

S. KEMPER.

Improvement in Saw-Mills.

No. 114,568.

Patented May 9, 1871.

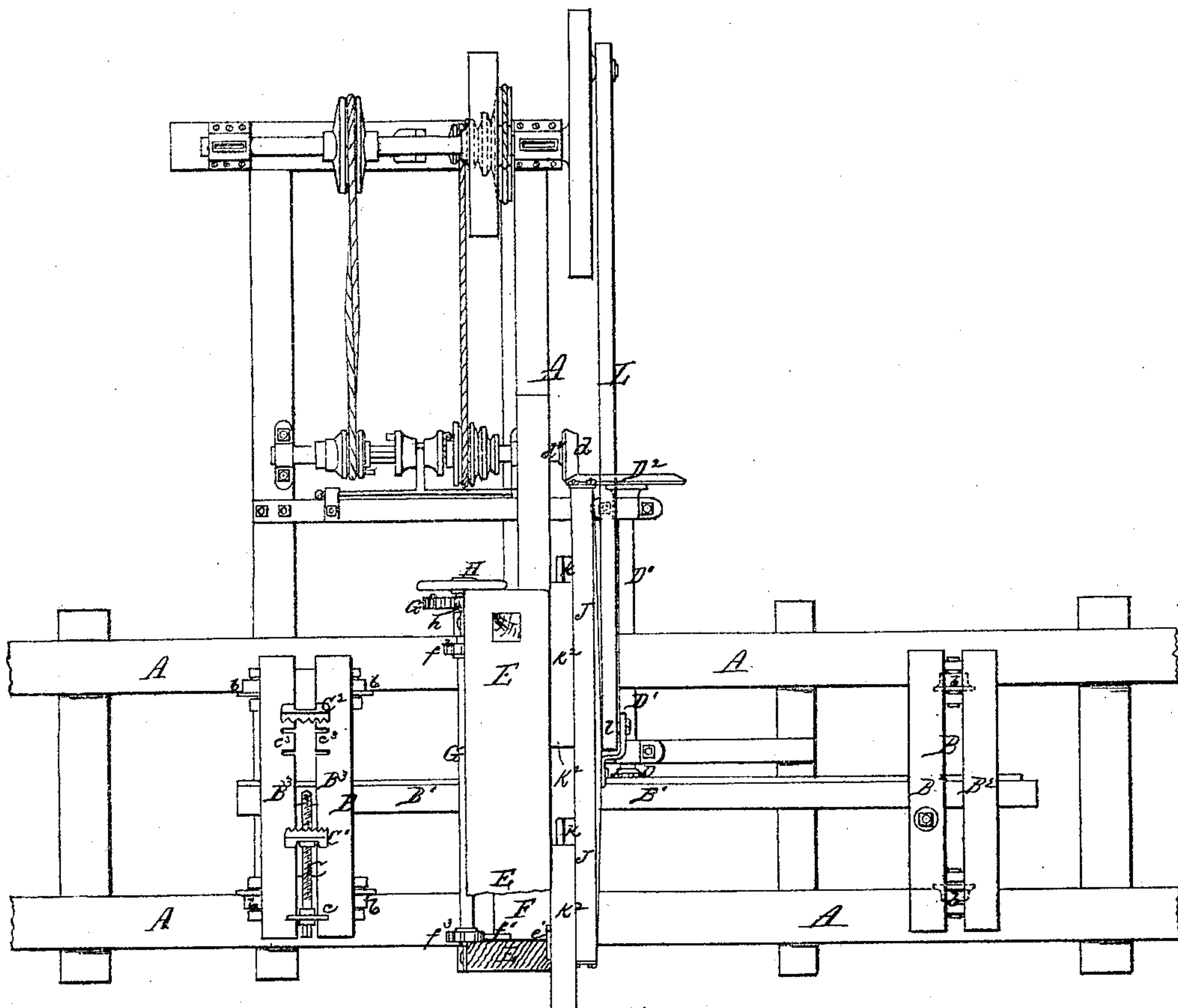


Fig. 1.

