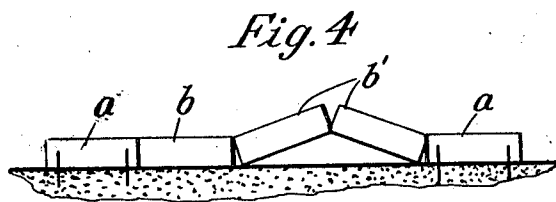
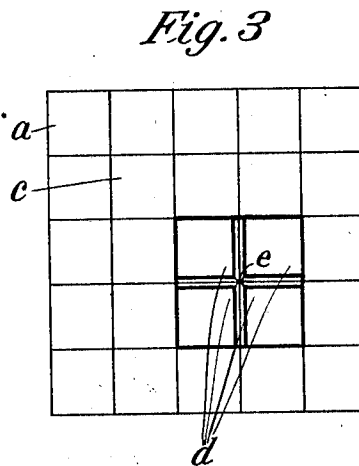
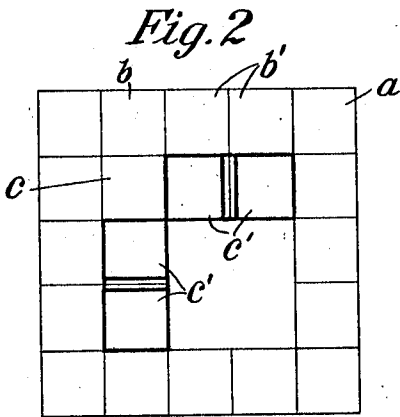
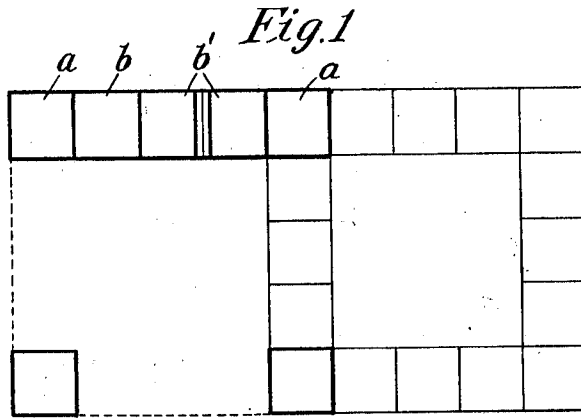


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METHOD OF LAYING FLOOR TILE.
APPLICATION FILED DEC. 16, 1911.

1,054,423.

Patented Feb. 25, 1913.



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METHOD OF LAYING FLOOR-TILE.

1,054,423.

Specification of Letters Patent.

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Application filed December 16, 1911. Serial No. 686,277.

To all whom it may concern:

Be it known that I, DAVID E. KENNEDY, a citizen of the United States, residing in the city, county, and State of New York, have invented a certain new and useful Method of Laying Floor-Tile, of which the following is a specification.

My invention relates to a method of laying a floor or tread surface of units or tiles of yielding material, and relates particularly to a method of laying tiles of cork, or of cork or similar vegetable composition, which is subject to expansion and contraction under varying atmospheric conditions.

One of the objects of my invention is to lay a floor or tread surface of yielding material, such as cork tiles in a series of independent but correlated squares or sections in which the separate units or tiles are under sufficient lateral pressure to prevent the formation of cracks, due to shrinkage of the tiles and to preserve proper alinement of the rows of tiles.

A further object of the invention is to lay a floor or tread surface of yielding material as cork tiles in a series of relatively independent squares or sections, whereby irregularities in the size of the units or tiles in the interior of each square or section will be automatically compensated without cutting or changing the shape of the tiles, in order to produce accurate alinement of the rows.

The various other objects of the invention will be more fully set forth in the following description of the preferred manner of practising my improved method, which consists in the new and novel features hereinafter set forth and claimed.

Referring to the drawings wherein is illustrated such a floor and the successive steps followed in laying it; Figure 1 is a plan of an arrangement of tiles embodying the first distinct step and showing parts of two sections; Fig. 2 is a plan of an arrangement of tiles showing part of a section embodying both the first and second steps; Fig. 3 is a view similar to Fig. 2, to which is added the last step; and Fig. 4 is a section of tiles in elevation illustrating the first step.

