

(No Model.)

W. HILL.
SAW FILING MACHINE.

No. 308,670.

Patented Dec. 2, 1884.

Fig. 1.

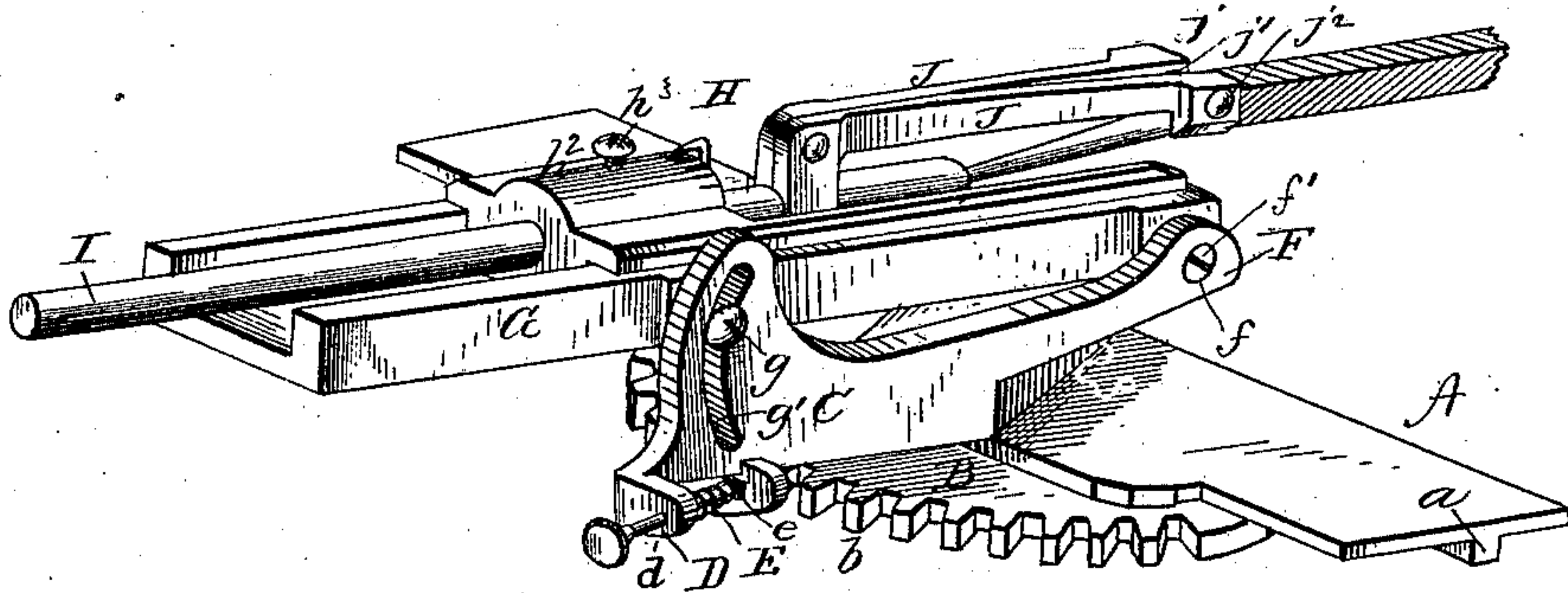


Fig. 2.

