

J. J. ENGELMAN,
Saw-Filing Machines.

No. 144,522.

Patented Nov. 11, 1873.

Fig. 1.

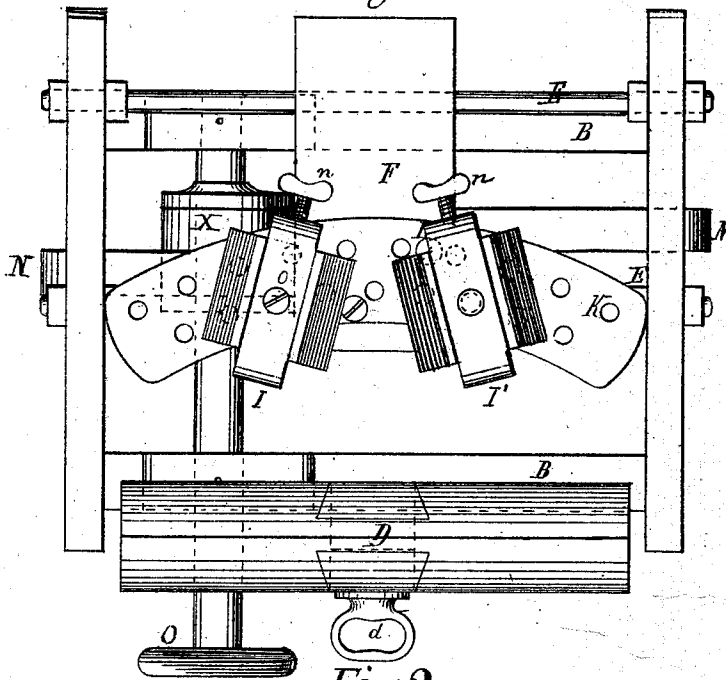
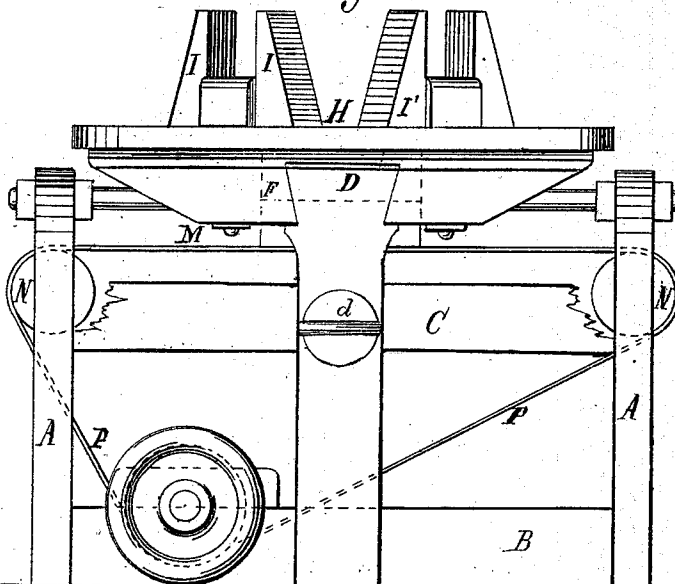


Fig. 2.



Witnesses.

Chas. C. Wilson

W. B. Chaffee

Inventor:

Joseph J. Engelman
by his attys.
Cox and Cox

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Fig 3.

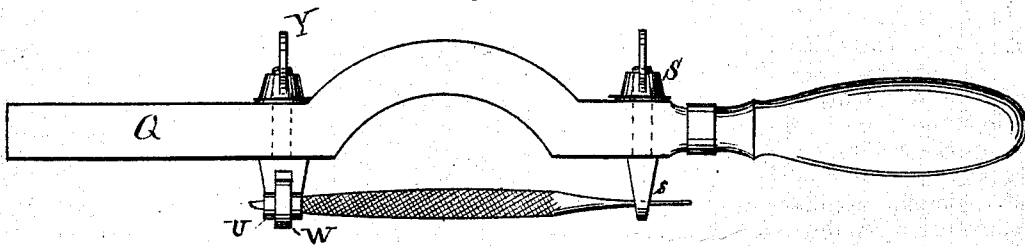


Fig 4.



Fig 5.

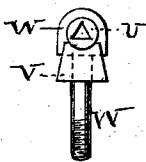
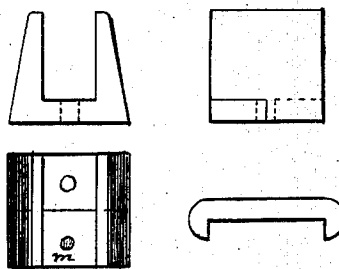


Fig 6.



Witnesses.
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W. E. Chaffee

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UNITED STATES PATENT OFFICE.

JOSEPH J. ENGELMAN, OF CHILLICOTHE, MISSOURI.

IMPROVEMENT IN SAW-FILING MACHINES.

Specification forming part of Letters Patent No. **144,522**, dated November 11, 1873; application filed June 10, 1873.

