S. M. SAMPSON.

CONCRETE TILE CONSTRUCTION.

APPLICATION FILED APR. 18, 1921.

1,415,197. Patented May 9, 1922.

Fig. 1

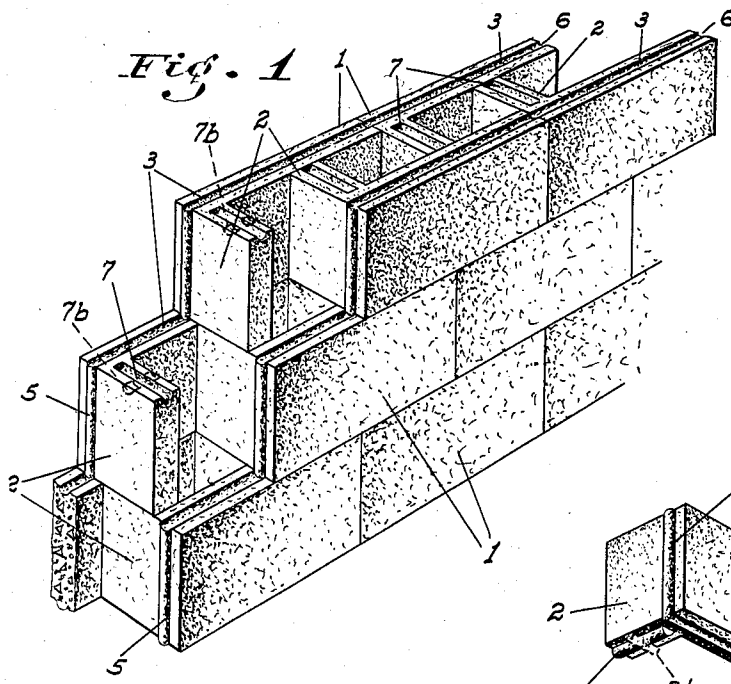


Fig. 2

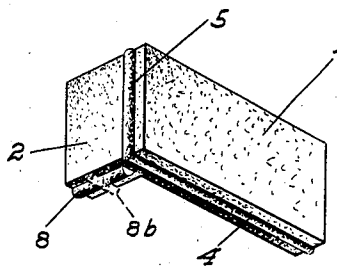


Fig. 3

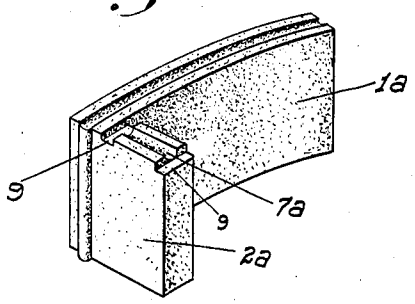


Fig. 4

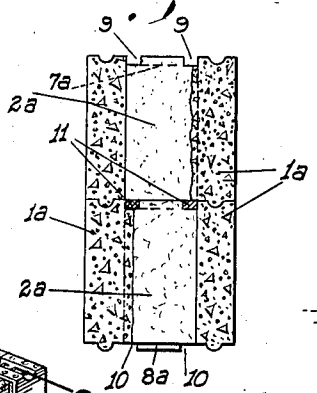


Fig. 6

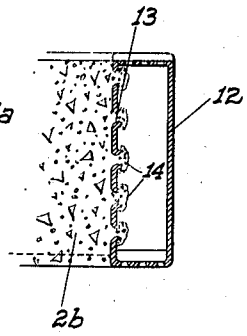


Fig. 5

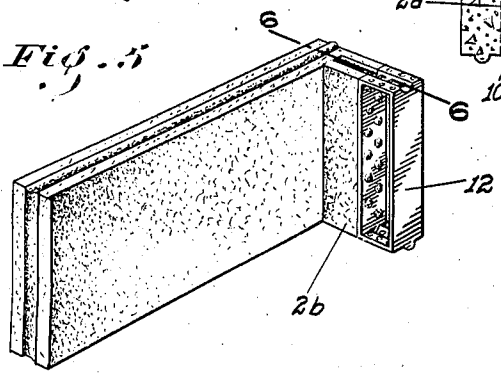


Fig. 7



INVENTOR.

Scott M. Sampson

BY

ATTORNEY

UNITED STATES PATENT OFFICE.

SCOTT M. SAMPSON, OF OAKDALE, CALIFORNIA.

CONCRETE-TILE CONSTRUCTION.

1,415,197. Specification of Letters Patent. Patented May 9, 1922.

Application filed April 18, 1921. Serial No. 462,080.

To all whom it may concern:

Be it known that I, SCOTT M. SAMPSON, a citizen of the United States, residing at Oakdale, county of Stanislaus, State of California, have invented certain new and useful Improvements in Concrete-Tile Construction; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in tile for wall construction purposes, and particularly to a type by means of which a double wall may be built so that an air circulation will be had between the two wall-thicknesses.

The principal object of my invention is to provide a tile for the purpose so designed that with a single sized tile a strong and substantial double wall of any height may be erected, which will be practically proof against cracking from top to bottom along the lines of abutment of the tile, as is so often seen in walls of this general character.

A second object is to design the tile relative to each other that double walls having different overall thicknesses up to a certain limit may be built up with a common sized tile for all such thicknesses, without destroying the substantial character of the wall, since the tiles of each wall thickness always coact with those of the other thickness.

