

E. R. PARKER.
Saw-Clamp and Filing-Guide.

No. 219,650.

Patented Sept. 16, 1879.

Fig. 1.

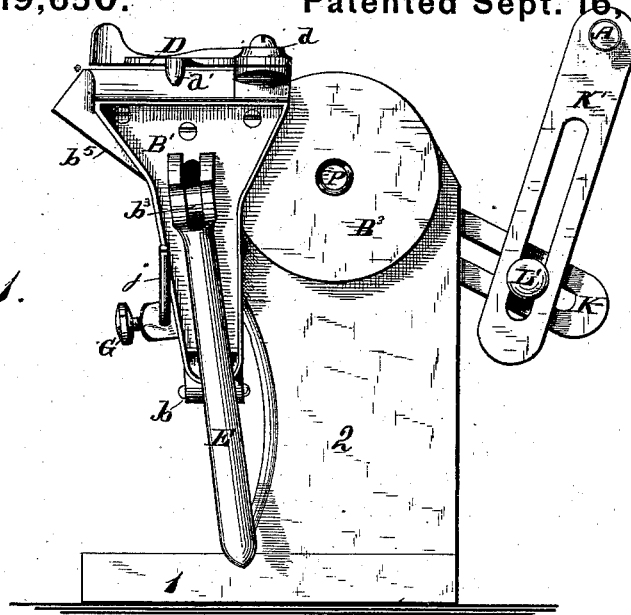
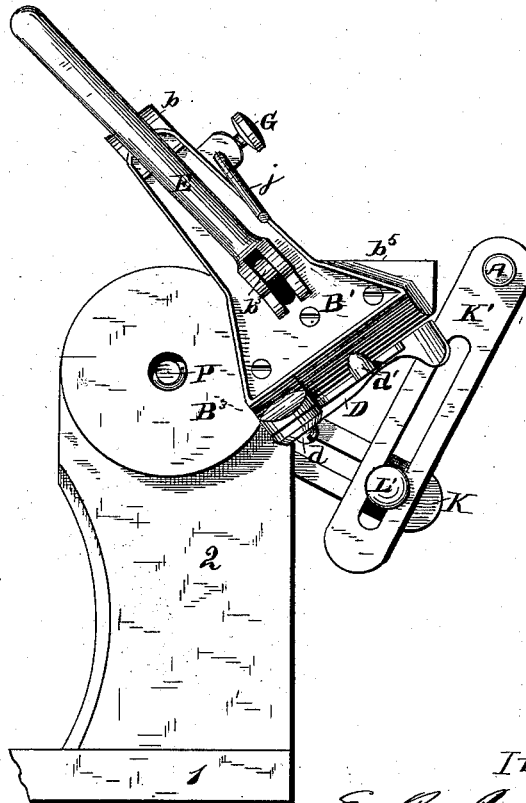


Fig. 2.



Attest,
W. H. A. Knight
W. Blackstock.

Inventor,
E. R. Parker,
By L. H. Hill,
His atty.

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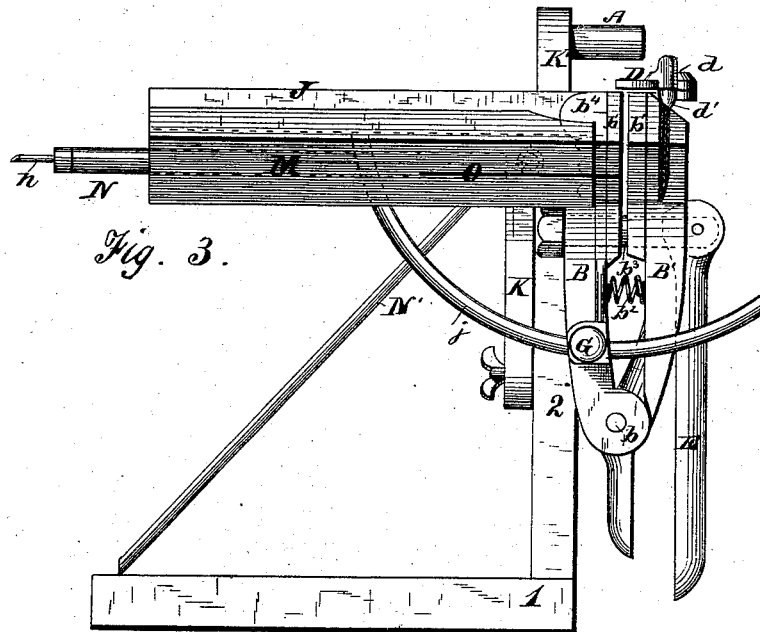


Fig. 3.

