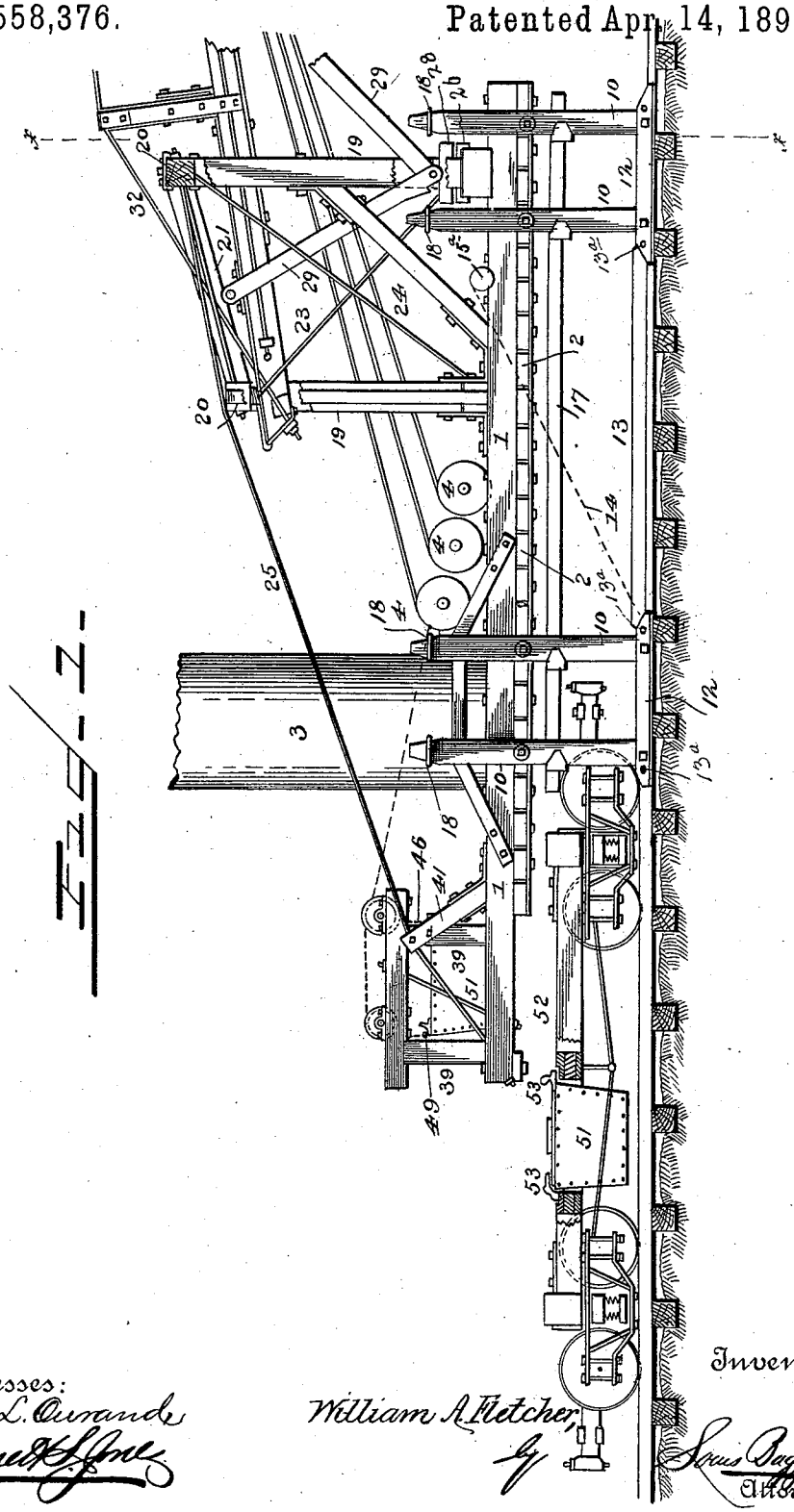
(No Model.) 4 Sheets—Sheet 1.

