

S. K. WILSEY.

Improvement in Machines for Sharpening Saws.

No. 122,929.

Patented Jan. 23, 1872.

Fig. 1.

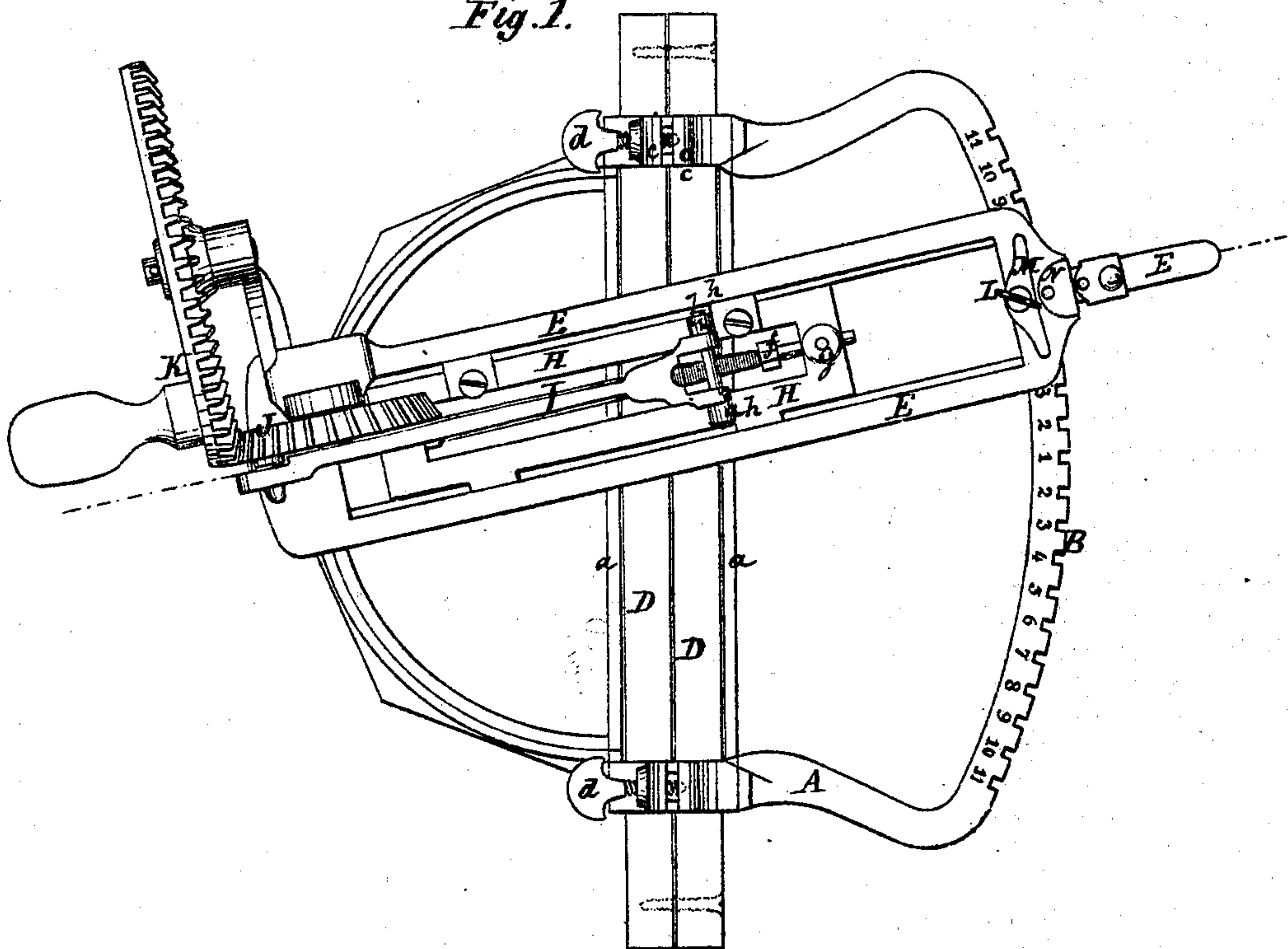
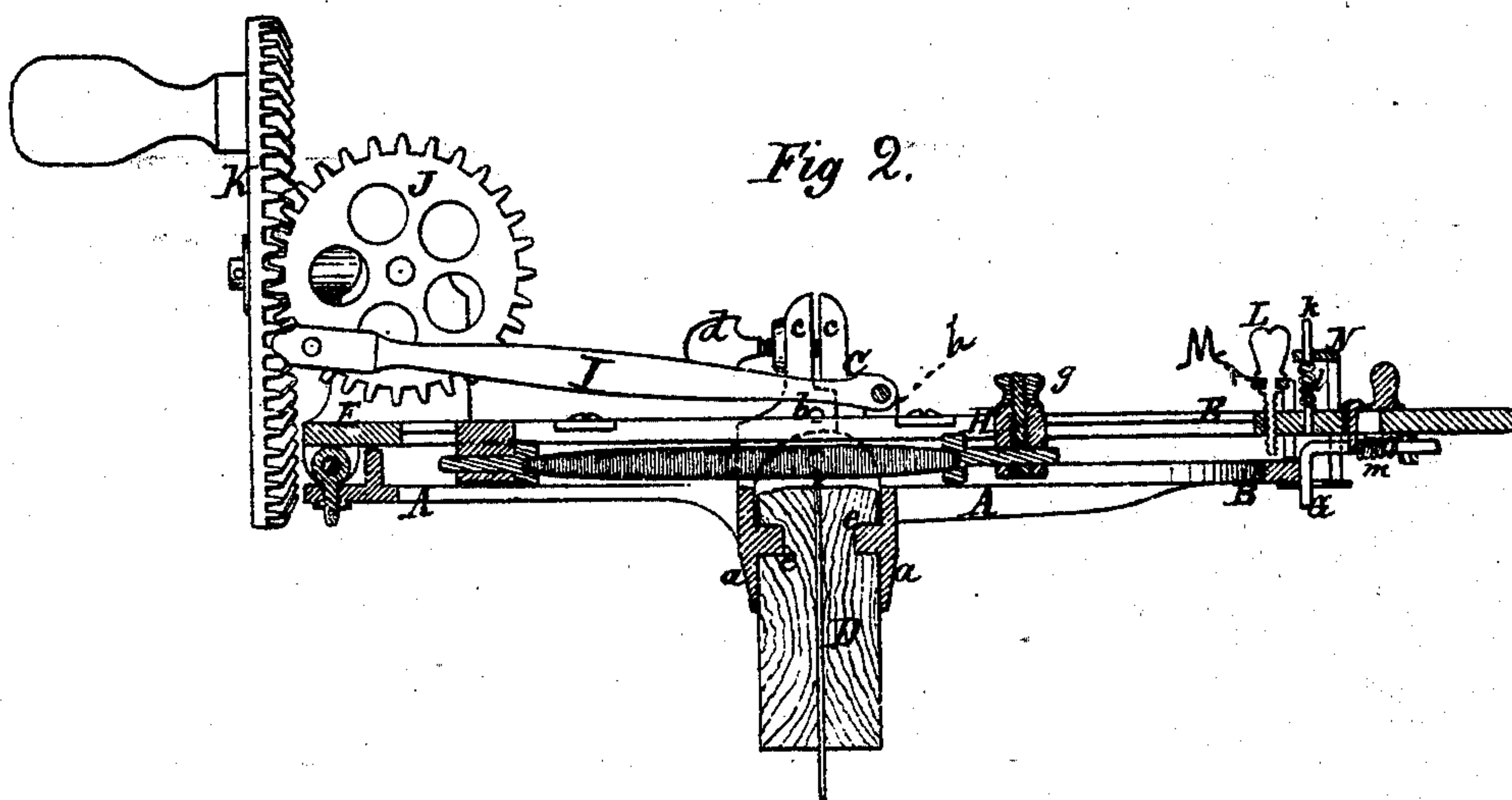


