

J. W. & T. PARKER.

SAW-GUMMER.

No. 171,039.

Patented Dec. 14, 1875.

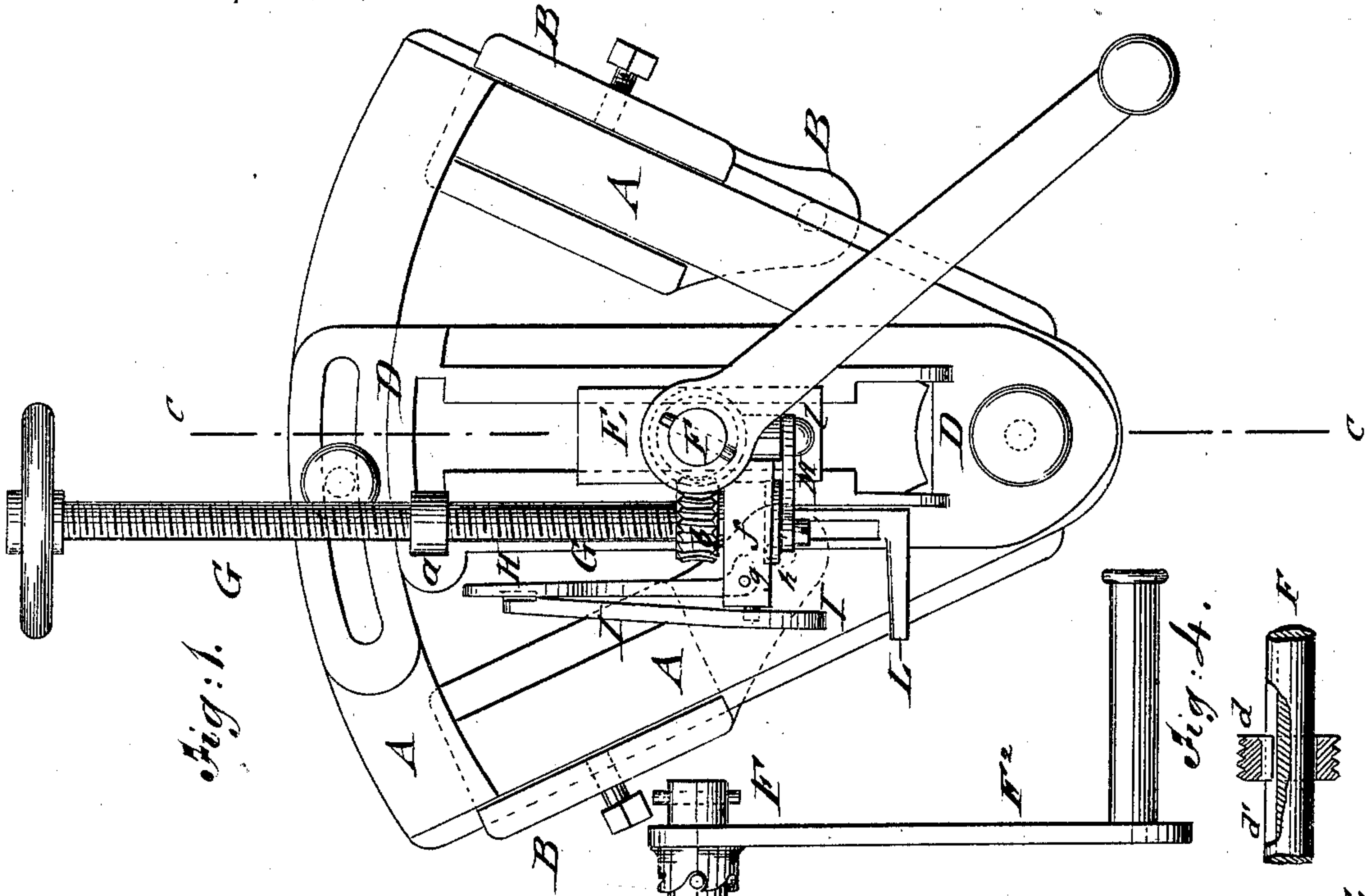


Fig. 1.

