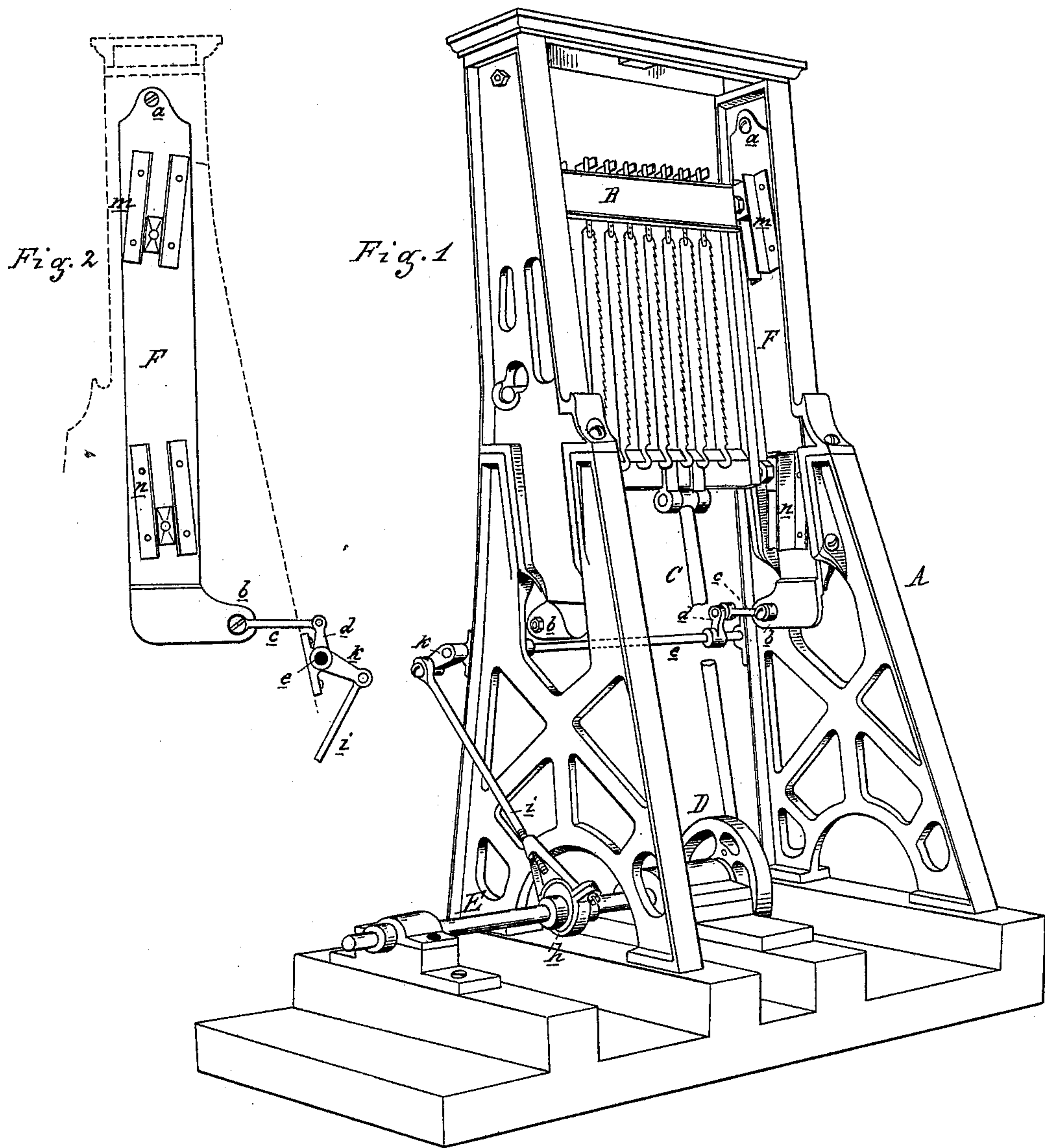


W. M. WILKIN.  
Reciprocating Saw Mill.

No. 231,249.

Patented Aug. 17, 1880.



Attest:

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# UNITED STATES PATENT OFFICE.

