

*J. G. Kennedy,
Reciprocating Saw Mill.*

N^o 17,629.

Patented June 23, 1857.

Fig. 3.

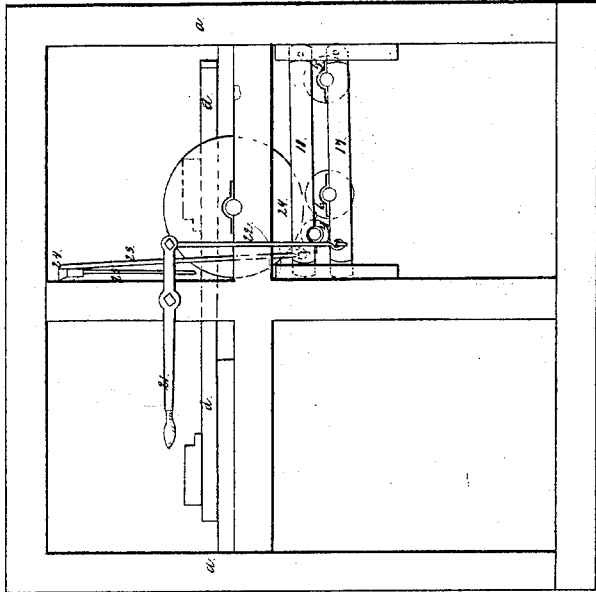


Fig. 2.

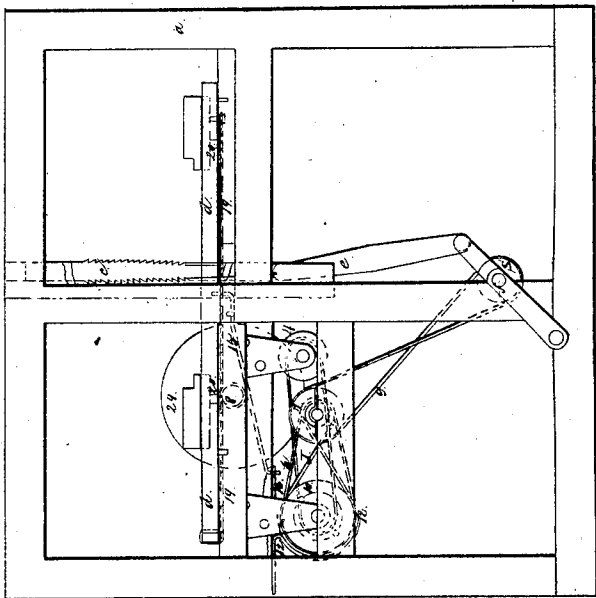
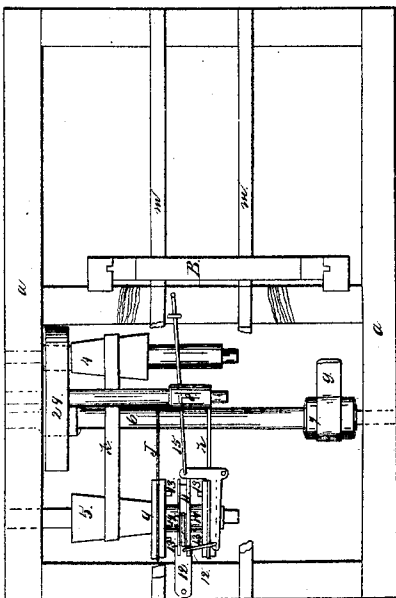


Fig. 1.



UNITED STATES PATENT OFFICE.

JAMES G. KENNEDY, OF CINCINNATI, OHIO.

SAWING-MILL.

Specification of Letters Patent No. 17,629, dated June 23, 1857.

To all whom it may concern:

Be it known that I, JAMES G. KENNEDY, of the city of Cincinnati, county of Hamilton, and State of Ohio, have invented a new and useful Improvement in Sawmills; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and the letters and figures of reference marked thereon, and made to form part of this specification.

Similar letters and figures refer to like parts of the improvement.