The tiles with which my invention is principally applicable are made of cork composition or other similar material, which may be secured to the floor by means of nails or cement or both. In the proper laying of these tiles it is necessary that they be crowd-

ed together to a certain degree. The degree of crowding is important, for it should be sufficient to prevent them from separating, should they unduly shrink, but not enough to permit them to bulge, should they, for any reason, unduly swell.

According to my method, the entire floor space is first accurately measured and divided into a plurality of squares or sections, each having a definite area that is slightly less than the normal combined area of the predetermined number of tiles to be laid in said section or square. If the floor is divided into sections adapted to receive twenty-five tiles, as shown by way of illustration in the accompanying drawings and the tiles are six inches square, then the normal length of a row of said tiles would be thirty inches, but the space measured off on the floor to receive such tiles is foreshortened from about three-sixteenths of an inch to one-fourth of an inch, depending on the condition of the tiles, the foreshortening being less in case the tiles are in an extremely dry condition. Preferably the entire floor space is laid out in foreshortened squares by means of a chalk line or in any other convenient manner before the laying of any tiles is begun. After the floor space has been laid out as just described, then the laying of tiles is commenced in a section remote from the wall or baseboard and preferably near the center of the room or wall space, or in a number of sections simultaneously if the floor space is large.

In laying the section the four corner tiles are permanently secured, as by nails or cement or both. This is the first step and is illustrated in Fig. 1. These tiles are properly spaced to include the desired number of tiles between them, in this case three, and the space is foreshortened to the amount required to produce the necessary squeeze. In practice I have found that this space may be foreshortened a minimum one-thirty-second of an inch for each twelve inches of tile used. Even when the tiles have been specially prepared and kiln dried to remove all moisture therefrom and shrink same as far as possible, the foreshortening may be increased up to approximately one-eighth of an inch when the tiles are in an expanded condition. The spaces between the corner tiles are next filled in with tiles *b, b'*. In the illustration shown in the drawings there is only one tile *b* on each side, but it is obvious that where

my method is pursued with larger sections, there will be more of the tiles *b*, depending upon the size of the section. The tiles *b'*, *b''* are laid in the foreshortened space by tilting them with their adjacent edges abutting and in raised positions and with their opposite edges abutting against the respective adjacent tiles on the floor. In this position pressure is brought upon the raised portion of the tiles, whereby they are forced down into place upon the floor. The pressure is thus equally distributed throughout the row and the tiles may then be made permanently fast either by cement applied to the tiles before they are laid, or by nails or by both. This same procedure is repeated upon all four sides of the section, as shown to the right in Fig. 1 and in Figs. 2 and 3. After the border row of tiles has been permanently secured in place the interior of the square thus formed is filled by laying the tiles in transverse rows, except that a space for a predetermined number of tiles, preferably four, is left to be filled at one operation. The transverse rows of tiles are laid commencing preferably adjacent to the border row and in the particular form of construction shown in the drawings, the intermediate rows comprise three tiles, which are laid by canting two of the tiles, for example *c'*, with respect to each other, which puts all of the tiles in each row under pressure in one direction only. In case the square to be filled is adjacent to a previously laid section, then one side of said section is used as the border or side and the tiles *b* are laid adjacent thereto, as shown in Fig. 1.

The last four tiles *d* are laid at the same time. Their adjacent edges are held together, and at the point *e* where they all meet they are held in raised positions while the respective sides of the four tiles that are to be adjacent the respective tiles already laid are brought in contact therewith, and while in these tilted positions pressure is applied to the four tiles at their raised portions and they are thereby forced down into place upon the floor thereby bringing each tile in the square or section under pressure in all directions. This completes the section, and the squeeze produced by forcing the several tiles in place causes the joints to be tightly united, and the pressure between them to be equally distributed. The tiles may then be nailed fast, or otherwise secured, as by cementing them and temporarily weighting them until the cement becomes hard. Where large sections are handled it may be necessary to temporarily tack such tiles as are under pressure in transverse directions, for example, the tile marked *e* in the drawings, in place previous to their being finally secured. This method is repeated with successive sections until the floor is entirely laid.

