April 3, 1934. F. L. CARSON 1,953,337

WOOD BLOCK PAVEMENT

Filed Nov. 7, 1930

Fig. 12.

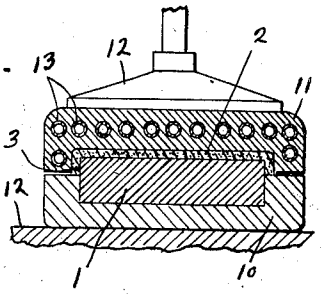


Fig. 1.

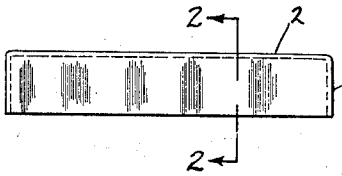


Fig. 2.

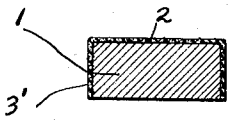


Fig. 3.

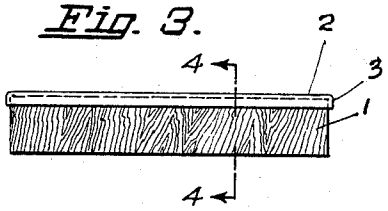


Fig. 4.

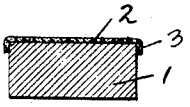


Fig. 10.

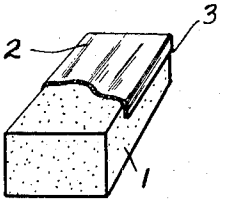


Fig. 5.

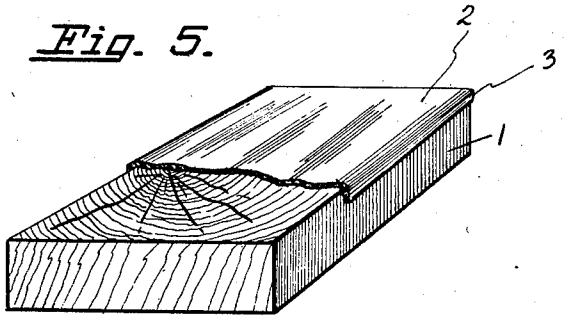


Fig. 6.

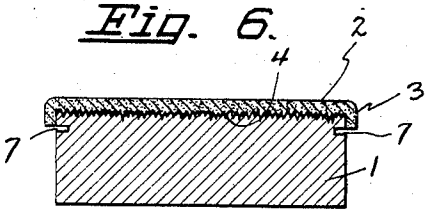


Fig. 7.

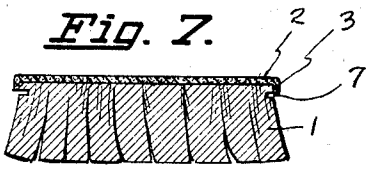


Fig. 8.

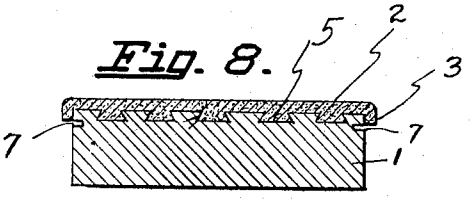


Fig. 11.

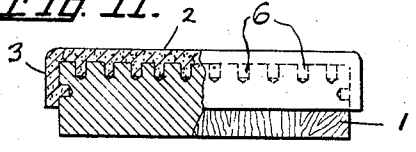
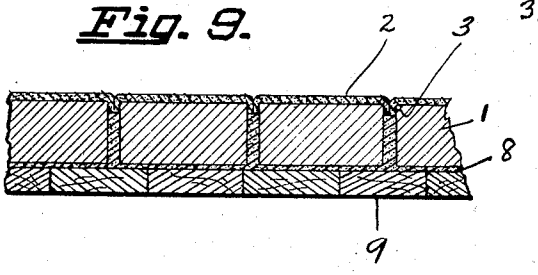


Fig. 9.



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UNITED STATES PATENT OFFICE

1,953,337

WOOD BLOCK PAVEMENT

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Application November 7, 1930, Serial No. 494,064

4 Claims. (Cl. 94—15)

This invention relates to block or tile flooring, particularly wood block flooring, and the objects of the invention are to provide a block unit which will be cheap to produce, permanent in form, extremely durable, and permit of a great variety of surface colors.

Briefly described, my invention comprises a floor block, preferably of wood cut to present the ends of the grain top and bottom and with a layer of plastic material covering the upper surface of the block and vulcanized or otherwise hardened thereon and forced under pressure to enter the grain or pores of the block so as to be firmly united thereto.