WILLIAM M. WILKIN, OF OSCODA, MICHIGAN.

## RECIPROCATING-SAW MILL.

SPECIFICATION forming part of Letters Patent No. 231,249, dated August 17, 1880.

Application filed January 29, 1880.

*To all whom it may concern:*

Be it known that I, WILLIAM M. WILKIN, of Oscoda, in the county of Iosco and State of Michigan, have invented an Improvement in Reciprocating-Saw Mills, of which the following is a specification.

The nature of my invention relates to certain new and useful improvements in the construction of gang-saw mills, by means of which each tooth of the saw in succession is compelled to perform its proper function in the downward stroke, and when this stroke is complete and at the commencement of return of the stroke the saw or saws are swung bodily backward in the kerf, thus clearing the log and loosening up the sawdust in the teeth of the saw, so that at the commencement of the next downward stroke the teeth and kerf are free from such dust.

The invention consists in the peculiar construction and operation of slides above and below, set in differing lines upon a vibrating plate or cheek, one of the same being pivotally secured to each side of the frame, and the means, hereinafter described, for producing the vibratory motion of the cheeks at each end of the stroke of the saws, as more fully hereinafter set forth.

In the drawings, Figure 1 is a perspective of my improved gang-saw mill. Fig. 2 is a plan view of one of the vibrating cheeks with slides attached.

Like letters refer to like parts in each figure.

In the accompanying drawings, which form a part of this specification, A represents the frame, B the gate, C the pitman, D the crank-wheel, and E the main shaft, of a gang-saw mill, all of the usual construction.

F represents a cheek, two of which are employed, one on each side, and pivotally secured to the inner faces of the upright part of the frame, as at *a*.

The lower end of each of these cheeks terminates in a rearwardly-projecting ear, *b*, and these ears are connected, by means of suitable wrist-pins and rods *c*, to the cranks *d* of the rock-shaft *e*. Upon the main shaft there is an eccentric, *h*, and an eccentric-rod, *i*, and crank *k* connects this main shaft with and gives motion to the rock-shaft *e*, thus giving a vibratory motion to the cheeks F.

The object of the rearwardly-projecting ears is to enable the connection to be made between the cheeks and rock-shaft in rear of the gate or sash without danger of being damaged

by pieces of slabs or other debris falling from the saws.

To each of the vibrating cheeks, and near the top thereof, is secured an inclined slide, *m*, the bottom of each slide being "set out" or forward of a vertical line. Near the bottom of each of said cheeks there is secured another inclined slide, *n*, the inclination being in the opposite direction from that of the slide *m*, and at a different angle from a vertical line, as shown in Fig. 2 of the drawings. The sash or gate works in these slides.

In practice, the eccentric is set so that at the commencement and during the duration of the downward stroke the lower ends of the cheeks are thrown forward, so that the lower slides are nearly vertical, and the lower ends of the upper slides are projected forward to the extent of the throw of the eccentric, thereby compelling each succeeding tooth of the saw to cut as the log is fed up. At the completion of the downward stroke the eccentric, reversing the motion described, withdraws the lower end of the cheeks from the advance of the log, thereby causing the sash or gate to swing bodily to the rear for the purposes hereinbefore specified.

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

1. In a gang-saw mill, slides at top and bottom set at different angles to a vertical line and secured to vibrating cheeks, to which motion is given by means of an eccentric on the main shaft and suitable connecting mechanism, substantially as and for the purposes described.

2. The combination, with the vibrating cheeks pivoted at their upper ends to the main frame, and provided with the rearwardly-projecting ears *b*, and having the guides *m n*, both secured to said cheeks, of the shaft E, the eccentric *h*, and suitable connecting mechanism, substantially as described.

3. The combination, with the vibrating cheeks F, pivoted at their upper ends to the main frame and carrying both sets of slides *m n*, set at different angles with a vertical line, of the shaft E, carrying the eccentric *h*, rod *i*, crank *k*, rock-shaft *e*, cranks *d*, and rods *c*, substantially as described.

WILLIAM M. WILKIN.

Witnesses:

H. CLAY KING,  
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