

M. WOODARD & JOHN E. SNYDER.

Improvement in Saw Mills.

No. 125,647.

Patented April 9, 1872.

Fig. 1.

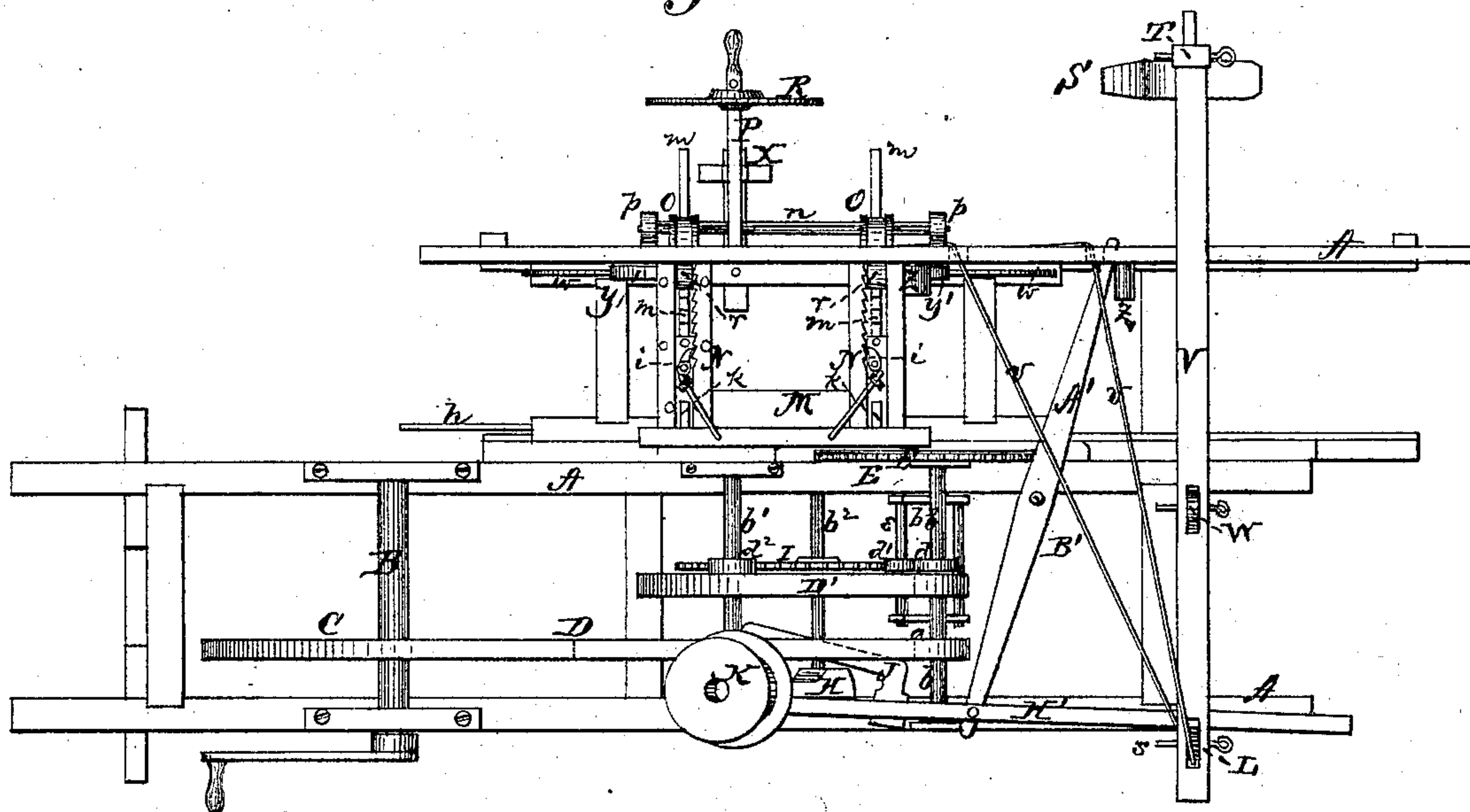
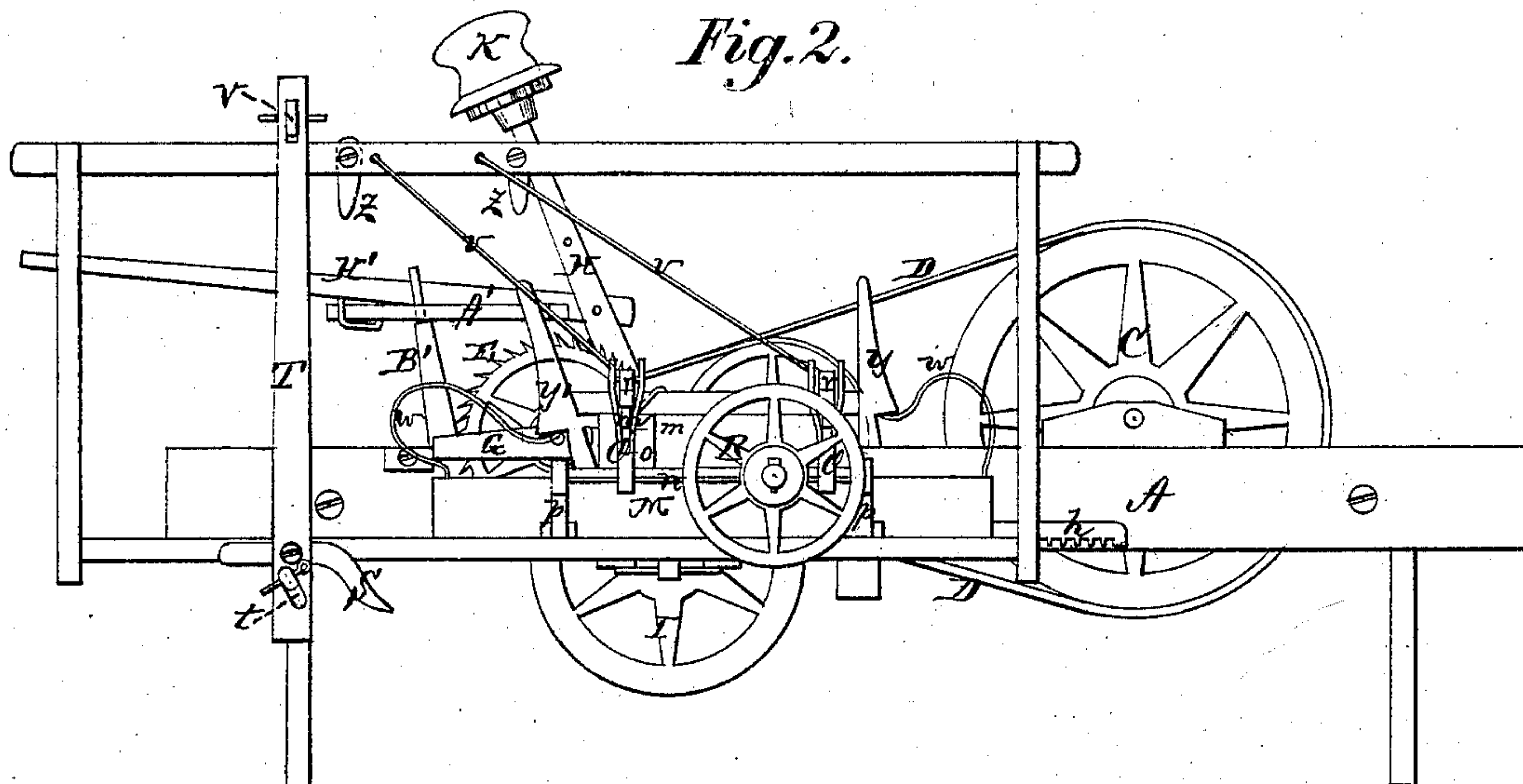


