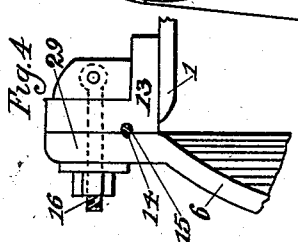
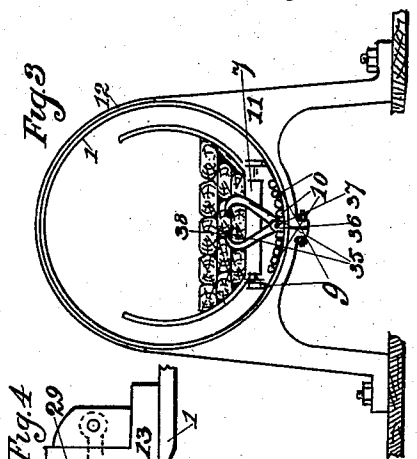
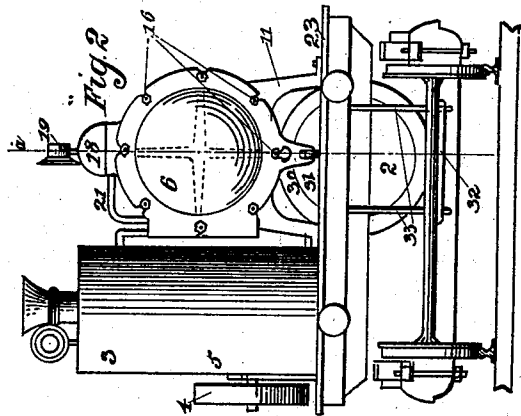
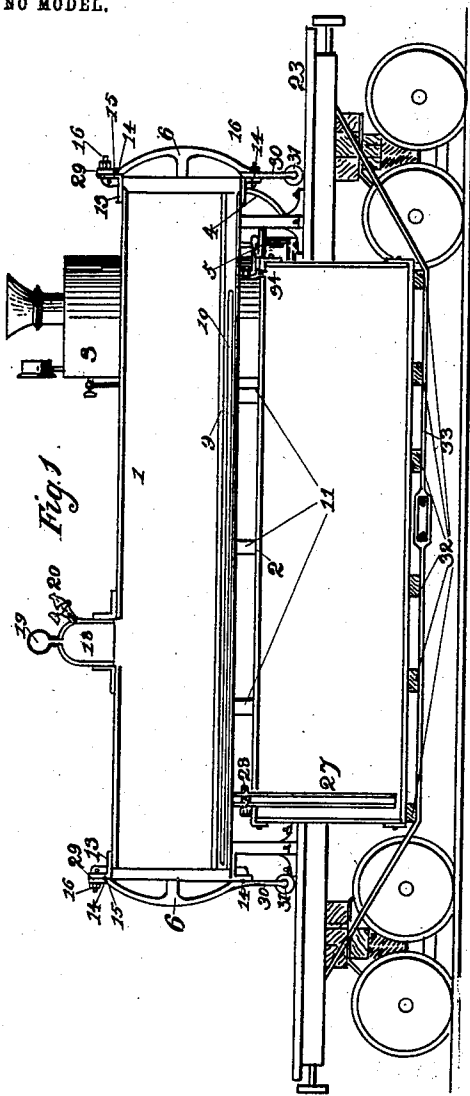


L. HANSON.

APPARATUS FOR PRESERVING AND CREOSOTING WOOD.

APPLICATION FILED MAY 3, 1902.

NO MODEL.



Witnesses

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LOUIS HANSON, OF WILMINGTON, NORTH CAROLINA.

APPARATUS FOR PRESERVING AND CREOSOTING WOOD.

SPECIFICATION forming part of Letters Patent No. 722,505, dated March 10, 1903.

Application filed May 3, 1902. Serial No. 105,857. (No model.)

To all whom it may concern:

Be it known that I, LOUIS HANSON, of the city of Wilmington, in the county of New Hanover and State of North Carolina, have invented certain new and useful Improvements in Mechanisms for Preserving and Creosoting Wood; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mechanisms for the applying of creosote and other preservatives to cross-ties, piling, lumber, &c.

The objects of my invention are to so construct and dispose the outfit that the same can be placed upon or built into a railroad car or cars and be operated thereon without removing it from the same, thereby avoiding the necessity of transporting the material to be operated upon to the creosoting-works, as heretofore necessary. I attain these ends by means of the mechanisms illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a complete plant, taken on the line *a*, Fig. 2, showing the interior of a creosoting and drying chamber 1 and of an oil receiving and storage tank 2, a boiler 3, and engine 4 for the production of steam for the drier and operation of an air-pump 5, respectively, the whole mounted on a platform 23, placed on regular railroad-trucks. Fig. 2 is an end view of a plant mounted as above, showing an end door 6 of the chamber 1, the end of the tank 2, and side of the boiler 3, and a portion of the engine 4, showing their relative position and arrangement. Fig. 3 is an enlarged cross-section of a chamber 1, showing the position and relation of the material operated upon 38, and the two retaining grippers or dogs 35, pivoted at 37 in their lug or support 36, fastened to the bottom of the chamber 1, the truck-track 9, steam-pipes 10, supporting-stanchions 11, and tie-bands 12 for the chamber 1. Fig. 4 is an enlarged section of a portion of Fig. 1, embracing a section of the collar 13 of the chamber 1, and a portion of the flange of the door 6, showing the packing-grooves 14 and packing 15, also the relation and position of one of the screw-

dogs 16 for tightening and retaining the door 6 steam-tight.

Similar numerals refer to similar parts throughout the various views.

