S. V. PATTILLO.

SAW-FILING MACHINE.

No. 189,646. Patented April 17, 1877.

Fig: 1.

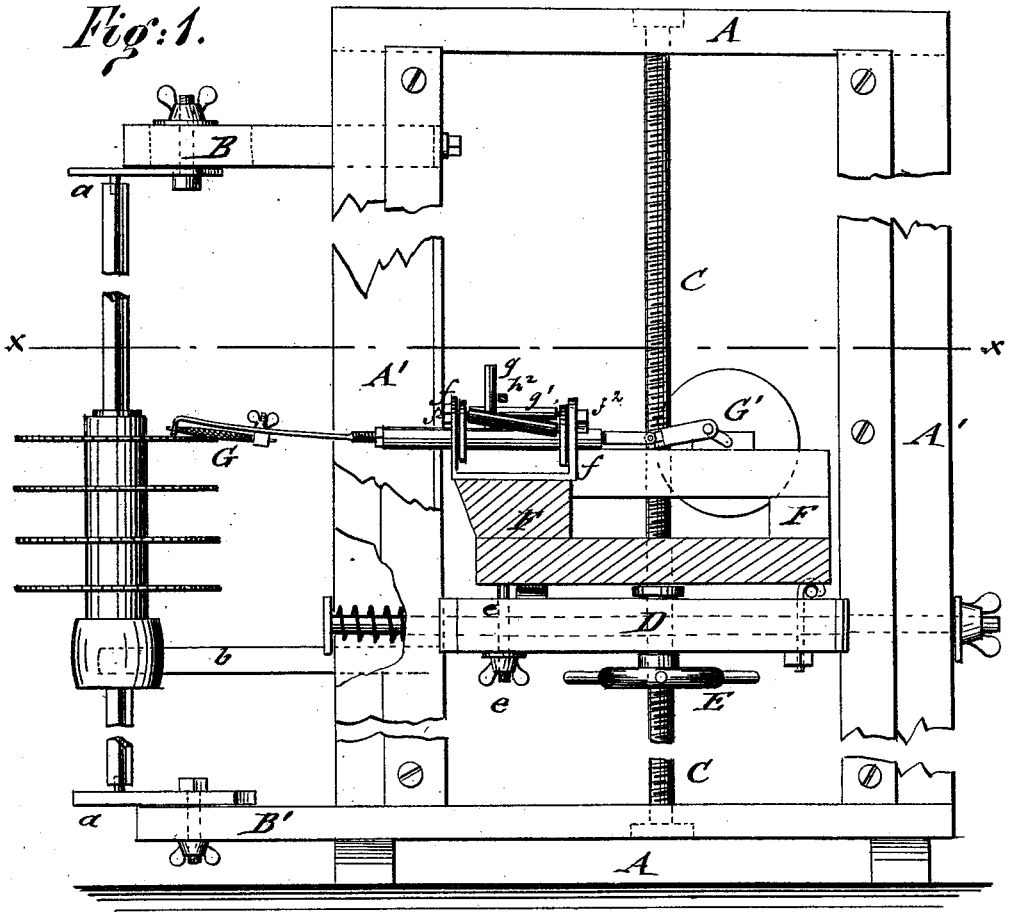


Fig: 2.

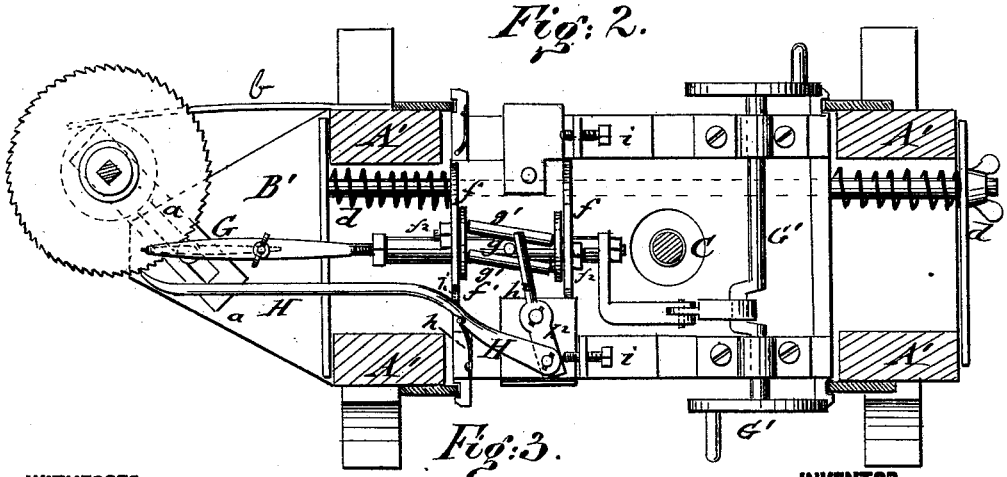
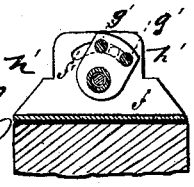


Fig: 3.