Fig. 4.

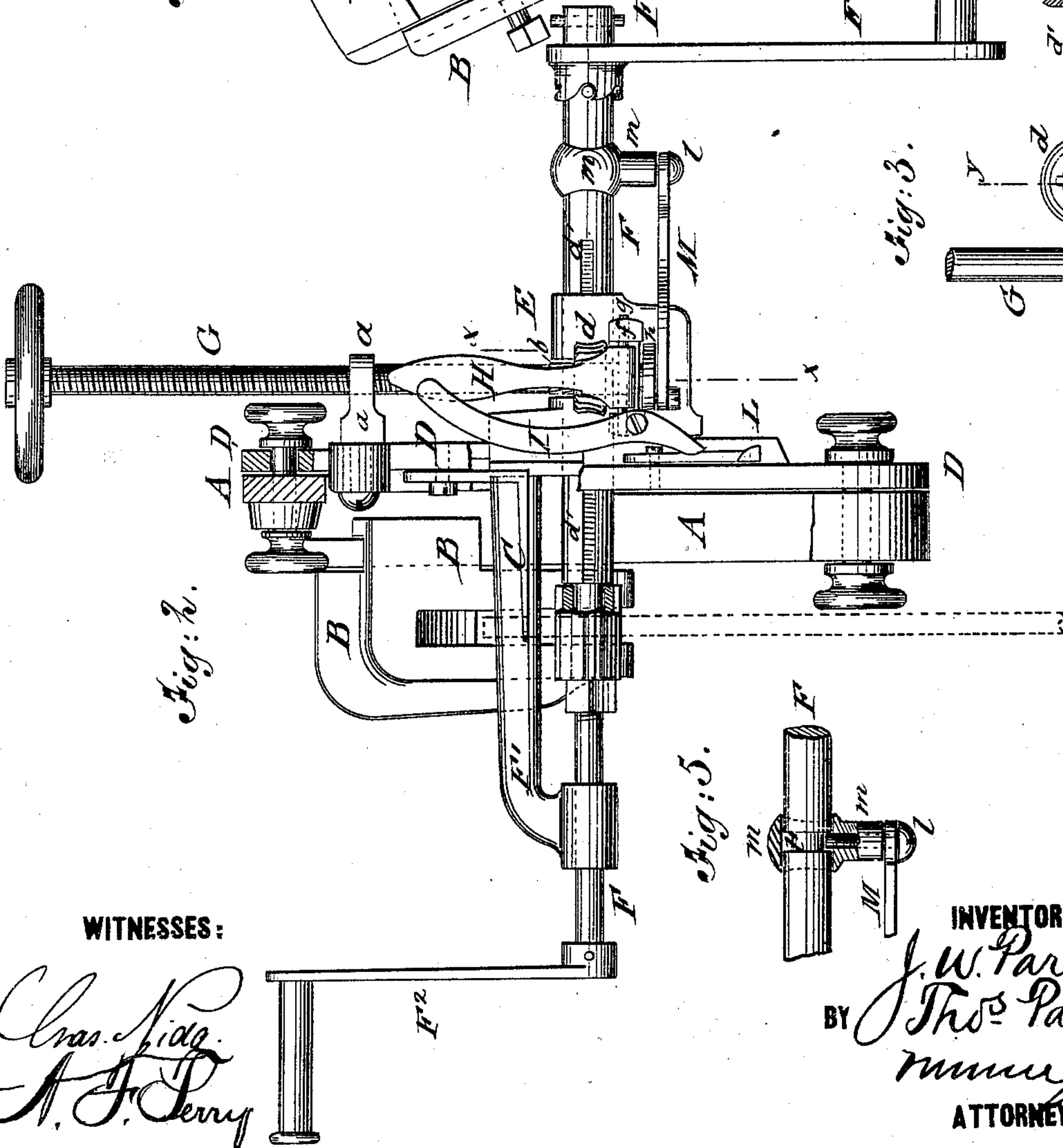


Fig. 2.

Fig. 3.

