J. W. STOKOE.

Set-Works for Saw-Mills.

No. 161,294. Patented Mar. 23, 1875.

Fig. 1.

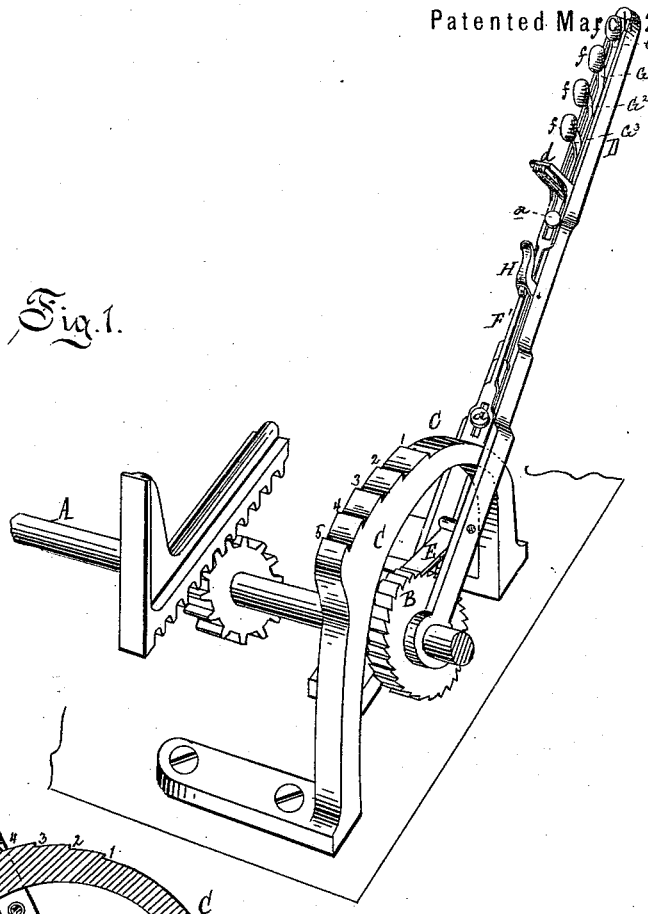


Fig. 2.

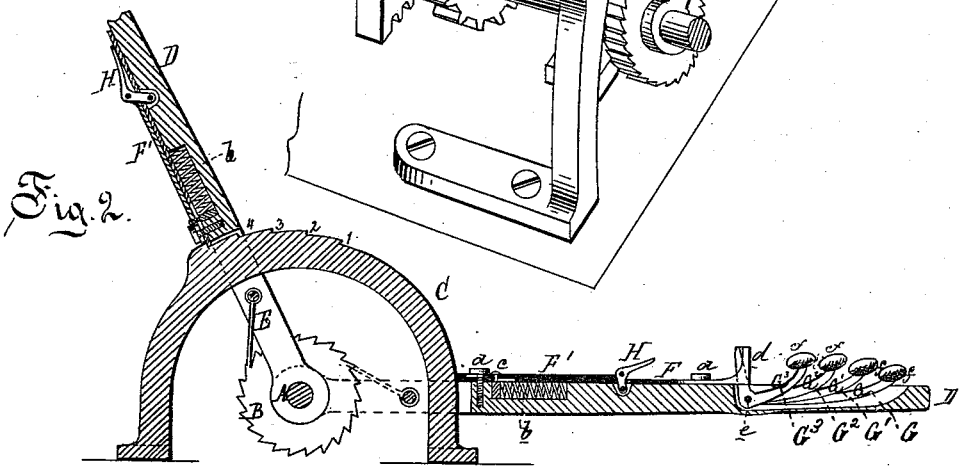
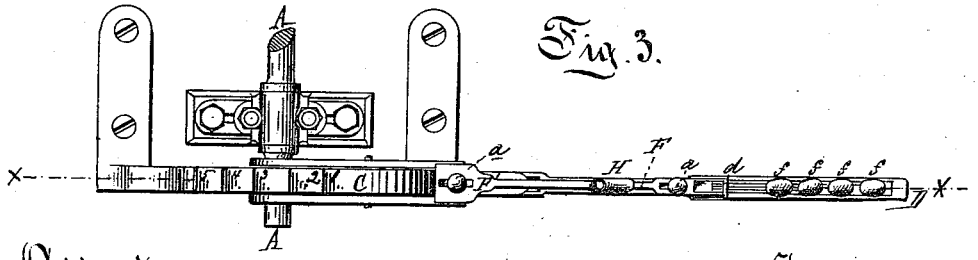


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN W. STOKOE, OF MANISTEE, MICHIGAN.