W. A. FLETCHER.

LOG LOADING MECHANISM.

No. 558,376. Patented Apr. 14, 1896.



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(No Model.) 4 Sheets—Sheet 2.

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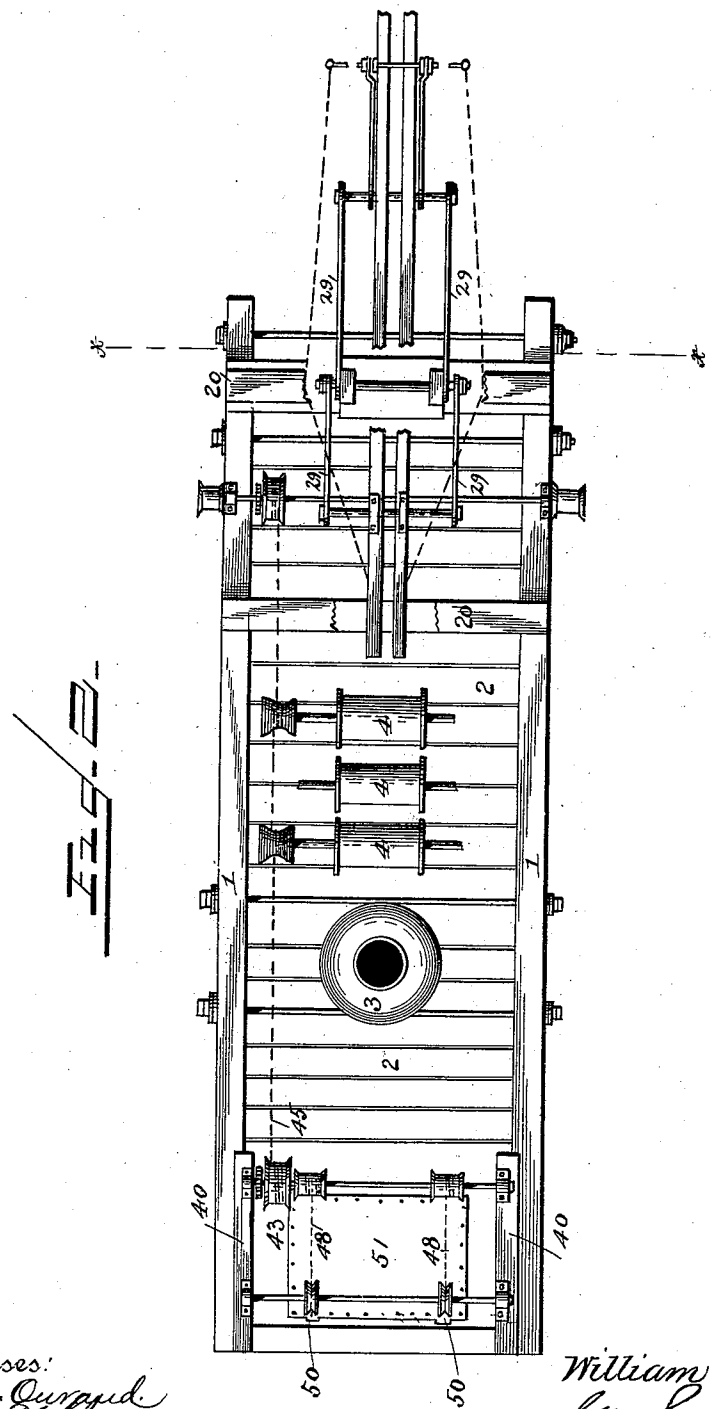

Fig. 2.

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(No Model.) 4 Sheets—Sheet 3.

