

J. & J. A. CROOK.  
Saw-Sharpeners.

No. 158,404.

Patented Jan. 5, 1875.

Fig. 1.

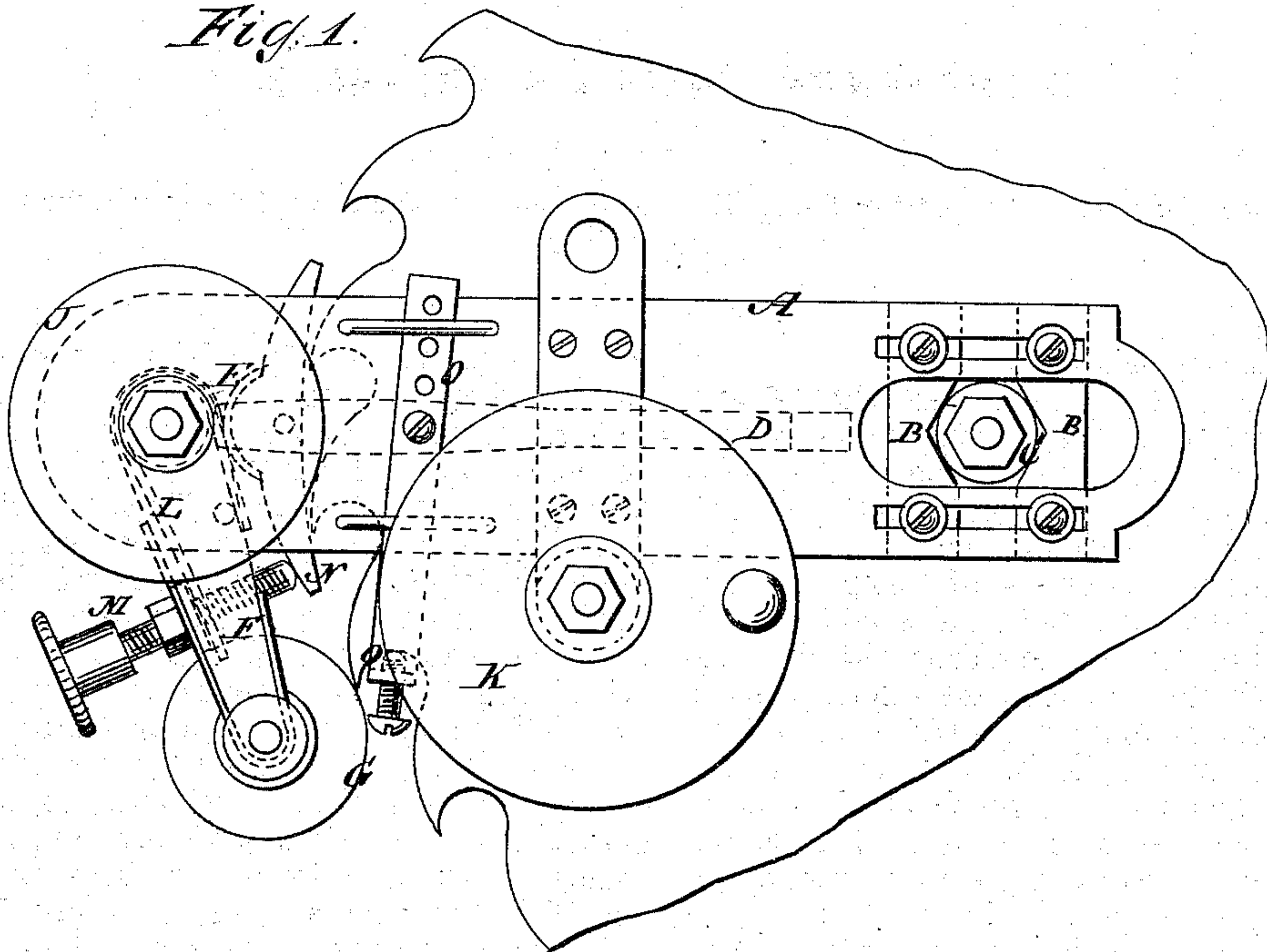


Fig. 2.

