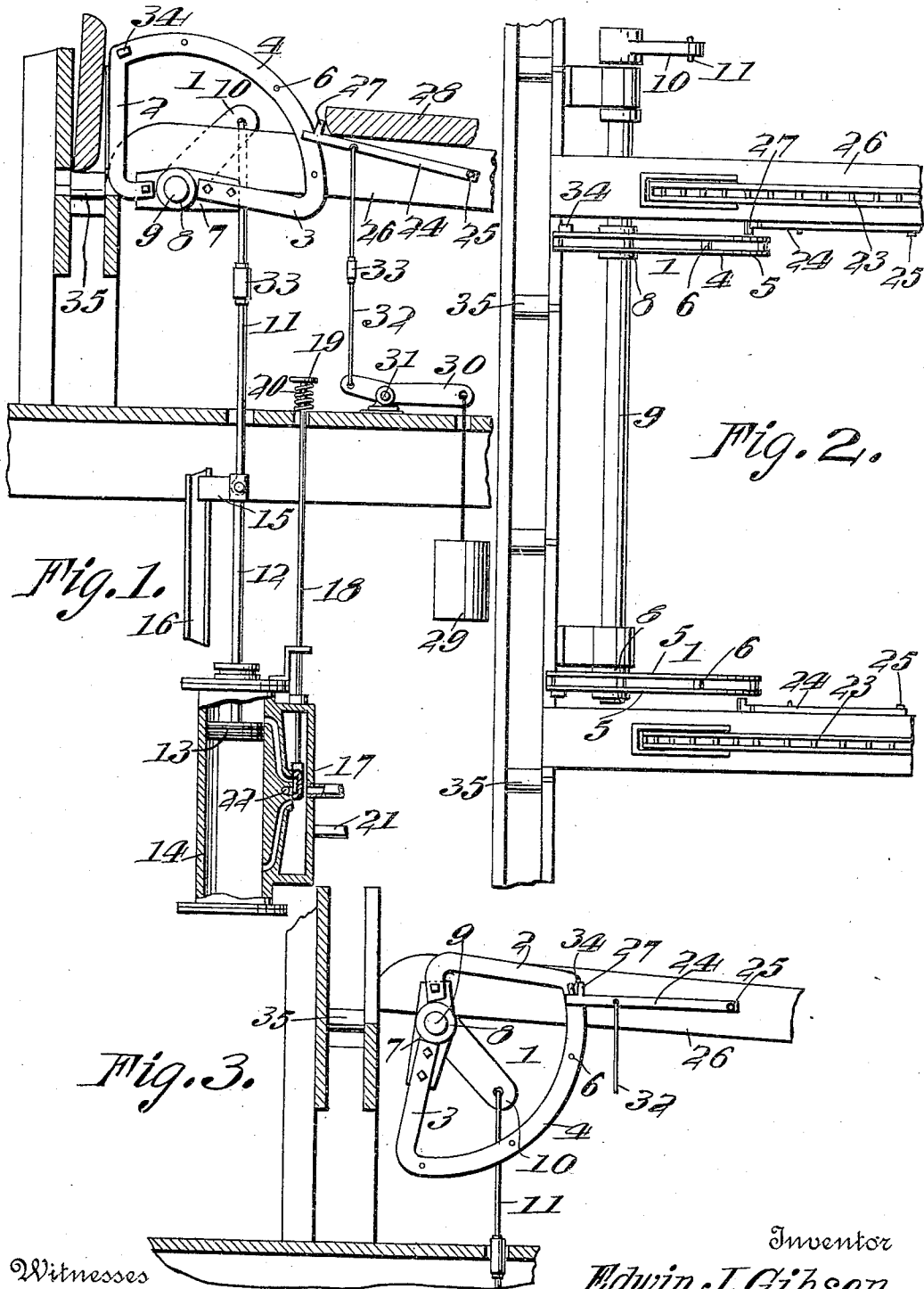


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STOCK LIFTER FOR SAWMILLS.
APPLICATION FILED APR. 22, 1909.

943,304.

Patented Dec. 14, 1909.



Witnesses

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STOCK-LIFTER FOR SAWMILLS.

943,304.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed April 22, 1909. Serial No. 491,538.

To all whom it may concern:

Be it known that I, EDWIN J. GIBSON, a citizen of the United States, residing at Charleston, in the county of Tallahatchie and State of Mississippi, have invented certain new and useful Improvements in Stock-Lifters for Sawmills; and I do 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.

This invention relates to an improved stock lifter, and is designed for use in connection with vertical re-saws in saw-mills to lift stock off the transfer chains and set it on edge ready to pass into the re-saw.