W. A. FLETCHER.

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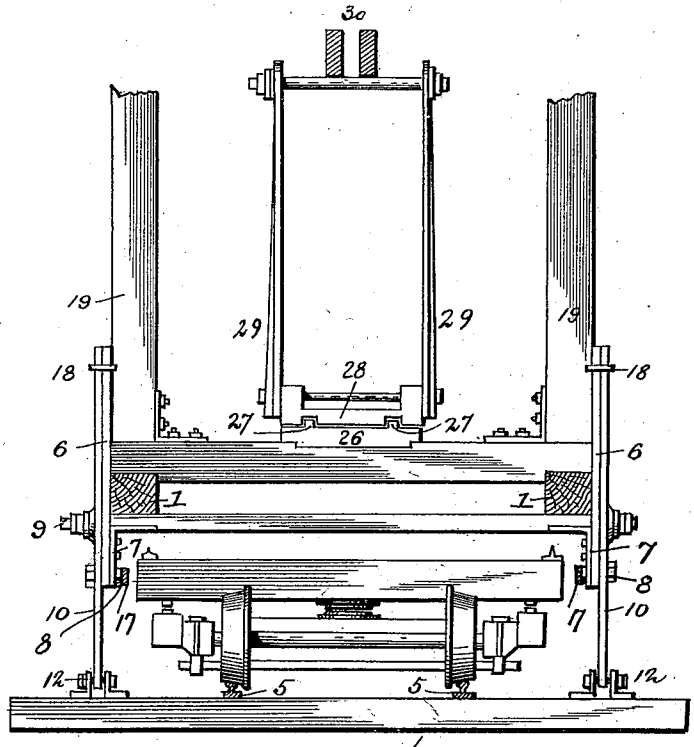

Fig. 3.

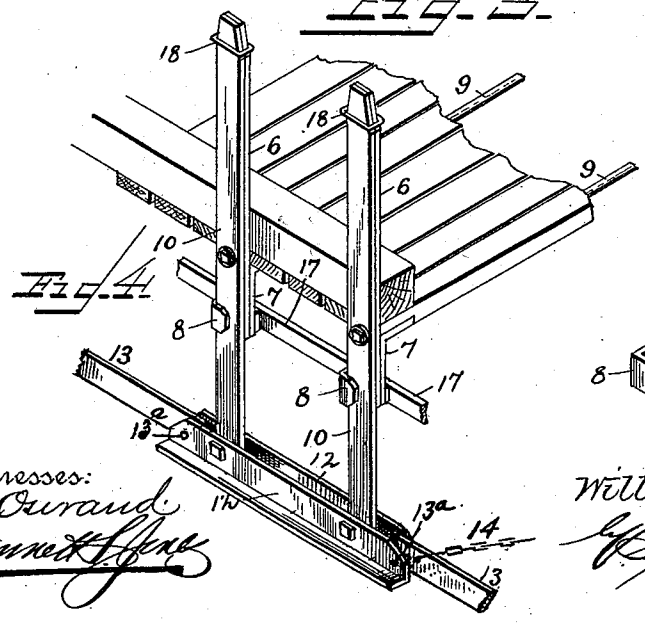

Fig. 4.

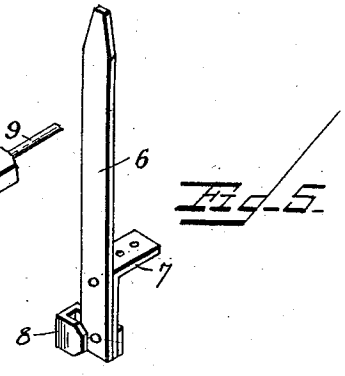

Fig. 5.

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(No Model.) 4 Sheets—Sheet 4.

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LOG LOADING MECHANISM.

