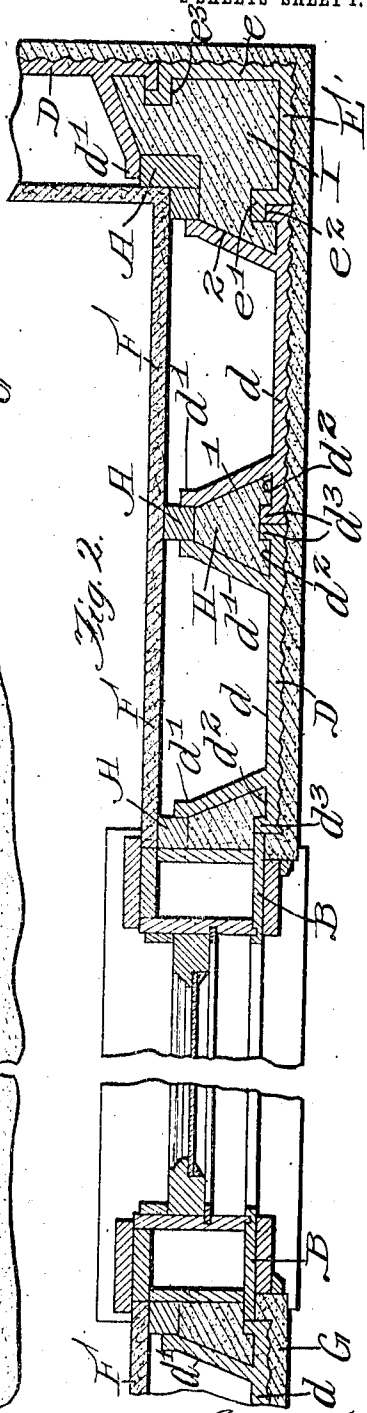
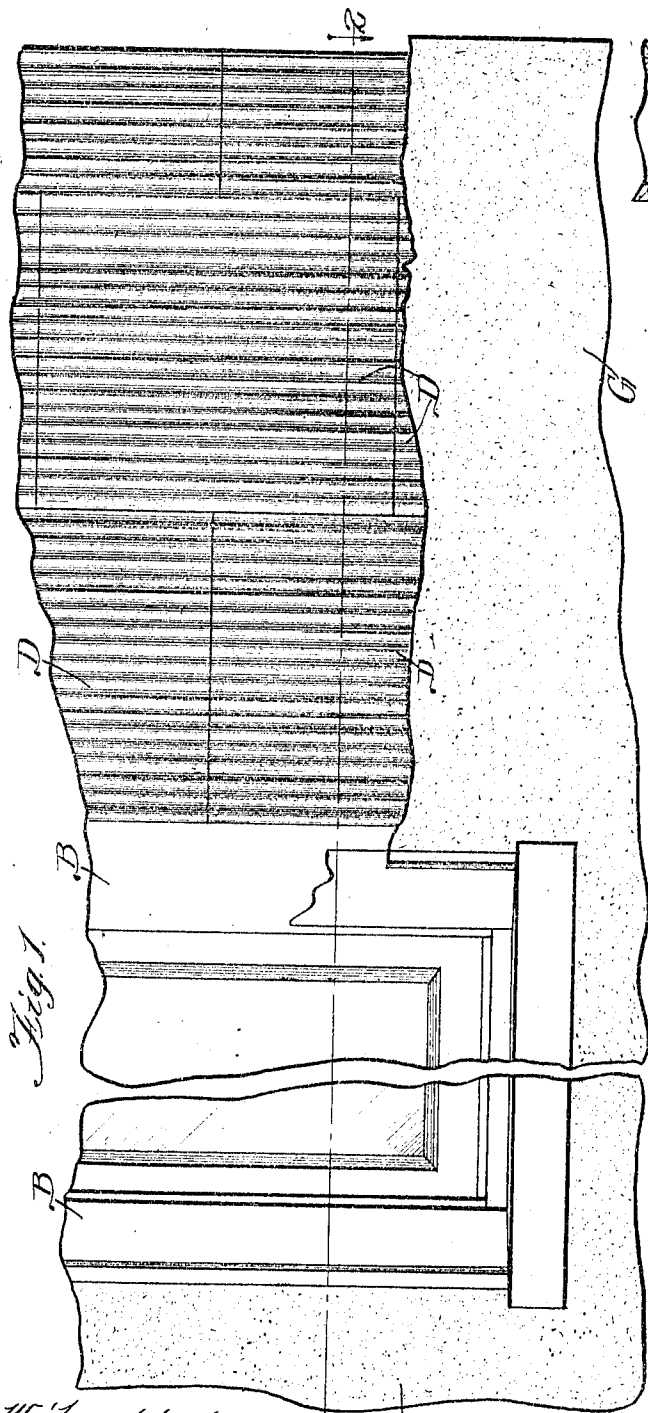


1,054,199.

