

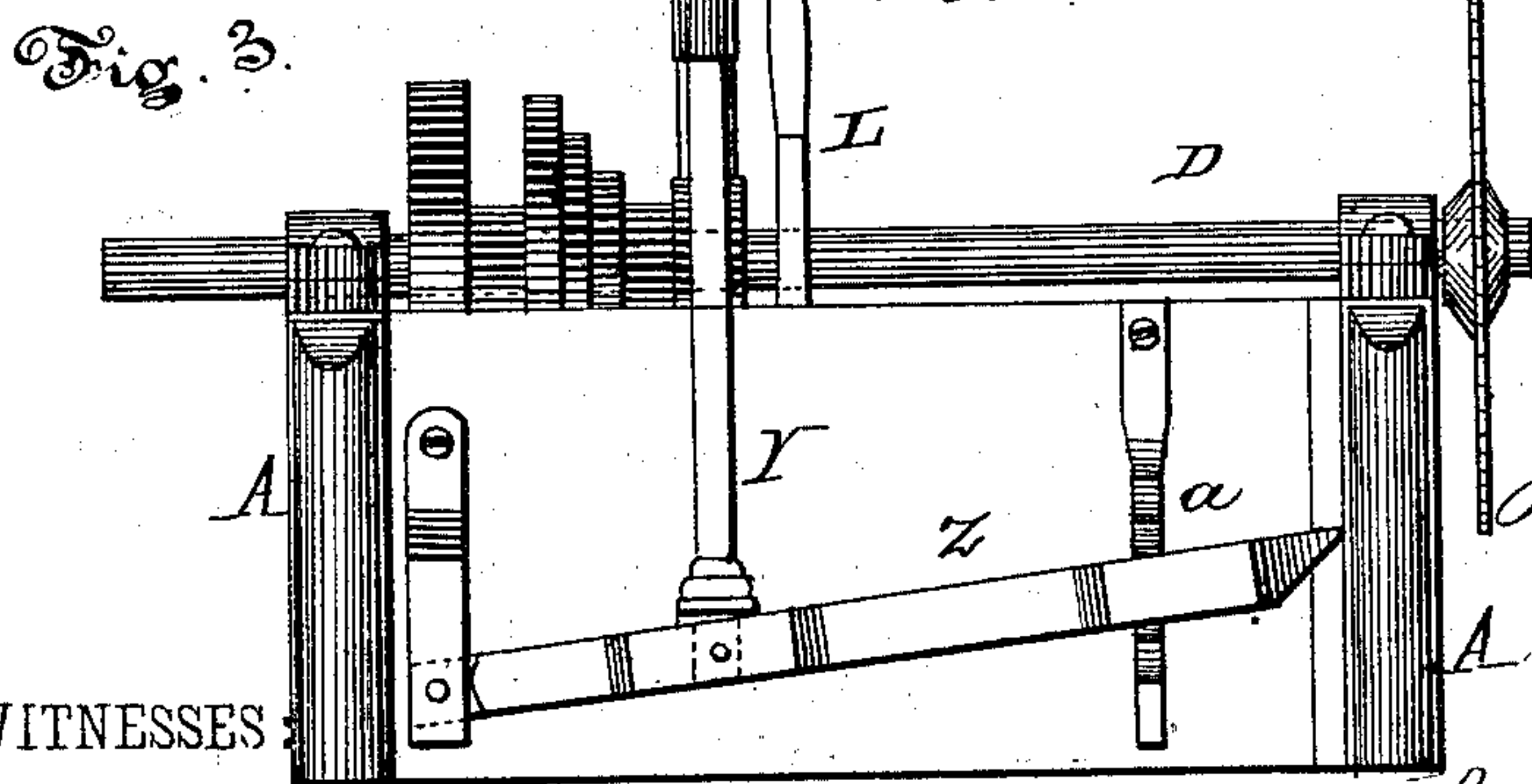
