No. 877,997. PATENTED FEB. 4, 1908.

F. M. HENRY.

CONCRETE BUILDING BLOCK WALL.

APPLICATION FILED AUG. 12, 1907.

2 SHEETS—SHEET 1.

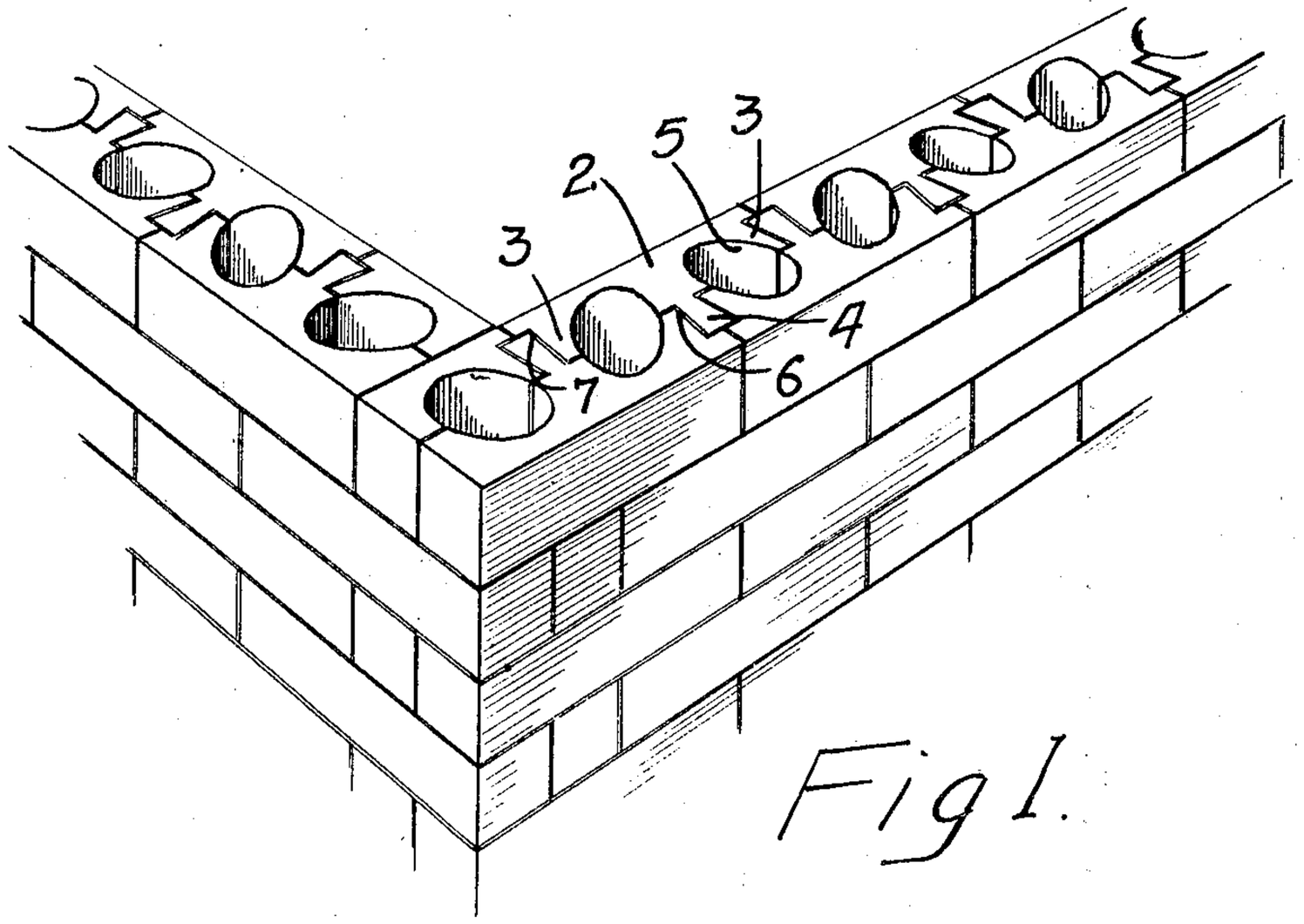

Fig 1.

