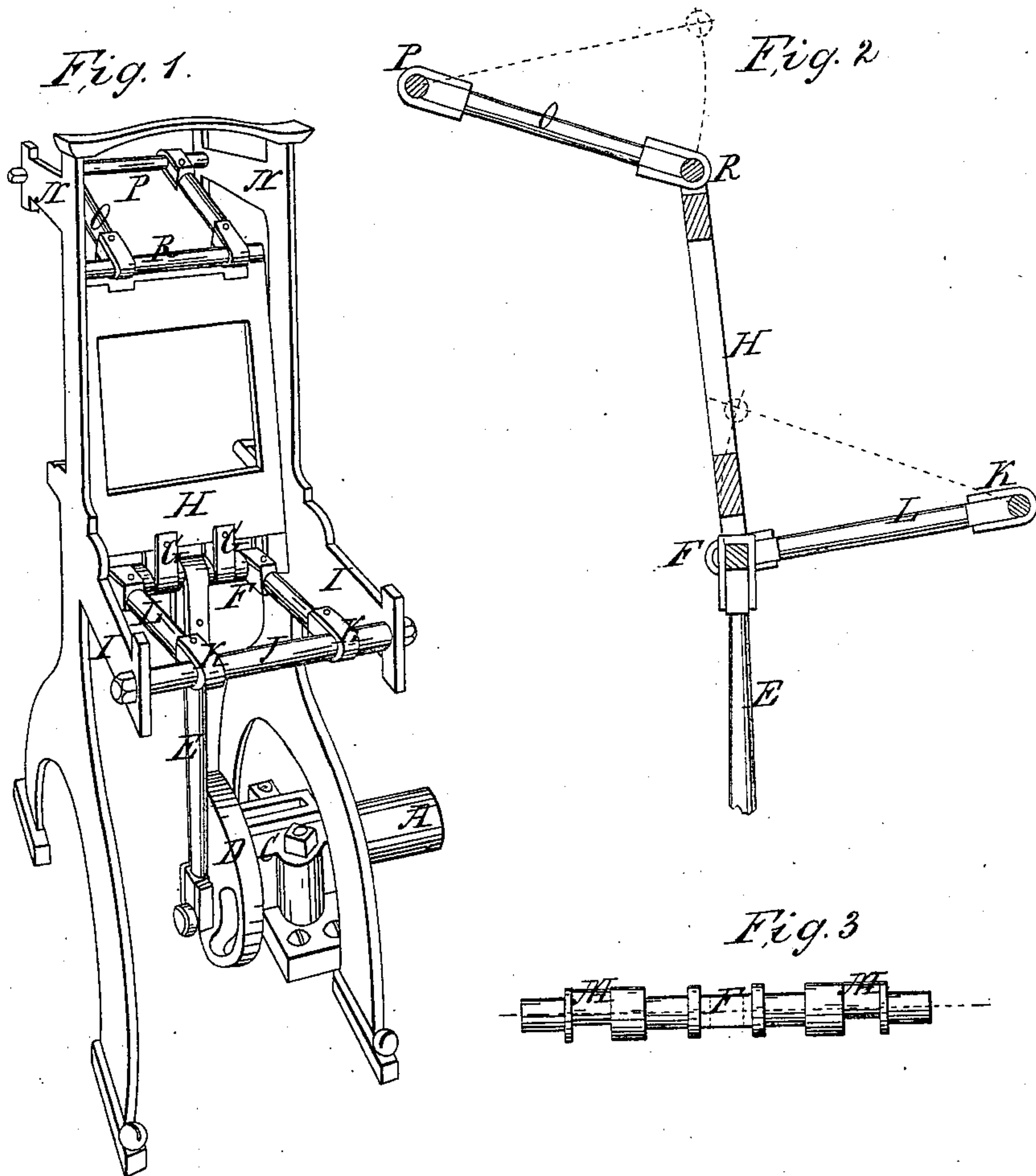


A. Fellker,
Reciprocating Saw Mill.
No 85,294. *Patented Dec. 29, 1868.*



Witnesses
L. C. Hyde
John Ruhlandt

Inventor.
A. Fellker
Per Attorney
Wm S Sprague

United States Patent Office.