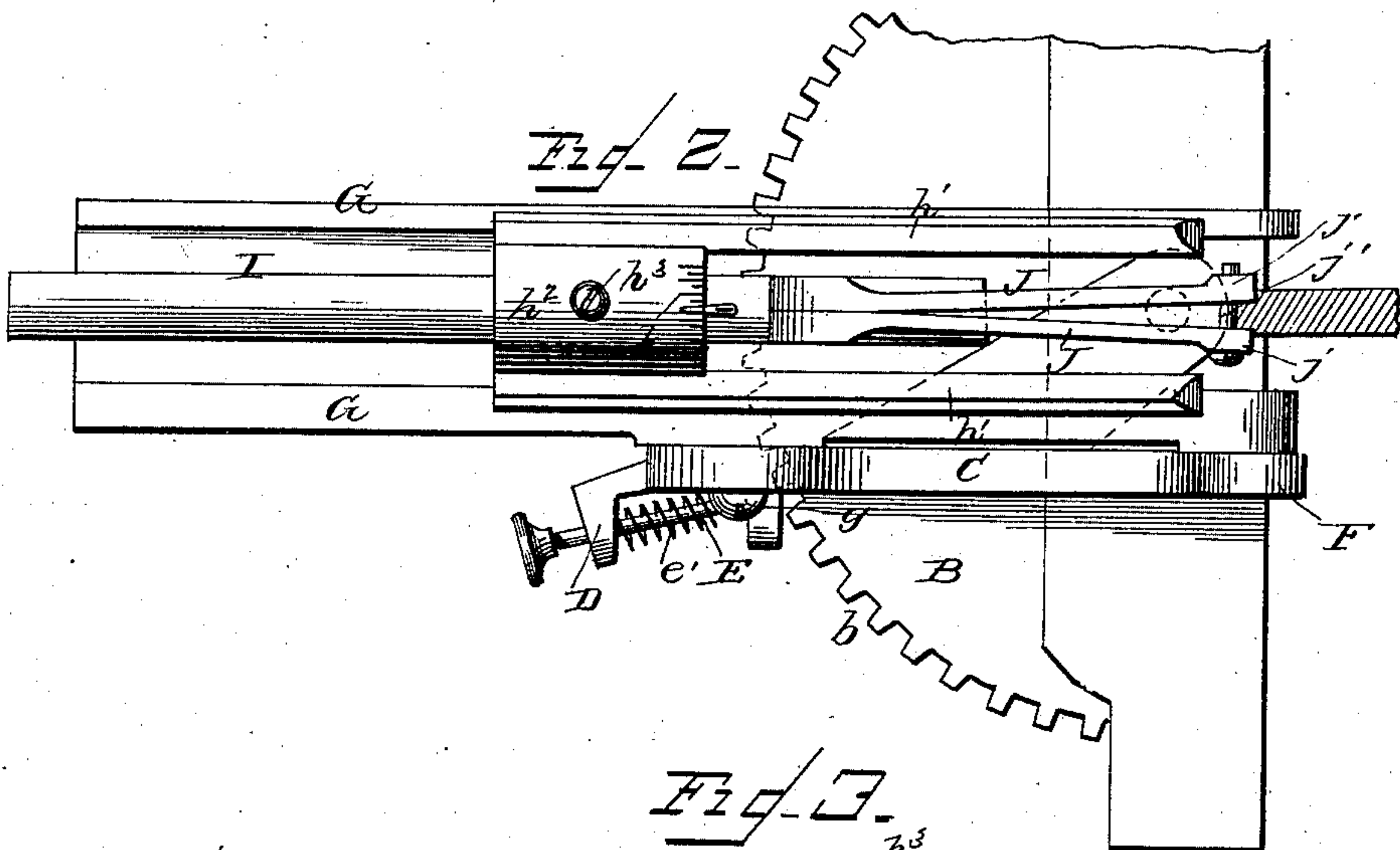


Fig. 3.

