(No Model.)

G. MORRISON.

SAW FILING DEVICE.

No. 455,727. Patented July 7, 1891.

FIG. 1.

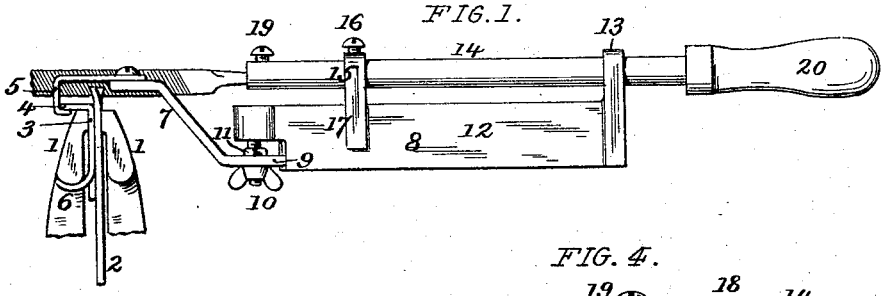


FIG. 4.

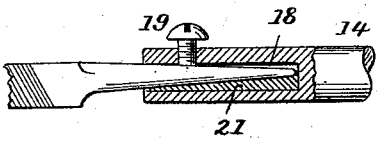


FIG. 2.

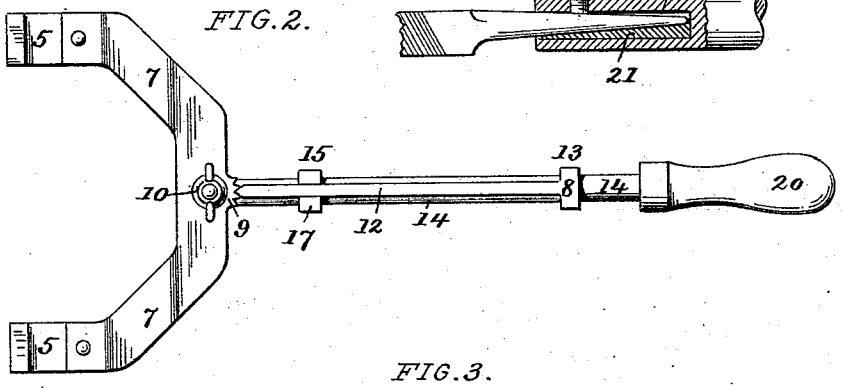
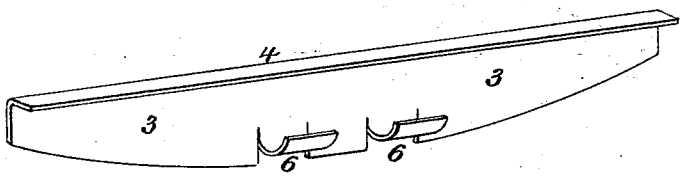


FIG. 3.



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UNITED STATES PATENT OFFICE.

GEORGE MORRISON, OF CHICAGO, ILLINOIS.

SAW-FILING DEVICE.

SPECIFICATION forming part of Letters Patent No. 455,727, dated July 7, 1891.

Application filed October 2, 1890. Serial No. 366,893. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MORRISON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Saw-Filing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for filing saws, the object of the present improvement being to provide a hand-machine for filing hand-saws, band-saws, and the like, embodying the features of a convenient and accurate guide for the file-carriage as it moves from tooth to tooth of the saw, a ready and simple means for adjusting the file, so as to give any desired undercut to the saw-teeth, combined with a simple and effective means for attaching or holding the different forms and sizes of file-tangs met with in the different uses of the machine. I attain such object by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved machine; Fig. 2, a bottom plan of the same; Fig. 3, a perspective view of the slide or guide for file-holder carriage; Fig. 4, an enlarged detail section of the file-holder.

Similar letters of reference indicate like parts in the several views.

Referring to the drawings, 1 represents the upper ends of the jaws of a saw-holding vise between which the saw 2 is clamped in the usual manner and by any suitable means.

