

(No Model.)

J. LUCIA.
LOG ROLLER FOR SAW MILLS.

No. 254,671.

Patented Mar. 7, 1882.

Fig. 1.

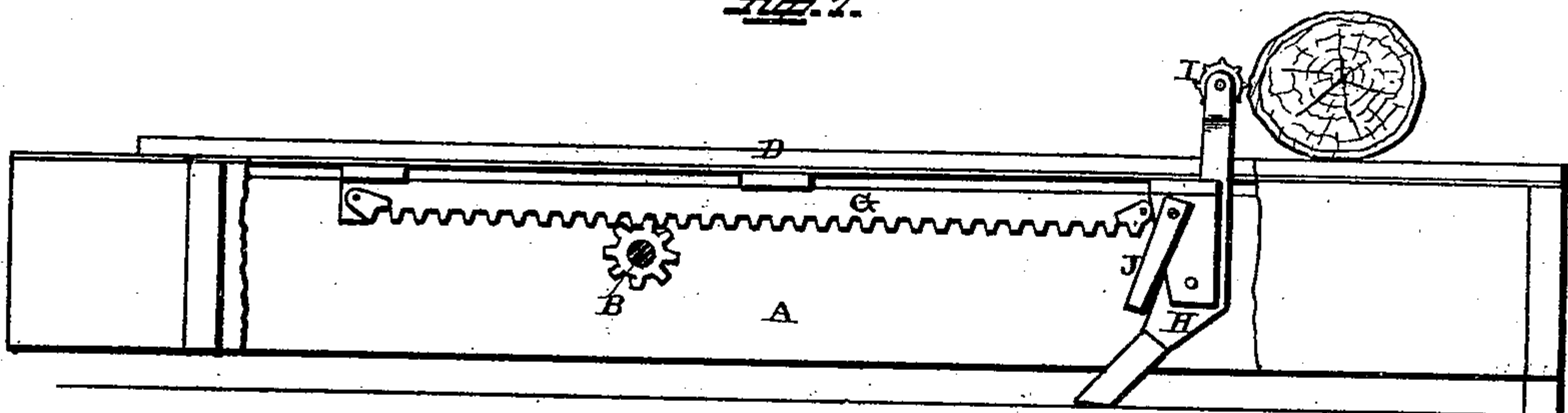


Fig. 2.

