

(No Model.)

I. LOUGHBOROUGH.
APPARATUS FOR SATURATING RAILWAY TIES.

No. 533,543.

Patented Feb. 5, 1895.

Fig. 1.

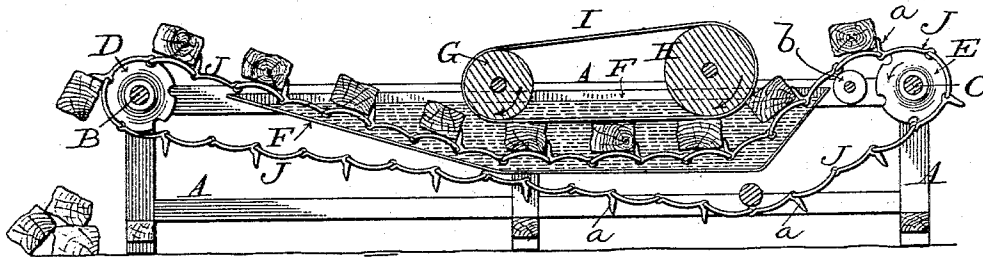
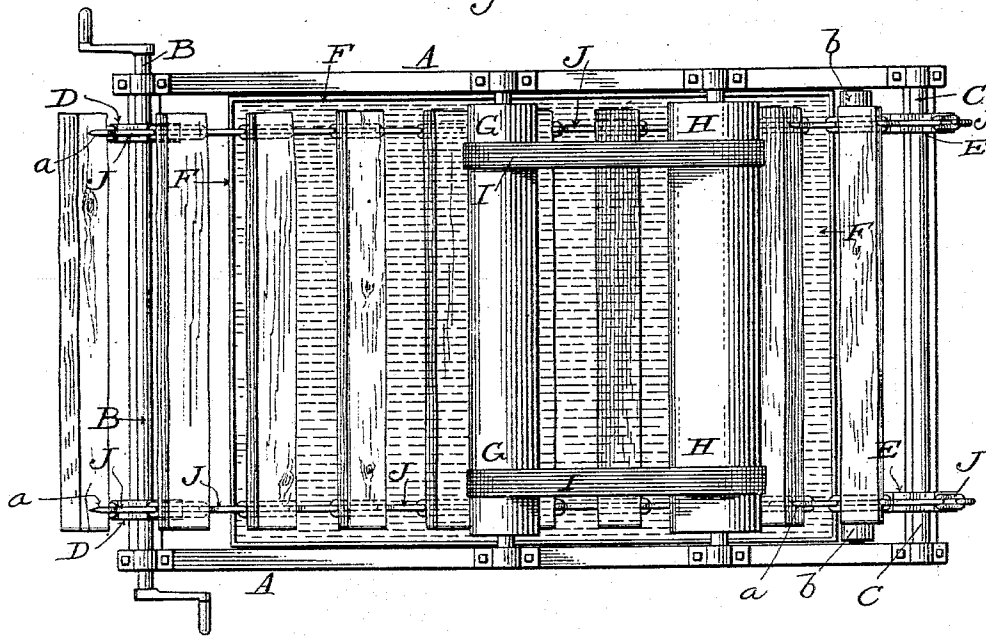


Fig. 2.



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UNITED STATES PATENT OFFICE.

IRA LOUGHBOROUGH, OF PITTSFORD, NEW YORK.

APPARATUS FOR SATURATING RAILWAY-TIES.

SPECIFICATION forming part of Letters Patent No. 533,543, dated February 5, 1895.

Application filed October 18, 1894. Serial No. 526,309. (No model.)

To all whom it may concern:

Be it known that I, IRA LOUGHBOROUGH, a citizen of the United States, residing at Pittsford, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Machines for Saturating Railway-Ties and other Woods, of which the following is a specification.

My invention relates to the impregnation or saturation of wood with a liquid preservative, and consists in a novel construction of mechanism for insuring the easy and complete immersion in the bath of preserving liquid.

In the drawings,—Figure 1 is a vertical, central, longitudinal sectional view through my machine; and Fig. 2, a top plan view.

A indicates a suitable frame, at opposite ends of which are journaled the shafts B and C, which are provided respectively with sprocket wheels D and E, the wheels being arranged in pairs upon the shafts. Between the shafts there is a tank or vessel F open at the top and extending, preferably, from side to side of the frame, with the top of the tank about on level with the shafts B C, while the bottom of the tank extends considerably below the plane of said shafts, as shown in Fig. 1. In this tank is placed the preservative liquid solution.

G and H indicate two rollers which are journaled in bearings on the top of the frame parallel with the shafts B C; the lower faces of the rollers being preferably in the same horizontal plane in order that the bands or belts I I which pass therearound may be parallel with the bottom of the tank or vessel.

It will be noticed that the roller H is located near to the receiving end of the tank so that the ties, posts, or other articles to be impregnated, will be forced down into the liquid almost immediately. The roller G is located midway between the ends of the tank so that when the ties or posts pass from beneath said roller, they are free to rise gradually from the bath to allow the superfluous liquid to drain or drip off them. In order to afford ample time for the liquid to thus drip off and back into the tank or vessel, the bottom slopes upward gradually toward the discharge end of the machine, as shown in Fig. 2.

To support and carry the logs, posts, or ties, I employ the endless carrying chains J J, the alternate links of which are provided with spurs *a* to engage the log or tie, and thereby insure its positive movement with the chains. These chains pass about the sprocket wheels D and E, down into the tank or vessel beneath the rollers G H and their belts, and back beneath the vessel. From this it will be seen that when the logs or ties are placed upon the chains J J they will, upon the forward movement of the chains, be carried down into the fluid in the tank or vessel. The wood has a tendency to float, but this is overcome by means of the endless bands or belts I I, which, while holding the chains and the posts carried thereby, down into the liquid, travel with the chains and offer no appreciable resistance to the travel of the chains and their load.

The chains J J are supported between the tank F and shaft C, by means of a roller *b*, which, in connection with the sprockets E, holds the chains up so as to facilitate the placing of the logs, &c., upon the chains.

Instead of employing long rollers G H, the shafts of said rollers may be provided with pulleys or wheels to receive the bands or belts.

Power may be applied to either of the shafts B C for imparting motion to the chains J J, the bands or belts I being driven by frictional contact with the logs, &c., carried by the chains.

In lieu of the two bands or belts I I, a single band or belt may be employed, in which case it will be located centrally or midway between the ends of the rollers so as to bear upon the ties or posts centrally between the carrying chains J.

Having thus described my invention, what I claim is—

1. In a machine for saturating ties &c., the combination with a main frame and a tank or vessel; of the endless spurred carriers upon which to place the ties, and which carriers pass into the tank; and an endless band located above the carriers and bearing upon the ties to submerge and to serve as a guide for the ties, substantially as shown and described.

2. In a machine for saturating ties &c., the

combination with frame A; shafts B and C
provided with sprocket wheels D and E; the
intermediate tank F; the endless spurred
carrying chains J J passing about wheels D,
5 E, and into the tank; the rollers G and H;
and the endless bands I I passing about the
rollers and adapted to bear upon the ties.

In witness whereof I hereunto set my hand
in the presence of two witnesses.

IRA LOUGHBOROUGH.

Witnesses:

FRANK WILTSIE,
CLARK BEERS.