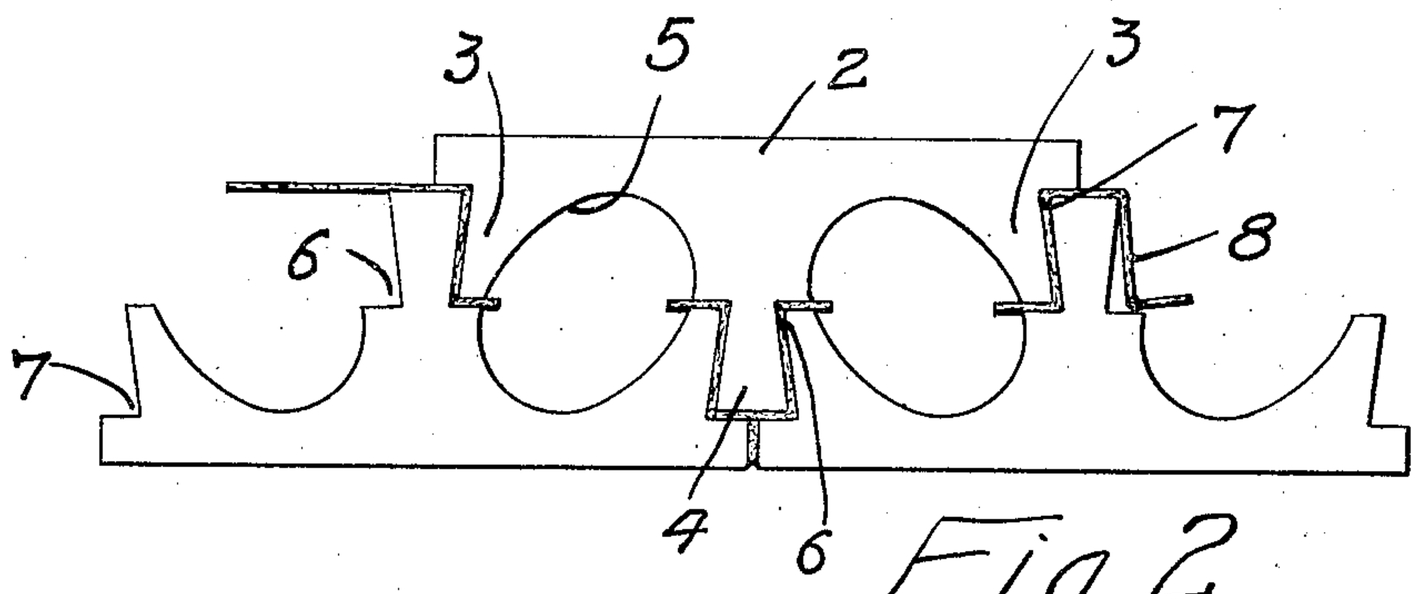

Fig 2.

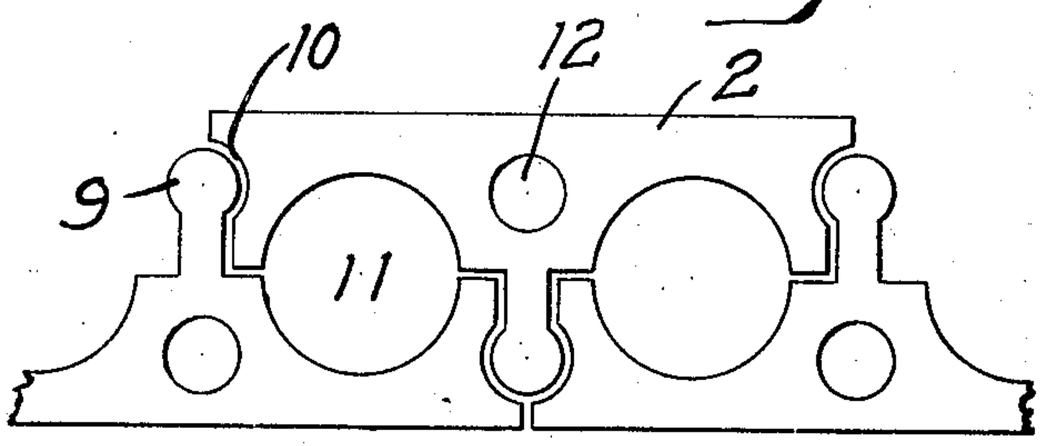

Fig 3

WITNESSES
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FRANCIS M. HENRY
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2 SHEETS—SHEET 2.

