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S. E. CAMPBELL

REENFORCED CEMENT TILE STRUCTURE

Filed March 28, 1923

Fig. 4

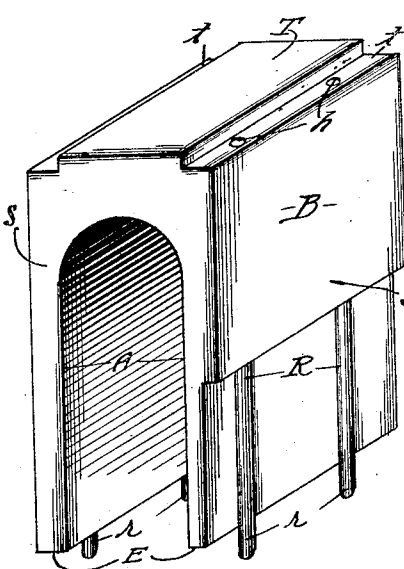
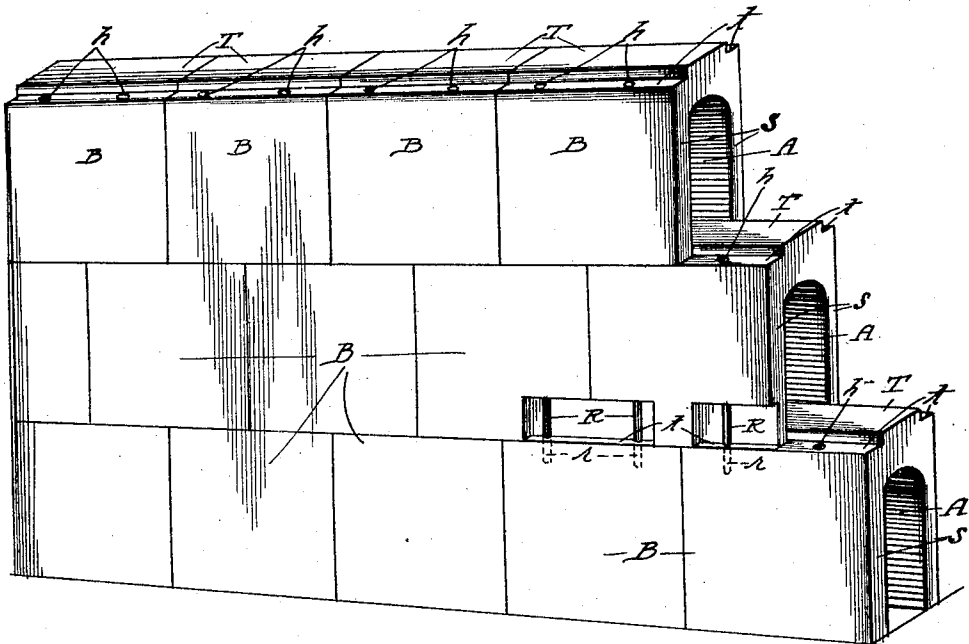


Fig. 1

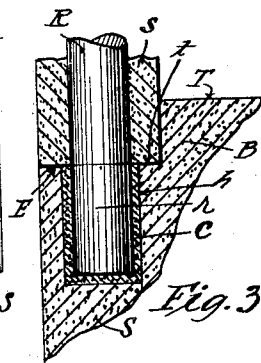


Fig. 3

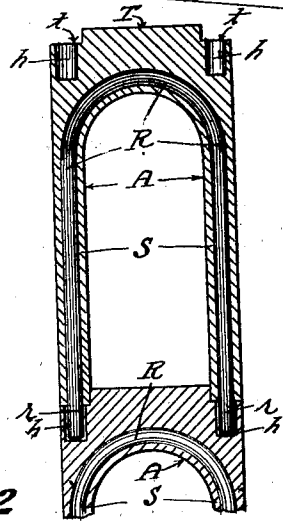


Fig. 2

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REENFORCED CEMENT TILE STRUCTURE.

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To all whom it may concern:

Be it known that I, SCOTT E. CAMPBELL, a citizen of the United States, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Re-enforced Cement Tile Structures, of which the following is a specification.

This invention relates to reenforced cement tile structure and the main object is to provide an improved form of tile, together with means formed therein for thoroughly reinforcing the individual tile, and means whereby the tile blocks may be arranged and firmly held in tiers and in staggered relation when used in a wall structure, for affording rigidity and strength, and also for providing a fireproof structure throughout.

Another object is to provide an improved cement tile block of reenforced character arranged so that the tile blocks when employed for forming a wall structure or the like may be interlocked and connected together and firmly held in staggered relation, and whereby the laying of the tile may be correspondingly facilitated and a fireproof, rigid structure provided.

Other objects may appear as the description progresses.