Patented Feb. 25, 1913.

2 SHEETS—SHEET 1.



Witnesses:
G. A. D. H. H. H.
G. A. D. H. H. H.

Inventor.
Howard H. Hahn
By Bulkley, Fenner & Dwyer
Attorneys

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H. H. HAHN.
WALL CONSTRUCTION.
APPLICATION FILED FEB. 5, 1910.

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2 SHEETS—SHEET 2.

Fig. 3.

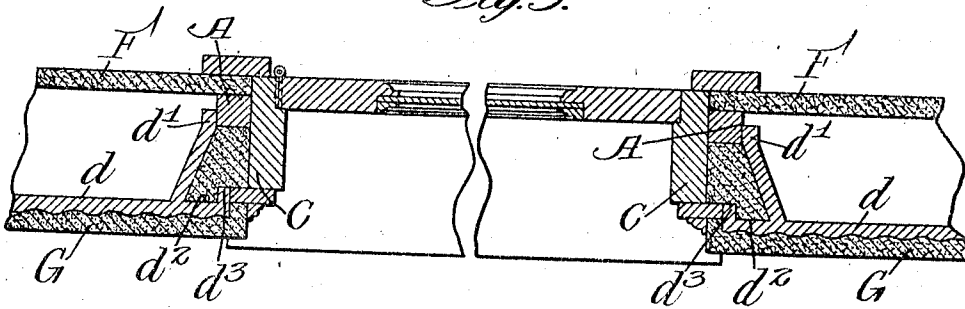


Fig. 4.

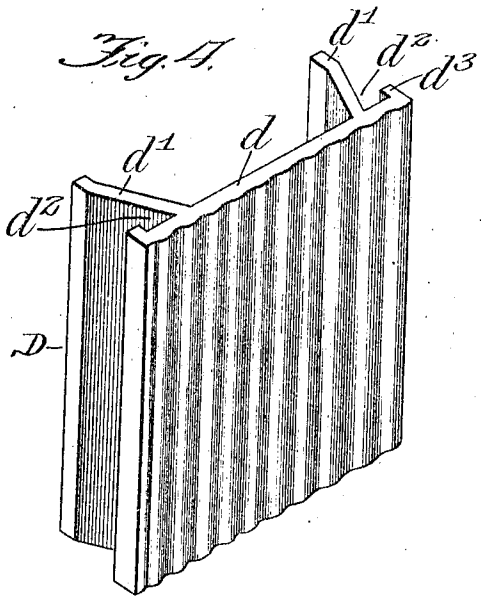
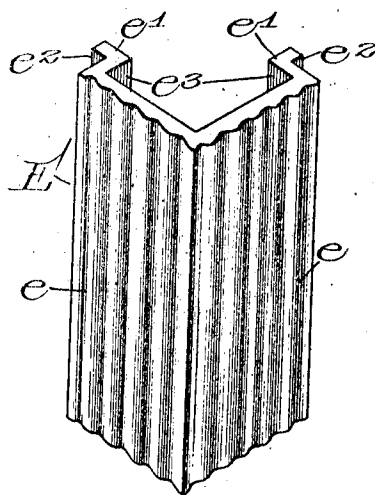


Fig. 5.



Witnesses:

Ed. J. Kemp
G. W. Dumas Jr.

Inventor:

Howard H. Hahn
By *Bullley & Burrows*
Attorneys

UNITED STATES PATENT OFFICE.

HOWARD H. HAHN, OF KENOSHA, WISCONSIN.

WALL CONSTRUCTION.

BEST AVAILABLE COPY

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Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed February 5, 1910. Serial No. 542,306.

To all whom it may concern:

Be it known that I, HOWARD H. HAHN, a citizen of the United States of America, and resident of Kenosha, Kenosha county, Wisconsin, have invented a certain new and useful Improvement in Wall Construction, of which the following is a specification.