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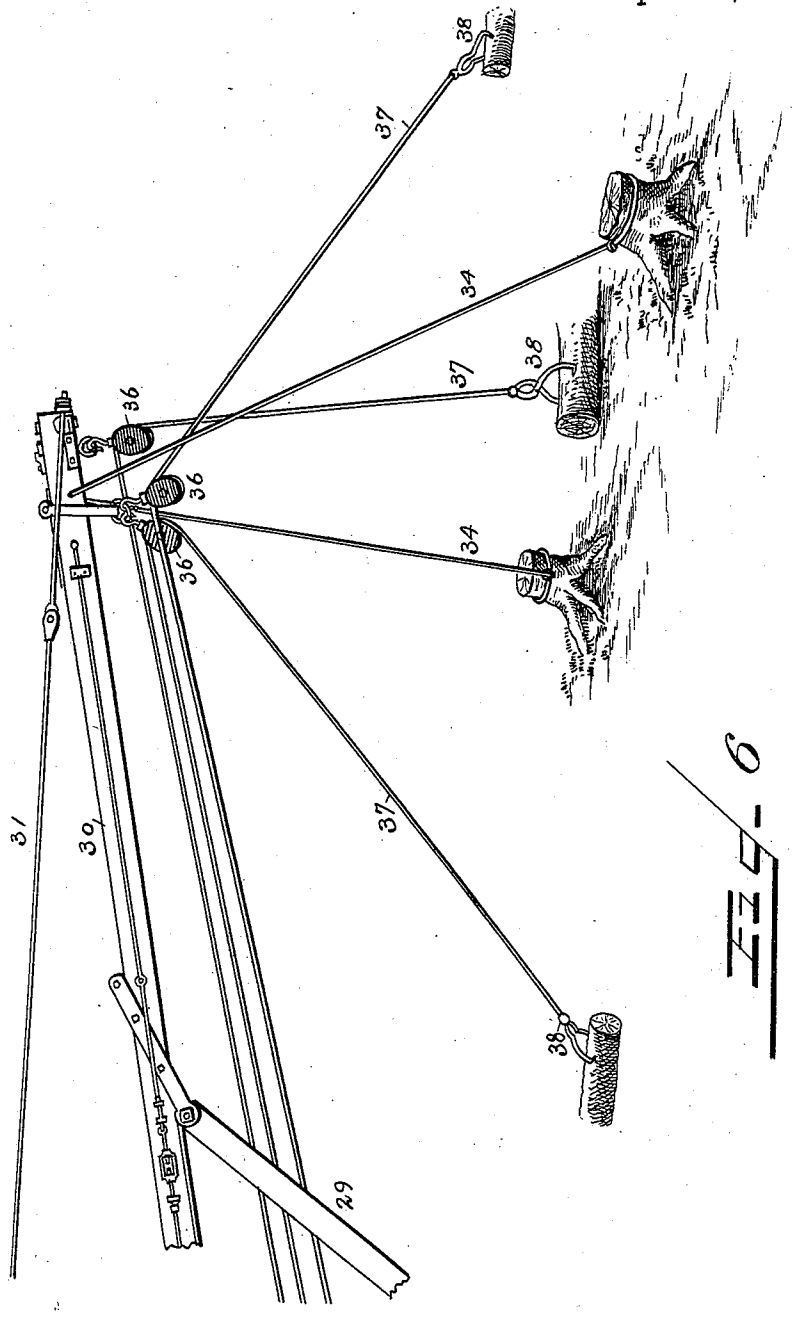

Fig. 9.

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UNITED STATES PATENT OFFICE.

WILLIAM ANDREW FLETCHER, OF BEAUMONT, TEXAS.

LOG-LOADING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 558,376, dated April 14, 1896.

Application filed September 21, 1895. Serial No. 563,242. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANDREW FLETCHER, a citizen of the United States, and a resident of Beaumont, in the county of Jefferson and State of Texas, have invented certain new and useful Improvements in Log Hauling and Loading Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to machines for hauling and loading logs upon cars, and its object is to provide an improved construction of the same whereby the logs may be hauled and loaded from either side of the track, or from both sides at once, and when not in use the machine may be readily placed upon an empty car for transporting it from place to place.