The principal objects of the invention are, first, to provide a device of this kind, which will be simple in construction and may be readily installed in position; second, to provide a device which will be positive in its operation; third, to so construct the device that it may be easily controlled or operated by the operator; and fourth, to equip the device with means to prevent the stock from passing over the lifter and in position to pass to the re-saw when the lifting arms are in raised position.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings: Figure 1 is a side elevation partly in section of a stock lifter embodying my improvements, the lifting arms in raised position; Fig. 2 is a plan view of Fig. 1; and Fig. 3 is a side elevation partly in section, of a portion of the device with the stock lifting arms in stock receiving position.

In the embodiment illustrated, the device comprises a pair of laterally spaced lifting arms 1, provided with vertical portions 2, lower horizontal portions 3 and curved portions 4 connecting the outer ends of the vertical portions with such ends of the horizontal portions. Each lifting arm comprises a pair of corresponding plates 5 which are held in spaced relation by spacing rollers 6, and said plates are connected with projections 7 extending from hubs 8, one arranged at one end of the rock shaft 9 and the other some distance from the opposite end

thereof. The shaft 9 is also provided at one end with a crank arm 10, to the outer end of which is connected a vertical pitman or plunger 11 which extends through the floor and connects with the rod 12 of a piston 13 mounted in a cylinder 14. The piston rod 12 is provided with a cross head or guide 15 which works in a suitable guide-way 16 mounted beneath the floor in any appropriate manner.

The numeral 17 indicates the slide valve for controlling the admission of steam into the casing 14, the stem 18 of said valve extending through the floor and being provided at its upper end with a tread plate 19. A spring 20 is arranged between the floor and tread plate 19 to hold the slide valve normally in such position as to permit the steam to pass in the cylinder 14 under the piston 13 in order that the latter will be normally held or positioned at the upper end of the cylinder 14 and thereby maintain the lifting arms 1 in raised position.

The numeral 21 indicates the exhaust pipe which leads to the exhaust cavity 22 of the piston cylinder 14. It will be understood, of course, that when the tread plate is depressed by the operator steam will be admitted above the piston and will consequently change the position of or lower the same, when the lifting arms 1 will be caused to swing into lowered position, in which position they are ready to receive the stock which is to be passed to the re-saw.

The numeral 23 indicates the transfer chains which are in motion continuously and are driven by any suitable means and in order to overcome the tendency of these chains to lift the stock over the lifting arms 1 when the latter are in raised position, catches 24 are pivoted, as at 25, to supports 26, the inner ends of said catches being provided with upwardly projecting portions 27 to engage the stock 28. The inner or free ends of the catches 24 are normally held in raised or stock-engaging position by weights 29 suspended from the free ends of levers 30 pivoted, as at 31, upon the floor and connected at their pivoted ends by connecting rods 32 with the free ends of the catches 24. The connecting links 32 as well as the connecting rod 11, may be provided with turn buckles 33, to increase or lessen the length of the same. Each lifting arm is provided at the intersection of the curved and verti-

cal portions of its outer plate 5 with a projection 34, the purpose of which will be presently disclosed.

In the operation of the device, the lifting arms are held in raised position, as shown in Fig. 1, while a piece of stock is passing upon the rollers 35 to the re-saw and the catches 24 held in raised position as indicated in said figure to prevent a piece of stock being carried by means of the transfer chains 23, over the lifting arms. However, when the next piece of stock is to be transferred from the chains 23, to the rollers 35 or brought into position to pass into a re-saw, the operator depresses the foot treadle 19 which actuates the slide valve 17 and causes the steam to pass over the piston 13 when the latter is caused to descend into the cylinder, and in doing so causes the lifting arms to swing into lowered or stock-lifting position as indicated in Fig. 3. As the stock-lifting arms swing into lowered position the projections 34 thereof engage the projecting ends of the catches 24 and swing them out of engagement with the piece of stock which is to be lifted. The foot treadle 19 is then released when the piston 13 again ascends in the cylinder 14 and swings the lifting arms in raised position, and in doing so, effects the transference of a piece of stock from the transfer chains 23 to the rollers 35 or brings the same into position to pass into the re-saw. At the same time, the weights 29 cause the free ends of the catches 24 to return into raised or stock-engaging position in order to engage the next piece of stock. It will be observed that the shape of the lifting arms is such that they act as a guard to prevent the stock from passing

thereover should the stock for any reason pass over the projections 24 of the catches.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

In a stock-lifter of the class described, a pair of laterally spaced stock lifting arms, means under the control of the operator for swinging said arms into either raised or lowered position, pivoted catches having outwardly extending projections at their free ends arranged in advance of the lifting arms, transfer chains for carrying the stock to the lifting arms, means for normally holding the free ends of the catches in raised or stock-engaging position, and means formed on the lifting arms for swinging the projections of the catches out of engagement with a piece of stock when the lifting arms are caused to swing into lowered or stock-receiving position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWIN J. GIBSON.

Witnesses:

W. B. BURKE,
ALBERT DAVIS.