Fig 2.



Witnesses

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IMPROVEMENT IN MACHINES FOR FILING SAWS.

Specification forming part of Letters Patent No. 122,929, dated January 23, 1872.

SPECIFICATION.

I, SIMON K. WILSEY, of Kirkwood, Riverside P. O., in the county of Broome and State of New York, have invented certain Improvements in Apparatus for Filing Saws, of which the following is a specification:

My invention relates to the combination and arrangement of a reciprocating file-carrier, operated by a crank-wheel and pinion, and a frame having the form of a quadrant transversely hinged, for holding the saw-clamp, in such a manner that the file-carrier shall be capable of carrying the file to the required depth, and also of changing the angle of the file for beveling the cutting-edge of the tooth; the object of the invention being to insure accuracy in the size and form of the teeth and to facilitate the operation of filing.

Figure 1 in the accompanying drawing is a plan of an apparatus embodying my invention. Fig. 2 is a side elevation of a longitudinal section through the connecting-rod, file, and saw-clamp, showing the manner of elevating and depressing the file and holding it at the required angle.

A is the frame, which has a notched rim or quarter segment of a circle, B. This frame is made in two parts, connecting with the jaws *a a* of the clamp C, which is hinged in the center *b*, above which project arms *c c* with adjusting thumb-screws *d d*, by which the jaws *a a* may be opened or closed to allow for the variations of the thickness of saw-plates. On the inside of the jaws *a a* are longitudinal tongues, which work in corresponding grooves *e e* in the saw-clamp D, which is opened for the reception of the plate of the saw and closed upon it by screws. For the ordinary hand-saw this clamp should be made about three feet in length, to allow of the required space for the screws at the ends. E is the guide-frame for the file-carrier. One end of this guide-frame is hinged to the head of a pivot in the frame A, which constitutes the radial center of the arc of the circle or segment B. The other end extends to and sweeps the curve, the edge of which is notched at equal distances for the reception of a spring-catch, G, which is attached to the end of said guide-frame for the purpose of holding it in position during the operation of filing the tooth. On

the rim of the segment B are numbers corresponding to the notches, commencing at No. 1 and continuing to No. 11, on each side of the line *x x*, intersecting the center of the arc or segment B, so that when the spring-catch G engages with the notch No. 1 the guide-frame shall be at a right angle with the saw-clamp D. H is the file-carrier or gate, which works on guide-ways in the guide-frame E. This gate is provided with adjustable socket-bolts *f f* at each end and on a longitudinal line through the center. These bolts have apertures for the reception of the ends of the file, which is secured in the required position by the adjusting thumb-screw *g*. I is the connecting-rod, which connects with the gate H, near the end, by a pin passing through lugs *h h* and the crank-pin on the beveled pinion J, which receives motion by the driving-wheel and crank K, all being attached to the pivoted end of the guide-frame E. L is a thumb-screw for adjusting the depth of the tooth to be filed. This screw works in the free end of the guide-frame E, and is connected with a stationary collar, M, provided with projections extending through the end of the guide-frame and bearing upon the rim of the segment B, so that by turning the thumb-screw L the guide-frame and file may be elevated or depressed to the required depth for filing. The guide-frame has a projection or handle, to which is attached the spring-catch G and file-"feeder" N, the lower part of which extends below the rim of the segment B and projects under it; the upper part extends above the guide-frame, and is held in position by a pin, *k*, which is surrounded by a spiral spring, *l*. This spring is placed between the guide-frame E and the upper part of the file-feeder N, which brings the part projecting under the rim of the segment B in contact with it, so that the guide-frame, yielding to the downward pressure of the spring, gives the required "feed" to the file. The spring-catch G is placed in a horizontal position, and engages with the notches on the edge of the segment by means of the spiral spring *m*.

The saw to be filed is first jointed, then placed between the saw-clamp D, the teeth extending slightly above the edge. The clamp is then closed, and secured by screws at the

ends, when it is placed between the jaws *a a* of the clamp C of the frame A. The slide-catch G is then drawn back, and the guide-frame E moved to the required number or notch for the bevel of the cutting-edge of the tooth, and locked. The file is then adjusted to the required depth by elevating or depressing the guide-frame by means of the thumb-screw L, when a few turns of the crank K will file the tooth. As the bevel changes at each tooth, the operation is facilitated by finishing the teeth on one side and then moving the

guide-frame to the opposite corresponding number, which accomplishes the work.

I claim as my invention—

The frame A made in two parts, attached to the hinged adjustable clamp C, adapted to slide on the saw-clamp D, in combination with the guide-frame E, file-carrier H, and operating devices, substantially as described.

SIMON K. WILSEY.

Witnesses:

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S. W. ROGERS.