

(No Model.)

W. H. C. SEXTON.
SAW MILL.

No. 465,117.

Patented Dec. 15, 1891.

Fig. 1.

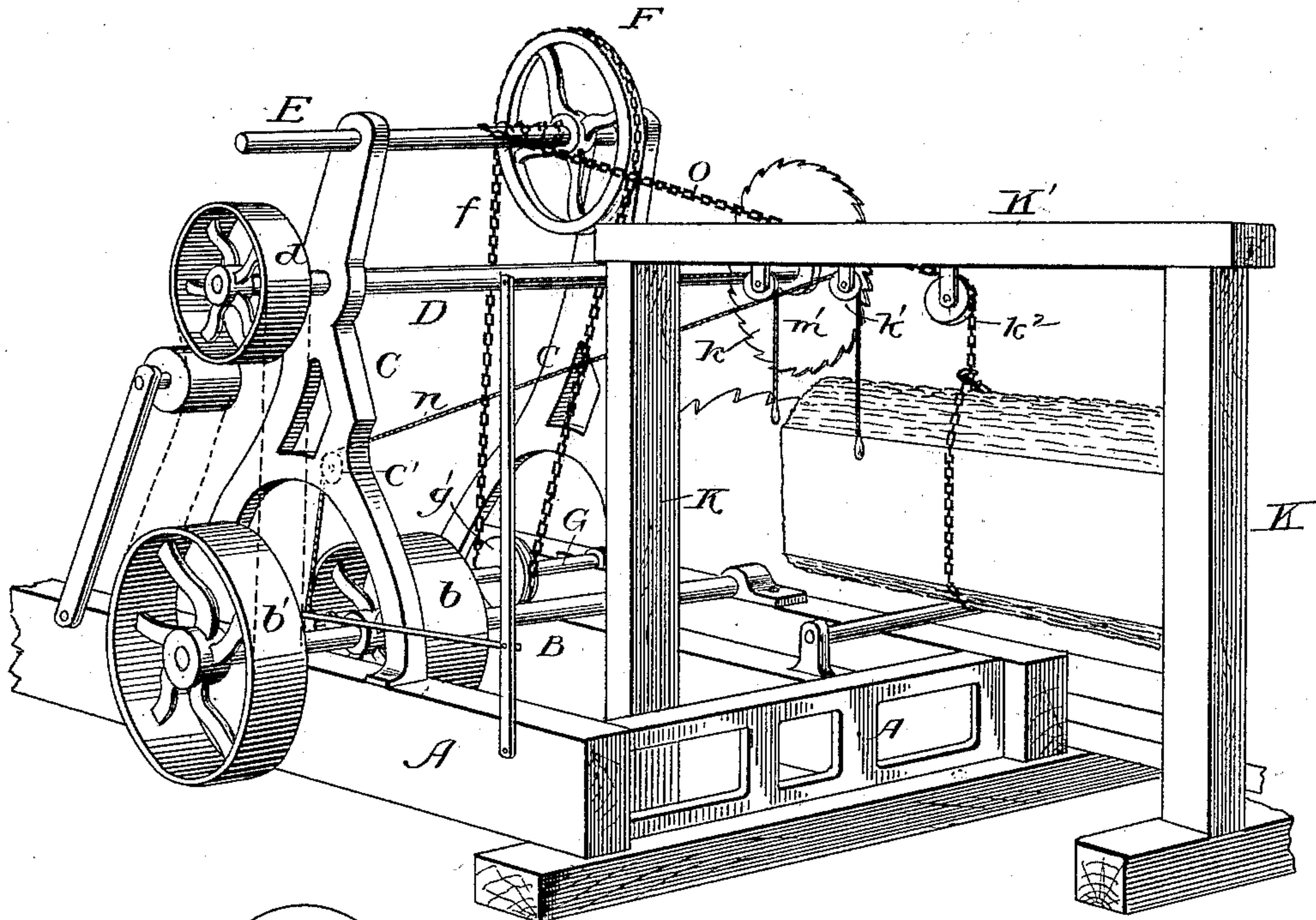


Fig. 2.

