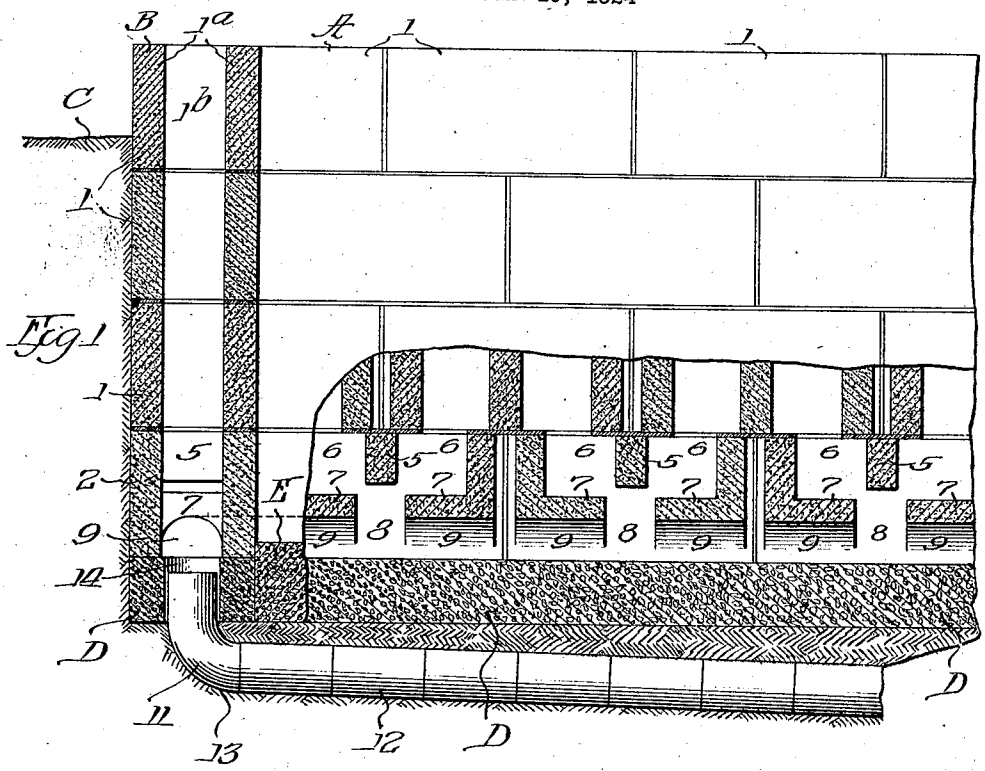
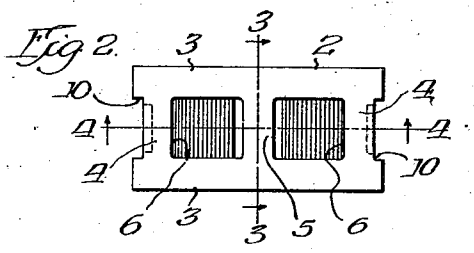
May 15, 1928. 1,670,095

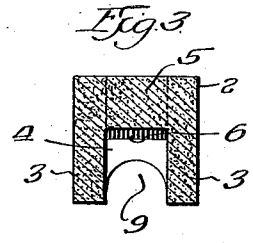
G. F. BOES

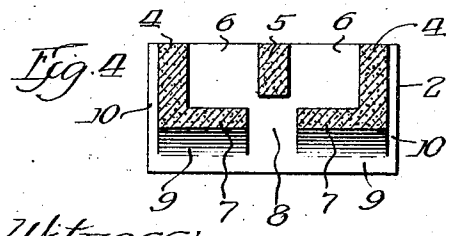
BUILDING TILE

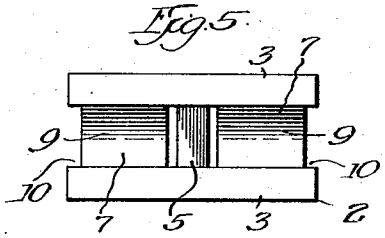
Filed Jan. 19, 1924











Witness:
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Inventor
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By A. Miller Redfield Atty.