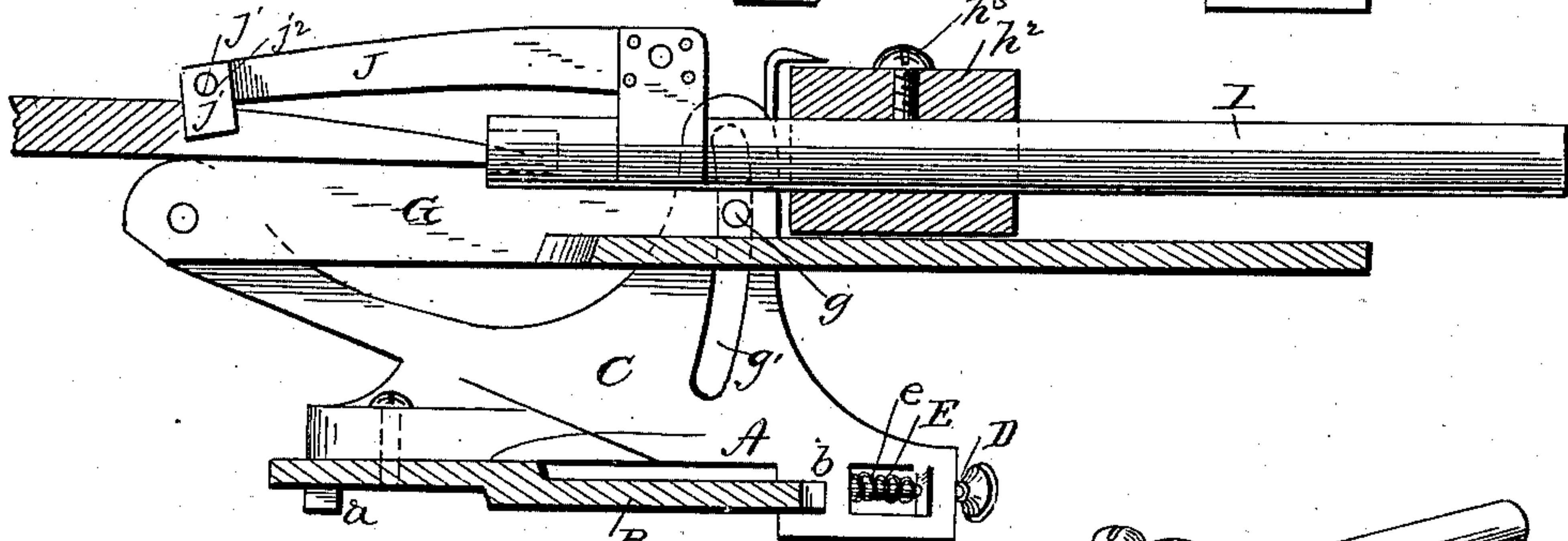
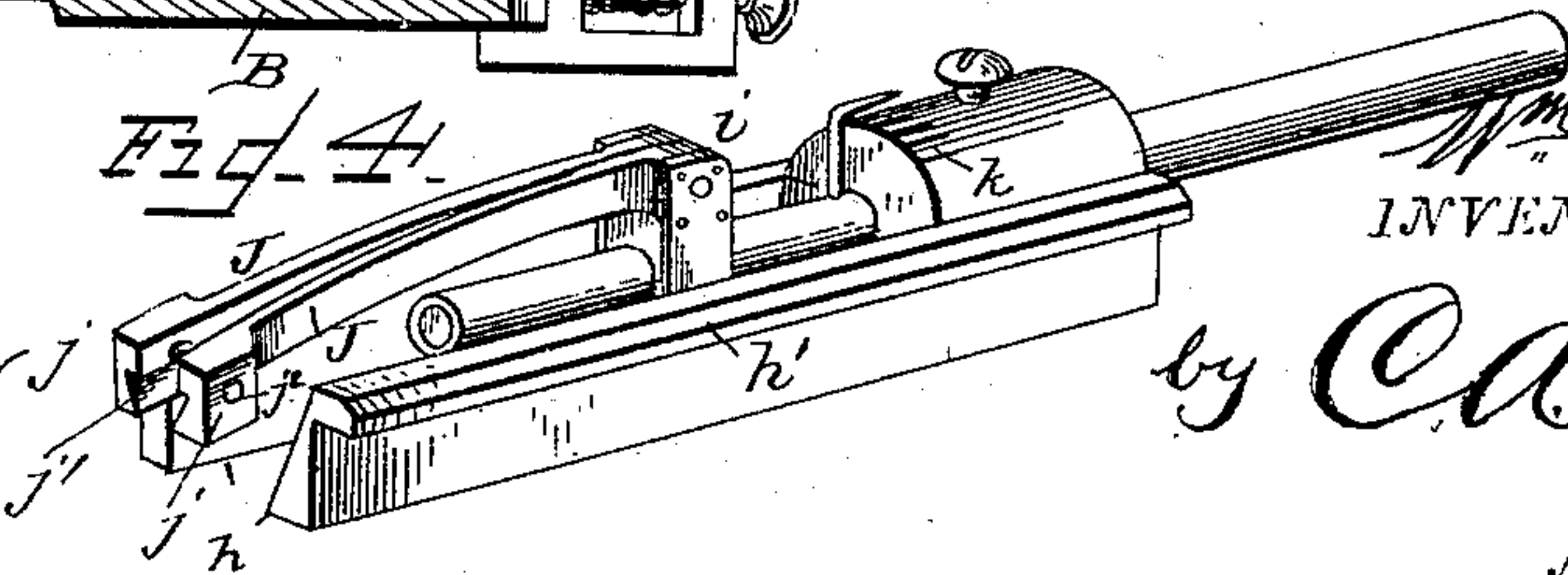


Fig. 4.

WITNESSES
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WILLIAM HILL, OF MOUNT VERNON, ILLINOIS.

SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 308,670, dated December 2, 1884.

Application filed March 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HILL, a citizen of the United States, residing at Mount Vernon, in the county of Jefferson and State of Illinois, have invented a new and useful Saw-Filing Machine, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a device for filing hand and other saws; and it has for its object to provide a device of this character which shall be simple in its construction and effective in its operation.

A further object of the invention is to provide an improved track or guide for the file and a clamping device for holding the same, whereby the file may be adjusted at any angle.

A further object of the invention is to provide improved means whereby the frame carrying the file may be adjusted to bevel the teeth.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal vertical section through the file-guide. Fig. 4 is a perspective view of the guide carrying the file.

In the accompanying drawings, in which like letters refer to corresponding parts in the several figures, A represents a base or plate which is constructed of metal and provided on its under side with ribs *a*, which are adapted to engage with corresponding grooves in the saw-clamp when the device is placed in position for operation. Upon the rear side of this base A is provided a segmental plate, B, which is provided with a series of teeth, *b*.

