

L. M. ASBILL.

Gin Saw-Filing Machines.

No. 134,451.

Patented Dec. 31, 1872.

Fig. 1.

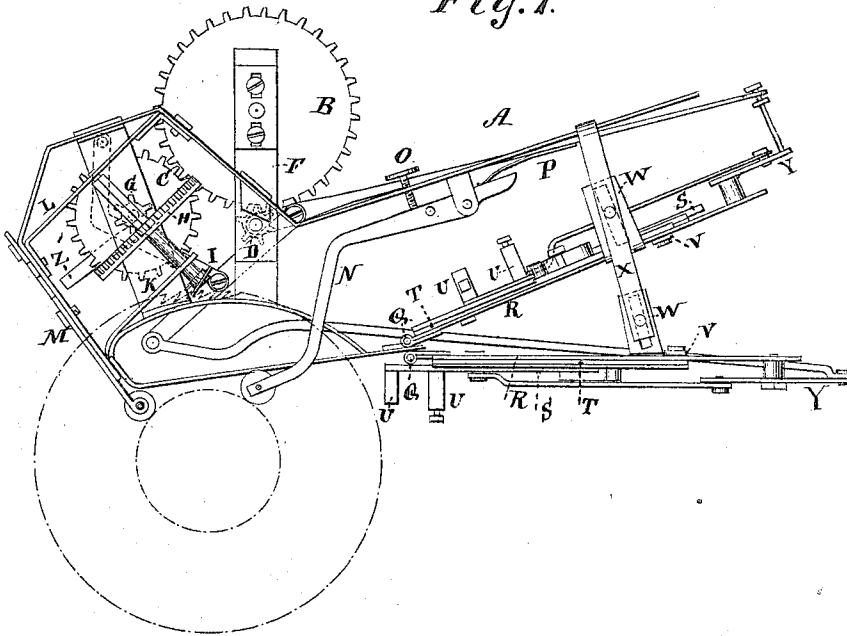
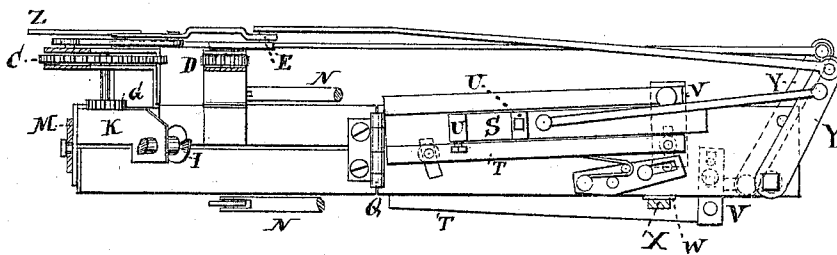


Fig. 2.



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UNITED STATES PATENT OFFICE.

LEWIS M. ASBILL, OF RIDGE, SOUTH CAROLINA.

IMPROVEMENT IN GIN-SAW-FILING MACHINES.

Specification forming part of Letters Patent No. 134,451, dated December 31, 1872.

To all whom it may concern:

Be it known that I, LEWIS MONROE ASBILL, of Ridge, in the county of Edgefield and State of South Carolina, have invented a Gin-Filing Machine, of which the following is a specification:

The object of my invention is to supersede hand-filing of the teeth of the saws of cotton-gins, which is a tedious, difficult, and laborious work, and to do it with neatness, uniformity, and lightning speed.

Figure 1 is a longitudinal sectional elevation. Fig. 2 is a plan view.

A is the frame of the machine, commencing at the hinges and extending over the machine its whole length. B is the driving-wheel, which should be about eight inches in diameter, the crank on which is about five and a half inches from the center to the handle; thus giving ample lever-power. C is the wheel on which B acts, and is about four inches in diameter, and in front of B. D is the pinion-wheel under B, and should be about one and three-eighths inch in diameter. E is the crank on the axle of said pinion-wheel, and should be one and one-quarter of an inch, thereby giving the files two and a half inches stroke on the gin-teeth. F is the upright, with its brace attached to the upper and lower part of the frame A. G is the small pinion-wheel that works in the horizontal cog-wheel H on the upright shaft, which should stand at an angle of about forty-five degrees, so that the feed-wheel I may stand precisely with the pitch or angle of the teeth. K is the piece in which the feed-wheel shaft turns. L holds the top of said shaft. The feed-wheel I has a slit in the edge, the under lip of which is turned down so as to catch the next tooth at every revolution, thereby acting as feeders to the files. The pinion G should be about one and a quarter inch diameter. The horizontal cog-wheel may be about two inches in diameter. Thus proportioned and finely geared the files will have six strokes to each revolution of the driving-wheel B and feed-wheel I. M is a sliding rest on the front end of the machine,

with two small wheels in the lower end, which rest on the wooden cylinder of the saws when the machine is at work, and, with the rear rest N, takes the whole weight of the machine when adjusted on the saw, which comes up between the halves of the lower frame till the feed-wheel I engages the teeth, so that the wheels in the lower ends of the front and rear rest, together with the oscillating or connecting-rods, are so arranged that they work between the saws on the right and left of the saw on which the machine is filing. The front rest M is lowered or elevated by two screws in the slots. The rear rest N is depressed by the screw O and elevated by the spring P. Q Q are the hinges; R R, the movable plates attached to the hinges; S S, the file-plates; T T, the movable or sliding spring-plates; and U U, the file-holders. V V are the slides to move the rear end of the file-plates in or out from the center, thus giving the files a deeper or shallower cut on the teeth. W W are the slotted uprights attached to the main brace X. Y Y are the two rear cranks to which the four connecting-rods are attached. Z is a guide.

The files are common hand-saw files inserted into the file-holder, with side screw against them and top screw screwed down on their shanks, which firmly secure them in their proper places.

The operation is as follows: The machine is set on the saws so as to allow one saw to come between the two halves of the frame, and rest between the front wheels until the feed-wheel I engages in the teeth; then regulate the front and rear rest so that they may take the whole weight of the machine, and so that the feed-wheel has the precise range of the teeth; then loose the screws in the uprights attached to the movable plates, elevate or depress them till the files also have the range of said teeth, and secure them firmly by screwing in the screws which work in the slots; then steady the machine with the left hand and turn the driving-wheel B rapidly toward the front of the machine with the right hand, and the filing will be done with

great rapidity. The under file files the right side of the teeth and goes about ten teeth in advance of the top file, which files the left side of the teeth, as the operator stands with the points of the saw-teeth toward him when working.

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

1. The hinged plates R R, file-plates S S, and spring-plates T T combined with file-holders, as and for the purpose set forth.

2. The slides V V combined with file-plates, as and for the purpose described.

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