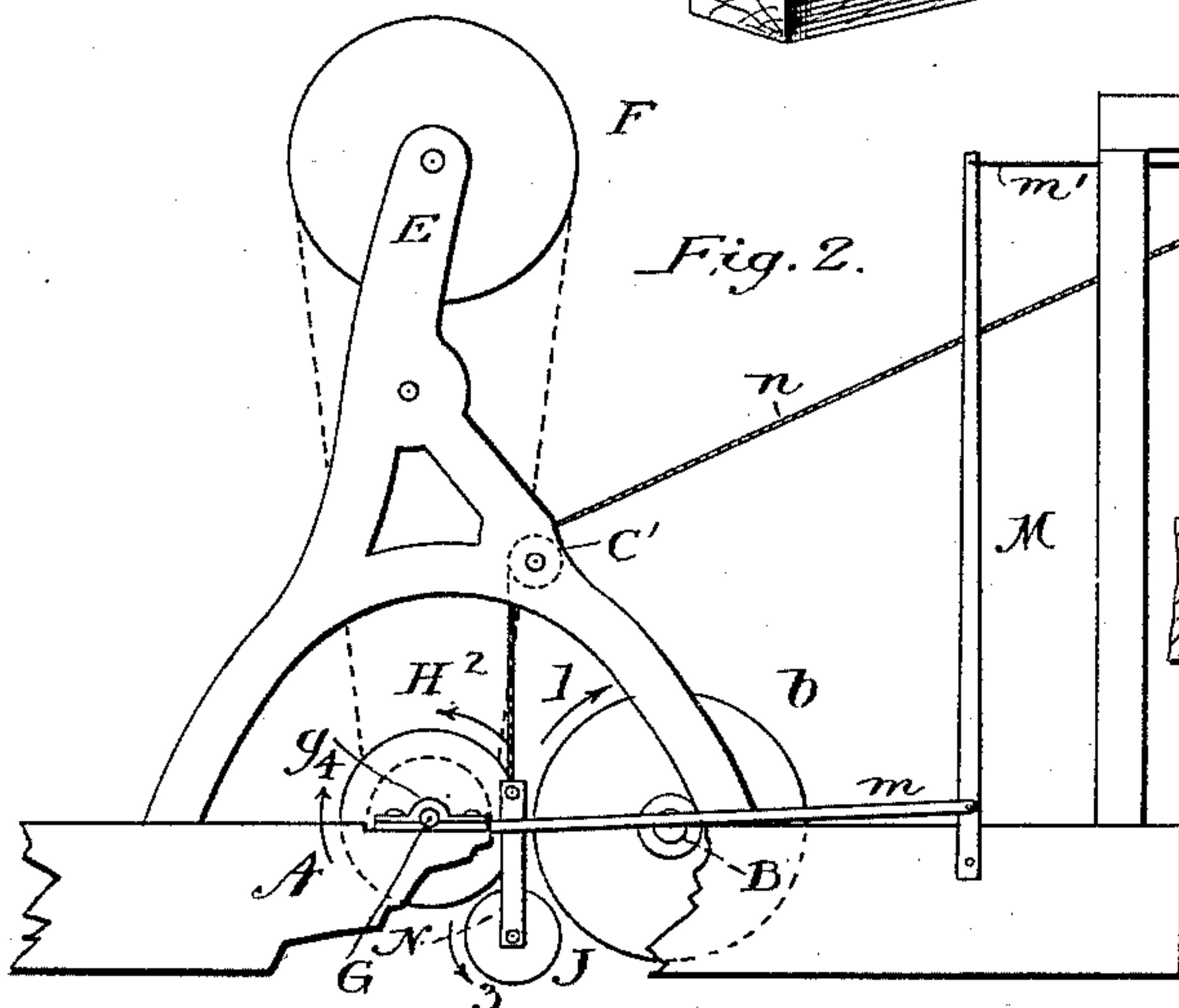
