J. S. BROWN.
Border-Tile.

No. 205,832. Patented July 9, 1878.

Fig. 3.

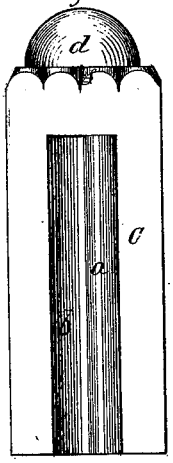


Fig. 1.

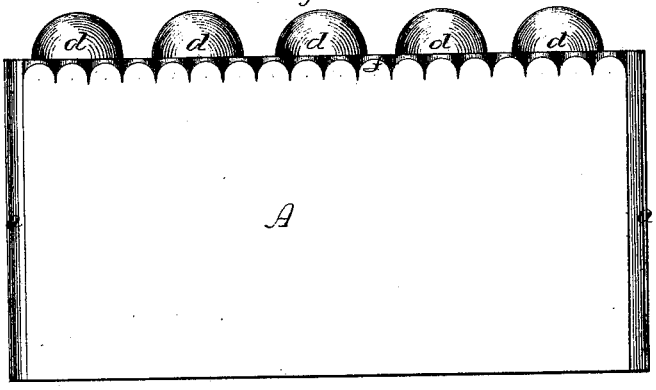


Fig. 4.

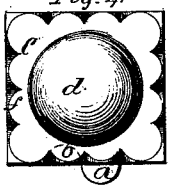


Fig. 5.

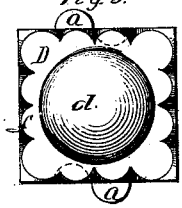


Fig. 6.

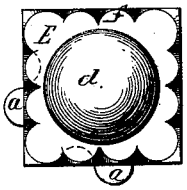


Fig. 7.

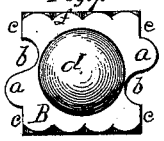


Fig. 2.

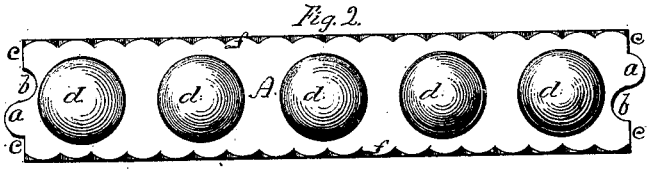
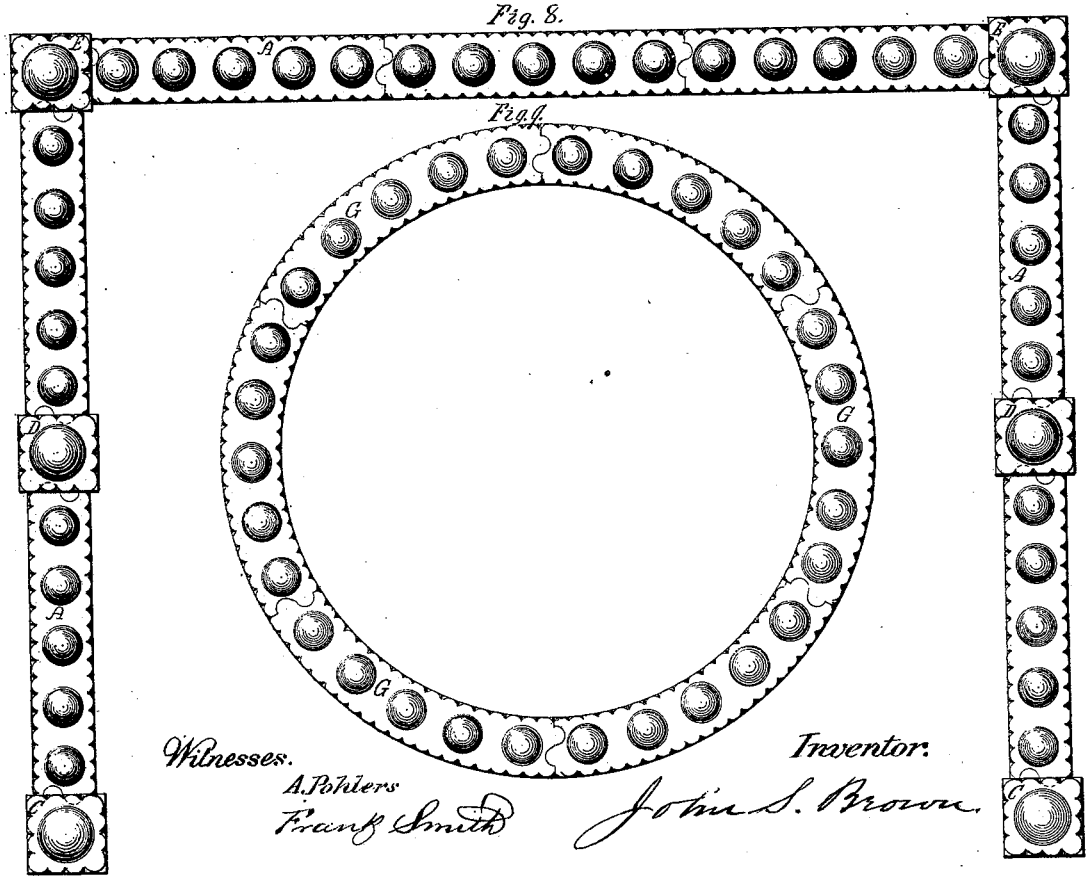


Fig. 8.



