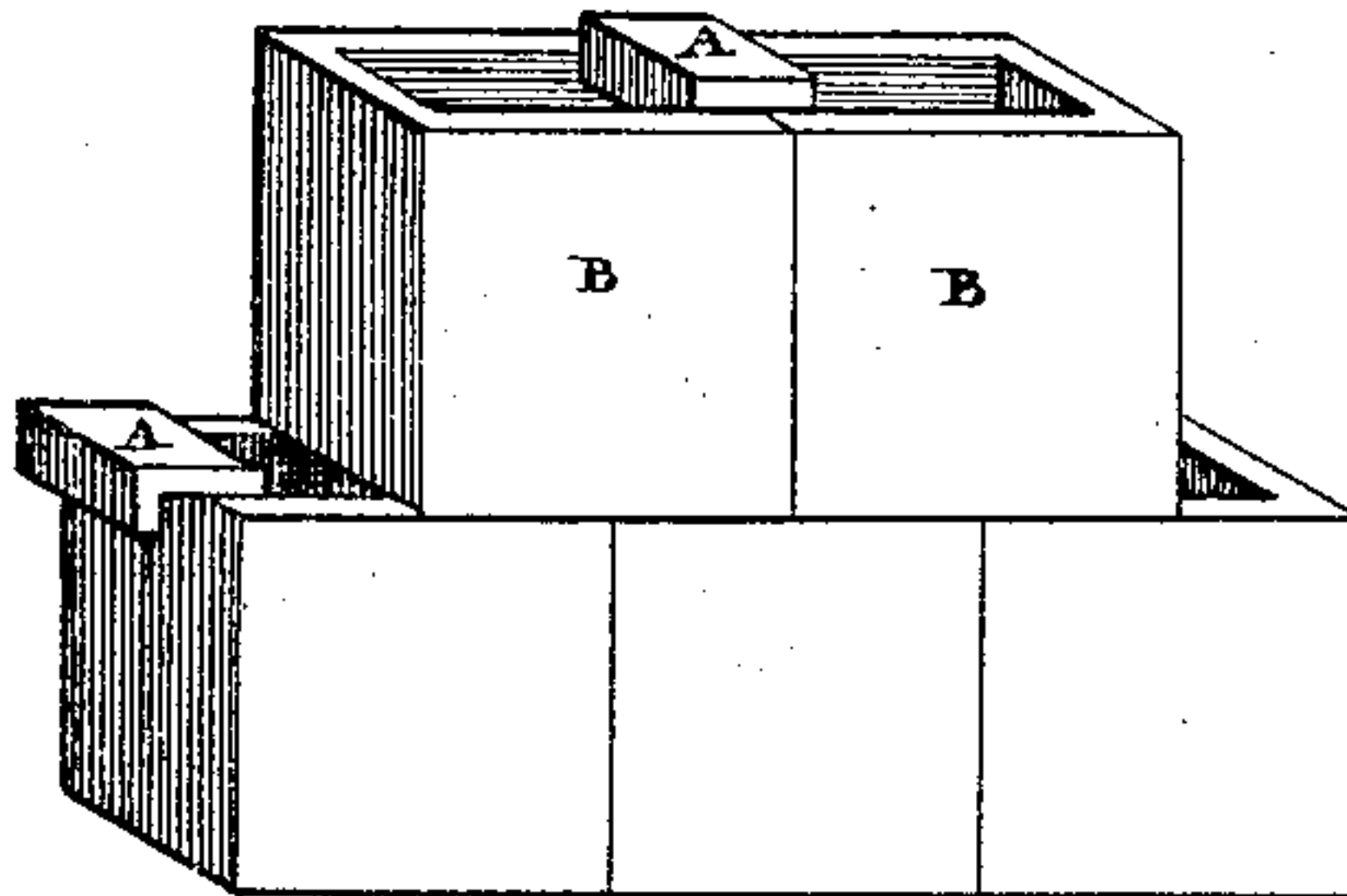


FIG. III.

