A. MILLER.

Molding-Machine.

No. 160,114. Patented Feb. 23, 1875.

Fig: 1.

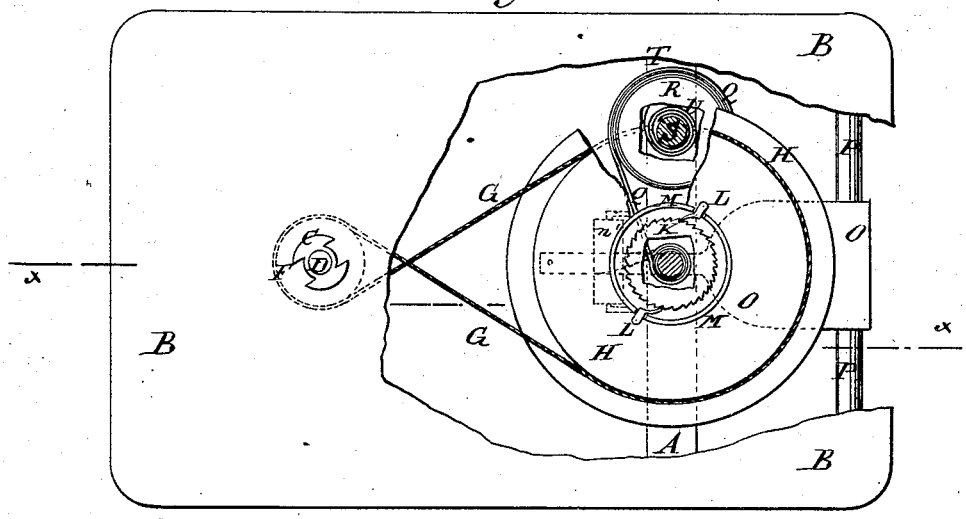
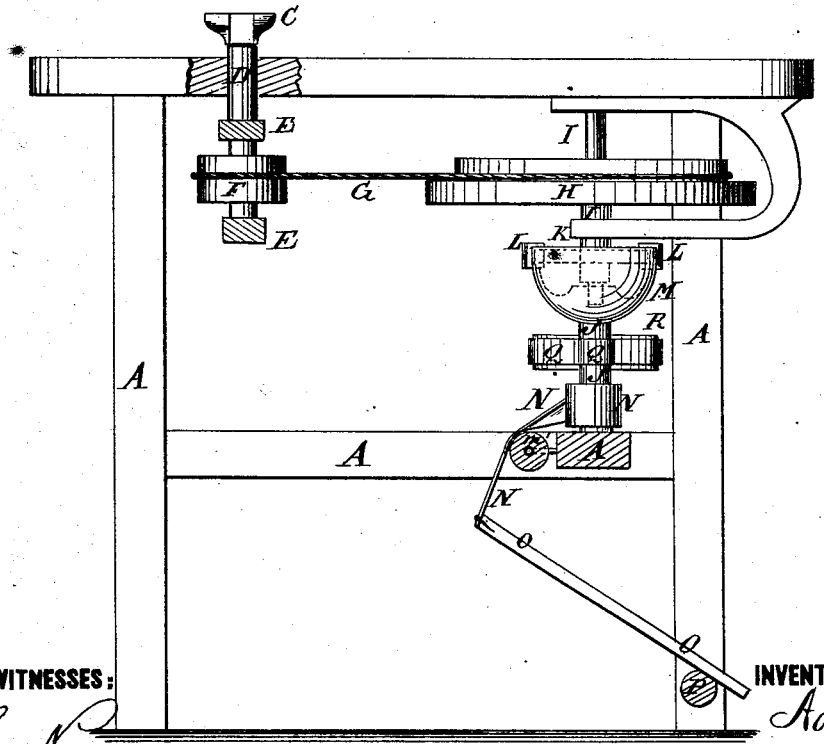


Fig: 2.



WITNESSES:

Chas. Nida.

A. F. Perry

INVENTOR:

Aaron Miller

BY

Munn & Co

ATTORNEYS.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

AARON MILLER, OF RINGTOWN, PENNSYLVANIA.

IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. **160,114**, dated February 23, 1875; application filed January 25, 1875.

