

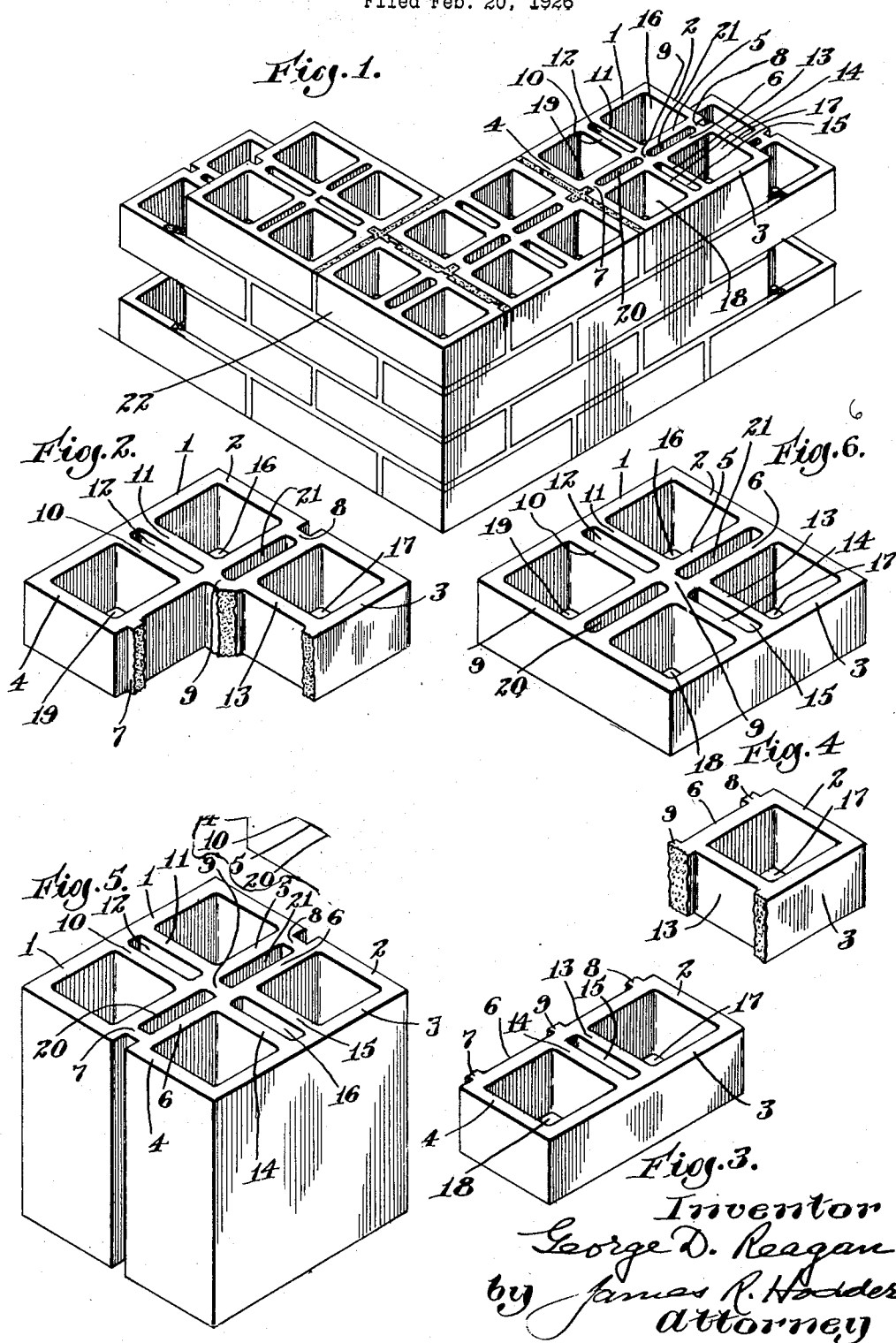
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BUILDING UNIT

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UNITED STATES PATENT OFFICE

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BUILDING UNIT.

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My present invention relates to novel building tiles, or units capable of utilization in outer wall construction, inner walls, partitions, and the like, and is a modification and improvement of the tiles illustrated in my prior Patent No. 1,495,439, May 27, 1924, and my prior and copending application Ser. No. 674,289, filed November 12, 1923. Various other modifications of my novel tiles are illustrated in co-pending applications Serial No. 90,642 filed February 25, 1926, Serial No. 93,698 filed March 10, 1926, and Serial No. 93,699 filed March 10, 1926.

The principal object of my present invention is to construct a unit for which it will be relatively simple to manufacture a die; a unit or tile which will be economical to manufacture, relatively light in weight for shipping, handling, laying up in walls, etc., and one which can be easily and accurately broken in quarters, halves and three-quarters, and which can be laid in a wall structure in any desired position, vertically or horizontally, with equal facility and load-carrying ability.

I prefer to form my novel building unit square, and preferably make the same $10'' \times 10'' \times 3''$, although I may make the same $10'' \times 10'' \times 4\frac{3}{4}''$, or in any other desired height, and may construct the same as cubical, if desired. I also prefer to form the walls and webs of my novel tile so that they will make a perfect bond, and will lock at the bond with the load being carried upon a line or continuous wall member, the face of the wall presenting a solid brick-wall effect.

I also form, at the juncture of certain of the interior webs with the walls, fracturable connections, which will render the breaking of the unit into small tiles or units more simple and efficient, and I desire to form these fracturable connections with formed predetermined corner structures, to facilitate laying up in the wall.

A further and important feature of my present invention consists in the provision of a single transverse web, dividing one pair of the interior webs on their center, thus making my present tile simpler of manufacture, and affording a central point for quicker and easier breaking, as well as mini-

mizing the liability of breaking into the remainder of the tile when removing a unit or section therefrom.

