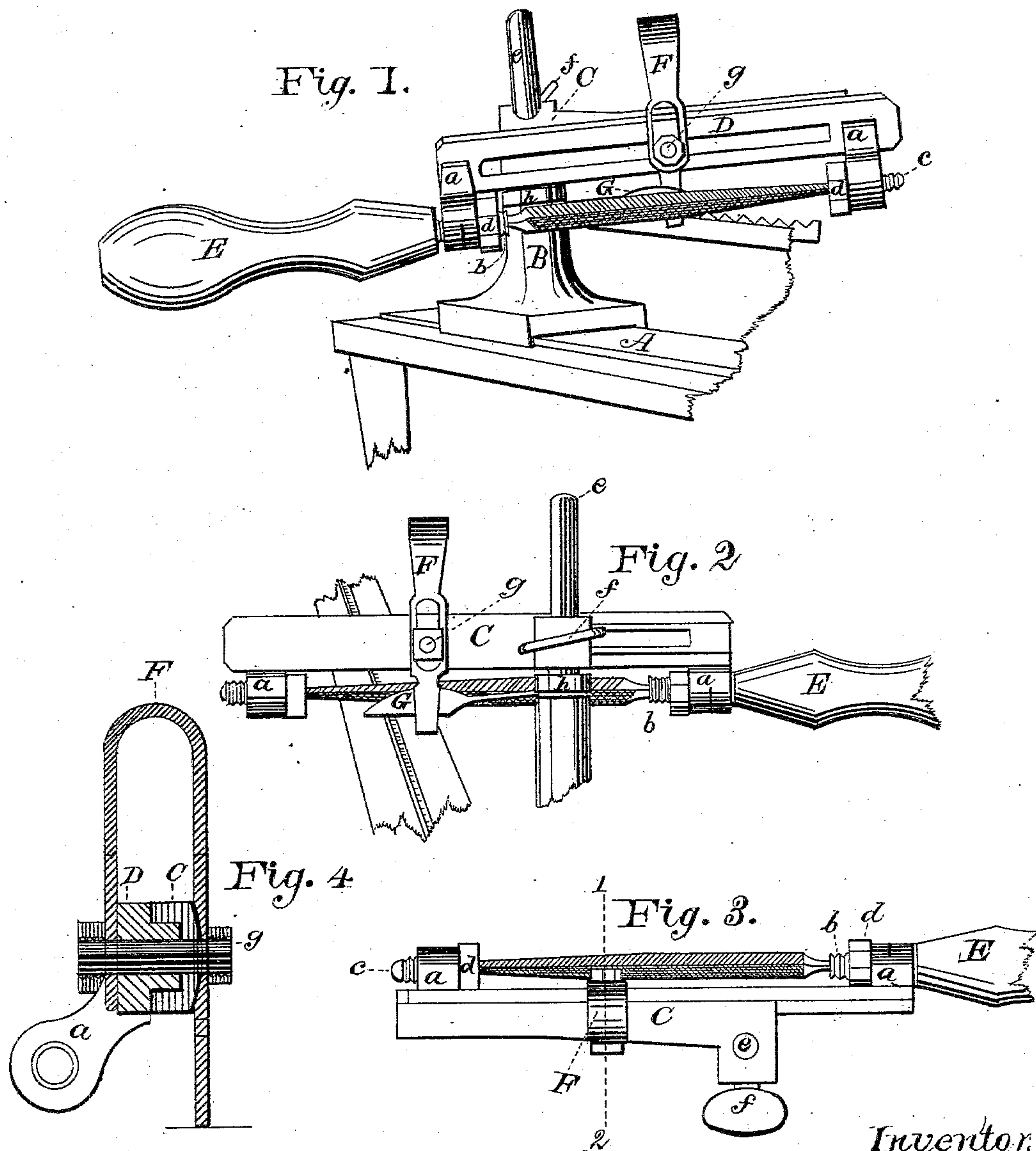


(No Model.)

C. F. HILL.
SAW FILING MACHINE.

No. 283,393.

Patented Aug. 21, 1883.



Witnesses:

Chat Mudge
John C. Tanner

Inventor.

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per

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UNITED STATES PATENT OFFICE.

CHARLES F. HILL, OF PHELPS, NEW YORK.

SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 283,393, dated August 21, 1883.