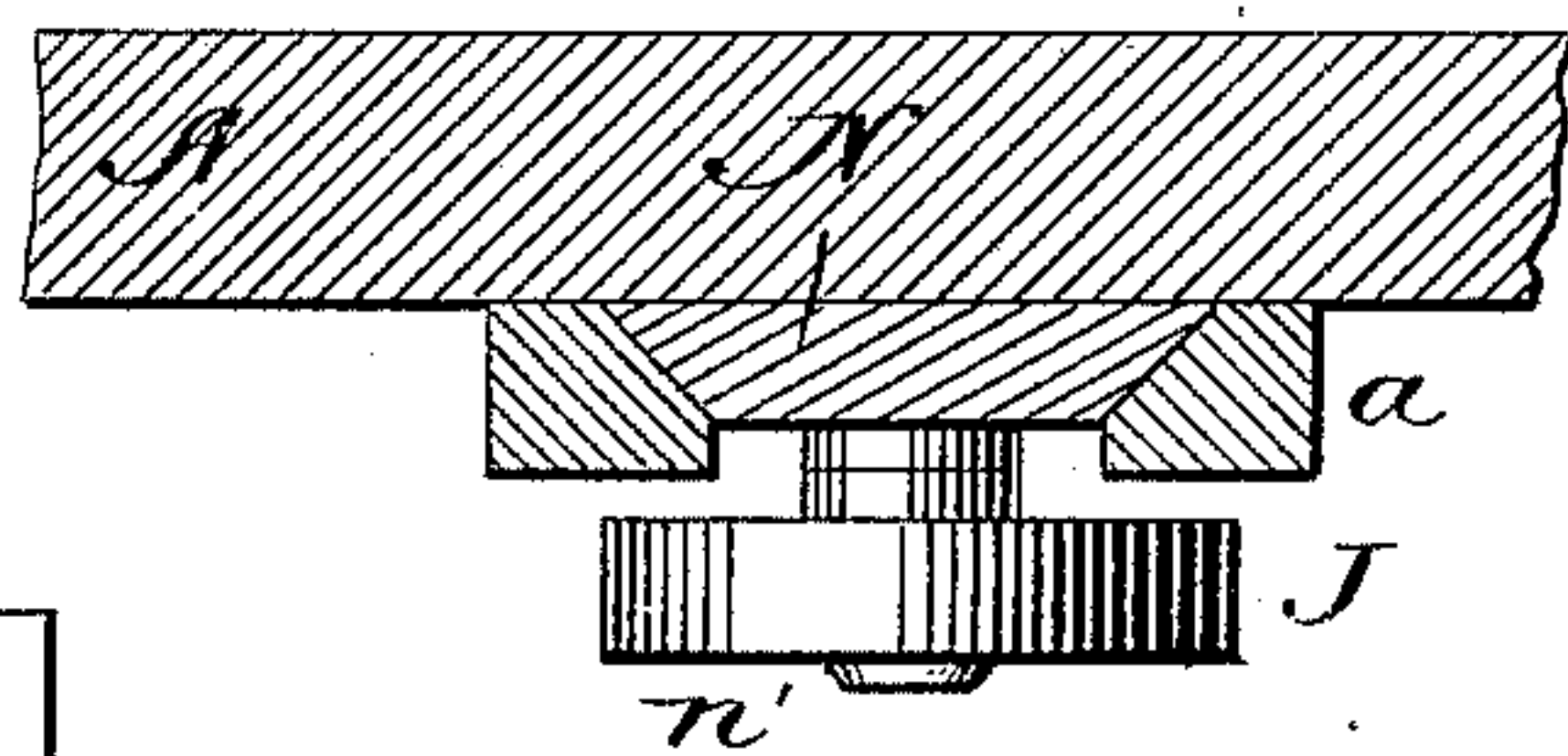


