Patented Nov. 7, 1922. 1,435,031

UNITED STATES PATENT OFFICE.

WILSON TAYLOR, OF TORONTO, ONTARIO, CANADA.

PROCESS FOR PREVENTING THE WATER-LOGGING OF NONRESINOUS WOODS.

No Drawing. Application filed February 26, 1921. Serial No. 448,240.

To all whom it may concern:

Be it known that I, WILSON TAYLOR, a subject of the King of Great Britain, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Processes for Preventing the Water-Logging of Nonresinous Woods, of which the following is a specification.

My invention relates to improvements in processes for preventing the water-logging of non-resinous woods and the object of the invention is to devise means for preventing logs of non-resinous wood when floating upon the surface of the water down stream from becoming water-logged. My process consists of heating the surface of the log above the temperature of the liquid to be applied thereto and then applying a coating of heated water proofing material so that it will impregnate the heated surface of the wood and solidify when cooled, then suddenly chilling the wood to prevent saturation by the waterproofing liquid beyond a predetermined depth.

I will now describe my process in detail. After the cutting of the standing timber, the logs resulting therefrom are dried out by the weather so that their specific gravity is less than that of water to enable them to float even for a few minutes. The ends of the logs are then rapidly heated by a blast of hot dry air or by the application of a heated plate of iron for a few seconds of time or by any other suitable means to a temperature above the temperature of the liquid to be afterwards applied so that such liquid will readily penetrate and not become chilled by contact with the wood.

Immediately after the heating, the ends of the logs are swabbed over two or three times with melted paraffin. After this operation is complete, the wood is suddenly cooled by applying a fine spray or stream of water thereto so as to prevent the paraffin saturating the wood too far, the object being to form a thin covering of saturated wood fibre which will prevent moisture passing therethrough into the body of the wood and yet at the same time not to saturate any more of the wood than is necessary to accomplish this result as the saturating of the wood destroys its quality.

After the paraffin is hardened the ends are again swabbed two or three times to leave a thick impenetrable coating which effectually prevents the water from entering the wood. If the specific gravity of the wood is near that of water the bark should be removed from the tree when cut and the sides dried by the weather as far as possible, then heat is applied to the surface of the wood either by a blast of hot air or by a hot plate passing over the wood in close proximity thereto, the heating of the wood being followed by a single swab of hot paraffin. The effect of this is to prevent for a long time the absorption of water through the sides of the log.

What I claim as my invention is:

1. A process for preventing the water-logging of non-resinous woods while in the logs from which the bark has been removed consisting of first weather drying the log until it has a specific gravity less than water, then rapidly heating the surface of the log to a temperature above the melting point of paraffin, then swabbing such surface while heated, with melted paraffin, and finally immediately after swabbing suddenly cooling the heated portion of the log to retain the paraffin closely adjacent to the surface of the log, thus forming an exterior strata of wax impregnated fibre extending over the whole surface of the log.

2. A process for preventing the water-logging of non-resinous woods, consisting of first weather drying the log until it has a specific gravity less than water, then rapidly heating the surface at the end of the log, then swabbing the heated surface with melted paraffin, then chilling such surface to harden the wax, and finally further applying melted paraffin thereto.

3. A process for preventing the water-logging of non-resinous woods consisting of heating the surface of the wood to a temperature above the melting point of paraffin, applying the melted paraffin to the log's surface whereby the paraffin, exterior to the fibres, is carried into the stratum to serve as an air seal extending over the surface of the log, and then chilling the surface to prevent the paraffin entering deeply beneath the surface of the log.

WILSON TAYLOR.