

H. ATKINSON.  
Circular-Saw Mill.

No. 204,782.

Patented June 11, 1878.

FIG. 1

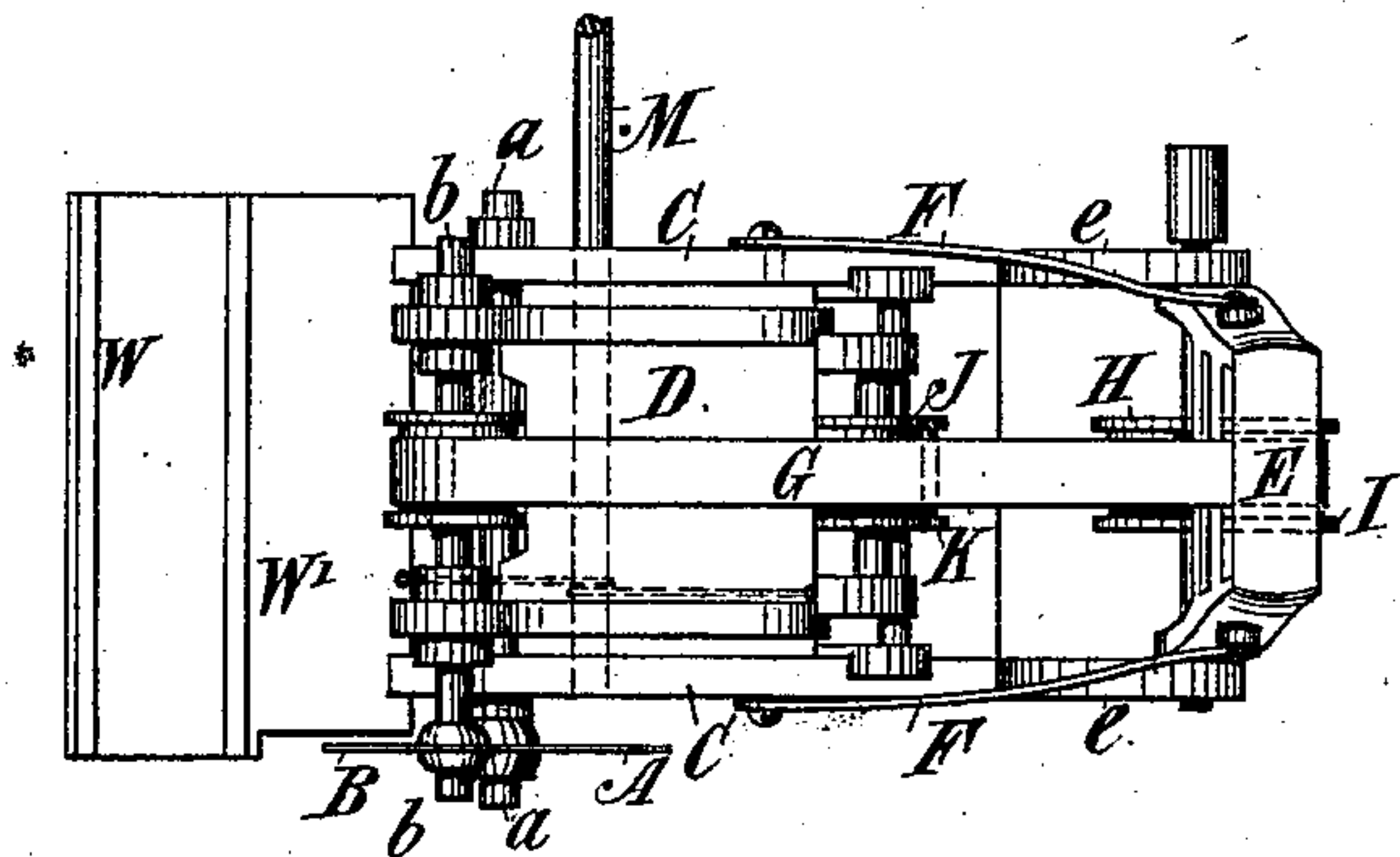


FIG. 2

