

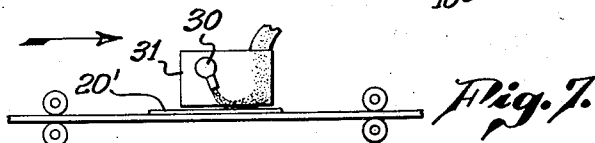
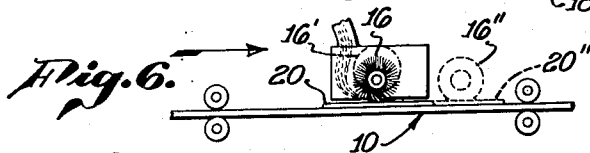
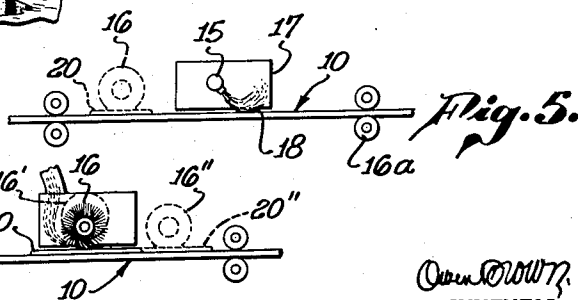
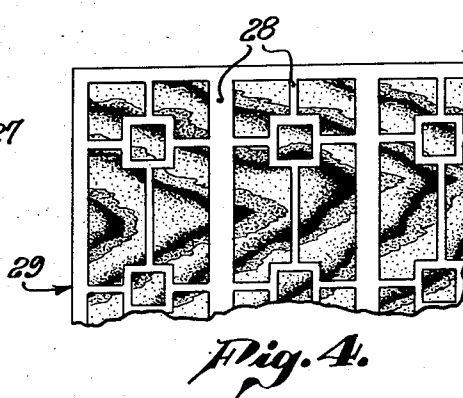
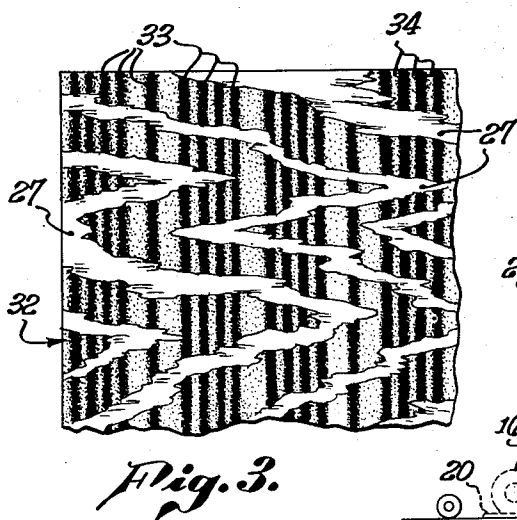
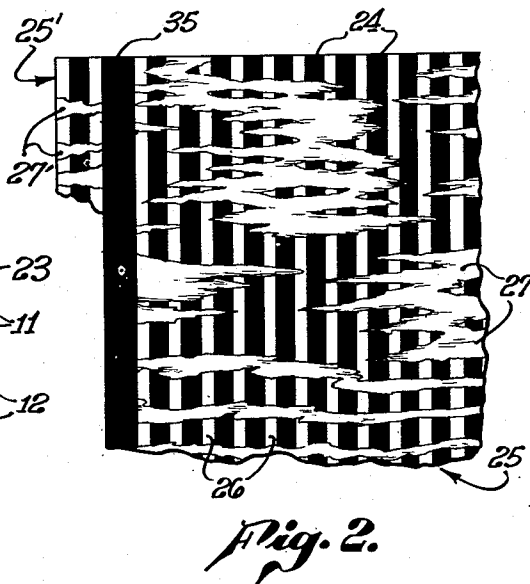
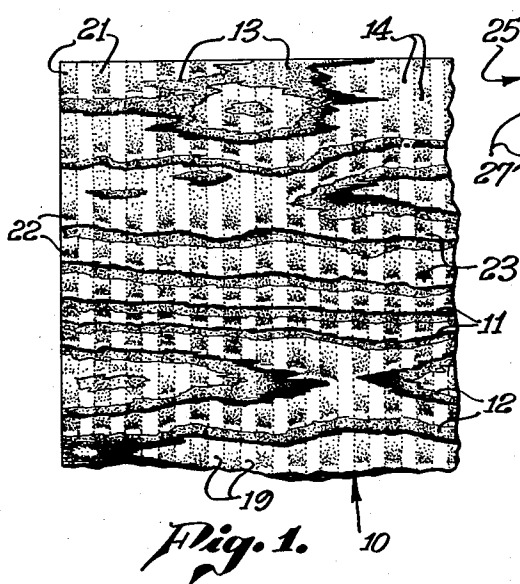
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2,706,355

