Aug. 9, 1938. F. H. HEDINGER 2,126,011

CAVITY BRICK FOR BUILDING PURPOSES

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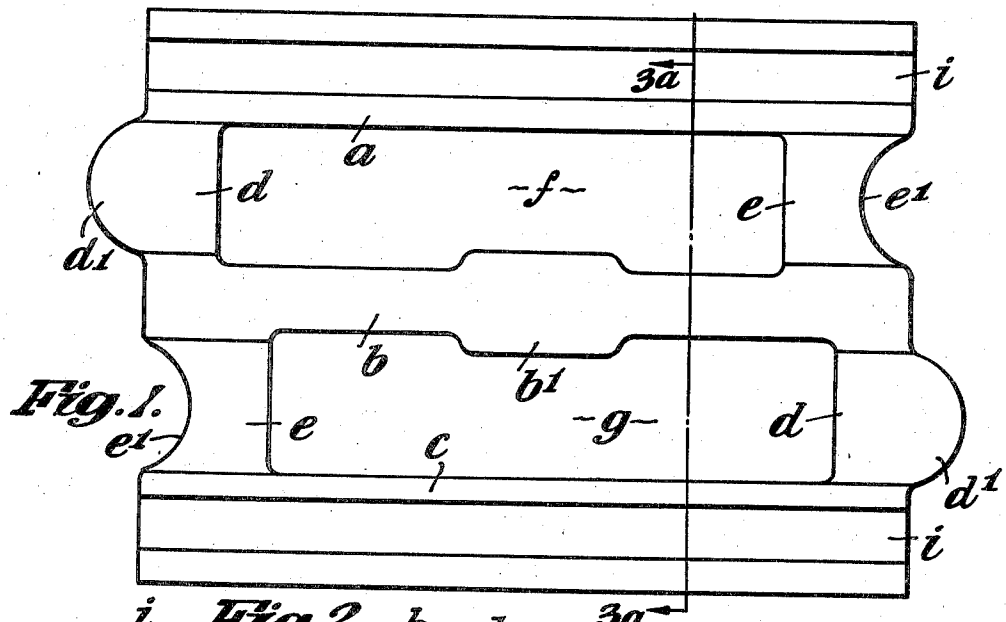


Fig. 1.

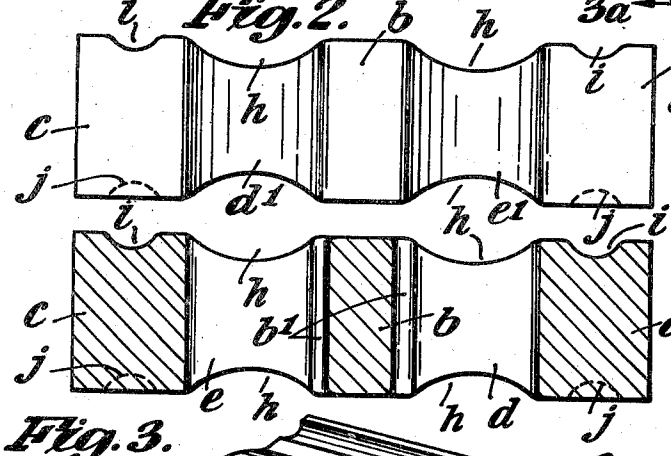


Fig. 2.

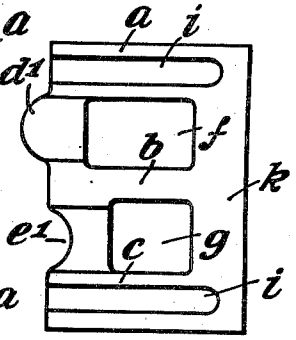


Fig. 5.

Fig. 3.

