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Patented Apr. 30, 1901.

J. D. MCGILLYCUDDY.
BRICK AND STRUCTURE BUILT UP THEREFROM.

(Application filed Nov. 29, 1899.)

(No Model.)

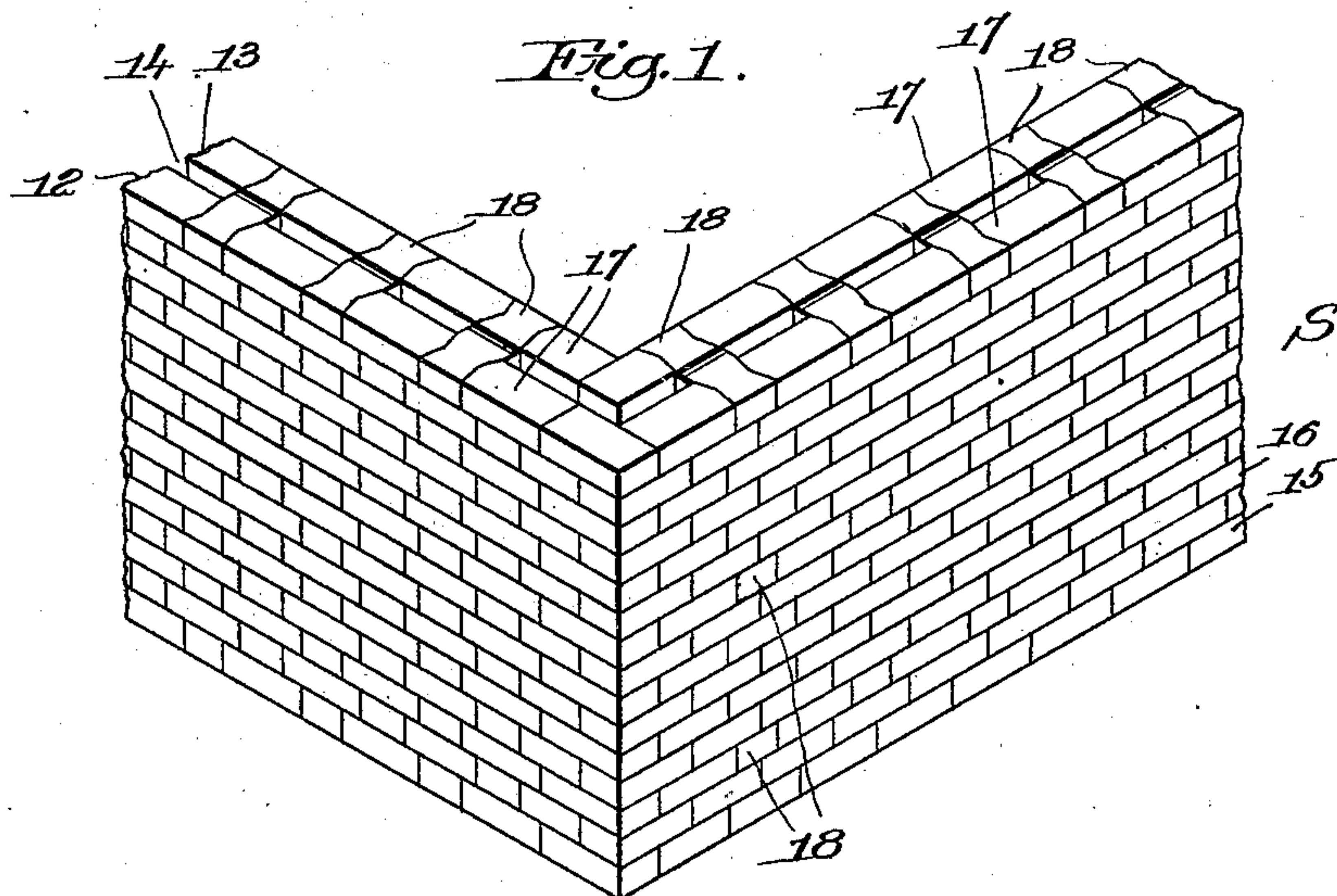


Fig. 2.