METHOD OF PRODUCING VARIEGATED WOOD SURFACE AND PRODUCT

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2,706,355

METHOD OF PRODUCING VARIEGATED WOOD SURFACE AND PRODUCT

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7 Claims. (Cl. 41—24)

This invention relates to certain wood by-products, and to their embellishment in a new and novel manner.

In several of my prior co-pending applications, means and methods are disclosed for ornamenting wood surfaces whereby to greatly enhance their optical appeal. In some of these, standard plywood panels are featured. And while the present invention is not essentially limited to plywood, it is particularly applicable thereto for reasons to be given hereinafter.

Wherein pre-decorated panels have been produced heretofore, their surface ornamentation has, as a rather natural sequence, followed the traditional procedure: namely, that of producing striations (as particularly exemplified by Patent No. 2,286,068 to Donald Deskey) and other forms of embellishment in a generally co-longitudinal relation to the grain trend.

This is quite understandable, of course, since standard panels are laid up in oblong sizes, with the normal grain trend of the face-ply usually running in the direction of their longest dimension. Clearly, as a typical case in point, if full size panels are to be striated by feeding them to a planer, it would seem most illogical to produce the striations crosswise of the panels, since that would necessitate planer blades eight or ten feet long . . . not to mention other considerations which would dictate running them through according to their narrowest dimensions. Nor has it been deemed of any advantage, in general, to lay up the face-ply transversely, as to their normal grain trend.

Reversing the grain trend

According to certain featured components of my invention, however, the aforesaid standard practice is preferably reversed. In short, for presently envisioned ends, it is preferred that only the core-ply of a 3-ply sandwich, for illustration, shall be laid with its grain trend lengthwise of the long dimension, and that each of the respective face-ply shall be cut and laid contrary thereto.

It follows, then, that where it is desired to produce ornamental patterns athwart the grain trend, as explained hereafter, it is not required that such panels shall be fed to the requisite machines edgewise of their longest dimensions, but—just as usual—the narrower way. To be sure, in the case of 4 x 8-ft. panels, a comparable result could be had by laying up the face-ply normally co-longitudinally, thereafter cutting them into two equal half-panels, and, then, feeding each 4-ft. half to a machine in such manner as to produce a cross-wise pattern thereon; that is, contrary to the grain trend.

From the foregoing, it will be sufficiently clear that, whether or not the panels are fabricated and/or fed in the preferred manner, the method herein contemplates producing particular forms of ornamentation thereon contrary to the grain-trend of each face-ply so treated. And wherein a wood surface other than plywood is to be similarly processed, the same also holds true.

In my prior co-pending application called "Embellished Wood Product, Its Method of Production, and Apparatus Therefor," filed April 27, 1948, as Serial No. 23,649, several systems are given for decorating wood surfaces—especially plywood surfaces—by initially toning the same and thereafter removing portions, only, of the toned surface wood. As therein explained, thermochemical toning is greatly to be preferred over ordinary stains and dyes, or the so-called Sugi process of merely charring the wood as a preliminary operation. And among the featured means for removing the surface wood

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is an automatic machine having a rotary wire-brushing device, which last is operable against the pre-toned surface of the wood.

According to one preferred method, pre-toned plywood panels are moved underneath a stationary masking grid within which are formed a predetermined arrangement of more or less narrow slots, and through each of which slots portions of the brushing component are permitted to abrasively contact only the unmasked surface areas. Panels of orthodox type, having face-ply laid up with their grain trends running co-longitudinal with the lengthwise dimension of the panels, will naturally receive a plurality of stripes, bands or the like running up and down the trend of the grain, except as broken and interrupted by the hard grain portions; which last are little if any affected by the brushing wheel or wheels, being merely given a high polish.

Cross-banded panels

Now it might be concluded, superficially, that no very different result would be had by merely producing such bands or stripes cross-wise of the grain trend; that such a cross-grain treatment might even tear out and destroy the more delicate, lacy hard grain of the surface wood. But surprisingly contrary results will accrue. Indeed novel, exceedingly decorative effects may be thus obtained . . . and in no other manner on wood.

