

Oct. 18, 1966

I. F. DITTMAR

3,279,138

SURFACE FINISHING PANEL

Original Filed Dec. 6, 1961

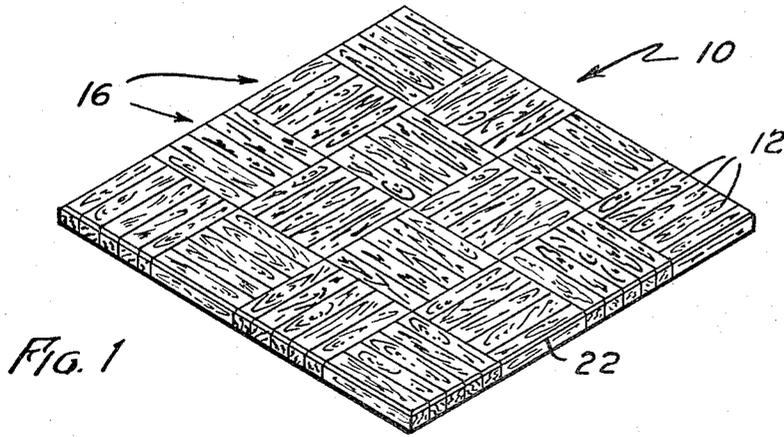


FIG. 1

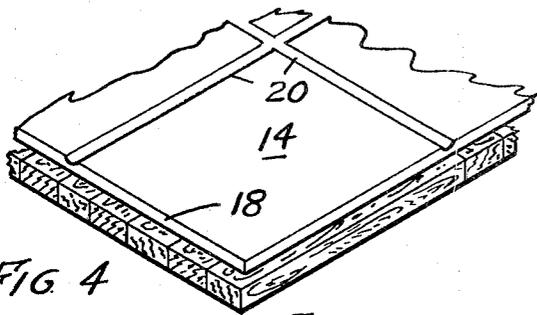


FIG. 4

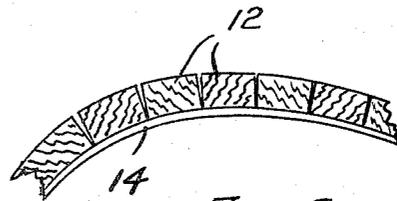


FIG. 6

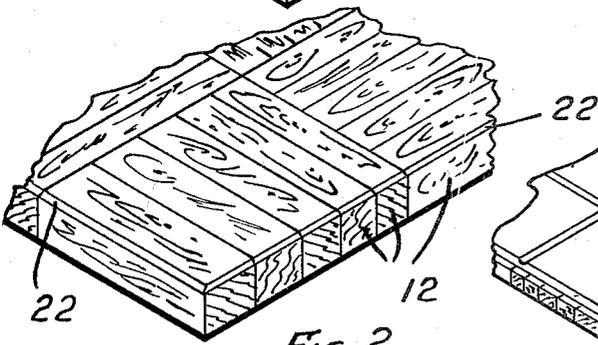


FIG. 2

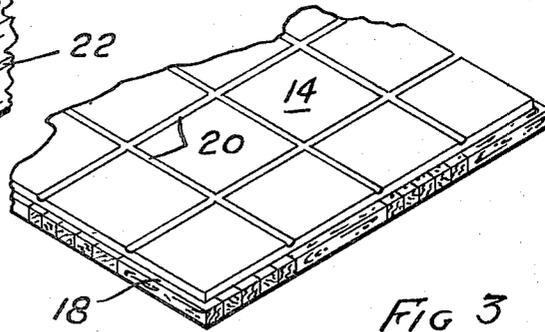


FIG. 3

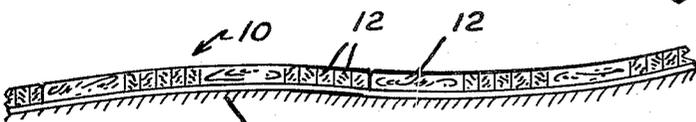


FIG. 5

INVENTOR.
IRVIN F. DITTMAR
BY
Jattison Wright & Pattison
ATTORNEYS

1

3,279,138

SURFACE FINISHING PANEL

Irvin F. Dittmar, Williamsport, Pa., assignor to The Cromar Company, a corporation of Maryland

Continuation of application Ser. No. 157,976, Dec. 6, 1961. This application July 2, 1965, Ser. No. 470,345
4 Claims. (Cl. 52-384)

This application is a continuation of application Ser. No. 157,976, now abandoned, filed Dec. 6, 1961.

The present invention relates to a unique wood panel and more particularly and specifically to a novel pre-finished parquet-type wood panel used for finishing floor and wall surfaces.