A cylindrical iron chamber 1, closed at the ends with doors 6, as hereinafter described, is provided with a dome 18, placed at any convenient point above the level reached by the creosoting liquid. The dome 18 is provided with a gage 19 to indicate the internal pressure (air) of the cylinder or chamber 1. It has also a vent-cock 20, whereby the pressure in the chamber 1 may be relieved to any desired extent. Entering the dome 18 is a pipe 21, leading to and connecting with an ordinary pressure and vacuum pump 5, located at any convenient point and operated by the engine 4. The bottom of the chamber 1 has the usual track 9 for trucks 7, Fig. 3, and steam-heat pipes 10 as at present used.

In the bottom of the chamber 1 are arranged lugs 36, to which are pivoted, as at 37, a pair of grapple-arms 35, adapted to engage one or more of the lowest tiers of timbers to prevent the trucks being raised from the track by flotation when the liquid is admitted to the chamber. When the grapples are not in use, they may be spread apart sufficiently to permit each arm thereof to be lowered to the floor of the chamber, so that they will not form obstructions to the truck when the latter is rolled in or out of the chamber.

The chamber 1, Fig. 1, has a slight incline horizontally, whereby any liquid in the same has a tendency to collect at one end. At this end is a pipe 27, passing down and communicating with the tank 2 (in the case of the combined tank and chamber, Figs. 1 and 2, the pipe 27 passing directly and nearly to the bottom of the tank 2) and is open at each end, but provided with a cut-off 28 above the tank 2. The chamber is supported on stanchions 11, Fig. 3, bolted thereto, and further secured by means of bands 12, passing over the chamber 1 and fastened to the two projecting arms of the stanchions 11. The chamber 1, Fig. 1, is provided at each end with a cast-iron hinged door 6, provided with lugs or notches for receiving screw-dogs 16, swung from shoulders on a collar 13, which collar is permanently fastened on the end of the chamber 1 and carries the pivotal portion of the

door's hinge. In the face of the collar 13, Fig. 4, and door 6 are coinciding annular grooves 14, in one of which is permanently fastened an elastic packing 15. The door 6, 5 Fig. 1, at its lowest extremity or on a projection therefrom 30 has a wheel 31 running on the car-platform 23 or a track placed thereon, whereby the hinge is relieved of the weight of the door 6. The oil-tank 2 is carried partially 10 under the platform 23 of the car and retained in position supported on pillow-blocks 32, supported by truss-rods 33 or in any way found most desirable in construction. The tank 2 is provided with any openings 15 found necessary for the mechanisms used in filling the same at the factory and has an air vent or inlet 34, which can be operated from the car-platform. At the side of the chamber 1, Fig. 2, at any convenient point 20 in its length is placed a boiler 3, preferably upright, of sufficient capacity to provide steam for heating the chamber 1 and running a small engine 4 for the operation of an air-pump 5, Fig. 1, of any type so arranged that 25 the air can be exhausted or compressed as desired in the chamber 1 through the connection established by the pipe 21. The timber to be operated upon having been placed in the chamber 1 and the doors 6 being closed 30 and fastened air-tight by means of the screw-dogs 16, steam is turned into the pipes 10 and allowed to fill the same until the internal temperature of the chamber 1 has been raised to the degree desired, the evaporated moisture and heated air being withdrawn from 35 the chamber 1 by means of the exhaust action of the pump 5. When the inclosed timber is adjudged to be sufficiently dry, the steam heat is cut off. The air-exhaust being 40 kept, the oil-valve 28 is turned on and the tank 2 air-vent 34 opened. The oil contained in the tank 2 will now pass up into the chamber 1, filling the same to any desired height. The valve 28 being then closed and 45 the air-pump action 5 reversed, any desired pressure may be maintained within the chamber 1 for the time necessary to complete the process, at which time the valves 28 being again opened the oil will pass downward into 50 the oil-tank 2, when the chamber 1 may be opened and the timber removed. The grips 35 below the truck 7 in the bottom of the

chamber 1 are for the purpose of preventing the trucks 7 from being lifted from the tracks 9 by flotation of the timber on the admission 55 of the oil.

I know that the process of saturating timber with creosote, &c., and the means of doing so by mechanisms similar to those herein described have already been and are now in 60 use, more particular reference being had to Patent No. 374,636, dated December 13, 1887. What I desire to attain is compactness of mechanism, whereby the plant for doing the work may be transferred to any convenient 65 point, thereby saving much delay and expense of shipping the materials to be treated and making the process available in places at present impracticable or inaccessible.

The use of a longer cylinder (not illustrated) may be obtained by running one or more dead-cars between and supporting the ends of the chamber on pivoted platforms placed on cars sufficiently far apart to receive 70 them.

What I claim as my invention, and desire to secure by Letters Patent, is— 75

1. In an apparatus for treating wood for the preservation thereof, the combination with a truck for carrying the wood to be 80 treated, of a chamber having rails on which said truck is mounted, and grapples pivoted in the bottom of the chamber and adapted to be raised to engage the wood, or lowered to permit the insertion or removal of the truck. 85

2. In an apparatus for treating wood for the preservation thereof, a rolling platform carrying a chamber for treating the wood, a tank to contain the treating material located below the chamber, a tube connected to the 90 chamber and extending to near the bottom of the tank, means for creating a vacuum in the chamber to draw the treating material through the tube, means to subject the material to pressure while in the chamber, a 95 truck mounted in the chamber, to support the wood; and grapples pivoted in the chamber to engage the wood to prevent flotation of the truck.

LOUIS HANSON.

Witnesses:

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ALEX. S. HEIDE.