While sundry conifers, having definite hard and soft grain areas, may be so utilized—as exemplified by West Coast hemlock, ponderosa pine and Sitka spruce, as well as by numerous other woods including Port Orford cedar and Southern cypress—rotary-cut Douglas fir plywood has been found to yield the maximum of desirable results to date. Because of the normally involved and random grain figure of rotary-cut firwood face plys, characterized by very distinct hard and soft portions thereof, it is possible to abrasively remove certain of the surface soft wood—as mentioned in connection with said co-pending application—without materially altering either the appearance or the texture of the contiguous hard grain. And where banding is applied diametrically contrary to the grain trend, as more fully explained hereinafter, the resultant visual effect is in marked contrast to that had by an identical treatment when applied longitudinally of said trend of the grain.

For example: while the co-longitudinal treatment usually produces bands which follow and overlap with extensive areas of the hard grain, this rarely occurs in the transverse banding, and each wide, narrow, or medium-wide area of the hard grain is clearly, cleanly differentiated. But such a differentiation in nowise accentuates the somewhat monotonous, commonplace appearance of the random firwood grain. On the contrary, it is irregularly and artistically broken up in variously intricate, relatively unpredictable latticed effects wherein certain, at least, of the hard grain areas appear to be superimposed over the unremoved soft wood which was protected by the masking element.

Such an effect, to be sure, is in some measure variably different in each wood specimen, and is varied further according to the method of toning previously utilized. Thus, where a hydrochloric treatment was applied (as see said copending application and the later reference herein to a formerly copending but subsequently abandoned application, for details regarding various thermochemical and other formulae), a curiously checkered appearance will usually be given to the wood—due in part to the partial removal of certain surface soft wood which uncovers portions of the hard-grain, and the latter presenting a different aspect from the uppermost surface portions of the same. This effect is further modified according to whether only a thin layer of surface soft wood is removed in the unmasked areas or whether the brushing is done to largely remove all or nearly all of the exposed soft grain, whereby the resultant grooves are usually more deeply, irregularly interrupted throughout their length.

Moreover, the intensity of the toning—assuming that the thermochemical method was employed—will make a further difference in the final result, since, if only medium dark hydrochloric tones are produced, for example, some

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areas of the hard grain will, quite automatically, have darker tones than other hard grain areas, even though the thermal treatment be quite uniformly applied. And where the soft grain is entirely removed from above sub-surface upper portions of the hard grain, the latter—due to the widely overlapping character of the rotary-cut grain layers—will, upon such exposure, be often at least twice as wide as the same grain appears at the upper surface level.

Furthermore, when the soft wood is thus removed across the grain, the bottoms of the resultant shallow grooves are not plainly marked by a multiplicity of narrow lacerations or brush-marks—as in the case of panels which are brushed co-longitudinally of their grain trend—but, on the other hand, said grooves have relatively smooth bottoms and clean-cut side walls. If the brushing component is of the proper stiffness, but not too stiff, even the narrowest parts of the hard grain, including frequent lacy portions approximating $\frac{1}{64}$ of an inch in width, will be sharply delineated.

Yet other formulae and methods of similarly decorating the wood surfaces will be given shortly; and it should be understood that while the methods herein taught are deemed to be preferred ones, they have been selected primarily for illustrative purposes. It will be most obvious, therefore, that wherein thermochemic techniques are employed, an infinite variety of effects may be obtained by the simple substitution of one formula for another. And variantly different other results may be had, for instance, where a sand-blast is used in lieu of the brushing element, as will be detailed hereinafter. Many of the broader objects of the invention will have been made clear already, and others will be self-evident from the later description, as related to the accompanying drawings and complemented further by the hereinafter appended claims. In said drawings—

Fig. 1 represents, in general, one typical result which may be obtained, as exemplified by the fragmental corner portion of a plywood panel laid up with a Douglas fir face-ply.

Fig. 2 is comparable to Fig. 1 but illustrates how a strikingly different optical effect may be had by the mere expedient of changing thermochemic formulas.

Fig. 3 illustrates a method of imposing a variantly different type of interrupted striping or banding transversely of the grain trend of the plywood fragment there shown.

Fig. 4 discloses a modified type of masking means, being more especially suitable wherein the abrading element is a sand blast.