Fig. 2.



Witnesses

John A. Ellis.

Inventor's

Inventor's
M Woodward & E Snyder
Per

Per

By Alexander

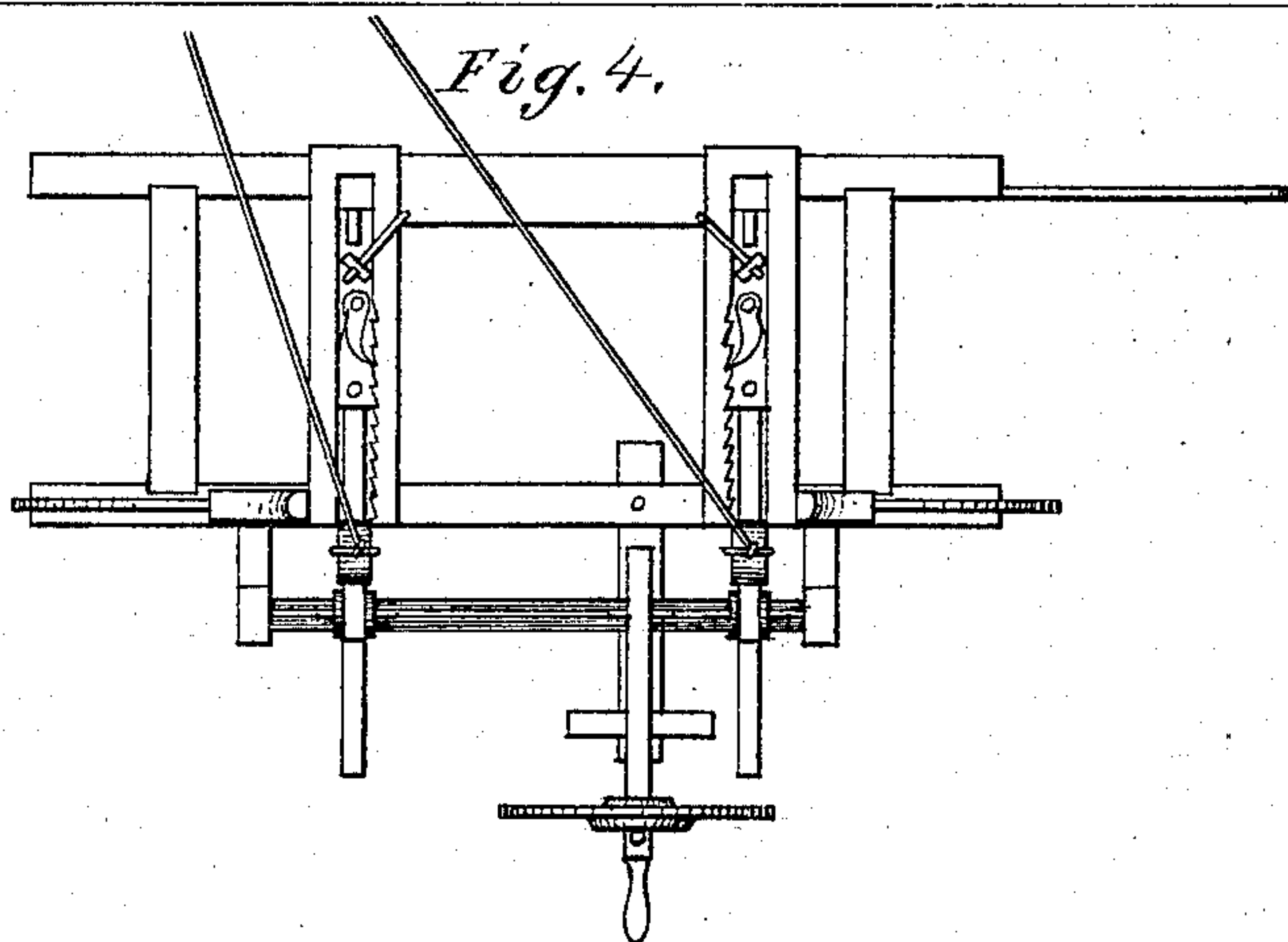
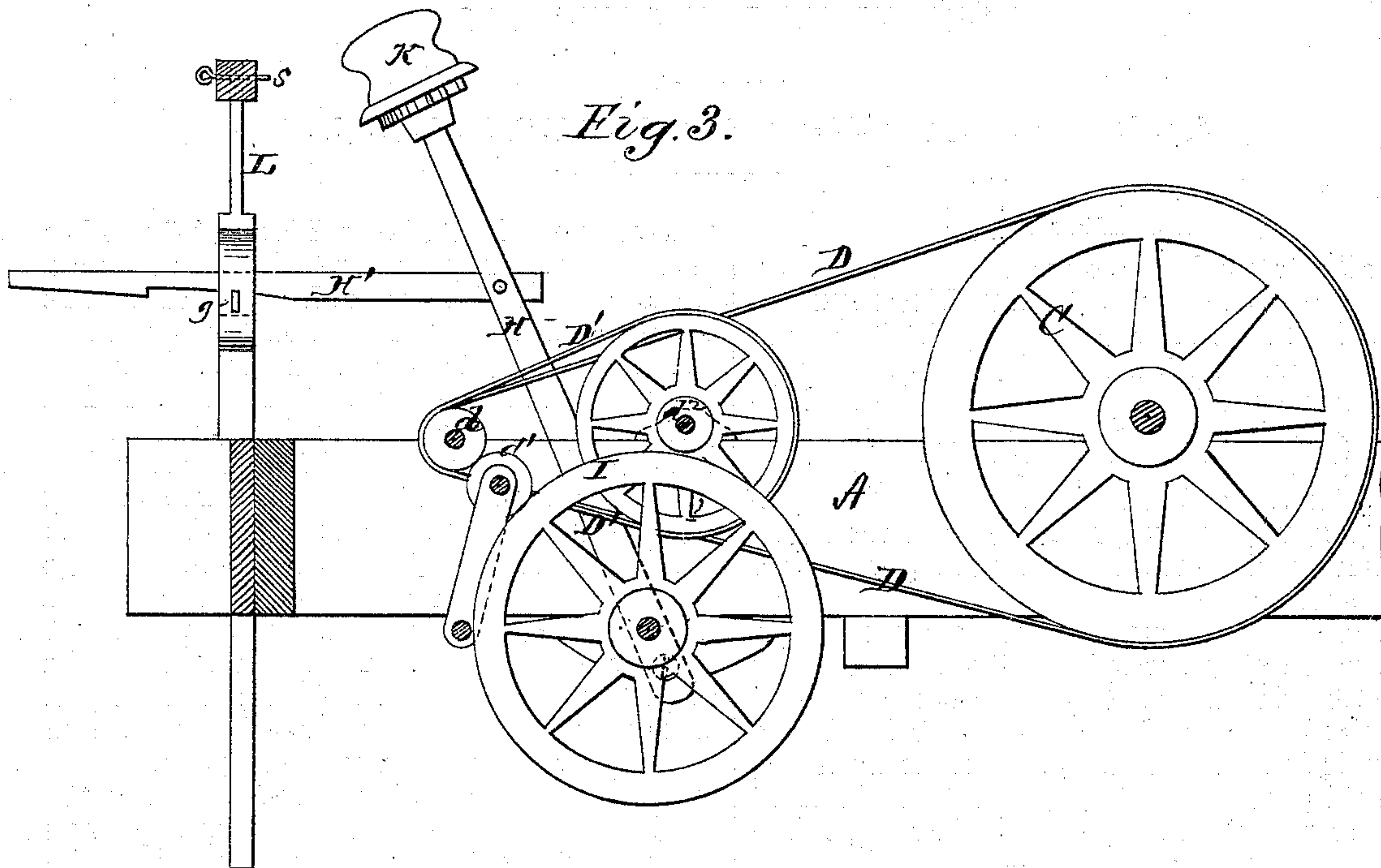
Atty