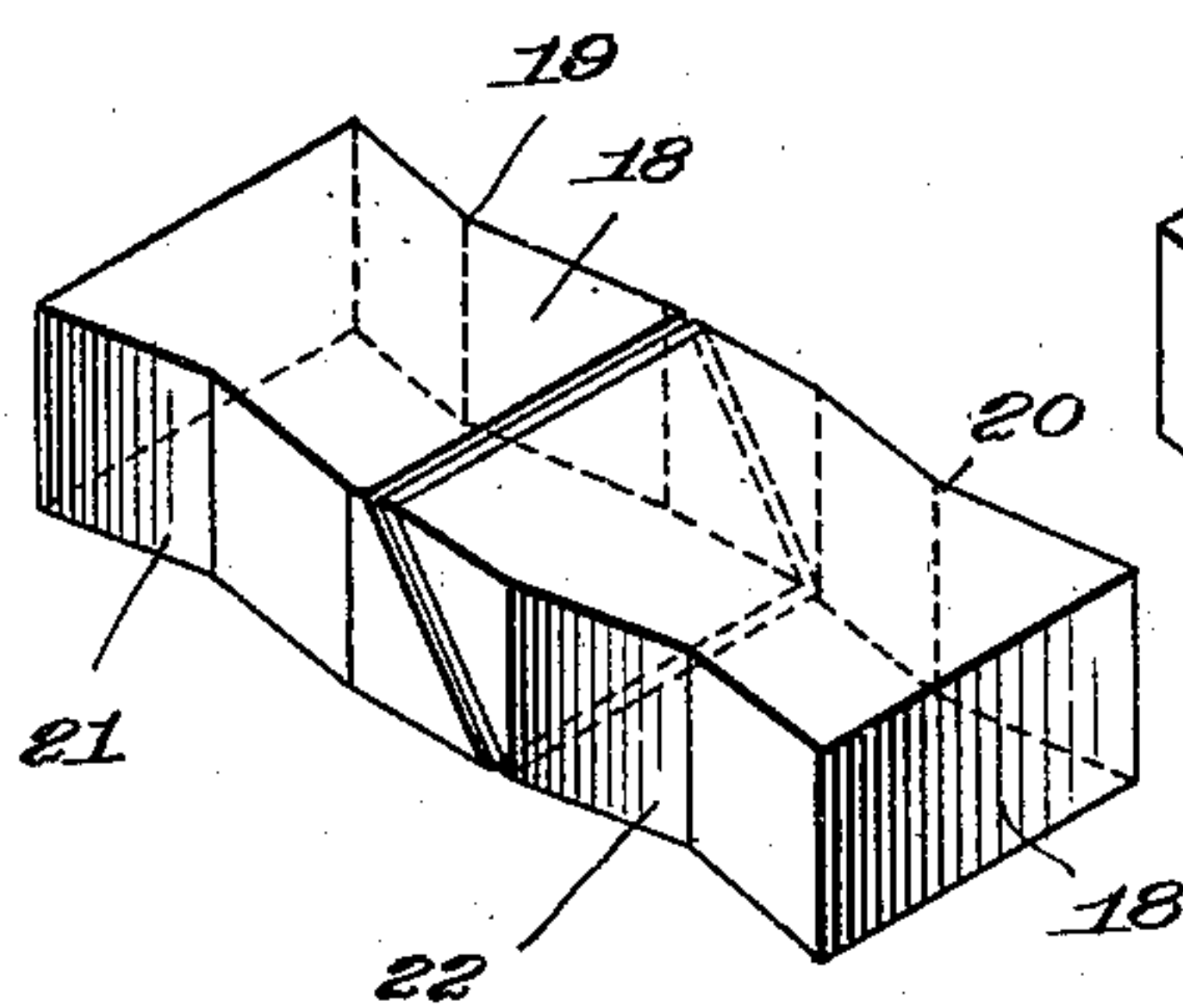


Fig. 3.

