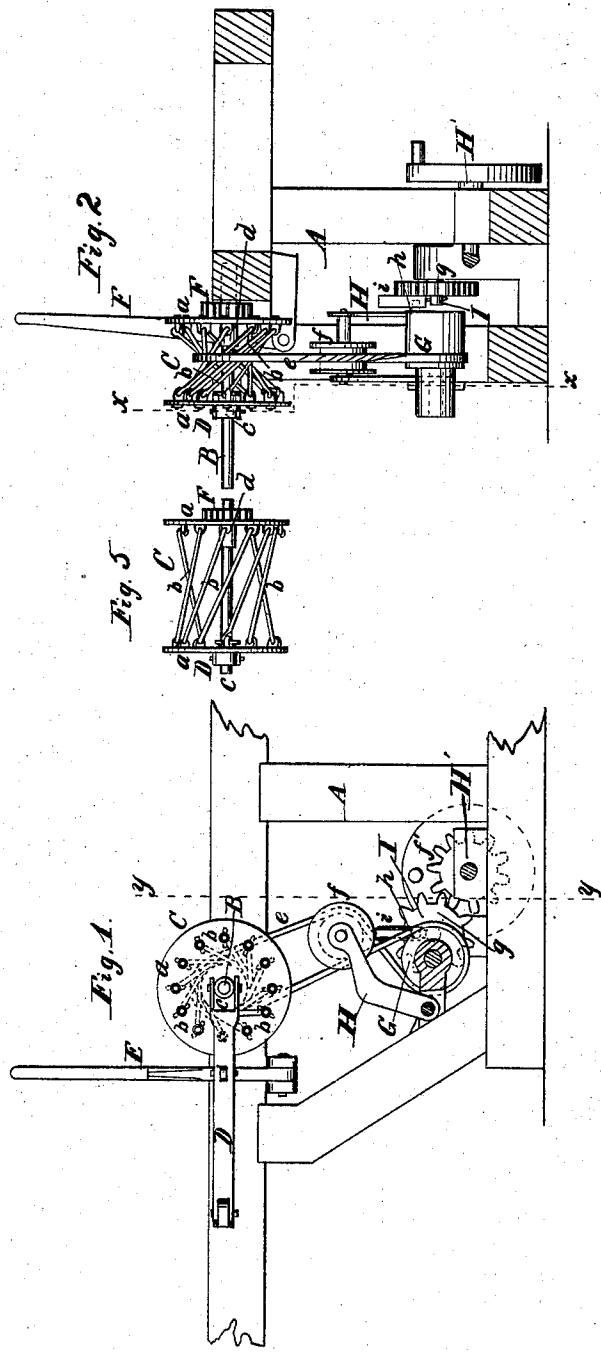


R. EICKMEYER.
SAWMILL.

No. 15,559.

Patented Aug. 19, 1856.



UNITED STATES PATENT OFFICE.

R. EICKEMEYER, OF YONKERS, NEW YORK.

IMPROVED METHOD OF REGULATING THE VELOCITY OF FEED FOR SAWING-MILLS.

Specification forming part of Letters Patent No. 16,559, dated August 19, 1856.

To all whom it may concern:

Be it known that I, R. EICKEMEYER, of Yonkers, in the county of Westchester and State of New York, have invented a new and useful Improvement in Saw-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my improvement, $x x$, Fig. 2, showing the plane of section. Fig. 2 is also a vertical section of the same, $y y$, Fig. 1, showing the plane of section. Figs. 3 and 4 is a view of the devices by which a movement of varying speed is given the shaft which drives the carriage. Fig. 5 is a detached view of the expanding pulley.

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

My invention consists in connecting the crank-shaft which drives the saw with the shaft which drives the carriage in such a manner that a variable speed is given the carriage, so that the log may be properly fed to the saw and the feed made to suit either a vertical or inclined saw, as will be hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a frame constructed in any proper manner to support the working parts.

B represents a shaft, which is attached to the upper part of the frame A. On the shaft B an expanding pulley, C, is placed loosely, the shaft being stationary and the pulley rotating upon it. This pulley is formed of two circular plates or disks, $a a$, connected by oblique rods b , the ends of the rods being jointed to the inner sides of the plates or disks $a a$, as shown clearly in Figs. 2 and 5. The outer plate or disk a is placed loosely on a sliding collar, c , on the shaft B, and a horizontal lever, D, is connected to the collar c . An upright lever, E, is connected to the horizontal lever D. The inner plate or disk a is attached permanently to a collar, d , on the shaft B, said collar having a pinion, F, which gears into a rack on the under side of the carriage on which the log is placed. A belt, e , passes around the pulley C, said belt also passing around a shaft, G, which is placed in the lower part of the frame A. An idle or friction roller, f , which is placed in a swinging frame, H, bears against the belt e .

H' represents the crank-shaft from which the reciprocating saw is driven. This shaft has a pinion, f' , upon it, which pinion gears into a corresponding pinion, g , on a shaft, I. The shafts I and G are placed out of line with each other, and to the inner end of the shaft G, at its periphery, there is attached a pin, h , which pin fits in a grooved plate, i , attached radially to the inner end of the shaft I. This is clearly shown in Fig. 3. It will be seen that when the shaft H' is rotated a variable motion will be communicated to the shaft G, for when the pin h is at the inner end of the grooved plate i the motion of the shaft G will be considerably slower than when the pin h is at the outer end of said plate, and the shaft G, therefore, will rotate about half of a revolution quicker than the other half. By this means the carriage is operated quicker at one time than at another, and the log is fed to the saw in a proper manner. For instance, if a vertical reciprocating saw is used, the log must be fed to the saw as the saw descends, and the crank on the shaft H' must be so placed that the most rapid motion will be given the carriage as the saw descends, the log being fed to the saw as it cuts; but if an inclined or "raking" saw is used the crank is so placed that the carriage will be moved more rapidly as the saw ascends.

Instead of the pin h and grooved plate i , a "draw-link," j , may be used, as shown in Fig. 4. The same effect is obtained by either device.

By operating the lever E the diameter of the pulley C may be increased or diminished, as occasion requires, the rods b allowing the two disks or plates $a a$ to approach and recede from each other. By this means the speed of the carriage may be increased or diminished, as desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

Driving or operating the log-carriage by means of two shafts, I G, placed more or less out of line with each other and connected by a pin, h , and grooved plate i or draw-link j , or any equivalent device, for the purpose of giving a variable movement to the carriage, thereby feeding the log to the saw, as described.

R. EICKEMEYER.

Witnesses:

J. BURNS,

THOMAS I. TEMPLE.