

J. M. REES.
Improvement in Saw-Mills.

No. 129,495.

Patented July 16, 1872.

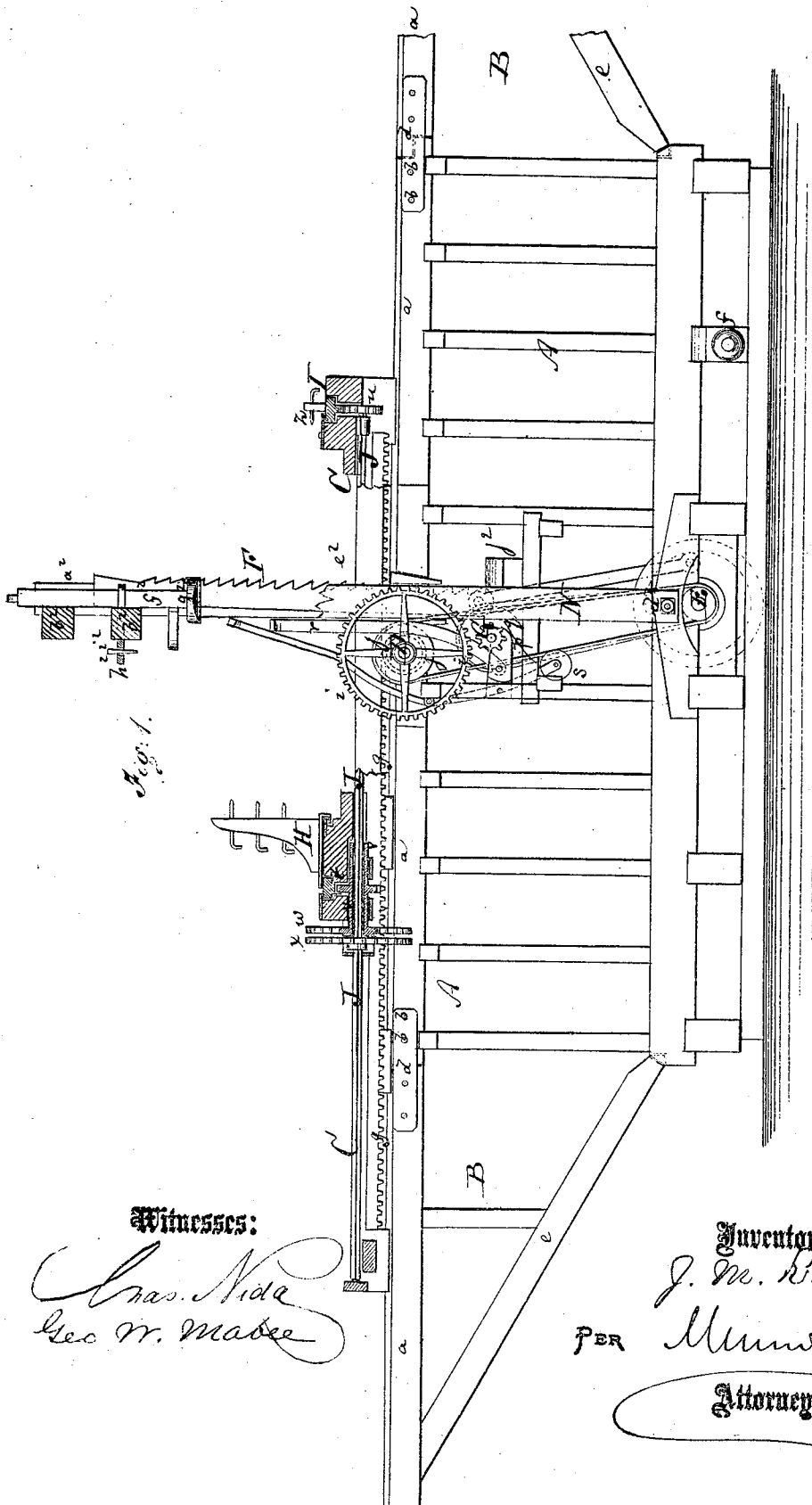


Fig. 1.

