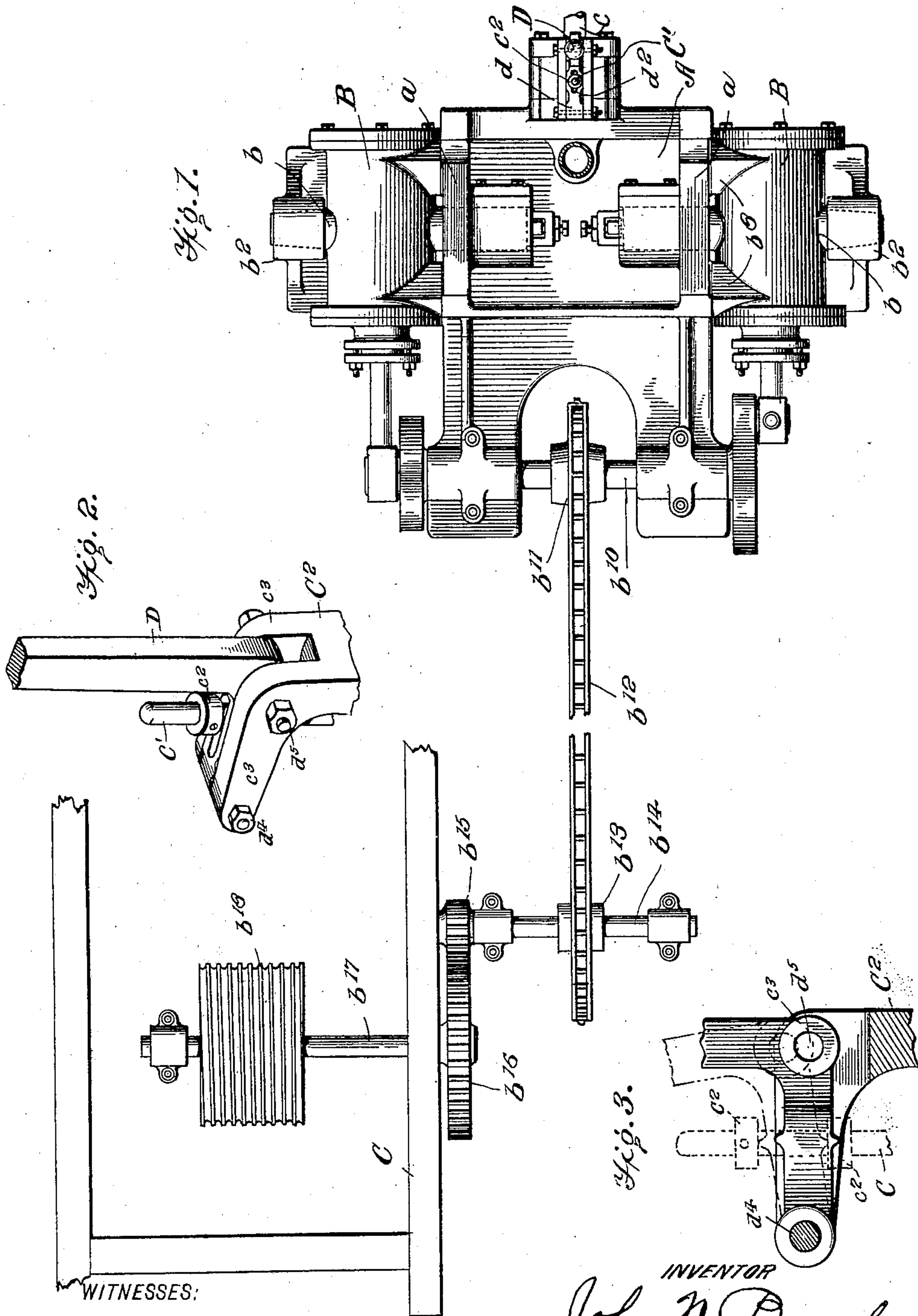


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J. N. BROWNLEE.
OPERATING MECHANISM FOR SAWMILLS.
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WITNESSES:

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JOHN N. BROWNLEE, OF SHUBUTA, MISSISSIPPI.