Patented May 15, 1928. 1,670,095

UNITED STATES PATENT OFFICE.

GEORGE F. BOES, OF LA FAYETTE, INDIANA.

BUILDING TILE.

Application filed January 19, 1924. Serial No. 687,169.

My invention relates to building tiles, and particularly to tiles made of cement or concrete.

One of the objects of the invention is to provide a tile which will permit a building or building wall construction to be drained so as to insure the dryness of the basement and other lower parts of the building.

Another object of the invention is to secure durability and simplicity of construction and inexpensiveness of manufacture.

In the accompanying drawings Fig. 1 is a view partly in vertical section and partly in side elevation of the lower portion of a building provided with tiles embodying my invention;

Fig. 2 is a plan view of one of the tiles;

Figs. 3 and 4 are cross sections taken on lines 3—3 and 4—4 respectively in Fig. 2; and

Fig. 5 is a bottom view of the tile.

Referring to the drawings, I show the lower portion of a building construction, the same consisting of two meeting walls A and B, and these wall portions are understood to comprise the bottom corner of a building, the ground or earth C being shown at one side and below the same. The usual footing D is also shown and a floor E which has its upper level slightly above the level of the footing D and which is understood to be the floor of the basement or the first floor of the building, as the case may be.

The walls A and B are preferably composed of several layers of tile 1—1 which may be the usual or ordinary form of tile with side walls 1^a and a central space 1^b. These walls also contain tiles embodying my invention and these tiles 2 are preferably laid in a single row or layer at the bottom of and below the layers of tiles 1—1. Each tile 2 preferably comprises a pair of side walls 3—3 and end walls 4—4, and an intermediate cross wall 5, said walls 3, 4 and 5 forming spaces or chambers 6—6. Each tile also preferably has horizontally disposed shelves or partitions 7—7 extending inwardly from the end walls 4—4 and terminating more or less below the central partition 5, so that a space or chamber 8 is formed between the ends of said shelves or horizontal members 7—7. The horizontal members 7—7 preferably form the tops or upper sides of horizontally arranged duct or conduit spaces or chambers 9—9, which are for drainage purposes as will be further explained, said conduits or ducts 9—9 lying between the lower ends of the side walls 3—3, as best shown in Fig. 3. Thus each tile is provided with a horizontally disposed conduit formed in two parts 9—9 with an opening 8 from above into the same and this conduit permits the drainage and horizontal flow of water or other liquid which may be in the vicinity and which may enter the conduit either through the central opening 9 or at the ends 10—10, the side members 3—3 projecting slightly beyond the end walls 4—4. Also the horizontal members 7—7 serve as shelves or platforms to catch such mortar or other substance as may be dropped down upon or into the tiles, particularly in the process of building.

Thus it will be seen that when the wall is built as shown, water may seep through the side walls of the tiles 1—1 and it will run down the same and in the intermediate space 1^b, and will flow into the tiles 2—2 and into the ducts 9—9 thereof, and inasmuch as these tiles 2—2 are laid end to end, as well shown in Fig. 1, whereby a continuous duct is formed to the tile duct sections 9—9, the water will run along this continuous duct and upon the footing D upon which the tiles are laid and will flow or drain into some suitable drainage arrangement, as for example, the tile drain 11 which is composed of tiles 12—12 and an elbow tile 13 extending up and into an aperture 14 in the foot D underneath one of the tiles whereby water drained into tiles 2—2 will run along the duct or passage formed thereby and into the drain 11, and thence to a sewer or other suitable outlet.

Thus it will be seen that a thoroughly tight floor and basement or other lower building part will be secured, all water which may seep or flow into the wall at any point thereof being automatically caught by the drainage system provided by my improved tiles and automatically drained off to some suitable point, thereby insuring thorough dryness of the lower part of the building, no matter what it may be. Also in the process of building or at other times, any hard matter, such as excess mortar, will be caught on and by the horizontal member 7 and so prevented from entering the duct drainage system provided by the drain tiles 2 above described.

It will be understood that changes and modifications may be made in the construc-

tion of the drain tiles herein disclosed, and also in the manner in which they are used, without departing from the spirit of my invention.