To all whom it may concern:

Be it known that I, JOSEPH J. ENGELMAN, of Chillicothe, Livingston county, Missouri, have invented a new and useful Improvement in Machines for Filing Saws, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved device for filing saws, and analogous purposes; and consists of a wooden frame, of suitable construction, to the front part of which is attached a vise or clamp, in which is fastened the saw. At the rear of the frame are two metallic bars or rods, which run parallel to the saw when secured in place, passing through and supporting a wooden block, to which is attached a curved guide-bearer, and upon which, suitably secured, are the guides, so arranged as to permit the action of the file at any necessary angle, and possessing other advantages, which will more fully appear hereinafter. A hand-plate, which controls a windlass and belt having relation to the block to which the guide-bearer is fastened, serves, in connection with the bearer, to carry the guides into any desired position. A file-holder of superior construction is provided, to which reference is elsewhere made more at length. The object of the invention is to provide an efficient and convenient machine for filing saws, and like purposes.

Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a side view of the file-holder; Fig. 4, a top view of the same. Fig. 5 is a view of the socket and stool used to hold one end of the file. Fig. 6 is a representation of the several parts of the guides.

The frame is constructed of convenient size, consisting of the vertical sides A, in which are mortised the beams or ties B B, which are placed at the lower edge of the sides A, near either extremity, so as to form a broad even support. The upper front corners of the pieces A are cut away, and the beam C mortised in a convenient position above and in line with the beam B, to afford a means of supporting the clamp or vise D and the axle of the windlass, as is more fully described hereinafter. Attached in any suitable manner to the beams B and C is one of the arms of the clamp or

vise D, which is constructed to be operated by means of a thumb-screw, *d*, its upper part being adapted to receive and hold the saw parallel to the beam C, and above the same, in a position having reference to the guides and other parts which are used to direct the file. At the top of the pieces A, removed from the beam C, are two horizontal parallel metallic bars, E, bolted securely, so as to serve as braces for the frame, as well as to support the block F, through which they pass. The block F is constructed of wood, in any usual form, and rides freely upon the bars E from side to side. Secured to the block F is a curved guide-bearer, H, provided at regular intervals with the apertures K, which are in two circular parallel lines, and in which the bolts of the guides I I' and spur *m*, hereinafter mentioned, fit, being so arranged as to permit the guides to be placed in any desired position upon the guide-bearer, to allow the action of the file at any angle that may be necessary. The guides I I' are constructed of metal or wood, and are in three pieces, two of which are substantially similar, each corresponding with the other, forming one side and one-half of the bottom of the guide, the two being so constructed as to permit of their being separated or closed, so as to increase or diminish the width of the guide-space without removing its bottom. (See Fig. 6.) The third piece, which is in the nature of a key, is arranged to fit securely between the two pieces just described, having part of its lower surface removed, so as to assist in holding the two in position, as shown at Fig. 6. Upon one of the pieces of either guide, arranged to fit in the apertures K, is a spur, *m*, the object of which is to prevent the dislocation of the guides when the same are secured in place, and set-screws *n* are provided to hold the pieces together while the guide is being moved. Belt-wheels N are hung in apertures cut in the pieces A; and a windlass, X, controlled by a convenient hand-plate, O, revolves in boxes attached to the beams B B. Secured to the block F are the belts P, which, passing over the wheels N and the roller of the windlass X, are so arranged as to cause the block F, with the guides attached, to move from side to side upon the hand-plate being turned. The file-holder (see Figs. 3, 4,) I pre-

fer to construct of metal, of any desired size, the end thereof, Q, being arranged so as to move within the guides I I', being adapted thereto. It may be provided with a suitable handle, and bowed in the center over the file, to facilitate its use. Adjacent to the handle is cut the slot R, and through it passes the screw S, to the lower end of which is attached a stump, s, in which is drilled a hole to receive the hilt-end of the file, a thumb-nut, T, being provided at the upper end of the screw S to regulate the same. (See Figs. 3, 4.) To hold the point of the file, a socket, U, is provided with a triangular aperture, and rests in a stool, V, through which passes a loop-screw, W, the end of which is provided with a thumb-nut, Y. (See Figs. 3, 5.) By arranging the file-holder in the manner described, I am enabled to turn the edge or sides of the file at pleasure, as well as to insert files of different sizes, by means of the slot R.

The saw having been placed in the clamp or vise D, and secured therein, the guides and file are adjusted. The filing is then proceeded with at pleasure, the guides being moved by means of the hand-plate O whenever necessary.

The various advantages of the device will suggest themselves.

If it be desired to increase the bevel upon the teeth of the saw, the guides are moved outward; and if it be desired to decrease the same, the guides are carried toward the center.

Should the guides or end of the file-holder Q be found to wear, the former may be removed and carried nearer together, their construction readily permitting the space between them to be contracted or enlarged.

Files of large or small size may be used with the file-holder, and, by turning the socket U, may be operated at any angle.

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

1. The curved guide-bearer H, provided with the apertures K arranged in concentric rows, for adjusting the guides I I', substantially as shown and described.

2. The sectional guides I I', pivoted and provided with the thumb-screws *n* and spurs *m* for holding them in position and upon the guide-bearer H, substantially as shown and described.

3. The curved guide-bearer H, sectional guides I I', block F, and bar E, in combination with the vise D, substantially as shown and described.

In testimony that I claim the foregoing improvement in machines for filing saws, as above described, I have hereunto set my hand and seal.

JOSEPH J. ENGELMAN. [L. S.]

Witnesses:

H. C. IRELAND,
S. MCWILLIAMS.