

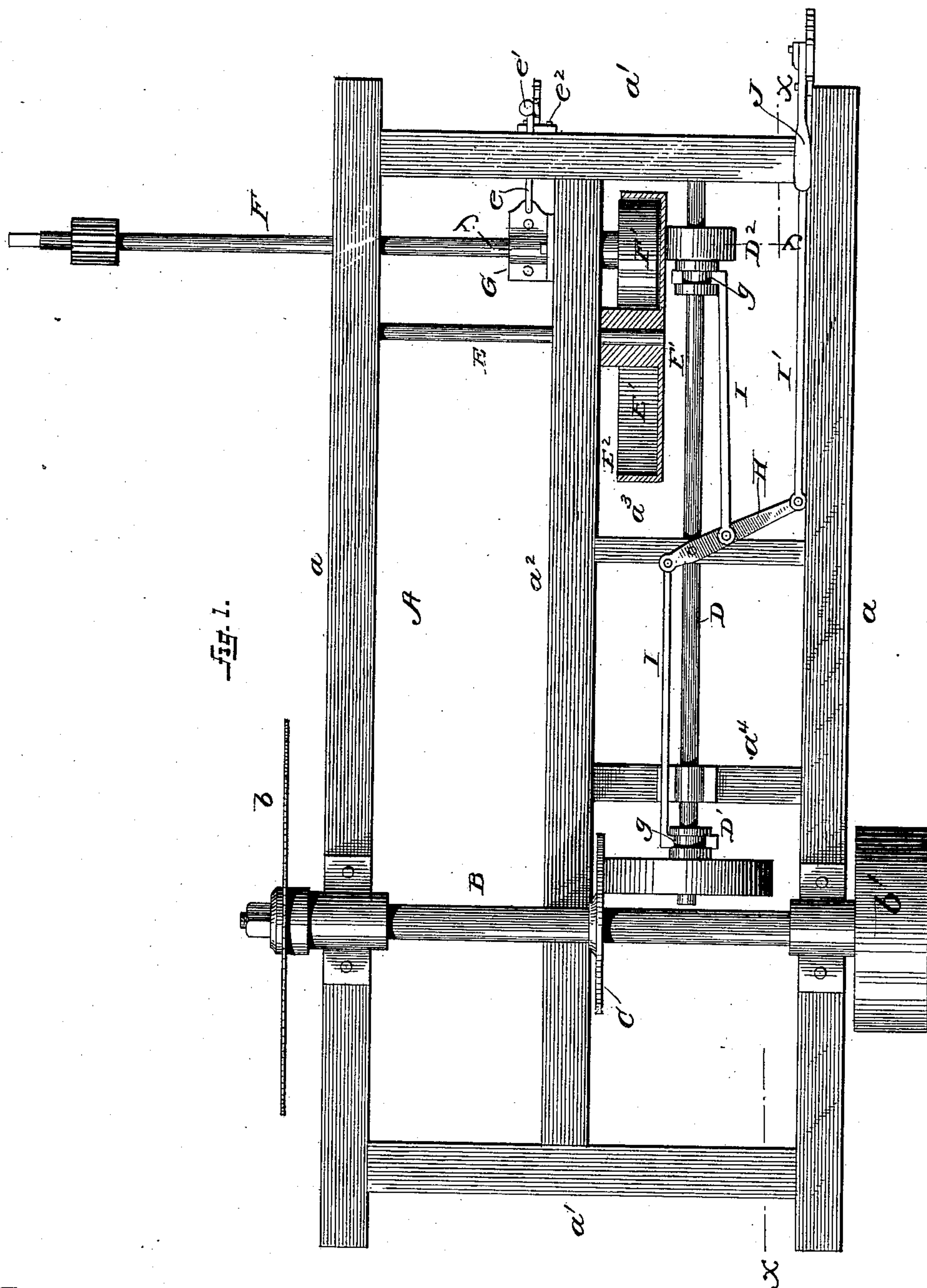
(No Model.)

2 Sheets—Sheet 1.

A. I. HIPPIE.
SAW MILL FEED MECHANISM.

No. 343,457.

Patented June 8, 1886.



Witnesses:

W. W. Mortimer.
J. B. Noyes,

Inventor:

