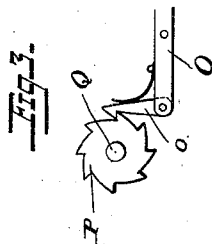
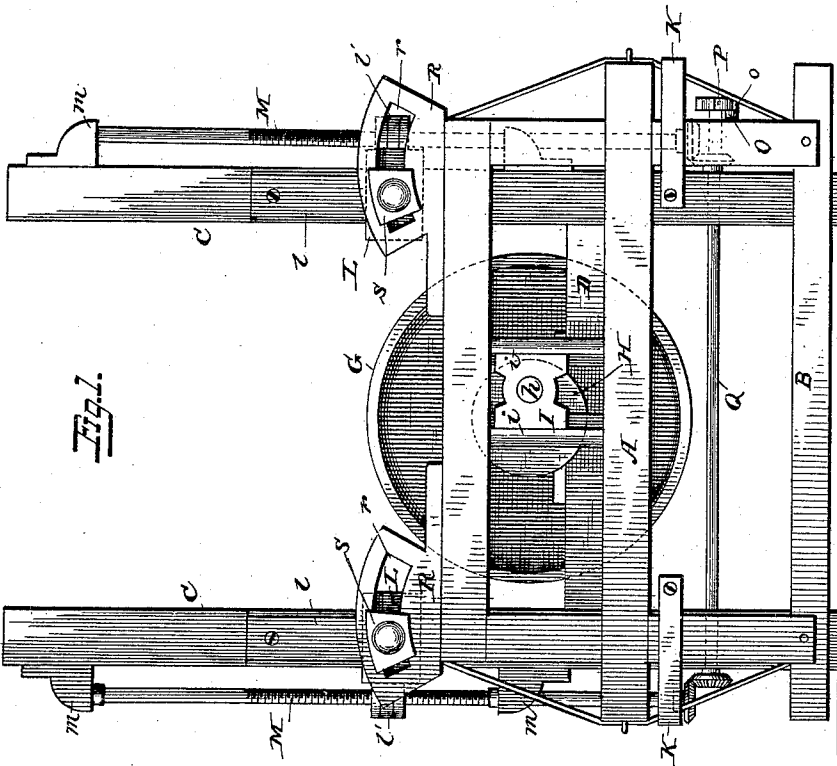
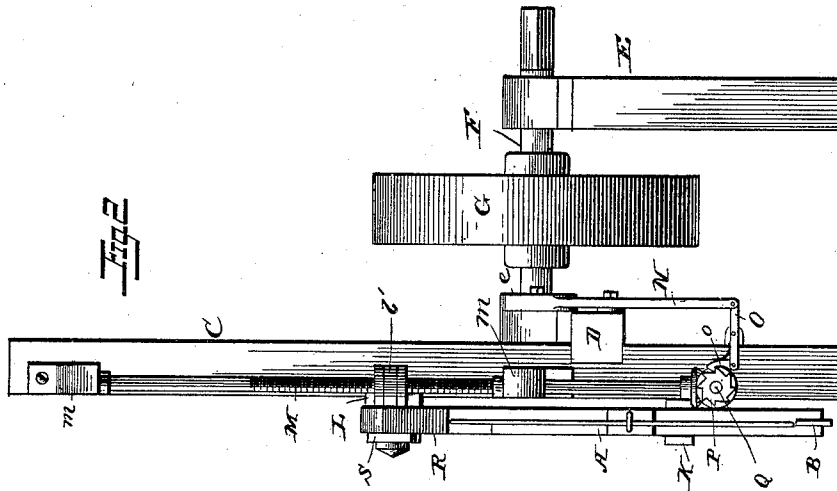


(No Model.)

J. W. MALOY.
STONE SAWING MACHINE.

No. 401,655.

Patented Apr. 16, 1889.



Witnesses,
J. H. Hinkel
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UNITED STATES PATENT OFFICE.

JAMES W. MALOY, OF MARIETTA, GEORGIA.

STONE-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,655, dated April 16, 1889.

Application filed June 25, 1888. Serial No. 278,076. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MALOY, a citizen of the United States, residing at Marietta, Cobb county, State of Georgia, have invented certain new and useful Improvements in Stone-Sawing Machines, of which the following is a full, clear, and exact specification.

