

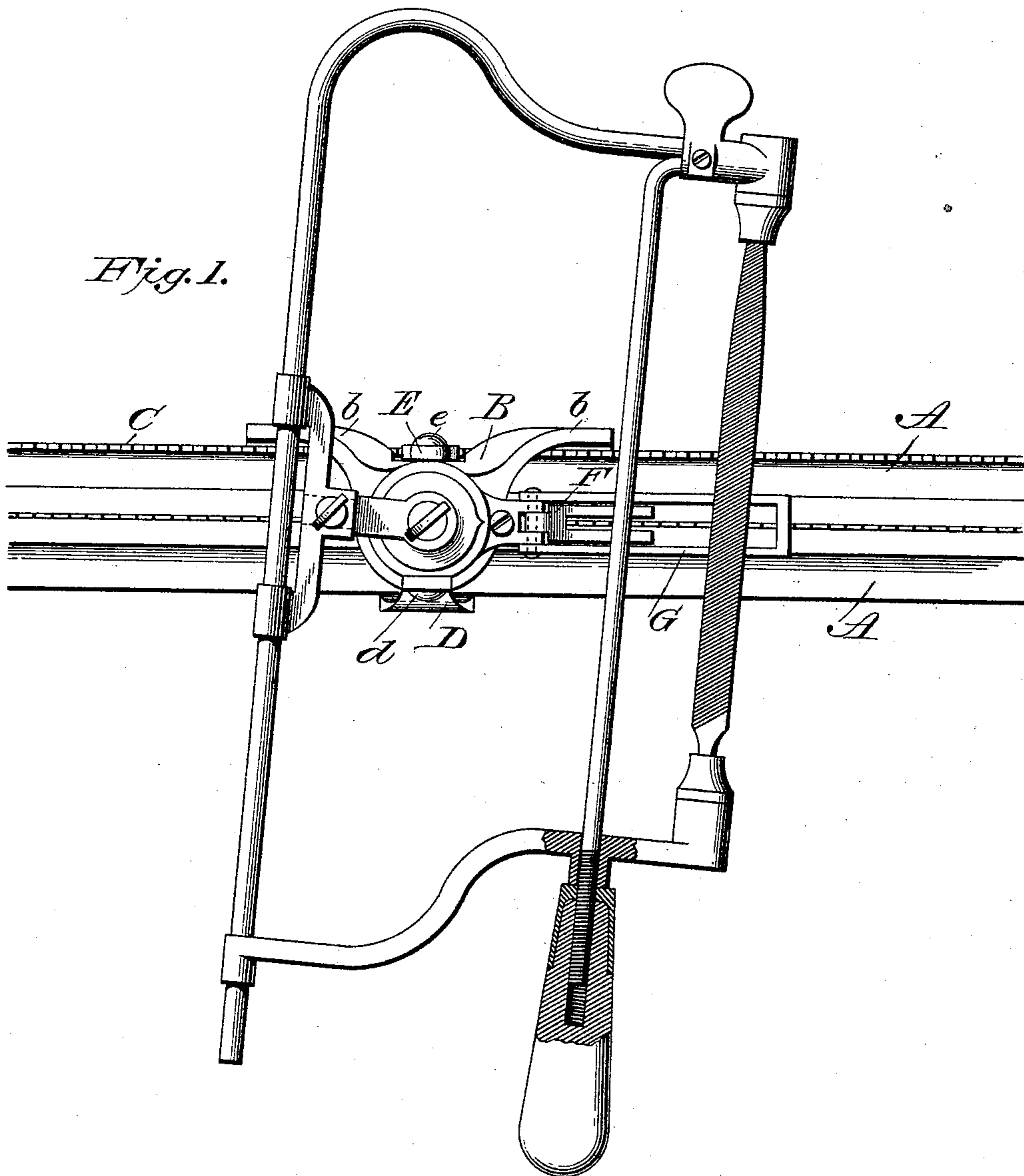
(No Model.)

2 Sheets—Sheet 1.

J. H. DIEHL.  
SAW FILING MACHINE.

No. 495,400.

Patented Apr. 11, 1893.