Fig. 5 is the schematic, side elevational view of a so-called thermatograph—to be further defined—in operative association with a plywood panel to be thermochemically toned. Shown, also, is a rotary brushing element which may be mounted for synchronous operation with said thermatograph.

Fig. 6, also a side elevation, illustrates how a plywood panel may be treated in either of several ways by the brushing device there schematically indicated.

And Fig. 7 represents a sand-blasting machine which may be employed.

The lead-line numerals relate only to like features of the drawings throughout.

Typical treatments

As mentioned previously, the use of one pretoning treatment in lieu of another may be carried out without specific limitation. And each distinct mode of treatment will produce variantly different effects, some merely different in a chromatic sense but others—especially as characterized by thermochemic applications—making possible distinctions which are, in part, the result of substantially different reactions which take place in and with the actual wood grain.

Thus on Douglas fir face-ply certain so-called chemical activators will react initially and primarily upon and with the surface hard grain, as typified by the aforesaid hydrochloric treatment, while other activators will initially react primarily on and with the surface soft grain to the virtual exclusion of said hard grain areas. In the case of the hydrochloric effects, for example, if the heat is more than very lightly applied the toning will penetrate rather deeply into the hard grain wood; so that the latter may even be sanded, lightly or moderately,

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without having materially changed the general aspect of the toned surface.

Referring again to the drawings, one characteristic effect is seen in Fig. 1, where the fragment of a panel 10 was pre-toned with the aforesaid hydrochloric solution. And unless otherwise stated, it will be assumed that Figs. 1, 2, 3 and 4 represent corner portions of standard plywood sheets having face-ply laid up contrary to their longitudinal dimensions. Obviously, the black and white sketches cannot show any of the chromatic shadings or specific, more direct color effects, and even the general textures and the high-low configurations of the wood can be only generally indicated.

Following the system herein and co-pendingly explained, panel 10 has been moderately heated to bring out the distinct black edgings 11 of the hard grain 12, whereby the remaining hard grain areas 13 are only toned to an attractive citron brownish or similar shade—depending on the exact characteristics of particular veneers and the degree of heat which was applied. Certain areas of the intermediary soft grain 14, more particularly adjacent the blackened edgings of the hard grain, will have been darkened considerably.

As mentioned previously, the more detailed data concerning the thermochemic formulas referred to herein are given in my prior co-pending but subsequently abandoned application entitled *Thermatography: The Art of Synthetic Colorization, as Applied to Certain Thermochemically Sensitized Surfaces, Including Apparatus Therefor and the Resultant Products Thereof*, filed November 26, 1945, as Serial No. 630,889; said application being available for public inspection in the Patent Office files.

Other treatments

The schematic view of Fig. 5 shows the panel 10 in the course of being toned by means of thermo-head 15 while passing through rollers 16^a, or while moved by means of any suitable other type of conveyor mechanism, including any suitable other hold-down means, if and as required in connection with the auxiliary brushing wheel 16, when it is desired to combine the same with a so-called thermatograph of which thermo-head 15 is the principal component. Thus in chain driven devices of this order, auxiliary hold-down means would be normally indicated for use with a brushing wheel 16.

Also, in many cases, it will be desirable to provide a suitable hood 17 to prevent fluttering of the flame 18, due to drafty air conditions . . . especially where gas and/or air pressures may be relatively light and in order to assure an absolute uniformity of the toning across the surface of panel 10.

The bands 19 represent surface areas which were protected by the masking device 20 (see Figs. 5 and 6); and the intermediary, more definitely interrupted bands or grooves 21 represent areas from which the previously toned surface soft grain was abrasively removed by element 16. In the small drawing no effort has been made to indicate the delicate shading within bands 19 and only approximately within the confines of areas 21.

It is noticeable, however, that these latter are deepest at local areas 22 which, in the specimen shown, indicate the lowest, visibly disposed parts of the hard grain sloping downwardly from the upper surface of the face-ply; and in said Fig. 1 specimen the lighter areas 23 are unremoved soft grain wood adjacent the next succeeding ridge of hard grain—the result, of course, of the movement of the panel through the brushing element from the opposite sides of the respective ridges of hard grain.

That is, where all of the soft grain is not removed, the remainder thereof will naturally be found on the more protected side of the hard grain, opposite the longitudinal movement of the panel relative to the rotative movement of the brushing wheel.

