

Dec. 15, 1925.

1,565,297

E. B. VARNEY
VENEER VAT

Filed July 29, 1925

2 Sheets-Sheet 1

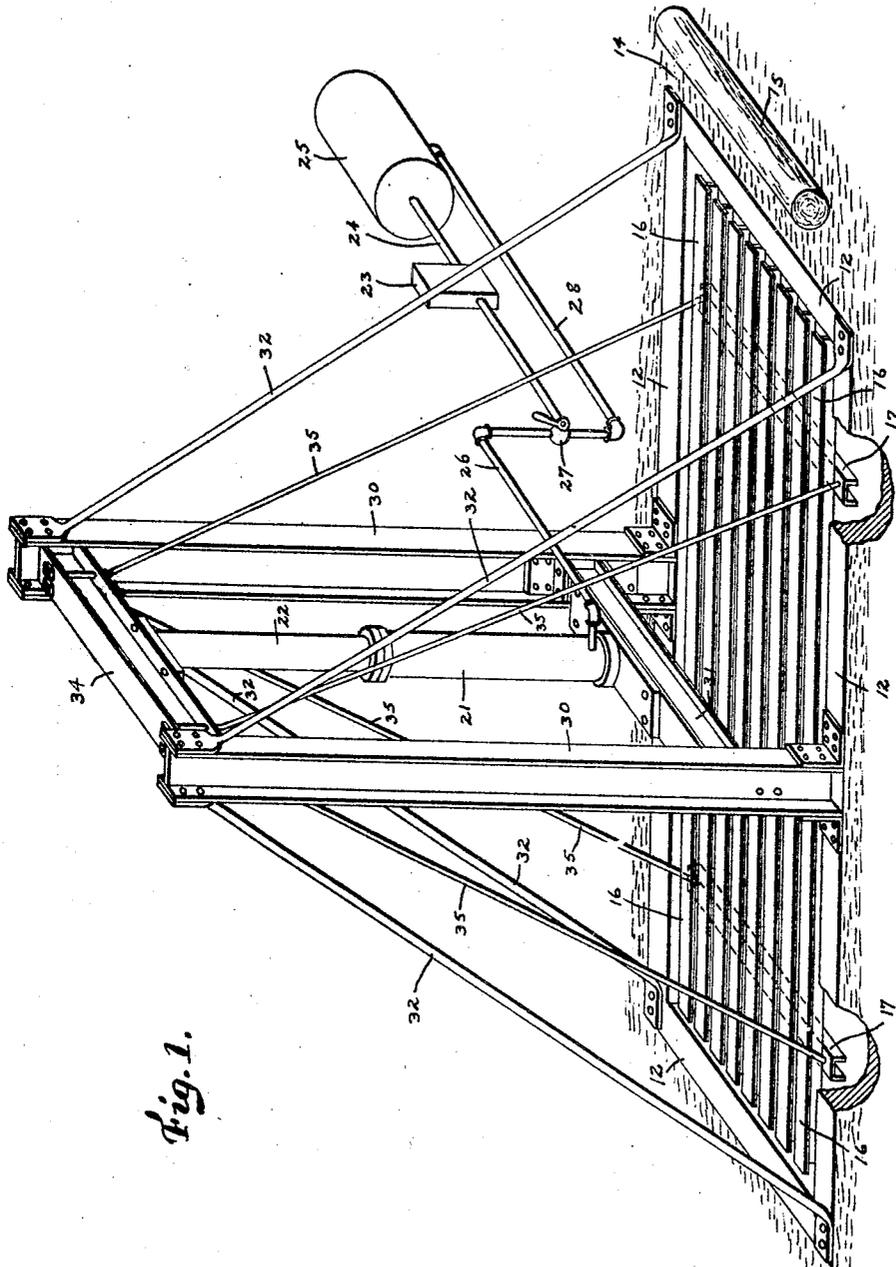


Fig. 1.

Inventor
Edward B. Varney
by *Wright Brown* *Wm. L. May*
Attys.

