

No. 683,792.

Patented Oct. 1, 1901.

J. PFISTER.
METHOD OF PRESERVING TIMBER.

(Application filed May 29, 1901.)

(No Model.)

Fig. 1.

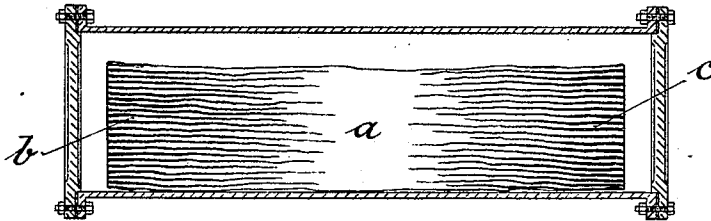


Fig. 2.

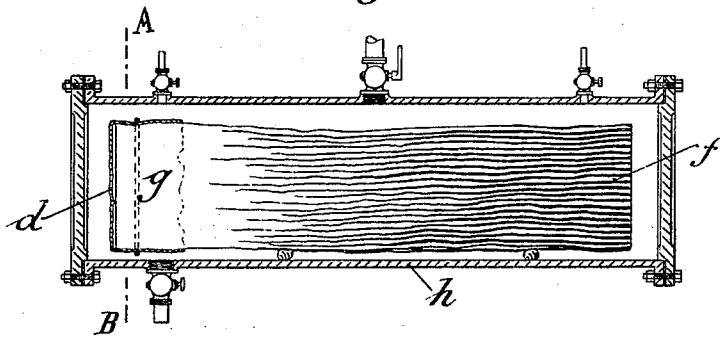
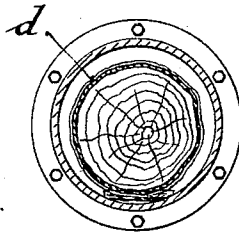


Fig. 3.



Witnesses:

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JOSEF PFISTER, OF VIENNA, AUSTRIA-HUNGARY.

METHOD OF PRESERVING TIMBER.

SPECIFICATION forming part of Letters Patent No. 683,792, dated October 1, 1901.

Application filed May 29, 1901. Serial No. 62,408. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEF PFISTER, a subject of the Emperor of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented new and useful Improvements in Processes of Preserving Timber, of which the following is a specification.

For the purpose of impregnating timber with a dye or preserving medium it has been the practice to place the timber to be treated in a closed cylinder filled with the dye or impregnating liquid employed and then to exert a high pressure upon the latter. The liquid hereupon enters the timber at both ends; but at the center of the latter in the innumerable fine passages or channels which, as is well known, run lengthwise of the wood an accumulation of sap and perhaps air takes place. The consequence is that the timber is really only permeated by the dye or preserving agent at its ends, while in the middle, owing to the gradual decrease in quantity of the liquid, there is a certain length wholly undyed or unpreserved. Thus not only is the product not uniform throughout, but if the imperfectly-impregnated portion, which, under a pressure of ten atmospheres, is about one-eighth of the complete length of timber, is removed there is a considerable loss incurred.

According to the process forming the subject of the present invention timber can be uniformly dyed or preserved throughout its entire length. This is effected by providing a cap, of waterproof material, for one end of the log or other piece of wood inserted in the pressure-cylinder and then submitting the contents of the latter to pressure, next applying the cap to the other end of the timber, and again submitting the whole to pressure.

The method of carrying the invention into effect and the result of the application of the process will now be explained with reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a pressure-cylinder containing a log and illustrates the system of preserving wood now in common use. Fig. 2 shows a similar view of a pressure-cylinder containing a log provided with a cap according to the present invention.

Fig. 3 is a cross-section taken on the line A B of Fig. 2.

If the timber is treated in the usual manner, an accumulation of sap and, it may be, air takes place at *a*, Fig. 1. This portion therefore remains undyed or unpreserved, while the ends *b* and *c* are irregularly dyed or impregnated, inasmuch as the liquid gradually decreases toward the center *a*. According to my new process a cap *d*, of rubber, canvas, or any other suitable waterproof material, is applied to one end of the timber to be immersed in the dye or impregnating agent. This cap may be loosely drawn over the end of the wood or may be firmly secured to it by means of a band or in other appropriate manner. If now the liquid in the closed cylinder *h* is submitted to pressure, it will enter the unprotected end *f* of the timber and will penetrate to a certain length *g* toward the other capped end of the timber, where the accumulation of sap or air will now take place. The intensity of the dyeing or impregnation will gradually decrease from *f* toward *g*. After the pressure has been applied for a certain length of time the cap *d* is now removed and put on the reverse end of the timber and the liquid again submitted to pressure. The liquid will now enter the wood at the end *g*, penetrating the portion which during the first part of the operation remains unimpregnated. The degree to which the wood is dyed or preserved will again be a decreasing one, so that the timber is finally thoroughly uniformly dyed or preserved throughout its entire length, a further entry of the impregnating agent at the end *f* being prevented by the cap.

By means of my new system, which is especially adapted for dyeing wood on account of the uniformity of color attained, all waste is obviated. The process is extremely simple and inexpensive in its application and can be readily carried out at the place where the timber is felled—*e. g.*, in the forest itself. It is obvious that the method can also be used in the treatment of a number of pieces of wood contained in a single cylinder, in which case each piece of wood must be provided with a cap, as described.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The method herein described of impregnating timber with a liquid, consisting in sealing one end of the timber liquid and air tight, immersing the timber in the impregnating liquid in a closed vessel and submitting the contents of the latter to pressure to force the
10 liquid into the unsealed end of the timber, then unsealing the end of the timber and sealing

the other end thereof liquid and air tight and again submitting the contents of the vessel to pressure, for the purpose specified.

In testimony that I claim the foregoing as 15 my invention I have signed my name in presence of two subscribing witnesses.

JOSEF PFISTER.

Witnesses:

TUDOLE SCHINNERMANN,
ALVESTO S. HOGUE.