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LINOLEUM FLOOR COVERING AND PROCESS OF MANUFACTURE

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Fig. 3.

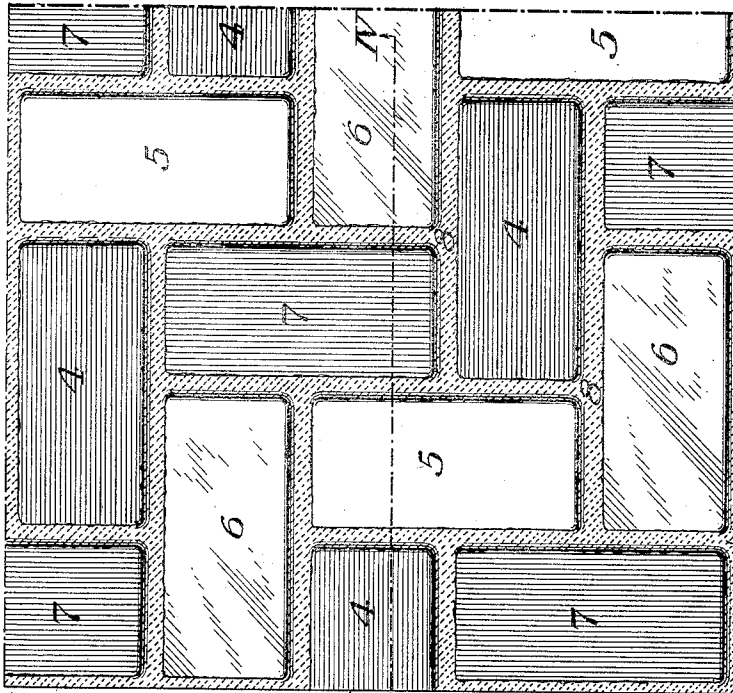


Fig. 1.

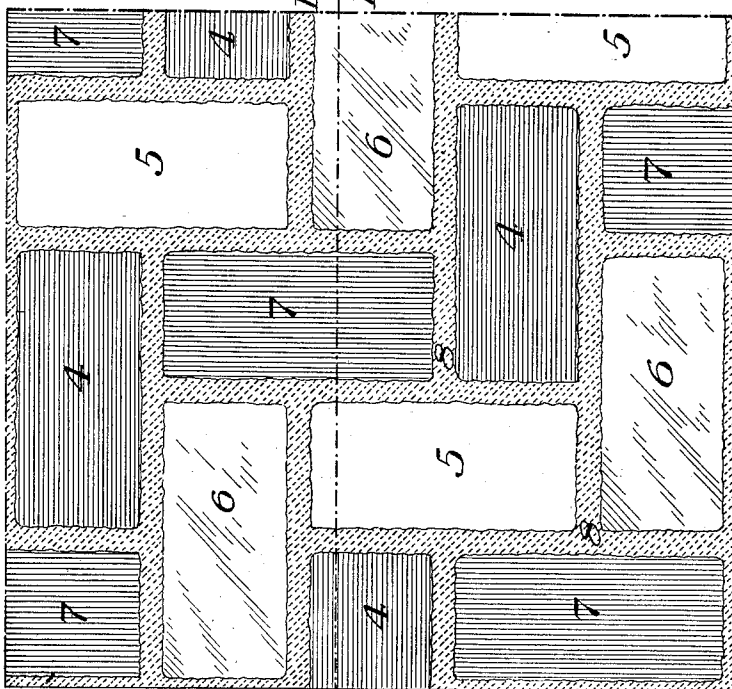


Fig. 2.



Fig. 4.



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LINOLEUM FLOOR COVERING AND PROCESS OF MANUFACTURE.

Application filed December 11, 1925. Serial No. 74,731.

This application is a continuation in part of our co-pending application Serial No. 11,110, filed Feb. 24, 1925.

The present invention relates to linoleum floor covering and to the process of manufacture, and more especially to a linoleum having a molded inlaid varicolored pattern brought into relief by having certain of the inlays sunk below the general surface level. The invention is particularly applicable to moulded inlaid linoleums having tile patterns which may be made to stand out by depressing the mortar joints, and will therefore be illustrated and described with particular reference to such embodiment of the invention, it being understood, however, that the invention is not so limited, but may also be embodied in other patterns.

In the drawing:

Figure 1 is a plan view of a piece of moulded inlaid linoleum having a color pattern comprising varying colors and formed into the usual smooth sheet;

Figure 2 is a section along the line II—II of Figure 1.

