

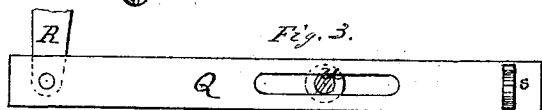
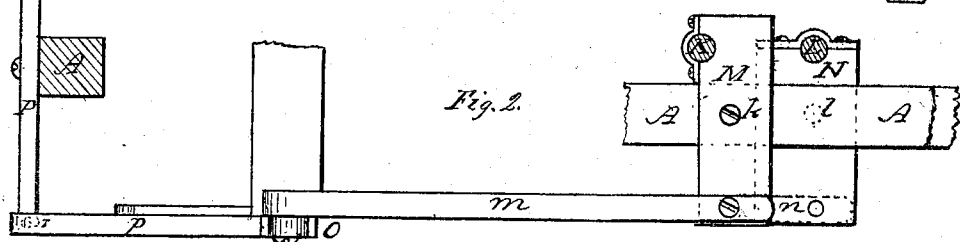
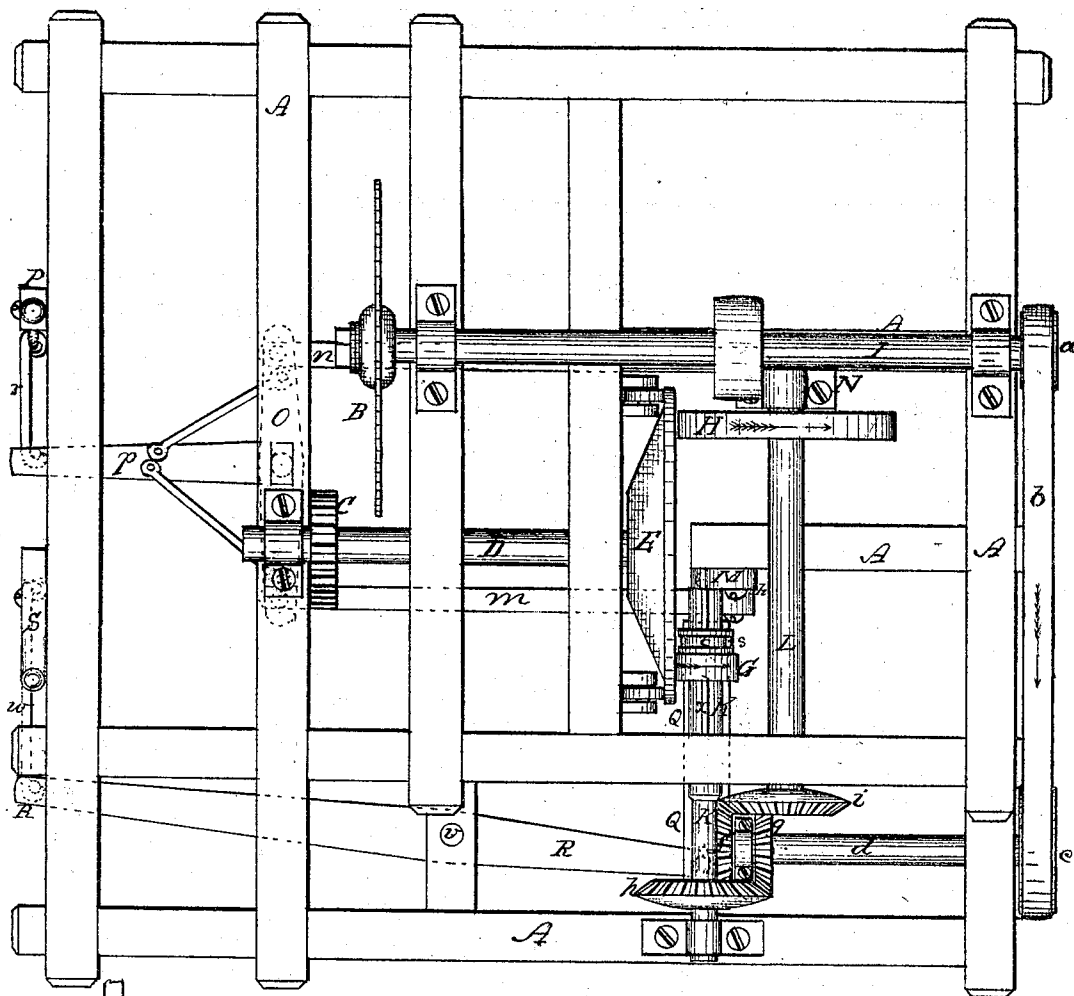
W. C. HART.