This invention relates to stone-saws of that class in which a saw-blade or a gang of saw-blades are mounted in a reciprocating frame, which is slowly advanced to feed the saw or saws into the stone as the kerf is cut; and it consists of certain improvements in the construction of such saws, as will be hereinafter pointed out.

In the drawings, Figure 1 is a side view of a stone-saw embodying my invention. Fig. 2 is an end view, and Fig. 3 is a detail view.

The sash or rectangular reciprocating frame A, carrying the saw-blade B, or, if desired, a gang of saws, is supported upon a stationary frame consisting of the uprights C C and the cross-piece D. Journaled upon the cross-piece D and upon a standard, E, to one side thereof, is a shaft, F, carrying a belt-wheel, G, through which power to operate the saw is imparted from any suitable motor. The shaft carries at one end a crank-wheel, H, the crank or wrist pin *h* of which has mounted thereon a slide, I, moving vertically in ways *i i*, carried by the sash or frame A, through which, as the shaft revolves, the frame, and with it the saw-blade, is given a horizontal reciprocating motion, it being properly directed by the guides K K, carried by the stationary frame.

The frame A may be moved downward to feed the blade into the stone by any well-known mechanism. That which I prefer, however, and which I have illustrated in the drawings, consists of the frame-supporting blocks L L, upon which the saw-frame slides as it is reciprocated, which blocks slide upon the uprights C in dovetailed ways or grooves *l*, and are provided with internally-screw-threaded lugs *l'*, with which engage the screw-rods M, turning in blocks *m m*, carried by the stationary frame. These rods are driven from some moving part of the machine, as the shaft F, which may be provided with an eccentric, *e*, operating a lever, N,

which in turn moves another lever, O, carrying a catch-pawl, *o*, which engages with the teeth of a ratchet-wheel, P, mounted upon the end of a shaft, Q, extending across the stationary frame and simultaneously rotating the screw-rods M, which thereby feed downward the blocks L and the frame and saw. The ways *i i*, with which the slide I engages, are sufficiently long to permit all necessary vertical adjustment of the blade without interfering in anywise with the reciprocation thereof. It is desirable in this class of saws that the blade should be raised slightly at the end of each vibration, in order to facilitate the feeding of the sand and water into the kerf. These motions are imparted to the blade by means of upward-curved ways or guides carried by the frame A, with which engage the bearings upon which the frame is supported, carried by the sliding blocks L. These curved guides or ways are produced by segmental slots *r*, formed in the upper bar of the frame A or in brackets R, carried thereby. The bearings which engage with these slots *r* are preferably in the form of anti-friction blocks S, pivoted to the sliding blocks L, so that they are free to turn in the slots as the frame is moved past them.

A stone-saw constructed as shown and described operates rapidly and with little friction, is simple in construction, and not liable to get out of order.

I do not wish to be limited to the exact construction shown, since various modifications will readily suggest themselves to those skilled in the art. For instance, the curved ways whereby the saw is elevated at the end of each reciprocation might be formed in the supporting-blocks L and the frame A, provided with the tilting-blocks S, which engage therewith.

What I claim is—

1. The combination of the saw-frame provided with vertical guideways, a stationary frame upon which it is supported, a shaft provided with a crank or wrist pin, and a slide mounted upon the said crank-pin and moving between the said ways, whereby upon the rotation of the shaft the frame is reciprocated, substantially as described.

2. The combination of the saw-frame pro-

vided with vertical guideways, a stationary
frame, the blocks upon which the saw-frame
is supported and slides as it is reciprocated
movable vertically upon the stationary frame,
5 a shaft provided with a crank-pin, a slide
mounted upon the said crank-pin and mov-
able between the ways on the saw-frame, and
mechanism driven from the said shaft for
moving vertically the saw-frame-supporting
10 blocks, substantially as described.

3. The combination, with the stationary
frame, of a reciprocating saw-frame provided

with segmental slots, and tilting bearing-
blocks S, carried by the stationary frame and
fitting the said slots, substantially as de- 15
scribed.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

JAMES W. MALOY.

Witnesses:

H. C. DERBY,
FRANCIS KENDALL.