J. A. Dorr,

Reciprocating Saw Mill.

No. 107,886. Patented Oct. 4, 1870.

Fig. 1.

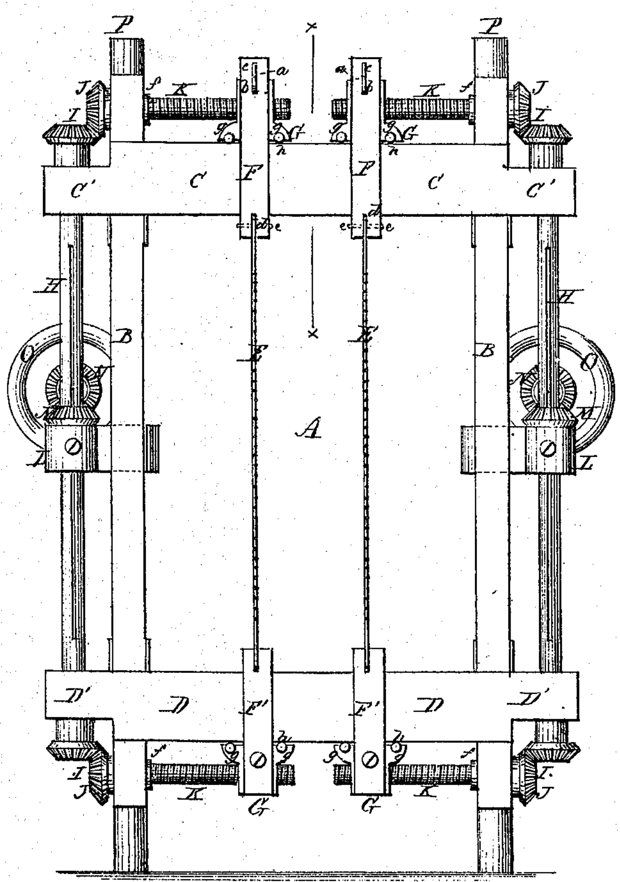


Fig. 2.

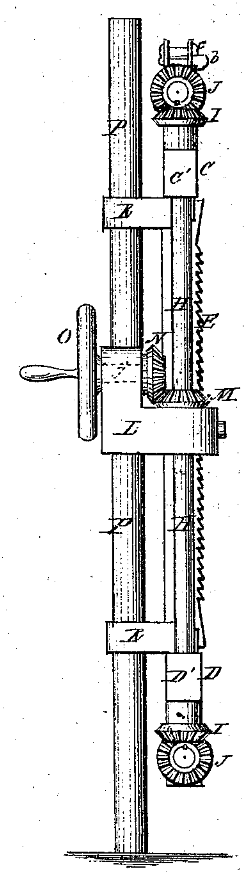
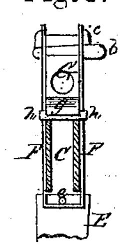


Fig. 3.



Witnesses.

[illegible]

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United States Patent Office.

JESSE A. DORR, OF WILLIAMSPORT, PENNSYLVANIA.

Letters Patent No. 107,886, dated October 4, 1870.

IMPROVEMENT IN SAW-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JESSE A. DORR, of Williamsport, in the county of Lycoming and in the State of Pennsylvania, have invented certain new and useful Improvements in Saw-Gates for Sawing Logs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, in which drawing—

Figure 1 is a front elevation of my device;

Figure 2 is a side elevation of the same; and

Figure 3 is a vertical cross-section of the top of the gate on the line *x x* of fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

The nature of my invention relates to saw-gates, constructed and arranged for slabbing logs, and for sawing logs into lumber; and

The invention consists in the means employed for making two vertical up and down saws, laterally and independently adjustable while in motion, and in the combination and arrangement of its various parts, all as more particularly hereinafter described.

In the drawing—

A represents the saw-gate, which is intended to be secured in any ordinary method in a saw-mill, the motive power being applied to it in any usual way.

This gate is constructed with two side pieces, B, arranged perpendicularly, and made solidly, of suitable material, with a top, C, and a bottom, D, each composed of two pieces of metal, of the form shown in the drawing, which pieces cross the side pieces at right angles, and are let into them near their upper and lower ends respectively, and properly secured thereto.

The ends C′ and D′ of these top and bottom pieces project a short distance beyond the outsides of the side pieces before named.

Two saws, E, are strained to said top and bottom pieces by means of straps, F and F′, which bend respectively up over the top piece, and down over the bottom piece aforesaid.

The strap F embraces a truck, G, more fully described hereinafter, and projects a little above said truck, where it has a slot, *a*, passing through both sides of it.

The top of the truck G has a corresponding groove, through which slot and groove passes a wedge-key, *b*, upon the under side of a locking-key, *c*, whose upturned shoulders embrace the outsides of the strap, and keep them together, while the key *b* secures the strap and truck together, and serves to strain the saw.

The bent portion or the bight of the strap, extending below the bottom of the top piece C, has a slot, *d*, in it, of sufficient size to admit the end of the saw, which is held in place there by a pin, *e*, which passes through it.

The lower end of the saw is attached in similar manner to the strap F′, and said strap is arranged, with regard to the bottom piece D and its truck G, like the strap F, except that it does not project below said truck, and is directly secured to it by screws.

Rods H pass vertically through the ends C′ and D′, rotating in them, on each side of the gate, and have at either end bevel-gears I, which mesh at the top and bottom with bevel-gears J, which, in turn, are secured to the rods K, which pass through and rotate in the top and bottom ends of the side pieces B and the trucks G.

The last named rods have screw-threads cut in them, to fit into corresponding screw-threads in the trucks G, and have, also, shoulders *f* next the outsides of the side pieces B, so that they may not have lateral play in their bearings.

The length of each pair of these rods is a little less than the width of the whole gate.

The trucks G, of the shape portrayed in fig. 1, have offsets *g* at their bases, which contain rollers *h*, which turn in semicircular bearings in said offsets, and cause the trucks to roll smoothly upon the top and bottom of the frame.

The rollers having a greater diameter in their centers, and less under the bearings, are thus made with shoulders, which press at either end against the inner sides of the plates composing the top piece C and bottom piece D, and are thus secured against lateral deviation.

The rods H pass up and down through suitable bearings L near the center of the frame, which bearings have, upon their upper front portions, bevel-gears M, perforated in the center, so as to admit the passage of the rods H through them, and permit them to turn freely upon said rods, which bevel-gears, in turn, mesh with bevel-gear N, secured to shafts *j*, passing through the bearings L from front to rear.

Upon the rear ends of the shafts just named hand-wheels O are properly attached.

These bearings are also secured to two vertical guides P, each in rear of the side pieces B, upon which the saw-frame also traverses up and down, said guides passing through suitable arms secured to said side pieces immediately above and below the cross pieces D and C respectively.

In the operation of this device each of the saws E can be adjusted laterally and independently of each other, so that the gate may be used for slabbing logs,

in such a way that a thin slab may be taken from one side, and a thick one from the other, or, in sawing lumber, so that a board may be taken from one side and a plank from the other; and this adjustment may be made while the saws are in motion, and without shutting off the power.

Having thus described this device,

What I claim therein as my invention is—

1. The trucks G, constructed as described and shown, in combination with the top and bottom pieces C and D, and the screws K, for the purposes set forth.

2. The combination of the trucks G, the top and bottom pieces C and D, the screws K, and the sawgate A, substantially as described and shown, for the purposes set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 15th day of August, 1870.

JESSE A. DORR.

Witnesses:

J. A. BEEBER,

E. ANDREWS.