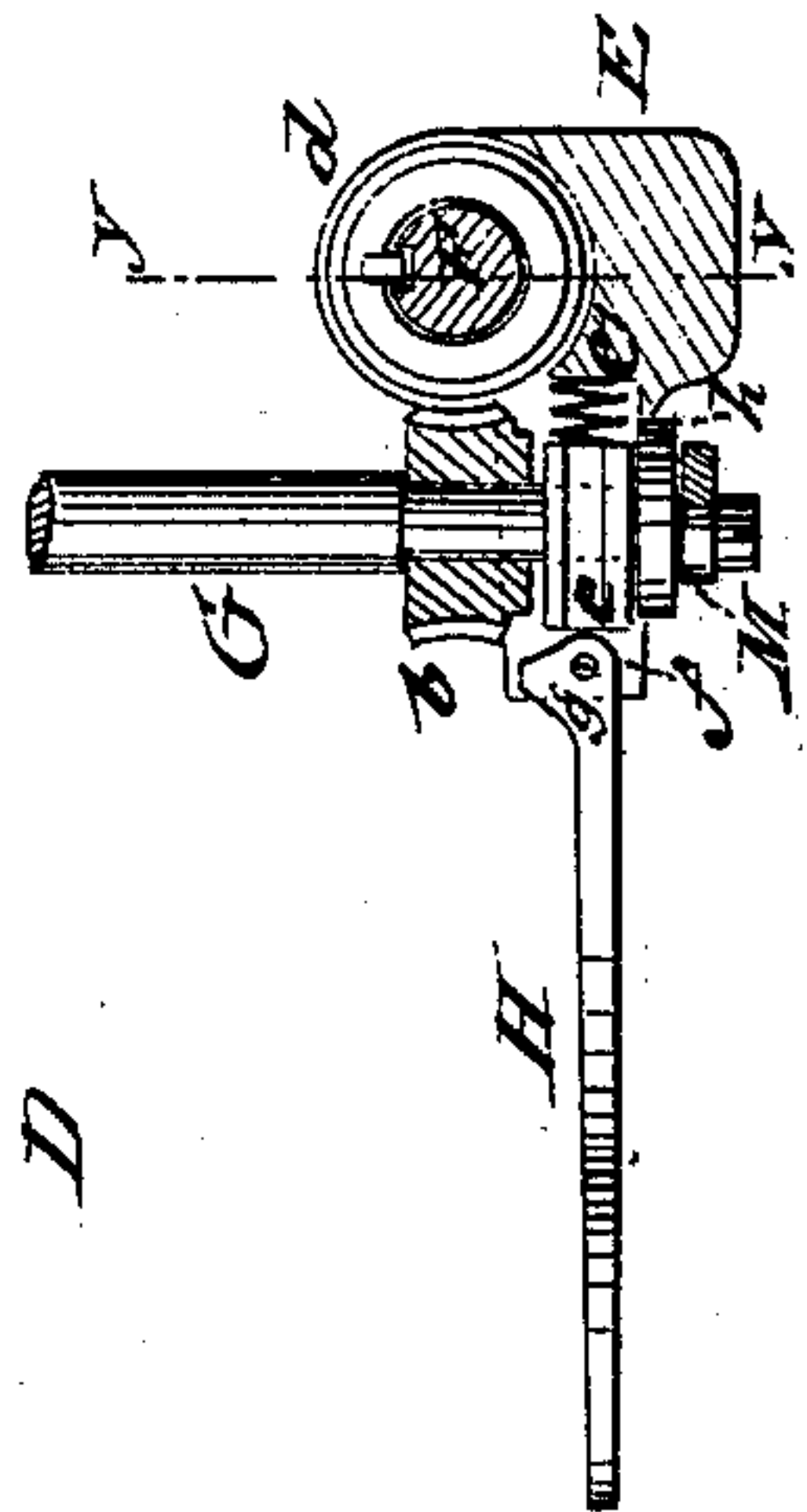
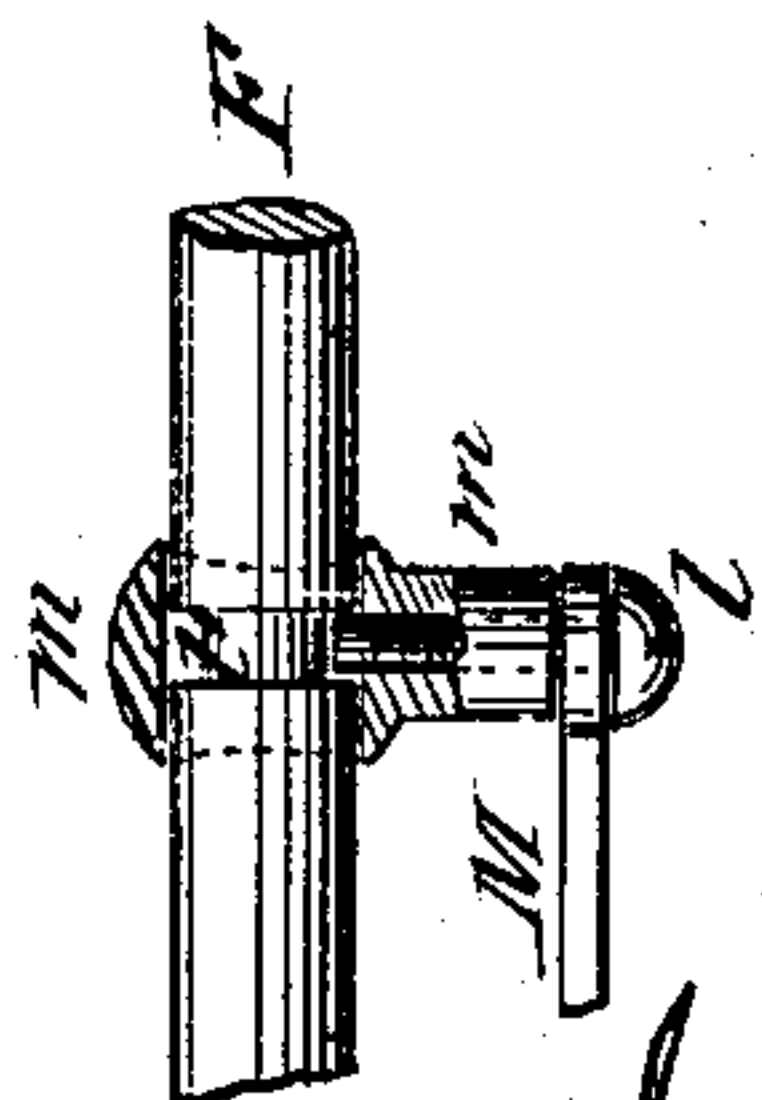