Fig. 3.



Witnesses:

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Inventor:

William H. C. Sexton,
by A. DuBois his atty.

UNITED STATES PATENT OFFICE.

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SAW-MILL.

SPECIFICATION forming part of Letters Patent No. 465,117, dated December 15, 1891.

Application filed February 3, 1891. Serial No. 380,106. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. C. SEXTON, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Saw-Mills, of which the following is a specification.

My invention is applicable to that class of saw-mills which are used for sawing logs into boards or dimension-lumber; and the purpose of my invention is to provide simple and effective means for turning the log, placing it on the carriage, turning it end for end, removing it from the carriage, or otherwise moving it, as the necessity of the work may require. I attain this object by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a view of the complete machine.
Fig. 2 is a side view with the pulleys *d* and *b'* removed and the side piece of the main frame A broken away so as to show the relative position of the several parts of the mechanism.
Fig. 3 is a detached inside view, on an enlarged scale, of the friction-wheel J and the slide N in position on the side piece of the main frame.

Similar letters refer to similar parts in all views.

The main frame A is of the usual form and is clearly shown in Fig. 1. Transverse to this frame and supported in suitable bearings is the lower saw-shaft B, to which are secured the friction-wheel *b* and pulley *b'*.

Secured to the frame A are vertical standards C, in which are journaled the saw-shaft D and the winding-shaft E, to which is keyed the sprocket-wheel F.

Supported in suitable boxes on top of the main frame A is the transverse shaft G, to which are secured the pulley H and the sprocket-wheel *g'*. A sprocket-chain *f* connects the sprocket-wheels F and *g'*. One of the boxes *g* supporting the shaft G is made to slide on top of one of the sides A of the main frame, so that the pulley H may, by means of the lever M, pivoted to the side of the main frame and joined by connecting-rod *m* with the box *g*, be moved into contact with or

disengaged from the friction-wheel *b* on the shaft B.

To the upper end of the lever M is attached a cord *m'*, extending over a pulley K within easy reach of the operator and by means of which the lever M is moved to slide the box *g*.

Working in suitable guides *a* on the inside of the side piece A is the vertical slide N, which carries on a horizontal spindle *n'* the reversing friction-wheel J. To the upper end of the slide N is attached a cord *n*, which passes over grooved pulleys C' K' to a position within easy reach of the operator. The cords *m'* and *n* afford a convenient and reliable means for operating the lever M and the slide N, respectively, and being suspended overhead do not obstruct the movements of the operator, and if struck by the log will not be injured. By pulling downward on the cord *n* the slide N is raised and the surface of the pulley J is brought into contact with the surface of the wheels *b* and H. When the saw is running, the wheel *b* revolves in the direction indicated by the arrow 1. If then the box *g* be moved toward the wheel *b*, it will carry with it the wheel H on the shaft G, and the surface of the wheel H, coming in contact with the wheel *b*, will cause the wheel H to turn in the direction indicated by arrow 2, imparting motion in the same direction to the shaft G and the sprocket-wheel *g'*. When the box *g* is moved in the opposite direction, the wheels H and *b* will be disengaged and the shaft G will stop. When the wheel *b* is turning in the direction indicated by arrow 1, if the slide N be moved upward, the reversing-pulley, coming in contact with the wheel *b*, will be rotated in the direction indicated by the arrow 3, and impart to the wheel H, with which it will also be in contact, motion in the direction indicated by the arrow 4.

Extending diagonally rearward from the main frame is a beam K', supported on vertical posts K. From this beam are suitably suspended the grooved pulleys *k k' k''*, in which run the cords *m' n* and the chain O, respectively.

To the shaft E is secured one end of a chain O, which passes over the pulley *k''*, and in

practice is wound once or more around the log and its other end suitably secured to the log or by hooking into a link of the chain, as clearly shown on Fig. 1. As the shaft E is turned in one direction the chain O will wind around the shaft, and when the motion of the shaft is reversed the chain will unwind.

The operation of my machine is as follows: If it is desired to draw a log to the mill, the outer end of the chain O or an extension thereof is hitched around the log and the shaft E is rotated, as heretofore described, to wind up the chain O and draw the log toward the mill. To change a log end for end on the carriage the chain O is hitched around the middle of the log and the chain wound up until the log is lifted clear of the carriage. The position of the log relative to the carriage is then easily reversed by hand. To turn the log on the carriage the chain is wound, say, once and a half around the log and the end of the chain secured to the log. The shaft E is then turned to wind up the chain, and as the other end of the chain unwinds it turns the log in the opposite direction. It is obvious from the description that the mechanism is under perfect control of the operator, since by means of the cords and pulleys the con-

tact of the friction-wheels may be increased or diminished, and the machinery may be stopped, started, or reversed at pleasure.

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

In a saw-mill, the combination of the cords supported by pulleys on the main frame, one of said cords being connected with a sliding box supporting a friction-wheel and the other of said cords being connected with a vertical lever fulcrumed on the main frame, the sliding box connected with said lever and supporting one end of a laterally-movable shaft, the friction-wheel and the sprocket-wheel on said shaft, the lower saw-shaft and the friction-wheel thereon, the standards secured to the main frame and supporting at their upper ends the winding-shaft, the sprocket-wheel on said shaft connected by a sprocket-chain with the sprocket-wheel on the movable shaft, and the chain supported by a pulley-block and having one end secured to the winding-shaft, substantially as set forth, and for the purpose stated.

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Witnesses:

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