My improvement consists in arranging the feeding machinery of the mill for giving motion to the log carriage in either direction when combined with a saw furnished with teeth on both edges, so that a plank can be sawed from the log when the carriage is moving in either direction, and thus save time and power with the ordinary reciprocating saw, or if required, can be made to cut when the carriage moves in one direction only, as is done with the usual structure of similar mills.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation by referring direct to the accompanying drawings, of which—

Figure 1 represents a plan or top view of a frame (supposed to represent the frame of the building) with certain posts of the mill-machinery removed for fully showing the improved parts of the mill, and Figs. 2 and 3 are side elevations of the frame representing portions of the mill necessary to comprehend the nature of the improvement.

(A, A) represents a frame work, and is supposed to be the frame of the building in which the mill will be constructed.

(B) is an ordinary saw gate, and furnished with a saw (C), which is provided with teeth on both edges, as represented in Fig. 2, and (*d, d*) is a log carriage provided with head and foot blocks, as usual, with the exception of being made so that the saw can be made to operate from either end of the log.

(*f*) is a shaft that will receive motion from an engine or other source of power, and is made to operate the saw gate by the pitman (*e*)—and (S) is a pulley on the shaft for operating the feeding motion by the belt or cord (*g*) passing over the pulley (7) on the shaft (6).

The loose pulleys (9) and (10), on the cone drum (5) receive their motion by the cords or belts (*h* and *J*)—the cord (*J*) is twisted around the pulley 9, so as to give the cone drum (5) a reverse motion compared to the motion of the pulley (*w*),—there are clutch pins 13, 13, on the loose pulleys 9 and 10 for catching against the pins 14, on the clutch coupling 11,—the clutch coupling 11 works on a key in the shaft and does not turn around while the pulleys 9 and 10 are made to work loose on the shaft.

K is a belt passing around the conical pulleys 4 and 5, for giving motion to what is commonly called the ratchet shaft and wheel 29, by means of the friction of the end of the shaft (4) against the edge of the ratchet-wheel 29 for the purpose of moving the log carriage (*d*) with the cord (19), which cord is attached to each end of the carriage, and wrapped once or several times around the shaft or drum (8) on the shaft, and is thus moved alternately in one and then the other direction. And for changing the motion of the carriage (*d*), the head and foot blocks are provided with shifting pins, 20, 20, which strike against the end of the rod (15), made to project up under the carriage as represented in Fig. 2, which will shift the clutch 11 out and in gear, with the pulleys 9 and 10, to suit the motion required by the medium of the bell crank lever 16, and shifter 12, 12, as represented in Fig. 1.

The end of the shaft (4) is made to work in a bearing on the under part of the swinging beam (18), which beam works on a pin at one end—and the other end is raised and lowered with the rod (23) and lever (24), represented in Fig. 3. When the saw is cutting both ways, the end of the shaft (4) is kept against the edge of the ratchet-wheel (29) all the time, and the motion of the carriage (*d, d*) is reversed by throwing the clutch 11 from the pulley 9 to the pulley (10) as before described and referred to. 17, represents another swinging beam and made to carry the end of the shaft 6, which serves the office of a go-back shaft when it is desired to saw but one way. The lever (18), after the cut is made, will be lowered, which leaves the ratchet-wheel free, and the end of the shaft 6 will be brought into contact with the edge of the ratchet-wheel 29, which will be made to run it back rapidly, after which the shaft (6) will be detached and the shaft (4) will be applied again for sawing,—the

beam 17 is operated with the lever (21) and rod (22), as represented in Fig. 3.

I don't claim to have been the inventor of any parts of the machinery composing the improvement when taken separately for purposes set forth in the foregoing specification, but—

What I do claim as my improvement and desire to secure by Letters Patent is—

10 The arrangement of the several parts of machinery and saw employed in one frame

by which I am enabled to change and run the saw carriage in either direction for sawing both ways, or if desired saw in one direction and run the carriage back as usual in the other direction, without sawing, all as represented and for purposes specified.

JAMES G. KENNEDY.

Witnesses:

M. BENSON,

EDMUND PENDLETON.