Witnesses.
A. Pohlers
Frank Smith

Inventor:
John S. Brown.

UNITED STATES PATENT OFFICE.

JOHN S. BROWN, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN BORDER-TILES.

Specification forming part of Letters Patent No. **205,832**, dated July 9, 1878; application filed June 9, 1877.

To all whom it may concern:

Be it known that I, JOHN S. BROWN, of Washington, in the county of Washington and District of Columbia, have invented new and useful Improvements in Border-Tiles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

The purpose of my invention is to produce an improved tile for edging walks, carriage-ways, parterres, garden-beds, and for other similar or analogous uses; and my invention consists in the following features of improvement: First, a vertical coupling-joint at the ends of adjacent tiles, to prevent the passage of growing roots between them, and to prevent lateral displacement, and bind the tiles together in line; second, coupling-joints at the two ends of each tile, formed alike, so that any one joint fits any other; third, the formation of the coupling-joints with two or more angles or turns, in order to render the same impenetrable to the roots of trees, grass, or plants; fourth, border-tiles having upon their upper surfaces or tops bosses or forms in relief, at regular intervals, and so arranged that when two or more tiles are coupled together these projections are continuously regular in position; fifth, border-tiles having angular or scalloped indentations in their upper edges, at regular intervals from end to end; sixth, border-tiles curved longitudinally to different and stated diameters, for forming various curved or circular, in addition to straight, borders; seventh, border-tile pilasters for terminations of tile-borders for corners of the same, and for insertion at intermediate places in tile-borders to break the continuity and sameness thereof.

In the accompanying drawings, Figure 1 represents a side view of one of my improved border-tiles; Fig. 2, a top view of the same; Fig. 3, a side view of a tile-pilaster to go with the border-tiles; Fig. 4, a top view of a terminal tile-pilaster; Fig. 5, a top view of an intermediate tile-pilaster; Fig. 6, a top view of a corner tile-pilaster; Fig. 7, a top view of a border-tile aliquot, to go with the border-tiles; Fig. 8, a view showing a combination of border-tiles and pilasters arranged in straight lines; Fig. 9, a view showing a combination of curved border-tiles laid in a circle.

Like letters designate corresponding parts in all of the figures.

These tiles are to be made of convenient dimensions and proportions, about as represented in the drawings, or otherwise, and of suitable material or materials, burned clay being very suitable for general use.

The tiles are to be set edgewise in the ground or bed, and the vertical coupling at the ends preferably extends the whole width of the body of the tiles, not only to keep the tiles surely in proper relative positions, but to close the joints against the passage of roots between them, this being an important purpose to be accomplished. It is obvious, however, that if the coupling should not extend through quite the whole width of the tile-body, yet, practically, the effect would be produced, even if not quite so perfectly as when the entire width is occupied thereby. For the greatest convenience, also, the couplings at both ends of the tiles are alike; and, in order that any coupling shall fit any other, each joint has a projecting part, *a*, and an indented or sunk part, *b*, one being of the same form of outline as the other, or properly fitting it, so that, in coupling, a projection shall always accurately enter an indentation in the adjacent tile on both the contiguous ends. For this purpose, also, a projection, *a*, should be just as far from the adjacent edge of the tile as is a depression, *b*, from its adjacent tile edge. The projections and depressions might be duplicated on the tile ends; but practically one projection and one depression will be found to serve the purposes of the coupling.

The projections and depressions may be either curved or angular. A nearly semi-cylindrical form, as shown in the drawings, is preferred.

Plane-faced shoulders *c c*, at right angles to the sides of the tiles, properly intervene between both the projections and depressions and their adjacent tile-corners.

These couplings, also, by the number of angles and turns they present laterally, effectually prevent the passage of tree, plant, or grass roots between the adjacent tiles, even if the joints are not perfectly close; and, since

the tiles are to be made wide or deep enough to prevent tillering roots from growing beneath them, walks, drives, parterres, and garden-beds bordered with them are perfectly preserved against the encroachments of adjacent vegetation.

It is not necessary that the couplings should secure the tiles against vertical displacement, since the breadth of the closely-set tiles prevents any considerable displacement by the dropping of one end of a tile, even if the under support is not uniform. Besides, there is considerable advantage in not having any vertical retention of any of the tiles, in order that any one may be removed and replaced at will, for any purpose, without disturbing others.

For ornamentation I principally rely on two methods, singly, or generally together:

First, by ornamental projections or reliefs *d d* upon the upper edge of each tile, arranged in regular order or succession and at regular or uniform distances apart, the spaces being so proportioned that when numbers of the tiles are placed together the joint-spaces shall be uniform or regular with the others. The forms of the reliefs may be varied to produce different styles of ornament, according to regular and various designs; and different styles may alternate or be combined to compose a compound ornamentation. This ornamental part I term the "head" of the tile.