A third object is to form a tile admirably adapted for silo and similar circular construction, and to provide means in such tile for enabling the structure to be rigidly bound together with metal reinforcing bands, which will be invisible and which cannot become displaced.

A further object is to form the tile with a metal portion, so as to break the continuity of the concrete or other water absorbing and transmitting material between the two wall thicknesses, so that the inner wall will be maintained in a dry condition irrespective of weather conditions outside.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Fig. 1 is a perspective elevation of a portion of a wall built up with my improved tile.

Fig. 2 is a perspective view of one of the tile detached.

Fig. 3 is a similar view of a tile particularly adapted for circular structures.

Fig. 4 is a cross section of a pair of such tile, showing the provision made for metal reinforcing bands.

Fig. 5 is a perspective view of a tile formed with a metal leg or extension.

Fig. 6 is a fragmentary section taken on a line 6—6 of Fig. 5.

Fig. 7 is a view of a metal wall tie.

Referring now more particularly to the characters of reference on the drawings, and especially at this time to Figs. 1 and 2, the numeral 1 denotes the main face of the tile, provided at one end with a right angled leg 2, thus forming the tile in the shape of the letter L. The upper edge of the face 1 is grooved from end to end as at 3 while the under edge is similarly tongued as at 4. One end edge of the face 1 is tongued as at 5, while the other end is grooved as at 6.

The upper edge of each leg 2 is grooved as at 7, this groove extending from the outer end to a point in alinement with the inner face of the tile, or that face against which said leg terminates. The under edge of the leg is provided with a similarly positioned tongue 8, but the vertical edge of said leg, or that edge parallel to but farthest from the inner tile-face, is plain.

In building a double wall with these tile, one row of the latter are laid with the legs 2 projecting inwardly and positioned in similar order throughout, so that the legs are each positioned a tile apart in the length of the wall, the tongues and grooves at the end edges of the tile being fitted with each other. When one such row has been laid, the other wall thickness may then be laid, which is preferably done so that the inner face of the tile abut against the ends of the legs of the row already laid, while the legs of those now being positioned project toward the first laid row to abut against the inner faces thereof and are positioned to lie intermediate the legs of said first laid row. This construction will be clear by referring to the upper end of Fig. 1.

When this operation is completed, the second outer row may be superimposed on the under one, this being done in such a manner that the legs of the upper tile now being laid rest on and lock with the legs of the inner row previously laid, and so on, to the top of the wall throughout both thicknesses, thus staggering the vertical abutting joints of the tiles, as shown in Fig. 1.

When the ends of the legs abut against the inner faces of the opposite tilefaces, the wall is as narrow as can be made with a certain sized tile. If it is desired however to make the wall thicker, the two rows of tile may be laid further apart, while at the same time the legs still rest on each other as heretofore explained, thus maintaining the substantial character of the wall.

While it is preferable to have the legs of the two rows spaced equally, it is not absolutely necessary, since the legs do not lock with the tile of the opposite row, and hence the latter may be moved to bring a pair of legs adjacent each other, or to space them according as may be desired, as for instance to surround structural columns and the like.

In the form of tile shown in Figs. 3 and 4, the face 1^a of the tile is curved on a predetermined arc, while the leg 2^a is radial from the center of this arc. At both ends of the groove 7^a, the upper edge of the leg is transversely cut away or recessed as at 9 to a depth equal to that of the groove, while on the under edge the tongue 8^a is cut away from both ends a distance equal to the width of the recesses at 10, so that when the tile are superimposed on each other in opposed relation, an orifice is formed for the reception of a reinforcing band 11, which would extend completely around the structure being built with this form of tile.

In the form depicted in Figs. 5 and 6, the concrete portion of the leg 2^b is shortened and is brought to its normal length by a metal member 12, preferably hollow so as to minimize the weight, this member being laid in the mold when the tile is being formed or poured, and secured therewith in any suitable manner, as by means of orifices 13 in the face of the metal member which abuts against the concrete portion of the leg, and through which some of the concrete may project to form a bond, as shown at 14 in Fig. 6.

This metal section is preferably made of a length sufficient to insure overlapping of the same with the corresponding member of the legs of the adjacent vertical tile, so that the continuity of the concrete is broken, thus preventing moisture from seeping from the outer to the inner wall.

Should it be desired to build a solid wall and pour concrete into the spaces between the tile, the latter may be held from spreading either by cross grooves and tongues on the legs 2, as shown at 7^b and 8^b, or metal ties 15 may be laid between the outer and inner rows, the ends of the ties setting in the grooves 6.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A building tile comprising a face member, an integral leg projecting therefrom, a metal member forming the outer end of the leg, and means whereby the metal member may be rigidly fixed to the integral leg without the use of additional members.

2. A building tile comprising a face member, an integral leg projecting therefrom and a hollow metal member forming the outer end of the leg, the face of the metal adjacent the integral leg being freely orificed, whereby to receive therethrough some of the material of the tile to bind the metal to the integral leg.

3. A building tile comprising a face member, an integral leg projecting therefrom, and a metal member fixed to and forming the outer end of the leg, said metal member being open from side to side, whereby horizontal air passages are formed when a number of tile are laid up in predetermined relation.

4. A building tile comprising a face member, an integral leg projecting therefrom, and a metal member fixed to and forming the outer end of the leg, said metal member being open from side to side and the metal adjacent the main leg being freely orificed, whereby to receive therethrough some of the material of the tile to form a binding for the metal member.

In testimony whereof I affix my signature.

SCOTT M. SAMPSON.