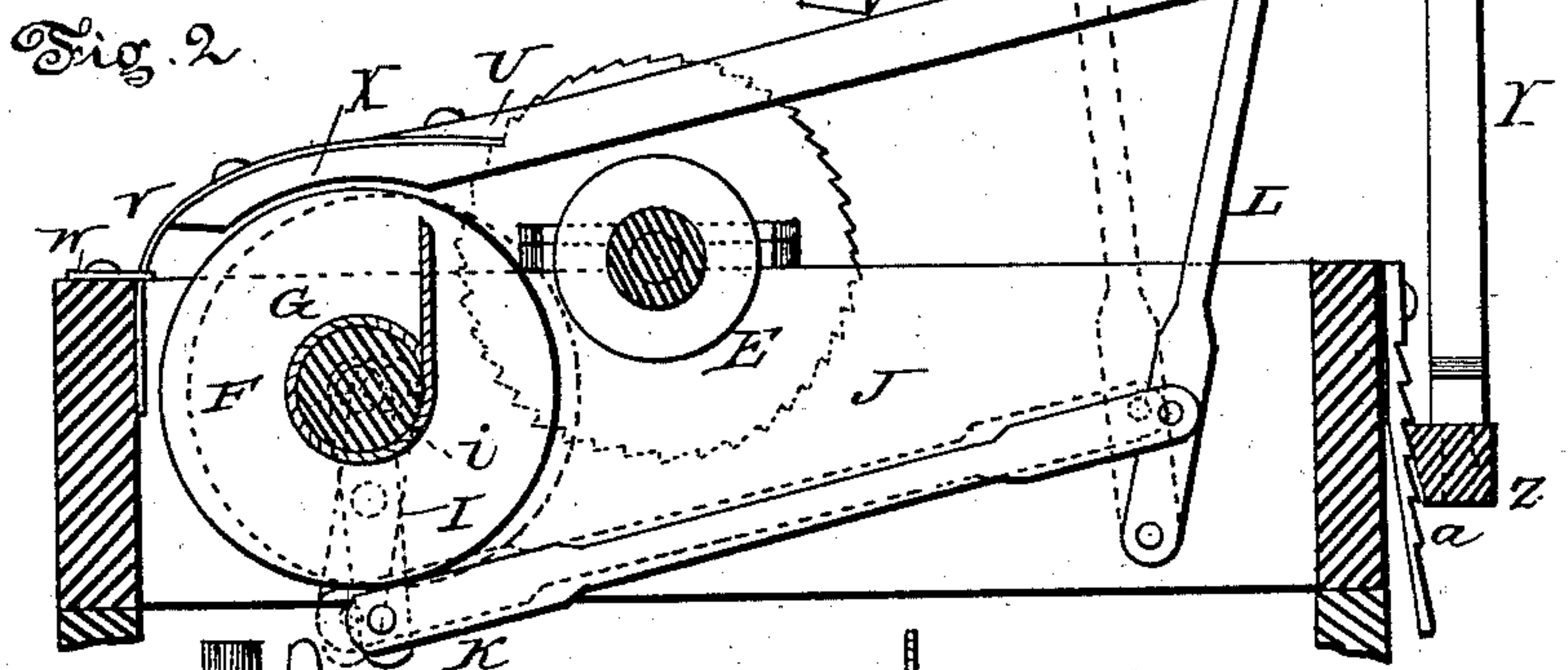
