No. 753,287. PATENTED MAR. 1, 1904.

J. H. MUNRO.

TILE AND TILE SETTING.

APPLICATION FILED APR. 4, 1903.

NO MODEL.

Fig. 4.

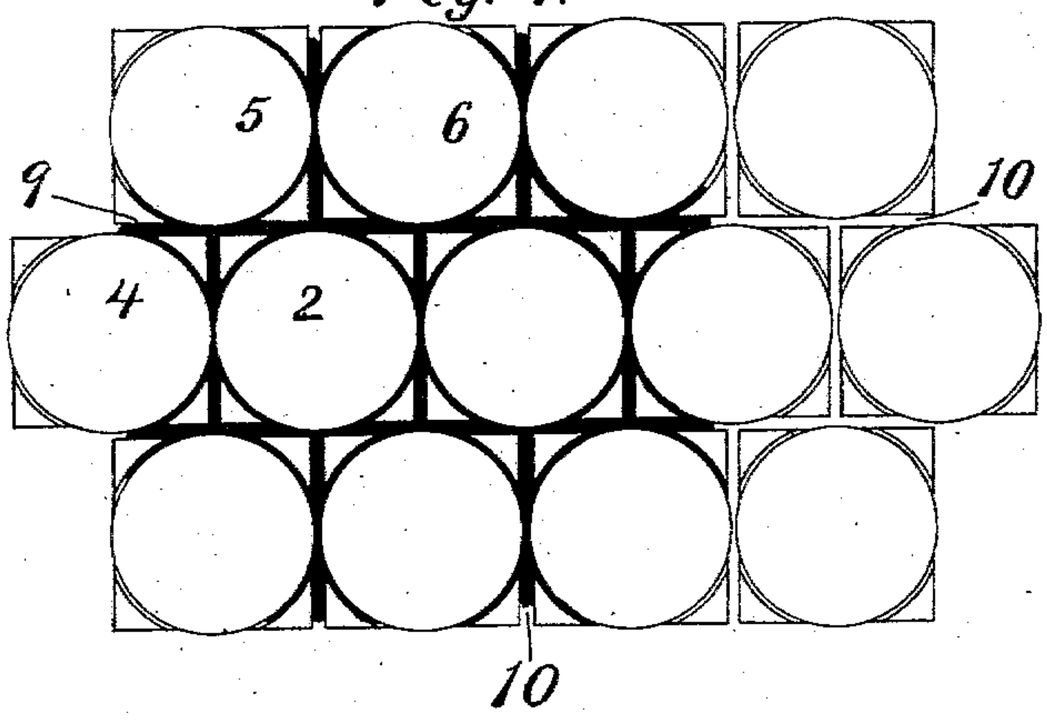


Fig. 2.

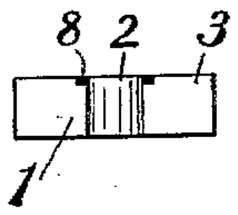


Fig. 1.

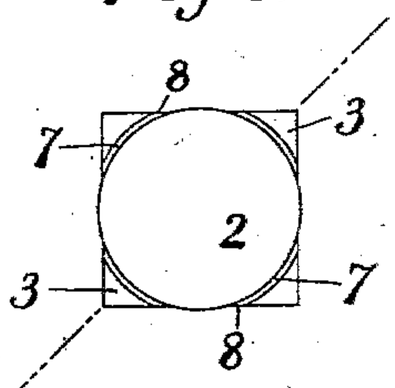


Fig. 3.

