

UNITED STATES PATENT OFFICE.

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COMPOSITIONS OF MATTER AND METHODS FOR PRESERVING AND FIREPROOFING
WOOD.

1,041,682.

Specification of Letters Patent.

Patented Oct. 15, 1912.

No Drawing.

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To all whom it may concern:

Be it known that we, FRIEDRICH SEIDENSCHNUR, chemist, and JULIUS DEHNST, chemist, subjects of the King of Prussia, German Emperor, residing at 12 Holtzendorff street, Charlottenburg, near Berlin, Kingdom of Prussia, German Empire, and 15 Joachim Friedrich street, Halensee, near Berlin, Kingdom of Prussia, German Empire, respectively, have invented a new and useful Improvement in Compositions of Matter and Methods or Processes for Preserving and Fireproofing Wood; and we do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to a composition of matter and a method or process for preserving and fireproofing wood described in the specification accompanying application for patent for which we have executed of even date herewith whereby wood is both preserved and rendered unflammable by soaking it with solutions of salts of ammonium and magnesium and alpha-naphthalene sulfonates.

It now appears that in impregnating with solutions of ammonium and magnesium salts, the nitro-substitution products of the naphthalene sulfonates can be used with special advantage as the antiseptic. Use may be made of the mono-nitro substitution products of both naphthalene monosulfonic acid and naphthalene disulfonic acid.

One advantage of using the nitro compounds consists in that the solutions employed for impregnation can be cooled much lower than is possible when solutions of ammonium-magnesium salts and alpha-naphthalene sulfonates are used. The nitro compounds offer the additional advantage of having a stronger preservative action than the unsubstituted naphthalene sulfonates. The salts of zinc and magnesium are specially suitable. The nitro-substitution products of naphthalene sulfonic acid may be used either alone or in association with the nitro-substitution products of the disulfonic acid.

It is remarkable that the nitro-compounds do not lower the fireproofing effect of the mixture in any way as it might have been

expected the nitro-substitution products would impair the security against fire. It is surprising to find, however, that the protective action against fire is even increased.

A single solution of the different salts may be prepared in the warm, and introduced into the wood in the known manner. On the other hand the salts may be introduced into the wood singly. For example, zinc nitro-naphthalene monosulfonate (which may, contingently, be used in admixture with the nitro-substitution products of the naphthalene disulfonates) can be introduced first, and then a solution of ammonium and magnesium sulfate. Ammonium and magnesium sulfate may also be introduced as separate solutions. In these cases it is advisable to employ the method according to the principal specification in which the wood is first impregnated with magnesium salts and then with ammonium salts. The nitro-naphthalene sulfonates may also be introduced last.

Example: Wood is treated, according to one of the known methods of impregnation, with application of pressure and a vacuum, with a hot solution of:—200 parts of magnesium sulfate, 100 parts of ammonium sulfate, 20 parts of zinc nitro-naphthalene monosulfate in 1000 parts of water.

The pure salts may be used, and also the impure salts, obtained from the crude products, may find application. Different metallic salts may also be mixed together; the zinc salt and the magnesium salt, for example, of the sulfonic acids being used together.

We claim:

1. The process for preserving wood and rendering it non-inflammable which consists in impregnating wood with salts of ammonium, salts of magnesium and salts of nitro-naphthalene-sulfonic acids.

2. The process for preserving wood and rendering it non-inflammable which consists in impregnating wood with salts of ammonium, salts of magnesium and salts of nitro-naphthalene-disulfonic acids.

3. Solution for preserving wood and rendering it non-inflammable composed of an aqueous solution of salts of ammonium, salts

of magnesium and salts of nitronaphthalene-sulfonic acids.

4. Solution for preserving wood and rendering it non-inflammable composed of an aqueous solution of salts of ammonium, salts of magnesium and salts of nitronaphthalene-disulfonic acids.

In testimony whereof, we have signed

our names to this specification in the presence of two subscribing witnesses.

FRIEDRICH SEIDENSCHNUR.
JULIUS DEHNST.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.