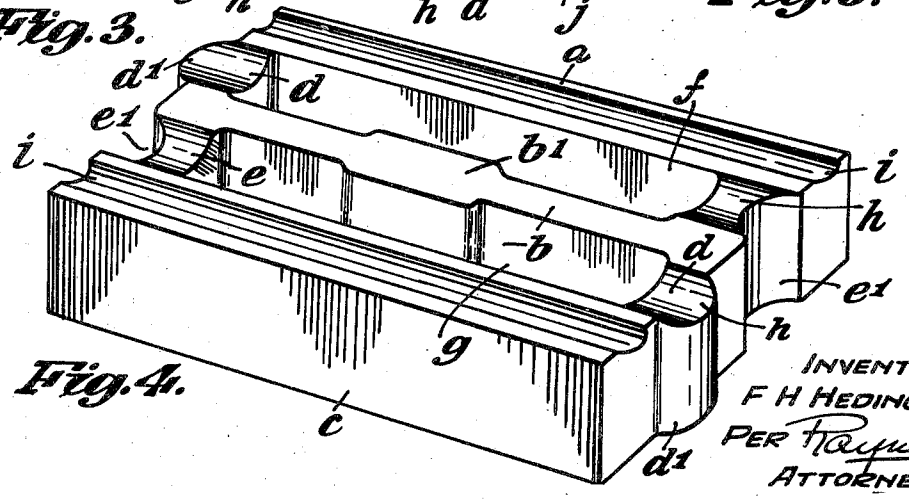


Fig. 4.

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CAVITY BRICK FOR BUILDING PURPOSES

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4 Claims. (Cl. 72—41)

This invention relates to cavity bricks for building purposes of the type in which a number of spaced parallel longitudinal and stretcher elements are united by integral webs, e. g. as described in patent specification No. 2,042,992 which proposes to adopt three spaced stretcher elements united near their ends by webs, the webs at one end both projecting beyond the stretcher elements to form a symmetrical pair of keys, the webs at the other end both being spaced within the adjacent end of the brick to form a symmetrical pair of recesses in which the key projections of an adjacent brick engage when erecting a wall or the like. The use of symmetrical recesses at one end and symmetrical projections at the other end of a cavity brick rather limits the manner of use of such bricks as they are not reversible or interchangeable readily, and therefore one object of this invention is to provide a cavity brick which is not so limited. Another object of this invention is to improve the construction of brick of the type in which three parallel stretcher elements are united by end webs to provide two longitudinal cavities in the brick.

According to the present invention a cavity brick comprises a number of spaced parallel stretcher elements united by webs adjacent each end, the webs at each end forming complementary keys and recesses, and the arrangement of keys and recesses at one end being opposite to or alternating with respect to those at the other end.

In carrying one form of this invention into practice a cavity brick comprises three parallel longitudinal or stretcher elements spaced to produce two longitudinal cavities by two pairs of webs united integrally with the ends of the stretcher elements, the webs at each end being relatively stepped so that whilst maintaining substantially uniformity of thickness of material throughout the stretchers and webs, one web at each end forms a projection and the other a recess, the projections and recesses at the opposite ends of the brick being diagonally opposed. The centre stretcher or longitudinal element is preferably strengthened mid-way between its ends by increasing its thickness for a short portion of its length. Grouting grooves can be formed along one or both edges of some or all of the stretcher elements.

In order that this invention may be clearly understood and readily carried into effect a sheet of drawings is appended hereto illustrating an embodiment thereof, and wherein:—

Fig. 1 is a top plan view.

Fig. 2 is an end elevation.

Fig. 3 is a section on the line 3*a* 3*a* of Fig. 1.

Fig. 4 is a perspective view, and

Fig. 5 is a plan view to a smaller scale showing a suitable half brick or truncated or foreshortened brick for use in completing an end of a line of bricks, e. g. at corners.

