No. 720,836. PATENTED FEB. 17, 1903.

J. H. MUNRO.

TILE SETTING.

APPLICATION FILED JAN. 18, 1902.

NO MODEL.

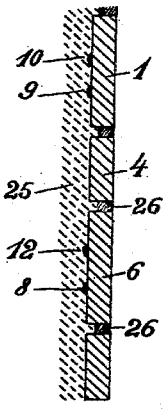

Fig. 2

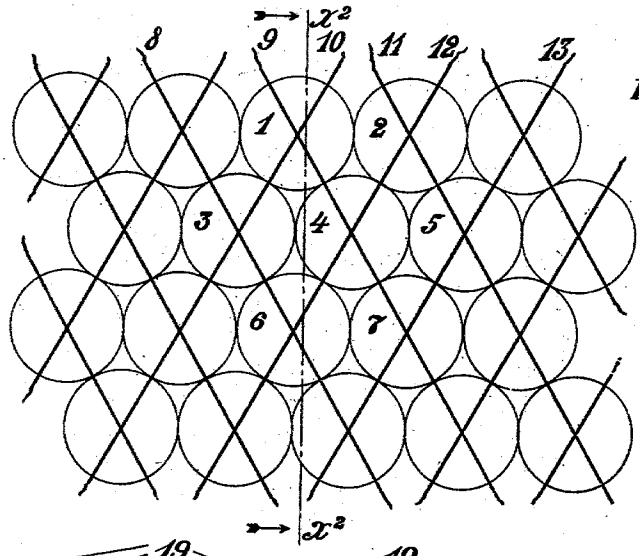

Fig. 1.

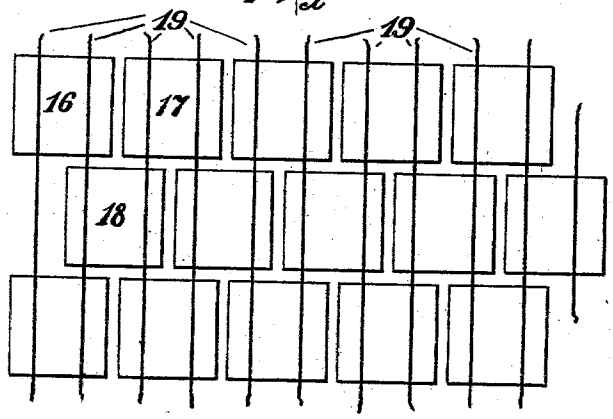

Fig. 3.

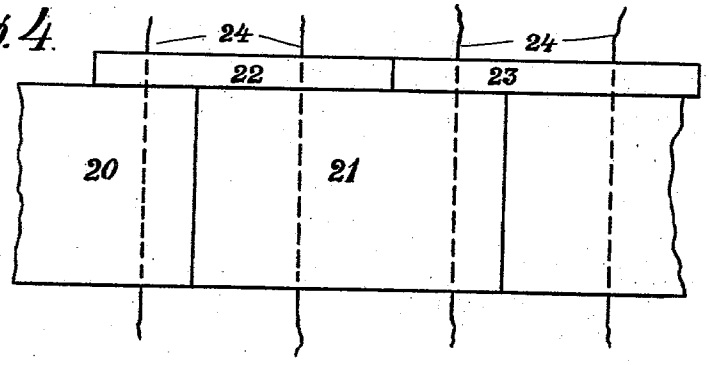

Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

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

TILE-SETTING.

SPECIFICATION forming part of Letters Patent No. 720,836, dated February 17, 1903.

Application filed January 18, 1902. Serial No. 90,324. (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 Tile-Setting, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings designating like parts.

This invention relates to the art of setting tiles, and more particularly to means for holding the tiles in assembled relation preparatory to their application to the bedding of cement on a wall, ceiling, floor, or similar surface.

It has been customary prior to my invention before setting tiles—as, for example, the small flat, circular, or polygonal tiles of lozenge-like appearance used in the floors of bath-rooms and in similar situations—to assemble a quantity of the tiles upon a suitable surface and apply to their face a sheet of paper coated with adhesive material, and the assembled mat of tiles is then transferred to the cement bedding, the backs of the tiles are pressed into the cement, and the paper is removed from the tile-faces, after which the interstices between the tiles are filled with grouting from the face side. The assemblage of the tiles prior to setting and their transfer in mat form presents many and obvious advantages; but the use of a paper support to which the tiles are attached by their faces is objectionable in that among other deficiencies it prevents the workman from seeing the tiles at the time of their introduction to the bedding of cement, nor can he fill in the grouting until the paper has been removed, both of these deficiencies tending for obvious reasons to cause lack of uniformity in the finished tile-surface.