While a further treatment called “pastellizing” is optional, the same is usually desirable whereby to obtain pastel effects and lighter tones in the unremoved surface soft wood. Such a treatment includes the application of a liquefied filler of pigment white, or other light toned tempera material, in a suitable solution of ordinary tap-water, followed by at least one subsequent wipe-off operation as detailed in co-pending cases.

Needless to say, a wide range of tonal effects may be had by simply using tempera white or suitable pigment coloring matter in the pastellizing of the panels.

However, it is not always desirable to thus additionally treat the face-plies, as is well illustrated by the decorative effect shown in Fig. 2. Therein the jetty black bands 24, on panel 25, are in vivid contrast to the whitish intermediary—and also interrupted—bands 26; the latter being the bottoms of the grooving formed in the soft wood zones by contact with the brushing wheel, but only to a depth sufficient to remove approximately all of the previously blackened soft wood grain, by contrast with the relatively unaffected hard grain 27.

In this instance, it is assumed that the activator used was a suitable solution of copper sulphate for production of thermochemic black tones throughout the soft grain areas to the exclusion, largely, of hard grain 27. And grain 27 could be pre-toned in yellow or any other preferred shade, utilizing a chemical stain (such as picric acid yellow) or any other toner which will remain relatively stable in the presence of locally applied heat of an intensity sufficient to bring out the copper sulphate blacks 24. For details, see said last mentioned co-pending application. The general appearance of panel 25 is unique, in that the hard grain areas 27 usually produce a vapory or cloud-like appearance, and seemingly imposed over the remainder of the panel surface, which becomes the back-ground of a product strongly simulating certain forms of artistic painting.

In this connection, it is apparent that plywood wall panels produced according to either of Figs. 1 or 2 are suitable not only for numerous commercial and other interiors, for atmospheric or more conventional effects, but also for cutting up into suitable smaller dimensions for the manufacture of a wide variety of furniture and other household accessories.

Other abrading techniques

Sundry other modifications and applications will doubtless be evolved from time to time. For another example: Fig. 4 indicates a means and a method of imposing a somewhat more involved, and more formalized, decoration with the aid of the mask 28, which same covers the surface of the previously thermatized panel 29. In this instance, panel 29 has been given a moderate hydrochloric treatment. Mask 28 may be of perforated metal or, for another example, perforated metal coated with a rubbery material or any other yieldable film which will resist a sand blast. Such masks may be fitted to the panels in any preferred manner, as by means of corner-pieces or flanges struck down along the edges of the mask to form a tray-like receptacle to receive the individual panels.

Wherein the openings are sufficiently large, the masked panels 29 could be treated normally to the action of brushing element 16; but, in general, where masks of this class are used it is best to employ one or another of the standard means for applying an abradant grit—such as well known pneumatic pressure systems or by centrifugal force.

Panels treated in this manner will yield variable effects, according to each particular thermochemic treatment and the configuration of the mask itself. Naturally, in the case of the hydrochloric treatment, as shown, much of the surface wood will be removed, except where covered by mask 28; but the hard grain, being especially resistant to the action of the abradant, will retain a substantial portion of its original appearance if very fine textured grit is applied at low tank pressures. Fig. 7, featuring the blasting head 30 within a shield 31, fully illustrates the method to those skilled in the sandblasting art.

In the schematic drawing, the mask 20' indicates how, by this mode of abrading, a sand blast may be utilized in lieu of brushing wheel 16 of Figs. 5 and 6 but retaining an equivalent of the grid-type mask 20 heretofore explained. The panel of Fig. 7, therefore, may be the same as panel 10 of Figs. 5 and 6; but mask 28 would be used instead of mask 20' if the effect explained relative to Fig. 4 is desired.

Direct thermochemic banding

Still another of the various possible methods of decorating the transversely disposed face-plies is depicted by the plywood article of Fig. 3. In this view a panel 32 has been thermochemically sensitized with a copper sulphate solution, according to the preliminary treat-

ment of panel 25 of Fig. 2; but instead of producing bands 24 thereon through a mask, the stripes 33 are more simply imparted by the expedient of moving the panel through a specially constructed burner-head 15, having a row of suitably spaced small apertures therein capable of burning in the black lines 33 with contrasting intermediary spacings 34 therebetween, as interrupted by the more or less impervious hard grain areas 27.