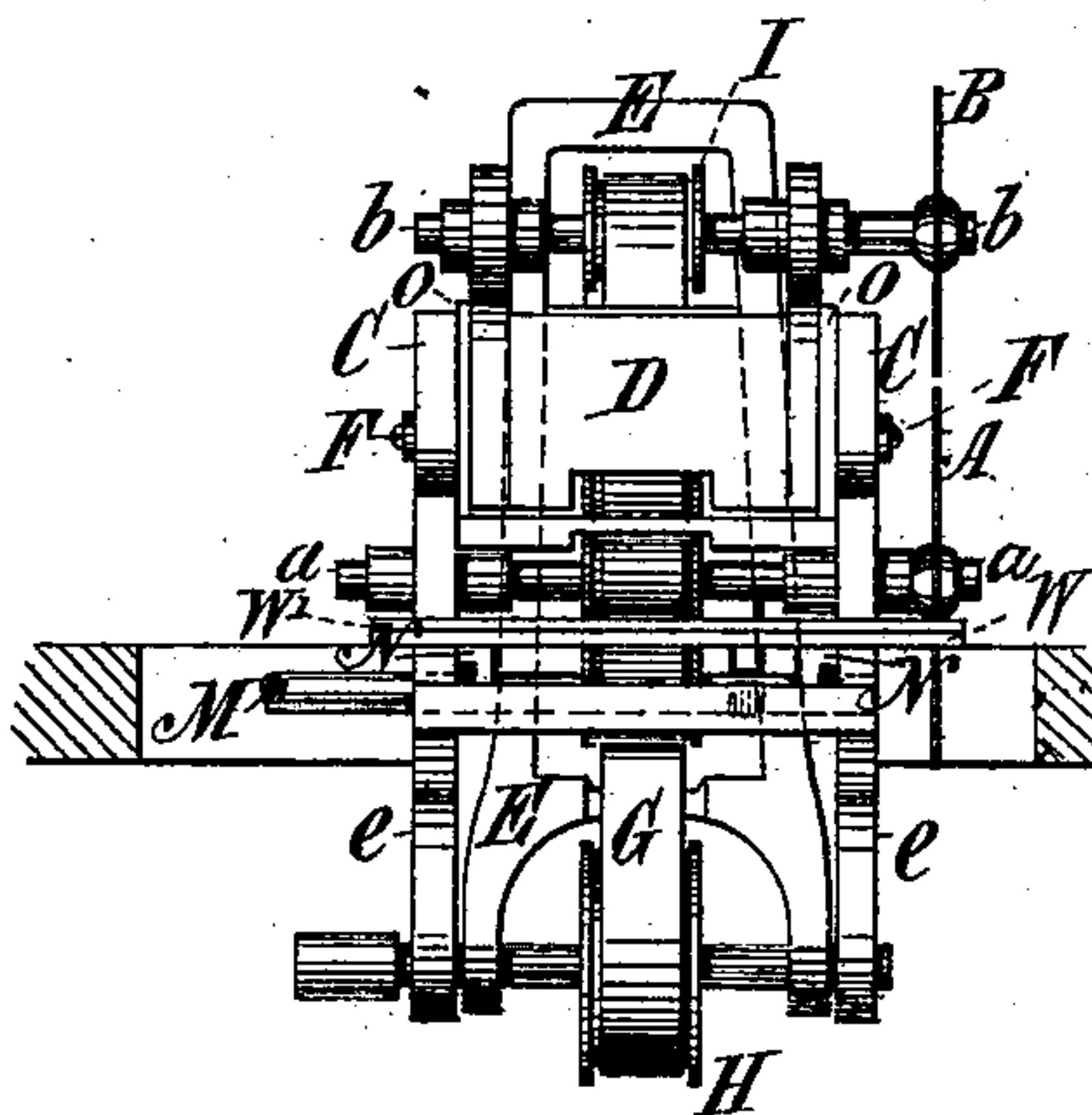
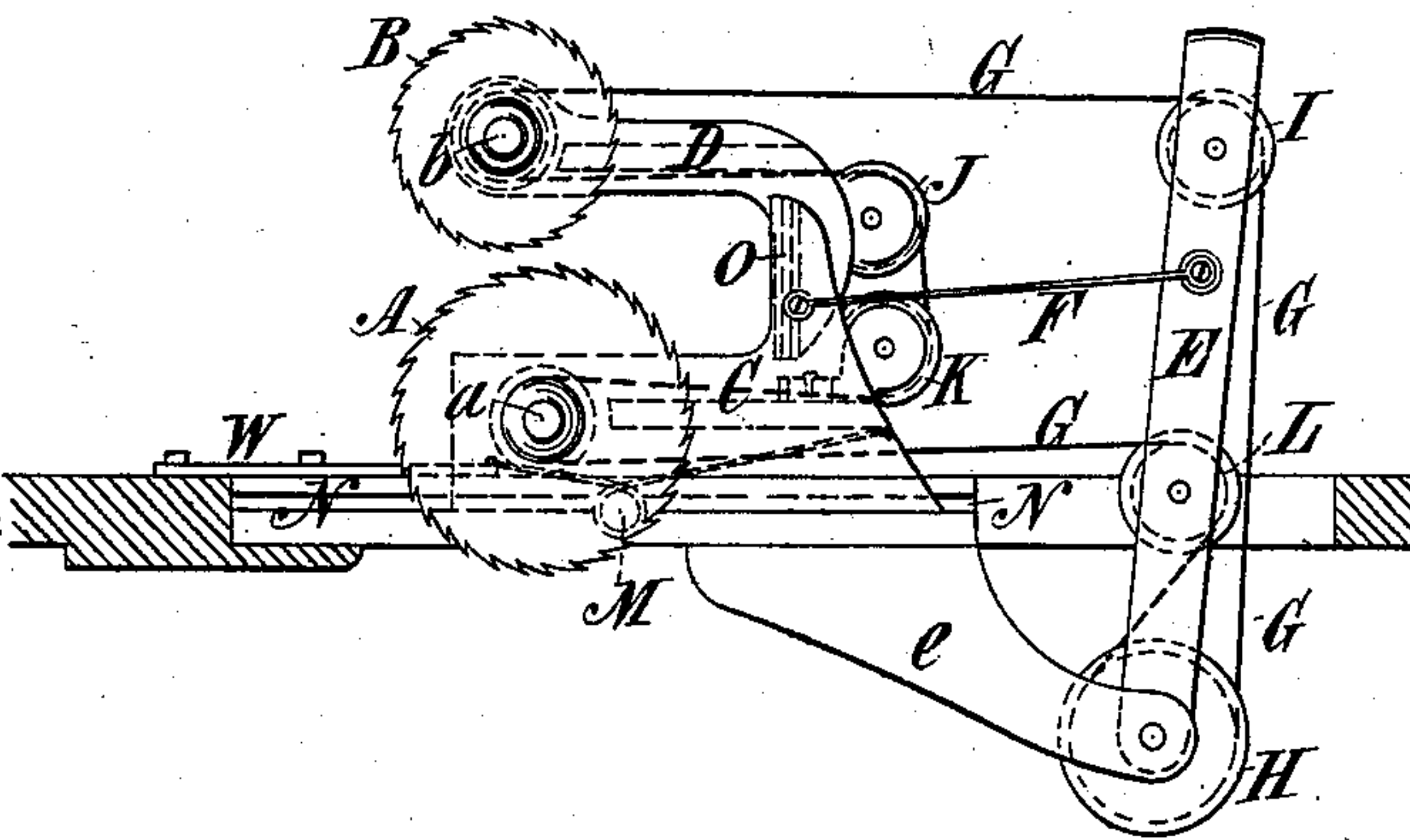


