G. J. KAUTZ.

SAWING-MACHINE.

No. 189,628. Patented April 17, 1877.

Fig. 1

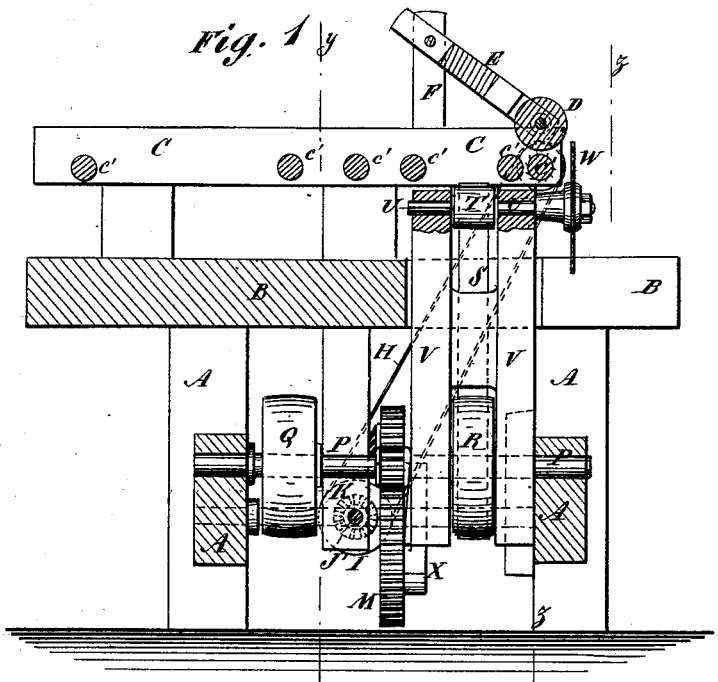


Fig. 2

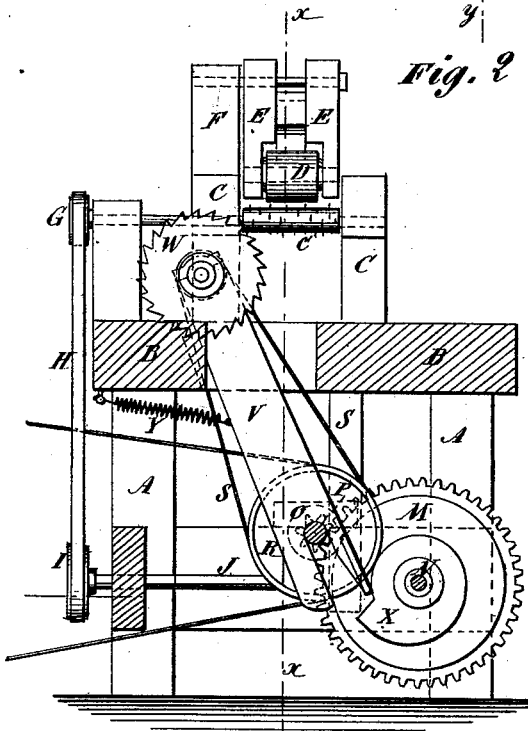


Fig. 3

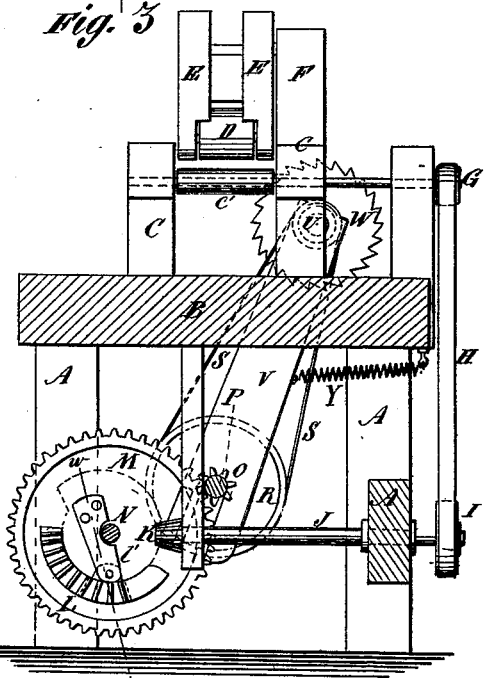
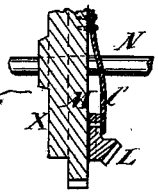


Fig. 4



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GEORGE J. KAUTZ, OF EMPORIUM, PENNSYLVANIA.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **189,628**, dated April 17, 1877; application filed February 27, 1877.