What I claim is:

1. A building tile provided with covered means for draining the building part, of which it is a portion, and also provided with a protected opening for admitting liquid into said drainage means.

2. A building tile provided with a covered drainage duct, and also provided with protected openings to admit water into said duct.

3. A building tile having covered drainage means for horizontal drainage and also having means to admit water into said drainage means and means for protecting said drainage means from solid material.

4. A building tile provided with a covered drainage duct extending in a lengthwise direction of the tile, said duct being formed by a horizontal partition located between the top and bottom of the tile and provided with a protected aperture for admitting water into said duct.

5. A building tile having a lengthwise extending drainage duct formed by a partition located between the top and bottom of the tile and having an aperture for communicating with a drain passage in a tile above.

6. A drainage tile having a covered lengthwise extending drainage duct formed by a substantially horizontally extending partition which is provided with an aperture forming an opening for communicating with a drainage passage in a tile above.

7. A building tile provided with a covered drainage duct extending in a lengthwise direction in the tile and an aperture extending tortuously downwardly and sidewardly in the tile and communicating with said duct.

8. A building tile provided with a drainage duct extending in a lengthwise direction in the tile and an aperture extending downwardly in the tile and communicating with said duct, said tile also having a shelf or cover for intercepting solid material and preventing the same from entering said duct.

9. A building tile provided with a drainage duct extending in a lengthwise direction in the tile and an aperture extending downwardly in the tile and communicating with said duct, said tile also having a shelf or cover for intercepting solid material and preventing the same from entering said duct, said shelf being formed or covered by the top of said duct.

10. A building tile comprising vertically arranged members forming downwardly extending chambers or spaces and horizontally arranged members forming a horizontal duct in tortuous communication with said vertical chambers or spaces.

11. A building tile comprising vertical side and end walls and a horizontal duct extending from end to end of the tile below said end walls and between said side walls, said duct being formed by a horizontal partition which is provided with a liquid inlet opening between its ends.

12. A tile comprising vertical side and end walls and a cross wall between the end walls and a horizontally extending partition extending between the end walls and lengthwise of and between the side walls, and forming a horizontal duct at the bottom of the tile, said partition having an opening communicating with said duct from above and an overhang protecting said openings.

13. A tile comprising vertical side and end walls and a cross wall between the end walls and a horizontally extending partition extending between the end walls and lengthwise of and between the side walls, and forming a horizontal duct at the bottom of the tile, said tile having an opening communicating with said duct from above, said opening being formed in said horizontal partition between the end walls and said side walls being extended beyond the end walls to form end openings into the ends of said duct.

14. The combination with upper layers of tiles having vertical members and vertical spaces between said members and a lower layer of tile having spaces or chambers communicating with the spaces of said upper layers of tile and also provided with ducts extending from side to side in said lower layer of tiles and forming a substantially horizontally arranged drainage duct and a drainage outlet communicating with said drainage duct formed by said lower layer of tiles.

15. The combination with the wall footing of a tile thereon having its lower portion provided with a recess forming a drain passage with said footing.

16. The combination with the wall footing of a row of tiles thereon having their lower surfaces provided with communicating horizontally arranged recesses forming with the footing a drain passage for the wall.

17. A tile provided with a shelf to collect excess mortar as it falls and also provided with a horizontal drainage passage protected by said sleeve and a vertical drainage passage communicating with the horizontal passage.

18. A building tile having a longitudinally extending partition forming a substantially horizontally extending drainage duct below the partition, said partition being provided with a liquid inlet communicating with said duct and also adapted to communicate with a drain passage in a tile above.

19. A building tile having a longitudinally extending partition forming a substantially horizontally extending drainage duct below the partition, said partition being provided with a liquid inlet communicating with said duct and also adapted to communicate with a drain passage in a tile above, and an overhang above said aperture to protect the same against solid material.

20. The combination with upper layers of tiles having vertically arranged drainage passages of a lower layer of tile having horizontally arranged drainage passages and also having openings to said horizontal passages communicating with the vertically arranged passages in the upper tiles.

In witness whereof, I hereunto subscribe my name this 16th day of January, A. D. 1924.

GEORGE F. BOES.