J. Nicholson,

Elevator.

No. 106,274. Patented Aug. 9. 1870

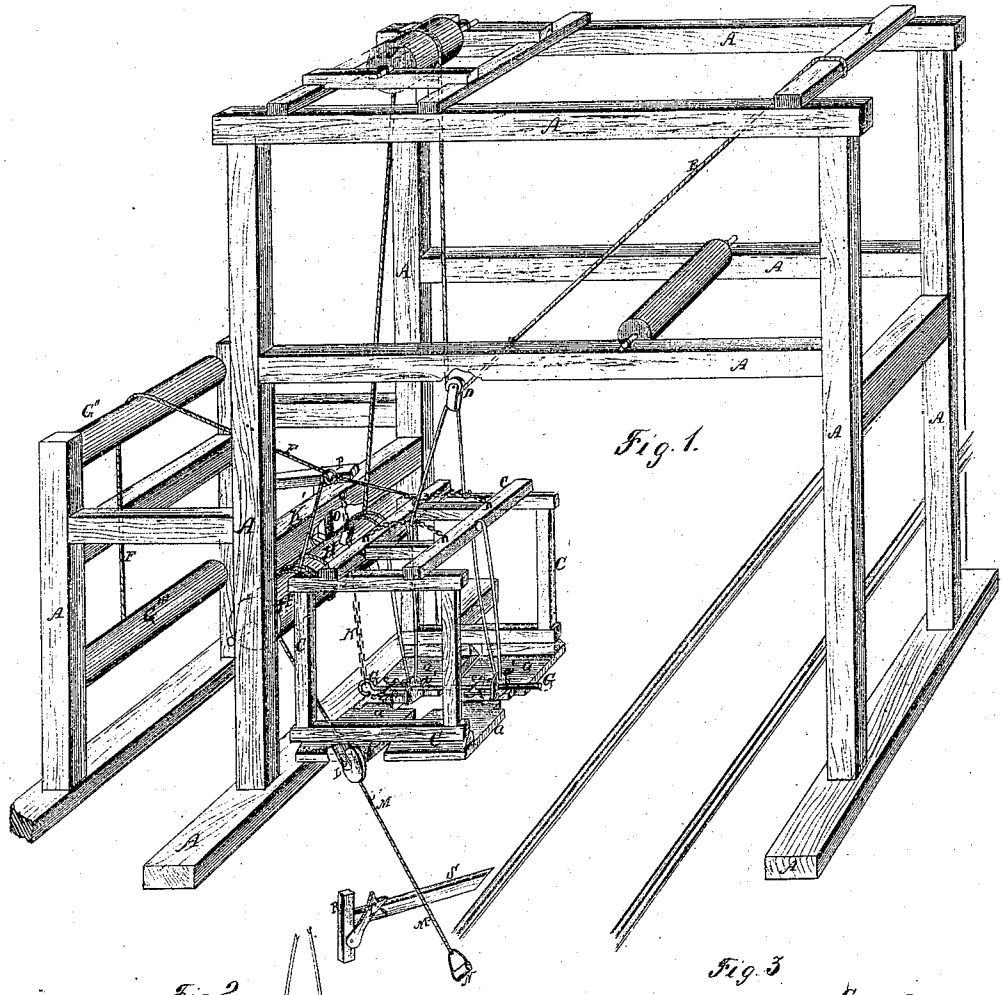

Fig. 1.

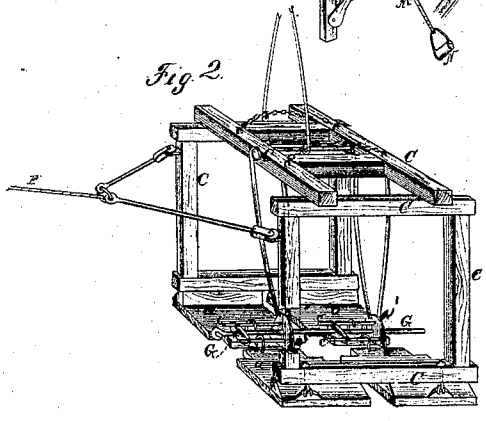

Fig. 2.

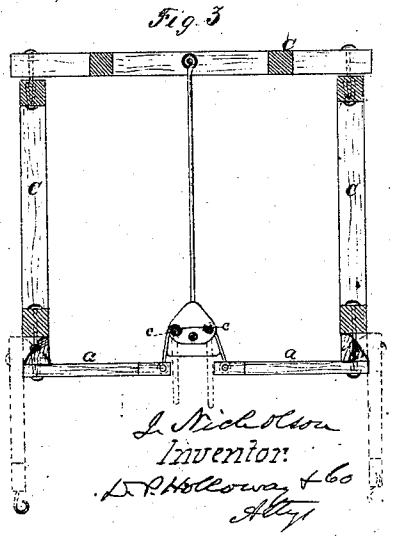

Fig. 3.

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JESSE NICHOLSON, OF MONTICELLO, INDIANA.

Letters Patent No. 106,274, *dated August* 9, 1870.

IMPROVEMENT IN APPARATUS FOR LOADING WOOD ON RAILWAY CARS.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, JESSE NICHOLSON, of Monticello, White county, Indiana, have invented certain new and useful Improvements in Apparatus for Loading Wood on Railway Cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawing which accompanies this specification, forming a part of the same, and to the letters of reference marked upon the same.