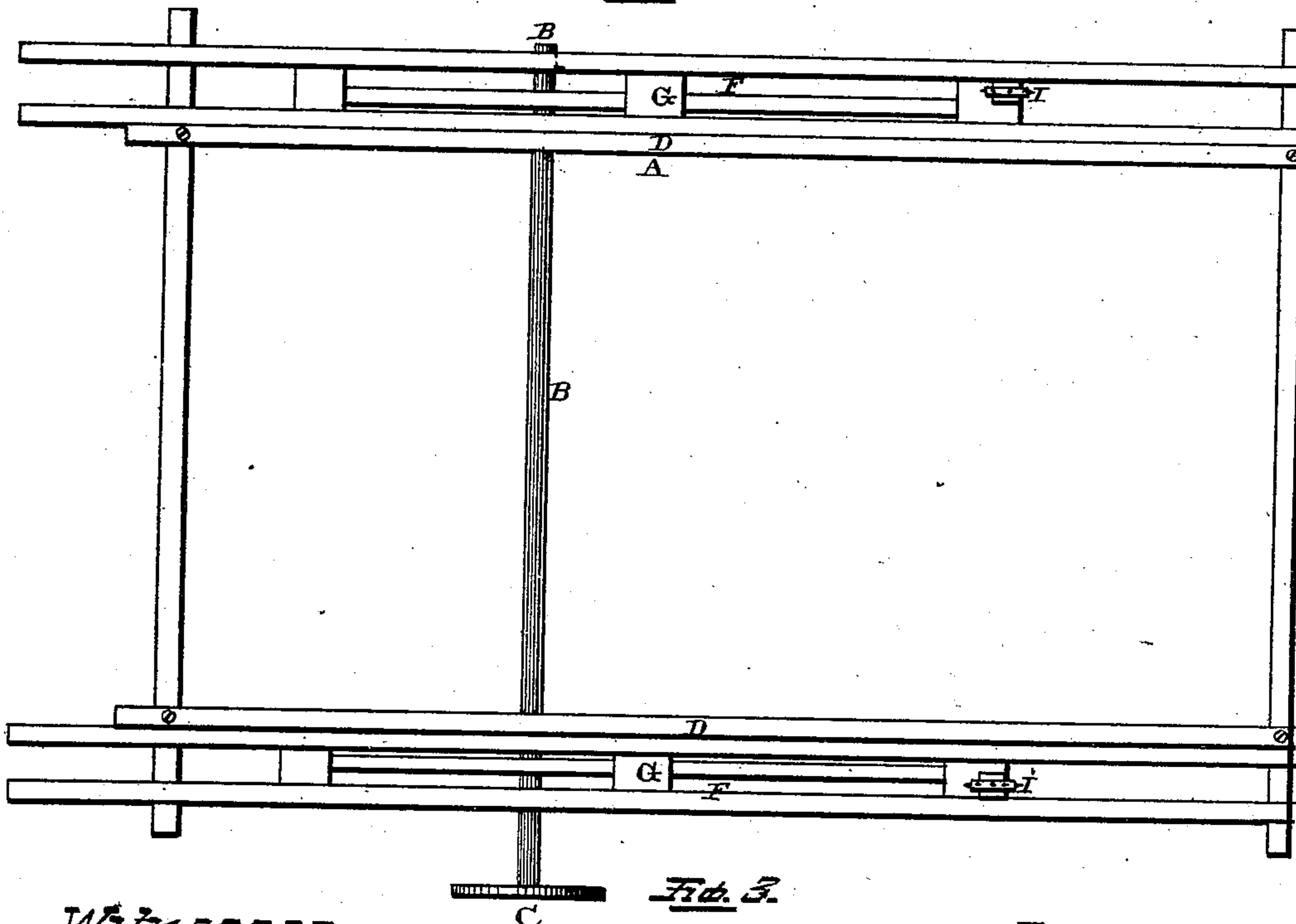
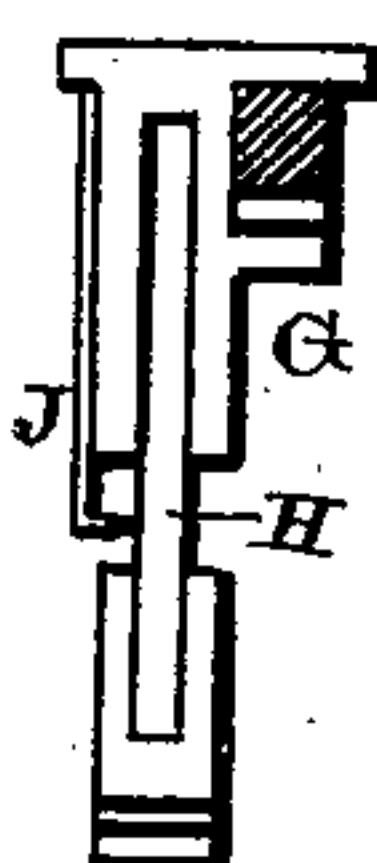


Fig. 3.



WITNESSES.

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LOG-ROLLER FOR SAW-MILLS.

SPECIFICATION forming part of Letters Patent No. 254,671, dated March 7, 1882.

Application filed April 6, 1881. Renewed January 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOEL LUCIA, of Little Suamico, in the county of Oconto and State of Wisconsin, have invented certain new and useful Improvements in Log-Rollers for Saw-Mills; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in log-rollers for saw-mills; and it consists in a pivoted lever having a spur-wheel journaled in its upper end, and having its lower end weighted, whereby, when the cross-heads are moved in one direction, the levers are made to roll the log forward toward the saw, and when moved in the opposite direction will allow their upper ends to be depressed, so as to pass under the log and then spring back into place by the action of the weight.