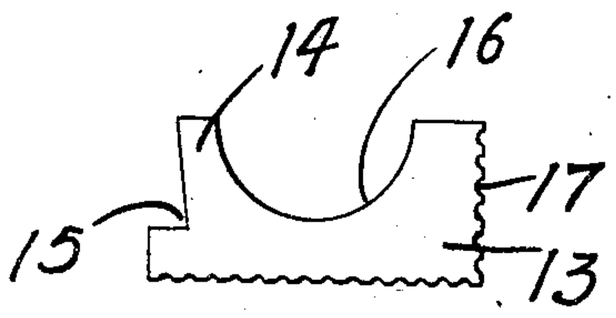

Fig 7.

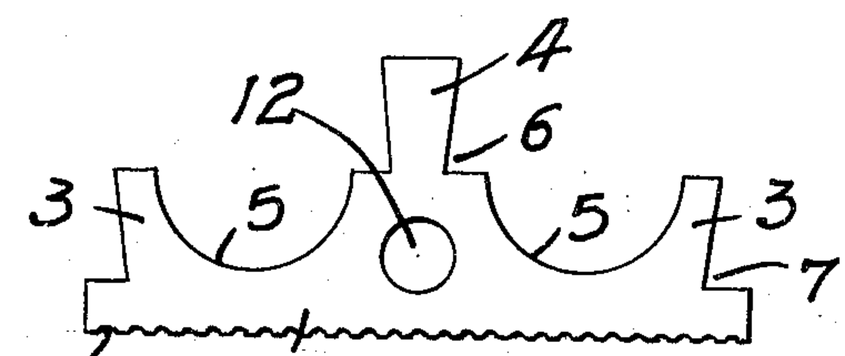

Fig 5.

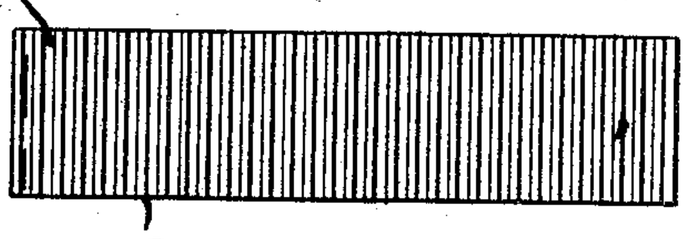

Fig 6.

Fig 4.

WITNESSES
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UNITED STATES PATENT OFFICE.

FRANCIS M. HENRY, OF MINNEAPOLIS, MINNESOTA.

CONCRETE-BUILDING-BLOCK WALL.

No. 877,997. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed August 12, 1907. Serial No. 388,117.

To all whom it may concern:

Be it known that I, FRANCIS M. HENRY, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Concrete-Building-Block Walls, of which the following is a specification.

The object of my invention is to provide a wall composed of interlocking blocks which when placed together will form a wall with vertical air spaces or flues therein.

A further object is to provide a wall composed of blocks having tongues projecting horizontally on each side of the middle line of the wall and invisible on each side when the wall is completed. This invisible characteristic of the tongue on the blocks in this case distinguishes this application from my former one, filed Jan. 19, 1907, Serial No. 353,074.

A further object is to provide a wall composed of blocks which when placed together will present a surface suitable to receive a plaster or stucco face.

The invention consists generally of various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a wall embodying my invention. Fig. 2 is a top view of a portion of the same. Fig. 3 is a similar view illustrating a modified construction. Fig. 4 is a top view of a wall showing the modified form of the vertical air flue therein. Fig. 5 is a detail view of one of the blocks. Fig. 6 is a front or face view of the same. Fig. 7 is a detail view of a filler block that is employed at the corners of the wall.

In the drawing, 2 represents a block rectangular in form of concrete construction having webs 3 at each end and an intermediate centrally arranged tongue 4 that is dove-tailed in form between which tongue and the webs 3 concave surfaces 5 are provided. These are preferably formed as shown in Fig. 2 to produce vertical flues or air shafts that are oval in cross section and diagonal with respect to the faces of the wall. The purpose of this is to thicken the webs 3 and provide more stock therein and prevent, to a large degree the danger of their breaking off during the molding operation, or while being handled or built into the wall. The dove-tail form of the tongue 4 causes the formation of recesses 6 on each side thereof, the bottoms of said recesses being in line substantially with the middle line of the wall, and the webs 3 are provided with corresponding recesses 7 into which the ends of the tongues of the opposite blocks are fitted. Thus, as shown in Figs. 1 and 2 the vertical joints between the blocks alternate in position on each side of the wall, the tongue of the block on one side being opposite the webs of the contiguous blocks on the other side and when the webs and tongue are fitted together they will interlock and the blocks forming the two faces of the wall will be firmly united together and it will be impossible for them to become separated accidentally or through any settling or heaving of the wall.