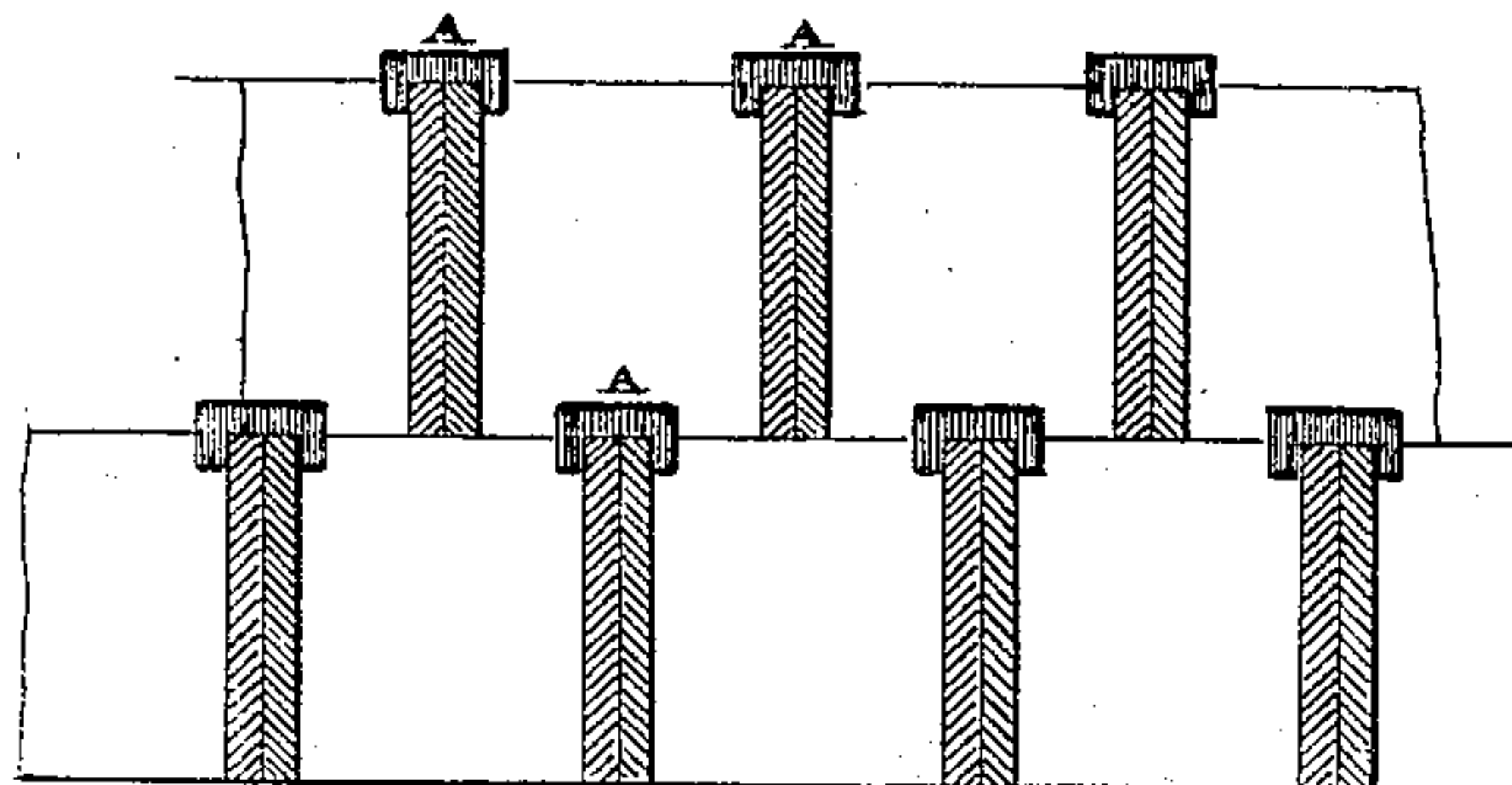
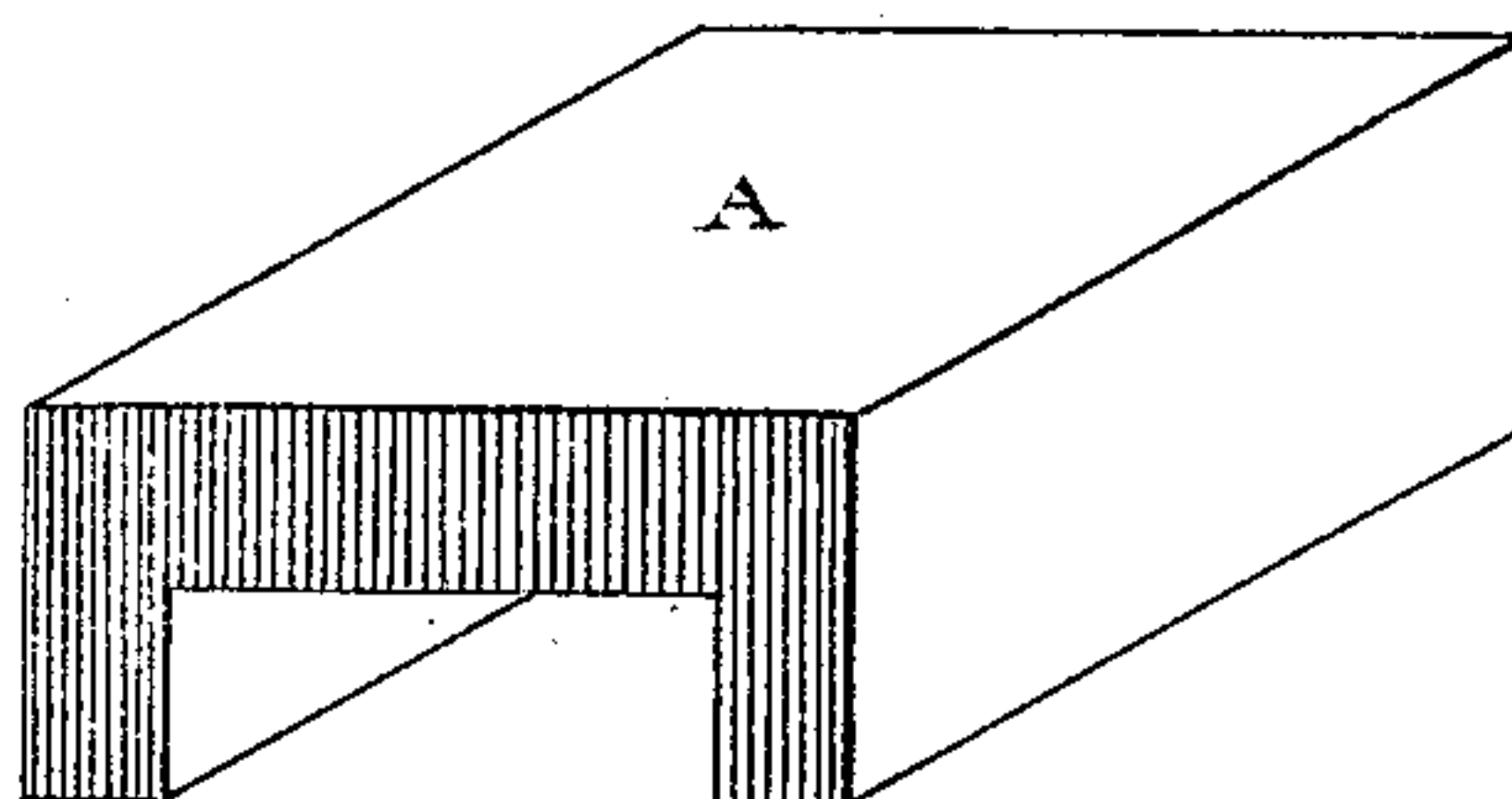