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UNITED STATES PATENT OFFICE.

MARTIN WOODARD AND JOHN E. SNYDER, OF MISSOURI VALLEY, IOWA.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 125,647, dated April 9, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that we, MARTIN WOODARD and J. E. SNYDER, of Missouri Valley, in the county of Harrison and State of Iowa, have invented certain new and useful Improvements in Saw-Mill Attachments; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of our invention consists in the construction and arrangement of a saw-mill, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, Fig. 2 a side elevation, and Fig. 3 a longitudinal vertical section of our machine.

A represents the frame of the machine, in which is the main driving-shaft B, having a large wheel, C, connected, by a belt, D, with a smaller wheel or pulley, *a*, upon the shaft *b*. On the end of this shaft is the saw E, on the outside of which is a guard, G, that also serves as a boxing and fastening to overcome friction and leverage. On the shaft *b* is a friction-roller, *d*, which gives motion to a similar roller, *d'*, on a shaft, *e*, as shown in Fig. 2. From the said shaft *b* motion is, by means of a belt, D', communicated to a shaft, *b*¹, said belt passing over a pulley on the shaft *b* and a wheel on the shaft *b*¹. This shaft *b*¹ is also provided with a friction-roller, *d*². Between and below the shafts *b* and *b*¹ is another shaft, *b*², carrying upon its inner end a pinion, *f*, for moving the log-carriage. The outer end of this shaft *b*² has its bearings in a lever, H, pivoted to the inside of the frame A, so that the said shaft may be moved sufficiently to bring a wheel, I, on the same in contact with either of the friction-rollers *d*¹ or *d*² and thus reverse the motion of the log-carriage, or be kept between them and not touch either, and thus keep said carriage stationary. The lever H moves in a guard, J, and is provided with a weight, K, on its upper end for the purpose of keeping the rag-wheel I with the necessary pressure against the fric-