My invention contemplates the provision of supporting means by which the tiles will be held together in assembled relation for the transfer or any desired purpose, but which means will not interfere with inspection of and access to individual tiles or portions of the mat of tiles by the workman during their introduction to the bedding and the subsequent application of grouting.

In place, then, of a continuous supporting-sheet I provide a support comprising widely-separated ties or connecting members to provide sight-openings and openings for the passage of cement or grouting, these openings being preferably of the proportions of a relatively large meshed net to secure the greatest freedom of access, although there need be no actual knotting of the ties.

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

In the drawings, Figure 1 shows in rear plan a group of tile members provided with means in which my improvements have been embodied to hold them in assembled relation preparatory to setting. Fig. 2 is a sectional view of such a group of tiles in place, showing bedding and grouting. Fig. 3 is a view similar to Fig. 1, the members in this instance being of polygonal contour; and Fig. 4 is a view similar to Figs. 1 and 2, but showing the face of an assemblage of tiles of different contours, the holding means being indicated in dotted lines.

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 and 2, the members designated by the reference-numerals 1 to 7, inclusive, may be considered as representing the small vitreous ceramic tile members used commonly in the flooring of bath-rooms and like situations and in the instance illustrated are about of the dimensions indicated. These are connected together with each other by means to hold them in assembled relation to enable them to be transferred thus to the place where they are to be set, the holding means in accordance with my invention being so constructed as to permit the workman to see and manipulate the individual members during the setting operation, to permit also access of the cement of the bedding to the rear surface of the members, introduction of grouting to the interstices of the mat-like assemblage of members, and a certain capability of limited universal movement of the individual members relatively to each other to enable their relative positions to be controlled with nicety. These various features are all secured in a convenient and advantageous manner by the highly-flexible strands 8 to 13,

inclusive, of twine, lead, or other suitable non-metallic material or metallic material in the selection of which the exigencies of particular situations will control more or less, and I wish it understood that while I prefer to provide in each instance for all the capabilities noted in the preceding paragraph, nevertheless I do not deem the omission of one or more of them to lie outside the spirit of my invention except so far as they are included among the elements of my claims.

The strands to which reference has just been made may be secured adhesively, as by the "water glass" of commerce, or otherwise fixed to the tiles and crossed, as indicated, to form a sort of network, this being one effective form of holding means, permitting free manipulation, another form being shown in Fig. 3, where similar strands 19 are secured in parallelism to hold in assembled relation the group of which 16, 17, and 18 are members, and Fig. 4 illustrates a slightly different character of tiling, the members 20 to 23 whereof are held as a group by the ties or ligaments 24.

Fig. 2, a vertical section on the line $x\,x$, Fig. 1, illustrates a typical installation of tiling, in which the reference-numeral 25 designates a bedding of cement, to which the members 1 4 6 have been introduced, with the side secured to the strands 8 9 10 12 toward the cement, and thereafter grouting has been filled in the interstices, as indicated at 26.

I have shown several arrangements of tiles and ties to illustrate some of the capabilities of my invention; but many other applications thereof will occur to those skilled in the art with many changes and modifications both in the arrangement and nature of the strands, ties, or other devices composing the foraminous holding means contemplated by my invention.

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

1. The combination with a plurality of tiles, of means to hold said tiles in assembled relation preparatory to setting the same; said holding means being cemented to said tiles at the region of tangency of said means and tiles only and leaving substantially the entire surface of said tiles exposed to free access of cement from both sides, substantially as described.

2. The combination with tiles, of holding means fixed thereto, comprising ties or ligaments connecting said tiles rendering the mat of tiles as a unit compressible or expansible in the plane of its surface, substantially as described.

3. Holding means of the class described for tiles, comprising widely-separated, flexible strands attached to the rear surfaces of said tiles and connecting the latter in mat-like relation.

4. As an article of manufacture, a tile mat composed of a plurality of connected members individually capable of a limited universal movement with relation to their fellow members, substantially as described.

5. A tile mat prepared for setting as a unit; comprising a plurality of tiles or the like; and flexible members connecting said tile members in such a manner as to permit variations in the area of the mat as a unit, and in the relative position of the component members, substantially as described.

6. A section of tiling, comprising a plurality of tiles spaced apart and a perforated backing secured to the rear surfaces of the tiles at all its points of contact with said tiles, whereby when the section is set in the cement bedding, the cement will pass through the perforations of the backing and into the spaces between adjacent tiles, as set forth.

Signed at New York, in the county of New York and State of New York, this 15th day of January, A. D. 1902.

JAMES H. MUNRO.

Witnesses:
ALEXANDER C. PROUDFIT,
JOHN KEIM, Jr.