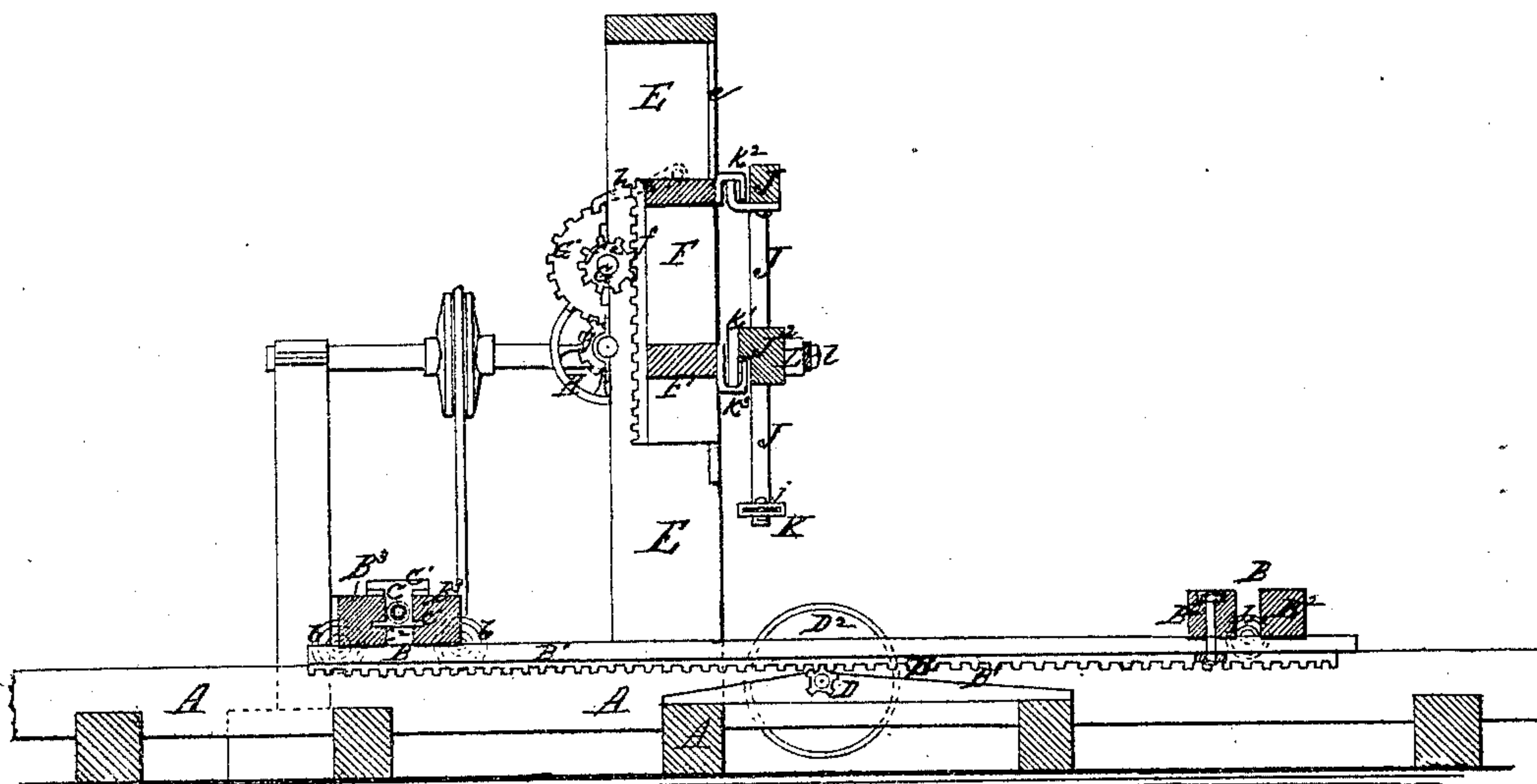


Fig. 2.

Witnesses:

Wm. L. Bethel
Robert Burns

Inventor.

