

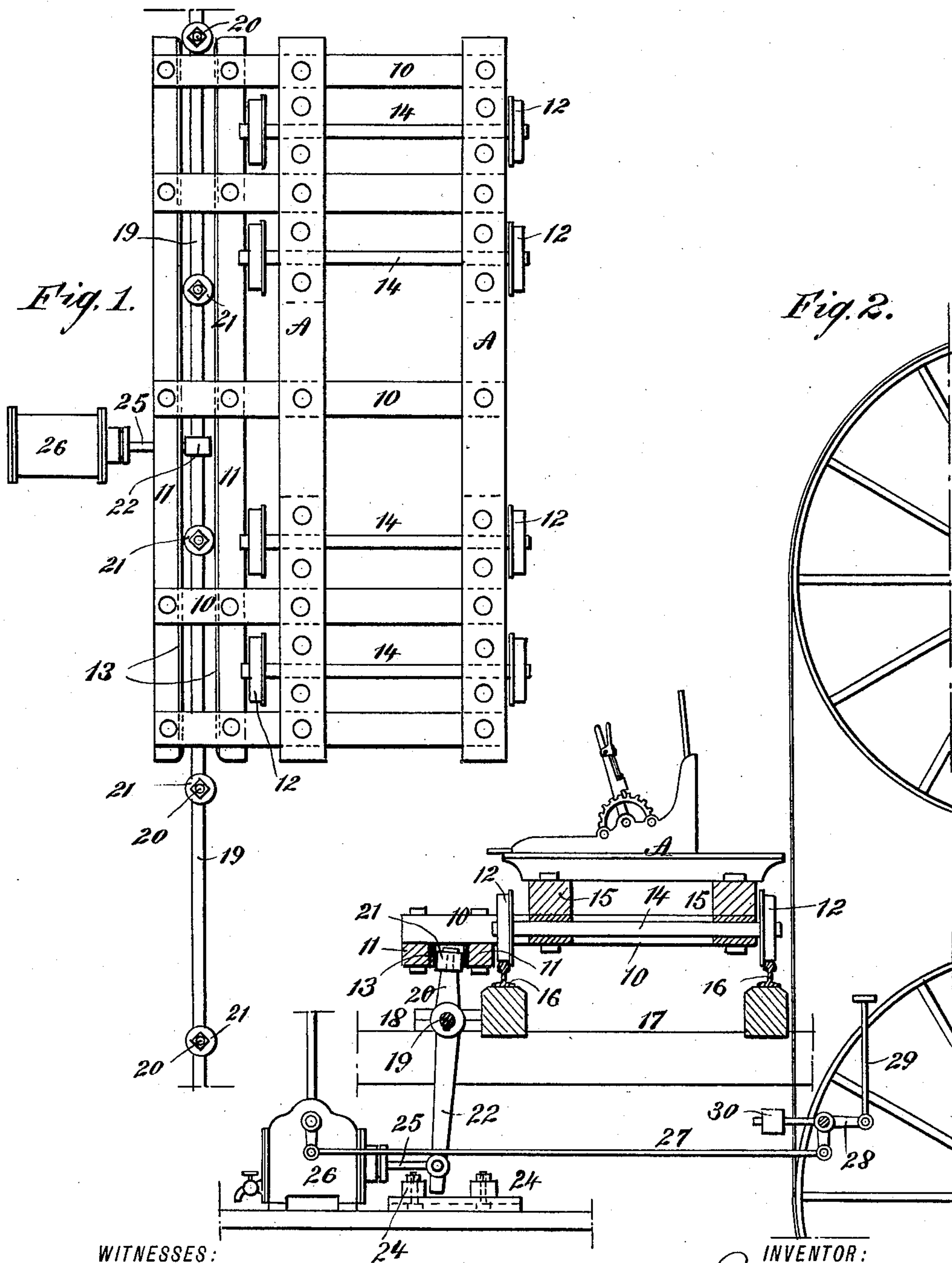
(No Model.)

J. BICKHART.

SIDE THROW MECHANISM FOR SAW MILL CARRIAGES.

No. 452,660.

Patented May 19, 1891.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB BICKHART, OF CADILLAC, MICHIGAN.

SIDE-THROW MECHANISM FOR SAW-MILL CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 452,660, dated May 19, 1891.

Application filed October 17, 1890. Serial No. 368,442. (No model.)

To all whom it may concern:

Be it known that I, JACOB BICKHART, of Cadillac, in the county of Wexford and State of Michigan, have invented a new and Improved Side-Throw Mechanism for Saw-Mill Carriages, of which the following is a full, clear, and exact description.

My invention relates to a side-throw mechanism for saw-mill carriages, especially to the carriages of band-saw mills, and has for its object to provide a simple and durable mechanism whereby the carriage, with log attached, may be conveniently and expeditiously set away from the saw a proper distance after the slab or board has been cut to enable the sawyer to gig back the carriage without incurring the danger of throwing the saw from its pulley by reason of a sliver, knot, or other protuberance on the log coming in engagement with the back of the saw.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate similar parts in both the views.

Figure 1 is a plan view of a saw-mill carriage and the attached mechanism; and Fig. 2 is a side elevation of the band-saw pulleys and a vertical section through the carriage, the major portion of the attached mechanism being in elevation.

