J. V. CLOSE.

HOLLOW TILE.

APPLICATION FILED MAR. 24, 1920.

1,395,176.

Patented Oct. 25, 1921.

Fig. 1,

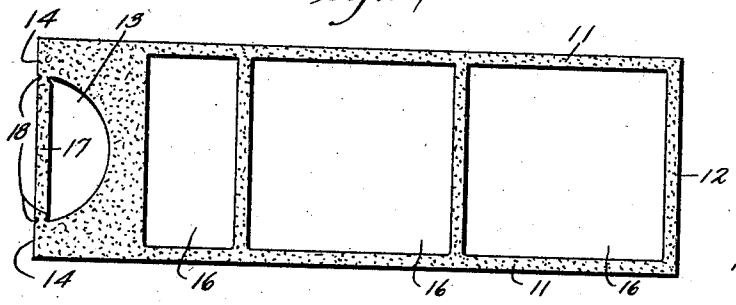


Fig. 2,

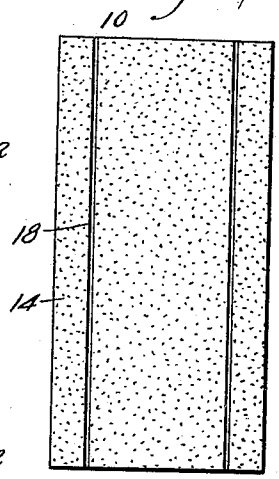


Fig. 4,

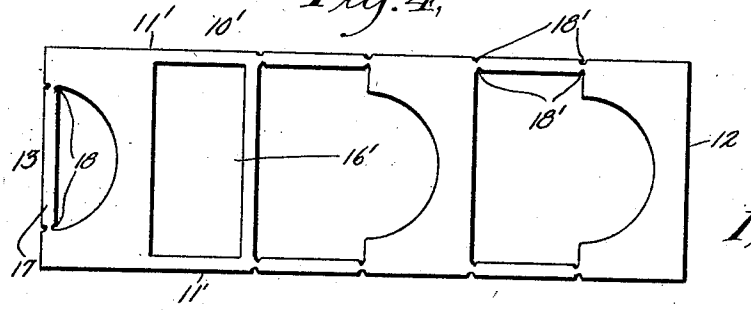


Fig. 5,

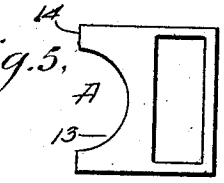


Fig. 3,

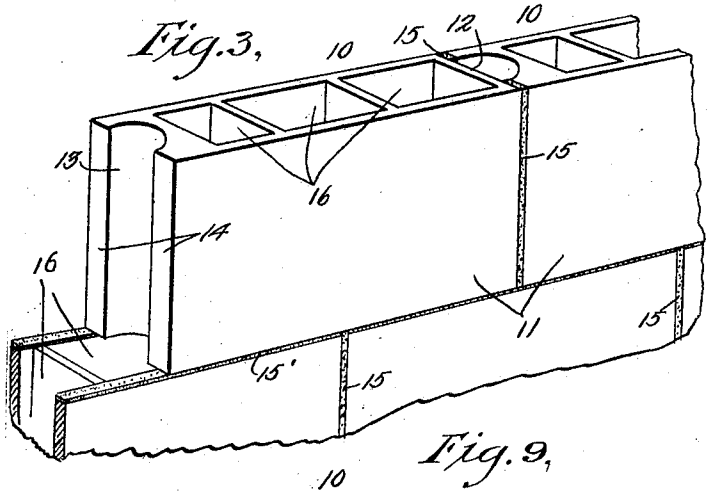


Fig. 6,

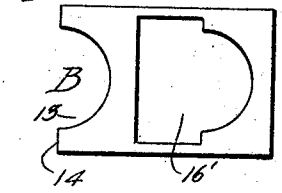


Fig. 7,

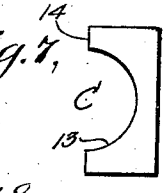


Fig. 9,

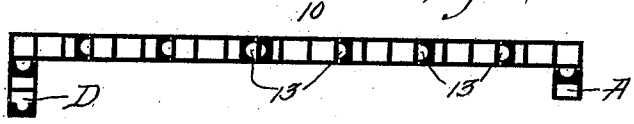


Fig. 8,

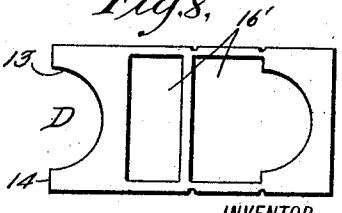
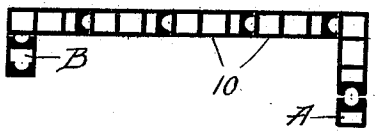


Fig. 10.



WITNESSES

Edw. Thorpe

Geo. H. Beele

INVENTOR

J. V. Close

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JACOB VOORHIS CLOSE, OF NORWALK, CONNECTICUT.

HOLLOW TILE.

1,395,176. Specification of Letters Patent. Patented Oct. 25, 1921.

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To all whom it may concern:

Be it known that I, JACOB V. CLOSE, a citizen of the United States, and a resident of Norwalk, in the county of Fairfield and State of Connecticut, have invented a new and Improved Hollow Tile, of which the following is a full, clear, and exact description.

This invention relates to building constructions and has particular reference to building material such as bricks or blocks and preferably of a hollow nature.

Among the objects of the invention is to provide a hollow block or tile structure which will make it impossible for moisture to pass through the wall, following the courses of the mortar.

Another object of the invention is to provide what may be termed a combination hollow tile having peculiar facilities for adapting it for the formation of special structures, such as corners, turns or walls of irregular length.