*John H. Diehl.*

Inventor

Witnesses

*L. S. Elliott.*  
*E. M. Johnson*

— by

*E. M. Johnson*  
Attorney

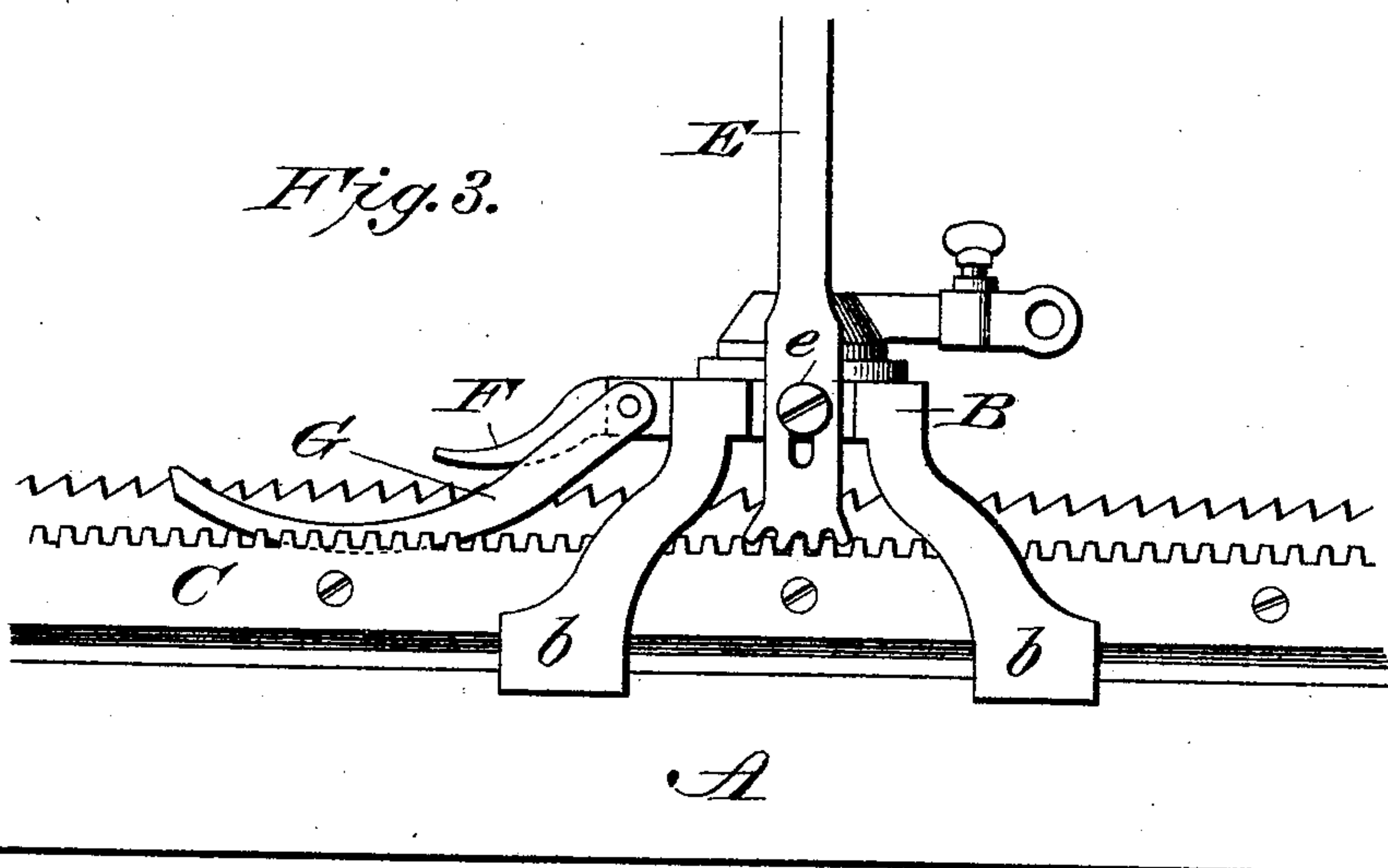