Improvement in Circular-Saw Mills.

No. 129,553.

Fig. 1.

Patented July 16, 1872.



Witnesses,
R. D. Smith
J. L. Day

Inventor,
William C. Hart,
By his Attorney,
J. S. Brown

UNITED STATES PATENT OFFICE.

WILLIAM C. HART, OF FULTON, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO
HORACE T. CROFOOT, OF HANNIBAL, NEW YORK.

IMPROVEMENT IN CIRCULAR-SAW MILLS.

Specification forming part of Letters Patent No. 129,553, dated July 16, 1872.

To all whom it may concern:

Be it known that I, WILLIAM C. HART, of Fulton, in the county of Oswego and State of New York, have invented an Improved Feed Apparatus for Saw-Mills and Circular Saws; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a top view of the apparatus or device as applied to a saw-mill or a circular saw, exhibiting such parts of the saw-mill in connection therewith as show the operation of the device; Figs. 2 and 3, views of parts thereof detached.

Like letters designate corresponding parts in all of the figures.

Letters A A represent the frame-work in which the feed device is mounted, and B a circular saw for a saw-mill or for any other purpose requiring the stuff to be regularly fed up to it on a carriage and then run back. The carriage (not shown in the drawing) is driven forward toward the saw and run back by means of a pinion, C, on a shaft, D, gearing with a rack on the carriage. On the shaft D is a disk or face wheel, E, against which the peripheries of two continually-revolving frictional wheels, G and H, are alternately pressed, and by the friction of their contact cause the disk or face wheel to turn either one way or the other, and, therefore, to drive the carriage forward or backward. The wheel G, revolving in the direction indicated in Fig. 1 by the arrow, drives the carriage forward, and the wheel H, turning in the direction indicated by the arrow thereon, is situated on the opposite side of the disk-shaft and drives the carriage backward. The wheel G is small, so as to drive the carriage forward slowly, as required, and the wheel H is comparatively large in diameter, so as to run the carriage back quickly. With this construction the two wheels may be run at equal speed. They derive their motion, as represented, from the saw-arbor I, from a pulley, a, on which a belt, b, runs to a pulley, c, on a shaft, d, which has two bevel-pinions, f and g, thereon, the pinion f gearing into a

bevel-wheel, h, on the shaft K of the friction-wheel G, and the pinion g gearing into a bevel-wheel, i, on the shaft L of the friction-wheel H, all substantially as shown in Fig. 1. In order to bring the two friction-wheels G H alternately into action on the disk or face wheel E the adjacent ends of their respective shafts K L are mounted in bearings M N, (seen most clearly in Fig. 2,) which have a lateral vibratory movement on pivots k l, respectively, so that either wheel can be brought into contact with the disk, or separated from it. To effect this swinging movement of the shaft-bearings M N they are connected, respectively, by rods m n, with a horizontally-vibrating lever, O, pivoted in a suitable position to the frame-work, and having a right-angled projecting arm, p, which is connected by a rod, r, with a handle, P, all substantially as shown. On moving the handle P in one direction the feeding-up friction-wheel G is pressed against the disk E, and on moving the handle in the other direction the wheel G is separated from the disk, and the running-back wheel H is brought into contact with the disk. Any equivalent device may be employed for bringing the wheels G and H alternately into contact with the disk or face wheel. In order to vary the rate of feed with a constant speed of the feed friction-wheel G, the latter has a sliding movement on its shaft K, so as to bring it nearer to or further from the center of the disk E. This sliding movement is effected by means of a sliding bar, Q, (shown separately in Fig. 3,) bearing a clutch-fork, s, which embraces a neck, t, on the wheel G. This bar slides over a guide-pin, u, and is moved by means of a vibrating lever, R, pivoted to the frame at v, and operated by a handle, S, connected therewith by a connecting-rod, w; or any equivalent device may be employed. A feather, x, on one side of the shaft K, over which a notch in the eye of the wheel G slides, prevents the wheel from turning on its shaft.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The device for feeding up and running

back a saw-carriage, consisting of the disk or face wheel E and friction-wheels G H, combined, arranged, and operating substantially as herein specified.

2. The combination and arrangement of the vibratory shaft-bearings M N, vibratory lever O, handle P, and their connecting-rods *m*, *n*, and *r*, for bringing the wheels G and H alter-

nately into contact with the disk E, substantially as herein specified.

Specification signed by me this 27th day of February, 1872.

WILLIAM C. HART.

Witnesses:

D. F. ACKER,

E. P. BARRETT.