IMPROVEMENT IN SET-WORKS FOR SAW-MILLS.

Specification forming part of Letters Patent No. **161,294**, dated March 23, 1875; application filed February 12, 1875.

To all whom it may concern:

Be it known that I, JOHN W. STOKOE, of Manistee, in the county of Manistee and State of Michigan, have invented an Improvement in Set-Works for Saw-Mills, of which the following is a specification:

The object of my invention is to so construct the lever and quadrant of the setting mechanism as that the operator can set the log or cant to any merchantable thickness of lumber to be cut from it, by a single sweep of the set-lever, and without shifting any pins or other stops on the quadrant; also at the same time to make any board "scant" or "plump" thickness, as desired.

The invention consists in providing the set-lever with a latch sliding on its face, which can be raised by a plurality of bell-cranks on the gripe or handle to varying heights, in combination with a quadrant having a series of stops of varying radiuses on its upper edge; also, the combination with said lever of second latch sliding on the face of the other, and actuated by an independent bell-crank for allowing the set-lever to be thrown forward enough to feed the head-block forward an additional one-eighth of an inch from any stop, whenever it is desired to make plump lumber, as more fully hereinafter set forth.

Figure 1 is a perspective view. Fig. 2 is a longitudinal vertical section at *x x* in Fig. 3, which is a plan.

The set-lever is shown in two different positions in Fig. 2. There is but one lever.

In the drawing, A represents the set-shaft of a circular-saw mill, on one which is keyed a ratchet, B, directly under a quadrant, C. On the shaft is sleeved the bifurcated end of a set-lever, D, which straddles the ratchet, with which engages a pawl, E, pivoted in the fork of said lever, and ordinarily lies in a horizontal position, resting on a stop. F is a latch secured to the face-edge of the lever by two screws, *a a*, passing through slots in the latch, which has a longitudinal movement on the lever, and has a spring, *b*, laid in a recess pressing down a block secured to the inner end of a screw, *c*, passing through a slot in said latch. The office of the spring is to press down the lower end of the latch into the face or upper edge of the quadrant, which has five permanent stops or abutments, 1 2 3 4 5, raised above its periphery, each raised higher than the preceding one. The upper end of the latch projects out at a right angle with the body, as at *d*. G G^1 G^2 G^3 are bell-cranks, pivoted at *e* in a recess formed in the gripe of the lever, their short arms taking under the projection *d* of the latch, while their longer arms being of different lengths extend up the face of the gripe, each terminating in a flattened finger-piece, *f*.

The first stop 1 on the quadrant would arrest the latch when the lever has been thrown far enough to move the head-blocks forward to have an inch board cut from the log or cant. To cut one and a quarter inch lumber the sawyer presses in the bell-crank G, which raises the latch high enough to slip over the stop 1, but it is there arrested by stop 2, which is in the position to arrest it when the head-blocks have been thrown one and a quarter inch. By pressing in successively the bell-cranks G^1 G^2 G^3 one and a half, one and three quarters, and two inch lumber may be cut with unfailing accuracy without stopping to change pins or other adjustable stops on the quadrant for each different thickness.

The quality of lumber known as "clear" commands a much higher price in the market than the ordinary run of the mill, which is cut to the exact or scant thicknesses above given. Clear lumber is required to have one-eighth of an inch greater thickness than common lumber to allow for shrinkage in seasoning, dressing, &c., else it is inspected and sold as of a lower grade. There is always more or less lumber in a log that will pass as clear if it can be cut plump or one-eighth of an inch over thickness, and to enable the sawyer to select such boards or planks from the timber a second latch, F′, is provided, which slides upon and with the latch F. It moves with the latter when it is raised by one of the bell-cranks; but has also an independent upward movement through a bell-crank, H, pivoted to its upper end and to the lever. The screw *c* connects it to the spring *b*, so that it is kept in contact with the quadrant, and it is always opposed to the various stops on the latter. Its thickness is such that if lifted by the bell-crank H to clear a stop the lever can be thrown

forward enough to move up the head-blocks five-eighths of an inch before the latch F strikes the abutment or stop, thereby enabling the sawyer to cut plump lumber at will.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the lever D, latch F, spring *b*, and bell-cranks G G^1 G^2 G^3, with the quadrant C, having a series of abutments in varying planes, substantially as and for the purpose set forth.

2. The combination of the latch F′ and its bell-crank H with the lever D and latch F, substantially as and for the purpose set forth.

JOHN W. STOKOE.

Witnesses:
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