The invention consists, essentially, in a platform of about the length of an ordinary log-car and of a height and width to enable it to span the same, mounted upon which are a steam engine and boiler and a rotating crane, said platform being provided with pivoted legs for holding it above the track, with means for locking said legs in a vertical position, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a log hauler and loader constructed in accordance with my invention. Fig. 2 is a plan view, some of the parts of the crane being removed. Fig. 3 is a cross-section on the line *x x*, Fig. 1. Figs. 4 and 5 are detail perspective views. Fig. 6 is a detail view showing guy-ropes of the crane secured to stumps and the loading ropes or cables connected with logs to be loaded.

In the said drawings the reference-numeral 1 designates side beams or timbers, to the under side of which are bolted cross-timbers 2, forming a platform to receive a boiler 3 and hoisting-drums 4, which are operated by an engine (not shown) of any ordinary or suitable construction.

The hoisting-drums and boiler may be of any construction found convenient, and as they form no part of my present invention a detailed description is not necessary.

The platform is about the length of an ordinary car, and is of a width somewhat greater than the track 5, so that it can span the same, and of a height sufficient to allow an empty car to pass thereunder.

Secured to the platform on each side are four (no more) stationary vertical bars 6, two near each end, which extend some distance above the platform and also below it, having their upper ends made tapering. Riveted to the lower ends of these bars are angle or riveted L-shaped plates 7, the lateral ends of which project inwardly and engage with cut-away portions of the cross-timbers. These plates are provided with beveled outwardly-extending lugs 8, for a purpose hereinafter described. Passing through apertures in said vertical bars are cross-bars 9, to which are pivoted or journaled legs 10, which support the platform in an elevated position. To the lower ends of these legs are pivoted angle-iron shoes 12, which connect the legs at the ends together in pairs and form a broad bearing for the legs.

The two angle-irons 12 of each shoe, which rest on the track-ties, are connected together at their inner ends by means of horizontal bars 13 and bolts 13^a, and to one end of each of said bars is secured a chain 14, which is wound upon a spool 15^a on the platform, whereby the platform is lowered when desired.

Secured to the inner sides of the vertical bars are horizontal bars 17 to prevent injury to the legs from the cars passing under the platform coming in contact therewith. The upper ends of the legs are tapered to correspond with the vertical bars and when said legs and bars are alined or perpendicular links 18 are slipped over the tapered ends, so as to hold the legs in position.

At one end of the platform is a crane-frame consisting of uprights 19, connected together at the upper ends by cross-beams 20 and side beams 21. This frame is suitably braced by means of rods 23 and 24 and bars 25 to give it great strength and rigidity. Secured to the platform near said end is the stationary section 26 of a turn-table formed with an annular flange 27 on its upper side, upon which rests and rotates the movable upper section 28. Secured to this section 28 are upwardly-extending inclined bars 29, to which is secured

a crane 30, of any ordinary or suitable construction, the inner end of which rests under the inner cross-beam of the crane-frame. This crane is braced and strengthened by rods 31 and 32, as is usual in this class of devices. The outer end of the crane is provided with guy-ropes 34, which are intended to be fastened to stumps or other objects, so as to hold the crane in any position to which it may be turned. The crane is also provided with sheaves 36, around which pass ropes 37, secured to the winding-drums and provided at their free ends with dogs or grips 38, which engage with the legs to be hauled or loaded on the car.

At the opposite or rear end of the platform is a frame consisting of uprights 39, side beams 40, and brace-beams 41. Journaled in the side beams 40 is a drum 43, upon which is wound a rope 45, connected with the driving-shaft of the hoisting mechanism, by which said drum may be rotated when desired. Wound upon similar drums are chains 46, the free ends of which depend downwardly and are formed with hooks. (Not shown.) Similar chains 48, also provided with hooks 49, are also wound upon said drum and pass over a roller 50, journaled to the side beams 40. There is an open space in the platform in this end, so that a sheet-iron water-tank 51, carried by a water-car 52 and provided with lugs 53, with which said hooks are adapted to engage, can be elevated to the platform. This water-tank is to supply the boiler with water when necessary.

