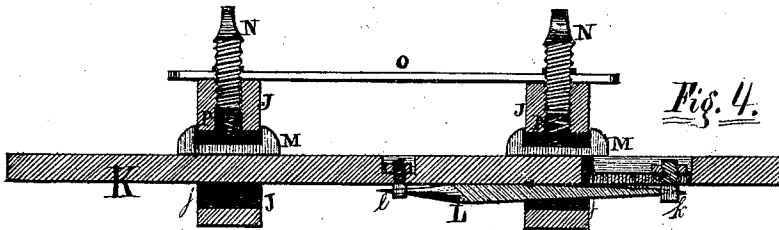


*R. H. Strong,*

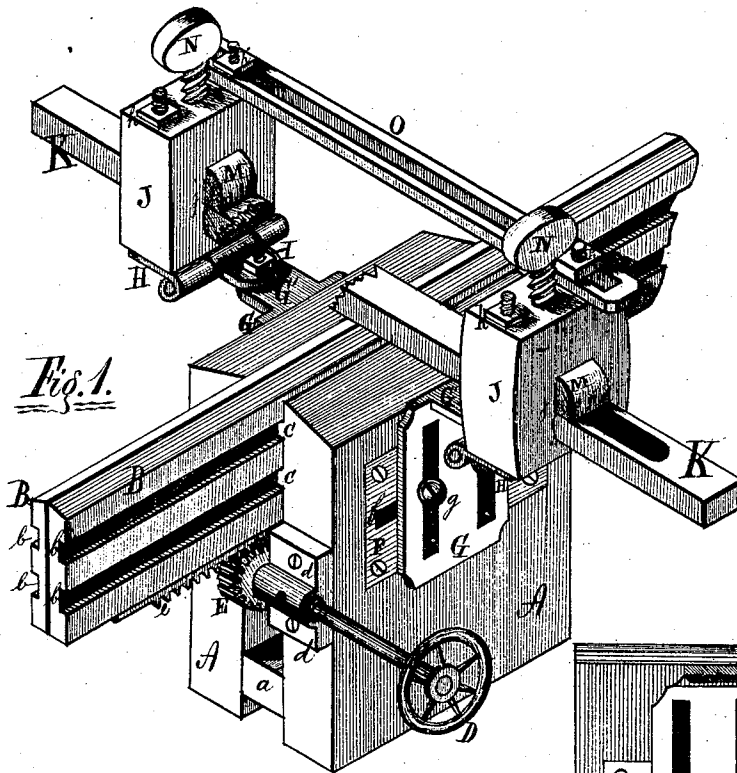
*Saw Sharener.*

*No. 101,938.*

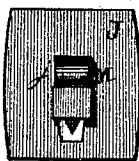
*Patented Apr. 12. 1870.*



*Fig. 4.*

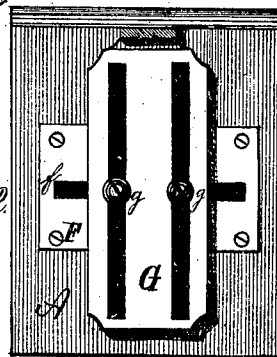


*Fig. 1.*



*Fig. 3.*

*Fig. 2.*



Witnesses:

*H. C. Walker*  
*Platt R. Richards*

Inventor

*R. H. Strong*  
*W. T. D. Richards, Atty.*

# United States Patent Office.

R. H. STRONG, OF GALESBURG, ILLINOIS, ASSIGNOR TO HIMSELF; J. F. BOYD, AND E. F. GREENE, OF SAME PLACE.

Letters Patent No. 101,938, dated April 12, 1870.

## IMPROVEMENT IN SAW-FILING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

I, R. H. STRONG, of Galesburg, in the county of Knox and State of Illinois, have invented certain Improvements in Saw-Filing Machines, of which the following is a specification.

### *Nature and Objects of the Invention.*

The nature of my invention relates to saw-filing machines; and

The invention consists in jaws with tongues corresponding with grooves on the clamps for holding the saw, the clamps sliding freely between the jaws, and being operated by a pinion and rack.

On each side of the jaws, plates are arranged containing slots and screws, by which they may be adjusted independently, laterally, or vertically.

These plates carry blocks hinged to them, through which the handle carrying the file is operated, and by means of the plates, slots, and bolts, the angle of the file with the saw-clamps may be adjusted either vertically or laterally, as desired.

