No. 790,260. PATENTED MAY 16, 1905.

J. H. MUNRO.

TILE AND TILING.

APPLICATION FILED APR. 4, 1903.

Fig. 1

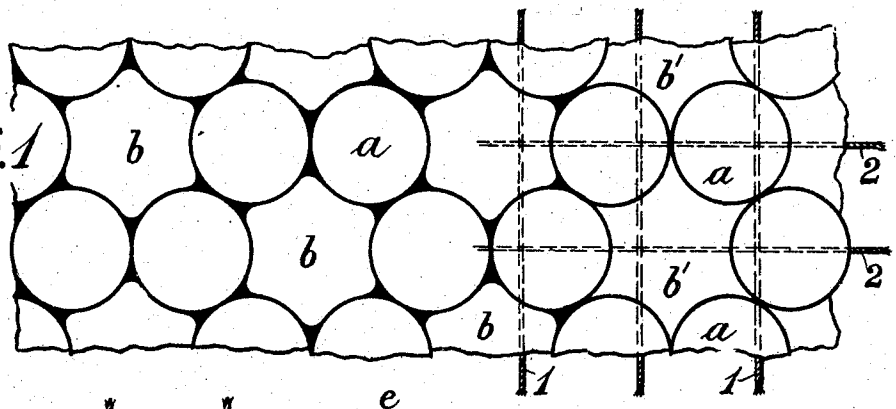



Fig. 2

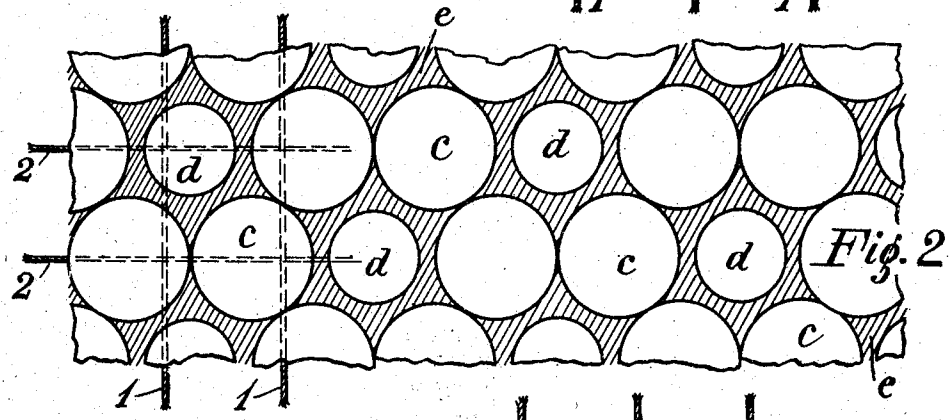



Fig. 3

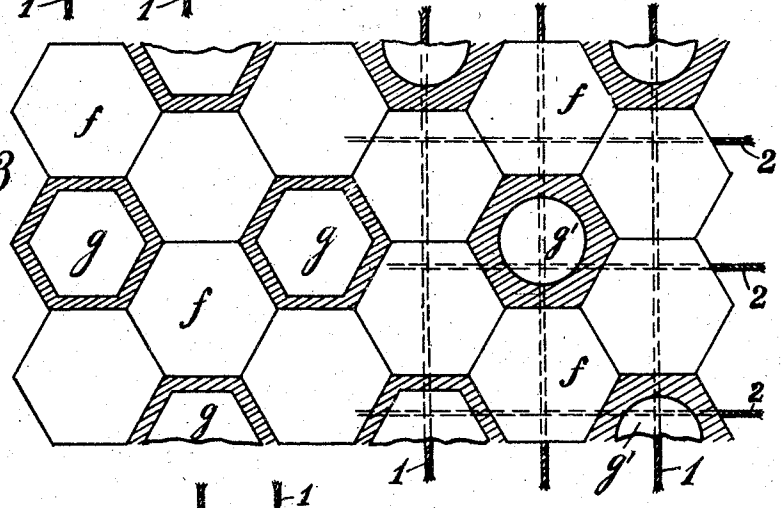
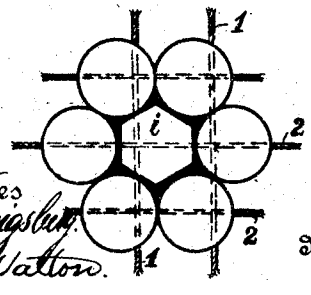



Fig. 4




Witnesses
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By his Attorney
Alexander P. Prindle.

No. 790,260. Patented May 16, 1905.

# UNITED STATES PATENT OFFICE.

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## TILE AND TILING.

SPECIFICATION forming part of Letters Patent No. 790,260, dated May 16, 1905.

Application filed April 4, 1903. Serial No. 151,154.

*To all whom it may concern:*

Be it known that I, JAMES HARDIE MUNRO, of Newark, New Jersey, have invented certain Improvements in Tiles and Tiling, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings designating like parts.

This invention relates to tiles and tiling, the term not being used in a technical sense, but as a convenient designation for the devices of fictile or other material used in the formation of coverings for floors, walls, ceilings, &c.; and while my invention is of particular advantage when embodied in tiling composed largely of small round tiles or "dots" of vitreous ceramic, nevertheless I wish it to be understood that I contemplate the utilization of my improvements in any field for which they are adapted by their nature.