Adam S. Hipp,
by J. R. Pettell
his Attorney

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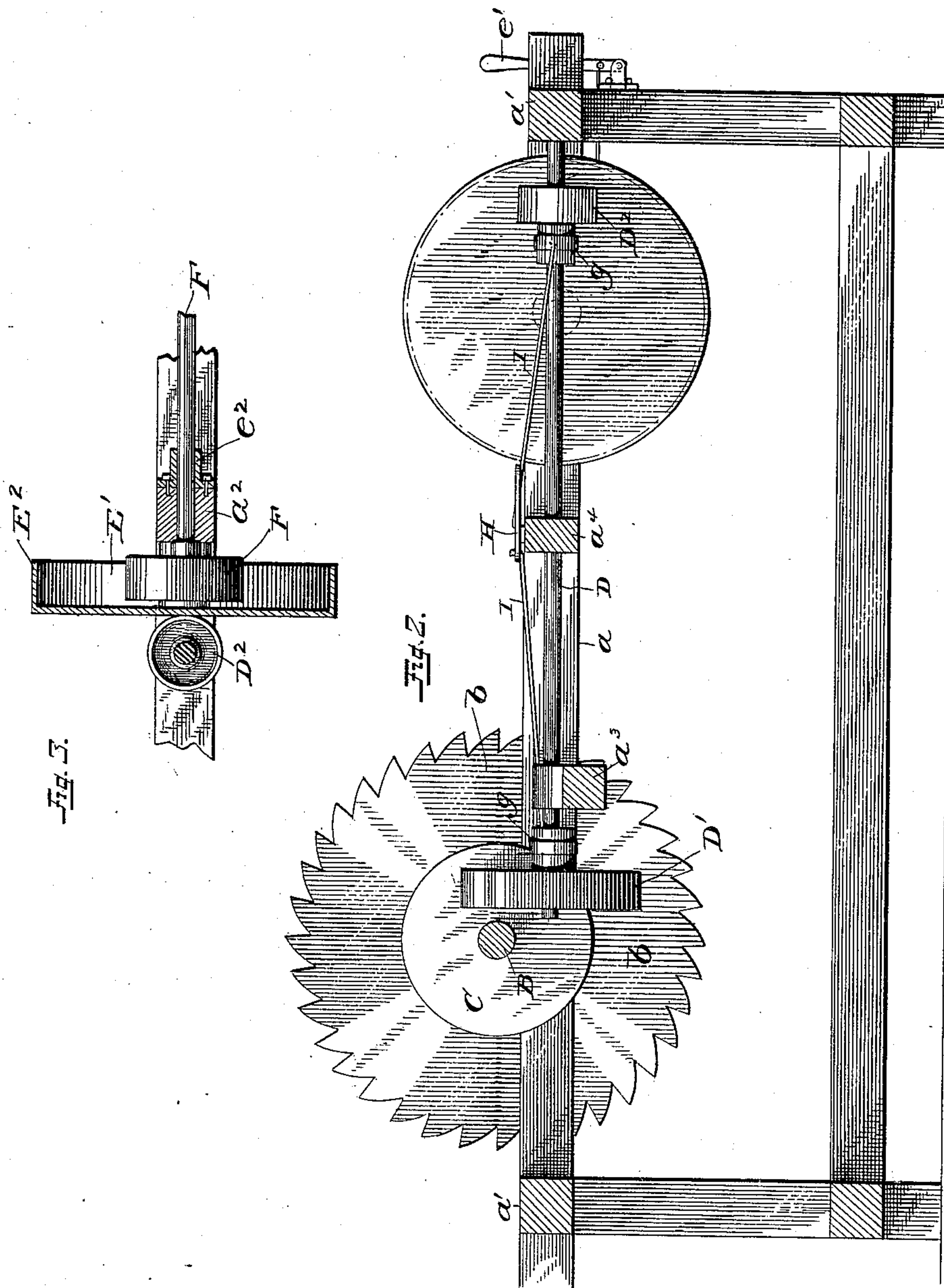
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W. H. Mortimer,
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Inventor:

Adam I. Hipp,
by J. R. Little
his Attorney.

UNITED STATES PATENT OFFICE.

ADAM ISADER HIPP, OF COLUMBIA, SOUTH CAROLINA.

SAW-MILL FEED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 343,457, dated June 8, 1886.

Application filed February 25, 1886. Serial No. 193,176. (No model.)

To all whom it may concern:

Be it known that I, ADAM ISADER HIPP, a citizen of the United States, residing at Columbia, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Mechanism for Operating Saw-Mill Carriages; and I 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.

My invention relates to means for regulating the mechanism for moving a saw-mill carriage to or from the saw, and the object of the invention is to dispense with the use of toothed gearing and belting, thereby imparting a steady and even movement to the carriage, and avoiding the jars and shakes incident to the operation of this class of mechanism as ordinarily constructed.

The invention consists in the improved construction and combinations of parts herein-after fully described, and pointed out in the claims.

In the drawings, Figure 1 is a plan view of my invention. Fig. 2 is a section on the line $x x$ of Fig. 1, and Fig. 3 is a detail section on the line $y y$ of Fig. 1.

Corresponding parts in the several figures are denoted by the same letters of reference.

Referring to the drawings, A represents a rectangular supporting-frame comprising the longitudinal side beams, a , connected at or adjacent to their ends by end beams, a' , which end beams are connected at a point about midway their ends by a longitudinally-disposed beam, a^2 . Having bearing in the frame, near one end thereof, is a shaft, B, on one end of which is rigidly mounted a saw, b , while on the other end is located a driving-pulley, b' , designed to be connected by a belt with any desired or suitable driving power.

Upon the shaft B is mounted, adjacent to the beam a^2 and on the side thereof nearest the driving-pulley, a friction-disk, C, having a broad bearing-face.