Simon Kemper
by his atty
Wm. L. Bethel

S. KEMPER.

2 Sheets--Sheet 2.

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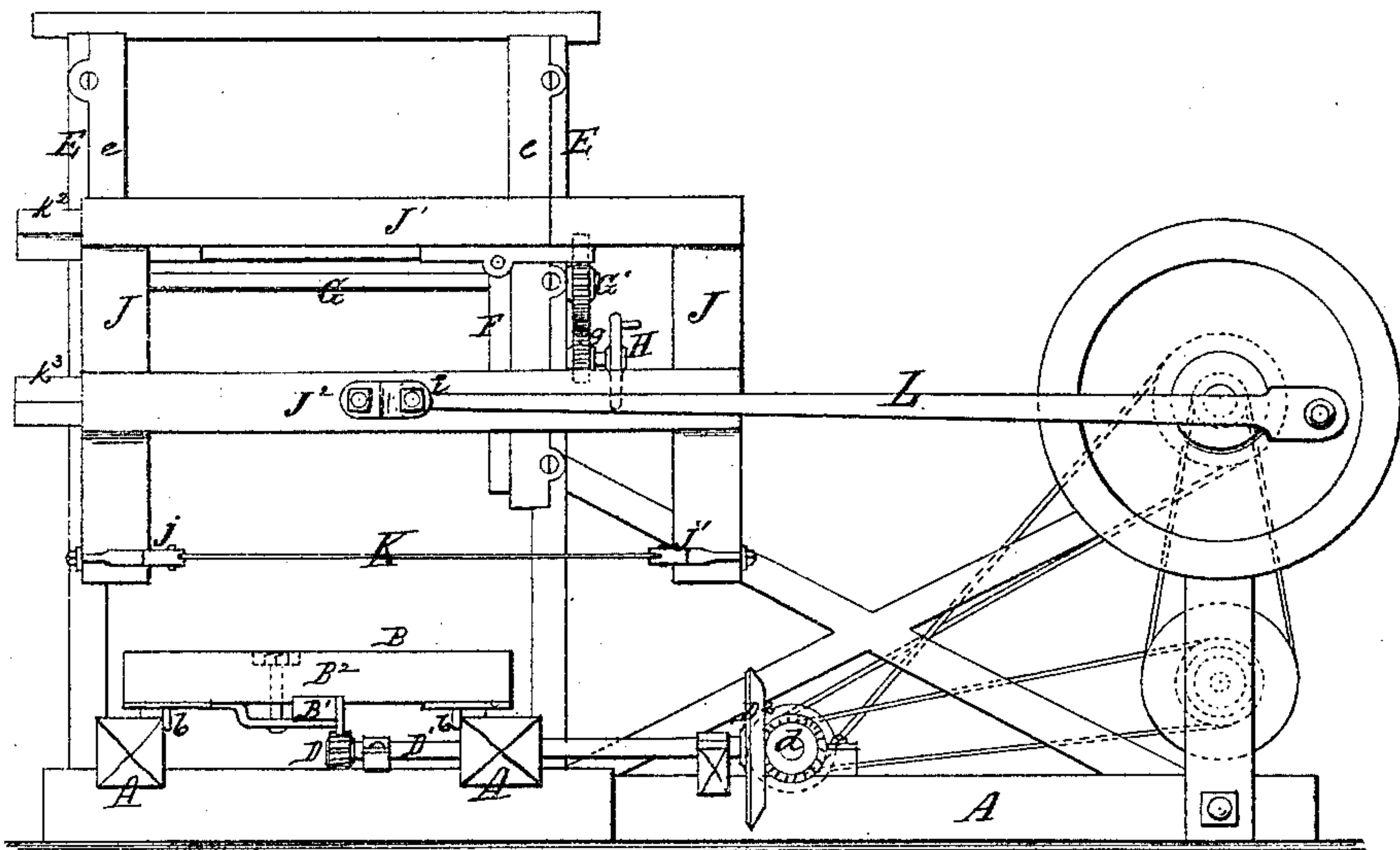


Fig. 3.