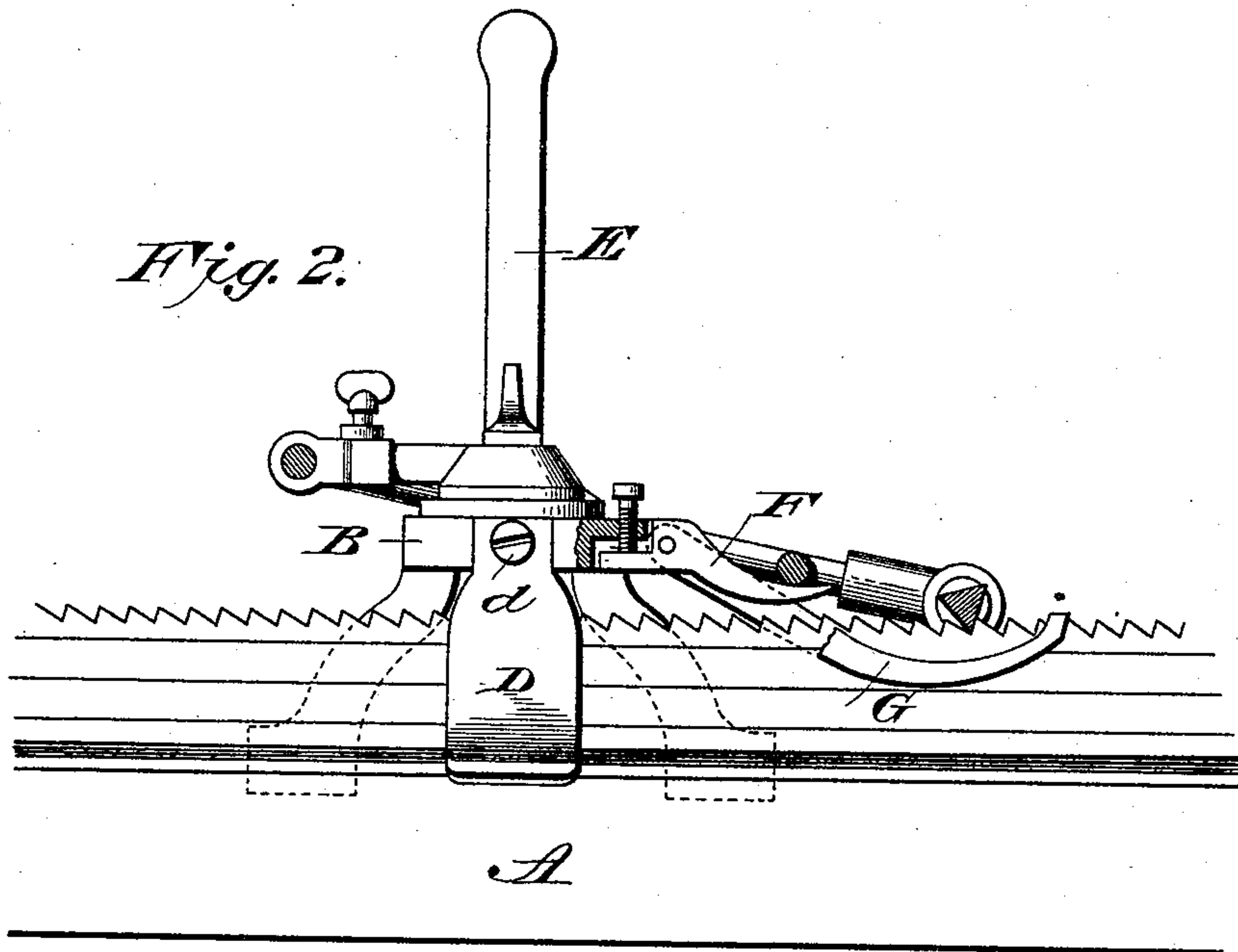
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*A. M. Johnson*