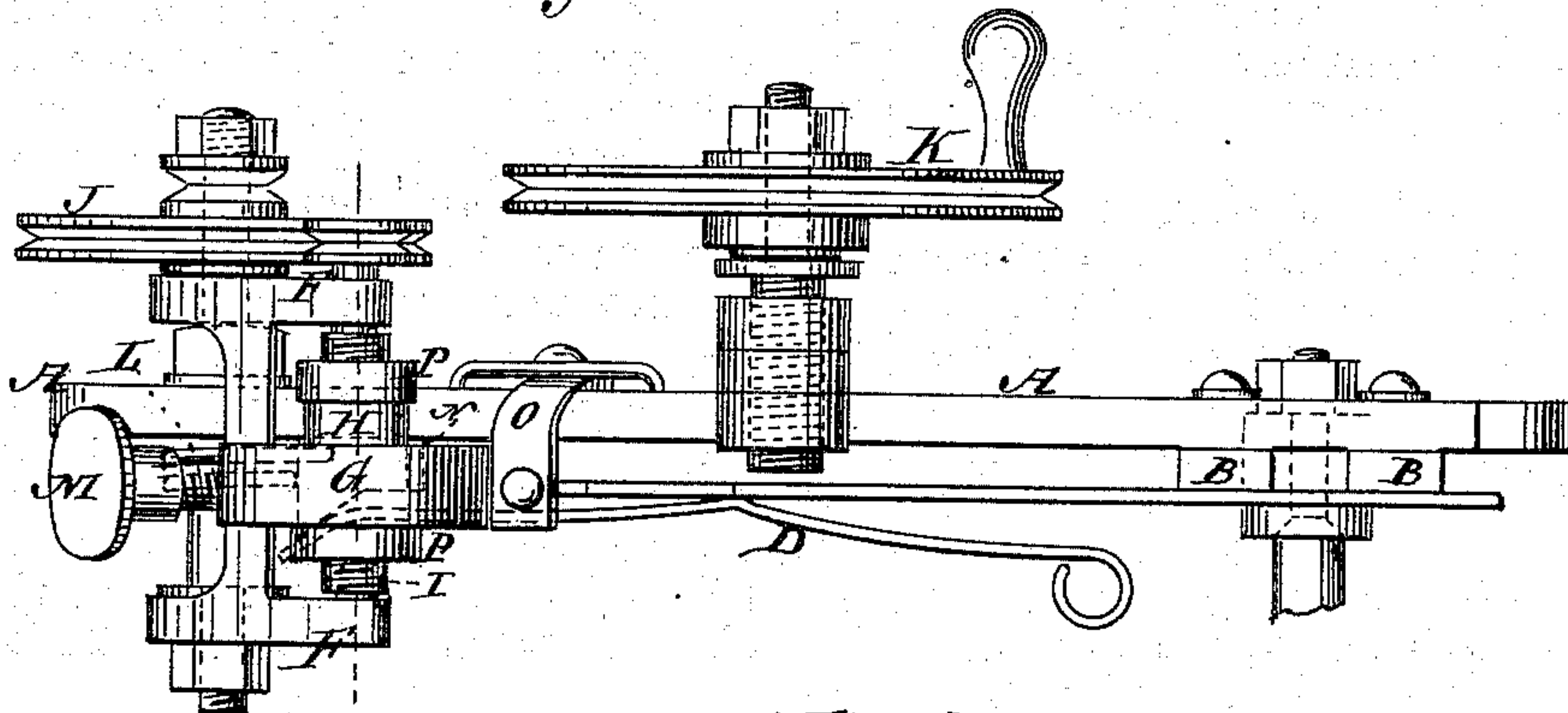
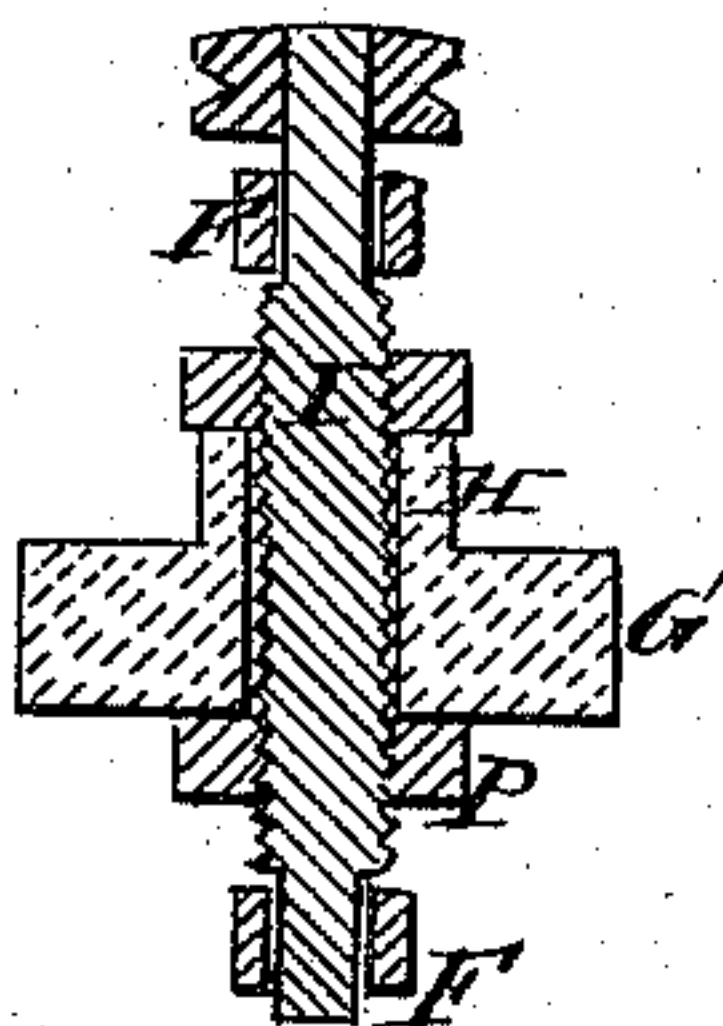


