L. W. POND.

Saw-Mill.

No. 160,348.

Patented March 2, 1875.

Fig. 1.

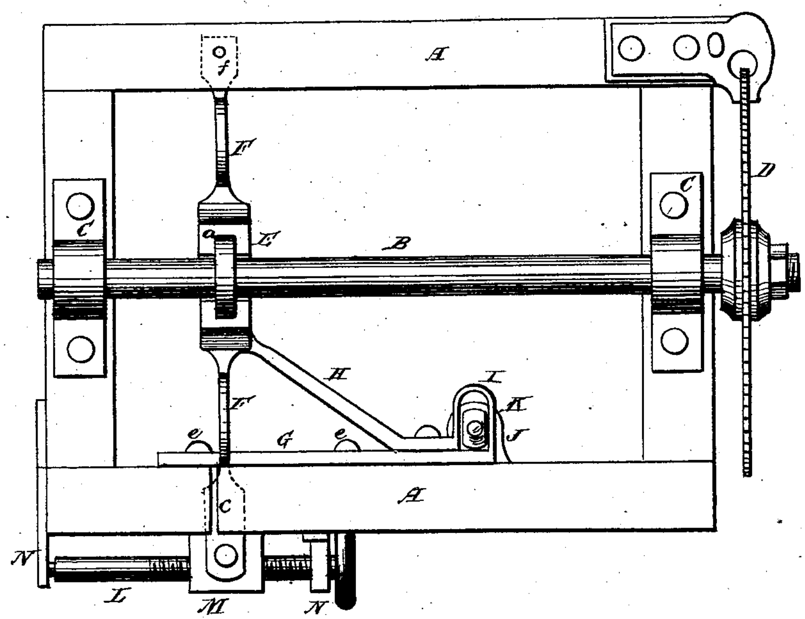


Fig. 2.

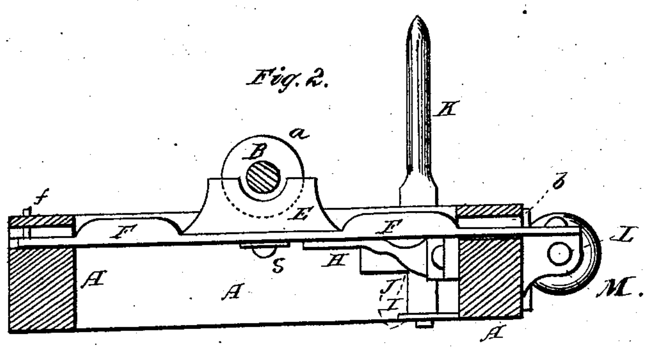
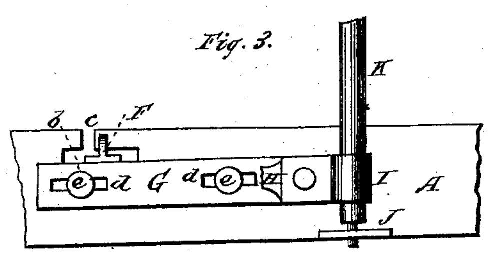


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEVI W. POND, OF EAU CLAIRE, WISCONSIN, ASSIGNOR OF ONE-HALF HIS RIGHT TO EAU CLAIRE LUMBER COMPANY.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. **160,348**, dated March 2, 1875; application filed June 15, 1874.

To all whom it may concern:

Be it known that I, LEVI W. POND, of Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented new and useful Improvements in Saw-Mills, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view; Fig. 2, a cross-section on line *x* of Fig. 1; and Fig. 3, a section of the side rail, showing the lever and its connections.

The object of my invention is to give the saw-shaft end play, to adjust the line of the saw, and to give the saw-shaft a yielding or adjustable endwise support; and its nature consists in providing the saw-shaft with a collar between the journal-bearings, said collar turning in a head or half-box supported upon an adjustable and yielding cross-bar.

In the drawings, A represents the frame; B, the saw-shaft; C, the journal boxes or bearings; D, the saw; E, the head or half-box; F, the yielding spring or yielding cross-bar; G, the sliding bar for moving the cross-bar F; H, the brace; I, the lever-stirrup; J, the supporting pivot or fulcrum for the lever K; K, the lever; L, the screw-shaft; M, the nut, to which the outer end of the yielding bar F is connected; N, the supports or journals for the screw-shaft; O, the saw-guide; *a*, the collar on the saw-shaft; *b*, the mortise in the frame, through which the end of the yielding cross-bar F passes; *c*, the slot or opening for inserting the bar F; *d*, the slots in the sliding bar G; *e*, the screws passing through the slots *d* and supporting the sliding bar G; *f*, pivoted bolt of the bar F; *g*, the pivot for the head E.

The frame A is made in any suitable manner and provided with a suitable saw-guide, O. The saw D is attached to the shaft in any suitable or well-known way, and the shaft is hung in any suitable journal boxes or bearing. Between the journal-boxes I place a collar, *a*, on the shaft B, and firmly attach it thereto, or it may be made a part of the shaft. This collar turns in a recess made to fit it in the head E. The head E is attached to the cross-bar F, which is pivoted at *f* to one side of the frame, and on the opposite side passes through an elongated mortise, *b*, in the frame, and is provided at the outer end with a screw-nut, M, through which nut the screw-shaft L passes, and is turned by means of a button or other suitable device at the end.

The run of the saw can be adjusted by means of the screw-shaft L, and for the purpose of this operation the cross-bar or lever F may be made rigid, and will be found useful without further addition; but, in order to give the saw a yielding movement endwise, I make the bar F so that it will spring to some extent; and, as the head E is attached, by means of the brace or bar H, to the sliding bar G, this construction will permit of end play of the shaft B. The end play may also be forced by means of the lever K, which is pivoted at J and passes through the stirrup I of the bar or bars G H, so that, by moving this lever K to the right or left, the position of the head E will be changed accordingly, and with it the run of the saw.

Two collars, *a*, may be placed on the shaft, and the head E made to work between them, instead of being grooved, as shown, and, by extending the shaft B beyond the journal-boxes, it may be applied to the end, instead of between, as shown.

The head E is attached to the bar F by a single pivot, *g*, centrally located, so as to prevent binding.

The spring-bar F should be strong enough to prevent any lateral vibration or trembling of the saw, but sufficiently yielding to allow the saw to give in either direction when crowded.

What I claim as new is as follows:

1. The pivoted bar F, in combination with the nut M and screw-shaft L, substantially as and for the purpose described.

2. The combination of the movable or spring bar F with the sliding bar G, brace or bar H, lever K, and stationary saw-guide O, substantially as and for the purposes set forth.

3. The combination, in a saw-frame, of the saw-mandrel B, provided with one or more collars, *a*, with the movable or spring bar F, nut M, screw-shaft L, sliding bar G or H, and lever K, substantially as specified.

LEVI W. POND.

Witnesses:
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