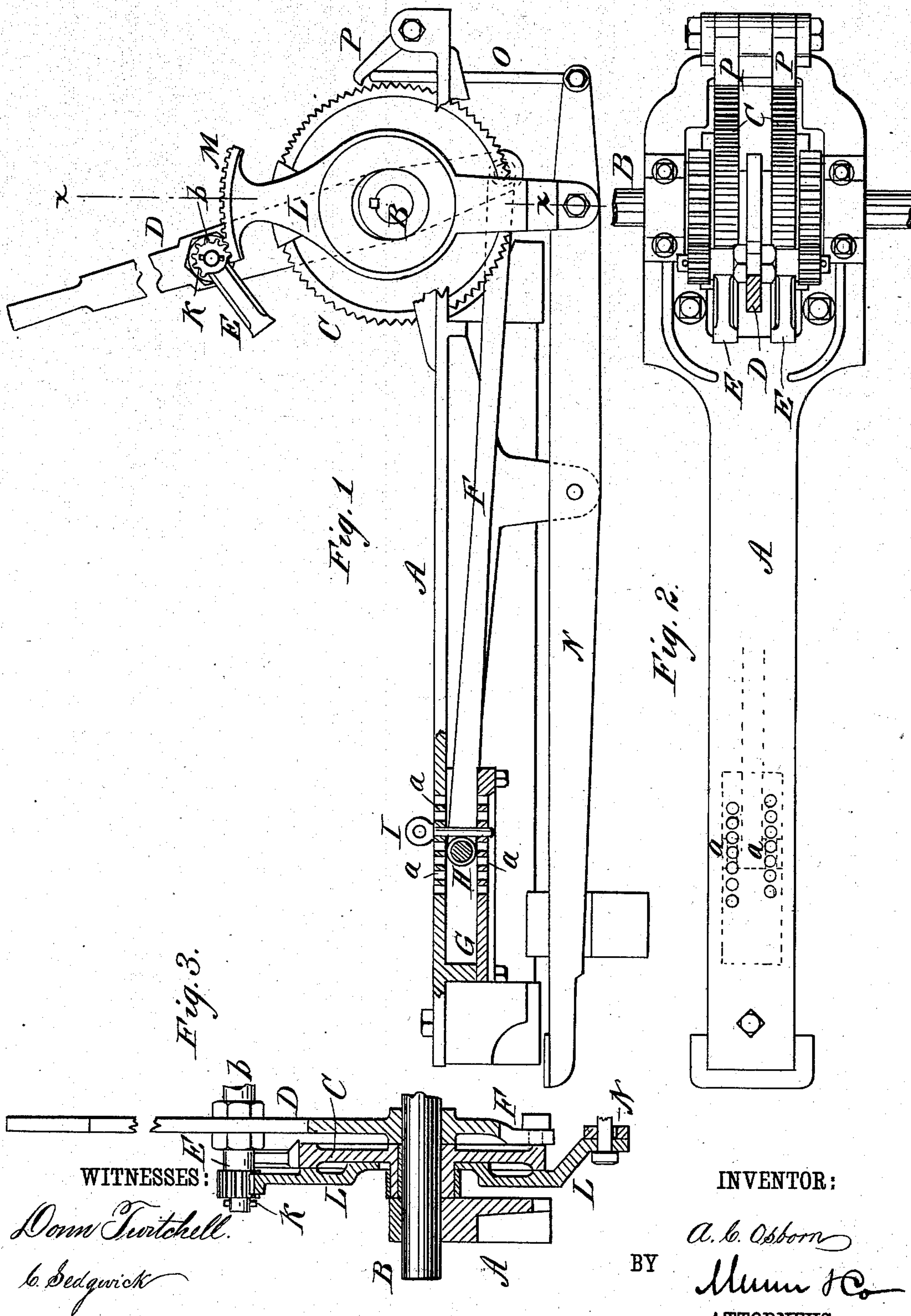


(No Model.)