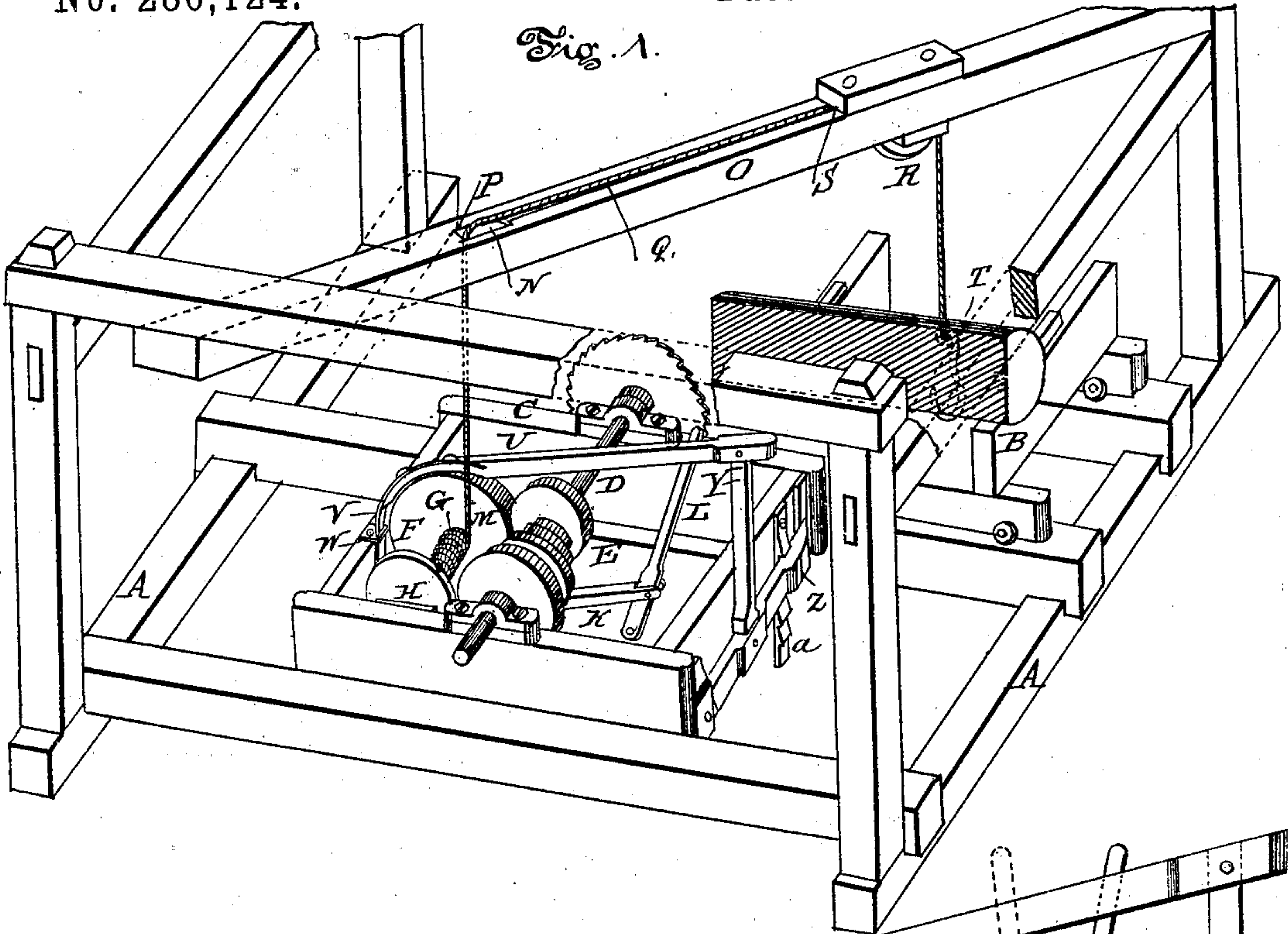
(No Model.)