At about the center of this plate or base A is pivoted a frame or casting, C, which is provided at its lower rear end with a depending bracket, D, having openings *d*, in which is mounted a bar or rod, E, having a squared head, *e*, to engage the teeth *b* of the segmental rack-plate B. This bar or rod is held in engagement with said teeth by means of a coil-spring, *e'*, mounted upon said rod between the loops of the depending bracket and bearing against the squared head of the said rod E. Upon the forward end of this frame or

casting C is provided an outwardly-extending arm, F, provided at its extremity with a perforation, *f*, through which passes a screw, *f'*, upon the end of which is pivotally secured the track or guide in which the file-carrier works. This guide G is provided on its inner side adjacent to the casting C with a set-screw, *g*, which works in a slot, *g'*, formed in said casting, whereby the file-guide G may be vertically adjusted the length of said slot and secured at any point thereon by tightening the said set-screw.

H represents the devices for holding the file, the same consisting of the side portions *h*, having flanges *h'* at their upper ends, which flanges rest upon the upper edges of the guide G and the lower ends or edges of the sides *h*, which rest upon the bottom of the guide-frame G.

At the forward end of the side portions *h* is provided a tubular portion, *h*², having a screw-threaded opening in its upper face, in which is seated a set-screw, *h*³.

I represents a rod or handle for sliding or operating the file-carrier, and which passes through the tubular portion *h*², and is held rigidly therein by means of the set-screw *h*³.

Upon the forward end of the sliding rod I is provided a loop, *i*, which encircles the same. To the upper ends of this loop, and between the same, are secured two arms, J, which are provided at their forward ends with clamping portions *j* to receive the file, which is held rigidly therein by means of a set-screw, *j'*, passing through screw-threaded openings *j*² in the ends of the same. The forward end of the sliding rod I is made hollow or recessed, and in said recess is a plug of cork, wood, or other material, in which the end of the file is inserted.

Upon the upper face of the tubular portion *h*² are graduated marks *k*, and upon the sliding rod is provided an indicator or bent arm, whereby upon loosening the set-screw in the upper side of the tubular portion the sliding rod may be adjusted at any point desired.

The operation of the device as above described is as follows: The saw-clamp for holding the saw while it is being sharpened is provided with grooves *x* and *z*, for the reception of the outer edge of the plate or base A and the ribs upon the under side thereof. The

saw is placed between the clamp and the saw-guide vertically adjusted by means of the set-screw which works in the slot formed on the side of the casting C, and the said casting C, which carries the file-guide, is adjusted to the desired angle by means of the segmental rack and the spring-pressed rod which engages the same. The sliding rod carrying the file may then be turned or adjusted by means of the set-screw of the tubular portion so as to bring the edge of the file at the desired angle, in order that the extremity between the teeth may be sharpened or made deeper.

It will be seen from the above description that in sharpening saws the file may be adjusted to sharpen the sides of the edges of the same, to make the recess or cavity between the teeth deeper, and that the arms holding the file may be adjusted for the reception of files of various sizes. It will also be seen that the device may be readily attached to or detached from the clamp holding the saw in position while being sharpened.

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

1. In a saw-filing machine, the combination, with a base-plate provided on its under side with ribs, and having a segmental rack-plate, of a frame, C, pivoted to said base, a file-carrier guide-frame pivoted to said frame C, said guide-frame being adapted to be vertically adjusted on the frame C, and a file-carrier, substantially as set forth.

2. The combination, with a suitable base-plate provided on its under side with ribs, and having a segmental rack-plate arranged upon its rear side, of a frame pivoted thereto, a spring-pressed rod to engage said rack-plate, a file-carrier frame pivoted to the frame C, and a file-carrier, as set forth.

3. The combination, with a suitable base-

plate provided on its under side with ribs, and having a segmental rack-plate, of a pivoted frame having depending brackets in which is mounted a spring-pressed rod, and provided with a vertical slot, a set-screw working in said slot for holding the carrier-frame at any desired vertical adjustment, and the file-carrier guide-frame pivoted to an arm of said frame, substantially as set forth.

4. The herein-described file-carrier, consisting of the flanged tubular portion, a rod mounted in said tubular portion, a rod adjustably secured in said tubular portion, and clamping-arms secured to said rod, and adapted to receive and retain a file, as set forth.

5. The herein-described file-carrier, consisting of the flanged tubular portion, a rod mounted in said tubular portion, and adjustably secured by means of a set-screw, and two forwardly-extending arms provided with clamping portions and a set-screw, to accommodate files of various sizes, substantially as set forth.

6. The herein-described file-carrier, consisting of the tubular portion, a rod adjustably secured in said tubular portion by means of a set-screw, a loop encircling said rod, to the upper ends and between which are secured clamping-arms adjustable at their ends by means of a set-screw, the end of said rod being recessed and provided with a plug of cork, wood, or other suitable material for the reception of the end of the file, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM HILL.

Witnesses:

T. E. WESTCOTT,
WM. S. DAVIS.