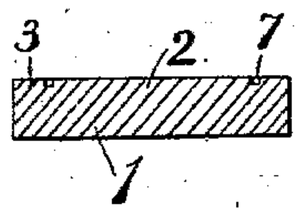
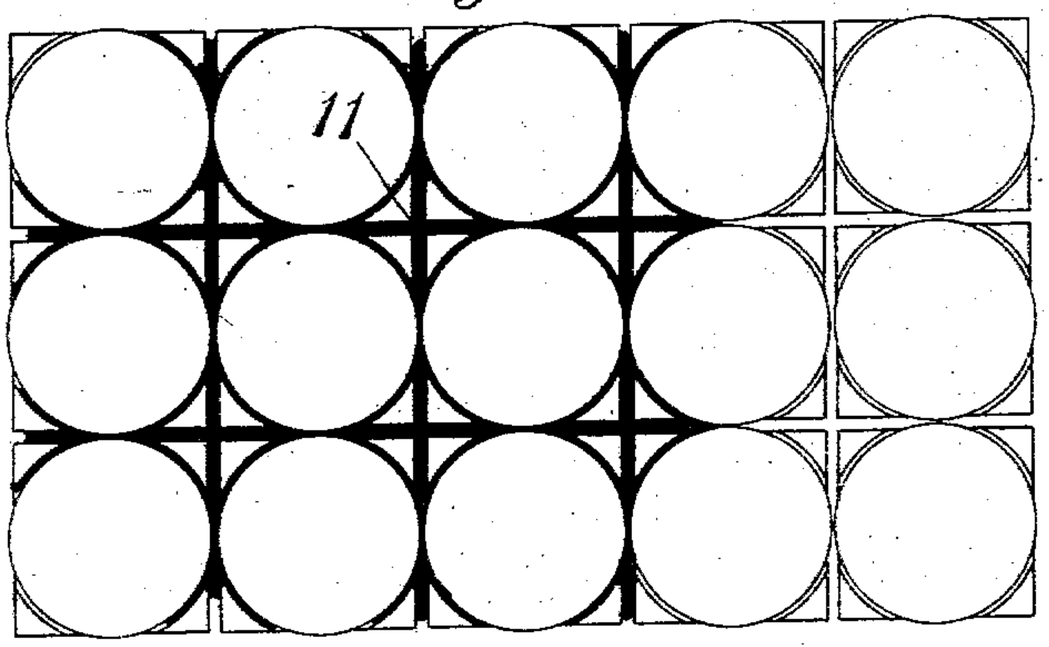


Fig. 5.



Witnesses
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No. 753,287. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

JAMES H. MUNRO, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN MILTON VAN ORDEN, OF NEWARK, NEW JERSEY.

TILE AND TILE-SETTING.

SPECIFICATION forming part of Letters Patent No. 753,287, dated March 1, 1904.

Application filed April 4, 1903. Serial No. 151,153. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. MUNRO, of New York, State of New York, have invented certain Improvements in Tiles and Tile-Setting, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings designating like parts.

My invention relates to tiles and tile-setting, and is of special value when applied in setting the relatively small tiles commonly used in the flooring of hallways in large buildings or of bath-rooms and the like, although it will be understood that I contemplate the utilization of my improvements in any field for which their nature renders them of advantage.

Square tiles or tiles symmetrically polygonal in contour are of course easiest to set; but a plain round or "dot" tile is a favorite form in use at the present day, sometimes set with "broken" joints, the tiles of one row standing opposite the joints in adjacent rows, and sometimes with "square" joints, the joints in all rows being in a line with the joints in adjacent rows, the use of these phrases being well known in the art. When set with broken joints, the tiles are usually tangent at six points, so that there is no connection between the grouting in the interstices, which are triangular in shape, relatively small, and the tiles are not bound together sufficiently. When set with square joints, the dots are tangent at four points, and the interstices of square form with concave sides are increased in area so disproportionately that the grouting takes up too much of the surface either for strength or beauty, and use is often made of separate filling-pieces corresponding in shape to the concave squares of the interstices. Such filling-pieces, while the effect they present is attractive and is preferred by many to that yielded by the dots set with broken joints, are open to certain objections, of which it will be sufficient to specify merely the necessity for making and carrying a double stock made up of two shapes of tile members and the further drawback that the filling-pieces being of small base have a tendency to burrow into the cement of the setting, from which they must be picked up by a knife-point at a cost of labor which is entirely disproportionate to the enhanced effect produced by their employment. To retain this enhanced effect, while obviating the necessity for separate filling-pieces, to provide a tile presenting dot effects whether laid with broken or square joints and occupying a uniform area when assembled in either manner, to embody these various capabilities in a polygonal tile without diminishing the characteristic facility of manipulation accompanying that form, these are among the features of my invention, and in one embodiment of my invention which presents these capabilities to a conspicuous degree I secure a further advantage of great importance—namely, a distribution of the grouting over the tiles in part, as well as between them, locking them together after a fashion at their corners.