A. C. OSBORN.
SET WORKS FOR SAW MILLS.

No. 282,214.

Patented July 31, 1883.



UNITED STATES PATENT OFFICE.

ALEXANDER C. OSBORN, OF CLARKSBURG, WEST VIRGINIA.

SET-WORKS FOR SAW-MILLS.

SPECIFICATION forming part of Letters Patent No. 282,214, dated July 31, 1883.

Application filed May 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER C. OSBORN, of Clarksburg, Harrison county, and State of West Virginia, have invented a new and useful Improvement in Set-Works for Saw-Mill Head-Blocks, of which the following is a full, clear, and exact description.

My invention relates to the mechanism for operating and adjusting the set-works of saw-mill head-blocks; and it consists, first, in a device for regulating the throw of the hand-lever by which the ratchet-wheels are operated to move the log; and, second, in a rack-and-pinion device for turning the pawl of the hand-lever into position for moving the ratchet-wheels in either direction, all as hereinafter described and claimed.

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

Figure 1 is a side view, partially sectional, of a saw-mill head-block with my improvements applied to the set-works. Fig. 2 is a plan view of the same, and Fig. 3 is a transverse section on line *x x* of Fig. 1.

A is the head-block. B is the shaft of the set-works. C C are the ratchet-wheels keyed on the shaft, and D is the hand-lever loose on the shaft, and carrying pawls E E for engaging the ratchet-wheels. These parts are of the usual construction, as will be also the devices operated by the shaft, which are not shown.

The lever D is extended below the shaft, and to its lower end is connected a rod, F, that extends to a box, G, at the under side of block A, where the rod connects to a slide, H, which is fitted for movement lengthwise of the box. In the upper and under sides of the box are holes *a* for receiving a pin, I, by which the movement of the slide is limited in one direction, the reverse movement being limited by the end of the box. The holes are as numerous as may be required, so that the pin can be shifted to vary the length of movement allowed to the slide H and rod F, and consequently to the lever D, thus regulating the extent of movement given the ratchet-wheels by the lever, and the lever and the forward movement of the log. In this manner the thickness of lumber sawed is governed.

The operating-pawls E are hung on a spindle, *b*, on the lever D, there being also pinions K on the spindle.

On the the hub of each ratchet-wheel a piece, L, is hung loosely, so as to be capable of a limited vertical movement, and the upper end of the pieces L are formed as racks beneath the pinions K, for engagement therewith when raised by means of a foot-lever, N, to which the pieces L are connected. To revolve the pawls the lever N is pressed down, which engages the racks with the pinions K, and the hand-lever being then moved, the pinions are turned by their engagement with the racks and the pawls swung over to either side for moving the ratchet-wheels in the direction desired.

At the outer end of lever N is connected an arm, *o*, that extends up to the back pawls, P, and the hole for the pin connecting the lever to the piece L is elongated, so that by a slight movement by the lever the pawls P can be raised without raising the piece L. This is done when it is desired to work the ratchets backward.

In place of using a rack and pinion, a friction-disk and curved arc may be used.

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

1. The combination, with the hand-lever D, extended below the shaft B of the set-works, of the box G, having holes *a*, the pin I, working in any of said holes, the slide H, adapted to move longitudinally in said box, and the rod F, connecting the lever with the slide, for the purpose specified.

2. The combination of slide H, having a movement limited by movable pins I, and rod F, with head-block A and lever D, for operating the set-works, substantially as described.

3. The combination, with the pawls E and pinions K, arranged on the spindle *b* of the lever D, of the ratchet-wheels C, provided with a loosely-hung and vertically-movable top ratcheted piece, L, on each hub, and the foot-lever N, connected with said pieces L, for the purpose specified.

4. The foot-lever N, connected by a pin and elongated slot with the piece L, and having an end arm, *o*, extending to the back pawls, P, as and for the purpose specified.

ALEXANDER C. OSBORN.

Witnesses:

C. C. ZINN,
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