If desired I may utilize the central transverse web above described in a similar tile without the fracturable connections at the outer wall, without departing from the present invention, and may also add an additional interior web parallel to each of the face walls of the tile, a series of small narrow voids separating this web from the outer walls, and providing a broad mortar receiving surface, to give increased strength and load-carrying ability to the wall.

I believe that all of these features are new, and I wish to claim the same broadly herein.

Further features of the invention, novel combinations of parts and advantages, will be hereinafter more fully pointed out and claimed.

Referring to the drawings, illustrating a preferred embodiment of the invention,

Fig. 1 is a perspective of a section of a wall built of my novel units;

Fig. 2 is a perspective of a preferred form of my novel unit, of which the wall in Fig. 1 is constructed, broken into three-quarters size;

Fig. 3 is a perspective of a half of the unit; and

Fig. 4 is a perspective of a quarter of the unit;

Fig. 5 being a perspective of the same unit or tile formed as a cube;

Fig. 6 is a modification illustrating the central dividing web, and omitting the fracturable connections on the outer walls.

As shown in the drawings, my novel unit or tile is constructed in a wall in the regular brickmaking practice, viz, staggered or alternated in each course, which is the practice followed except at corners, around chimneys, windows, etc.

The unit illustrated in Figs. 1, 2, 3 and 4 comprises the walls 1, 2, 3 and 4. A pair of webs 5 and 6 extend transversely of the entire unit and are united to the walls 2 and 4 at fracturable connections 7 and 8, which fracturable connections are formed, as illustrated, with formed predetermined corner structures for better results after breaking.

A short central transverse web 9 divides the webs 5 and 6, providing a central point for easier and neater breaking into sections or smaller units. Smaller webs 10 and 11 extend from the wall 1 to the web 5, and form a narrow void 12, and corresponding webs 13 and 14 extend from the wall 3 to the web 6, forming a narrow void 15.

These various webs and walls thus form four larger voids, 16, 17, 18 and 19, of equal area and volume, and each of these larger voids having rounded corners or fillets, for greater strength and to reduce the possibility of fracture at the corners of the larger voids. Also the webs 5 and 6, together with the central transverse dividing web 9, form narrow voids 20 and 21, these webs 5 and 6 and voids 20 and 21, forming a central mortar receiving area of sufficient width to afford a strong joint.

Fig. 2 illustrates the unit utilized in Fig. 1, broken into a three-quarter unit or tile, for use at corners, for piping, or the like, and illustrates the lines of fracture very clearly.

Fig. 3 illustrates a half of the building unit, for use at corners, as illustrated at 22, Fig. 1, windows, or the like.

Fig. 4 illustrates a quarter of the unit, in itself a complete tile, and capable of utilization in many positions in the actual building.

In Fig. 5 I have illustrated my novel building unit constructed as a cube, which will be advantageous for certain forms of building practices, although the preferable form is as illustrated in the other figures.

In Fig. 6 is shown a still further modification of my novel building unit or tile, which is still within the range of the present invention, and is extremely simple of manufacture and has many of the advantages of the other units illustrated in the drawings. This block has the walls 1, 2, 3 and 4, webs 5 and 6, forming with the transverse web 9, narrow voids 20 and 21, and webs 13 and 14, forming the narrow void 15, and the larger voids 16, 17, 18 and 19, formed by the outer walls and interior webs. The only point of distinction between the unit illustrated in Fig. 6 and that illustrated in Fig. 1, is in the omission of the fracturable connections 7 and 9; which, while desirable and efficient, are not essential, the principal point of novelty in the unit of Fig. 6 consisting in the provision of the single transverse web 9 centrally of the webs 5 and 6, this single transverse web 9 being very important and resulting in a much more easily fracturable unit.

The units illustrated in Fig. 6, it will be appreciated, may also be broken into quarters, halves, or three-quarters, the same as the unit utilized in the wall in Fig. 1.

I believe that each of the two forms of building units or tiles illustrated in the drawings are new, and I wish to claim the same herein.

The building units illustrated herein, when constructed in a wall, will present a neater, and more finished exterior appearance than where common brick are used, because of the fact that there will be fewer mortar joints showing on the face of the wall. The larger voids 16, 17, 18 and 19, being continuous and vertical throughout the wall, permit the advantages of fire-proofness, moisture-proofness, and also may be reinforced, if desired, by cement, or cement and steel, continuously or alternately as desired, throughout the extent of the wall, and will also permit these voids to be used as conduits for waste pipes, wires and the like.

A further advantage of building units such as shown in the present application, is that a building may be constructed higher than with the use of common brick, due to the relative lightness of these tile or units as compared to common brick of a quantity to build the same wall.

My invention is further described and defined in the form of claims as follows:

1. A rectangular hollow building unit having a plurality of large voids defined by the outer walls of said unit on two sides thereof and on the other sides by webs having smaller voids therein, one pair of said webs being connected at their center by a single transverse web aligned with the voids formed by the other said webs.

2. A rectangular hollow building unit comprising half sections united by a plurality of webs along a distinct line of fracture, each half section comprising single outer walls and a pair of transverse webs intermediate the end walls of said section, said transverse webs defining a narrow void therebetween, and said webs and outer walls defining a pair of larger voids, one of said webs connecting the half sections being aligned with the narrow voids defined by the transverse webs in the half sections, and the other said connecting webs being offset from opposite edges of the outer walls and forming, with said opposite edges, kerfs to facilitate fracture along said line of fracture.

In testimony whereof, I have signed my name to this specification.

GEORGE D. REAGAN.