To all whom it may concern:

Be it known that I, AARON MILLER, of Ringtown, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Molding-Machines, of which the following is a specification:

Figure 1 is a top view of my improved machine, part being broken away to show the construction. Fig. 2 is a side view of the same, partly in section through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved foot-power molding-machine for working regular or irregular moldings upon the edge of lumber, which may be adjusted to run the cutter-head in either direction, as may be desired, and which shall be simple in construction, convenient in use, and effective in operation.

The invention consists in the combination of the shaft, the pulley, the band, the drive-wheel, its shaft and ratchet-wheel, the pawls, the flanged shaft and its two straps, the treadle, the strap-pulley and its shaft and spring, with each other and with the cutter-head, table, and frame of a molding-machine, as hereinafter more fully described.

A represents the frame of the machine, to the top of which is attached the table B, upon which the lumber is placed to be worked. C is the cutter-head, which is secured to the upper end of the shaft D by means of screws and collars, so that it may be adjusted according to the thickness of the lumber to be operated upon. The shaft D passes through a hole in the table B, and revolves in a bracket, E, attached to the table or frame A. To the shaft D, beneath the table B, is attached a drum or wide pulley, F, to receive the driving-band G, which also passes around the driving-wheel H. The driving-wheel H is made with two parts of different diameters, the smaller part being made so much smaller than the larger part that the band G, when straight, passes around the pulley or drum F, and the larger part of the wheel H, when crossed, will be of the right length to pass around the smaller part of said wheel H, so that the cutter-head may be run in either direction by using the band G straight or crossed, and putting it upon the proper part of the cone driving-wheel H. The driving-wheel H is secured to the shaft I, which revolves in a bracket attached to the frame A or table B, and its lower end revolves in a socket in the upper end of the shaft J. To the lower part of the shaft I is attached a ratchet-wheel, K, upon the teeth of which takes hold two pawls, L, placed in slots in the cup-shaped flange M, attached to or formed upon the upper end of the shaft J.

By this construction, when the shaft J is turned forward, the pawls L will take hold of the teeth of the ratchet-wheel K and turn the shaft I forward, and when the shaft J is turned backward the pawls L will slip over the teeth of the ratchet-wheel K without checking the forward movement of the shaft I, the drive-wheel H acting as a fly-wheel to give steadiness of motion to the cutter-head C and prevent it from being affected by the alternate backward and forward movement of the shaft J and pawls L. The lower end of the shaft J revolves in a step attached to the frame A, and to its lower part, or to a small pulley attached to its lower part, is secured the end of the strap N, which is wound around the said shaft or pulley, passes over a guide-roller, *m*, pivoted to the frame A, and its other end is attached to the free end of the treadle O. The other end of the treadle O is attached to a round, P, the ends of which are pivoted to the legs or posts of the frame A.

By this construction, by pressing the treadle O downward, the strap N will be unwound from the shaft J, turning the said shaft J forward, causing the pawls L to take hold of the ratchet-wheel K and turn it and the shaft I forward, giving a forward movement to the cutter-head. To the shaft J, or to a small pulley attached to said shaft, is secured the end of another strap, Q, which is wound upon said shaft in the opposite direction from the strap N. The other end of the strap Q is attached to and wound upon a pulley, R, attached to a short shaft, S, the journals of which revolve in bearings in a bracket, T, attached to the frame A. To the lower part of the shaft S is attached one end of a spring,

U, which is wound upon said shaft in the opposite direction from the strap Q, and its other end is attached to the frame A.

By this construction, as the treadle O is pressed down the strap Q will be wound upon the shaft J and unwound from the pulley R, and the coiled spring U will be wound upon the shaft S. As the pressure is removed from the treadle O the elasticity of the spring U will cause it to uncoil from the shaft S, turning the shaft S and wheel R backward, coiling the strap Q upon the wheel or pulley R, uncoiling said strap Q from the shaft J, turning said shaft backward, and again winding the strap N upon the said shaft J, ready to be again unwound by another downward movement of the treadle O.

In this way a succession of impulses will be given to the wheel H, while the inertia of said wheel H will keep the cutter-head C revolving at a uniform velocity.

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

The combination of the shaft D, the pulley F, the band G, the drive-wheel H, the shaft I, the ratchet-wheel K, the pawls L, the flanged shaft J, the strap and treadle N O, the strap Q, pulley R, shaft S, and spring U, with each other and with the cutter-head C, table B, and frame A, of a molding-machine, substantially as herein shown and described.

AARON MILLER.

Witnesses:

JAMES EVANS,

DANIEL Y. DREIBILBEIS.