With the foregoing and other objects in view and without unnecessarily restricting the scope of the invention, the nature of the invention will be more fully set forth hereinafter in connection with the accompanying drawings, in which—

Figure 1 is a plan view of one form of my improved hollow tile which may be regarded as a standard form.

Fig. 2 is an end elevation of the same as looking toward the right in Fig. 1.

Fig. 3 is a diagrammatic perspective detail indicating a portion of a wall made in accordance with my invention.

Fig. 4 is a plan view of a combination tile.

Figs. 5, 6, 7 and 8 are plan views of various forms that may be derived directly from such blocks as are shown in Fig. 4.

Figs. 9 and 10 are diagrammatic plan views indicating portions of walls built with my improved tiles.

Referring now more specifically to the drawings, I show in Figs. 1, 2 and 3 standard tiles 10 having side walls 11, a flat end wall 12 and a recessed end wall 13. This recessed end wall comprises two vertical spaced faces or surfaces 14 lying in the same plane perpendicular to the side walls 11 and hence parallel to the end wall 12. The recess between the walls 14 may be of any suitable depth or cross sectional form, but is deep enough so that courses of mortar 15 applied on the surfaces 14 will not extend across the recess.

Between the end walls 12 and 13 the tile may be provided with any suitable number, size or form of vertical air spaces 16. These may be of large capacity relatively as is customary in hollow tile structures so as to reduce the weight of the material. As to the particular arrangement or form of these air spaces I am not at this time particularly concerned.

From what has just been said and with reference to Fig. 3, it will be understood that the tiles 10 may be set up or laid in a uniform manner, course upon course, throughout a wall or the like, the tiles of one course breaking joints with the courses above and below it, and by applying the mortar only on the faces 14 to make connection between the ends of adjacent tiles, there is no continuity of mortar from one side of the wall to the other. If the same condition is observed in the application of the mortar along a horizontal course at 15', it is impossible for any moisture to pass through the wall. In my extensive experience with building constructions, I have found that the usual condition which results in the passage of water or moisture through the wall is due to the capillarity of the mortar and not to the composition or porous capacity of the tiles themselves, especially if the tiles are glazed. By providing such surfaces on the tiles as will make it practically impossible for the mason to spread the mortar entirely across the width of the tile, a break is provided in the mortar which makes it impossible for moisture to pass through from one side of the wall to the other.

Fig. 1 indicates a knock-out section 17 at the recessed end of the tile, which, when broken out will expose the recess above described and thereby establish spaced end walls 14. The tiles may be formed either as shown in Fig. 1 or Fig. 3, but preferably as in Fig. 1 for the fact of additional stiffness or strength of the tiles for handling or transportation purposes. The mason, however, with his trowel or other similar tool may easily knock out the section 17 when the wall is being built. This action is facilitated by providing wire cuts 18 along the edges of the knock-out section, preferably on both the inside and outside thereof. As shown in Fig. 9 at about the center thereof

a wall may be built with the recessed end portions of the main tiles directed toward each other from opposite corners or ends of the wall. This fact ordinarily would bring two recesses 13 together where the two portions of the wall meet, but instead of bringing these two parts together, a tile such as shown in Fig. 1 may be introduced without knocking out the section 17; thus the wall will be somewhat stronger than if the section 17 were removed. But in any case, the space 13 will be observed at each joint.

The combination tile indicated at 10′, Fig. 4, is made similar in general dimensions and construction to the tile of Fig. 1, the same having similar end walls 12 and 13, side walls 11′ and vertical air spaces 16′, as well as the knock-out section 17 at the recessed end. I provide, however, a peculiar arrangement of air spaces or construction of the tile, forming among other things the condition, in that the tile as a whole is subdivisible into units of various designs. For example, Fig. 5 shows a unit A constituting the left end of the device as shown in Fig. 4, assuming that the knock-out section 17 is removed; Fig. 6 shows a unit B constituting the right half of Fig. 4; Fig. 7 shows a unit C constituting the extreme right end of the block of Fig. 4, and Fig. 8 shows a unit D comprising the left half of Fig. 4 with an additional section taken from the right half. These various units or sub-divisions may easily be formed from the combination tile by reason of suitably disposed wire cuts 18′ formed preferably on both the insides and the outsides of the web portions forming the boundaries of the air spaces. In other words, the mason in building a wall and finding it necessary to depart from the standard size of the tiles for the purpose of filling certain short spaces or the like, will take one or more of the combination tiles and sub-divide them into such units as may be necessary to meet the condition, as indicated partially in Figs. 9 and 10. It will be observed, however, that each of these units, as well as the main blocks, is provided with a recessed end 13 having the facilities above described for making a moisture proof joint.

The avoidance of any solid mortar joint by the use of this hollow tile permits plastering directly on the tile wall and thereby saves the usual cost and trouble of furring and lathing.

I claim:

1. A building tile having a plurality of differently shaped vertical openings, sundry of the openings having one end wall recessed, the opening at one end of the tile having its outer end wall provided with wire cuts to permit its removal to form a recess at the end of the tile, the side walls of the openings having a recessed end wall being provided with wire cuts, whereby a number of differently shaped units can be formed from the tile, each having a recess in one end.

2. A building tile, having a plurality of openings, the end openings and an intermediate opening each having one of its end walls straight and the other curved, the straight wall of one end wall being provided with wire cuts to permit its removal to form a curved recess at one end of the tile, and each side wall of each of the openings having a curved end wall being provided with two wire cuts, whereby the tile can be subdivided into a plurality of differently shaped units, each having a curved recess in one end.

JACOB VOORHIS CLOSE.