The cross-timbers 10 of the carriage A are made to extend some distance rearward, and to the under faces of the rearwardly-extending portions of the cross-beams 10 two spaced guide-beams 11 are secured in any suitable or approved manner, which guide-beams extend from end to end of the carriage, the inner beam being outside of the wheels 12, supporting the carriage-body. The inner faces of the guide-beams 11 have fastened thereon metal wear-plates 13; but the said plates may be omitted, if found desirable. The axles 14, upon which the wheels 12 are mounted, are of greater length between the wheels than the space intervening the outer faces of the boxes 15, in which the axles are journaled, the said boxes being securely attached to the body of the carriage, the said carriage being

provided with the usual knees and dogs. The axles 14 are so journaled in the boxes 15 that the boxes are laterally movable upon the axle. The wheels of the carriage travel upon the usual tracks 16, secured to sleepers, which sleepers rest upon floor-beams 17 or equivalent supports.

In suitable boxes 18, attached to the floor-timbers outside of the rear sleeper, a shaft 19 is journaled, which shaft extends, preferably, the length of and parallel with the tracks 16. The shaft 19 has attached thereto at intervals upwardly-projecting arms 20, and upon the upper ends of said arms friction-rollers 21 are journaled, the said rollers being adapted to enter the space between the guide-beams 11 of the carriage and engage with the wear-plates thereof. The upper end of a lever 22 is rigidly secured to the shaft 19 at any desired point in its length, usually at its center, which lever extends downward below the floor-beams into the space between two opposite and parallel check-blocks 24, the said blocks being adapted to limit the throw of the lever. The lower end of the lever receives motion by being pivotally connected with the piston 25 of a steam-cylinder 26. The valve-rod 27 of the cylinder is led forward in direction of the mill, and is pivotally connected to an elbow or rocking lever 28, which lever has also attached thereto an upwardly-extending hand-rod 29, which is located within convenient reach of the sawyer, through the medium of which hand-rod the valve of the cylinder is controlled. The hand-rod is usually pivoted to the upper or horizontal member of the elbow-lever, and, if desired, the lever 28 may be operated by the foot of the sawyer instead of through the medium of the hand-rod. The valve of the piston is maintained normally in position to permit the cylinder to act to force the carriage up to the saw by means of a weight 30, attached to the elbow-lever, a spring, or equivalent device.

In operation the sawyer, by moving the lever 28 in one direction, lets steam into one end of the cylinder, which, by forcing out the piston, moves the lever 22 inward or in the direction of the saw at its lower end, which imparts a rocking movement to the shaft 19, thereby throwing the arms 20 rearward, and, as said arms are confined between the guide-

beams of the carriage-body, the said body is moved rearward upon its axles 14 a distance sufficient to remove the log out of possible engagement with the saw, thus enabling the
 5 sawyer to gig the carriage back, and when this is accomplished the lever 28 is released, and the spring or weight 30 restores it to its normal position, thereby letting steam enter the opposite end of the cylinder, which causes
 10 the piston to draw the lower end of the lever in the direction of the cylinder, and as the arms 20 are thereby forced forward the carriage is moved to its proper position, enabling the saw to cut through the log as the carriage
 15 is again fed forward.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a saw-mill carriage the body of which is movable laterally on its axles, of a rock-shaft mounted in supports below and independent of the carriage and provided with arms engaging the carriage-body, and means for operating the rock-shaft,
 20 substantially as described.

2. The combination, with a saw-mill carriage the body of which is laterally movable on its axles and provided with guide-beams at one side, of a rock-shaft provided with
 30 arms projecting between the guide-beams, and means for operating the rock-shaft, substantially as described.

3. The combination, with a saw-mill carriage the body of which is movable laterally
 35 upon its axles and provided with guide-beams at one side, of a rock-shaft provided with arms projecting between the guide-beams, a lever secured to the rock-shaft, and an actuating mechanism connected to said lever,
 40 substantially as described.

4. The combination, with a saw-mill carriage the body of which is mounted to move

laterally upon its axles and provided with parallel guide-beams at one side outside of the wheels, of a rock-shaft journaled beneath
 45 the channel formed by the guide-beams, arms projected upward from the rock-shaft into said channel, friction-rollers attached to the arms and engaging the sides of the beams, a
 50 lever connected with the rock-shaft, and an actuating mechanism connected with the lever, as and for the purpose specified.

5. The combination, with a saw-mill carriage comprising the axles, a body mounted to slide laterally upon the axles, the trans-
 55 verse beams of the body being extended beyond one side, and spaced longitudinal beams secured to the extensions of the transverse beams, of a rock-shaft, arms extending from the rock-shaft upward between the longi-
 60 tudeal beams of the carriage, a cylinder, a piston connected with the cylinder, a lever attached to the rock-shaft, and a connection between the piston and the lever, as and for the purpose set forth.

6. The combination, with a saw-mill carriage comprising axles, a body having lateral movement upon the axles, the transverse beams of which are extended beyond one
 70 side, and spaced longitudinal guide-beams secured to the extensions of the transverse beams, of a rock-shaft, arms projected upward from the rock-shaft between the longitudinal beams of the carriage, friction-rollers mounted upon said arms, a cylinder, a lever
 75 projected downward from the rock-shaft, a connection between the lever and the piston of the cylinder, and mechanism for operating the valve of the cylinder, as and for the purpose set forth.

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Witnesses:

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