

J. H. MUNRO.  
PROCESS OF SETTING TILES.

(Application filed June 28, 1902.)

(No Model.)

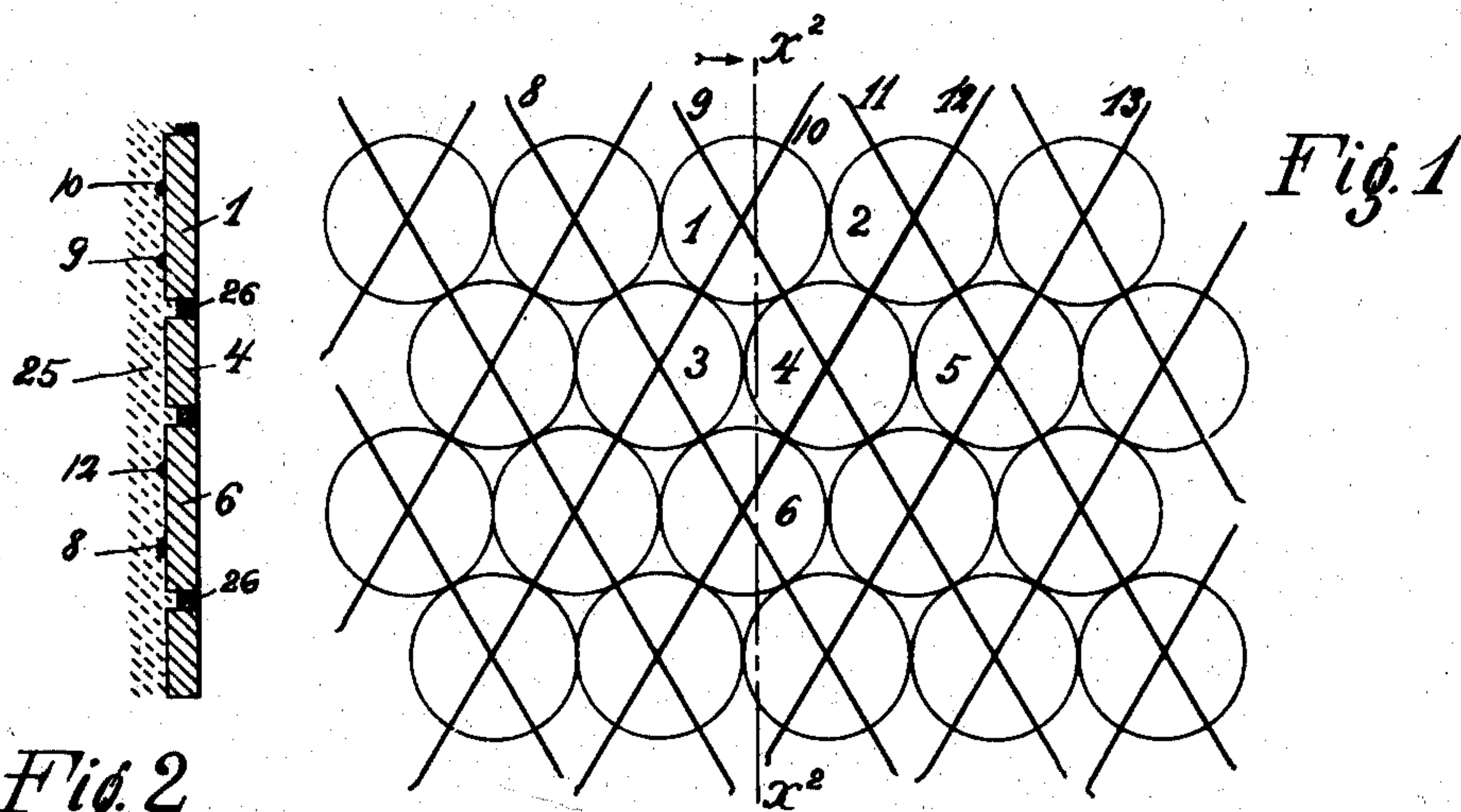


Fig. 2

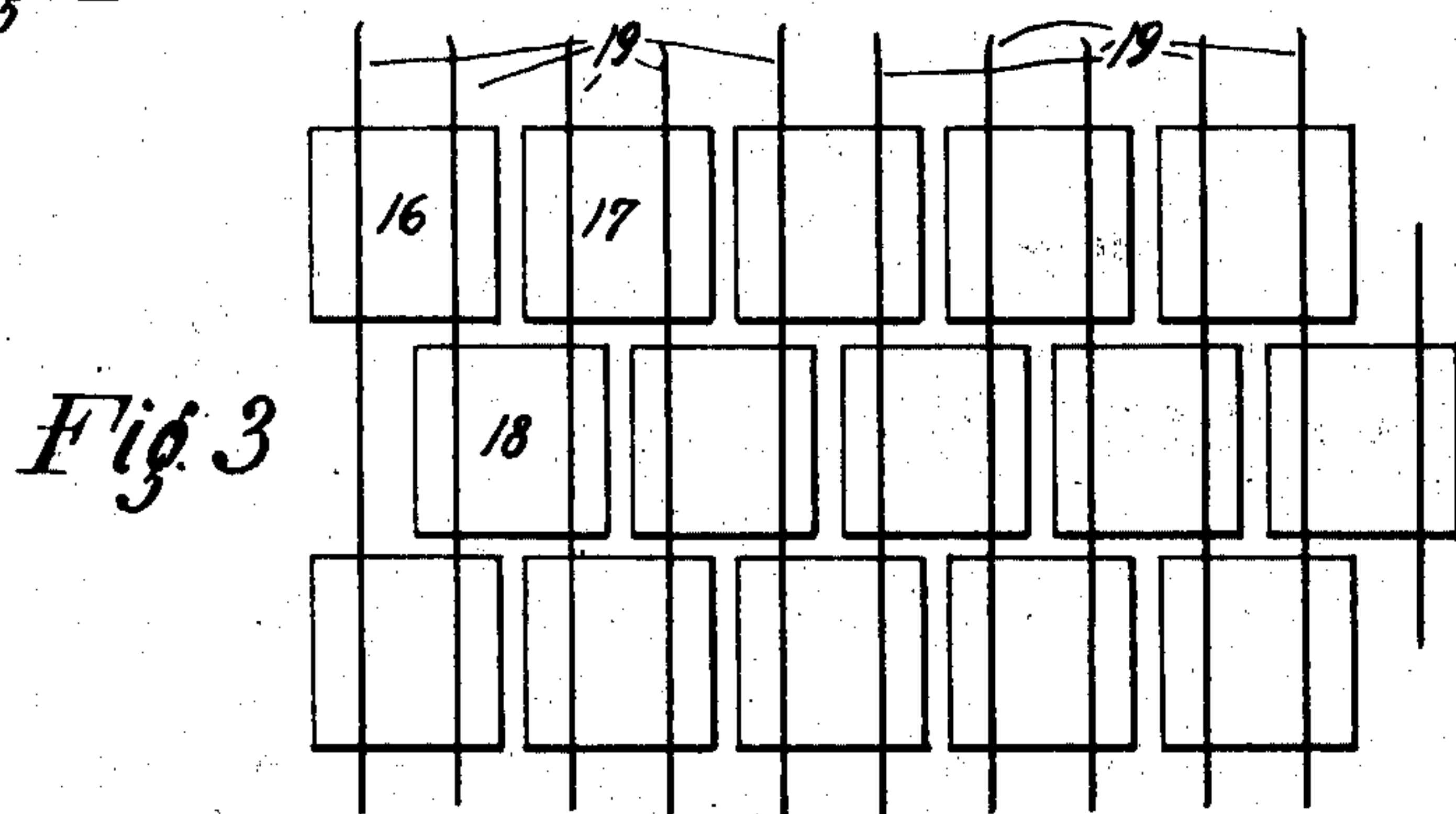


Fig. 3

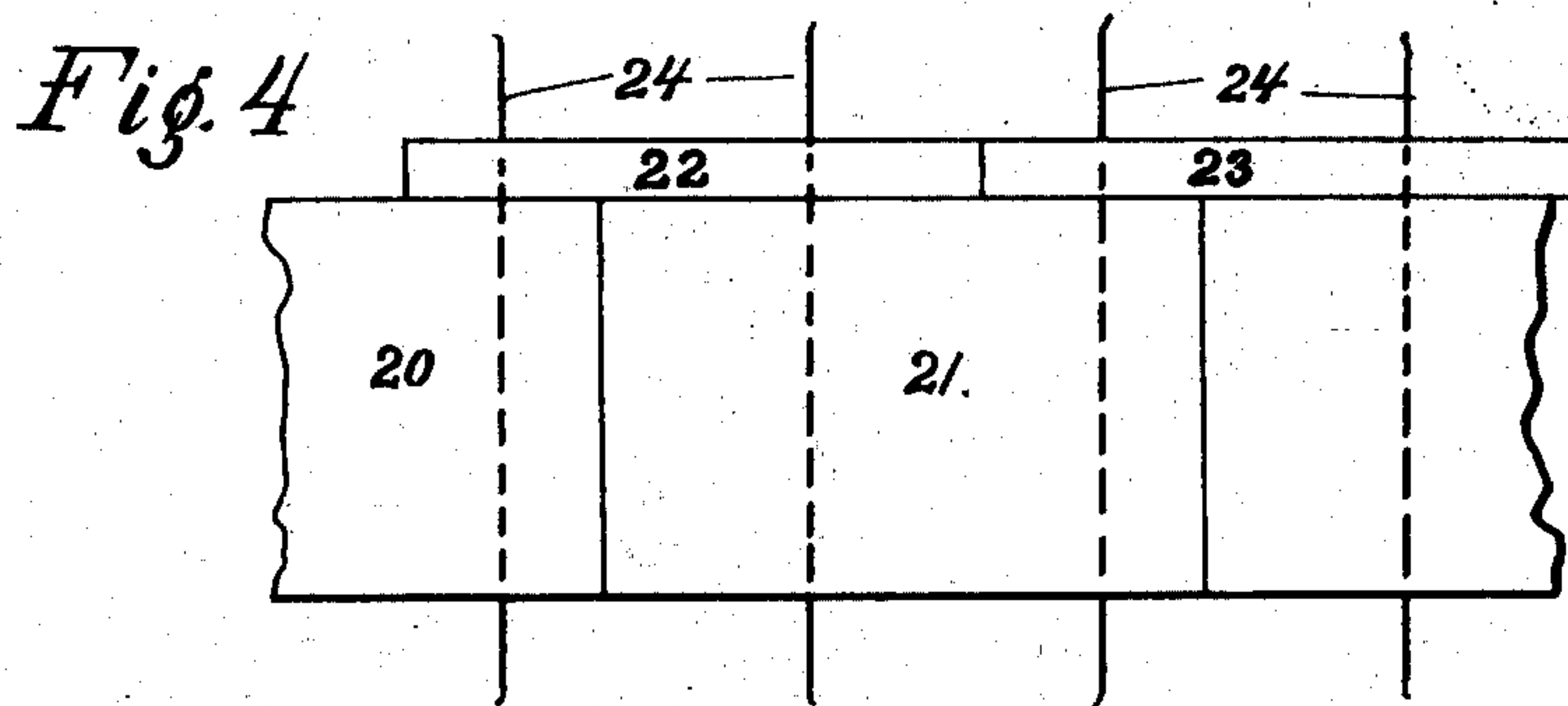


Fig. 4

Witnesses  
Ivan Konigsberg.  
Harry H. Walton.

Inventor  
James Hardie Munro  
By his Attorney  
Alexander C. Proudfoot.



# UNITED-STATES-PATENT-OFFICE.

JAMES HARDIE MUNRO, OF NEWARK, NEW JERSEY.

## PROCESS OF SETTING TILES.

SPECIFICATION forming part of Letters Patent No. 706,474, dated August 5, 1902.

Application filed June 28, 1902. Serial No. 113,557. (No specimens.)

*To all whom it may concern:*

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

This invention relates to the art of setting tiles, and has for its particular object a process for preparing the tiles in assembled relation for transportation and application to the bedding of cement on 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 connecting of the tiles loosely for transportation in such manner as to permit convenient access to the tile-surfaces during the operation of cementing in position to enable adjustment and cementation of the tiles while still connected, and 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 singly or by compression or expansion of the mat as a whole in its plane. 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  
 5 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  
 10 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  
 15 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 *xx*, 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, and 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  
 30 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 and forming the subject of my application, Serial No. 90,324, filed January 18, 1902. 35

Having thus fully illustrated and described my invention, what I claim, and desire to secure by Letters Patent, is— 40

1. That improvement in the art of preparing and setting tiles consisting in connecting said tiles loosely for transportation; adjusting said tiles, *in situ*, while still connected; and cementing said tiles in adjusted position, 45 substantially as described.

2. That improvement in the art of setting tiles which consists in connecting the respective tile members together flexibly, for adjustment, and in such a manner as to leave 50 substantially the entire reverse portions free to access; and cementing and grouting the tile while said members are still connected, substantially as described.

Signed at New York, in the county of New York and State of New York, this 27th day of June, A. D. 1902. 55

JAMES HARDIE MUNRO.

Witnesses:

ALEXANDER C. PROUDFIT,  
 HARRY H. WALTON.