AMOS FELLKER, OF BAY CITY MICHIGAN.

Letters Patent No. 85,294, dated December 29, 1868.

IMPROVEMENT IN HANGING SAWS.

The Schedule referred to in these Letters Patent and making part of the same

To whom it may concern:

Be it known that I, AMOS FELLKER, of Bay City, in the county of Bay, and State of Michigan, have invented a new and useful Improvement in Method of Hanging Muley, Sash, or Gang-Saws; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a perspective view of my invention.

Figure 2 is a side elevation, showing the position of the pitmen.

Figure 3 is a plan view of the rock-shaft.

Like letters indicate like parts in each figure.

The object of this invention is so to hang sash or gang-saws, for sawing logs, that they will have an oscillating motion, by means of suitable connections at top and bottom, that, in their upward motion, they will be thrown back from the cut, thereby allowing the sawdust to fall, and preventing it from obstructing the utility of the saw in cutting, and so arranged, that, in the downward motion of the saw, it will be thrown forward in the cut against the log.

In order to accomplish this end, I construct a mill in the following manner, as shown in the drawings:

A is the main driving-pulley, driven by any suitable power, and attached to the main shaft B, which runs in proper bearings, C, and to which is secured the crank-wheel D, provided with an appropriate wrist-pin, to which is attached, in the usual way, by a proper strap, the pitman E, whose upper end is rigidly attached to the rock-shaft F, which is secured, by suitable straps, G, to the saw-frame H.

To the frame I, is secured the stationary shaft J, provided with journals, upon which the straps K play.

These straps are secured to the horizontal pitmen L, which, by means of suitable straps, are, in turn, secured to and give motion to the rock-shaft F and saw-frame H.

It will be noticed that the journals M upon the rock-shaft, upon which the straps of the horizontal pitmen play, are not turned upon a true line with the centre of said rock-shaft, but are eccentrics, or eccentric-journals, and are designed to assist in extending the sweep of the lower end of the saw in its forward and backward motion.

To the frame N is secured another stationary shaft, P, provided with suitable journals, upon which play suitable straps, which secure the outer ends of the horizontal pitmen O, the other ends of which are secured, by other straps, to the stationary shaft R, which, in turn, is rigidly secured to the top of the frame H, and controls the motion of the upper end of the saw.

By this method of suspending or hanging saws, the use of slides and cross-heads, or their equivalents, is entirely avoided, thereby saving much friction, and enabling the saws to be run with much greater rapidity than when operated in any other manner.

It will be seen that the upper horizontal pitmen are somewhat shortened, so that at no time will the saw stand perpendicular, but will, at all times, be inclined towards the direction of its cut, by which means the sawdust is more effectually allowed to drop out of the cut.

By this method of obtaining both a reciprocating and oscillating motion of the saw, friction is saved, and speed gained.

The outer ends of all the horizontal pitmen being held at a fixed point, their inner ends are compelled to describe the arc of a circle in their motion, and give the same motion to the ends of the frame H, to which the saw is attached.

The rock-shaft and stationary shafts may be lengthened, when the attachment is intended to be used to run "gangs" of saws, thereby allowing room for more horizontal pitmen, if desired, while, when used to run a "muley"-saw, they may be shortened, and single horizontal pitmen used.

The drawings show the apparatus as designed to be used in running a "sash"-saw.

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

The arrangement of the horizontal pitman O, saw-frame H, rock-shaft F, having eccentric-journals M, pitmen E and L, and stationary shafts J and P, all arranged to operate the saw-frame H, substantially as and for the purposes set forth.

AMOS FELLKER.

Witnesses:

H. F. EBERTS,

CHARLES A. W. RICE.