Second. I ornament the shoulders or upper edges of the tile, next to the sides thereof, with indentations *f f*, forming regular figures or divisions, which will be continuous and uniform when the tiles are joined together.

In addition to the purpose of ornamentation, these indentations serve a purpose of utility, in that a half-indentation being always at the end of each upper edge, sharp corners are thereby obviated, so that there is much less liability to clip off those corners and disfigure the tiles.

The aliquot parts of the tiles, as shown in Fig. 7, are intended to be used in filling out short spaces less than the length of a full-sized tile. Each one is intended to form an individual part or division of the tile design with which it is used, so that the design shall not be violated or interrupted by its use. These parts, for shortness of expression, may be denominated "quots." Their couplings *a b* are the same as those of the tiles, and fit therein, the couplings being at opposite sides, as shown, to be used intermediately or successively, and others may have the coupling-joint only at one side, to be used as terminals.

The pilasters, as shown in Figs. 3, 4, 5, and 6, are preferably somewhat thicker than the main tiles, to project a little laterally beyond them. They also extend somewhat above the tiles, as indicated in the drawings, to give them prominence and break the sameness of continuous tiling when much extended, as for borders of walks and drives. They are generally made square, but may have any other form suitable for their purpose, particularly for forming corners with acute or obtuse angles. They are provided with couplings *a b*, the same as those of the tiles, and to fit the same. These extend vertically only as high as the bodies of the tiles, the part of the pilaster projecting above the tiles being free therefrom. For terminal pilasters there is a coupling-joint only at one side, as shown in Fig. 4. For intermediate pilasters there are coupling-joints on two opposite sides, as shown in Fig. 5. For corner pilasters there are two coupling-joints, respectively, on two adjacent sides, as shown in Fig. 6. The relief ornamentation *d* on the head of each pilaster and the indented ornamentation *f* on the shoulders of the pilasters are intended to be the same or in harmony with the corresponding ornamentation on the tiles of similar design. The shoulder ornamentation preferably extends along all the upper edges of the pilaster, as shown. The modes of using these pilasters in combination with the tiles are indicated in Fig. 8, wherein C C represent terminal pilasters; D D, intermediate pilasters, and E E corner pilasters. When intermediate pilasters are used for ornamentation they may be placed alternately with the main tiles or at intervals, with any greater number of main tiles intervening, according to taste.

The curved tiles G G, as shown in Fig. 9, representing a curve of eighteen inches in diameter through the longitudinal centers of the tiles, are to be of several different curvatures, less than about forty feet in diameter, to suit various requirements. Curves of forty feet or more in diameter may be laid with the straight tiles; and if curves of diameters between eight and forty feet are not all fitted with curved tiles exactly corresponding therewith, they may be laid with the quots, Fig. 7; but with curves less than eight feet in diameter curved tiles corresponding in curvature should be used to make good work. The ornamentation of the curved tiles is intended to correspond with that of the straight tiles of the same design or font, and to be of the same, or nearly equal, length; and, whatever the different diameters of the curvature, the length of each tile is such that an exact number of whole tiles will just complete the circle of which its curvature is an arc. They are provided with similar couplings *a b* at their ends to fit the straight tiles and the pilasters, the lines of the joints being radial to the circle of which they form an arc. They are employed not only in bordering circles, but in forming curves of any kind, simple or compound, those of different curvature being capable of combination together as well as with straight tiles.

All the tiles and pilasters may be made in various colors, uniform or varied. Especially I contemplate decorating the ornamental heads of the tiles with various colors, particularly

for use in bordering parterres and for winter gardening. They may be glazed or not, as preferred, or according to their uses.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Border-tiles having coupling-joints vertically extended along their ends, substantially as and for the purpose herein specified.

2. Border-tiles having coupling-joints of the same form at their two ends, substantially as and for the purpose herein specified.

3. Border-tiles having vertical coupling-joints at their ends formed with two or more angles or turns in a horizontal direction, substantially as and for the purpose herein specified.

4. Border-tiles having upon their upper surfaces or tops bosses or forms in relief at regular intervals, and so arranged that when two or more tiles are coupled together these projections are continuously regular in position, substantially as and for the purpose herein specified.

5. Border-tiles having angular or scalloped indentations in their upper edges at regular intervals from end to end, substantially as and for the purpose herein specified.

6. Border-tiles curved longitudinally in arcs of various circles, and so proportioned in length that a certain number of equal circle will exactly fill the circle of which each is an arc, substantially as and for the purpose herein specified.

7. Border-tile pilasters of greater height and width than the main border-tiles, and having each one or more vertical coupling-joints for forming terminals and corners to or intermediate reliefs on tile-borders, substantially as and for the purpose herein specified.

JOHN S. BROWN.

Witnesses:
JOHN T. ARMS,
GEO. I. HILL.