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Geo W. Mabee

Inventor:

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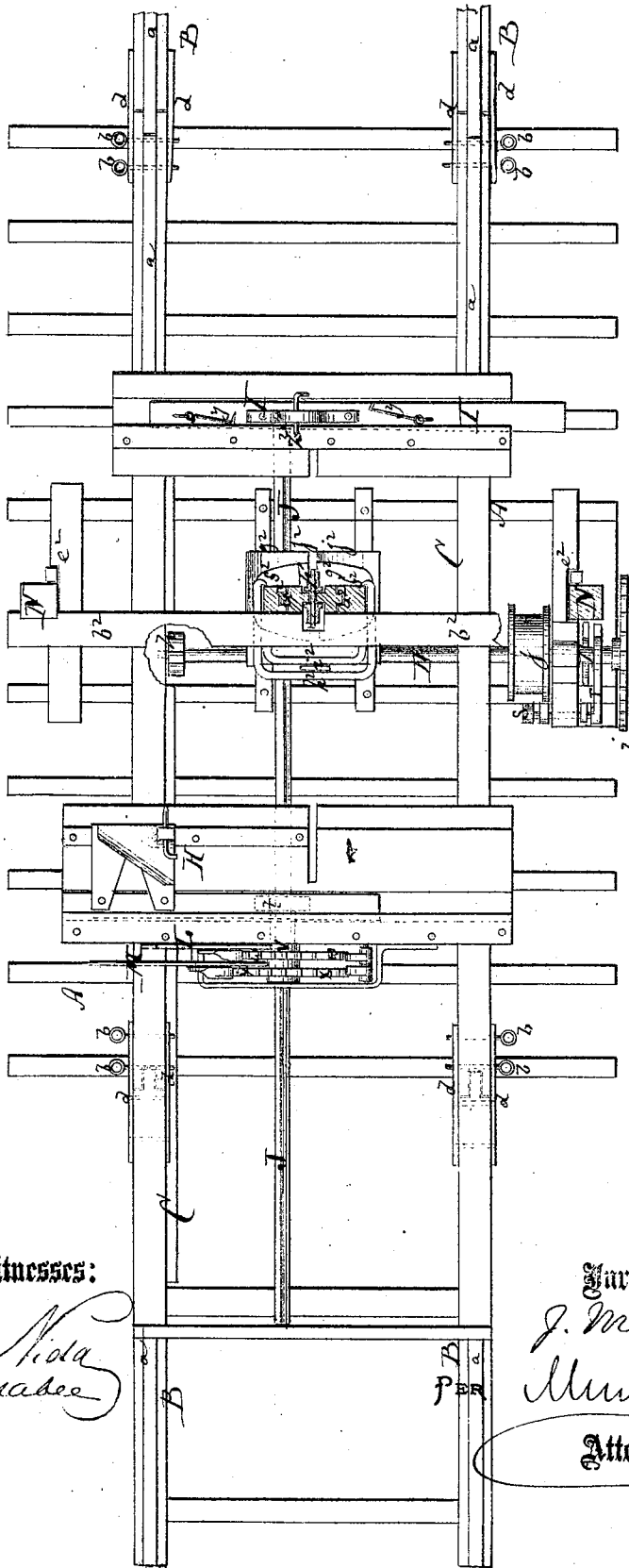
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Fig. 2.



