

No. 735,019.

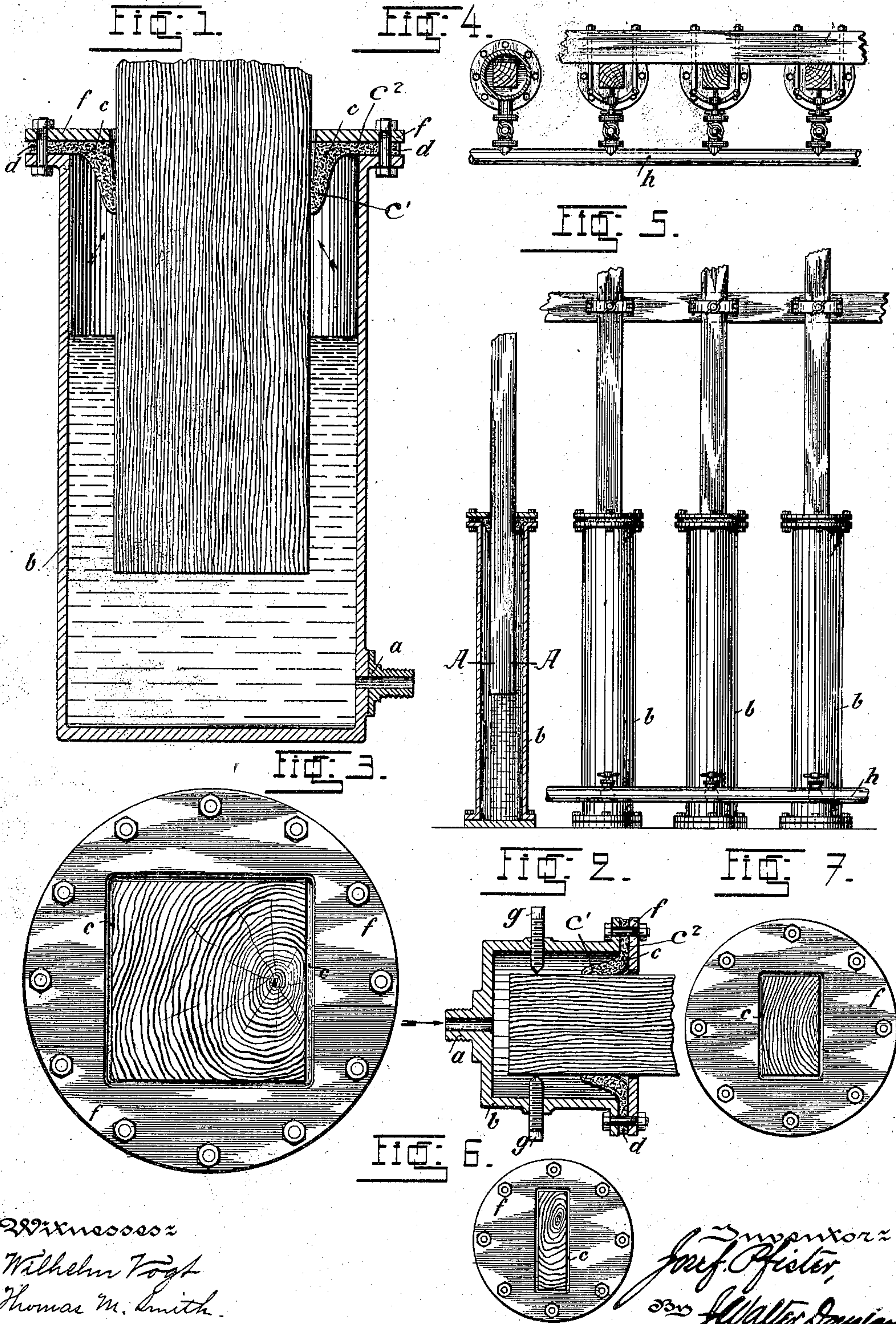
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J. PFISTER.

APPARATUS FOR IMPREGNATING OR STAINING WOOD.

APPLICATION FILED AUG. 5, 1902.

NO MODEL.



Witnesses:
Wilhelm Vogt
Thomas M. Smith.

Inventor:
J. Pfister,
by J. Walter Dayman
Attorneys.

UNITED STATES PATENT OFFICE.

JOSEF PFISTER, OF VIENNA, AUSTRIA-HUNGARY.

APPARATUS FOR IMPREGNATING OR STAINING WOOD.