In the accompanying drawings I have shown one practical embodiment of my invention, subject to modification within the scope of the appended claims without departing from the spirit thereof, in which:

Fig. 1 is a perspective view of a tile block embodying my improvements, a portion of one side of the tile being cut away so as to show the reinforcing members.

Fig. 2 is a transverse section of the same shown in position in a wall, for illustrating the reinforcing and interlocking features of the tile.

Fig. 3 is an enlarged fragmentary section similar to Fig. 2, showing the method of connecting adjacent blocks together for affording a rigid structure.

Fig. 4 is a perspective view of a section of a wall structure formed of my improved tile, portions of the same being cut away as in Fig. 1 to show the reinforcing members.

It will be observed by reference to Figs. 1 and 2 that my improved cement tile blocks are of arc cross section with a minimum thickness of wall, thereby providing a

light weight tile, and the blocks are adapted to be moulded in a suitable mould or form into the preferred shape and allowed to set for a period of time, as in other concrete and cement structures.

Each of the blocks B has an arched passage A extending longitudinally through the tile between the sides S, S, and the central portion of the top T is preferably of about the same width as the passage A and extends for a sufficient distance above the top portions *t, t*, so that when two of the tile are placed in position as shown in Fig. 2, that is to say, one above the other, the portion T forms a rib which fits into the lower portion of the passage A of the upper tile, while the lower edges E, E, of the sides S, S rest upon the top portions *t, t*, of the lower tile.

A pair or more of U-shaped reinforcing metal rods R, R are embedded in the cement during the moulding operation in definitely spaced relation, as shown in Figs. 1 and 2, and the ends *r, r* of said rods project downwardly for a substantial distance from the lower edges E, E of the blocks and are adapted to extend into holes *h, h*, formed in the top portion *t, t*. The holes *h, h* are preferably of slightly larger diameter than the ends *r* of the rods R, so that when the blocks are employed for forming a wall or other structure, a grouting of cement as at C may be placed in the holes *h* around the ends *r* of the rods for forming a tight and firm joint.

Referring to Fig. 4 it will be seen that when my improved cement blocks are employed in a wall or other structure it is preferable to so lay the tile so that the joints in the successive courses will be staggered as in ordinary masonry, and to this end the length of the tile is uniform and the ends thereof made as smooth as possible so that close fitting joints may be provided.

The reinforcing rods R in each of the tile blocks B are spaced apart at a distance exactly equal to one half of the length of the blocks, so that when the blocks are arranged in courses, as shown in Fig. 4, the two rods of the blocks B will be staggered with respect to the joint between the two blocks immediately below, and a given block. Thus, it will be observed that the rods R are necessarily positioned in the blocks B at distances apart equal to one half the length of the tile and at distances

from the ends of the blocks equal to one fourth the length of the tile, so that the distance between the adjacent rods R of two abutting blocks will be the same as the distance between the two rods of any single tile. The distance between the holes h , h , in each block is the same as the distance between the rods R, so that when the blocks are laid in courses as shown in Fig. 4, the depending ends r of the rods will readily seat in the holes h of the blocks therebelow.

This construction is shown in Fig. 4, in which the structure of the wall is cut away at two points so as to show the staggered joints and the relation of the rods R and holes h .

It will also be noted that when formed into a wall structure the reinforced blocks will have longitudinal ribs formed between abutting top portions T which extend throughout the length of the structure, thus preventing any displacement of the blocks and forming a firm rigid structure.

What I claim is:

1. A reinforced tile structure including a block having a longitudinally formed passage therein, open at the bottom and closed at the top, a longitudinal rib on the top thereof adapted to seat in the lower end of the passage of an adjacent tile, substantially U-shaped reinforcing members embedded in the block at uniformly spaced distances and extending around said passage, said reinforcing members being extended substantially from the bottom of said blocks, and recesses formed on the opposite sides of

said rib in the top of the block for receiving the depending ends of the reinforcing members of a block supported thereabove.

2. A reinforced cement tile block having side portions spaced apart, and a longitudinal passage extending therethrough and open at the ends, a longitudinally disposed rib at the top conforming in width to said passage, and shoulders on the top of the block extending from and to their ends on opposite sides of said rib for receiving the lower edges of the sides of a superposed block, and substantially U-shaped reinforcing rods embedded in the block and extending over and around said passage.

3. A reinforced cement tile block having side portions spaced apart, and a longitudinal passage extending therethrough and open at the ends, a longitudinally disposed rib at the top conforming in width to said passage, shoulders on the top of the block extending from and to their ends on opposite sides of said rib for receiving the lower edges of the sides of a superposed block, substantially U-shaped reinforcing rods embedded in the block and extending over and around said passage protruding from the bottom of the block, recesses being formed in the shoulders of the top and spaced corresponding to the spacing of and for receiving the ends of said rods.

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Witnesses:

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