(No Model.)

2 Sheets—Sheet 1.

T. J. REAMY.

SAWMILL FEED MECHANISM.

No. 510,818. Patented Dec. 12, 1893.

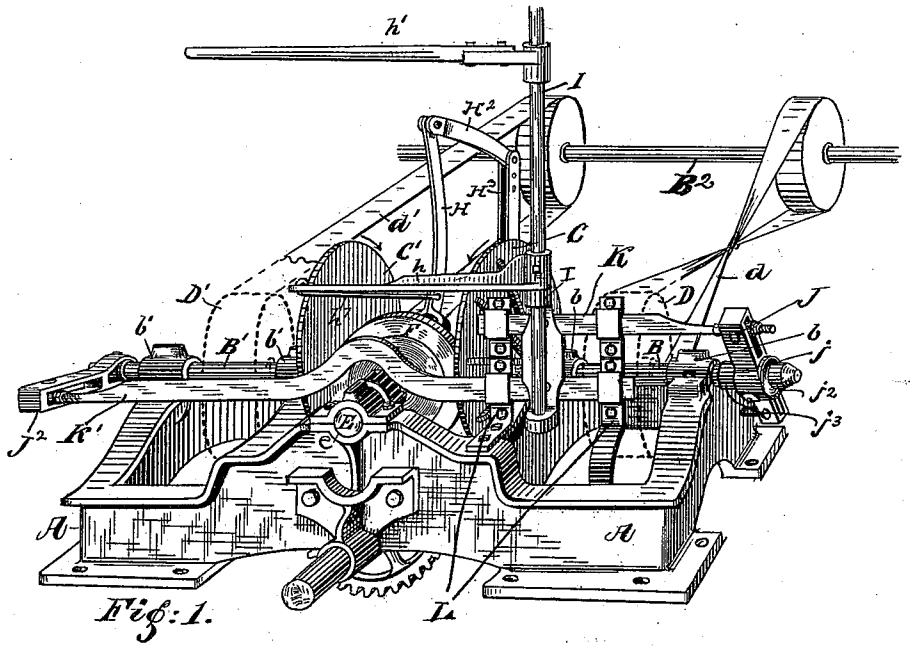

Fig. 1.

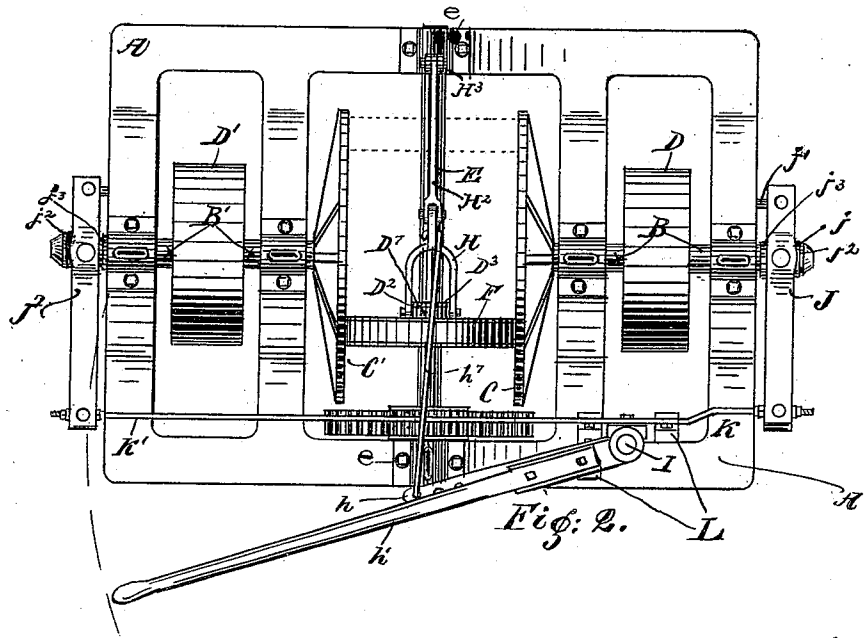

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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SAWMILL FEED MECHANISM.

No. 510,818. Patented Dec. 12, 1893.