SPECIFICATION forming part of Letters Patent No. 735,019, dated July 28, 1903.

Application filed August 5, 1902. Serial No. 118,426. (No model.)

To all whom it may concern:

Be it known that I, JOSEF PFISTER, engineer, a subject of the Emperor of Austria-Hungary, residing at Hotel Kronprinz, Vienna II, Austria-Hungary, have invented certain new and useful Improvements in Apparatus for Impregnating or Staining Wood, of which the following is a specification.

Different systems have been hitherto used for impregnating and staining wood by forcing the dyeing liquid under pressure into the wood. There are also apparatuses where the wood is closed with its front face in a receptacle, and the impregnating or staining liquid is pressed in at this end. Such apparatuses are, however, more or less expensive. Their handling and the obtaining of a tight closing of the wood piece introduced therein is connected with great trouble and difficulties; besides, their bulky size making them difficult to be moved from one place to another they are of no use in forests or wood-cutting places.

The present invention relates to an apparatus for impregnating and staining wood where the receptacle containing the impregnating or staining liquid is provided with an elastic neck reaching into the interior of the receptacle. In the opening of this neck the wood under treatment is introduced, and as soon as the liquid in the receptacle undergoes a pressure a tight closing of the neck around the wood is effected by the liquid under pressure.

In the accompanying drawings, Figure 1 shows the apparatus in a standing position; Fig. 2, the same in horizontal position. Fig. 3 is a top view of Fig. 1, and Figs. 4 and 5 represent a plan and side view of a number of apparatuses joined together for being used in a larger plant. Figs. 6 and 7 show different forms of neck-openings, according to the wood to be impregnated or stained.

A simple receptacle *b*, provided at a suitable place with a socket *a* for the pressure-pipe of the impregnating or staining liquid, is closed with a neck *c*, made out of an elastic material—such as india-rubber, leather, or the like—having a pendulous portion *c'*, reaching into the interior of the receptacle, and is firmly gripped at its edge *c²* between the flange of the receptacle and a plate *f*, fastened to the flange.

The elastic neck *c* forms an opening which, according to the wood under treatment, may be round, square, or long. The wood to be impregnated or stained is passed with its one end through this opening-way into the interior of the receptacle *b*, whereby only a rough hewing of the wood with an ax or a saw is required.

Through a pressure by a pump on the liquid introduced into the receptacle and surrounding the end of the wood piece the free or pendulous part *c'* of the neck tightens itself close to the wood, and the higher the pressure on the liquor the tighter the pendulous part of the neck closes around the wood, so as to completely calk it. The liquid is then forced under pressure into the channels or pores of the wood, impregnating it up to its other end. For correctly adjusting the wood piece toward the opening of the neck screws *g*, Fig. 2, may be used.

The height or length of the receptacle depends entirely upon the nature of the wood to be impregnated or stained. Sound pieces without flaws need only a short dipping, while for flawy and knotty ones correspondingly longer receptacles are required.

As seen from Figs. 4 and 5, a number of the above-described receptacles may be joined to one pressure-pipe *h*, enabling thus to enlarge a plant to any desired working capacity. For this purpose different sizes of those forms mostly to be used are kept on stock and introduced in the receptacle just as they are required.

The staining and impregnating of wood with the above-described apparatus is done much easier and simpler than with any hitherto-known apparatus, and it may be worked at any place without difficulty.

The course of the process may be followed to the end, and besides by the liquid pressing around the head of the wood piece introduced into the opening of the neck the wood is preserved from flawing.

By removing the plate *f* and the neck *c* from the receptacle *b* and replacing the same by another plate and neck having openings of another shape the apparatus may be adapted for use with logs or pieces of lumber of varying cross-section by simply providing plates and necks having varying shapes of openings

to accommodate the different shapes of the logs or pieces. The plate *f* and neck *c* can readily be removed by unloosening the nuts from the bolts *d*.

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

In an apparatus of the character described, a receptacle into one end of which the im-
10 pregnating liquid is forced under pressure, a plate having an opening closing the opposite end of said receptacle, a neck having a pendulous portion extending into the receptacle, said neck having an opening corresponding
15 to the opening in the plate, and means for

removably clamping the edge of said neck between the plate and receptacle, all arranged so that when the log to be treated enters the receptacle through the opening in the plate and neck; the pendulous portion of the neck 20 is clamped to the log by the pressure of liquid in the receptacle.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEF PFISTER.

Witnesses:

ALBIN SCHILLER,
ALVESTO S. HOGUE.