FIG. 3



Witnesses.  
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*William J. Kern*

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Inventor.  
Per Atty. *Rach. H. Leguella*

# UNITED STATES PATENT OFFICE.

HENRY ATKINSON, OF ETCHEMIN, QUEBEC, CANADA.

## IMPROVEMENT IN CIRCULAR-SAW MILLS.

Specification forming part of Letters Patent No. **204,782**, dated June 11, 1878; application filed March 22, 1878.

*To all whom it may concern:*

Be it known that I, HENRY ATKINSON, of Etchemin, in the county of Levis and Province of Quebec, Canada, have invented certain new and useful Improvements in Apparatus for Preparing Timber for Shipment; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to provide means for performing the operation of "butting," required in preparing for shipment timber which has been rafted or floated to the port whence it is to be shipped, and to supersede the present method of cutting off the unsound ends of logs and squaring them, this being now performed by hewing with axes, and can only be done in a tidal river or port, and at low tide.

My invention allows this operation to be performed in any inland port, or at any point on the course of the stream down which the logs are floated, and can be carried on continuously.

The way in which I propose to effect this is by drawing the logs to be butted, &c., from the pond in which they are stored onto the deck or floor of an inclosed vessel or floating mill, in which the operation will be performed, this vessel being also provided with means, such as a screw-propeller worked by the engine which drives the mill, to enable it to move from place to place.

The log when drawn up out of the water is placed upon a suitable carrier and run forward to the butting-machine, which may be briefly described as consisting of two saws, carried in a frame which is moved back and forth, so as to bring them in contact with the log to be butted, the distance between the arbors of these saws being adjustable to suit the varying size of the log, the two saws, when brought into operation, cutting off from the log the unsound or rough end at the point marked or butting it.

The log, when the operation is finished, may be, if required, taken to the dressing-machine, or returned to the boom for storage, or at once put on board the vessel in which it is to be shipped.

For fuller comprehension, however, of my invention, reference must be had to the an-

nexed drawings, in which Figure 1 is a plan of the apparatus. Fig. 2 is a front view of the same. Fig. 3 is a side view of the same.

Similar letters of reference indicate like parts.

A and B are circular saws (placed so that the eye of A will pass under the timber to be butted and the eye of B above it) mounted on spindles *a b*, and carried in proper bearings formed, respectively, in the frames C and D, the former of which has attached to it, by a plate or in any suitable way, a section, *W'*, of the track *W*. Brackets *e*, secured to the under side of the floor, carry between them loosely the pivot-pin of the frame or swing E, constructed preferably as shown, connected by rods *F* to the frame D in such a manner as to give it a corresponding motion.

In the base of the swing E is carried the driving-pulley H, receiving motion from the engine in any usual way. From the under side of this pulley the belt G passes up and around pulley L, also carried in the swing, thence to and around the pulley on the arbor or spindle *a* of saw A, whence it is taken around the adjusting or tightening pulley K, mounted in the frame C, over the pulley J in the frame D, around the pulley on the spindle *b* of the saw B, and, lastly, over a pulley, I, in the upper part of the swing to the driving-pulley again.

The saws A and B may be of larger or smaller diameter, according to the size of log to be butted, and the frame D be moved up and down to correspond with the varying size of the saws, being held in place by the binder O, the pulley K on the frame C being at the same time moved back and forth to keep the belt G at proper tension.

The operation of my invention may be thus described: The floating mill having steamed to the boom or pond in which are stored the logs to be butted, they are drawn in succession, by any of the ordinary apparatus used for that purpose in a saw-mill, up an inclined way, preferably at the bow of the vessel, onto suitable carriages, which are then run along to the butting-machine, the culler being able to examine the log on all sides before marking where the end is to be cut off. The swing E is then thrown forward, carrying with it the frames C



and D, and bringing the saws in contact with the log, these receiving their motion from the driving-belt G passing over the several pulleys, arranged as described, and rotated by the driving-pulley H. By actuating the roller M the movable portion W' of the track is gradually moved forward, enabling the saws to cut completely through the log. This being accomplished, the action of the roller is reversed, so as to throw back the saws, replacing the track as before. The distance apart of the arbors of the saws A and B, which are driven from the pulley H by the belt G, is regulated by the size of the log to be cut. The log having been butted, is then, if required, run along to the dressing-machine, or again put in storage or shipped direct.

What I claim is as follows:

1. The combination, with the frames C and

D, carrying the saw-arbors, of swing E, pivoted to brackets, operating to move the saw-frames back and forth on suitable ways, substantially as and for the purposes specified.

2. In combination with the frames C and D, carrying the butting-saws, a section, W', of the track, moving back and forth transversely by means of roller M or its equivalent, as and for the purposes set forth.

3. The combination, with the driving-belt G, of driving-pulley H, pulleys I, J, K, and L, arranged as described, and operating to convey motion to the saw-arbors, all as herein set forth.

HENRY ATKINSON.

Witnesses:

A. PLAISANCE,  
ED. GUAY.