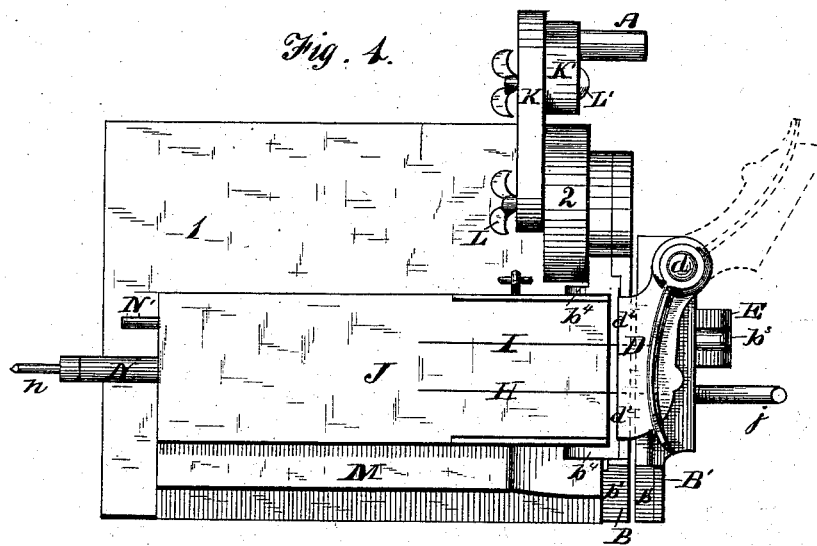


Fig. 4.

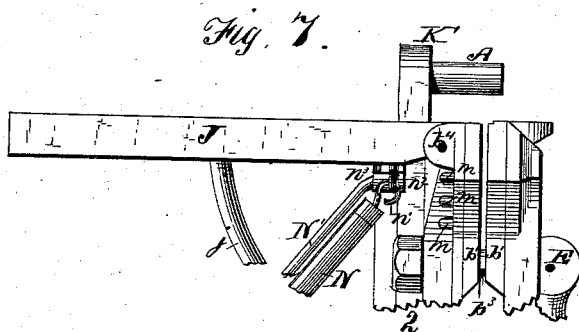
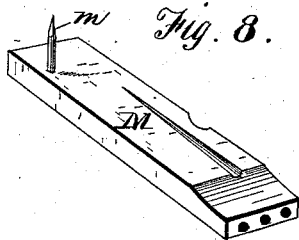
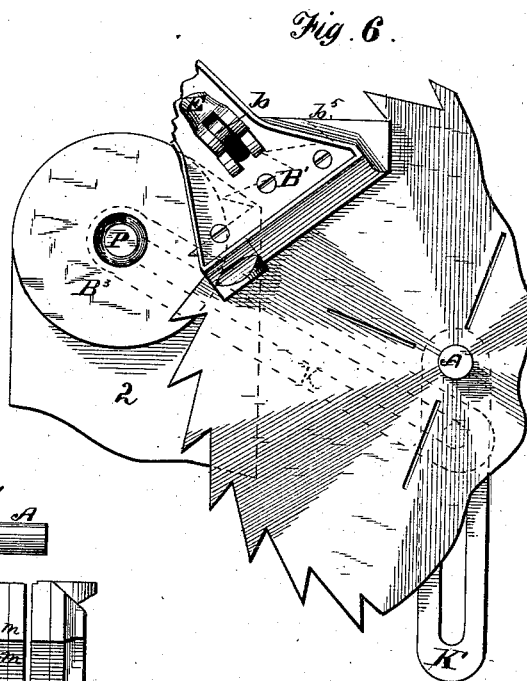
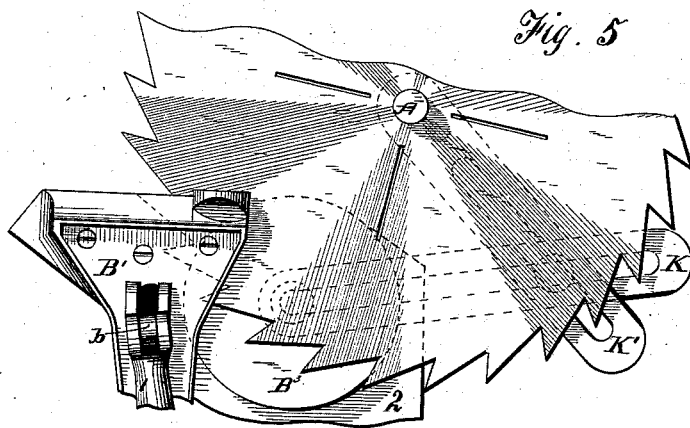
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UNITED STATES PATENT OFFICE.