While the novel panel constituting a principal concept of the present invention has many and varied uses, it is in greatest demand in the field of pre-finished wood flooring. Heretofore, in the art of wood flooring, it has been the practice to produce and supply unfinished parquet units bonded by kraft paper on one or both sides, which units are laid in a mastic compound, leveled, stripped of paper and then finished in the manner of finishing typical wood flooring. This type of floor installation has proved to be time-consuming, arduous and costly.

It is therefore a general object of this invention to provide a novel and improved parquet-type floor panel which eliminates substantially all of the principal objections inherent in panels of similar purposes heretofore known in the art.

A principal object of this invention lies in the provision of a novel and improved wood panel of the parquet-type which is manufactured with a pre-finished face and a flexible backing mat permitting ready installation of the panel in the manner of synthetic floor tiles to produce a pre-finished installation.

Another object of this invention resides in the provision of a novel and improved wood panel which is constructed so as to provide for equalization and balance of stresses of expansion and contraction resulting from the natural hygroscopic character of wood thereby eliminating distortion, separation and buckling, such as has been common in floor units of similar type and purpose.

Still another object of this invention rests in providing a novel and improved wood panel in which the component parts of the panel unit are self-leveling in respect to one another, as are the panel units in respect to each other, when installed on surfaces having untrue, non-level characteristics.

A further object of this invention is the provision of a novel and improved wood panel formed from a multiple of small wooden slats grouped and arranged in patterns of diverse grain direction so as to form a uniform panel unitized by a flexible fabric backing adhered to the slat surfaces on one side and with the opposite slat surfaces being pre-finished.

Another object of this invention rests in the provision of a novel and improved wood panel of the construction hereinbefore described which is simple and inexpensive of design, manufacture and installation in relation to known prior art devices of like function.

Still further objects and advantages of this invention will become more readily apparent to one skilled in the pertinent art when the following general statement and description are read in the light of the accompanying drawings.

The nature of the present invention may be stated in general terms as pertaining to a pre-finished, mosaic wooden panel formed from a plurality of identical slats arranged in diverse patterns and joined in uniform units by flexible backing fabric adhered to the slat surfaces

2

on one face of the units, the slat surfaces on the second face of each unit being pre-finished and wax coated.

Referring now to the accompanying drawings in which like numerals designate similar parts throughout the several views:

FIG. 1 is a perspective view of the novel panel constituting the present invention;

FIG. 2 is an enlarged fragmentary view of a portion of the panel of FIG. 1;

FIG. 3 is a view similar to FIG. 2 illustrating the bottom surface of the panel;

FIG. 4 is an enlarged fragmentary view of the panel as shown in FIG. 3;

FIG. 5 is an elevational view of panels laid on an uneven floor surface;

FIG. 6 is a fragmentary elevation illustrating panel flexibility.

The improved wooden panel 10 constituting the inventive concept herein disclosed takes the form of a flat unit of uniform outline made up of a multiple of identical wooden slat elements 12 arranged in a tight mosaic pattern and bound together by a backing sheet 14 of a flexible material.

As is best seen in FIG. 1 of the accompanying drawings, wherein a preferred embodiment of the panel is illustrated, each panel unit 10 is composed of an equal number of uniform block elements 16 arranged in a square configuration with an equal number of such block elements on each side of the square. Each block element, in turn, is composed of a plurality, five in number in the example shown, of elongated flat wooden slats 12 disposed in side by side coincidence with the grain of all of the slats in each such block element extending longitudinally of the slats and, thus, in the same direction of the block element.

As is further seen, the adjacent block elements are oriented at 90° to one another so that the longitudinal dimensions and grain directions in the slats of adjacent elements are perpendicular.

As is best seen in FIG. 2, one face of the panel unit is substantially covered by a flexible backing member 14, such as asphalt saturated felt, which is bonded to the entire panel unit surface and to the surfaces of each slat in each block element of the panel unit. It is seen, for reasons to be hereafter made evident, that the backing member 14 is trimmed off at 18 about its four sides at a slight distance inwardly of or in undercut relation to the peripheral edge of the overlying panel unit, and that the member 14 is compressed with groove formations 20 at spaced intervals in perpendicular directions thereof with said grooves coinciding with the overlying joints or lines of division between the several block elements forming the panel unit.

The peripheral edge of that face of the panel unit opposite the backing sheet is beveled as at 22 for purposes to be made evident, and the exposed face of the unit is finished by sanding, sealing and wax coating as is to be hereafter described.