My invention contemplates a new wall construction for houses and other structures.

It relates more particularly to walls built of masonry.

In practising my invention I first erect a frame of wood or other suitable material. Then I inclose the frame with a wall built of blocks or tiles laid either loosely or with mortar. These blocks or tiles have recesses in their sides where they are joined vertically, which form vertical openings extending from the top to the bottom of the wall. Preferably, these openings which are formed between the vertical columns of blocks or tiles are closed at their inner sides by the studding of the frame. Then when the wall is up, I pour wet concrete or cement down the said openings, until they are entirely filled, and when this hardens the blocks or tiles are held firmly together. Each inclosed column of concrete or cement forms a key for locking the blocks or tiles against displacement. Thus the concrete or cement is handled without the use of molds of any kind whatsoever, as the spaces or openings formed by the wall and frame are sufficient for this purpose. Heretofore the building of walls by pouring concrete or cement has always involved the use of molds. Thus, with my improved construction and method a considerable saving is accomplished. Furthermore, the wall can be constructed without the use of certain skilled labor which was heretofore necessary for work of this kind. After the wall is fully constructed, then I plaster it inside on the studding, in the ordinary manner. A coat of plaster or cement can also be applied to the outer surface of the wall. For use in building a wall in this way, and as a matter of further improvement, I provide a specially formed block or tile, which can be made of either cement or some baked or fired material, such as brick are made of, and which are formed with particular reference to the running or pouring of the concrete or

cement keys by which they are locked together. The nature and advantages of my invention will, however, hereinafter more fully appear.

In the accompanying drawings, Figure 1 is an outside view of a fragment of a wall involving the principles of my invention, showing a window therein, and having a portion of the outside plaster stripped off to show the blocks or tiles. Fig. 2 is a horizontal section on line 2-2 in Fig. 1. Fig. 3 is a horizontal sectional view showing the method of constructing a door-way in the said wall. Fig. 4 is a perspective of one of the blocks or tiles used in the body of the wall. Fig. 5 is a similar view of the blocks or tiles used at the corners.

As thus illustrated, the frame of the house is first erected, having the ordinary studding A, which latter are vertical and spaced apart in the ordinary manner. The window frames B and the door frames C are set into the studding in the manner shown in Figs. 1 and 3. Then the blocks or tiles D for the sides, and the blocks or tiles E for the corners, are laid one on top of the other between the studding. Each block or tile D has a flat front d and sides d' , which latter have vertical recesses d^2 therein. The front edges of said sides may have inwardly projecting ribs d^3 , as shown. The corner blocks or tiles have front walls e which meet at right angles. The sides e' are formed externally with vertical channels e^2 and internally with ribs e^3 which project inwardly. The blocks or tiles D are set in such manner that the studding A is between the sides d' , and so that the recesses or vertical channels d^2 form fully inclosed openings 1. The corner blocks or tiles E are set in such manner that their channels e^2 are engaged by the ribs d^3 on the adjacent blocks or tiles D. In this way a larger and irregularly shaped vertical opening 2 is formed at the corner of the wall. Wet concrete or cement is then poured into the tops of these openings 1 and 2, with the result that vertical columns or keys are formed which extend from the bottom to the top of the wall. These keys lock the blocks or tiling firmly together. This is all done easily and without the use of skilled labor. Afterward the studding can be plastered on the inside, as shown at F, in

the ordinary and well known manner. A coat of cement or plaster G can then be applied and for this purpose the blocks or tiles can be corrugated on their outer surfaces.

The blocks or tiles D and E can be made of cement, concrete, terra cotta, or other suitable material. The keys H and I may be reinforced with rods or wire, if such is desired, or in any other suitable manner.

From the foregoing it will be seen that no molds are necessary, as the blocks or tiles, in conjunction with the studding, form spaces which fully inclose the concrete or cement. The blocks or tiles D can be made either with or without the ribs d^3 ; but if used they help to lock the vertical columns together. If the ribs d^3 are not used, the keys H will be of the same shape and formation, but will not have the outer groove in which said ribs engage. Any suitable kind of cementitious material may be used, such as Portland or natural cement, concrete or the like. The blocks or tiles can be laid one on top of the other, or in any suitable manner, so as to break joint, or otherwise, as may be desired, and either loosely or with mortar, as may be found most desirable for any particular case.