EDWIN R. PARKER, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN SAW-CLAMP AND FILING-GUIDE.

Specification forming part of Letters Patent No. **219,650**, dated September 16, 1879; application filed May 23, 1879.

To all whom it may concern:

Be it known that I, EDWIN R. PARKER, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a certain new and Improved Saw-Clamp and Filing-Guide; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view, showing the device in position for filing the front of the tooth. Fig. 2 is a similar view, showing the device in position for filing the back of the tooth. Fig. 3 is a side elevation; Fig. 4, a top-plan view; Figs. 5 and 6, detail views, showing the saw in different positions. Fig. 7 is a side elevation, partly broken away, showing details; and Fig. 8 is a perspective view of the supplemental file-guide detached.

Similar letters of reference in the several figures denote the same parts.

The object in making this invention is to produce a convenient instrument or machine for clamping and holding the saw-teeth and guiding the file in filing all sizes of circular and mill saws of any gage, size, and shape of teeth, and whether the saw be on the arbor or removed therefrom; and the improvements consist, respectively, in the several devices, and in the combinations and sub-combinations, as hereinafter described and claimed.

The instrument or machine which constitutes the subject-matter of the invention is provided with parts so combined, adapted, and adjustable that, by its aid, the saw-teeth, whether square or swage set, or beveled or spring set, and whether the saw be on the arbor or off, can be accurately reduced to uniform shape and size by filing on their front or back, or both.

I will first describe its construction, and then explain the manner of its use for the different purposes referred to.

In the drawings, No. 1 represents the base, and No. 2 a vertical post or standard attached thereto, and having its upper end rounded off, as shown. B B¹ are a pair of spring-clamps or a vise, the jaws of which are pivoted together at *b*, and are faced or lined with wood or other suitable material, as shown at *b¹ b¹*. These jaws are forced apart by an interposed spring, *b²*, and can be locked together by means of an eccentric-headed lever, *E*, and rod *b³*, or

other equivalent arrangement, the means not being material provided they can be properly opened, closed, and locked.

A horizontally-rotating guide-block or button, *D*, is pivoted to the top of the movable jaw B¹ at *d*, and is provided with a stop, *d¹*, which permits it to be swung over the middle of the space between the two jaws, but arrests it when the straight edge *d² d²* comes parallel to the clamping-edges of said jaws. In that position the ends of the space will be open at each end of the part *d² d²*. The fixed jaw B is provided with lugs *b⁴ b⁴*, between which is pivoted a vertically-swinging table, *J*, which I term the "file-guide." This table can be adjusted and held at different angles to the faces of the jaws by means of a curved supporting-rod, *j*, and a clamping-screw, *G*.

N is a brace, provided with a sharp metallic point, *n*, at its lower end, and pivoted by some species of universal joint to the under side of the filing-guide J, for the purpose of bracing, steadying, and supporting said guide and its connected mechanism when in operation.

As a convenient means of attaching the brace to the filing-guide, I recommend two eyebolts, *n¹ n²*, one secured to the guide, and the other entering the end of the brace.

A pair of these bolts should be arranged under each edge of the filing-guide, and the brace can be detached from one and connected to the other pair at pleasure.

Another brace, N¹, made of spring-metal and attached to the other side of the filing-guide by a rigid or a swiveling connection, *n³*, may be employed for the additional bracing of the said parts, if preferred. Lines H and I are drawn on the upper face of the filing-guide and across the top of the clamping-jaws.

The entire structure, comprising the vise, filing guide, and their connected parts, is pivoted to the standard No. 2 by means of a headed bolt, P, passing through an arm, B³, of the fixed jaw, and through the standard, and secured in place by a thumb-screw nut, L, on the side opposite to the head. Upon this pivot-bolt the said structure can be, by the screw-nut, clamped in the position shown in Figs. 1 and 5, or turned nearly upside down and clamped in that position, as shown in Figs. 2 and 6. When thus turned upside down it will be observed that the inclined under face of the jaws (shown at *b⁵ b⁵* in Figs. 2 and 6) comes to a horizontal position, and be-

comes, in its turn, the top of the clamps or vise.