H. C. & W. N. BOWERS.

LOG TURNING ATTACHMENT FOR SAW MILLS.

No. 280,124.

Patented June 26, 1883.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY C. BOWERS AND WARREN N. BOWERS, OF NEW HAVEN, IND.

LOG-TURNING ATTACHMENT FOR SAW-MILLS.

SPECIFICATION forming part of Letters Patent No. 280,124, dated June 26, 1883.

Application filed April 2, 1883. (No model.)

To all whom it may concern:

Be it known that we, HENRY C. BOWERS and WARREN N. BOWERS, of New Haven, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Log-Turning Attachments for Saw-Mills; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a saw-mill provided with our improved log-turning attachment. Fig. 2 is a longitudinal vertical sectional view of the saw-frame, and Fig. 3 is an end view of the same.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to that class of log-turners in which the windlass, upon which the rope or chain which is attached to the log and turns it is wound, is operated by suitable gearing with the saw-mandrel; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A represents part of the frame-work of the mill house or shed; B, the log-carriage, and C the saw-frame. The saw-mandrel D is journaled upon this frame in the usual manner, and a friction-pulley, E, is fastened upon the mandrel, adapted to engage and turn a friction wheel or disk, F, upon a windlass, G, the one end of which is journaled in a bearing, H, in one of the sides of a saw-frame. The other end of the shaft of the windlass is journaled in a bearing, I, in the upper end of a lever, J, which is pivoted upon the side of a beam, K, in the middle of the frame, and an arm, L, is hinged to the lower end of this lever, while its other end is hinged to a hand-lever, M, which is pivoted at its lower end upon the side of beam J, within easy reach of the sawyer.

It will thus be seen that by pushing the hand-lever toward the saw-mandrel the friction-wheel will come in contact with the friction-pulley upon the mandrel and be revolved by the same, winding a rope, N, upon the windlass. This rope is passed upward over a

pulley, N, above the windlass, journaled in a beam, O, suitably fastened to the frame-work of the mill, the said pulley being journaled in a slot, P, in the beam O, and the rope passes in a longitudinal groove, Q, in the upper surface of the beam, and down over a pulley, R, journaled in a slot, S, in beam O, above the point where the carriage stops before the saw enters the log.

A dog, T, is fastened to the end of the rope, adapted to be driven into and bite in the log, and by carrying the rope around the log and fastening the dog into it the log may be turned as desired by winding the rope upon the windlass.

A brake, U, is fastened upon the end of a curved flat spring, V, the lower end of which is fastened to the side of the end piece of the frame, while the upper portion of the same is carried through a slotted plate, W, fastened upon the edge of the end piece of the frame, and fastened to the inner end of the brake-lever U, which bears with a concave shoe, X, upon the flat rim of the friction-wheel F.

To the outer end of the brake-lever is hinged an arm, Y, which is hinged at its lower end to a foot-lever, Z, pivoted at one end upon the end piece of the frame, while a projecting lip at the other free end is adapted to engage into a series of ratchet-teeth, a, upon the end piece. By means of this brake the log may be held suspended after it has been lifted by the windlass above the carriage, and its descent may be regulated by changing the free end of the foot-lever, which is within easy reach of the sawyer, from one ratchet-tooth to another. In this manner it will be seen that the logs may be turned over or endwise upon the carriage without exertion of manual strength, one man being able to handle a log which it would require several men to turn; and the logs may also be drawn up upon the carriage by means of the same rope and dog, thus saving a large amount of labor.

Where a top saw-frame is used a spiral spring may be fastened to the top of the frame and to the upper edge of the brake-lever, taking the place of the curved flat spring, while the brake may be depressed by toggle-arms fastened between the frame and lever-arm, within reach of the sawyer.

Having thus described our invention, we

claim and desire to secure by Letters Patent of the United States—

5 The log-turning attachment consisting of the friction-pulley E, fastened upon the saw-mandrel; the windlass G, having friction-wheel F, and journaled in the rigid bearing H in the saw-frame, and in the movable bearing i in the upper end of lever I, pivoted at the other end of the saw-frame; arm K, hinged at one end of
10 the lower end of the lever I; hand-lever L, pivoted at its lower end upon the saw-frame, and having the other end of arm K hinged to it above its fulcrum; rope M, fastened at one end to the windlass, passing over pulleys
15 N and R at the top of the mill-frame, and having dog T attached to its outer end; brake U, having curved spring V at one end, fastened to

the side of the saw-frame, and having shoe X bearing against the rim of wheel F; arm Y, hinged to the outer end of the brake-lever U;
20 foot-lever Z, pivoted at one end upon the side of the saw-frame, and having arm Y hinged to it and engaging ratchet-bar a, fastened upon the side of the saw-frame with its outer end, as and for the purpose shown and set forth. 25

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

HENRY CASTLEMAN BOWERS.
WARREN NICHOLAS BOWERS.

Witnesses:

LOUIS JACQUE MONNOT,
LEWIS S. MAPEL.