

(No Model.)

J. M. NEWTON.
SAW FILING MACHINE.

No. 535,721.

Patented Mar. 12, 1895.

Fig-1-

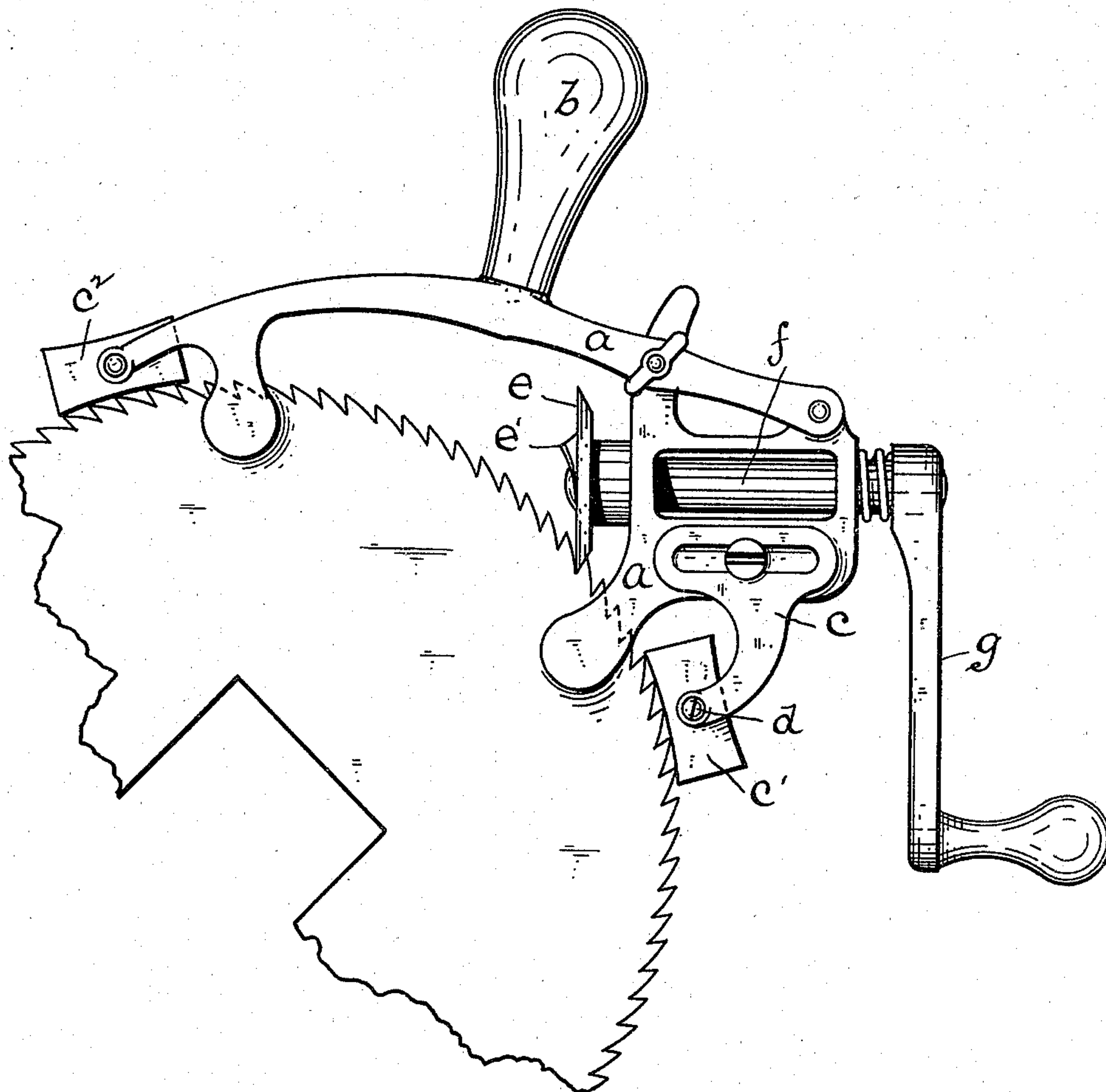
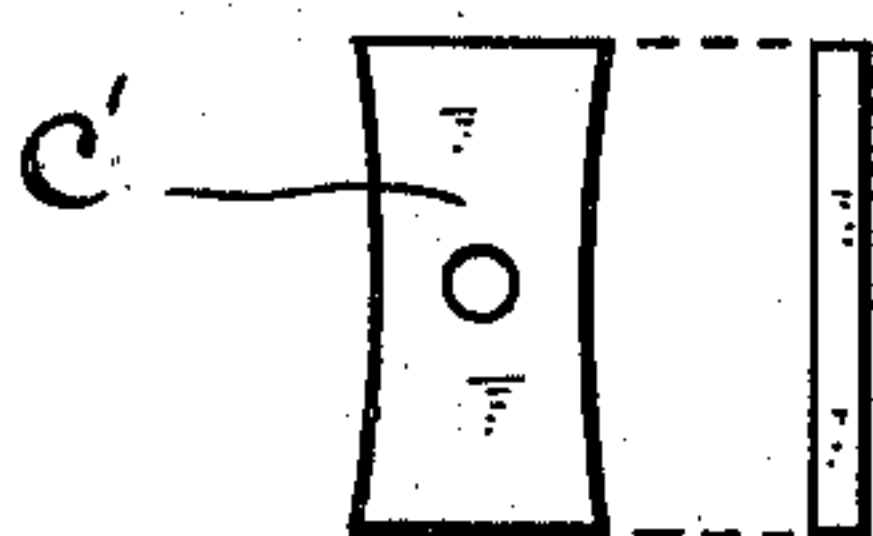


Fig-2-



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN M. NEWTON, OF NORWICH, CONNECTICUT.

SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 535,721, dated March 12, 1895.

Application filed November 22, 1894. Serial No. 529,672. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. NEWTON, a citizen of the United States, residing at Norwich, New London county, State of Connecticut, have made certain new and useful Improvements in Saw-Filing Machines, which improvements are fully set forth and described in the following specification, reference being had to the accompanying sheet of drawings.

On the 20th day of June, 1876, Letters Patent No. 178,872 were granted to William S. Newton for certain improvements in saw filing machines of the kind commonly used in connection with cotton gin saws and to this patent reference may be had for a more complete description of this class of machines, the object of this present invention being to improve certain details of construction in these machines to the end that the quality of work done by the same shall be superior to that which it has been heretofore possible to accomplish therewith.

To assist in explaining my invention I have provided the accompanying sheet of drawings, in which—

Figure 1 is a side view of a complete saw filing machine illustrating the same as properly mounted upon a saw in position for use, said machine being in the class, and practically the same in general construction, with that shown and described in the said William S. Newton patent, which construction will be described in brief before referring to my present improvement. Fig. 2 shows face and edge views of a shoe of raw-hide or similar material which forms an important element of my invention.

Referring to the drawings *a* denotes the frame of a saw filing machine having secured thereto a handle *b* by which the complete device may be held firmly in the position desired when in use.

c indicates a certain rest or gage adjustably secured to frame *a* by means of a screw *d*. Gage *c* has pivotally secured to its lower end a shoe *c'* which bears against the teeth of the saw when the machine is in use. By means of this gage *c* the depth of the cut of the rotary file may be regulated said gage being moved inward toward, or outward from, the saw to produce a cut of greater or less depth

as may be desired. A shoe *c''* similar to shoe *c'* is pivotally secured to the frame *a* and likewise rests upon the teeth of the saw as shown, and serves to assist in retaining the device in position when in use.

e indicates an ordinary rotary file mounted upon one end of a shaft *f* supported in suitable bearings in frame *a*. Shaft *f* has fixedly secured to its opposite end a crank *g* by means of which said shaft is revolved.

e' indicates a certain switch located on file *e* which switch serves at each revolution of file *e* to catch into the notch immediately in advance of the one being operated upon and serves to bring said tooth into engagement with file *e*; continued revolution of said file serving to bring successively into engagement therewith each tooth of the saw.

Having now described in a general way the construction and manner of operation of filing machines of the class to which this invention is immediately related I will now proceed to describe my present improvement with a view to pointing out the advantages derived from its embodiment in these machines.

As heretofore constructed the pivoted shoes *c'* and *c''* have been made of cast metal having their edges concaved to fit the circular outline of the saw, thus bringing the points of the teeth in direct contact with the cast metal of the shoes and I have found, by long continued experience and experiments that such frictional contact of these metallic shoes, or gages, with the finely sharpened points of the saw teeth, tends to dull the teeth by abrasion, thus defeating in a measure the object and usefulness of the machine. To remedy this defect I have now provided shoes *c'*—*c''* of rawhide, lignum vitæ, or other non-metallic substance which, while sufficiently hard to support and guide the complete machine, are so much softer than the saw teeth that they cannot possibly injure said teeth and, in anticipation of extraordinary wear, I have concaved the opposite edges of said shoes so they may be readily swung upon their pivots to bring either edge into operative position relatively to the saw teeth.

To permit of readily turning the shoes upon their pivots without materially adding to the cost of the construction I provide the upper

portion of the rest or gage *c* with a slot by means of which it may be adjustably secured to the side of the frame, much more cheaply than could be done with the tongue and recess upon the under side as shown in said patent. This construction throws the gage to one side of the saw which permits of the shoe being pivotally secured to the free end of the gage upon the same side as the frame, thus causing the shoe to lie in the same plane with the saw without having to bifurcate the end of the gage, to cause the shoe and the file shaft to lie in the same plane with the saw, as must necessarily be done with the Newton patent. It will thus be seen that the gage may be cast or stamped from a flat piece of material and the shoe can be loosely pivoted to its free end so that it can be revolved upon its pivotal point and will always lie in the plane of the saw, and thereby be in position irrespective of which side or edge of the shoe is toward the saw.

This improved construction does not add materially to the cost of producing this class of machines but does add in a considerable degree to their usefulness.

Having described my invention, I claim—

In a saw filing machine, the combination, with a frame, of a rotary file journaled therein, adjustable gages secured to the frame, one of which is provided with a slot and is secured to the side of the frame by means of a set screw, whereby the gage lies at one side of a plane through the file shaft and the saw, and a reversible shoe of non-metallic material pivotally secured to one side of the free end of each gage, each edge of the shoe being concaved and adapted to fit against the teeth of the saw, substantially as set forth.

JOHN M. NEWTON.

Witnesses:

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