Such a pattern, it has been found, may readily be produced by lowering the burner-head quite close to the surface of the panel 32 and moving the latter at the required exactly predetermined speed: that is, so as to obtain the black lines 33 without unduly clouding the intermediary soft grain spaces 34. The hard grain 27, according to this formula, will be relatively unaffected by a moderate heating of the soft grain.

While panels produced according to either of the methods explained heretofore may be normally sealed, as by waxing, or with a coat of clear lacquer—such as wall-paper lacquer, lacquer sanding sealer, or as otherwise elected—the same could be produced for the market in the form of panels 10 and the sealing operation left to the option of each individual purchaser. In the case of panels 25, however, a top seal would be indicated for the protection of the more readily scratched and scuffed black areas 24.

Modifying the bands

Among the minor modifications which are possible with respect to the panels 10 and 25 is a method of applying the bands 19 or 24 in the form of interspaced or staggered markings; that is: instead of relying solely upon the hard grain areas to break up the continuity of the bands. This may be done by mounting the brushing wheel component 16 according to the power-driven, cam-operated mechanism shown in the aforesaid patent application having Serial No. 23,649, whereby, at pre-timed intervals, the wheel 16 will lift up from mask 20 to position 16' and quickly return thereto—thus producing a plurality of interrupted bands.

The staggered effect may be imposed by providing an extension 20' of mask 20, Fig. 6, including an additional brushing component 16' adapted to be automatically raised and lowered in the manner indicated by phantom 16'; the respective brushing wheels being operable through alternating openings in the forwardly and rearwardly disposed areas of the grids, so as to contact only particular corresponding areas of the wood surface intermittently, and in the required staggered locations.

By option, the bands 24 could be quite wide and the auxiliary brushing component 16' adapted to register intermittently along the center of each band 24, through smaller grid openings, whereby to produce spaced inner markings (not shown) within the longitudinal confines of each such band . . . or any predetermined plurality thereof.

Abutting techniques

It is especially characteristic of panels produced according to certain of the foregoing formulas that original imperfections in the face-plies are largely corrected during processing. Thus anomalous patches consisting of veneer insets which are frequently used to close up apertures caused by cut-outs around knot-holes, or to cure some other defect in the face-plies, are difficult to distinguish in typical specimens processed according to the Fig. 1 formula. This is due largely to the broken up optical effect, which is produced by a combination of interrupted wood tones in addition to interrupted ridges and recesses in the surface of the plies. Patches which are carefully matched to the grain figure are scarcely perceptible, even upon a close-up scrutiny.

It is obvious, too, that where articles of this class are to be edge-buttet, as in wall coverings, panels of variant grain figures present an appearance of regularity throughout a given area of a wall, for example, due to the uniform spacing of the bands 19 or 24 with intermediary areas 21 and 26. And it is also clear that where the panels are abutted horizontally, these bands will coincide to produce a different appearance of uniformity and continuity.

Such an effect is graphically shown in Fig. 2, wherein the solid vertical black band 35 at the edge of panel 25 is closely juxtaposed to a panel 25'—shown only quite fragmentally—having the non-conforming hard grain 27'. It is also obvious that occasional other solid black bands

35 across the surface of each panel would further carry out such a wall scheme and make for still greater uniformity throughout.

Incidentally, it is deemed likely that in time to come plywood face-ply will be laminated to backing means other than other wood sandwiches. Therefore, wherever—in the claims—the term “plywood” is employed, it is hereby provided that any laminated structure may be regarded as thus embraced, even though only the face-ply is of wood.

In all of the herein described operations, where plywood is particularly mentioned, and wherein it will be essential that the panels shall be fed through abrading machines of one type or another with great accuracy—whereby, for example, to obtain accurate registry with the masking component—it is understood that satisfactory guide means will be provided on such machines.

Having indicated the exceptional versatility and flexibility of the invention, as to both its broader and its more specific features, the hereinafter appended claims should be construed according to the full breadth of the subject matter disclosed, except as may be limited by certain of the individual claims.

I, therefore, claim:

1. As a new article of commerce: an object having a wood surface comprising respectively distinct hard and soft grain portions, said surface bearing a pattern of spaced, substantially geometrically parallel, but irregularly discontinuous striae running through the soft textured surface wood; such striae being generally directly athwart the normal grain trend, except where irregularly intercepted and interrupted at substantially all points of contact therewith by the surface hard grain portions trending predominantly contrary to the direction of said striae.

