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WOOD VENEER AND METHOD OF TREATING SAME

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The use of wood veneer has in the past been limited to those applications where mechanical pressure can be brought to bear upon the veneer until sufficient time has elapsed for the glue to harden and hold the veneer tightly in place. The hydraulic presses necessary to exert enough pressure to hold veneer flat and maintain it in flat contact with the surface to which the veneer is to be applied until the glue is thoroughly set are very expensive, not only in their original cost, but in their maintenance, all of which is reflected in the extremely high cost of laminated panels which are used for interior panel work, manufacture of furniture, and for other uses.

Furthermore, an extremely heavy core is required in the ordinary method of making panels, to prevent the pull of the veneer from warping from the core.

For general repair work or re-covering of checked or peeling veneer surfaces, it has been necessary to partially dismantle these surfaces in order to re-veneer them.

This invention comprises a thin lamina of wood of the order of 1/60 of an inch thick, or thinner, which is coated and impregnated on one side with vulcanized latex and on the other side with a synthetic resin finish, thus sealing the thin lamina of wood veneer between two coatings of substantially water-proofed material. The veneer having been thoroughly dried before sealing between these water-proof materials, cannot absorb additional moisture from the atmosphere or from the surfaces to which it is applied, and therefore has little or no tendency to expand, as would be the case if it were not protected. It is preferable to dry this thin veneer between the plates of a hot-plate press, using a pressure neighboring on 150 pounds to the square inch and a temperature of 150 degrees Fahrenheit or above. It is essential that this pressing operation remove from the veneer all inherent or naturally occurring moisture and contract it to its minimum dimensions. The synthetic resin finish on the face of the veneer and the vulcanized latex coating on the back of the veneer may be sprayed on or otherwise applied and are thoroughly dried before the veneer is used. The latex penetrates the wood surface, and with some kinds of wood cut in certain directions it penetrates through; the complete drying, before applying the latex, assures a firm hold of rubber to wood.

In applying the new product, it is necessary only to paint the surface to be covered with a thin coat of vulcanized latex adhesive, allow this coat to thoroughly dry, anywhere from fifteen minutes to twenty-four hours, and then lay the veneer prepared as above on to the coated surface, smoothing it out over the surface to obtain a complete surface contact. Instantaneous and complete adhesion between the veneer and the surface is obtained without any additional pressure whatsoever other than the initial smoothing operation. In this manner veneer can be applied by the ordinary workman, with the only requisite tools being a pair of scissors and a paint brush. After this thin veneer has been applied to a surface, it has every appearance of solid wood and the veneer will stand baking up to 175 degrees for a period of hours, as well as immersion in water, without any sign of checking, peeling, cracking, or splitting.

The contrast of extremely low humidities in heated houses with extremely high humidities when sultry summer days load the air with moisture vapor, is what causes the greatest difficulty with ordinary wood veneers. The low humidities dry every particle of the moisture content out of the veneer and shrink it to its utmost limit. The high humidity then forces moisture vapor into the cells of the wood and the wood in attempting to expand, but being held by the glue, causes blistering. In the opposite reaction a damp wood when applied to a surface and then subject to low humidities, in its attempt to shrink, must check or split. The inherent strength of a lamina thicker than 1/60 of an inch is so great that it tends to buckle or crack upon the receipt or giving up of moisture. Even with some absorption of moisture, should it be desirable to omit the resin finish, a lamina of this order of thickness will not obtain sufficient strength in swelling and contracting to either distort itself or its rubber adhesive or pull itself loose, or separate its particles or distort the support on which it has been placed when coated and attached with vulcanized latex. It has been found that a suspension of "Vultex" is most effective.

Although the use of latex in connection with laying veneer has been known for years, the use of latex vulcanized prior to its application, while it is still in a liquid form, in connection with thin lamina of wood freed from inherent moisture is believed to be new.

Other impregnating agents and adhesives have been used, but none having the advantage of pre-vulcanized latex which, when it is applied and dried, holds the thin veneer and all its particles in one piece and prevents bubbling, cracking, checking and splitting. It also makes the

thin, fragile veneer more of a durable fabric and less subject to cracking and breaking while it is being handled. It will of course be understood that the vulcanized rubber does not harden, so the coated lamina is flexible and comparatively strong. Latex adhesive which has not been pre-vulcanized has been found impractical for the purpose of holding thin veneer to a surface. The present invention avoids the use of an intermediate cloth, paper, or other material between the thin veneer and the surface to which said veneer is to be applied.

With the use of one lamina of veneer as contemplated by this invention there is no cross pulling of lamina against lamina, as is so often the case where several are used, even though they are often placed with the grain at various angles in the respective laminae.

From the above it can easily be seen that this product can be manufactured at a very low cost, the processing of the veneer being a simple spraying application of the finish on the one side, and the pre-vulcanized latex on the other side of the veneer.

What I claim as new and desire to secure by Letters Patent is:

1. An article of manufacture consisting of a single lamina of wood veneer freed of inherent moisture of approximately 1/60 inch thick or less having a coating of dried vulcanized rubber on one side thereof.

2. An article of manufacture consisting of a single lamina of wood veneer freed of inherent moisture of approximately 1/60 inch thick or less having a coating of dried vulcanized rubber on one side thereof, a substantially waterproof coating on the other side thereof.

3. The art of manufacturing veneer consisting of cutting a lamina of wood of approximately 1/60 inch thickness, or less, drying therefrom all inherent moisture and applying to one side thereof vulcanized latex and drying the same.

4. The art of manufacturing veneer consisting of cutting a lamina of wood of approximately 1/60 inch thickness, or less, drying therefrom all inherent moisture and applying to one side thereof vulcanized latex and drying the same and applying to the other side thereof a substantially waterproof coating.

5. The art of applying veneer consisting of cutting a lamina of wood of approximately 1/60 inch thickness, or less, drying therefrom all inherent moisture and applying to one side thereof vulcanized latex and drying the same, applying to the surface to be covered a coating of vulcanized latex and drying the same, then smoothing the lamina of veneer, dry rubber against dry rubber, into contact, without the necessity of the application of any other pressure.

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