It further consists in attaching to the cross-head a spring-catch, which, when the levers have their upper ends depressed, as when passing under the log, catch under the sides of their lower ends to hold the levers in nearly a horizontal position until released by the operator, all of which will be more fully described hereinafter.

The object of my invention is to dispense with the usual springs and other such appliances as have been attached to the lower end of these pivoted levers, and to make the levers automatic in their operation by making the lower ends of the levers heaviest, and to provide a means by which the levers can be thrown out of operation when so desired.

Figure 1 is a side elevation of my invention, partly in section. Fig. 2 is a plan view of the same. Fig. 3 is a detail sectional view.

A represents a suitable frame of any desired construction, and through which passes the operating-shaft B, which is provided with a pinion for moving each cross-head back and forth, and a friction-wheel, C, upon its outer end. Upon the top of this frame are secured the two skids D, upon which the log is placed preparatory to being moved toward the saw. Each

side of the frame, at its top edge, is provided with suitable ways or guides, F, in which the cross-heads G are moved back and forth by means of the pinions on the driving-shaft and the racks formed in their lower edges. Pivoted in the lower part of the downward extension formed on the front end of the cross-head is the lever H, which has a wheel, I, provided with sharp points journaled in its upper end, and which lever has its lower end either made thick and heavy, so as to serve as a counterbalance, or which has a weight of any suitable kind secured to it. The lower end of this lever is curved slightly backward, as shown, so as to cause the upper end of the lever to return more quickly into position after it has been depressed for the purpose of moving under a log, as is the case when the cross-head is moved backward toward the log which has been placed upon the skids in their rear. Secured to the side of the cross-head, and extending downward a suitable distance, is a spring catch or hook, J, of any suitable description, which has its lower end so shaped as to catch under the lower edge of the lever when the upper end of the lever is depressed sufficiently far to raise the lower end upward.

The operation of my invention is as follows: The log is placed upon the skids and rolled forward by hand to a point in advance of the driving-shaft. The driving-shaft is then turned so as to draw the cross-heads backward, and when the upper ends of the levers come in contact with the front side of the log the levers turn freely upon their pivots, and their lower ends are depressed sufficiently to allow them to pass underneath the log. When the levers sink down just far enough for the wheels to pass underneath the logs the spring-catches do not interfere with the levers, and as soon as the wheels are passed under the log the weighted ends of the levers cause their upper ends to rise upward in the rear of the log. When the shaft is turned so as to move the cross-heads forward the sharp projections on the wheel catch against the sides of the log and roll them forward toward the saw. When it is desired to throw the levers out of operation it is only necessary to raise their weighted ends

upward far enough to enable the spring hooks or catches to keep under their lower edges, when the upper ends of the levers will be held down out of operation until the spring-hooks are moved backward, so as to leave the levers free to operate.

Heretofore pivoted levers provided with wheels have been used; but they have been attached to springs and other such devices for drawing them back into position again after they have been depressed by the logs; but this construction is both troublesome and expensive. By weighting the levers they are made automatic in their operation, and the cost of the machine is greatly cheapened.

The tooth or cog at each end of each rack is pivoted, so as to prevent it from being broken. Where they are pivoted, as here shown, the head-blocks will move from end to end of the frame at full speed without the slightest danger, whereas if these end cogs are cast in a solid piece with the rest of the bar either the teeth

themselves will be broken or the teeth of the pinion will be injured.

Having thus described my invention, I claim—

1. In a log-roller, the combination of a driving-shaft and pinions with the rack-bars G and cross-heads, and the pivoted weighted levers H, provided with the spur-wheels I, substantially as shown.

2. The combination of the driving-shaft provided with pinions, the rack-bars, cross-heads, pivoted weighted levers provided with the spur-wheels I, and the spring-catches J, substantially as described.

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

JOEL LUCIA.

Witnesses:

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A. R. COOPER.