M is a supplemental filing-guide, adapted to be used with the jaws when they are adjusted in this last-mentioned position, and it is secured in place by studs *m m* projecting from the side of the fixed jaw, which enter the end of the part M, and by a peg or spur, *m'*, which enters a hole in the bottom of guide J, which in such case is inverted in position and extends under the guide M.

The guide M and part *b⁵* of the jaws is marked with a line, O, as shown. It will also be observed that the part *b⁵* of the jaws is made to project somewhat, so as to take the proper hold upon the saw and allow room for filing, when the instrument is used in the inverted position shown in Fig. 2.

K is a slotted arm, pivoted to the bolt P, and K' is a similar slotted arm, pivoted to the arm K by a clamping-bolt, L', whereby the combined arms can be lengthened or shortened, and straightened out or bent up, at will, for the purpose of accommodating the instrument to saws of different diameters. A is a stud on the side of arm K', whereon the saw is mounted, the stud being of such size as to fit the central arbor-hole of the saw.

The arms K K' may be detached and reversed, so as to project from the opposite side of the clamps or vise at will.

The operation of this contrivance is as follows: In filing circular saws detached from their mandrels or arbors, said saws having square or swage set, arrange vise as seen in Figs. 1 and 5, place pin A on the right side of the clamp; hang the saw on the pin with its teeth between jaws B B', the point of tooth at line H and front of tooth up; bring down cam-lever E to close and lock the jaws, and place the file on the guide J, with the thumb of the left hand on the point of the file, which should be inclosed in a shield or packing of leather or other suitable material to save the file and prevent injuring the guide. The saw being properly fastened, the operator will have no difficulty in keeping his file flat on the guide, and getting the teeth of equal and uniform size and shape. If the saws are spring-set, or with beveled teeth, they are applied and adjusted as before; but the thumb-screw G is then loosened, and the filing-guide is raised to any required bevel, after which the tooth (and every alternate one afterward) is filed as before. But for the oppositely-beveled alternate teeth, the arms K K' must be changed to the left-hand side of the vise, and the saw inserted at the opposite side. The point of the tooth must be brought to the line I, with front of tooth up. The workman then puts the thumb of his right hand on the point of the file, to hold it down on the filing-guide, and operates as before.

For filing the back of the teeth, loosen the thumb-screws L L', take hold of the lever E, and turn the vise over to the right as far as it will turn; place the supplementary file-guide

M in position, and secure it as above described; bring arms K K' to right side of instrument; hang the saw on pin A, with the point of the tooth at line O and the back up at any angle desired; clamp the saw, and file as before.

For filing large saws on their mandrels, either while in the saw table or bench, or where no table or bench is used, first remove bolt P and detach the vise and its filing-guide from the standard No. 2. Then, holding the clamp with its brace or braces in the left hand, with the forefinger up against the bottom of the filing-guide J, close the guide or button D over the jaws, place the clamp on the saw with the button D resting on the front of the tooth, close and lock the jaws, drop the swinging brace N, spring the saw toward you and brace it in that position by means of the brace N, remove the button D, and operate as before.

For filing the back of the tooth, remove the brace N from the bottom of the file-guide M on the bottom of the guide J, turn the clamp upside down, place it on the back of the tooth, drop the brace N, and proceed as last above described.

With the instrument herein described not only can the work be done more accurately and uniformly than heretofore, but with a great saving of time and labor, and with the necessity of far less experience and skill on the part of the workman.

I claim as my invention—

1. The combination of reversible clamping-jaws with an adjustable arm to hold the saw, substantially as described.

2. The combination of a reversible arm to hold the saw with clamping-jaws, substantially as described.

3. The combination of a reversible arm to hold the saw with reversible clamping-jaws, substantially as described.

4. The combination of the file-guide J with the clamping-jaws, substantially as described.

5. The combination of the adjustable file-guide with the clamping-jaws, substantially as described.

6. The combination of clamping-jaws adapted to receive the saw from either side with an arm for holding the saw, substantially as described.

7. The combination of clamping-jaws adapted to receive the saw from either side with an arm to hold the saw and adjustable file guide or guides, either or both, substantially as described.

8. The combination of reversible clamping-jaws with two file-guides and a saw-holding arm, substantially as described.

9. The combination of the brace with the file-guide and clamps, as described.

10. The combination of the guide-button D with the clamping-jaws, substantially as described.

EDWIN R. PARKER.

Witnesses:

PATRICK HANAGAN,
DUNCAN WRIGHT.