It will be understood, of course, that I do not limit myself to the building of a wall to its ultimate height before the keys are run in. The wall may be built to the desired height, and the keys of cement or concrete then run in, and this operation can be repeated until the wall is of the height desired for the size of the building, or for any other purpose. In other words, the wall can be built in sections or stages, one on top of the other, in the manner described.

As shown in Fig. 1, the blocks or tiles D are arranged to break joint—that is to say, the joints between the blocks or tiles of one column are intermediate the joints between the blocks or tiles of the columns at each side thereof, so that the wall is, in one sense, composed of vertical courses, which courses are laid in such manner that the blocks or tiles of one course break joint with those of adjacent courses. In this way the strength of the cement or concrete keys is materially increased.

What I claim as my invention is:

1. A wall construction comprising upright frame members, blocks or tiles laid up against said members, with a space running up and down one side of each member, each space being closed at three sides by the said blocks or tiles, and at one side by a frame member, cement filling said spaces and forming enlargements of said members, and means secured directly to said members to form a surface for the wall.

2. A wall construction comprising a frame of wood studding, blocks or tiles laid

up in contact with said studding, with a vertical space running up and down the outer edge of each piece of studding, each space being closed at three sides by the blocks or tiles, and at the innerside by a frame member, cement filling said spaces and forming enlargements of the studding, and means secured directly to the said studding to form a surface for the wall.

3. A wall construction comprising blocks or tiles laid up with vertical spaces, a frame with vertical members, each member closing one side of one of said spaces, whereby each space extends up and down one of the frame members, leaving said members exposed at one side, and filling for said spaces, each filling engaging two columns of the blocks or tiles and forming an enlargement of a frame member.

4. A wall construction comprising upright frame members, blocks or tiles laid up against said members, with a space running up and down one side of each member, each space being closed at three sides by the said blocks or tiles, and at one side by a frame member, cement filling said spaces and forming enlargements of said members, and means secured directly to said members to form a surface for the wall, each block or tile being open at the rear thereof, and having flanges which engage the frame and filling.

5. A wall construction comprising a frame of wood studding, blocks or tiles laid up in contact with said studding, with a vertical space running up and down the outer edge of each piece of studding, each space being closed at three sides by the blocks or tiles, and at the inner side by a frame member, cement filling said spaces and forming enlargements of the studding, and means secured directly to the said studding to form a surface for the wall, each block or tile being open at the rear thereof, and having flanges which engage the frame and filling.

6. A wall construction comprising blocks or tiles laid up with vertical spaces, a frame with vertical members, each member closing one side of one of said spaces, whereby each space extends up and down one of the frame members, leaving said members exposed at one side, and filling for said spaces, each filling engaging two columns of the blocks or tiles and forming an enlargement of a frame member, each block or tile being open at the rear thereof, and having flanges which engage the frame and filling.

7. A wall construction comprising upright frame members, blocks or tiles laid up against said members, with a space running up and down one side of each member, each space being closed at three sides by the said blocks or tiles, and at one side by a frame member, cement filling said spaces and

forming enlargements of said members, and means secured directly to said members to form a surface for the wall, each space being wider at the front than at the rear thereof, and each block or tile having a front thickness extending half way across the face of the filling, whereby the vertical edges of said blocks or tile meet at the front of each filling.

- 10 8. A wall construction comprising a frame of wood studding, blocks or tiles laid up in contact with said studding, with a vertical space running up and down the outer edge of each piece of studding, each
15 space being closed at three sides by the blocks or tiles, and at the inner side by a frame member, cement filling said spaces and forming enlargements of the studding, and means secured directly to the said studding
20 to form a surface for the wall, each space being wider at the front than at the rear thereof, and each block or tile having a front thickness extending half way across the face of the filling, whereby the vertical

edges of said blocks or tiles meet at the front of each filling. 25

9. A wall construction comprising blocks or tiles laid up with vertical spaces, a frame with vertical members, each member closing one side of one of said spaces, whereby each
30 space extends up and down one of the frame members, leaving said members exposed at one side, and filling for said spaces, each filling engaging two columns of the blocks or tiles and forming an enlargement of a
35 frame member, each space being wider at the front than at the rear thereof, and each block or tile having a front thickness extending half way across the face of the filling, whereby the vertical edges of said
40 blocks or tiles meet at the front of each filling.

Signed by me at Chicago, Illinois, this 1st day of February, 1910.

HOWARD H. HAHN.

Witnesses:

WM. B. DARWIN,
J. NORBY.