Figure 3 is a plan view of the same piece of linoleum after a portion of the color pattern has been depressed; and

Figure 4 is a section along the line IV—IV of Figure 3.

Referring to the illustrated embodiment of the invention, reference numeral 1 indicates a sheet of linoleum having the usual burlap backing 2 and a layer of linoleum composition 3 applied thereto. The linoleum layer is formed of inlays indicated by reference numerals 4, 5, 6, 7 and 8. The inlays 4, 5, 6 and 7 simulate flooring tiles, while the inlays 8 simulate the mortar joints between the tiles. The inlays 8 should be of a color varying from the color or colors of the inlays 4, 5, 6 and 7, in order to simulate the difference in color between the mortar and the tiles. The inlays 4, 5, 6 and 7 are preferably, as indicated in the drawings, of varying colors arranged with irregularity of occurrence to simulate the irregular color arrangement of hand laid ceramic tiling; and by "varying colors", we mean either different colors or different shades of the same color. In a linoleum simulating hand craft tiling, the inlays 4, 5, 6 and 7 will usually be of the same general color, but having color differences to simulate the dif-

ferent shades of burnt tiling which, because of the difference in intensity of heat at which they are burned, come out of the kiln with different shades of color. While it is preferred to have the inlays which simulate the tiles differing in color, they may be of identical color, in which case, the color pattern is, of course, formed by the color contrast between the mortar joints and the tile.

The inlay portions 8 are sunk or depressed into shallow grooves 9, as shown in Figures 3 and 4, to simulate the depressed mortar joints occurring in tile floors. The depressed mortar joints bring the tile pattern into relief and make a linoleum of a much more attractive appearance than plane-surface tile pattern linoleum. The relief given to the colored pattern makes it stand out strikingly. It also breaks up the smooth light-reflecting surface afforded by a plane-surface linoleum. In looking across a room toward a window, the colored pattern of a plane-surface linoleum may be lost in the reflected light, whereas the same pattern, when brought into relief by indenting certain of the colored figures thereof, is distinctly visible under the same conditions.

The depressed grooves or recesses are relatively wide and shallow, being usually about $1/32$ d to $3/64$ th of an inch in depth and of a width corresponding to the width of the colored inlay which is depressed. They preferably have smooth contours to prevent the retention of dirt and to allow of easy cleaning.

The color pattern is preferably formed of colored inlays formed by the molded inlay linoleum process. In making moulded inlaid linoleum, the linoleum mixes which form the colored inlays, such as those indicated at 4, 5, 6, 7 and 8 in the drawings, are placed by stencils in granular condition upon the burlap backing to form a layer of loose granular material consisting of sections or patches of differently colored mixes, so disposed as to form the desired pattern, as is the usual practice in making moulded inlaid linoleums. The linoleum mixes usually contain ground cork, wood flour and an oxidized linseed oil binder, thoroughly ground and mixed into a loose granular material which can be applied through the stencils. Other specific filler materials and

binders have been and may be substituted for the ground cork, wood flour and oxidized linseed oil binder in making up the granular mixes, and we intend the terms "linoleum" and "linoleum mixes" to include such substitutions. The burlap backing bearing this layer of loose granular material is then compressed under heat and pressure to form a solid sheet of linoleum. Due to the fact that the differently colored inlay portions are applied to the backing in a granular condition, the granules at the dividing or junction lines between the colors become somewhat interlaced so that the line of juncture between the colors is somewhat irregular, as indicated in the drawings, a characteristic which distinguishes moulded inlaid linoleum from so-called straight line inlaid linoleum.

In the making of straight line inlaid linoleum, the linoleum material is first calendered into sheets from which the pieces to be used in making inlay are cut or died. Pieces cut from differently colored sheets are applied either by machine or by hand to a burlap backing so as to form the colored pattern desired. The pieces of the sheet linoleum material are then pressed against and into the burlap backing and are consolidated by heat and pressure to form a continuous sheet of linoleum. The lines of juncture between the inlays are sharp and distinct. Hence, the name, straight line linoleum.