Application filed November 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HILL, a citizen of the United States, residing at Phelps, in the county of Ontario and State of New York, have invented a new and useful Saw-Filing Machine, of which the following is a specification.

My invention relates to improvements in saw-filing machines in which the file is adjustable, and the objects of my improvements are, first, to afford facilities for the ready adjustment of the file to any pitch of teeth or angle required; second, to provide means for accurately gaging the distance and depth of cut between teeth, which is particularly necessary in recutting old and worn saws; and, third, to facilitate the work by easing up the file on the backward stroke, and to render the device operative with equal facility by left as well as by right handed persons. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the entire machine; Fig. 2, a perspective view of the obverse side of Fig. 1; Fig. 3, a top view of the same; and Fig. 4, a vertical section of a part of the machine on the line 1 2, Fig. 3.

Similar letters refer to similar parts throughout the several views.

On a bench provided with movable jaws, in which the saw is secured, is laid a plate or track, A, parallel to the line of the saw, over which track rides an upright grooved standard, B, carrying a horizontal adjustable beam, C, grooved its entire length to receive the tongued sliding frame D, which has hangers *a* at both ends, through which pass threaded bolts *b* *c*, provided with nuts *d* *d*.

To one end of the threaded bolt *b* is secured a handle, E, the other end of said bolt being bored out sufficiently to allow of the introduction of the smaller or handle end of an ordinary three-cornered saw-file, the corresponding end of the bolt *c* having a similar opening for the reception of the other end of the file. The most accurate adjustment of the file can be secured by the manipulation of the nuts *d* *d* and the swinging of the horizontal adjustable beam C on the shaft *e* of the standard B, and securing the same in the desired position by the thumb-screw *f*. A bent slotted plate F straddles the beam C and the sliding frame D,

and holds the latter in position by means of a threaded bolt, *g*, and acts as a stop to the length of the stroke of the file, the frame D being slotted almost its entire length, as shown in Fig. 1. One end of the plate F terminates in a leg, which rests on one of the jaws which secures the saw, and regulates the depth of cut by being raised or lowered, and secured in the desired position by means of the threaded bolt *g* and its accompanying nuts.

The gaging of the distances between teeth is accomplished by means of the adjustable spring-gage G, through one end of which is a hole corresponding to the circumference of the shaft *e*, previously referred to, being secured in the desired position by a nut, *h*, the shaft being threaded at that point for the purpose. The spring-gage G is turned for about half its length, so as to present a knife-edge, which fits into the spaces between the teeth of the saw, and when in use occupies a position between the leg of the bent slotted plate F and the file. The distance between the file and the gage determines the dimensions of the base of the tooth. It is plain to be seen that when the first cut is made and the file is shifted to make the next cut the gage, taking the place just vacated by the file, both being secured at a previously determined distance apart, must of necessity space the distance between said gage and file at each succeeding shift to completion. Both gage and file, being adjustably attached to the standard B, move with the said standard as it slides along the track A, which it does at the completion of each tooth. The file does not touch the work until the downward pressure necessary to propel the said file is applied, which pressure also causes a slight tilting of the entire machine toward the saw, when the spring-gage G, being at this juncture the only impinging point, gives until stopped by the leg of the bent plate F striking the jaw below when the determined depth of cut is reached, as previously described, and on the removal of pressure from the handle of the file reacts and throws up the tool on the backward stroke.

While I do not confine myself to stationary hangers in which to secure the tool in use, I prefer that method as being at present the best adapted for the purposes for which my machines are constructed.

I am aware that prior to my invention saw-filing machines have been made with adjustable files. I therefore do not claim that feature, broadly; but

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

1. The combination, in a saw-filing machine, of a grooved standard, B, adapted to a track or plate, A, the swinging adjustable beam C, with a slotted sliding frame, D, having hang- 10 ers *a a*, hollow threaded bolts *b*, screw-bolt *c*, and nuts *d d*, substantially as shown, for the purpose specified.

2. The combination, with the beam C and frame D, of the bent slotted plate F, adjustable by means of a threaded bolt, *g*, and nut, and having terminal leg, substantially as set forth. 15

3. The adjustable spring-gage G, attached to the threaded shaft *e* and secured by the nut 20 *h*, as shown, for the purpose specified.

CHARLES F. HILL.

Witnesses:

CHAS. MUDGE,

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