Dec. 15, 1925.

E. B. VARNEY

1,565,297

VENEER VAT

Filed July 29, 1925

2 Sheets-Sheet 2

Fig. 2.

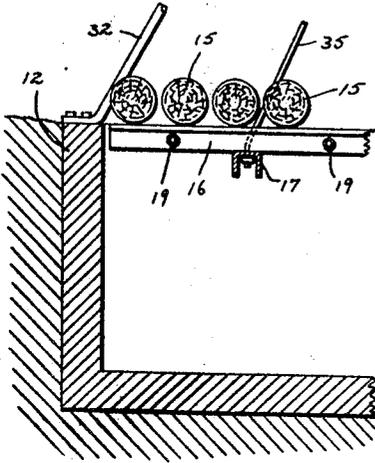


Fig. 3.

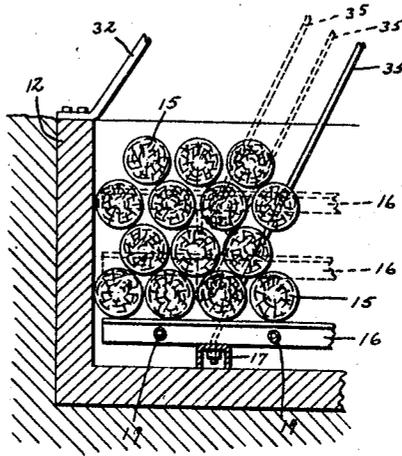


Fig. 4.

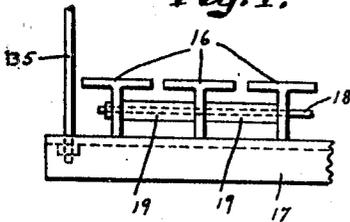
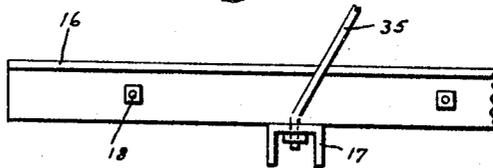


Fig. 5.



Inventor
Edward B. Varney
by *Wright & Brown* *Wright & Brown*
Attys.

UNITED STATES PATENT OFFICE.

EDWARD B. VARNEY, OF FALL RIVER, MASSACHUSETTS.

VENEER VAT.

Application filed July 29, 1925. Serial No. 46,927.

To all whom it may concern:

Be it known that I, EDWARD B. VARNEY, citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Veneer Vats, of which the following is a specification.

This invention relates to vats provided with heating means and adapted to raise water therein to a boiling temperature and boil a charge of logs inserted in the vat to prepare the logs for conversion into veneers. A vat of this character is usually half full of boiling water. In cold weather, when the vat is uncovered, the steam rising from the boiling water makes the mouth of the vat entirely invisible. The mouth is substantially flush with the surrounding surface, which supports the logs before and after the boiling operation, the logs being rolled from the supporting surface to the vat before boiling, and from the vat to said surface after boiling. When the mouth of the vat is obscured by steam, an operator is liable to accidentally step into the vat, usually with fatal results. In the veneer industry, so far as I am aware, there is nothing to prevent this fatality, which not infrequently occurs.

The object of this invention is to prevent the possibility of accidental entrance into the veneer vat by an operator without interfering with the desirable freedom of movement of logs into and out of the vat.

I accomplish this and other related objects by the improved auxiliary structure, hereinafter described and claimed, adapted to support a charge of logs in the vat in position for boiling, and to close the mouth of the vat in such manner as to prevent entrance to the vat before a charge is inserted and after the charge is removed.

Of the accompanying drawings forming a part of this specification.—

Figure 1 is a perspective view showing a veneer vat and an auxiliary structure embodying the invention.

Figure 2 is a longitudinal section of portions of the vat and the platform, hereinafter described, of the auxiliary structure, the platform being raised to prevent entrance or access to boiling water in the vat.