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UNITED STATES PATENT OFFICE.

SAMUEL V. PATTILLO, OF GREENVILLE, ALABAMA, ASSIGNOR TO HIMSELF AND FRANK J. KOHN, OF SAME PLACE.

IMPROVEMENT IN SAW-FILING MACHINES.

Specification forming part of Letters Patent No. **189,646**, dated April 17, 1877; application filed February 17, 1877.

To all whom it may concern:

Be it known that I, SAMUEL V. PATTILLO, of Greenville, in the county of Butler and State of Alabama, have invented a new and Improved Gin-Saw-Filing Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional side elevation of my improved machine for filing or sharpening gin-saws. Fig. 2 is a horizontal section of the same on line *x x*, Fig. 1; and Fig. 3 is a detail end view of the spiral guides and driver.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide an improved gin-saw-filing machine by which the gin-saws may be quickly, uniformly, and effectively sharpened.

The invention will first be described in connection with drawing, and then pointed out in claims.

In the drawing, A represents an upright supporting-frame, that guides in recessed uprights A′ the adjustable top bracket B, to which, and to a lower fixed bracket, B′, which carry both slotted and screw-clamped centers *a*, the shaft of the gin-saw cylinder is applied, as shown in Fig. 1. A tension-spring, *b*, bears on the saw-cylinder, to prevent the too easy motion of the same on the centers.

A fixed upright screw-post, C, is arranged centrally between the guide-posts or uprights A′ and a horizontal bed-frame, D, that is guided vertically along the posts, and is moved up or down on the screw-post by a screw hand-wheel, E, that binds by a collar on the top and bottom part of the bed D. When the bed-frame D has arrived at the required height it is secured to the guide-posts by spring-acted clamp-plates and screw-bolts *d*.

On the bed-frame D is supported the frame F, that carries the feeding and filing devices, the frame F being hinged at the rear end, and spring-acted at the front end, to be set higher or lower by a screw bolt and nut, *e*, for the purpose of increasing the pressure of the file on the saw-teeth.

The stock of the file G is worked by a revolving crank-shaft, G′, in lateral guides *f*, a fixed projecting pin, *g*, of the file-stock moving in oblique twisted guides *g′*, to impart simultaneously with the reciprocating motion a slight oblique motion to the file G. The oblique guides *g′* may be adjusted to one side or the other of the axis of the file-stock by means of curved slots f^1 of the guides *f*, and fastening clamp-screw f^2, so that the same degree of spiral motion may be given to the file for right and left hand filing.

The file G is seated in the end of the file-stock, and in a clamp-socket of the same, as shown in Fig. 1. The feed H enters by its curved and flattened end into the teeth of the saw, and is pressed into the same by a spring, *h*, being guided in a recess, h^1, of guide *f*, and intermittently operated by a fulcrumed lever, h^2, that is pivoted to the rear end of feed-rod H, and engaged by the projecting pin *g*, acting as a driver.

A set-screw, *i*, bears on the fulcrumed lever h^2, and adjusts the feed-rod to the depth of the teeth of the saw. The return motion of the driver pushes the feed forward, so as to move the saw while the spring *h* carries the feed back to enter the next tooth, and so on.

A second set-screw, *i*, recess h^1, and spring *h* are arranged, also, at the opposite side of the file-stock symmetrically to the other parts, so that the feed may be transposed to the other side of the file when the apparatus is adjusted for left-hand filing, the spiral guides and centers of cylinder-shaft being correspondingly changed and the saw-cylinder reversed.

The machine is operated by adjusting, first, the file vertically to one saw after the other by means of the center screw-post and hand-wheel, and filing the teeth of each saw at one side. The saw-cylinder is next taken out of the centers and reversed, and the machine adjusted for left-hand filing when the same operation of sharpening the teeth of each saw is performed as before, and thus a rapidly-working and very effective filing-machine for gin-saws obtained that accomplishes the work in better, speedier, and more uniform manner than by hand, and provides a time and labor

saving device for the sharpening of cotton-gin saws.

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

1. The frame F, spring supported in front and hinged in rear to the bed D, in combination with screw bolt and nut, to allow the pressure on file to be increased, as described.

2. The combination, with the spring-actuated arm H, of the lever h^2 and file-stock, having pin g, substantially as and for the purpose set forth.

3. The combination, in a filing-machine, of the oblique guides g', slotted lateral plates f, file-stock, and clamp-screws, to allow the file to be set for right or left hand work, as specified.

SAMUEL V. PATTILLO.

Witnesses:
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MARKUS EHLBERT.