To all whom it may concern:

Be it known that I, GEORGE J. KAUTZ, of Emporium, in the county of Cameron and State of Pennsylvania, have invented a new and useful Improvement in Sawing-Machines, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved machine, taken through the line *x x*, Fig. 2. Fig. 2 is a vertical cross-section of the same, taken through the line *y y*, Fig. 1, looking to the right. Fig. 3 is a cross-section of the same, taken through the line *z z*, Fig. 1, looking to the left. Fig. 4 is a detail section taken through the line *w w*, Fig. 3.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved sawing-machine, designed for use in a saw-mill for cutting off slabs, edgings, and other lumber into lengths for wood, laths, pickets, &c., and which shall be so constructed as to feed the lumber forward to the saw, and feed the saw forward to the lumber automatically, and which may be adjusted to cut off the lumber in longer or shorter lengths, as required.

The invention consists in the combination of the pulleys and belt, the shaft, the small gear-wheel, and the segmental gear-wheel with the large gear-wheel and the toothed feed-roller, for feeding the lumber forward to the saw intermittingly; and in the combination of the swinging frame, the cam, and the spring with the saw-mandrel, the shaft, and the large gear-wheel, for feeding the saw forward to the lumber intermittingly, as hereinafter fully described.

A is the frame of the machine, to the top or table B of which is attached the stationary carriage C, in which the lumber is placed to be sawed, and through which it is fed to the saw. The lumber rests upon roller *c'*, pivoted to the side bars of the carriage C, and the forward one of which is toothed to take hold of the lumber and carry it forward.

The lumber is held down upon the toothed roller *c'* by a weighted roller, D, which is pivoted to the lower end of a swinging frame, E, the upper end of which is pivoted to a post, F, attached to the carriage C.

The journal of the toothed roller *c'* projects, and to it is attached a pulley, G, around which passes a belt, H. The belt H also passes around a pulley, I, attached to the end of a shaft, J, which revolves in bearings attached to the frame A, and to the inner end of which is attached a small gear-wheel, K.

The teeth of the gear-wheel K mesh into the teeth of the segmental gear-wheel L, formed upon the side of the large gear-wheel M, so that the lumber may be fed forward each time the segmental gear-wheel meshes into the gear-wheel K, and for a distance proportioned to the length of the segmental wheel L. The segmental wheel L is made in sections, one or more of which are detachable, and are held in place by spring-catches *l'*, so that the length of the segmental wheel L can be easily adjusted as may be required.

The large gear-wheel M is attached to the shaft N, which revolves in bearings attached to the frame. The teeth of the large gear-wheel M mesh into the teeth of the small gear-wheel O, attached to the shaft P, which revolves in bearings attached to the frame A, and to which is attached a pulley, Q, to receive the driving-belt.

To the shaft P is also attached a pulley, R, to receive the belt S, which passes around the pulley T, attached to the saw-mandrel U. The saw-mandrel U revolves in bearings attached to the upper end of the frame V, and has the saw W attached to its end.

The side bars of the frame V pass down upon the opposite sides of the pulley R, and their lower ends are slotted, to receive and ride upon the shaft P.

Upon the side of the large gear-wheel L is formed, or to it is attached, a cam, X, which, as the said gear-wheel L revolves, bears against and presses back the lower end of the frame V, which swings the upper end of said frame V forward, and presses the saw W against the lumber to make the cut.

As the shoulder of the cam X leaves the lower end of the frame V the upper end of the said frame V and the saw W are drawn back by the spring Y, to allow the lumber to be fed forward for another cut. One end of the spring Y is attached to the swinging frame V, and its other end is attached to the frame A or table B.

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

1. The combination of the pulleys and belt G I H, the shaft J, the small gear-wheel K, and the segmental gear-wheel L with the large gear-wheel M and the toothed feed-roller c', for feeding the lumber forward to the saw intermittingly, substantially as herein shown and described.

2. The combination of the swinging frame V, the cam X, and the spring Y with the saw-mandrel U, the shaft P, and the large gear-wheel M, for feeding the saw forward to the lumber intermittingly, substantially as herein shown and described.

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