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Inventor

by *[Signature]*  
Attorney



# UNITED STATES PATENT OFFICE.

JOHN H. DIEHL, OF QUEEN CITY, MISSOURI.

## SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,400, dated April 11, 1893.

Application filed November 23, 1892. Serial No. 452,937. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. DIEHL, a citizen of the United States of America, residing at Queen City, in the county of Schuyler and State of Missouri, 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in saw filing machines; the same being designed as an improvement upon my prior patent dated February 2, 1892, No. 468,221; the present invention consisting in the improved means for retaining the carriage upon the frame, and in the construction of said carriage wherein it is provided with an adjustable rest for the file carrying frame and with a catch-bar adapted to engage with the saw-teeth; and the invention further consists in providing the actuating lever with teeth and a slot, whereby said lever is caused to directly engage with the rack-bar on the frame to effect the proper movement of the carriage.

In the accompanying drawings forming part of this specification: Figure 1 is a plan view. Fig. 2 is a side elevation, and Fig. 3 is a view of the other side.

A A designate the side pieces of the clamp, to one of which is rigidly secured the rack-plate C, and with said rack-plate a lever pivoted on the carriage B engages. The carriage is provided on one side with feet *b b* and on the other side with a flat spring plate D; said spring plate being attached to the carriage at its upper end by a set-screw *d*, and bent at its lower end to enter a longitudinal groove or guideway in one side of the clamp-frame. By means of this construction the cost of the carriage is lessened, and the spring has sufficient give to permit said carriage to be applied to clamp-frames of different widths.

E designates a lever which is pivoted to the carriage by a set-screw *e*, which passes through a slot in the lever so that said lever can be moved up and down upon the set-screw; and

the lower end of this lever is provided with a toothed segment adapted to engage with the rack-plate C attached to the clamp-frame. The feet or legs *b* serve as stops to limit the throw of the lever and consequently the movement of the carriage.

F designates an adjustable arm which is pivoted to the carriage and lies immediately above the teeth of the saw, said arm being provided with a set-screw. The outer end of this arm is bifurcated, so that it may be adjusted to locate the upper edge thereof on a line with the saw-teeth, thereby permitting a greater range of adjustment than is secured in my prior patent. The same pivot that carries the arm F also carries a bail or loop G, the outer end or connecting bar of which is beveled to engage with the saw-teeth that have been set or sharpened, and in moving the carriage by the lever E the bail will ride upon the teeth and fall automatically into the next tooth. The file operates or cuts between the end of the bifurcated arm and end of the bail or loop, the side bars of said bail being curved to lie below the plane of the teeth of the saw.

The improvements herein set forth add materially to the simplicity of the machine shown and described in my prior patent, and greatly reduces the cost of manufacture. The file is carried in a frame constructed substantially as shown, and one of the bars of the frame passes through guides which form a part of the carriage while the other cross-bar is adapted to bear upon the adjustable arm F, so that the depth the file will cut is limited by said adjustable arm.

Having thus described my invention, I claim—

1. In a saw-filing machine, the combination of a carriage having feet or legs on one side which are adapted to engage with the clamp-frame, a flat spring D secured to the other side of the carriage, said spring being bent to enter a groove or guideway, substantially as shown.

2. In a saw-filing machine, the combination of a carriage adapted to be mounted on a saw-clamping frame having a rack-plate, of a lever pivotally attached to the carriage, said lever having a longitudinal slot and notched

end which is adapted to engage with the rack-plate, substantially as shown, and for the purpose set forth.

3. The combination in a saw-filing machine,  
5 of a carriage for the purpose set forth, having an adjustable arm F mounted on said carriage the outer end of which is bifurcated and adapted to lie immediately above or embrace the saw-blade, and a file carrying frame mounted  
10 on the carriage and provided with a cross-bar which is adapted to engage with the adjustable arm, for the purpose set forth.

4. In a saw-filing machine, a carriage mounted and held on a clamp-frame by spring pressure, a slotted lever pivoted to the carriage and

adapted to engage with a rack-plate attached to the clamp-frame, a loop G pivoted to the carriage and adapted to engage with the teeth of the saw, and a bifurcated arm pivoted to the same pivot as the loop so that said arm 20 may lie between the side members of the loop, substantially as shown, and for the purpose set forth.

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

JOHN H. DIEHL.

Witnesses:

GEORGE D. GILLILAND,  
BIRNEY DYSART.