Having thus described my invention, I claim:

1. The method of laying a flooring of tiles of yielding material, which consists in dividing the floor space into a plurality of rectangular sections adapted to receive a predetermined limited number of tiles, and each having an area less than the normal area of the tiles to be secured in said section, securing permanently the corner tiles of said foreshortened section, laying the sides of said sections by crowding the tiles between the fixed corners, laying the intermediate tiles in rows so as to leave a space in the interior of the section having an area smaller than the normal area of the tiles to be inserted therein, placing the tiles in said space tilted at an angle to each other, and then forcing said tiles into position by pressure exerted on the tilted portions of said tiles, and then securing the tiles permanently in place.

2. The method of laying a flooring of tiles of yielding material, which consists in dividing the floor space into a plurality of rectangular sections having less area than the normal area of the tiles to be secured in said sections, securing permanently the corner tiles of each foreshortened section, laying the sides of said sections by crowding the tiles between the fixed corners, laying intermediate tiles in transverse and longitudinal rows by forcing said tiles into said rows under pressure, leaving a space in the interior of the section having a smaller area than the normal area of the tiles to be inserted therein, placing the tiles in said space tilted at an angle to each other and forcing the tiles into position in said space by pressure exerted on the tilted portions of said tiles, securing the tiles permanently in place, and then forming the adjacent sections by using the first mentioned section as one wall of each adjacent section.

3. A method of laying a flooring of units or tiles of yielding material which consists in dividing the floor space into a plurality of foreshortened squares and filling the interior of each of said squares by forcing tiles under pressure in one direction into rows transverse with respect to each other to leave a foreshortened space in the interior of each square, and forcing tiles into said space until all of the tiles in the interior of said square are under pressure in both transverse and longitudinal directions.

4. A method of laying a flooring of units or tiles of yielding material which consists in providing a stationary border of tiles inclosing a space adapted to receive a predetermined number of tiles, forcing tiles under pressure into rows between said border, whereby a portion of the tiles in each of said rows will be under pressure in one direction, leaving an opening adapted to re-

ceive a predetermined number of tiles and having an area less than the normal area of said tiles and then forcing said tiles into said opening under pressure, whereby each of the tiles within said border is subjected to pressure in all directions.

5. A method of laying a flooring of units or tiles of yielding material which consists in permanently laying a hollow square of tiles, so that the interior area of said square will be not greater than the normal area of the tiles to be inserted therein, laying rows of tiles in said space, commencing adjacent to the border row and laying said rows in transverse directions, so that a portion of the tiles in each row will be under pressure in one direction only until a space remains in the interior of said square having less area than the normal area of the tiles to be inserted therein, and then forcing tiles into said space so that all of the tiles in the interior of said square will be under pressure in all directions.

6. A method of laying a flooring of units or tiles of yielding material, which consists in dividing the floor space into a plurality of sections, each adapted to receive a predetermined number of tiles, securing the corner tiles of each section in accurate alignment with the corresponding tiles in adjacent sections, forcing tiles under pressure between corner tiles to form a plurality of hollow squares, and forcing tiles into rows in the interior of each of said squares under substantially similar pressure, so that the

joints between the rows of tiles in the several squares will form continuous lines longitudinally and transversely of the entire floor space divided as aforesaid.

7. The method of laying tile floors, in sections which consists in laying the four corner tiles in secure and predetermined foreshortened positions, filling in between the adjacent corner tiles by forcing the intermediate tiles into place between said foreshortened corner tiles, securing the tiles in place composing the border; laying other rows of tiles within the border by laying the tiles flatwise, and by laying the last two tiles in each row by holding their adjacent edges together in raised position and their opposite edges against their adjacent tiles and applying pressure to force the tiles in place, the rows being laid to leave a foreshortened square space for four tiles; then laying four tiles in this space by holding their common adjacent corners in raised position and the sides adjacent the laid tiles positioned against said tiles and applying pressure at the raised part to force the four tiles in place to distribute an equal pressure within the border and securing the tiles within the outer border in place.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

DAVID E. KENNEDY.

Witnesses:

MATILDA DAVIDSON,
JULIA K. CLARKE.