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE

JOHN CROOK AND JAMES A. CROOK, OF AUGUSTA, OHIO.

## IMPROVEMENT IN SAW-SHARPENERS.

Specification forming part of Letters Patent No. **158,404**, dated January 5, 1875; application filed November 14, 1874.

*To all whom it may concern:*

Be it known that we, JOHN CROOK and JAMES A. CROOK, of Augusta, in the county of Carroll and State of Ohio, have invented a new and Improved Saw-Sharpener, of which the following is a specification:

Our invention consists of emery-wheels adapted for dressing both sides of the teeth and gumming the saw, together with driving-gear and adjusting devices, and a spring-clamp mounted on a radius-bar contrived to be temporarily attached to the collar of a circular saw, all so arranged that the wheels can be readily applied to the teeth, so as to dress them all alike and do the work expeditiously, the machine being operated by a hand-crank.

Figure 1 is a side elevation of our improved machine, together with a portion of a saw, showing the application of the machine. Fig. 2 is a top view of Fig. 1, and Fig. 3 is a section of the grinding-wheels and the mandrel.

Similar letters of reference indicate corresponding parts.

A is the radius-bar, for holding the wheels and the gear for turning them. It is provided with adjustable bearing-pieces B, which fit on the saw-collar C, and it also has a spring-clamp lever, D, which swings down on the opposite side of the saw and over a cam, E, to hold it to the side and on the collar. At the outer end of the radius-bar a frame, F, is pivoted, which carries the grinding disks or wheels G H on a mandrel, I, fitted in bearings in its free end, and turned by a belt from the pulley J, which is turned by the driving-pulley K. This frame swings toward and from the teeth, and has a spring, L, which tends to keep it off. It also has a gage-screw, M, which touches the stop N when the teeth are dressed off sufficiently, and gages them to uniform sizes. There is also a gage, O, which regulates the depth of the notches when gummed out by the small grinder. Both of these gages are adjustable to adapt the machine to different saws. The large wheel, G, is for dressing the teeth on the top, and the small one, H, is for dressing the under or concave side of the teeth, and for gumming the saw-plate.

They are placed side by side, and are adjustable lengthwise of the axis I, to adapt each for being located in the desired position relative to the saw, to bring either the large or small wheel opposite its edge. They are clamped and secured in such position by means of the collars P, which are screwed along the mandrel. When the small wheel is used the gage-screw M is screwed back sufficiently to let the wheel drop into the notches the required extent. The stop N for this gage-screw is contrived so that the frame F may be shifted over to the opposite side of its axis, as may be sometimes required for saws having the teeth arranged reversely to the way they are represented in the drawing; also to apply the machine to saws hung in reverse of the arrangement represented. The driving-wheel K, gage O, and the cam-lever D are also arranged to shift in like manner and for the same purposes. The grinders are pressed on the teeth, and the radius-bar is moved forward and backward along the teeth by one hand, while the crank is turned by the other hand.

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

1. The adjustable bearing-pieces B, spring-clamp lever D, and the cam E, combined with the radius-bar A, substantially as specified.

2. The combination of the grinder-carrying frame F, adjusting stop-gage M, and the stop N with the radius-bar A, substantially as specified.

3. The combination of the gage O with the grinder-carrying frame F, radius-bar A, stop-gage M, and stop N, substantially as specified.

4. In a saw-gummer, the combination of the large and small grinding-wheels G H, the threaded mandrel I, and screw-collars P with pivoted carrying-frame F and bar A, as shown and described, for the purpose specified.

JOHN CROOK.  
JAMES ALBERT CROOK.

Witnesses:

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