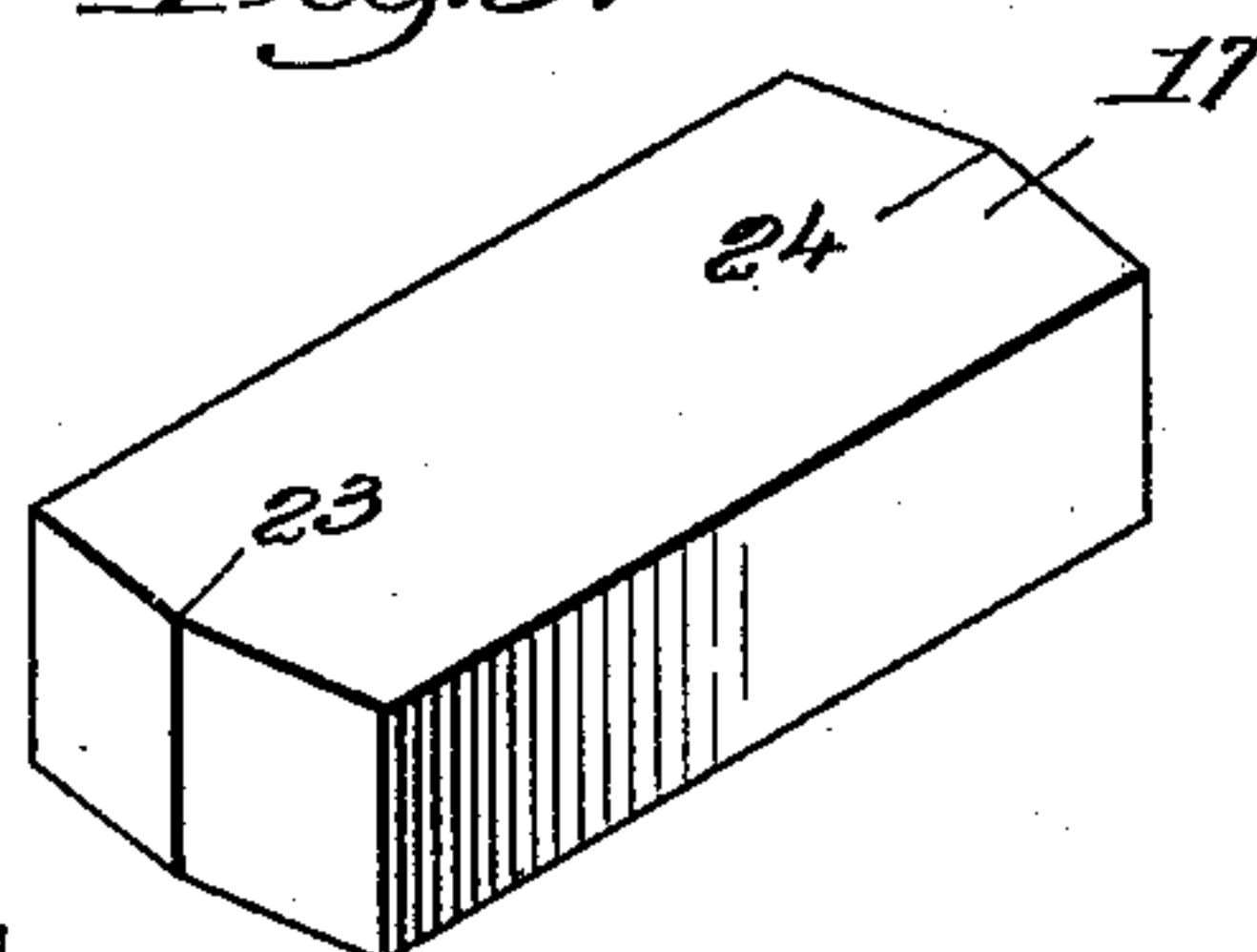
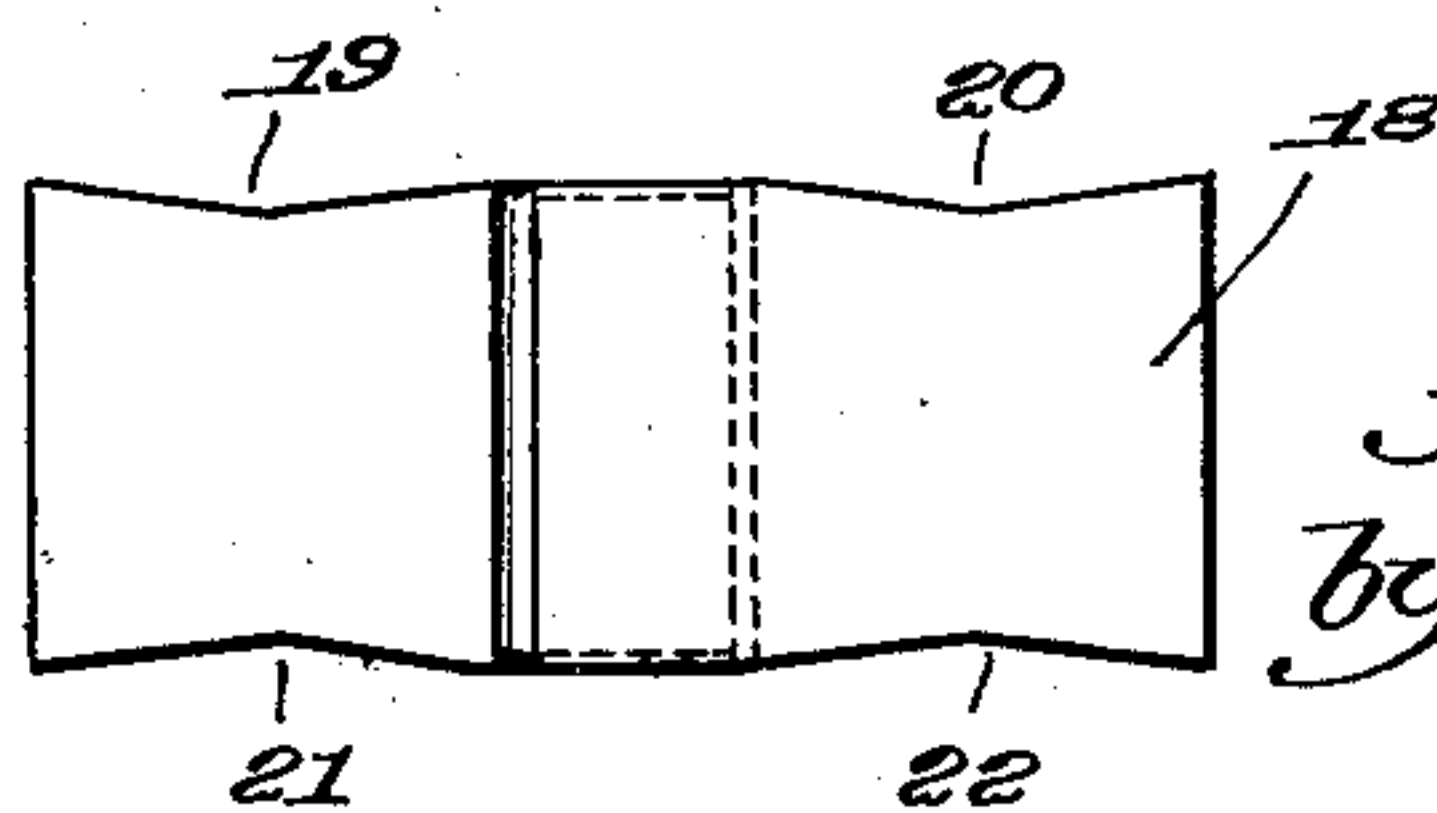