The operation is as follows: Supposing the platform to be loaded upon a car which is on the track at the place when the logs are to be loaded, the rope of a hoisting-drum is secured to a log, stump, or other object. The legs are now turned down until the shoes rest on the foundation, and by starting the engine said drums are actuated so that the rope will pull the platform forward and the legs, acting as levers, will cause the platform to be elevated. When the legs are in a perpendicular position, the lugs will engage with them and prevent further movement of the platform. The links are then engaged with the tapered ends of the vertical bars and legs to lock the latter. The car is then run from under the platform to under the crane, and by means of the latter and the hoisting-drums logs can be hauled and loaded on the car from either side or from both sides at once.

To load the platform on an empty car, the latter is pushed under the same and the links disengaged from the legs and bars. By now turning the spools to which the chains, secured to the horizontal bars pivoted to the shoes, are wound said shoes are moved or slid along the tracks and the legs turned down so as to lower the platform onto the car.

Having thus fully described my invention, what I claim is—

1. In a machine for hauling and loading logs on cars, the combination with the platform, the crane and the hoisting mechanism, of the pivoted legs and means for actuating them to elevate and lower the platform, substantially as described.

2. In a machine for hauling and loading logs on cars, the combination with the platform, the crane and the hoisting mechanism, of the pivoted legs, the pivoted shoes at the lower end thereof, the horizontal connecting-bars, and means for raising the same, substantially as described.

3. In a machine for hauling and loading logs on cars, the combination with the platform, the crane and the hoisting mechanism, of the stationary bars secured to said platform, the outwardly-extending lugs, the pivoted legs, the shoes pivoted to the lower end of said legs, the horizontal connecting-bars, and means for elevating the same, substantially as described.

4. In a machine for hauling and loading logs on cars, the combination with the platform, the crane and the hoisting mechanism, of the platform, the stationary vertical bars secured thereto having tapering upper ends, the angle-plates secured to the lower ends thereof, the outwardly-extending lugs, the pivoted legs having their upper ends tapering, the shoes pivoted to the lower ends of said legs, the horizontal connecting-bars, and the links for locking said bars and legs together, substantially as described.

5. In a machine for hauling and loading logs upon cars, the combination with the platform, the crane and the hoisting mechanism, of the stationary vertical bars having their upper ends tapered and their lower ends provided with angle-plates, the outwardly-extending lugs, the pivoted legs having their upper ends tapered, the shoes at the lower ends thereof, the horizontal connecting-bars, the chains connected therewith, the spools to which said chains are secured, the links for locking said bars and legs together, and the protecting-bar secured to the inner sides of said angle-plates, substantially as described.

6. In a machine for hauling and loading logs on cars, the combination with the platform and the pivoted legs, of the hoisting-drums, the crane provided with drums and the hoisting-ropes the construction being such that said platform can be raised by operating the drums and pulling upon the hoisting-ropes, substantially as described.

7. In a machine for hauling and loading logs on cars, the combination with the platform and the pivoted legs for supporting the same in an elevated position, of the hoisting mechanism, the crane-frame, the turn-table, the inclined arms secured thereto, the crane extending inwardly beyond the pivotal point with its inner end resting under the inner cross-bar of said frame, substantially as described.

8. In a machine for hauling and loading logs upon cars, the combination with the platform and the pivoted legs and connections to the hoisting mechanism, of the pivoted crane and the guy-ropes secured to said crane for holding it in place, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM ANDREW FLETCHER.

Witnesses:
SIDNEY ALBERT LONG,
THOMAS WHITMARSH CURLEY.