D represents a longitudinally-disposed shaft having bearing in one of the end beams of the frame at one end, and supported at its other end by a beam, a^4 , which connects one of the side beams of the frame and the centrally-ar-

anged beam a^2 , said beam carrying a bearing-box, through which said shaft passes. Said shaft is also supported midway its ends by a beam, a^3 , connected with one of the side beams and the beam a^2 .

Upon the inner end of the shaft D is mounted a friction-pulley, which is preferably of compressed paper or pulp, and which bears against the side face of the friction-disk C, so that upon motion being imparted to the shaft upon which the saw is mounted said pulley will be rotated and will turn the shaft upon which it is mounted.

On the shaft D, adjacent to the end of the supporting-frame A, is mounted a smaller friction-pulley, D^2 .

E represents a shaft, having bearing in the frame A, and carrying at its inner end a rigidly-mounted friction-wheel, E' , having a smooth hub, which acts as a friction-surface, as will be more fully explained. The friction-wheel E' is provided at its peripheral edge with an inwardly-projecting circumferential flange, E^2 , the purpose of which will be hereinafter explained. The friction-pulley D^2 , as will be seen, bears against the face of the friction-wheel E' , and thereby rotates the shaft upon which it is mounted.

F represents a shaft, having bearing in the supporting-frame A, and carrying a toothed pinion adapted to mesh with the longitudinally-disposed rack-bar usually employed on saw-carriages, (not shown.) Said shaft has a slight longitudinal movement at its inner end, and upon said inner end is rigidly mounted a friction-pulley, F' , which is located between the hub and rim or flange of the friction-wheel E' . If the shaft carrying the friction-pulley F' be moved so that it will engage the hub of the friction-wheel E' , it would be turned in a direction the reverse from that in which the friction-wheel is moving, and if moved so as to bear against the inner face of the rim it would be revolved in the opposite direction, the same as that in which the friction-wheel is moving.

Fitting upon the shaft F is a block, G, which is connected by a rod, e , with a pivoted lever, e' , pivoted to a bracket, e^2 , secured to the supporting-frame outside the latter, and by means of which the shaft F is moved to cause its

friction-pulley to bear against the rim or hub of the friction wheel, as desired.

It will be understood that the shaft B is rotated at all times at the same rate of speed, and to regulate the speed at which the carriage is moved to or from the saw, as circumstances may require, the friction-pulleys on the shaft D are provided with inwardly-projecting collars or sleeves, which are formed with circumferential grooves or channels *g*. Pivoted on the beam *a* is a lever, H, connected with which, on opposite sides of its pivot, are rods I, having arms at their inner ends which fit in the grooves or channels *g*. Pivoted to the inner or free end of the lever H is a rod, I', which is connected at its other end to a vertically-arranged lever, J. It will be seen that by moving the upper end of said lever toward the supporting-frame the pulleys will, through the medium of the connecting arms or rods, be drawn closer together, this action causing the small pulley D² to be drawn toward and bear on the pulley near the axis thereof, while the friction-pulley D' will be moved and bear against the friction-disk C, near the peripheral edge thereof, thus causing the shafts D and F to be moved at a greater rate of speed. If the lever be moved in the opposite direction, the pulley D' will be moved nearer the axis of the disk C, thereby causing its shaft to be revolved at a slower rate of speed and the pulley D² to be moved near the peripheral edge of the pulley F', thereby causing the shaft which carries the pinion for operating the saw-carriage to be moved at a slower rate of speed. In the manner above described, it will be seen that the speed with which the carriage advances toward the saw or recedes therefrom is readily and quickly regulated.

By the construction above described it will be seen that the use of toothed gearing and belting, which is liable to derangement, and which has been found to be very unsteady in its movement, is avoided, and mechanism provided which is not only simple in its construc-

tion, but effective in its operation. In addition to this, the speed of the carriage is readily and quickly controlled, and the shifting required to change the movement of the carriage is quickly made.

Having thus fully described my invention, I claim—

1. In mechanism for operating saw-mill carriages, the combination, with a supporting-frame, of a shaft located at one end of the frame and carrying a saw and friction-disk, a shaft for operating the saw-carriage located at the other end of the frame and carrying a pulley, a flanged friction-wheel to engage said pulley, and a longitudinally-arranged shaft carrying pulleys to engage the friction-disk and flanged friction-wheel, substantially as set forth.

2. The combination, with a supporting-frame, of a shaft arranged at one end thereof, and carrying a saw and friction-disk, a shaft located at the other end of the frame and carrying a friction-wheel, connections between the said friction-wheel and the shaft for operating the saw-carriage, a longitudinally-arranged shaft carrying a pulley at each end to bear against the friction-disk and wheel, and levers for moving the pulleys on said shaft, substantially as set forth.

3. The combination, with a supporting-frame, of a shaft arranged at one end thereof and carrying a saw and friction-disk, a shaft, F, arranged at the other end of the frame and carrying a friction-pulley, a shaft carrying a flanged friction-wheel to engage said pulley, a longitudinally-arranged shaft carrying a pulley at each end to engage the friction-disk and wheel, and levers for moving said pulleys, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ADAM ISADER HIPP.

Witnesses:

W. H. GIBBES, Jr.,
JOS. W. MULLER.