In its broader form the base block may be any porous material such as wood, brick or tile, and the plastic material may be bakelite, rubber, cementitious materials, or soft metal such as lead, but in its preferred form it is an end grain wooden block with a layer of phenol condensation product "vulcanized" thereto, or rather formed thereon under conditions of heat and pressure so as to force the material while plastic into the grain as stated. Also it is a feature of the invention that the coating extend down over the edges of the block so that when the blocks are laid in abutting relation either as a floor, or as wall or other panelling, no raw edges will be visible, and the material will form a spacing element for the blocks so as to determine the cement space between them.

In the drawing accompanying this application, Fig. 1 is a side view of one of my improved blocks with the surface covering extending clear down over the edges.

Fig. 2 is a cross section of Fig. 1 taken along the line 2—2 thereof.

Fig. 3 is a view similar to that of Fig. 1 but showing the covering material extending part way over the edges.

Fig. 4 is a cross section of Fig. 3 taken along the line 4—4 thereof.

Fig. 5 is a perspective view of one of my blocks as made up with end grain wood and with the covering extending part way over the edges, the covering being broken away in part.

Fig. 6 is an enlarged cross section of a wooden or other porous block showing the infiltration or penetration of the plastic material into the grain or pores of the block. This view also illustrates side cuts in the block under the edge of the covering material to prevent warpage of the block.

Fig. 7 is a cross section of a wooden block badly warped, to illustrate the saving effect of the slots under the edge of covering material.

Fig. 8 is a cross section of a block showing an additional dove-tail grooving of the surface of the block to increase the hold of the covering material.

Fig. 9 is a cross section of a portion of a floor laid with my blocks.

Fig. 10 is a perspective view of a porous brick block covered with the tread material on top and part of edges.

Fig. 11 is an end view of a block with part broken away to show a plurality of anchor holes for additionally locking the surface covering in place.

Fig. 12 is a cross section of a block in its die members during the process of manufacture.

In further detail, in all figures the base block is designated 1 and the top covering 2, and as stated the base block is preferably of wood with end grain up as illustrated in Fig. 5, and as a wood I find blocks of California redwood to give best results as they are quite free from warpage tendency and are of an open end grain so that the plastic covering material is readily forced into the open grain when in the press being vulcanized or "set".

The covering material may lap over the edges slightly as shown in Figs. 3 to 12 inclusive, as at 3, or may extend clear down over the edges as at 3′ in Figs. 1 and 2.

In Fig. 6 the interlocking of the plastic material with the fiber of the wood or pores of other material is shown at 4, and in Fig. 8 the further locking of the material by dovetailed grooves 5, and in Fig. 11 the drilled holes 6.

The groove 7 running around the wooden block permits the lower part to swell or warp as indicated in exaggerated form in Fig. 7.

The blocks when used for an ordinary floor are preferably about ¾ inch in total thickness, though for other uses they may be of any suitable thickness.

In laying the blocks they are held in place by glue, cement, mortar, asphalt or any other adhesive material, preferably the latter first applied in a hot layer 8 to the sub-floor 9 (Fig. 9) and each block pushed into place so as to elevate some of the cement into the seams until stopped by the overhanging edges 3, 3 of adjacent blocks. If any of the cement is forced out through the top it is later cleaned off with a suitable solvent.

In vulcanizing the layer of rubber or bakelite onto the block, the latter is dropped into a die plate 10 (Fig. 12) and the upper die 11 brought down with great pressure between the members

12 of a press, while the die 11 in contact with the plastic is kept hot by any suitable means, such as by introducing steam in pipes 13. The pressure thus both shapes the upper contour of the block accurately while at the same time forcing the plastic deeply into the pores of the block to firmly unite with it.

While, as stated, I prefer bakelite or similar condensation products as the plastic on account of the great variety of color effects, I may use any suitable plastic. Rubber, when used, may of course be given any coloring desired, and also may be vulcanized to a half hard condition so as to retain a certain amount of its cushioning properties if desired.

Having thus described my invention it will be seen that a wooden block thus prepared will have a permanent wearing face which will maintain its shape regardless of what changes may transpire in the body of the block below through warpage or splitting, and the surface material being forced into the pores of the block under great pressure may be worn through yet it will not peel or crack off.

I claim:—

1. A slab of wood sawed across the grain provided with a surface covering of bakelite material extending over the end grain of one side and coming down over the edges of the block part way only forming a seam spacer.

2. A paving unit comprising an end grain block of wood provided with a surface covering of plastic material extending only part way down over the edges, and an open groove in the side edges of the block adjacent the termination of the plastic material.

3. A paving unit comprising an end grain block of wood provided with a surface covering of bakelite material extending only part way down over the edges, and an open groove in the side edges of the block adjacent the termination of the bakelite material.

4. A paving unit comprising an end grain block of wood provided with a surface covering of plastic material extending part way down over the edges, an open groove in the side edges of the block adjacent the termination of the plastic material, and undercut recesses formed in the top of the block interlocking said plastic material with the block.

FRANCIS L. CARSON.