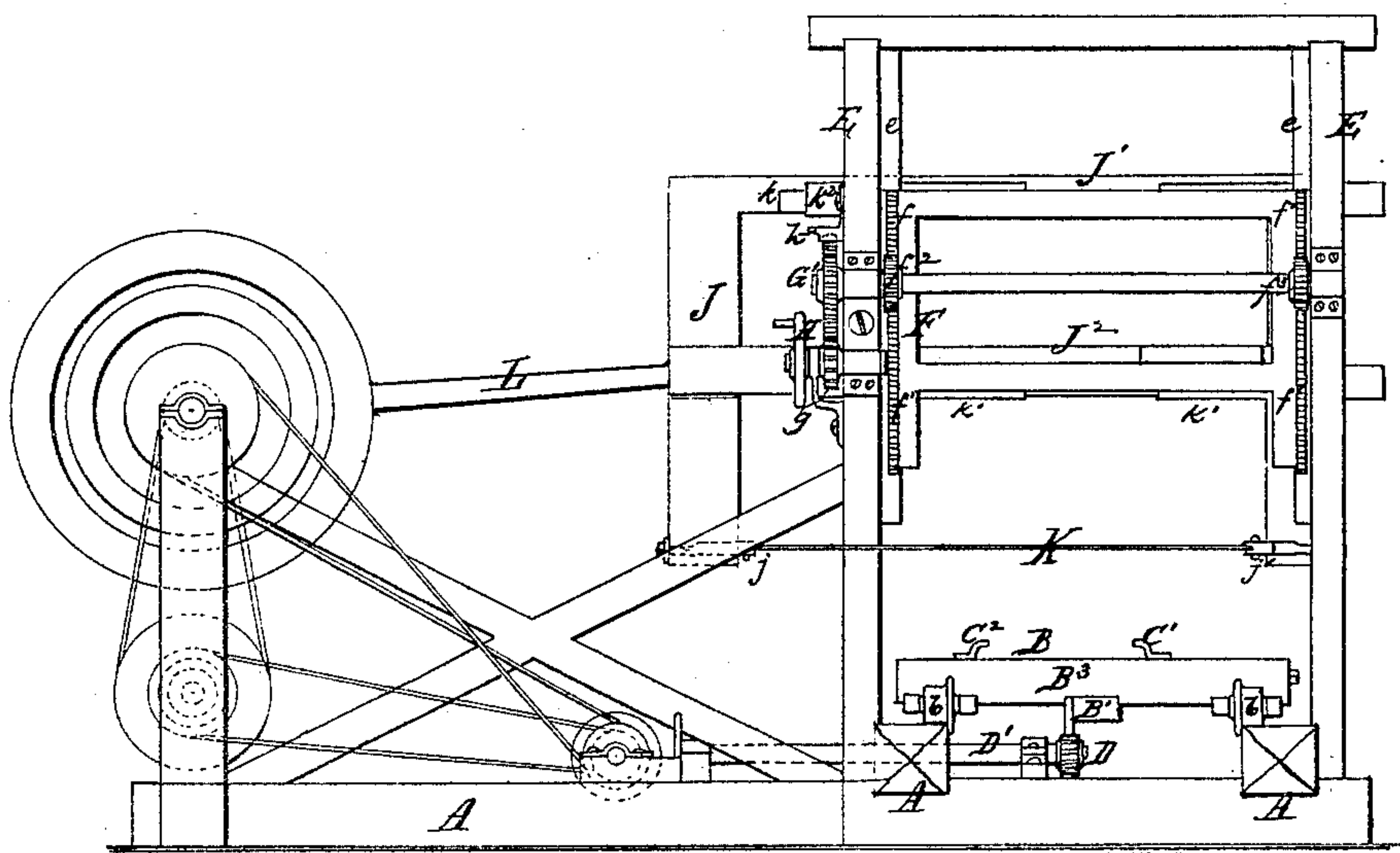


Fig. 4.

Witnesses:

J. M. Fether,
Robert Furness

Inventor:

Simon Kemper
by his atty
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United States Patent Office.

SIMON KEMPER, OF BERGER, MISSOURI.

Letters Patent No. 114,568, dated May 9, 1871.