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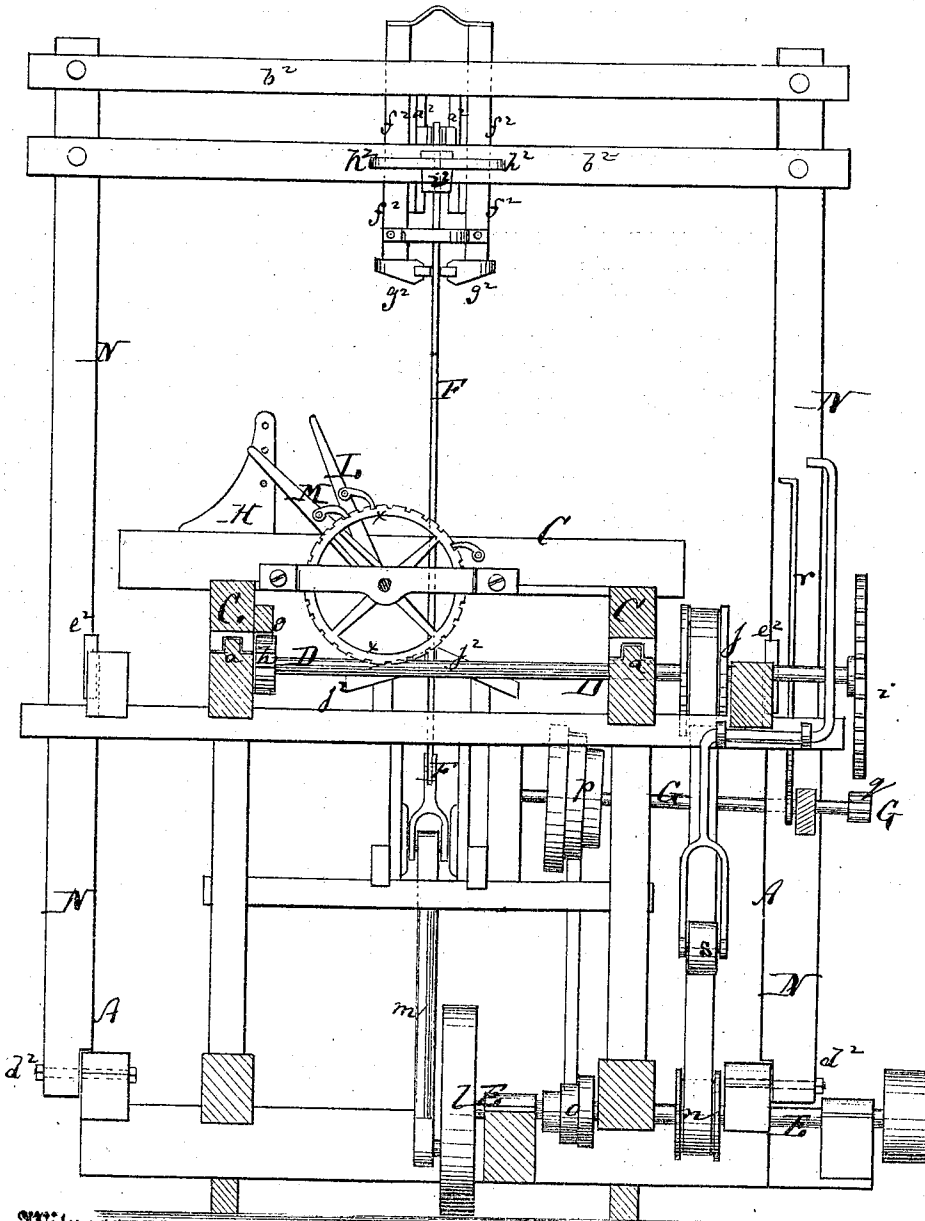
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Fig. 3



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UNITED STATES PATENT OFFICE.

JAMES M. REES, OF SCOTT, OHIO.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 129,495, dated July 16, 1872.

Specification describing a new Improvement in Saw-Mills, invented by JAMES M. REES, of Scott, in the county of Adams and State of Ohio.

Figure 1 represents a side elevation, partly in section, of my improved sawing-machine. Fig. 2 is a plan view, partly in section, of the same; and Fig. 3, a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

The invention consists in a certain improvement upon saw-mills, which will first be fully described and then pointed out in the claim.