OPERATING MECHANISM FOR SAWMILLS.

No. 890,839.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed March 19, 1907. Serial No. 363,264.

To all whom it may concern:

Be it known that I, JOHN N. BROWNLEE, a citizen of the United States, residing at Shubuta, in the county of Clarke and State of Mississippi, have invented certain new and useful Improvements in Operating Mechanism for Sawmills; and I do hereby 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.

Among the objects of my invention may be mentioned: the provision of novel means of mounting the operating lever and a novel form of connection thereof with the valve-stem, in a steam-feed works for driving the carriage of a saw-mill; whereby there are provided two removable bearings for said lever, in the nature of pivots, so that, with both bearings in place, movement of said lever is prevented; with one bearing removed, a forward movement of said lever causes steam to be admitted to the cylinders to run the engines forward, and a backward movement of said lever causes steam to be admitted to the cylinders to run the engines backward; while, with the other bearing removed and the first-mentioned bearing in position, a forward movement of said lever causes steam to be admitted to the cylinders to run the engines backward, and a backward movement of the lever causes steam to be admitted to the cylinders to run the engines forward. In either event, the operating lever brings the engines to a full stop when in the center of its stroke. The advantage of this ingenious method of mounting the operating-lever is that it permits the engines to be positioned on either side of the shaft which actuates the saw-mill carriage. All as more fully hereinafter disclosed.

With this object in view, and others appearing as the specification proceeds, my invention resides in the novel construction, combination, and arrangement of parts of a device characterized by my invention, as will be hereinafter fully set forth in the specification, summed up in the claims, and illustrated in the drawings, in which latter:

Figure 1 is a top plan view of a steam-feed for saw-mill carriages, displaying my improvements applied thereto; Fig. 2 is a fragmentary perspective detail view of the operating-lever, illustrating the novel manner of

mounting the same in bearings and its connection with the stem of the valve; Fig. 3 is a fragmentary view of the operating lever.

Referring to the drawings in detail, A represents the bed-plate of the steam-feed mechanism, which is a casting of any ordinary or desired form, and having standards *a*, *a* rising therefrom.

B, B represent twin oscillating engines or cylinders; each engine being provided with a cone-shaped or tapering trunnion *b* working in a cone-shaped or tapering bearing in a standard *b*², which may be adjustably secured to the bed-plate A. As the tapering trunnion wears, the standard may be moved farther inward, thus taking up wear. This construction is, obviously, very advantageous, and contributes to the general desirability and advantages possessed by the steam-feed mechanism as a whole.

Carried by the crank shaft is, in this instance, a sprocket-wheel *b*¹¹ (though it is obvious that a gear-wheel or belt-pulley may be used, instead), meshing with a sprocket-wheel *b*¹³ on a shaft *b*¹⁴, on the end of which is a pinion *b*¹⁵ meshing with a pinion *b*¹⁶ on the end of a shaft *b*¹⁷ carrying the ordinary drum *b*¹⁸, around which is wound the rope (not shown) of an ordinary rope-drive, connected with the saw-mill carriage C, and forming no part of my invention.

C' represents the valve-stem of the steam-feed works, and carrying at its lower extremity any preferred or ordinary form of valve (not shown, as forming no part of my invention), controlling admission of steam to the engines through the steam-inlet pipe *c*. The valve-stem is provided, towards its upper end, with two collars *c*², *c*².

C² designates an upright standard disposed near the valve stem and suitably secured at its lower end. The standard is right-angled, bent at its upper portion into horizontal, forked or bifurcated extensions *c*³, *c*³, straddling the valve-stem C'.

Working between the bifurcations *c*³, *c*³ is the horizontal foot *d* of a vertical operating-lever D, said foot being provided with a slot *d*², through which the valve-stem C projects, and in which it works. The foot is also provided with teats or nipples *d*³ (Fig. 3), bearing against the under surface of the upper collar *c*² and against the upper surface of the under collar *c*²; though these teats are not

indispensable and may be omitted, if desired.

