

W. W. PARSONS.
Saw-Filing Machines.

No. 146,017.

Patented Dec. 30, 1873.

Fig: 1.

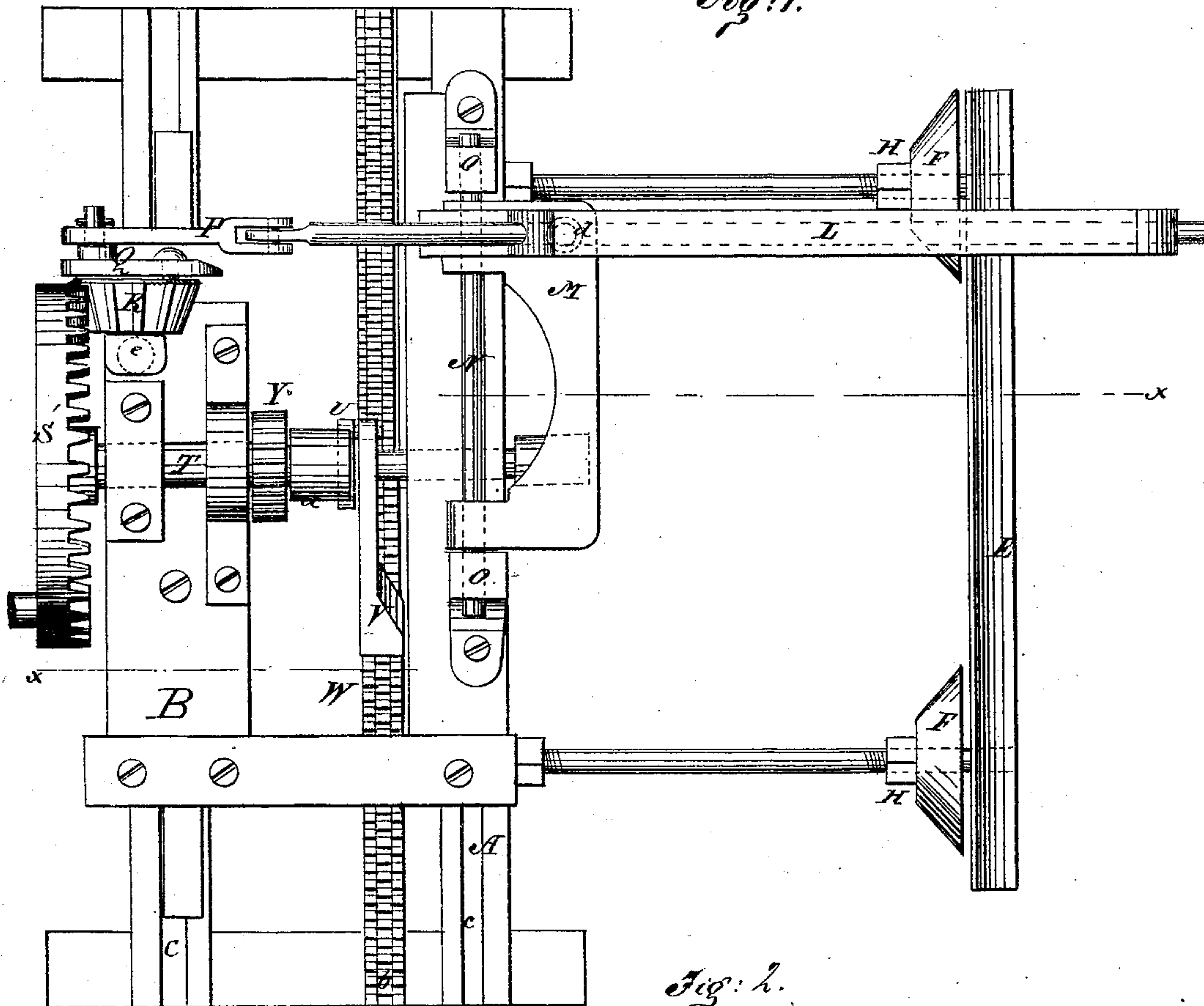
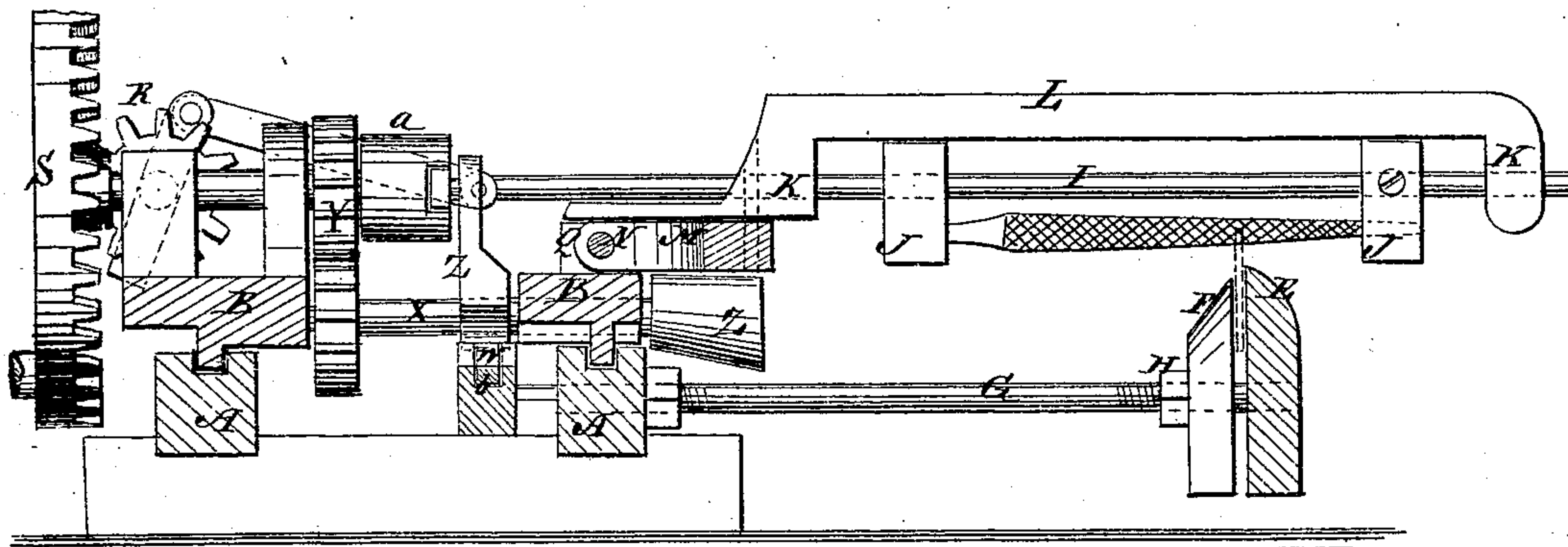