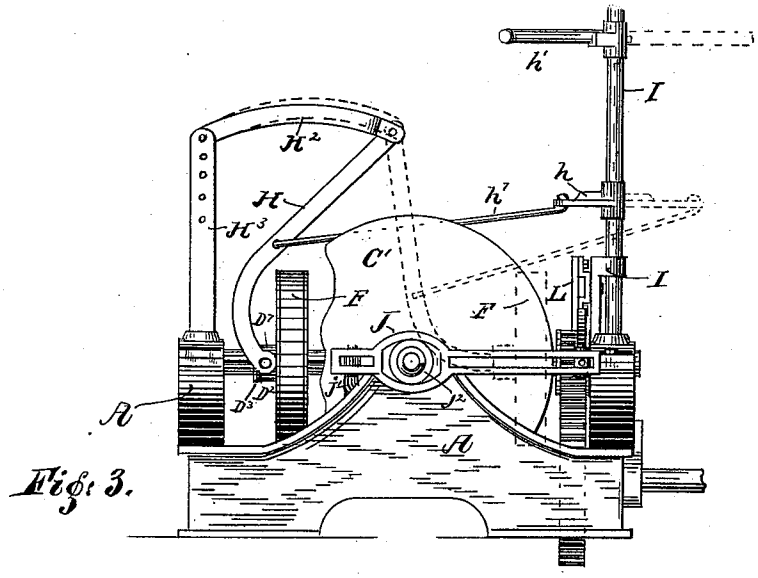

Fig. 3.

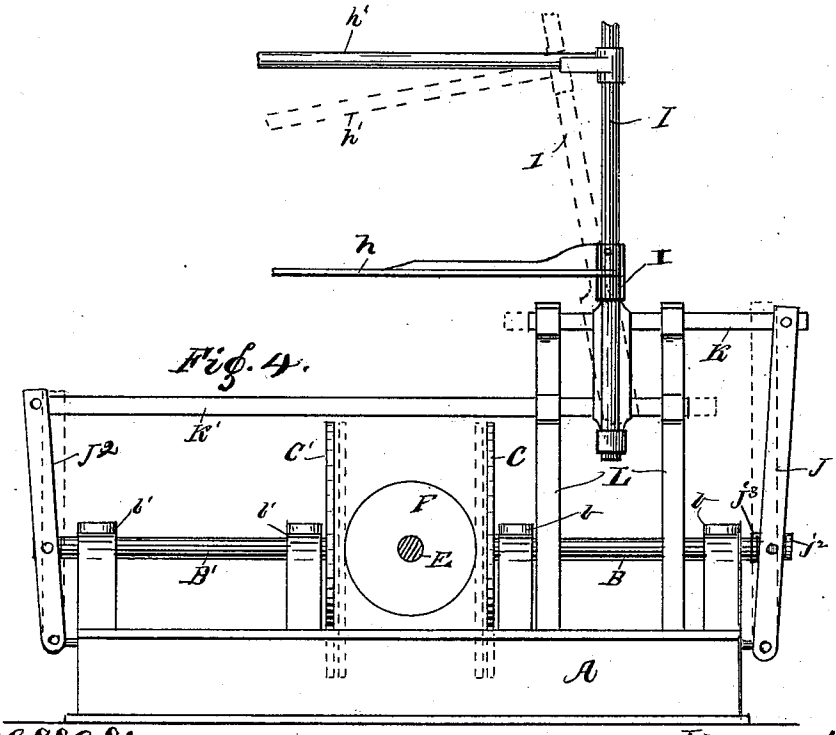

Fig. 4.

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UNITED STATES PATENT OFFICE.

THOMAS J. REAMY, OF AUBURN, INDIANA.

SAWMILL FEED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 510,818, dated December 12, 1893.

Application filed December 23, 1891. Serial No. 416,003. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. REAMY, a citizen of the United States, residing at Auburn, in the county of De Kalb and State of Indiana, have invented certain new and useful Improvements in Sawmill Feed Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in saw mill feed mechanism; and it consists in the construction and arrangement of parts which will be fully described hereinafter, and particularly referred to in the claims.

The object of my invention is to provide a friction driving mechanism which is especially applicable to saw mill carriages, and of the construction hereinafter shown and described, whereby great power is obtained, and the several parts adapted to be operated by a single lever.

Figure 1, is a view in perspective of my invention in the form adapted to act as a feed mechanism for saw mills. Only the frame work of my device and the parts essential to an understanding of the construction and operation of same are shown and the driving pulleys are indicated by dotted lines. Fig. 2, is a plan view of same showing the driving pulleys in full lines but not showing the driving belts. Fig. 3, Sheet 2, is a detail in side elevation, showing disk broken away to better illustrate the construction of the friction pulley and levers for shifting it on its countershaft. This figure shows the pulley and levers in dotted lines at the opposite end of the shaft. Fig. 4, Sheet 2, is a diagram showing the construction of the system of levers by which the two disks are thrown into contact with the friction pulley. The dotted lines indicate the positions when the disks are in contact.

Similar letters represent like parts throughout the several views of the drawings.

A is the base or frame work to which the other parts are attached.

B and B′, are two shafts arranged so that their longitudinal centers will be horizontally aligned. They are journaled in the boxes *b*, *b* and *b′*, *b′*, respectively.