The lever D is adapted to be mounted in either of two removable pivot-bearings d^4 , d^5 . In the drawing, both pivot-bearings are shown in place, so that in this position the lever D is locked against movement; and, when it is desired to operate the lever, one or the other of the bearings is removed, as may be convenient. When the bearing d^4 is removed, a forward movement of the operating-lever D depresses the foot d on its pivot d^5 , thus permitting the valve-stem C to drop or lower, and giving a forward movement to the engines B, B, driving the saw-mill carriage C forward; while, with the bearing d^4 in position and the other bearings d^5 removed, the same (a forward) movement of the operating-lever D will swing the foot d upward on the pivot d^4 , thus raising the valve, and giving the reverse (a backward) movement to the engines B, B. This arrangement of bearings for the operating-lever D is important and efficacious, as it permits the engines to be positioned on either side of the shaft b^{17} operating the saw-mill carriage, and by removing one or the other of the bearings, the carriage can be made to travel in the same direction as the lever, which greatly increases its efficiency.

Many modifications in detail may be made, without departing from the scope and purview of my invention, as all such minor changes are within the range of those skilled in the art, and come strictly within my invention; but

What I do claim as new is:

1. In a steam-feed mechanism for saw-mills, a reciprocable member, a standard disposed in proximity to said member, and an operating-lever controlling the movement of said member, said lever being adapted to be mounted in either of two bearings in said standard and, when mounted in both said bearings, to be locked against movement.

2. In a steam-feed mechanism for saw-mills, a reciprocable member, a standard disposed in proximity to said member, and an operating-lever controlling the movement of said member, said lever being adapted to be mounted in either of two bearings in said standard and, when mounted in both said bearings, to be locked against movement, said lever being provided with a foot engaging said member.

3. In a steam-feed mechanism for saw-mills, a reciprocable member, a standard disposed in proximity to said member and provided, at its top, with a horizontally-disposed extension, and an operating lever controlling the movement of said member, said lever be-

ing adapted to be mounted in either of two bearings in said extension.

4. In a steam-feed mechanism for saw-mills, a reciprocable member, a standard disposed in proximity to said member and provided, at its top, with a forked or bifurcated extension horizontally disposed, and an operating-lever controlling the movement of said member, said lever being adapted to be mounted in either of two bearings in said extension.

5. In a steam-feed mechanism for saw-mills, a reciprocable member carrying collars near its top, a standard disposed in proximity to said member and provided, at its top, with a forked or bifurcated extension horizontally arranged and straddling the member, and an operating-lever controlling the movement of said member, said lever being adapted to be mounted in either of two bearings in said extension.

6. In a steam-feed mechanism for saw-mills, a reciprocable member carrying collars near its top, a standard disposed in proximity to said member and provided, at its top, with a forked or bifurcated extension horizontally disposed and straddling the member, and an operating-lever controlling the movement of said member, said lever being provided with a foot disposed between the forks and adapted to be mounted in either of two bearings in said extension.

7. In a steam-feed mechanism for saw-mills, a reciprocable member carrying collars near its top, a standard disposed in proximity to said member and provided, at its top, with a forked or bifurcated extension horizontally disposed and straddling the member, an operating lever controlling the movement of said member, said lever being provided with a foot disposed between the forks and engaging the said collars, and removable pins passing through said foot.

8. In a steam-feed mechanism for saw-mills, a reciprocable member carrying collars near its top, a standard disposed in proximity to said member and provided, at its top, with a forked or bifurcated extension horizontally disposed and straddling the member, and an operating lever controlling the movement of said member, said lever being provided with a slotted foot disposed between the forks and engaging the said collar and adapted to be mounted in either of two bearings in said extension.

In testimony whereof, I affix my signature, in the presence of two subscribing witnesses.

JOHN N. BROWNLEE.

Witnesses:

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