In the present invention the guide or slide for the file-holder carriage consists of a flanged plate 3, of the required length, the vertical portion of which fits between the jaws of the saw-holding vise, and is clamped and held in place by the saw-clamping operation, the overhanging horizontal flange 4 forming the guide or slide that is engaged by the hook-shaped prongs 5 of the carriage.

6 are curved prongs or lap-pieces on the guide-plate 3, that engage under the horns of the vice-jaws at each side of the vertical member of the vise-jaw.

The carriage consists of a forward portion 7, and a carriage portion proper 8, in which the file-holder slides. The forward portion at one end carries the hook-shaped prongs 5, and at the other end, which is suitably depressed, as shown, is provided with a notched sector 9, in which the beveled forward end of carriage portion 8 is engaged at the required angle. The portions 7 and 8 are adjustably connected together, so as to regulate the depth of the cut made by the file by means of a screw-threaded stud projecting down from the portion 8 and passing through the part 7, thumb-nut 10, and lock-nut 11, being provided to lock the parts at the required adjustment.

The carriage portion proper consists of a main plate member 12, having at its rear an upwardly-projecting guide-head 13, through which the cylindrical file-holder 14 slides and is guided in its movement.

The sliding file-holder 14 is made of a cylindrical form, so as to admit of its being turned in its guide-collar 15 to adjust the file to cut any desired form of saw-tooth, either straight or undercut, a set-screw 16 being used to secure it at its desired adjustment. The guide-collar 15 moves with the file-holder, and is provided with a forked extension 17, that straddles the plate member 12, as shown, to guide the file-holder and prevent any turning of the same.

At its forward end the file-holder is provided with an orifice or socket 18, for the reception of the file-tang, and a set-screw 19 for holding the same in position. 20 is a handle at the rear end of the file-holder for operating the same, and in the present invention 21 is a bearing jaw or support of soft or ductile metal inserted opposite to the set-screw, so that in clamping the file in place the tang thereof will embed itself in the soft metal and by this means be held in a very strong and perfect manner. An important advantage resulting from the use of the soft-metal support 21 is that any of the various forms of file-tangs met with in the market can be held in a very perfect and efficient manner.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a saw-filing machine, the combination, with the jaws of the saw-holding vise, of the

flanged guide-plate 3, arranged between the vise-jaws so as to be clamped in position between the same, and the file-holder carriage provided with hook-shaped prongs 5, that engage the horizontal flange of said guide-plate, substantially as set forth.

2. In a saw-filing machine, the combination, with the jaws of the saw-holding vise, of the flanged guide-plate 3, arranged between the vise-jaws so as to be clamped in position between the same, and having curved prongs or lap-pieces 6, that engage the horns of the vise-jaw, so as to prevent any tendency to an endwise movement of said guide-plate, and the file-holder carriage provided with hook-shaped prongs 5, that engage the horizontal flange of said guide-plate, substantially as set forth.

3. In a saw-filing machine, the combination, with the jaws of the saw-holding vise, of the flanged guide-plate 3, arranged between the vise-jaws so as to be clamped in position between the same, the file-holder carriage formed in two parts 7 and 8, pivoted together and provided at their pivot-point with a notched sector 9 to secure the parts at the desired angle, the screw-threaded stud, the thumb-nut 10, lock-nut 11, and hook-shaped prongs at the forward end of the carriage engaging the horizontal flange of the guide-plate 3, substantially as set forth.

4. In a saw-filing machine, the file-holder carriage formed with a guide-head 13 at its rear end, in combination with the file-holder 14, made of a cylindrical form, so that it may be turned to adjust the file, and the guide-collar 15, having a set-screw 16 and a forked extension 17, that straddles the plate member 12 of the carriage, substantially as set forth.

5. In a saw-filing machine, the combination, with the file-holder carriage and guide-plate 3, essentially as herein set forth, of the file-holder 14, having at its forward end a socket 18 and set-screw 19, and the bearing jaw or support 21, of soft or ductile metal, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE MORRISON.

Witnesses:
ROBERT BURNS,
GEO. H. ARTHUR.