In tiling composed entirely of small round dots laid in contiguous rows, the dots in each row lying opposite the joints in adjoining rows, the arrangement of dots produces upon the eye an effect of lines, which effect is monotonous if the tiles are laid properly, so that the lines are straight, while if the lines are curved or irregular through poor workmanship an offensive asymmetrical appearance is presented. Furthermore, in laying tiling composed entirely of these small round dots it happens frequently that through improper spacing of the tiles the regular alinement of broken joint in adjacent lines is lost, with an effect which is disastrous to the appearance of the completed tile, and it is with great difficulty that even an experienced workman can discover where the proper arrangement has been departed from and still more difficult when found to accomplish its remedy. Occurrences of the above difficulty are promoted by the setting of tile papered upon its face, and I prefer, therefore, in carrying out my improvements to utilize the process and means for preparing tiles for setting disclosed in Letters Patent granted to me upon the 5th day of August, 1902, No. 706,474, and upon the 17th day of February, 1903, No. 720,836, although it will be understood that I do not limit myself in the use of my improvements hereinafter disclosed to "corded ceramic," as it is known in the art.

Briefly stated, among the principal features of my invention is the introduction in a tiling embodying many small round dots or similar shapes, presenting when alone monotonous straight lines, of tiles at frequent intervals differing sufficiently in shape or size from the first-mentioned tiles to break up the monotony of the lines either by their own shape or the shape of the cement-filled interstices between adjacent tiles. In the case of the round-dot tiles this may be accomplished by introducing a star-shaped scallop or polygonal tile at frequent intervals or a round tile of smaller dimensions than the principal tile. Tiling thus constituted may be laid in sheets, either corded or papered, with much greater facility and accuracy than the round dot alone, the eye of the workman being aided by the different shape of the tiles to accomplish more accurately the proper emplacement and joining of successive sheets of tiling.

Another important provision made by me is the utilization in such tiling, with the usual tiles of vitreous ceramic or like material, of frequent members of a material having greater resistance to slipping of the feet of passers-by, a property secured by the use of such materials as rubber composition, friction metal, or other materials, preferably of a waterproof character, the combination of the ceramic therewith serving to prevent undue wear of the other material.

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 illustrates in plan view a section of tiling in the construction of which my invention has been embodied. Fig. 2 is a similar view of a modified form of tiling, Figs. 3 and 4 showing similarly still other modifications.

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 the reference-letter *a* designates individual tiles,

which may be considered as the round-dot tiles of vitreous ceramic or like material well known in the trade and constituting the principal tile in the section of tiling illustrated in plan in Fig. 1. At frequent intervals throughout these first-mentioned tiles I have illustrated tiles *b*, which in the figure under discussion take the shape of star-like or scalloped disks, two round dots intervening between consecutive stars in each line and adjacent lines being arranged so that the stars in one line are spaced between dots in the adjoining line. It will be seen readily by even a casual inspection of this figure that there can be no monotony of line in a tile thus constituted.

In Fig. 2 the desired result is produced by substituting smaller round-dot tiles *d* in the same positions between the principal tiles *c* as are occupied in Fig. 1 by the stars *b*, the star-like figure produced by the cement *e* in the interstices of the tiling effectually breaking up any such continuity of line as is exhibited in tiling of round-dot tiles all of the same size.

In Fig. 4 a hexagon *i* takes the place of the star *b*, and in Fig. 3 the principal tile is shown as a hexagon *f*, in which smaller hexagons *g* or round dots *g'* are shown as introduced to accomplish the desired end.

In the figures I have shown, upon a portion of each, cording cemented to the back thereof in accordance with my Letters Patent to which reference has been made above, and it will be obvious that, especially in the construction illustrated in Fig. 2, the position of the intermediate tiles *d* will be maintained to great advantage during transportation and setting by the provision of the cording.

In accordance with the features of my invention designed to prevent slipping upon floors of this character the principal tiles or the others may be composed of rubber composition, lead composition, or other suitable non-metallic or metallic substances of a frictional character.

Having thus illustrated and described my invention fully, I wish it understood that I do not limit myself to the specific forms of tile nor materials shown and described nor in general otherwise than as pointed out in the claims read in connection with this specification.

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

1. A sheet of tiles or similar devices assembled preparatory to emplacement in a tiling or the like comprising members, similar in size, assembled in adjacent rows and smaller members, interspersed at frequent intervals in said rows of larger members respectively, and held in place relatively to, but out of contact with, said larger members, by cording, substantially in the manner and for the purpose set forth.

2. Tiling or the like composed of members assembled in adjacent rows with broken joints, said rows comprising in recurring series two members of like shape and size and a member differing in size, shape, material or color from the flanking pairs of members in its row, said pairs in one row being arranged opposite unlike members in the respectively adjacent rows, and every row in whatever direction the tiling is viewed presenting frequently dissimilar adjacent members, substantially as described.

3. A sheet of assembled tile members to be laid in tiling, composed of vitreous ceramic members in adjacent rows, and subsidiary members of material presenting relatively high resistance to slipping interspaced at sufficiently frequent intervals among said ceramic members to be engaged in substantially continuous succession by the feet of passers-by, said member being connected by cording, substantially as described.

Signed at New York, in the county of New York and State of New York, this 9th day of March, A. D. 1903.

JAMES H. MUNRO.

Witnesses:

ALEXANDER C. PROUDFIT,
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