Referring to the drawing the brick illustrated is a one-piece moulding and comprises three parallel stretcher elements *a*, *b* and *c* united adjacent their ends by two pairs of integral transverse webs. These webs are denoted by the reference letters *d* and *e*, the webs *d* having projecting parts d^1 and the webs *e* being stepped inwardly relatively to the webs *d* and formed with recesses e^1, complementary to the projections d^1. It will be seen that this arrangement provides two longitudinal cavities *f* and *g*, each cavity having at one end a web *d* with a projection d^1 and a web *e* with a recess e^1, so that the cavity brick can be described as consisting of three spaced parallel stretcher elements *a*, *b* and *c* united by webs *d* and *e* adjacent each end, the webs at each end forming complementary projections or keys d^1 and recesses e^1, and the arrangement of keys and recesses at one end being opposite to or alternating with respect to those at the other end.

It is preferred that the projections e^1 and recesses d^1 shall be curved to avoid sharp corners liable to be fractured.

It will be seen that with a brick having three stretcher elements *a*, *b* and *c* as shown, that at each end of the brick is provided a recess and a projection whereby a brick when laid will interlock with the adjacent bricks, the recesses and projections being obtained by setting back the transverse webs into the body of the brick and enlarging them outwards respectively. The cavities are of such length that the thickness of the webs is substantially that of the stretchers so that in manufacture there is no distortion or uneven drying or setting as there would be if there were dissimilar thicknesses in the brick body.

The transverse webs are preferably recessed on both upper and lower edges, as indicated by the reference letter *h*, to permit the flow of air from one brick to another in a horizontal direction as well as the vertical air flow through the cavities.

Grouting grooves *i* are provided on the upper edges of the two outer stretchers. Alternatively one groove may be provided on each of the outer stretcher members on the upper and lower edges respectively or grooves may be provided on both the upper and lower edges of each outer stretcher member, the location of such additional grouting

grooves being indicated by the reference letter *j* in Figs. 2 and 3.

The centre stretcher element *b* may be of narrower transverse dimension than the others, and may be strengthened at its weakest point, i. e. its centre, by an increased thickness part b^1.

For the purpose of finishing off the ends of a line of bricks, e. g. for forming corners or for making up a runner course of brickwork, a half brick such as shown in Fig. 5 is adopted in which one end has the appropriate key or projection d^1 and the recess e^1, whilst the other end is closed by an end wall *k* formed in continuity with and bridging the outer stretcher elements *a* and *c*.

It is intended that the projections and recesses in adjacent bricks abut closely without the need for intermediate mortar or grouting, the only joint material being that between the vertical faces of the stretcher members, so that in laying the bricks the projections and recesses provide a positive locating means and creeping of the courses which sometimes occurs in ordinary bricklaying due to uneven vertical joints is eliminated.

The bricks are readily reversible when necessary as the various courses of brickwork proceed and quoins and other shaped bricks may be produced on similar lines to the straight course bricks.

The bricks may be made of burnt clay, concrete or any of the known materials used in constructional work.

I claim:—

1. A cavity brick comprising three longitudinal parallel spaced vertical runner web elements, the outside elements constituting the back and front of the brick, transverse vertical web elements connecting and integral with the ends of said runner elements forming the ends of the brick, and said longitudinal and transverse web elements enclosing elongated vertical cavities, said web elements having complementary male and female key elements located in diagonally opposite relationship at the ends of the bricks and the contour of the ends of the brick being complementary so that the brick is reversible on a vertical axis and so that the key elements will closely interfit the complementary elements of an adjacent brick without intervening air space.

2. The cavity brick of claim 1 in which one pair of diagonally opposite vertical webs is provided with cylindrical projections, projecting beyond the ends of the longitudinal runner elements and the other diagonally opposite pair of vertical transverse web elements is provided with corresponding cylindrical recesses conforming to said projections, said recesses being below the ends of said longitudinal web elements.

3. The cavity brick of claim 1 in which the middle longitudinal web element is enlarged at its middle portion.

4. The cavity brick of claim 1 in which the transverse web elements are cylindrically recessed at their top and bottom faces and in which two of said webs at diagonally opposite positions are cylindrically recessed at their outside faces, the other two transverse web elements being provided with corresponding projecting portions.

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