IMPROVEMENT IN SAW-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SIMON KEMPER, of Berger, in the county of Franklin and State of Missouri, have made a certain new and useful improved Horizontal Saw-Mill; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention relates—

First, to the arrangement of a sliding saw-frame with saw operating horizontally;

Secondly, to the construction and arrangement of parts by which the saw can be adjusted to saw any required thickness;

Thirdly, in providing the carriage with adjustable dogs for clamping the log or lumber securely in position; and

Lastly, to certain detail construction of parts now to be more fully described.

To enable those skilled in the art to make and use my said invention, I will now more fully describe the same, referring to the accompanying—

Figure 1 as a top plan; to

Figure 2 as a longitudinal sectional elevation; to

Figure 3 as a front elevation; and to

Figure 4 as a rear elevation.

The stationary frame or bed A I provide with a carriage, B.

The carriage B consists of a longitudinal rack, B¹, to which the head-blocks B² B³ are secured, and upon which the log or timber is placed.

The head-blocks are provided with wheels, b b b b, so as to slide evenly upon the iron track of the bed A, in manner usual.

In order that the log can be securely and firmly held I have arranged between each head-block a crank-screw, C, supported at one end in proper bearings c.

Said screw carries a sliding dog, C¹, moving in elongated slots c¹ c², fig. 2.

Also, said head-blocks have a series of vertical slots or grooves, c³, fig. 1, in which the dog C² is inserted. Thus all sizes of logs can be clutched and held in place.

The feed-motion is imparted to the carriage B by its rack B¹ meshing in pinions D on the end of the feed-shaft D¹, said shaft being operated by its gear D² meshing with pinion d on the lower shaft d' of frame A.

The arrangement of driving-wheels, cone-pulleys, and feed-works, with their belting-connections for regulating the feed and imparting the feed-motion to the carriage B, is made in the usual well-known manner to be operated by horse or steam-power.

To the main frame A I secure the upright frame E, supporting the adjustable frame carrying saw-frame and saw, as follows:

Within the frame E I arrange the frame F, working on guide-plates e e', and supported and receiving its vertical movement by racks f f¹ meshing in pinions f² f³ on shaft G, which has its bearings secured to the frame E, as shown in fig. 4.

To adjust the frame F in any required vertical position I provide the end of shaft G with a proper gear-wheel, G', gearing with pinion g on a shaft having its bearings on the side of frame E, and which carries the hand-wheel H, as shown in figs. 3 and 4.

By turning the hand-wheel H the frame F receives its vertical slide-motion, and, when adjusted as required, is secured in position by a pawl, h, engaging in gear-wheel G'.

The saw-frame J consists of upper and center beams J¹ J², its saw K being secured to arms j j', and set to operate horizontally.

The beams J¹ J² of saw-frame I provide with slides k k', fitted to slide and operate in the grooved slides k² k³, secured to the adjustable frame F, in manner clearly shown in fig. 2.

The saw and its frame are thus supported on frame F. They receive their horizontal reciprocating motion by a pitman, L, pivoted at l to the saw-frame J, and connecting with and secured to the fly-wheel on main driving-shaft operated by the power source.

As, therefore, saw-frame, with saw, rests in the slides of the adjustable frame F, it can readily be adjusted to saw any thickness required. This adjustment of the saw, it will be observed, can readily be accomplished as soon as the carriage starts to feed, and without stopping the motive power. Furthermore, as the log when once clamped in its true position need not be changed, the operation of sawing can be accomplished with great accuracy, and with a saving of great time and labor.

Having thus fully described my said invention,

What I claim is—

1. The crank-screw C, sliding and removable dogs C¹ C², when arranged in head-blocks B² B³ of a feed-carriage, B, as and for the purpose described.

2. The combination of the horizontal saw K, its frame J having slides k¹ k² arranged to slide in grooved slides k³ k⁴ of the adjustable frame F, substantially as set forth.

In testimony of said invention I have hereunto set my hand in presence of witnesses.

Witnesses:

SIMON KEMPER.

WILLIAM W. HERTHEL,

ROBERT BURNS.