The irregular juncture lines between the inlays of molded inlaid linoleum produce a better simulation of the irregular edges of floor tiles. While the marginal lines of the depressions or grooves should substantially coincide with the lines of juncture between inlays, nevertheless, a mathematically exact matching of such marginal lines and juncture lines is not essential, since inaccuracies in the matching of the smooth marginal lines or edges of the grooves with the lines of juncture between colors are not so apparent with the irregular lines of moulded inlaid linoleum as would be the case with the sharp straight lines of straight line inlaid linoleum. Moreover, since the moulded inlaid linoleum is formed from the inlays in granular condition directly into the final sheet form, the juncture lines or joints between the inlays are as strong as the rest of the sheet and will not show signs of splitting along such juncture lines when subjected to indentation. The somewhat irregular lines of juncture between the colored inlays produces a color blending effect softer than that of the sharp lines of straight line linoleum, and in tile pattern linoleums, the somewhat irregular lines of juncture between the inlays simulating the tiles and mortar joints resemble the irregular edges of trowelled mortar joints in handlaid ceramic tiling. For

these reasons, we prefer to make the linoleum which is to have a depressed pattern formed therein, by the moulded inlaid process.

After the linoleum is made in the usual way, as described above, it is passed beneath an embossing plate, which indents a portion of the colored pattern, preferably indenting entire inlays of a given color or colors, as for example, the inlaid color forming the mortar joints in tile pattern linoleum. The linoleum is then cured in the usual manner. While it is preferable to indent the pattern before curing the linoleum, the indenting operation may be carried out on the cured goods, in which case, the linoleum is heated to a plastic condition before the surface is subjected to the indenting operation. While the indenting operation is preferably carried out as a separate operation upon a previously consolidated sheet of smooth surfaced linoleum, the two operations may be combined and an embossing plate or roll may serve not only to indent the pattern, but also to compact or consolidate the linoleum composition later.

While we have illustrated the invention as applied to a tile pattern design, it may be applied to other linoleum patterns. For example, floral or other figures may be indented in linoleums having floral or other figured patterns. The invention is therefore not limited to its illustrated embodiment, but may be otherwise embodied within the scope of the following claims.

We claim:

1. As a new article of manufacture, an inlaid linoleum floor covering having a color pattern formed of molded inlays having irregular lines of juncture and brought into relief by having certain of said inlays sunk below the general surface level, the marginal lines of the sunken portions substantially coinciding with the lines of juncture between inlays.

2. As a new article of manufacture, a linoleum floor covering having a color pattern simulating tile separated by mortar joints, formed of molded inlays having irregular lines of juncture between inlays and brought into relief by having the inlays simulating the mortar joints depressed below the inlays simulating the tiles, the marginal lines of the depressions substantially coinciding with the lines of juncture between the inlays simulating the mortar joints and the tiles respectively.

3. In the process of making molded inlaid linoleum, the steps which consist in applying to a backing a layer formed of granular linoleum mixes so disposed as to form the desired inlaid color pattern, consolidating the granular linoleum material into a sheet consisting of varicolored inlays having irregular lines of juncture, and thereafter indenting certain of the inlays, the

marginal lines of the indentations substantially coinciding with the lines of juncture between the depressed and undepressed inlays.

5 4. In the process of making tile pattern molded inlaid linoleum, the steps which consist in applying to a backing a layer formed of granular linoleum mixes colored to simulate tiles and mortar joints between the tiles,
10 consolidating the granular linoleum material into a sheet consisting of colored inlays simulating tiles and separating mortar joints and having irregular lines of juncture, and depressing the surface of the inlays simulating the mortar joints below the general surface level of the linoleum, and curing the linoleum.

5 5. In the process of making molded inlaid linoleum, the steps which consist in applying to a backing a layer formed of granular linoleum mixes disposed to form the desired color pattern, and subjecting the material to pressure to consolidate the granular material and form certain of the inlays with
20 their surfaces bodily depressed below the general surface level of the linoleum so as

to bring the color pattern into relief, the outlines of the sunken portions substantially coinciding with the irregular lines of juncture formed between inlays by consolidating
30 the granular mixes into the inlays.

6. As a new article of manufacture, a molded inlaid linoleum floor covering having a tile pattern formed of molded inlays colored and arranged to simulate tiles separated by mortar joints and having irregular
35 lines of juncture between the inlays, and having the inlays simulating the mortar joints depressed below the general surface level of the linoleum.

7. As a new article of manufacture, a molded inlaid linoleum floor covering having a pattern formed of colored molded inlays having irregular lines of juncture between the inlays, and brought into relief by
40 having certain of the inlays depressed below the general surface level of the linoleum.

In testimony whereof we have hereunto set our hands.

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