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN W. PARKER AND THOMAS PARKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SAW-GUMMERS.

Specification forming part of Letters Patent No. 171,039, dated December 14, 1875; application filed June 19, 1875.

To all whom it may concern:

Be it known that we, JOHN W. PARKER and THOMAS PARKER, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Saw-Gummer, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side view of our improved saw-gummer; Fig. 2, a vertical transverse section of the same on the line *c c*, Fig. 1; Fig. 3, a detail section of cutter-shaft and feed mechanism on line *x x*, Fig. 2. Fig. 4 shows detail section, on line *y y*, Fig. 3, of worm-gear, sliding on cutter-shaft; and Fig. 5, a detail view of connection of cutter-shaft with reciprocating-link.

Similar letters of reference indicate corresponding parts.

Our invention relates to an improved saw-gummer that gums the teeth to exact depth, throwing the cutters automatically out of gear when the required depth has been reached.

The invention is an improvement in the class of gummers whose cutter-shaft bearing is adjustable in a slotted way or radius-bar, which is in turn adjustable around a fixed axis located on the lower portion of a circular or sector-shaped frame that is provided with clamps to adapt it for attachment to a saw-blade.

The invention relates to means for automatically interrupting the feed of the cutter-shaft and producing reciprocation of the same simultaneously with its rotation, as hereinafter fully set forth.

