

UNITED STATES PATENT OFFICE.

HENRY R. BRINKERHOFF, OF OAKPARK, ILLINOIS.

WATERPROOFED WOOD AND METHOD OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 686,582, dated November 12, 1901.

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To all whom it may concern:

Be it known that I, HENRY R. BRINKERHOFF, a citizen of the United States, residing in Oakpark, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Waterproofed Wood and Methods of Making the Same, of which the following is a specification.

When the weather is unusually damp, the keys of pianos are apt to "stick," as it is termed, by reason of the swelling of the wood in them, which causes such interference by one key with another as to prevent them from returning to their normal positions after they have been struck. This invention has been devised with special reference to the overcoming of this difficulty, although it can be used in any case where it is important to prevent the swelling of wood through absorption of the moisture from the atmosphere.

In practicing my invention I proceed substantially as follows: I first heat the wood in a hot chamber or oven for several hours in order to drive off any moisture then in the wood and also to secure expansion of the cells, and thus render them receptive of the moisture-repelling agent. Then while the wood is still hot it is immersed in a boiling bath consisting of benzin and dehydrated lanolin in about the following proportions: benzin, two thousand cubic centimeters, equal to about two quarts and three ounces, and lanolin, fifty grams or one and one-half ounces avoirdupois, this being about the relative amount of lanolin which can be held in solution by the amount specified of benzin. The wood is permitted to remain in the bath until the benzin has deposited the lanolin in the cells of the wood, the length of time during which the immersion is continued depending on the size and density of the wood. Piano-keys of soft pine should remain in the bath for about thirty minutes, smaller pieces for a shorter time and larger pieces for a longer time. If the wood is more

dense than pine, then the bath should be continued somewhat longer than with pine.

Upon removal from the bath the benzin will disappear by evaporation and the oil will remain in the cells and thereafter render the wood practically proof against the absorption of moisture.

I prefer to employ benzin as the vehicle for carrying the oil into the wood, as it is a good solvent for the lanolin, is penetrating, and quickly evaporates after the wood is removed from the bath; but other volatile oils capable of dissolving the lanolin may be substituted for the benzin.

While the proportion of benzin or other vehicle is the one which I deem the best and most economical, it will be understood that I do not wish to be limited thereto, the essential thing being that enough benzin be employed to dissolve the lanolin, and if more benzin is used than is necessary for that purpose no harm will be done in the working of the process, as the lanolin will be deposited in the cells of the wood in the same manner.

I claim--

1. The process of treating wood to prevent its swelling by absorption of moisture, consisting in immersing the wood in a bath consisting of a volatile oil containing lanolin in solution, substantially as specified.

2. The process of treating wood to prevent its swelling by absorption of moisture, consisting in immersing the wood while hot in a bath consisting of a volatile oil containing lanolin in solution, substantially as specified.

3. As a new article of manufacture, the wood having its cells charged with lanolin to prevent absorption of moisture, substantially as specified.

HENRY R. BRINKERHOFF.

Witnesses:

H. M. MUNDAY,
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