C and C′ are metallic disks keyed to the inner ends of the shafts B and B′ respectively so as to be rotated by the revolution of the shafts.

D, is a pulley keyed to the shaft B, and D′ is a like pulley keyed to the shaft B′. Both of these pulleys are connected by belts with corresponding pulleys on the main driving shaft B^2, one of the said belts, *d*, being twisted in order to transmit a reverse movement to the pulley, D, and the other belt, *d′*, being straight so as to cause the two shafts and attached disks to revolve in opposite directions as shown by the arrows in Fig. 1.

E, is a counter shaft whose opposite ends are journaled by suitable boxes, *e*, to the bed plate or frame of the machine, and F, is a friction pulley splined to the shaft, E, so that while both pulley and shaft must revolve together, the pulley may be shifted longitudinally upon the shaft. By this construction, power will be transmitted to the friction pulley by contact with the disks and the power will be transmitted to both sides of the pulley at once with an equal pressure, that will be counteracting, in its result and relieve the shaft of the friction with its journal bearings, and from the tendency to spring out of alignment; and besides the foregoing advantages, by using two disks the amount of contacting surface between the disks and the pulley will be doubled. The speed of the pulley, F, will be varied by shifting its position on the shaft in a direction to or from the center, the greatest velocity being transmitted to the pulley when it is nearest the edge of the disk and decreasing toward the center at which point the pulley will remain stationary, and on passing the center the movement will again increase in rapidity toward the periphery but the direction of revolution will be reversed.

It is not desired to limit this invention to any prescribed form of levers for controlling the movements of the pulley on the countershaft, or for regulating the contact between the pulley and the disks, but as the system of levers for this purpose as shown in the drawings has proven very convenient and

efficient, a description thereof will now be given.

D^2 is a continuation of the hub of the pulley F, and D^3, is a collar secured to it by means of a set screw of otherwise.

D^7 is a loose collar between the collar D^3 and the pulley.

H, is a bifurcated lever whose bifurcated ends are connected pivotally with the collar D^7 and whose opposite end is pivotally connected with the link, H^2, and the link is pivotally connected with the stationary bar or standard, H^3.

I, is a vertical rod having the horizontal arm, *h*, secured to it so as to turn with the rod, and *h'*, is a hand lever also secured horizontally to the rod, I. The connecting bar, h^7, is attached at one end to the lever H, and at the other end to the arm, *h*, and by a horizontal movement of the hand lever the pulley may be moved in a corresponding direction on the shaft.

J, is a yoke whose inner end is pivoted at, *j'*, to the frame of the machine, and whose outer end is connected by means of the slide K, with the bar or rod, I. To the sides of the yoke intermediate between the two ends, the collar, *j*, encircling the projected end of the shaft, B, is pivotally secured, and the collars j^2 and j^3 fastened to the shaft by set screws and placed on opposite sides of the loose collar, *j*, prevent longitudinal movement of the collar, *j'* along the shaft. In like manner the yoke, J^2, is secured to the shaft, B', and is connected with the vertical rod, I, by the slide bar K', only at a point several inches below the point of attachment of the slide, K. The standards L, one on each side of the vertical rod, I, are provided with guide boxes to receive the bars K and K', which pass through the boxes and are held from twisting or displacement, except longitudinally, by the boxes.

By bearing down on the hand lever, *h'*, the rod I will be forced out of vertical alignment and move the slide bars so as to force the shafts B and B' longitudinally toward the center of the machine, and carry the disks in with it into contact with the friction pulley. By this construction both disks may be shifted simultaneously, and by a different movement of the same hand lever the pulley may be shifted upon the counter shaft.

I claim—

1. A friction driving mechanism comprising a central friction wheel, two friction disks revolved in opposite directions, a single hand lever adapted to be moved back and forth in two planes, intermediate actuating devices connecting the said lever with the said disks, whereby the disks may be moved simultaneously to and from the friction wheel when the lever is moved in one plane, and operating devices connecting the said lever with the friction wheel and adapted to move it to vary its speed when the said lever is moved in the other plane, substantially as set forth.

2. A friction driving mechanism comprising a shaft carrying a central sliding friction wheel, a shaft at each side of the said wheel which revolve in opposite directions and adapted to move toward and away from the friction wheel, friction disks thereon, pivoted levers connected with the said sliding shafts, an operating lever adapted to have a movement in two planes, connections between the operating lever and the said pivoted levers for operating the sliding shafts when moved in one plane, and connections between the said operating lever and the sliding friction wheel for moving it when the operating lever is moved in the other plane, substantially as specified.

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

THOMAS J. REAMY.

Witnesses:
JOSEPH A. MINTURN,
T. F. MEANY.