2. As a new embellished sandwich structure: a backing means to which a face-ply of veneerwood is laminated; said face-ply having a grain trend of respective hard and soft textured wood which runs generally directly transversely of the longitudinal dimension of said structure, and bearing a pattern of ornamentation which cooperates with the natural surface wood grain of said ply to form therebetween an augmented decorative motif in shallow relief; said ornamentation comprising a plurality of substantially geometrically parallel grooves extending lengthwise of the longitudinal dimension of the face-ply, across said grain trend, and said grooves being each of an irregularly discontinuous formation in that they are present only in the soft textured surface and adjacent subsurface wood, and are locally interrupted and stopped by and at each intersecting figuration of hard grain surface wood, wherever the latter describes its normally irregular pattern of veining athwart the substantially straight contour lines of said striae.

3. As a new article of manufacture: a wood product characterized by distinctly variant hard and soft grain surface figurations, and characterized further by a plurality of discontinuous shallow grooves running in substantially geometrically straight, substantially geometrically parallel lines in right-angular relations to the natural grain trend; said grooving being present only in said soft textured grain portions and, therefore, frequently unsymmetrically interrupted where locally intercepted and crossed by the normally irregularly disposed figurations of the hard grain surface wood.

4. As a new article of manufacture: a laminated product, of standard plywood panel dimensions, having a wood face-ply characterized by distinctly variant hard and soft grain surface figurations, and characterized further by a plurality of discontinuous shallow grooves running in substantially geometrically straight, substantially geometrically parallel lines in right-angular relations to the natural grain trend; said grooving being present only in said soft textured grain portions and, therefore, frequently unsymmetrically interrupted locally where intercepted and crossed by the normally irregularly disposed figurations of the hard grain surface wood.

5. As a new embellished sandwich structure: a backing means to which a face-ply of veneerwood is laminated, said ply having a random grain figure characterized by respectively distinct hard and soft grain portions, certain of said soft grain portions being on a substantially common surface plane with the surface hard grain, and certain other soft grain portions comprising the side and bottom walls of shallow, spaced striations; said striations,

per se, being disposed directly contrary to the general grain trend and, hence, normally at respective right angles to the trend line, but not necessarily at an exact right angle to each figuration of the usually random grain structure comprising the trend pattern of said face-ply; the disposition of said striations being in substantially straight, parallel rows with substantially verticle sides, and each such stria, within its own particular confines, being of exactly the same width for each segmental length thereof but all thereof being of an irregularly discontinuous conformation in that they are present only within the soft textured surface and adjacent subsurface wood and are frequently locally interrupted and stopped by and at each intersecting figuration of hard grain wood, wherever the latter described its normally irregular pattern of veining athwart the substantially geometrically straight contour lines of said parallel striae; the respective striations defining intermediary, flat-topped ridges in the form of geometrically parallel segments of banded surface wood which are accented by the differently toned bottoms of the contiguous striae, and said ridges bearing a deposit of synthetic coloring matter which renders them additionally accented by contrast with said bottoms of said striae.

6. As a new article of manufacture: a wood product characterized by distinctly variant hard and soft grain surface figurations, and characterized further by a plurality of discontinuous shallow grooves running in substantially geometrically straight, substantially geometrically parallel lines at approximate right angles to the unitary direction of trend of said figurations; said grooving—which defines a complementary pattern of intermediary, flat-topped ridges of banded surface wood—being present only in said soft textured grain portions, and, therefore, frequently unsymmetrically interrupted locally where intercepted and crossed by the normally irregularly disposed hard grain surface wood; the surface wood of said flat-topped ridges bearing a deposit of synthetic coloring matter which renders them additionally accented by contrast with the adjacent grooving and vice versa.

7. As a new embellished sandwich structure: a backing means having a veneerwood face-ply of distinctly variant hard and soft grain surface figurations, and said ply further characterized by a plurality of shallow grooves running in substantially geometrically straight, substantially geometrically parallel lines at approximate right angles to the unitary direction of trend of said figurations; said grooving—which defines a complementary plurality of flat-topped ridges of banded surface wood—being present only in said soft textured grain portions, and, therefore, frequently unsymmetrically interrupted locally where intercepted and crossed by the normally irregularly disposed hard grain surface wood; the surface wood of said flat-topped ridges bearing a synthetic tone pattern of light and dark contrasty effects, especially exemplified by thermochemic wood tones, which renders said ridges additionally accented by contrast with said grooving and vice versa.

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