Figure 1 is a perspective view of my improved apparatus.

Figure 2 is a perspective view of the hinged wood-rack for lifting and moving the wood.

Figure 3 is a vertical sectional view of the wood-rack, showing its hinged connections and its manner of opening and closing, in dotted lines.

Like letters refer to like parts.

To enable those skilled in the art to construct and use my said invention, I will proceed to describe the same.

In the drawing—

A A A, fig. 1, represent the timbers of a rectilinear frame, constructed over the track of an ordinary railway, of suitable height and width, and properly secured in a convenient location.

Across the top of the frame is placed a cross-piece, I, to which is secured one end of a line or rope, E, and at the opposite end of the frame is placed a fixed friction-roller, J, over which the rope E passes, extending down between the posts on that side of the frame to a windlass, H, over which the rope E passes, and by which it is operated.

A running pulley-block, D, is placed upon the rope E between the bearings I and J, traversing the long way of the frame as it is operated by the guy-rope F and its own weight.

The wood-rack C is hung to the pulley-block D by suitable devices, and is constructed of two square frames of the requisite size, which form the ends of the rack, and connected on the top by parallel bars properly secured, to which the devices secured to the pulley-block are attached, and by which the wood-rack is raised and lowered.

Attached to each lower corner of the frame of the wood-rack are hinged sections, which form the bottom of the rack, and which are secured in the center to cross-heads, which are attached to a movable horizontal rod resting in bearings *a' a'*, suspended from the top center of the framing.

Each of these bearings is provided with two short rods, which are hinged to its corners, and, when in position, rest upon suitable notches in the cross-heads of the horizontal rod G.

Each of the hinged sections *a a* of the bottom is provided with suitable hooks at their inner ends, which fasten to the short rods *c c*, and are by these devices held in position while the wood-rack is being held and loaded and moved.

A chain or linked rod, K, is attached to the cross-piece K' of the framing, at one end, and to the movable horizontal rod G at the other end, and its length is so adjusted as that, when the filled wood-rack swings toward the car or tender to be loaded, the said rod G is drawn from its bearings by the momentum of the wood-rack, and all the hinged sections of the bottom being thus simultaneously released, the contents of the wood-rack are instantly deposited in the spot desired.

By a forked brace, attached to a similar device at the top of the wood-rack, which has a line or cord secured to it, passing over the friction-roller G'', and secured to a windlass, G''', the wood-rack is withdrawn to its place, and ready to be refilled.

Immediately under the windlass H, and attached to the sill of the framing, is a snatch-block, L.

Through this snatch-block passes a rope, M, one end of which is coiled around the windlass H in a contrary direction from that of the rope E, and to its opposite end is secured a stirrup, N. This stirrup N is constructed with a friction-roller upon the front bar, to allow it to pass easily up or down a post or standard, with which the pilot or cow-catcher of any locomotive-engine may be provided.

The central circumference of the windlass H is provided with teeth or cogs, into which works the stop O, which is secured to the lever P, and operated by it to release or hold the windlass H, as may be required.

Alongside of the railway track, and at a convenient point, is placed a post, R, provided with an oblique brace, reaching from the top of the post to the ground, in the form of an inclined plane.

Attached to the post R, by a pin or bolt at the bottom, upon which it may swing, is a stop or trigger, T, the top part of which is notched to receive and release the rope, as desired.

It will be seen that the object of my invention is to provide that the wood used as fuel by locomotive-engines upon railways shall be raised from any given point upon the side of the track, and deposited within and upon the tender by means of the motion of the engine as it reaches the station.

Its operation is as follows:

The wood-rack being filled, and the parts of the apparatus all arranged and constructed as herein described, the stirrup N is dropped over a suitable standard or other arrangement upon the engine as it approaches the point opposite the wood-rack. The rope M is thus drawn through the snatch-block L, causing

the windlass H to revolve, raising the wood-rack by means of the rope E, and, the pulley-block D descending, the same carries the wood-rack far enough to reach the tender of the locomotive, and to remove the horizontal rod G from its bearings, whereupon the hinged sections of the bottom of the wood-rack drop, and the wood is released. Simultaneously with this the rope M is carried up on the inclined plane S, until reaching the trigger T, when it raises the stirrup N to a sufficient height to release it from the engine.

By turning the windlass G''' the guy-rope attached to the wood-rack brings it back to its proper position for loading, and by raising the stop attached to the lever P, the wood-rack descends, by its own weight, ready for refilling.

Having thus fully described my said invention,

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

1. The suspended wood-rack C, when constructed with hinged bottom boards *a a*, the inner ends of which are supported, in the manner substantially as shown and described, upon cross-heads of a sliding bar, G, resting in hangers *a' a'*, the parts operating substantially as set forth.

2. The combination of the wood-rack C, constructed as described, pulley-block D, rope E, windlass H, and chain K, all arranged to operate substantially as set forth.

3. The combination of the windlass H, rope M, snatch-block L, stirrup N, inclined plane S, and trigger T, all arranged to operate as herein described.

JESSE NICHOLSON.

Witnesses:

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WM. H. PAREDS.