In the drawing, A represents the sector-shaped main frame, to the radial and flanged sides of which the jaws B are adjustably applied by guide-grooves, and attached by clamp-screws to the saw. A gage, C, between the jaws defines the extent to which the gummer is set on the teeth. A sliding and centrally-recessed way, D, is pivoted to the apex or corner of the radial sides of frame A, and adjusted by its outer slotted end to the arc-shaped side of frame A, clamp-screws at apex and slot holding the sliding way rigidly in position. The journal-box E of the cutter-shaft F is guided on way D, so that shaft F passes at right angles to frame A, intermediately between the radial sides of said frame and the side guides of way D. A feed-screw bolt, G, turns in a guide-nut, *a*, attached to way D,

and gears, by a worm, *b*, at the end, with a worm, *d*, of the cutter-shaft. Worm *d* is keyed to a longitudinal groove, *d'*, of cutter-shaft F, and revolves the shaft without interfering with its lateral reciprocating motion. The cutters are placed in suitable manner on the shaft F, which is rotated by hand-cranks F² at the ends of the same, an additional supporting-bearing, F¹, projecting from frame A between the jaws.

The hand-cranks F² may be notched to bind on projecting pins of the shaft to revolve the same for gumming, but pass freely in opposite direction without turning the shaft and injuring the cutter-knives.

The end of feed-screw G turns in a journal-box, *e*, that rests on a cushioning-spring, *e'*, and slides in guide-standards *f* of the shaft journal-box E. A cam-lever, H, is pivoted to the standards *f* by a cross-pin, *g*, above the sliding journal-box *e*, and forces the same in downward direction when pressed down upon the same. The worm, *b* of feed-screw G is thereby thrown into gear with the worm *d* of the cutter-shaft, and causes, on the revolving of the shaft, the forward feeding of screw G, together with shaft-bearing E and cutter-shaft F. The cam-lever H is held in position on the sliding box, so as to retain the feed-screw in gear with the cutter-shaft, by a curved and fulcrumed lever, I, that is brought at one end over the cam-lever, and at its other end in contact with an adjustable gage, L, that defines the depth of cutting. Gage L detaches lever I from the cam-lever H and releases the latter, by the action of the cushioning-spring, from the sliding journal-box of the feed-screw, so that the feed of the cutters and the gumming is instantly and automatically interrupted, and an even and exact depth of gumming to all the teeth secured. A crank-disk, *h*, at the end of feed-screw G, outside of sliding journal-box *e*, is connected, by a link, M, pivoted thereto, with a pivot-pin, *l*, of the cutter-shaft, which pivot-pin is screwed into a socket-sleeve, *m*, of the shaft, being extended into an annular groove, *l'*, of the same, so that the shaft revolves in the sleeve while being simultaneously reciprocated by the action of the feed-screw and link. The cutters are thereby gradually moved from one side to the other in connection with the motion of the feed.

screw, acting at each revolution with another part on the saw-recesses, and preventing thereby the heating of the same. The gummer may, therefore, be worked with great rapidity, and applied to the next recess by turning the feed-screw in opposite direction and carrying thereby the cutter-shaft back. The gummer is then clamped by the jaws to the next tooth of the saw-blade, and its exact position defined by the outer gage C, while the angle of cut is adjusted by the sliding way. The feed mechanism is then thrown into gear, and the cutter-shaft revolved until the cutting is interrupted by the action of the depth-regulating gage. In this manner the saw is quickly and accurately gummed by a very reliable and effective instrument.

We are aware of the patent No. 166,313 for saw-gummer; but claim nothing therein shown or described.

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

1. The combination of pivoted and spring-acted cam-lever with fulcrumed guard-lever and depth-regulating gage for interrupting feed of cutter shaft, in the manner described.

2. The combination of crank-disk of feed-screw, by pivoted connecting-link, with pivot-pin, socket-sleeve, and groove of cutter-shaft to produce reciprocating motion of shaft simultaneously with the revolutions of the same, substantially as set forth.

JOHN W. PARKER.
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Witnesses:

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