Thumb-screws pass down through the blocks, through which the handle operates, and their lower end rests on spiral springs, the springs, in turn, resting on gibs or keys through the blocks, and on the handle serving to adjust the pressure on the file.

A slotted bar extends from one block to the other, for the purpose of steadying them, all substantially as hereinafter described.

### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view of a machine embodying my invention, with a part of the file-holder or handle shown broken away.

Figure 2 is an elevation showing the jaw A, fig. 1, and the plates on the same.

Figure 3 is an elevation showing one of the blocks through which the file-holder passes.

Figure 4 is a vertical sectional view of the upper part of fig. 1.

### *General Description.*

A A are jaws, connected at their lower end by the block a.

B B are the clamps, between which the saw is held, and are provided with grooves b b, which run on the tongue C on the aforesaid clamps.

B is a hand-wheel, the shaft of which has a bearing, d, on one of the jaws, A, and carries a pinion, E, engaging with a rack, e, on the lower side of the clamps B, and by which the clamps B B may be adjusted longitudinally, as desired.

F is a metal plate, of which there is one secured to each jaw A, and having a slot, f, through it.

G G are plates, with two slots transversely with the slot f.

g g are bolts, with nuts on their ends, against the inside or back side of the plate F.

The plates G have tongues or projections, G' G', at their upper ends, to which the hinges H H are pivoted by the bolts I I.

J J are blocks with holes, j j, through them, and are secured to hinges H H by the bolts h h.

K is the file-holder or handle, to which the file L is secured, on the under side, by means of a small eye-bolt, l, into which the heel of the file is passed, the bolt passing partly through the file-holder and entering a nut seated in a recess in the upper side of the file-holder K.

The point of the file is secured by a bolt, k, and nut, the bolt passing up through a slot in the holder K, which slot is enlarged in the upper part to form a seat or shoulder for the nut to bear against.

The holder K is passed through the holes j' j, which holes have a slight extension, as shown at fig. 3, in the lower side, where the file may freely pass through, the holder being held from pressing the file against the lower part of the holes in the block J, by resting on the projections produced by the enlarged hole.

M M are gibs or fixed keys with heads on each end, their flat sides resting on the holder K, where it passes through the blocks J J.

N N are thumb-screws, and

P P are spiral springs seated between the lower end of the screws N and the gibs M.

O is a slotted bar, extending from one of the blocks J to the other, and receiving the bolts k' k'.

The manner of operating my invention is as follows:

The jaws A may be bolted together or may be held in a vise.

The saw is placed between the clamps B, and may be moved as desired by means of the hand-wheel D.

The pitch of the file L, or its inclination vertically, may be regulated by moving the plates G, up or down on the bolts g, and the bevel on the saw-tooth, or the inclinations of the file laterally, may be regulated by sliding the plates G and the bolts g along the slot f in the plate F. In either case when the desired position is secured, the bolts g may be tightened up and the position retained, the hinge H and the pivot I allowing the blocks J to always adjust themselves to the free movement of the holder K when the relative angle of the holder with the saw-blade is changed in either direction by moving the plates G.

By means of the thumb-screws N the pressure on the file may be regulated, and the spiral spring P will accommodate the enlarged size of the file at the

heel end, and keep the file to the saw-blade, while the small end or point is passing over.

By tightening the nuts on the bolts *h'*, the bar *o* will aid in holding the blocks *J* steady.

The sense of feeling may be used in this machine, as in hand-filing, while, by means of the different devices described, the exact angle desired may be given to all the teeth by a person not capable of filing a saw true in the ordinary way.

*Claims.*

I claim as my invention—

1. The combination and arrangement of the jaws *A A*, clamps *B B*, hand-wheel *D*, pinion *E*, and rack

*e*, with the plates *G* and *F*, slotted as described, bolts *g*, hinges *H*, and bolts *I*, substantially as described and for the purpose set forth.

2. The combination of the file-holder *K*, blocks *J*, gibs *M*, spiral spring *P*, thumb-screw *N*, bolts *h h'*, and bar *o*, substantially as described, and for the purpose set forth.

3. The arrangement of the plates *F* and *G*, and bolts *g*, as and for the purpose described.

R. H. STRONG.

Witnesses:

PLATT R. RICHARDS,  
J. B. HARSH.