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BLEACHING OF WOOD

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5 Claims. (Cl. 8—111)

The present invention relates to the bleaching of wood and more particularly to the bleaching of wood with hydrogen peroxide and an alcoholic solution of an alkali.

In accordance with the procedures of the present invention the article of wood to be bleached is treated with a solution containing or generating hydrogen peroxide. To this end the peroxide solution is sprayed or brushed upon the article in amounts sufficient to bleach the same or the article dipped or immersed in the peroxide solution. The particular mode of applying the solution will depend upon the type of article to be treated, that is, whether the same be in the form of veneer strips or heavier shaped and formed articles, and upon the type of wood, whether hard or soft wood and whether the same be seasoned or sap laden. Where it is desired to bleach the wood substantially throughout, the wood is subject to vacuum, pressure, heat or other conventional procedure and immersed in the peroxide to obtain substantially complete impregnation.

The hydrogen peroxide may be commercial grades of hydrogen peroxide, such as 100 volume peroxide, or may be 10 to 100 volume, or the oxidizing solution may contain materials generating hydrogen peroxide in solution such as the perborates, percarbonates and the like and the alkali metal peroxides and such materials are comprised by the term hydrogen peroxide.

The wood is also treated with an alcoholic solution of an alkali. Such solution comprises any of the water soluble alcohols capable of dissolving an alkali, as for instance, methyl or ethyl alcohol, the quantity of alkali dissolved therein depending upon the kind of alkali and alcohol employed. In general the alkali will be caustic soda, although other caustic alkalis may be employed, such as caustic potash and the like, and alcoholic solutions of ammonia will also serve. Suitable solutions may be obtained by dissolving alkali metals in the alcohol. The caustic alkali is generally dissolved to the extent of 3–12% although saturated solutions may be employed. Likewise, saturated solutions of ammonia in the alcohol are recommended although about a 4% solution will be found of sufficient concentration for general use.

The solution of alcoholic alkali causes the peroxide to act upon the colored woody fibers rapidly and before the solution evaporates. The use of alcoholic solutions reduces the amount of water added to the wood and reduces the time required to eliminate the added water and reduces the moisture content of the wood to substantially that of the untreated woody article.

The alcoholic alkali may be added prior to, concurrent with or subsequent to the peroxide treatment, provided that the peroxide or alkali is not lost. Thus, the woody article may be dipped or immersed in the peroxide solution and the alcoholic alkali then sprayed or brushed upon the so-treated portions whereby the peroxide is activated and the wood bleached. Rapid evaporation of the alcohol occurs leaving a bleached wood surface.

We claim as our invention:

1. The method of bleaching wood which comprises treating the wood with a solution containing a peroxide and an alcoholic solution of an alkali and permitting the alcohol to evaporate from the wood whereby the concentration of bleaching agent in the solution in the wood is increased and bleaching facilitated.

2. The method of bleaching wood which comprises applying to the wood a solution of hydrogen peroxide and an alcoholic solution of an alkali and permitting the alcohol to evaporate from the wood whereby the concentration of bleaching agent in the solution in the wood is increased and bleaching facilitated.

3. The method of bleaching wood which comprises applying to the wood a solution of hydrogen peroxide and thereafter an alcoholic solution of an alkali and permitting the alcohol to evaporate from the wood whereby the concentration of bleaching agent in the solution in the wood is increased and bleaching facilitated.

4. The method of bleaching wood which comprises treating the wood with a solution containing a peroxide and an alcoholic solution of a caustic alkali and permitting the alcohol to evaporate from the wood whereby the concentration of bleaching agent in the solution in the wood is increased and bleaching facilitated.

5. The method of bleaching wood which comprises treating the wood with a solution containing hydrogen peroxide and an alcoholic solution of ammonia and permitting the alcohol to evaporate from the wood whereby the concentration of bleaching agent in the solution in the wood is increased and bleaching facilitated.

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