A in the drawing represents the middle section of the screw-frame. B B are the end sections of the same. When all these sections are united, as in Fig. 1, they form continuous parallel rails *a a*, for the support of the saw-carriage C, the several portions of said rails being respectively secured to the sections A and B B. At their upper parts the sections B B are fastened to the middle part A by means of pins *b b*, fitted through connecting-straps *d*. Inclined braces *e*, projecting inwardly from the sections B, enter mortises in the ends of A and serve to sustain the end sections in proper position. Whenever the frame is to be separated for transportation the pins *b b* are withdrawn, and the ends detached to be conveniently placed on a suitable vehicle. Projecting wheel-supports or axle-boxes *f f* are or may be formed at the sides of the frame A, near the lower part thereof, to permit the attachment of wheels, and thus facilitate the transportation of the machine without other vehicles. The saw-carriage C rests on the rails *a a* and carries a toothed rack, *g*, which gears into a pinion, *h*, on a transverse shaft, D, hanging in the frame A. The shaft D carries at its outer end a toothed wheel, *i*, and also a pulley, *j*. E is the driving-shaft of the machine, hung in the lower part of the frame A, and provided with the crank-wheel *l*, for connecting with the pitman *m*, that moves the saw F. Upon the shaft E is also mounted a pulley, *n*, and a graduated pulley, *o*. A belt connects the pulley *o* with a similar graduated pulley, *p*, on a shaft G, from which a pinion, *q*, meshes into the toothed wheel *i*. By this connection motion is transmitted from the driving-shaft E to the shaft D with greater or

less speed, according to the position of the belt on the graduated pulleys to move the saw-carriage. The shaft G hangs in adjustable supports, and can, by a lever, *r*, be carried out of gear with the toothed wheel *i* to arrest the saw-carriage, and when the same is to be reversed in its motion. The return motion of the saw-carriage is produced by means of a belt that passes over the pulleys *j* and *n*, and that is slack while the carriage is moved by the shaft G, but drawn tight by a vibrating roller, *s*, when to be thrown into action. The saw-carriage C carries the head-block H and the tail-block I, each moving in transverse grooved guides, as shown, and each toothed on the under side, so that they may gear into pinions *t* and *u* respectively. The pinion *t*, under the head-block, is mounted upon a sleeve, V, which turns loose on a longitudinal shaft, J, that hangs in the said carriage, as shown. The sleeve V is also provided with a ratchet-wheel, *w*, which can be turned by a pawl and lever, L. The pinion *u*, under the tail-block, is directly mounted upon the shaft J, said shaft carrying a ratchet-wheel, *x*, close to the wheel *w*, as shown. A lever and pawl, M, will serve to impart motion to the wheel *x* and shaft J. When the two levers L M are worked simultaneously, which can be easily done with one hand, the head and tail blocks will be simultaneously adjusted. When, however, they are to be moved independent of each other, the levers are separately handled. The tail-block I is provided with hooks *y y* for holding the log at the sides, and with a spike, *z*, for entering the end of the log and holding it steady. The saw F is, at the lower end, connected with the pitman *m*. Its upper end works between parallel vertical guides *a² a²*, that are secured to horizontal cross-beams *b² b²*. The ends of these beams are fastened to the upper ends of the fender-posts N N. The fender-posts are, at their lower ends, pivoted to the lower rail of the frame A, as at *d²* in the drawing, and can be inclined more or less on their pivots, and locked, by wedges or screws *e²*, at the upper part of the frame A. The rake or sweep of the saw is regulated by the inclination of these pivoted fender-posts. Along the vertical guides *a² a²* are applied vertically-adjustable slides *f² f²*, which, at their lower ends, carry the upper saw-guides *g² g²*.

These slides f^2, f^2 are set up or down in order to make the guide g^2 to be close above the log being sawed. A clasp, h^2 , formed of an arched metal strap that protrudes through one of the beams b^2 , serves, in conjunction with a wedge, i^2 , to hold the slides f^2 secure in whatever position they may have been placed. The lower saw-guide j^2 , affixed to the frame A, is roof-shaped, as shown, to prevent sawdust from reaching the pitman connection and clogging the joints.

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

The pivoted fender-posts N N, carrying the upper saw-guides, and made adjustable to regulate the sweep or rake of the saw, as set forth.

JAMES M. REES.

Witnesses:

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JAMES H. SMITH.