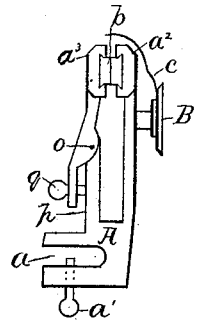
(No Model.)

J. W. GIBSON & C. C. HARRIS.

SAW FILING MACHINE.

No. 346,541. Patented Aug. 3, 1886.

Fig 2



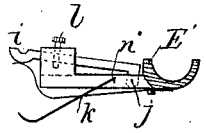
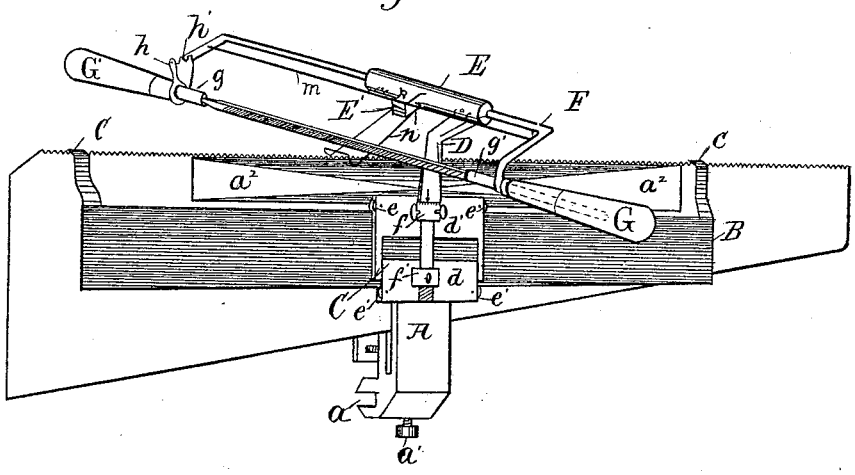


Fig 3

Fig 1



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UNITED STATES PATENT OFFICE.

JOHN W. GIBSON AND CARLETON C. HARRIS, OF DENVER, COLORADO.

SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 346,541, dated August 3, 1886.

Application filed May 21, 1886. Serial No. 202,856. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. GIBSON and CARLETON C. HARRIS, citizens of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented a new and useful Saw-Filing Machine, of which the following is a specification.

Our invention relates to improvements in saw-filing machines, in which the file is held and guided by adjustable frame-work attached to a suitable vise for holding it, and which holds the saw to be filed; and the objects of our invention are to provide a cheap and efficient machine for the purpose of filing saws. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the entire machine, showing a saw-blade in position, ready to be filed. Fig. 2 is an end view of the vise and the track-plate. Fig. 3 is a side view of the lifter and depth-guide.

Similar letters refer to similar parts throughout the several views.

The opening *a* in the vise A is to receive the edge of the bench, and is fastened thereto by the thumb-screw *a'*. The jaws of the vise A are provided with rubber linings, *b*, which are cemented into the jaws a^2 and a^3, between which the saw is held. The jaw a^3 is pivoted at *o* to the arm *p*. Through the lower end of a^3 is a thumb-screw, *q*, which presses the lower end out and the upper end of jaw a^3 in against the side of the saw.

c c are guides which regulate the height to which the saw is placed in the vise, in order that the mechanism holding the file may work properly, and they are attached to the track-plate B by rivets.

The carriage C is composed of two pieces, *d* and *d'*. *d'* has two grooved wheels, *e e*, pivoted to the inside of its upper corners, which run on the upper edge of the track-plate B. *d* has also two wheels of the same kind as *d'*, pivoted to the inside of its lower corners, (marked *e' e'*,) which run on the under side of the track-plate B. These pieces *d* and *d'* have on their outsides bearings *f* and *f'*, through which the standard D passes, and which has a shoulder (marked with an arrow) above the bearing *f*. Beneath the bearing *f'* a spiral spring is placed on the standard D and held by a nut or pin. This spring acts as a shoulder and it presses *d* up and pulls down on the standard D, which action holds the carriage on the track-plate, on which it may be moved from end to end. In the bearings *f* and *f'* are thumb-screws with which the standard may be held at any point desired.

The standard D is a projection from the lower half of the bearing E, which holds the file-frame F, and through which it slides from end to end, the bearing E having a round hole through it and the back of the file-frame being made to fit it nicely.

The file-frame F is formed as shown in Fig. 1, having the handles G and G'. The block *g*, which holds the outer end of the file, is provided with a shoulder which presses against the outer end of the frame F, and has a projection which passes through a hole in the frame, and on this the handle G' is fixed. In the inner end of the frame next the handle G a thread is cut, through which is screwed the threaded portion of the block *g'*, which has only an inch of plain surface, while the threaded portion is of sufficient length to hold a file of the ordinary short lengths when screwed in toward G', and after passing through the frame leave enough to hold the hollow handle G, which holds the threaded portion of the block *g'*, when a long file is held, as shown in dotted lines, Fig. 1. To the block *g* is attached a spring-pawl, *h*, which keeps the file from turning, unless desired, at which time it is pressed toward G, out of a tooth in the guide *h'*, and turned to the desired position, when the pawl *h* is allowed to spring into the tooth in the guide *h'*, which will hold it at that point. The lifter and depth-guide E' is attached to a projection from the under half of the bearing E, as shown in Fig. 3, and consists of a lip, *i*, formed as shown, pivoted at *j* to E', and working between two upright sides on E', which lip is raised by the spring *k*, and the distance of its descent is gaged by the set-screw *l*, which passes through *i*, and prevents it from going past any desired point. On the lip *i* rests the rod *m*, which is attached to the frame. The spring lifts the lip *i*, which lifts the rod *m*, which in turn raises the frame, file, &., on the back-stroke, and prevents the file from wear-

ing out. The set-screw prevents the file from cutting too deep, in the manner described.

The guide *n* is constructed of a steel wire, pivoted at *n'* to E', and is used in making new teeth on a saw-plate, in the following manner: A saw-plate is placed in position, two teeth are formed on its edge, into the cavity between which the lower end of the guide *n* is placed, which will indicate where the carriage is to rest while the next tooth is formed, and so on throughout the entire length of the plate.

Having now fully described our invention, what we claim, and desire to secure by Letters Patent, is—

In a saw-filing machine, the combination of the frame F, the bearing E, with its standard D, and lifter, the depth-guide E', the carriage *c*, the track-plate B, the vise A, with rubber jaws, and the guide *n*, substantially as shown and described, and for the purpose set forth.

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Witnesses:
MARK KEENEY, Jr.,
C. C. WILSON.