Patented Jan. 25, 1938

2,106,468

UNITED STATES PATENT OFFICE

2,106,468

METHOD OF MAKING WOOD PRODUCTS

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No Drawing. Application November 23, 1936, Serial No. 112,346

2 Claims. (Cl. 21—33)

This invention relates to a method of making wood products, and more particularly to a method of making a flexible wood veneer which may be used as a wall covering, for paneling, and for decorative effects. This application is a continuation in part of my copending application Serial No. 31,738 filed July 16, 1935.

Efforts to provide a thin wood veneer facing of sufficient flexibility to permit it to be secured to either flat or curved surfaces have heretofore been unsuccessful. It has been proposed to provide a veneer facing on a flexible backing, and submit it to a special treatment to remove the tendency of the veneer facing to curl due to greater shrinkage of the facing than the shrinkage of the backing. While such proposal has resulted in some improvement, it has not provided a material which is flexible and which can be used directly on walls without a backing of fabric or the like and which can be applied to curved surfaces as well as flat surfaces.

By the present invention I provide a wood veneer facing that is extremely flexible and can be easily applied to any type of surface without warping or curling. The flexibility of the product permits its application to curved surfaces and also permits it to be directly applied to walls and the like without using any backing. The product is obtained by submitting sliced wood of the desired thickness to suitable treatment whereby a flexible product is obtained that will not warp and which may be placed over various types of wall board, plaster walls, metal or the like. It may be readily and easily secured to such backing by means of adhesives, such as the ordinary wheat flour paste.

In carrying out the invention, the wood is first cut to the desired thickness. Heretofore the product has been made in lengths of 8, 10 and 12 feet with widths ranging from 8 inches to 14 inches. These dimensions, however, are purely arbitrary and other sizes may be used. The wood from which the veneer is to be made is cut to a suitable thickness, generally from .01 to .02 of an inch. It is then submitted to the treatment hereinafter described to impart to it the desired flexibility. In the first step the wood is placed in a bath of hot water for a period of several hours. A temperature of from 180° to 200° F. may be employed and I have obtained very good results when the wood is submitted to such a treatment for a period of from 2 to 3 hours.

Following this treatment the sliced wood is placed in a hot bath of soap at a temperature of about 180° F. for a period of about four hours. The bath may consist of a 1 percent soap solution. After removal from the soap bath the sliced wood is placed in a bath of magnesium chloride. The magnesium chloride solution may be from 1 to 10 percent and may be employed at any temperature, preferably room temperature. The wood is allowed to remain in the bath for about a half hour. The soap bath carries forward the removal of undesirable materials from the green wood and the magnesium chloride bath precipitates an insoluble metallic soap on the wood and on the wood fibers. The result of this bath is to precipitate an insoluble metallic soap on the wood and in the wood fibers.

After the sliced wood is removed from this solution and cleaned, it is placed in a bath of one part of glycerine to three parts of water for a period of approximately ten hours. The glycerine bath preserves the flexibility of the wood fibers. While I do not know just what this treatment does to the wood to render it pliable, I have found that wood submitted to the foregoing steps, if then properly dried, will have the desirable flexibility imparted to it to permit it to be placed on a surface, such as a wall, and applied to curved surfaces by the use of ordinary wheat flour paste. The drying step is of importance and must be properly carried out in order to secure the desired product. The drying must take place slowly in a moist atmosphere and the treated wood while drying, is preferably placed between blankets of fibrous material to prevent too rapid escape of the moisture therefrom. For this purpose I have successfully used news-print paper as a blanket, although other fibrous materials, such as felt, fabric or the like may be used.

The drying is carried out in a closed chamber or oven at a moderately warm temperature and the exhaust of air from the chamber is regulated so as to maintain moisture in the chamber atmosphere to prevent too rapid drying. When the drying is carried out in this manner, the final product consists of wood strips or sheets of a thickness of from .01 to .02 of an inch which have such a degree of flexibility that they may be readily bent for application to a curved surface. The treatment and the resulting flexibility also provides a product which may be directly secured to a suitable base, such as a plaster wall, a wooden surface, a metal surface or various composition boards that are employed in the construction of walls and known as wall boards. While the product has its greatest use for wall covering and paneling, it may also be used for

decorative purposes, such as inlays and overlays and for providing figured designs on lamp shades, fancy boxes and similar products. When applied to a surface by means of a wheat flour paste or other suitable adhesive, it will adhere permanently without warping, blistering or loosening at the joints. It may easily and economically be applied and can be placed on walls when used as a covering for such walls with as much ease and facility as ordinary wall paper. It has the advantage of furnishing a surface that produces the appearance of solid wood and can be made in any desired finish, such as mahogany, walnut, oak or any other desired wood.

I claim:

1. The herein described method which comprises cutting wood into thin sheets, soaking the sheets in warm water, immersing the sheets in a solution of soap, then immersing the sheets in a magnesium chloride solution, placing the sheets in a mixture of glycerine and water, and then drying them.

2. The herein described method which comprises cutting wood into sheets having a thickness less than .02 inch, placing the sheets in a bath of hot water for a period of several hours, then placing them in a hot bath of soap for a period of about four hours, then placing them in a solution of magnesium chloride for about a half hour, then placing them in a mixture of glycerine and hot water for approximately ten hours and then drying.

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