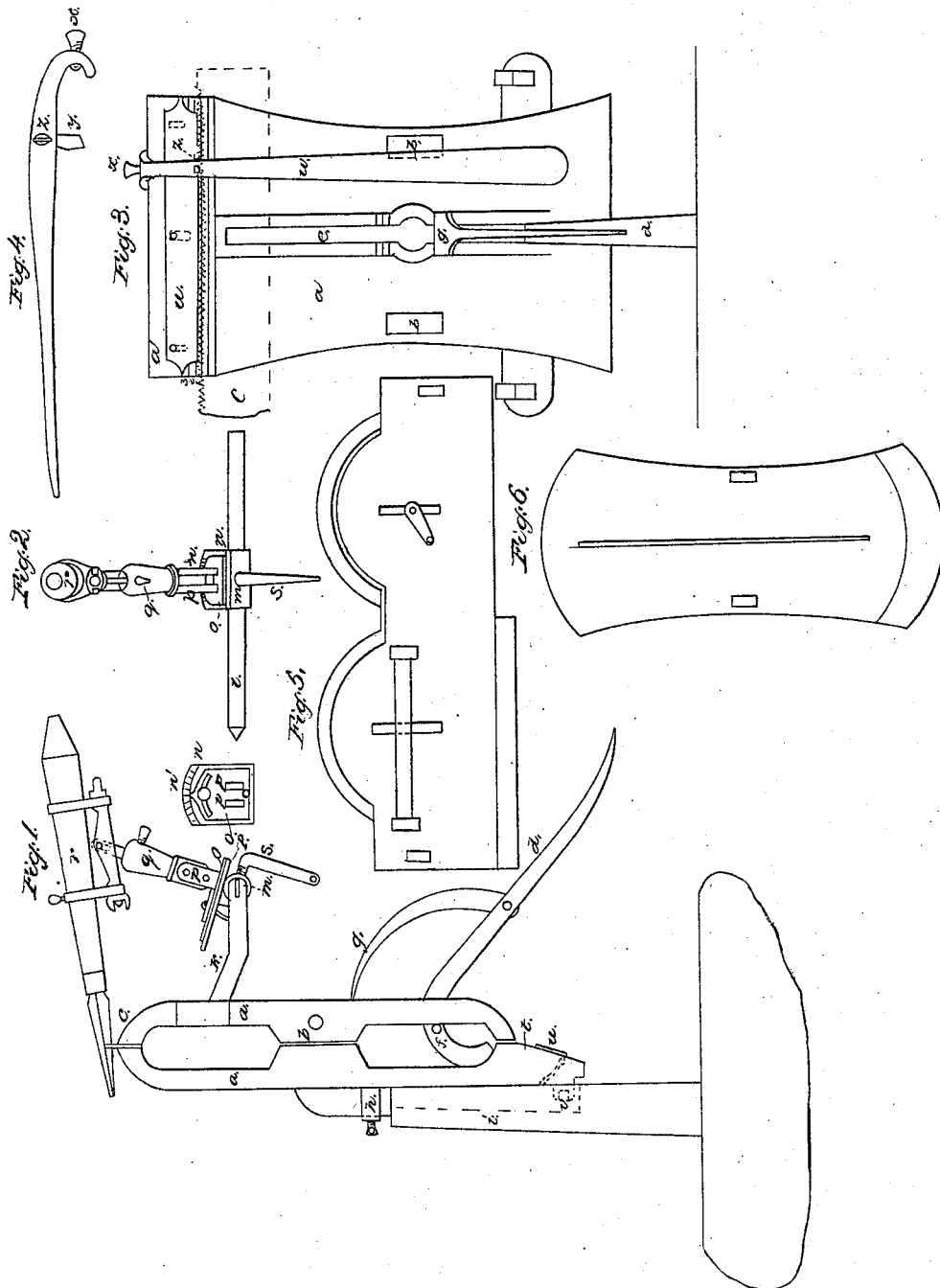


*C. Lafferty,*

*Sharpening Reciprocating Saws.*

*N<sup>o</sup> 5,249.*

*Patented Aug. 21, 1847.*



# UNITED STATES PATENT OFFICE.

CHARLES LAFFERTEY, OF YORK SPRINGS, PENNSYLVANIA.

## MACHINERY FOR SETTING AND FILING SAWS.

Specification of Letters Patent No. 5,249, dated August 21, 1847.

*To all whom it may concern:*

Be it known that I, CHARLES LAFFERTEY, of York Springs, in the county of Adams and State of Pennsylvania, have invented  
5 new and useful Improvements in Saw Setting and Filing Apparatus, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the manner of making,  
10 constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the apparatus; Fig. 2, a front view of the file and its guide detached; Fig. 3, a front view of the saw set; Fig. 4, is the tool for setting the  
15 saws; and Figs. 5 and 6 are modifications of the instrument for circular saws.

20 The same letters indicate like parts in all the figures.

The nature of my invention consists in the construction and arrangement of the clamp for holding the saw for setting and filing  
25 and in combining therewith a guide for the file and a gage and tool for setting the teeth.