Panel units of the character hereinbefore described may be readily installed as flooring, by way of example, in substantially the same manner as present-day asphalt and plastic, namely, by applying mastic on a floor surface to a pre-determined thickness, and laying the wooden panels in the mastic, backing sheet side down, in edge to edge relationship, after which they are pressed down into adhesive contact with the mastic. As is best seen in FIG. 5, panels so laid on a floor surface 24 of uneven or unlevel character will accommodate themselves readily to floor contours by reason of the flexibly interconnected component elements of the panel, and upstanding or projecting obstructions between adjacent panels are avoided

3

by the edge beveling hereinbefore described. The undercut of the flexible backing serves to provide beneath the panel a limited void between adjacent panels which will receive excess mastic forced upwardly by setting pressure applied to the upper panel surfaces thereby curtailing, if not eliminating, mastic extrusion from between adjacent panels.

It is to be recognized that a panel of the type described may be assembled and unitized by the application of the flexible backing material to the multiple, separate wood slats arranged as shown and described. When the flexible backing has been secured to the slats by adhesion the panel becomes a composite unit which may then be handled and processed for machine or hand operations resulting in the working of the panel face opposite to the backing sheet. Accordingly, the composite panel unit may be subjected to sanding, fluid coating, waxing and buffing operations to ultimately provide a pre-finished unit for ready installation.

It has been discovered that the arrangement of slat elements, and grain directions thereof as shown and hereinbefore described, serves to take maximum advantage of the hygroscopic characteristics of wood and to provide for a complete balance in all lateral directions of the panel of stresses set up by absorption of moisture. This balance avoids any warping or buckling of the panels when installed on a wall or floor surface.

It has also been discovered that a panel of the type described and shown achieves maximum benefit through securing each slat element to the fabric or flexible backing independently of each other slat element, all of which is best illustrated in FIG. 6. Independence of slat element attachment to the backing provides for maximum flexibility of the panel and maximum self-leveling characteristics.

It has been further discovered that by grooving the backing sheet 14, as at 20, or by a preselected pattern of grooves, scoring or slotting in plural directions of the backing sheet, built-in relief is provided for lateral stresses set up in the flexible backing sheet which result from moisture presence or drying out of adhesive materials used to set the panel against a wall or floor surface.

By the foregoing, it can be seen that a complete, pre-finished floor may be quickly and easily installed which is immediately ready for use.

Having thus described and explained the invention and having clearly satisfied the objects and advantages hereinbefore set forth, what is desired to be claimed is:

1. A pre-finished floor panel comprising, a plurality of blocks formed of plural elongated wood slats in side by side relationship, a flexible sheet underlying the surface of said blocks and being undercut to provide a marginal shoulder peripherally about said assembled blocks, said

4

sheet being secured independently to each slat in each block, the peripheral edge of said assembled blocks on that face opposite said flexible sheet being beveled, and said flexible sheet having a plurality of elongated grooves formed therein in spaced relationship.

2. A pre-finished floor panel as defined in claim 1 wherein the wood grain runs longitudinally of each slat, and the slats of adjacent blocks are positioned in perpendicular directions.

3. A pre-finished floor panel comprising, a plurality of elongated wood slats of the same size and with the grain running longitudinally thereof arranged in side by side relationship to form a square block configuration, a plurality of said slat formed block configurations arranged in side by side and edge to edge relationship to form a flat rectangle in which the grain of the slats in adjacent blocks extends at right angles, a flexible sheet of lesser peripheral dimension than said rectangle secured independently to each slat on one face of said rectangle and defining a marginal shoulder peripherally about said rectangle, said sheet being provided with spaced grooves thereacross in two perpendicular directions thereof, the slats about the peripheral edge of said rectangle being chamfered adjacent the faces thereof opposite said attached sheet, and the slat surfaces within the peripheral chamber being finished.

4. A pre-finished floor panel comprising, a plurality of elongated wood slats of the same size and with the grain running longitudinally thereof, said slats arranged in side by side relationship to form a block, a plurality of said slat formed blocks arranged in side by side and edge to edge relationship to form a flat rectangle with the slats of adjacent blocks being oriented in perpendicular relationships, a flexible sheet secured independently to each slat on one surface of said flat rectangle, said flexible sheet being provided with a plurality of elongated grooves formed therein in groups arranged in intersecting transverse directions of said sheet, said grooves coinciding with certain joints defined by abutting wood slats to accommodate and relieve lateral stresses set-up by variations in moisture content of the assembly, and that surface of said flat rectangle remote to said flexible sheet being pre-finished.

References Cited by the Examiner

FOREIGN PATENTS

734,179	1955	Great Britain.
828,823	1960	Great Britain.
855,019	1960	Great Britain.

FRANK L. ABBOTT, *Primary Examiner.*

R. A. STENZEL, *Assistant Examiner.*