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BRICK AND STRUCTURE BUILT UP THEREFROM.

SPECIFICATION forming part of Letters Patent No. 673,129, dated April 30, 1901.

Application filed November 29, 1899. Serial No. 738,652. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. MCGILLYCUDDY, a citizen of the United States, residing at Medford, county of Middlesex, State of Massachusetts, have invented an Improvement in Bricks and Structures Built Up Therefrom, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

This invention relates to bricks and to a structure built up therefrom, said bricks being of peculiar importance in connection with a multipart wall—that is, one having a plurality of sections tied or bonded together—and in the present case the sections or parts of the wall are separated by an air-space, so that cold, dampness, and sound will thereby be excluded from a compartment formed from such a structure.

The improved structure and the bricks composing the same are illustrated in simple and convenient embodiments thereof in the accompanying drawings, in which—

Figure 1 is an isometrical perspective of a two-part wall, showing certain of the wall-bricks locked in place by the tie-bricks. Figs. 2 and 3 are similar views, upon an enlarged scale, of the tie and wall bricks, respectively; and Fig. 4 is a plan view of a tie-brick.

In Fig. 1 I have represented a structure or wall built from bricks, and the same is shown consisting of two vertical parts or sections 12 and 13, separated by an air-space 14, whereby moisture, sound, &c., can be thoroughly excluded from the interior of a compartment. The structure or wall is laid in the usual manner by ordinary bricks to a desired height, after which I prefer to lay upon the same wall bricks of a peculiar kind adapted to cooperate with the tie or transverse bricks.

In Fig. 1 the two lowest courses 15 of bricks are of the standard type, while the superposed course 16 in each part of the wall is formed by bricks of the kind shown in detail in Fig. 3 and denoted by 17. (See also Fig. 1.) Referring to the last-mentioned figure, five courses of the ordinary brick are shown as laid in both sections of the wall upon the course 16 just mentioned, while the sixth course is represented as consisting of the

bricks 17, bonded transversely by tie-bricks, as 18.

In Fig. 1 the top courses of the sections 12 and 13 are shown comprising the bricks 17, secured crosswise by the locking or tie bricks 18. The bricks 17 are substantially the same length as the standard brick—i. e., eight inches—while the tie or transverse bricks are somewhat longer than said standard bricks—say about ten inches.