Figure 3 is a view similar to Figure 1 showing the platform lowered and supporting a charge of logs.

Figure 4 is an end view of a portion of the platform on a larger scale.

Figure 5 is an edge view looking toward one of the longer edges of the platform.

The same reference characters indicate the same parts in all of the figures.

In the drawings, 12 designates a sunken veneer vat which may be of any suitable construction and provided with any suitable heating means, not shown, so that a body of water partially filling the vat may be raised to boiling temperature. The vat is sunk so that its mouth is substantially flush with a surrounding surface 14 from which logs 15 may be rolled into and out of the vat. There is nothing new in the construction of the vat and its location relative to a log-supporting surface.

In carrying out my invention, I combine with the vat an auxiliary structure adapted to support a charge of logs in the vat in position for boiling, and to close the mouth of the vat. Said structure comprises an open-work platform constituting a false bottom movable vertically in the vat and formed to prevent entrance to the vat when raised, a supporting frame located above the vat, power mechanism associated with said frame, connections suspending the platform horizontally from the power mechanism, so that the platform may be raised and lowered by said mechanism, the frame, the power mechanism, and the suspending connections being arranged to permit movement of logs to and from the platform, and manually operable starting and stopping means whereby the platform may be held stationary at any position to which it is movable, the arrangement being such that the platform may be held in position to prevent entrance to the vat or to the water-containing portion thereof before a charge is inserted and after the charge is removed, so that the platform prevents the possibility of an operator falling into the hot water in the vat when the mouth of vat is obscured by steam.

The platform is preferably composed of a series of T-beams 16 extending lengthwise of the vat, the latter being usually oblong, a pair of channel beams 17 extending crosswise of and supporting the beams 16, and spreading or spacing means engaged with the beams 16 and including rods 18 passing through the vertical members of the beams

16 and spacing sleeves or collars 19 strung upon the rods between the beams 16.

The platform is so proportioned that when it is in an elevated position in the vat, it prevents any portion of an operator's body from passing below the platform, the openings between the bars 16 being sufficient to permit a free circulation of hot water through the platform.

The power mechanism shown in the embodiment of the invention here illustrated is embodied in a hydraulic hoist, which includes a vertical cylinder 21 fixed in a vertical position to the supporting frame, hereinafter described, and a piston or ram 22 movable vertically in the cylinder 21 by hydraulic pressure as usual in the operation of hydraulic hoists. The hoist here shown is of a well known type, including a pump 23, whose intake is connected by a pipe 24 with a storage tank 25 and whose outlet is connected with the cylinder 21 by a pipe 26 in which a manually operable two-way valve 27 is located, the valve when turned to one position permitting the entrance of liquid forced by the pump into the lower portion of the cylinder 21, and when turned to another position shutting off the pump from the cylinder and permitting an outflow of liquid from the cylinder through a return pipe 28 to the tank 25. The valve 27 may be closed to prevent the movement of water either to or from the cylinder, and when the valve is in this position, the ram is positively supported against downward movement in the cylinder.

The supporting frame here shown includes upright members 30 rising from opposite sides of the vat and rigidly connected therewith, a transverse member 31 fixed to and extending between the members 30 and sufficiently elevated above the vat to permit movement of logs under it, and bracing members 32 secured at their upper ends to the upright members 30, and at their lower ends to the vat.

The preferred connections between the power mechanism and the platform include a cross head 34 fixed to the upper end of the ram 22 and suspension rods 35 fixed at their upper ends to the cross head and at their lower ends to the supporting bars 17 of the platform. In this instance, there are two pairs of suspension rods 35, these extending parallel with each other.

It will be seen by reference to Figure 1 that the supporting frame, the power mechanism, and the suspending connections, above described, are arranged to permit movement of logs to and from the platform by rolling the logs between the suspension rods 35 under the frame member 31 and between the braces 32.

