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UNITED STATES PATENT OFFICE.

GEORGE E. RICE, OF BROOKLYN, NEW YORK, ASSIGNOR TO SU-DEX WOOD CURING COMPANY, INC., OF COS COB, CONNECTICUT, A CORPORATION OF DELAWARE.

PROCESS FOR TREATING WOOD.

No Drawing. Application filed July 22, 1922. Serial No. 576,878.

To all whom it may concern:

Be it known that I, GEORGE E. RICE, a citizen of the United States, and resident of the borough of Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Processes for Treating Wood, of which the following is a specification.

My invention refers to the treatment of wood, timber, lumber, and like substances, and more particularly it relates to processes in which the wood is seasoned, toughened and otherwise conditioned by impregnating the same with a saccharine or sugar solution, to which another solution or solutions are sometimes added; and again, the present invention relates to a special subclass of saccharine processes, in which a solution of mixed carbohydrates is utilized, such a mixed carbohydrate solution being defined as a saccharine or sugar solution which also contains one or more other carbohydrates.

An example of a mixed carbohydrate solution is described in the Letters Patent of William Powell, dated March 18, 1919, and numbered 1,297,491, wherein the solution is described as a saccharine solution, with or without an insecticide, and containing one or more other carbohydrates, such as starch, dextrin or gum.

My present improved process for treating wood relates more especially to treating the same for all kinds of fungi and insect and parasite proofing, weather proofing, water proofing, etc. I employ a mixed carbohydrate solution similar to that described in the aforesaid Powell patent. The details of the process are changed to include a bath of a ten per cent solution of paradichlorobenzene in kerosene oil heated over a closed steam coil which is covered in a sand box, as I shall hereafter describe.

My improvement on said Powell saccharine process consists in the following changes: After the wood has been immersed in a solution of sugar or syrup and dextrin, and boiled therein until the boiling is complete, or immersed in a solution of sugar or syrup, dextrin and alum, and boiled therein until the boiling is complete, the wood is removed at once and placed in a solution of paradichlorobenzene in kerosene oil heated over a closed steam coil which is covered in a sand box, said solution being heated to between 110° to 160° F., then impregnated, naturally, the time required being determined by the density and thickness of the lumber. Very little impregnation is allowed during cooling.

Proceeding now to describe my improved wood-treating process in further detail, as it applies to curing and impregnating wood that is to be used for fungi and insect proofing, and similar purposes, I prepare first an aqueous saccharine solution of sugar or syrup of any kind and dextrin. The saccharine solution preferably has a specific gravity of about 1080°. The dextrin added to the saccharine solution amounts, for example, to about 5%. The amount of alum used may vary, depending on the kind of wood being treated, and is determined by tests. In some cases I add a little gum, as gum tragacanth, say ½%, and a little arsenic or arsenated calcium, say 2% to 4%. The wood or timber is placed in this solution and boiled until sufficiently free of deleterious matters. When boiling is complete and the wood is cured, the wood is quickly removed and placed in a solution of paradichlorobenzene in kerosene oil heated over a closed steam coil which is covered in a sand box, said solution being heated to between 110° to 160° F. The wood is allowed to remain for periods that vary with the thickness and density of the timber. In processing porous lumber the initial solution will contain sugar or syrup, dextrin and alum, and when boiling is complete very little impregnation will be allowed during cooling.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The herein-described process for the curing and treating of wood for fungi, insect, weather and water proofing, which consists in impregnating it with a saccharine solution containing dextrin and alum, and then subjecting it to a bath of paradichlorobenzene.

2. The herein-described process for the treatment of wood, which consists in boiling the wood in a solution of sugar and dextrin, and then subjecting it to a bath of heated paradichlorobenzene.

3. The herein-described process for the treatment of wood, which consists in boiling

it in a solution of sugar and dextrin, and then boiling the same in paradichlorobenzene and kerosene oil.

4. The herein-described process for the treatment of porous lumber, which consists in placing the lumber in a solution of sugar, dextrin, and alum, boiling the same, then placing it in a bath of paradichlorobenzene and allowing very little impregnation during cooling.

5. The herein-described process for treating wood for germ and fungi proofing and other purposes, which consists in immersing it in a solution containing sugar and dextrin, boiling the same, then immersing the wood in paradichlorobenzene and kerosene oil, heated to between 110° and 160° F.

6. The herein-described process for treating wood for insect, fungi, weather, and water proofing, and other uses, which consists in immersing it in a solution containing sugar and dextrin, boiling the same, then immersing the wood in paradichlorobenzene and kerosene at a temperature between 110° and 160° F.

In testimony whereof I hereunto affix my signature.

GEORGE E. RICE.