The construction of my machine is as follows: The principal parts are formed of two castings (*a*, *a'*) in the form of flat plates, the ends of which are turned inward as is  
30 clearly shown in Fig. 1; in the middle of these plates there are joints (*b*) by which they are connected, thus forming a clamp in which a saw blade (*c*) can be held at either  
35 end, as will be hereafter more fully described. The end of the clamp for filing saws, which is shown uppermost in Fig. 1, has its jaws rounded off like a vice, and between them the saw is pinched and held  
40 firm while being filed by means of a bent lever (*d*) which passes through a narrow slit (*e*) (Fig. 3,) in the front plate; that part of said lever which is between the plates is curved downward as clearly shown  
45 in Fig. 1; a pin (*f*) is put through the lever projecting on each side which bears against the inside of the front plate on each side of the slit (*e*) and forms a fulcrum. When the outer end of this lever is borne down it  
50 will obviously spread the plates (*a*, *a'*) below their joint (*b*) and cause their upper jaws to pinch whatever is held between them; to hold the lever in this position a pawl (*g*) is jointed to the lever and extends  
55 up to the plate (*a*) on the face of which notches are cut for it to take into to brace

down the lever. A loop (*h*) is affixed to the back plate (*a'*) of my apparatus which slips onto the end of an upright post (*i*) by which the clamp is firmly held in proper position. From the front plate (*a*) near the  
60 upper end in Fig. 1 two arms (*k*) project; these may be keyed in so as to be removable which will be found a great convenience in packing the apparatus; these arms support  
65 a shaft (*l*) parallel with, and at a proper distance below the jaws of the clamp on which a collar (*m*) slides. To this collar is attached a plate (*n*) on the upper side on which a second plate (*o*) is pivoted; this  
70 plate (*o*) has a pointer on it that turns to an index plate (*n'*) and to it is attached a short standard (*p*) to which is jointed a socket piece (*q*), in the upper end of which there is a socket for the reception of the  
75 file holder (*r*). The pin of the file holder which enters the socket has an oblong hole in its upper end through which the pin passes that attaches it to the cross head of the file holder, the length of this slot regulates the depth to which the file is to go. A  
80 set screw (*s*) confines the collar (*m*) on the shaft (*l*) while one tooth is filed, and the plate (*o*) is turned to any angle (as indicated on the index (*n'*) of the lower plate  
85 (*n*)), that the file is required to move in.

By this apparatus constructed as above set forth saws can be filed to any form required even by the most unpractised hand. For setting the saw teeth the opposite end  
90 of the clamp is turned up, as shown in Fig. 3; the jaw (*a'*) of this end of the clamp is extended up above the front jaw (*a*) and its face is inclined as shown at (*t*) (see Fig. 1); on this face there is a gage plate (*u*) that is  
95 held up by springs in the jaw which are shown by dotted lines in Figs. 1 and 2; on the face is marked a series of horizontal lines 1, 2, 3, &c., to either of which the gage plate (*u*) is set by its set screw (*v*), (see  
100 Fig. 1) according to the width the teeth are to be set. The saw is held between the jaws of the clamp in a similar manner to that employed in the other end and the lever being reversed for that purpose.  
105

The tool for setting the teeth is shown in Fig. 4 and also (*w*) Fig. 3; it is a plain lever with a hook at one end having a set screw (*x*) in the bend of the hook, and a  
110 tooth or stud (*y*) projecting from the face of the lever at a proper distance from the hook. The application of this tool is as

follows: The hook is caught over the upper edge of the projection ( $z$ ) on the jaw ( $a'$ ) which brings the tooth or stud on a line with the upper point of the tooth of the saw to be set which is nicely adjusted by the set screw ( $x$ ), then by bearing against the lever ( $w$ ) the tooth is bent against the face of the inclined part of the jaw and set, the lever is then slipped to the next tooth to be acted on, and the process repeated the whole length of the jaw, the saw is then slipped along for a further action of the set and so on to the end. The tooth or stud ( $y$ ) can be changed for another sized one, it being fastened into the lever by a set screw ( $z$ ). Figs. 5 and 6 are mere modifications of the same machine to adapt it to the circular saw; as the changes are perfectly obvious no detailed description of them is deemed necessary.

What I claim as my invention and desire to secure by Letters Patent is—

1. Constructing a saw set in the manner described by having one jaw raised above

the other and beveled on the face, with a rib behind as described, by which the teeth are set by a toothed lever that hooks over said rib and brings the tooth against the teeth of the saw, as above specified,—the width of the set of the teeth being determined by the gage, substantially in the manner and for the purpose set forth.

2. I also claim the filing apparatus, constructed substantially as herein made known, consisting of a file holder consisting of a standard that slides parallel in front of the jaws of the clamp to which the file is so attached as to have a free motion horizontally in any direction to which it is set and so regulated as to file to any given depth the holder is set for so that it will direct the file to the proper angle and depth on the saw, in the manner and for the purpose above specified.

CHARLES LAFFERTEY.

Witnesses:

J. J. GREENOUGH,

A. P. BROWNE.