FIG. IV.



Witnesses.

Edwin Robt. Hall

W. D. Kerfoot

Inventors.

Geo. H. Johnson
Wm. Freeborn

UNITED STATES PATENT OFFICE.

GEORGE H. JOHNSON AND WILLIAM FREEBORN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HOLLOW-TILE WALLS.

Specification forming part of Letters Patent No. 132,291, dated October 15, 1872.

To all whom it may concern:

Be it known that we, GEORGE H. JOHNSON and WILLIAM FREEBORN, both of the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in the Construction and Binding Together of Hollow-Tile Walls, Partitions, Vault-Linings, &c.; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents an isometrical view of a double-tile wall, fastened together with the improved binder or clamp A; Fig. 2 represents an isometrical view of a single-tile wall fastened together with the improved binder or clamp A; Fig. 3 represents a longitudinal section of the single-tile wall, showing the manner of fastening vertically and horizontally with the improved binder or clamp A; and Fig. 4 represents a half-size view of the binder or clamp A.

The nature of this invention consists in the construction of hollow walls made of any incombustible material, whereby great strength is obtained with less than one half the weight of a solid wall of equal dimensions, enabling us to build partitions across ordinary floors without reference to the position of the beams or girders, and also enabling us to build fire-proof structures at a greatly reduced cost, for the reason that much lighter beams can be used, as also lighter walls to carry the same. Our method of tying or binding the wall together horizontally and vertically by the use of the clamp A, will be seen by reference to Figs. 1 and 2; the thickness of the clamp projects above each course of the tiles, and as they invariably break joints it allows the top course to set down over or fit around two or more sides of the clamp, thus locking every course laterally and making it impossible to force them from their position. By this system walls can be built of any required thick-

ness, as shown by Fig. 1, by laying a header and stretcher alternately. Walls built on this plan of the same thickness of a solid wall of brick are much stronger and stiffer, with the additional advantages of being not more than one half the weight and without the using of furring and lathing, which are indispensable to a solid wall to avoid dampness, as by our principle all the moisture absorbed from the exterior, through the pores of the tiles by capillary attraction, is carried off by the air circulating through the spaces in the tiles. We also intend using the tile to construct linings for fire-proof vaults in buildings, also cemetery vaults and all structures requiring a circulation of air between the interior lining to carry off the dampness from the outside walls, and to keep the inside of the structures at the same temperature as the outer air, thereby preventing the deposit of moisture and rendering such structures as dry and free from dampness as ordinary rooms.

What we claim as new, and desire to secure by Letters Patent, is—

1. The fastening together vertically and horizontally, by the binders or clamps A, of the hollow tile B, forming a wall of any desired thickness, substantially as shown and described.

2. A single-tile hollow wall laid longitudinally, and composed of the runners B, fastened together vertically and horizontally by the binders or clamps A, substantially as shown and described.

3. The binder or clamp A made of any material, and so constructed and placed that every tile in the wall will be bound or clamped together vertically, and locked or doweled together horizontally, substantially as shown and described.

GEO. H. JOHNSON.
WM. FREEBORN.

Witnesses:

EDWIN ROBT. HALL,
WM. D. KERFOOT.