tion-wheels. To the lever H is pivoted another lever, H', which passes through a guide attached to a stationary post, L, and in said guide is fixed a spring-button, *g*, which may be turned with its edge up to catch in a notch on the under side of the lever H' to hold the lever H in an upright position, so that the rag-wheel I will not come in contact with either of the friction-wheels, and thus leaves the carriage standing still. M represents the carriage upon which the log to be sawed is placed, said carriage moving upon suitable ways, and provided with a rack-bar, *h*, into which the pinion gears to move the carriage. N N are the head-blocks of the carriage, the ends of which nearest the saw are closed to prevent the jacks *k k* from passing out into the saw. The jacks *k k* are attached to notched bars *m m* sliding in the head-blocks, and provided with spring-pawls *i i*, which work in notches on the inside of the head-blocks to prevent the log from moving back after being moved forward. *n* represents an iron shaft having a key-slot cut the entire length, and supported by arms *p p* on the outside of the carriage M. On this shaft are two jaws, O O, and a lever, P, the latter provided with a set-wheel, R. The sliding notched bars *m m* pass one through each jaw O, and above said bar in the jaw is pivoted a dog, *r*, to operate said notched bars. As soon as the carriage has passed far enough so that the log has cleared the saw the set-wheel R strikes a shoe, S, raising the lever P, which causes the dogs *r r* to move the sliding bars *m m* and the jacks *k k*, so as to set the log to any desired width to the saw. The width to which the log is to be set is regulated by the position, or rather height, of the shoe S, which is attached to an upright bar, T, hung upon one end of a lever, V, said lever being pivoted on a post, W, and its position regulated by a pin, *s*, through the post L and the other end of said lever V. The posts W and L may be attached to the mill or the building-frame, as may be desired. The lower end of the upright bar T, to which the shoe S is attached, has a slot, *t*, through which a guide-bar passes, said slot *t* being made to correspond with the slant of the shoe S, so that the shoe will always retain its natural position to the set-wheel R. To the dogs *r r* are cords *v v* attached, which run to the post L above the pin *s* to raise either dog, so as to saw lumber of uneven width

at the ends. X is a supporting-bar attached to the bottom of the carriage to support the lever P in its resting position after the set-wheel R leaves the shoe S, so that the dogs *r r* will not fall back over any more notches than required on the bars *m m*. The lever P is also at its end provided with a handle for moving said dogs by hand when required. Y and Y' are spring-posts attached to the carriage M by mortise and tenon, or by wide mortise to fit over the carriage-frame, or by hinges, the springs *w w* keeping said posts in their proper places. These posts during the movement of the carriage strike buttons Z Z, and these buttons hold the posts until they spring back far enough to clear the buttons, and then strike a lever, A', pivoted horizontally on a post, B', and its other end attached to the lever H', so that by the blow on said lever A' the position of the lever H becomes shifted and the feed reversed. The spring-post Y is stationary at the front head-block, while the post Y' may be adjusted to accommodate any desired length of log. The buttons Z Z may be attached to the frame of the mill, or above, in the building, as required.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the shafts *b, b¹, b²*, and *e*, friction-wheels *d d¹ d²*, friction-wheel I, and lever H with weight K, all substantially as shown and described, and for the purposes herein set forth.

2. The combination of the lever H with its weight K and guard J, the notched lever H', and spring-button *g*, all substantially as and for the purposes herein set forth.

3. The combination of the shaft *n*, lever P, jaws O O, dogs *r r*, notched bars *m m*, and jacks *k k*, substantially as and for the purposes herein set forth.

4. The combination of the shoe S, bar T having slot *t*, lever V, and posts W L with pin *s*, all substantially as and for the purposes herein set forth.

5. The combination of the spring-posts Y Y', buttons Z Z, and levers A', H', and H, all substantially as and for the purposes herein set forth.

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

MARTIN WOODARD.

Witnesses:

JOHN E. SNYDER.

A. S. AVERY,

S. H. MATTHEWS.