Briefly stated, my invention resides in a tile or device for the like purpose by whatever name called of polygonal contour, but presenting a face in which appears a well-defined dot or circular area, which preferably will be surrounded by complementary areas corresponding in number and shape to the remaining area of the polygon. I prefer to accomplish this division of the tile-surface by means of a shallow circular kerf, groove, or depression, which will intersect the sides of the polygon and will receive grouting in continuation of the grouting placed in the usual way between the tiles, so that the grouting will lock the tiles together, as well as bind them at adjacent surfaces.

The various features of my invention will be fully illustrated and described in the accompanying drawings and specification and set forth in the claims.

In the drawings, Figure 1 is a plan view of a square tile in the construction of which my invention has been embodied. Fig. 2 is a view in side elevation thereof; Fig. 3, a view in diagonal section. Fig. 4 shows a group of tiles of the above type laid with broken joints; Fig. 5, a similar group laid with square joints.

In the embodiment of my invention selected

for illustration and description as a convenient form to enable a ready and complete understanding of my improvements, referring to Figs. 1 to 5, inclusive, the reference-numeral 1 designates the body of a tile which may be formed of any suitable material and in accordance with my invention presents a face divided into a well-defined dot or portion of circular area 2 and a portion or portions 3, integral with the body and provided to serve as filling means, occupying the space intervening between the dot 2 and neighboring dots 4 5 6 of adjacent tiles when laid therewith, as illustrated in Figs. 4 and 5. In the instance illustrated in Figs. 1 to 5 the filling portions 3 are four in number and form, with the dot, a tile substantially square in contour, and the division 7 between the dot and filling portions 3 takes the form of a circular kerf, groove, or depression to secure an advantage to be set forth more fully, although I do not limit myself to this form of dividing means. When a kerf or depression is used, it serves as a collecting-place for grouting material, and I prefer to have the central area of such size that it extends slightly beyond the sides of the square, so that the kerf will have lateral openings, as at 8, to permit the grouting or similar binding medium 9 in the kerfs on adjacent tiles of the group to unite with the grouting in the interstices 10 and form a sort of net or continuous interlocking medium, partly between and partly upon the tiles. When such tiles of square form are laid, as illustrated in Fig. 4, with broken joints and the grouting filled in, the effect produced is that of dot-tiles laid with filling-pieces, and so in Fig. 5, where the tiles being laid with square joints the apparent number of filling-pieces is increased, due to their grouping, the interlocking action being especially in evidence when the binding medium surrounds four filling portions 3, as at 11.

The advantage of the slightly-bulging dots is to enable them to be laid closely adjacent at the bulging portion, leaving, however, plenty of space between the straight parts of the sides of neighboring tiles for the grouting to enter. This bulging construction may be retained, if desired, when my improvements are embodied in tiles of other contour.

Having described my invention thus fully, I wish it understood that I do not limit myself to the use of any particular material nor to the specific shapes and construction illustrated nor in general otherwise than as set forth in the claims read in connection with this specification.

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

1. As an article of manufacture; a "dot-tile" or similar device provided with a filling-piece formed integrally therewith, and divided superficially therefrom by a kerf, or the like.

2. A tile presenting a face of polygonal contour having a central "dot" the periphery whereof extends beyond the sides of said polygon, substantially as described.

3. A "dot-tile," having a central dot portion, and four independent triangular projections integral with said dot portion, lying in the same plane, and forming therewith a substantially square structure.

4. A substantially square tile divided by a curvilinear kerf, groove or depression into a central area occupying the major portion of the face of said tile, and complemental areas occupying the remainder of said face, said depression having lateral openings to permit the grouting in said depressions on adjacent tiles, when laid in a group, to unite with the grouting in the interstices of said group to lock said tiles together, substantially as described.

5. A tile-surface; comprising a plurality of tiles having "dot" portions and integral filling portions divided respectively from said dot portions by superficial depressions; and grouting filled in said depressions and between said tiles, forming a continuous interlocking medium, partly between, and partly upon, said tiles, substantially as described.

Signed at New York, in the county of New York and State of New York, this 3d day of February, A. D. 1902.

JAMES H. MUNRO.

Witnesses:

ALEXANDER C. PROUDFIT,

HARRY H. WALTON.