In Fig. 1 it will be seen upon referring to the top course of the double wall that the sides of the tie or transverse bricks 18 overlap the ends of the course-bricks 17 in the two parts of the wall and that the end faces of said tie-bricks are flush with the inner and outer faces of the wall. This forms a stable and solid wall, which can be laid in a comparatively short space of time with less mortar and bricks than in making the usual solid wall, and to secure greater rigidity of my novel type of wall I prefer to interlock the tie-bricks 18 with the wall or course bricks 17.

My invention includes as one of its features a brick having a mortise or depression the surface of which has an obtuse divergence outwardly from a transverse line located between the ends of such mortise or depression, and while such mortise may be of any suitable character it is represented as comparatively shallow and V-shaped, both branches of the V being upon similar angles.

Referring to Fig. 2, the brick 18 there shown has a series of four similar mortises (though this is not essential) denoted, respectively, by 19, 20, 21, and 22, the mortises 19 and 20 being represented as formed in one side of the brick, while the mortises 21 and 22 are formed in the opposite side thereof, by virtue of which the brick is doubly reversible, so that either side face of the same can be interlocked with the wall-bricks or with a body of mortar placed between the same and no matter upon which side the brick may be laid, and a mason need not consume any more time in placing these tie-bricks in the structure than would be the case with standard bricks all the faces of which are plane or flat. The mortises 19 and 20, it will be seen, are situated at opposite sides of a transverse median line of the tie-brick, in one side thereof, while the

same applies with respect to the mortises or depressions 21 and 22 upon the opposite side of said brick, and this construction obviates the formation of easily-broken projections upon the tie-bricks.

Though the ends of the wall-bricks which cooperate with the tie-bricks 18 may be plane or flat, I prefer to form tenons upon said ends, and said tenons are denoted by 23 and 24, and their outline is substantially the same as that of the surface of the mortises which receive them, the ends of the wall-bricks presenting a blunt appearance of substantially V shape. The tenons 23 upon a wall-brick are adapted to be located opposite the mortises formed in the tie-bricks, and the spaces between the surfaces of the mortises and tenons are ordinarily filled with mortar, thereby firmly interlocking them.

The tying of the wall may be made at any place in its height and the tie-bricks may be separated at different intervals, as it will be remembered that they are doubly reversible.

The parts 12 and 13 are disposed longitudinally of the wall, while the tie-bricks are disposed transversely thereto and lock or hold the former against collapse or strains, and a finished wall upon the opposite sides has the appearance of one built from ordinary bricks, for the end faces of the tie-bricks lie in the same plane as the side faces of the wall, and, as previously set forth, no more than the expected skill of a mason is necessary in constructing the wall represented.

In some cases moisture might pass through the outer section of a wall, and to prevent the same coming in contact with the inner section thereof I prefer to channel the tie-bricks, the channel serving as a means for conveying such moisture as it collects away from the inner part of the wall. In Figs. 2 and 4 the tie-brick there shown is represented as having a channel of relatively small area cross-sectionally extending entirely around the same. What might be termed the "side branches" of the channel, which is shown as being rectangular, slope toward the front, so that said side branches serve to convey any water that may enter the upper part of the channel in a direction away from the inner portion of the wall, so as to protect absolutely the latter from dampness. Should the brick 18 be laid at a slant, that portion of the chan-

nel upon what may be considered the under side thereof serves as an effective bar to the passage of water past the same, as when the water falls into said under side of the channel it will drop off the same.

The invention is in no wise limited to the construction previously described, nor to the arrangement of the bricks, nor to their particular conformation, for these features may be variously modified within the scope of the appended claims.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A wall comprising two sections separated by an air-space, tie-bricks uniting said sections, said tie-bricks being provided with mortises in each side face thereof separated by an enlarged central portion and extending from said central portion to the ends of the brick, and wall or course bricks provided with ends adapted to fit and lock within the mortises of the tie-bricks.

2. A tie-brick provided with a series of mortises arranged in each side face thereof, said mortises being separated by an enlarged central portion of the brick and extending from said central portion to the ends of the brick, the mortises on different sides being disposed opposite each other, and said central portion being provided with a sloping water-channel.

3. A tie-brick having an enlarged central portion and end portions of like size and dimensions whereby the tie-brick may be placed in a wall with either end outward, each of said end portions comprising a mortise in each side face thereof extending from the enlarged central portion of the tie-brick to the extreme end thereof, the ends of the brick being of the same dimensions as the central portion.

4. A brick having a water-channel extending entirely around the same and the side branches of the channel being sloped.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN D. MCGILLYCUDDY.

Witnesses:

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