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE

WALTER W. PARSONS, OF STANSTEAD, CANADA.

IMPROVEMENT IN SAW-FILING MACHINES.

Specification forming part of Letters Patent No. **146,017**, dated December 30, 1873; application filed July 19, 1873.

To all whom it may concern:

Be it known that I, WALTER W. PARSONS, of Stanstead, Quebec, Canada, have invented a new and Improved Saw-Filing Machine, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a plan view of my improved saw-filing machine, and Fig. 2 is a sectional elevation taken on the line *xx* of Fig. 1.

A is a platform or bed-frame on which a frame, B, is fitted to slide backward and forward in ways *c* in the top of said frame, and a vise, E F, supported at one side of said frame, and a short distance from it on rods G, the said rods being detachably connected to said frame by sliding in holes formed in a couple of the parallel beams of the frame, the object being to remove the vise when the machine is not in use for fastening it compactly. The saws to be filed are clamped between the long jaw E and short ones F by the nuts H, which screw forward and backward on the rods G. I represents the file-stock, which consists of a round shaft carrying the hangers J, in which the file is secured and working in the brackets K of a bar, L, which is attached at one end to the rocking plate M, so as to project beyond the vise, and support the file above it. This rocking plate is pivoted by the rod N so as to rise and fall, and the rod is supported on the frame B in suitable brackets O. The file-stock is connected by a rod, P, with a crank, Q, on a bevel-wheel, R, which is geared with the driving-wheel S, to be turned by it. The crank-wheel and driving-wheel are also mounted on the sliding-frame. On the inner end of the shaft T of the driving-wheel is a short crank, U, which works a pawl, V, to push the frame B along from time to time, to shift the file along the saw. Under this shaft T is another shaft, X, which is geared with T by wheels Y, so as to turn at the same speed, and it carries a cam, Z, which lifts the rocking plate M once to each revolution, to hold the file up while the frame is shifted by the pawl V. These shafts are so geared that the cam lifts the rocking plate just before the pawl shifts the frame along.

In order to vary the movement of the frame by the pawl to suit different saws, with teeth varying in size, I mount the crank U, on which the pawl is mounted, so that the pin can be shifted toward or from the center of the shaft, by sliding the crank in a slot in the face of the hub or disk *a*, to shorten or lengthen the swing of the crank-pin, and to vary the pitch of the toothed rack W, so that the adjustment may be finer than the pitch of the teeth of said rack. I make it in two or more parts, preferably three, and have the middle one, *b*, adjustable lengthwise, and thus I can cause the frame to move suitably for saws of any pitch. The file-stock holding frame is attached by a pivot, *d*, to the rocking plate M, so that it can be turned diagonally to the vise, to correspond with the bevel of the teeth, and the wheel R is mounted on a block which is pivoted to the frame, as at *e*; also to turn for shifting the file to the bevel of the saw-teeth. The driving-wheel S is made five (more or less) times larger than the pinion R, to make about four strokes of the file to each tooth, or as many as needed to do the work thoroughly.

When the alternate teeth of one angle have been filed from end to end of a saw, the latter is shifted end for end in the vise, the pawl V is turned over to the other side, and the motion of the driving-wheel is reversed to file the other teeth.

Saws may be jointed by this machine by fastening the rocking plate as high as the cam carries it, raising the pawl V out of action, and then sliding the frame B along by hand while turning the driving-shaft.

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

The combination, with filer-stock sliding frame B, of the cam Z, rocking lift-plate M, and pawl and ratchet V W, operated at the times, in the manner and for the purpose specified.

WALTER W. PARSONS.

Witnesses:

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