When the platform is raised, a course of logs 15 may be rolled thereon as shown by

Figure 2. The platform may then be lowered sufficiently to permit the rolling of another course of logs onto the first course, the platform being meanwhile held in a fixed position. This operation may be repeated until the platform reaches the bottom of the vat, its downward movement being step by step. After the boiling operation, the platform may be raised step by step and held after each step to permit the removal of the logs one course at a time. After the removal of the last course, the platform remains in position to close the mouth of the vat.

It will now be seen that access of any part of an operator's body to boiling water in the vat is prevented at any stage of the operation of inserting and removing the logs and after the removal of the logs, the raised platform accomplishing this function when raised, after the removal of the logs, and the logs and the platform conjointly performing this function during the operations of inserting and removing the logs.

The upright frame members 30 are preferably channel beams into the recesses of which the ends of the cross head 34 project, so that the cross head is guided in its vertical movements by the members 30.

It is customary to cover the vat by a temporary cover during the boiling operation which usually lasts twenty-four hours. The removal of the cover allows a cloud of steam to arise obscuring visibility and making it difficult for the operator to keep out of the vat.

The hydraulic type of hoist is preferred because of the absolute surety of control of speed in both raising and lowering, by the control of the volume of liquid forced into the cylinder and allowed to escape therefrom through the instrumentality of the usual valve 27. The hoisting speed cannot be increased by the operator beyond a predetermined rate which is preferably not over eighteen inches per minute. The lowering speed is governed by the rate of escape of the liquid from the cylinder, this being determined by the adjustment of the valve. As above stated, the platform is positively held stationary when the valve is closed.

The showing of the hydraulic hoist is somewhat conventional, it being understood that there is nothing new in the construction and mode of operation of the hoist.

This type of power mechanism obviates the use of rotating shafts, pulleys, belts, gears, etc., and danger of injury to the operator by the power mechanism, the same being practically fool proof.

Although I prefer a valve-controlled hydraulic hoist as the power mechanism for the reasons stated, I am not necessarily limited thereto, and may employ any other suitable type of power mechanism adapted

to be started and stopped by the operator, and to hold the platform stationary when it is at any height to which it is movable.

I claim:

5 1. In combination, a sunken veneer vat having its mouth substantially flush with a log-supporting surface; and an auxiliary structure adapted to support a charge of logs in the vat in position for boiling, and
 10 to close the mouth of the vat, said structure comprising a platform constituting a false bottom movable vertically in the vat and formed to prevent entrance to the vat when
 15 raised, a supporting frame located above the vat, power mechanism associated with said frame, connections suspending the platform horizontally from the power mechanism so that the platform may be raised and
 20 lowered thereby, the frame, the power mechanism, and the suspending connections being arranged to permit movement of logs to and from the platform, and manually operable starting and stopping means whereby
 25 the platform may be held stationary at any position to which it is movable, the arrangement being such that the platform may be held in position to prevent entrance to the vat before a charge is inserted and
 30 after the charge is removed.

2. In combination, a sunken veneer vat having its mouth substantially flush with a

log-supporting surface; and an auxiliary structure adapted to support a charge of logs in the vat in position for boiling, and to close the mouth of the vat, said structure
 35 comprising a platform constituting a false bottom movable vertically in the vat and formed to prevent entrance to the vat when raised, a supporting frame located above the vat, a hydraulic hoist including a vertical
 40 cylinder fixed to the frame, a ram movable vertically therein by hydraulic pressure, and a manually operable valve controlling the passage of hydraulic pressure to and from the cylinder, suspending connections between
 45 the ram and the platform including a cross head fixed to the ram and suspension members connecting the cross head with the platform, the hoist being operable to raise and lower the platform and hold it in any position
 50 to which it is movable, the frame, the hoist, and the connections between the hoist and the platform being arranged to permit movement of logs to and from the platform, the arrangement being such that the
 55 platform may be held in position to prevent entrance to the vat before a charge is inserted and after the charge is removed.

In testimony whereof I have affixed my signature.

EDWARD B. VARNEY.