In my former application above referred to the medial tongues on the block extend entirely through and are visible on each side of the wall, while in this case the tongues are dove-tailed in form and each tongue interlocks with the end of the adjoining block so that when the wall is completed the tongues will be invisible and the blocks will be securely locked together.

In building the wall an insulating strip 8 of felt, straw-board or other suitable material may be inserted between the joints of the opposite blocks to prevent moisture from passing through from one side of the wall to the other.

In Fig. 3 I have illustrated a modified construction which consists in providing heads 9 on the ends of the tongue to fit into recesses 10 in the ends of the block. Circular air spaces 11 are formed and the middle portion of each block has a vertical opening 12.

In Fig. 4 the type of block shown in Fig. 3 is provided, built into a wall but having dove-tailed tongues on the middle portions of the blocks corresponding to the tongues shown in Figs. 1 and 2, and which I will designate by the same reference numeral. At the corner of the wall I provide a block 13 having a web 14 at one end provided with a recess 15 to receive the end of the tongue on the corner block. The position of the block 13 in the wall is indicated in Fig. 1, being arranged in line with the inner faces of the walls and at its outer end alternating in position first on one side of the corner and then on the other. It is provided with a concave surface 16 coöperating with the recess in the corner block to form the vertical air flue. The outer faces of these blocks have vertical

grooves 17 formed therein at intervals and arranged so that when the blocks are placed one upon another these grooves will register and form continuous grooves from the top to the bottom of the wall.

The grooves may be made of suitable width and depth to produce a cut stone effect, or the grooved surface may be coated with a plaster preparation to form an exterior finish. The blocks may be made of any suitable length and depth, and when built into the wall will form a very substantial, durable structure. This block is designed particularly for use where the interlocking of the blocks forming the faces of the wall is desired, and where the ends of the tongues should be concealed within the wall to obtain a suitable surface for the exterior finish.

I claim as my invention:

1. A wall composed of T-shaped blocks, each having a rectangular head forming a stretcher with a dove-tailed tongue molded transversely on said head midway between its ends, said tongue having recesses on each side and the inner ends of said recesses coinciding with the longitudinal middle line of block and the inner surface of said head on each side of said tongue being concave and the ends of said head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the ends of said webs being coincident with the longitudinal center of the wall, and said webs having recesses in the ends of the block corresponding substantially to those on said tongue and into which web recesses the tongues of the adjoining blocks are adapted to fit, and the tongues in the block on one side of the wall being opposite the joint between the ends of the blocks on the other side of the wall and invisible from said other side and the concave surfaces in the opposite blocks forming vertical flues, substantially as described.

2. A wall composed of T-shaped blocks each having a rectangular head with a tongue molded transversely on said head midway between its ends, said tongue having recesses on each side and the ends of said head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the ends of said webs and the inner ends of the recesses in said tongue being coincident with the longitudinal center of the wall, and said webs having recesses in the ends of the block to receive the tongue on the opposite contiguous block, and the ends of said tongues being opposite the joint between the ends of contiguous blocks on the same side of the wall and concealed on the outside and forming a lock between the opposite blocks, and there being concave surfaces formed between said tongues, and the ends of the blocks and said concave surfaces forming vertical air flues that are substantially oval in cross section and diagonal with respect to the center line of the wall, for the purpose specified.

3. A wall composed of T-shaped blocks each having a rectangular head with a centrally arranged tongue extending transversely of the block, said tongue having recesses in its opposite side faces and the ends of said block having terminal webs projecting outwardly therefrom on the same side of the block and parallel substantially with said tongue, said tongue being dove-tailed in form and said terminal webs having recesses adapted to receive said tongue, and the ends of the tongues being opposite the joints between the ends of contiguous blocks on the same side of the wall and concealed on the outside and forming a locking means between contiguous blocks, and the outer faces of said blocks having a series of closely arranged, shallow, vertical grooves therein, those of one block being adapted to register with the corresponding grooves of the blocks above and below when the blocks are built into the wall and thereby form continuous grooves extending vertically in the face of the wall.

In witness whereof, I have hereunto set my hand this 8th day of August 1907.

FRANCIS M. HENRY.

Witnesses:

RICHARD PAUL,

J. B. BYINGTON.