(No Model.)

A. S. DUNN.

BAND SAW FILING MACHINE.

No. 383,944. Patented June 5, 1888.

Fig. 1.

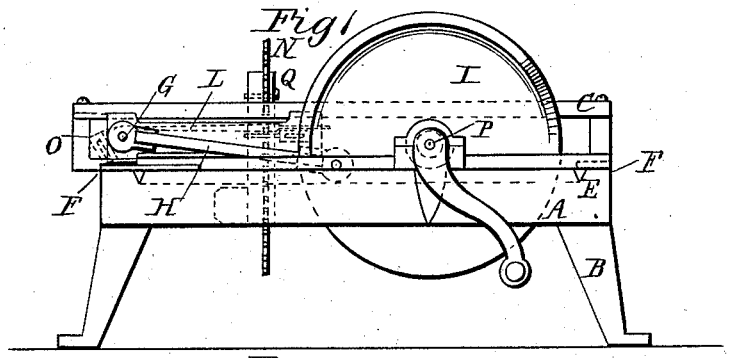


Fig. 2.

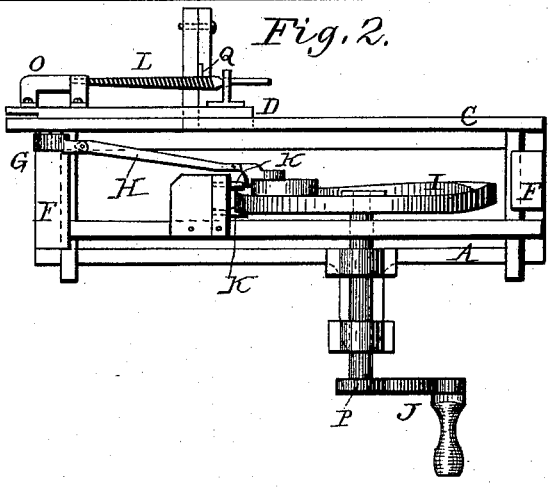
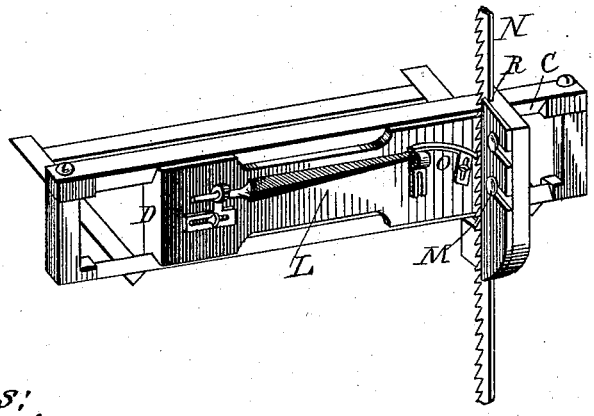


Fig. 3.



Witnesses:
James W. Hall.
Adolph Hoefele.

Inventor.
Andrew S. Dunn.

UNITED STATES PATENT OFFICE.

ANDREW S. DUNN, OF NEW BRIGHTON, PENNSYLVANIA.

BAND-SAW-FILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 383,944, dated June 5, 1888.

Application filed February 28, 1887. Serial No. 229,233. (No model.)

To all whom it may concern:

Be it known that I, ANDREW S. DUNN, a citizen of the United States, residing at New Brighton, in the county of Beaver and State of Pennsylvania, have invented an Improvement in Band-Saw-Filing Machines, of which the following is a specification.

My invention relates to an improvement in band-saw-filing machines; and it consists in the mechanism hereinafter described for filing a band-saw without displacing it from the wheels of the machine on which it runs at a single continuous operation, the operation of which mechanism will hereinafter more fully and at large appear.

To enable others skilled in the art to which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a front elevation of my improvement in machines for filing band-saws. Fig. 2 is a top view of the same; and Fig. 3 is a perspective back view of file-holder, slide, cross-head, and saw-clamp.

In the accompanying drawings, A represents the frame of machine; B, the legs; C, the vertical V-slide, in which slides file cross-head D. From the lower part of vertical slide C, and at right angles with the same, at each end of machine, extend two V-slides, which slide in V-grooves E, Fig. 1, under the caps F, Figs. 1 and 2. On the front side of file cross-head D is a pin or bearing, G, on which bearing runs one end of the adjusting pitman-rod H, which pitman-rod is in three pieces, allowing of the file, which is attached to the back side of file cross-head D, being moved out of mesh with the teeth of the saw being filed when the file makes its backward motion. The other end of rod H is connected to a bearing on wheel I, which wheel I at the periphery has a flange thereon, which flange has two variable offsets directly opposite each other, diametrically of the wheel, which flange, as the wheel is turned around through the medium of crank J, runs between guide-rollers K, which guide-rollers are attached to a connecting-piece between the horizontal slides on the vertical file-slide C. The variable rim on the wheel I working between the guide-rollers K, which are connected, as shown, with horizontal slides under plates F, gives the file-slide C, with its cross-head D, on which is the file L, its in-and-out motion. The adjusting pitman-rod H, being connected to wheel I, gives back-and-forward motion to the file cross-head D and the file L.

In Fig. 3, M is the saw-clamp, between the clamps of which the saw N is moved upward by the adjustable saw-raising device O coming in contact with the under side of the next tooth following the one that has been already filed. The forward motion of the file-slide D, through the medium of the adjustable saw-raising device O passing under the under side of tooth next below the one already filed, raises said tooth to the level of the top of file L as the wheel I is turned around by the crank J or other power applied at P. When the full stroke of adjusting pitman-rod K is exhausted, the file then stands with the heel or butt of the file still in mesh with the tooth of the saw N, as shown in Figs. 1 and 2, at which point the offset in the flange of the wheel I, moving between the guide-rollers K, moves back the file-slide C, the file cross-head D, and the file L. The adjusting pitman-rod then moving off the center downwardly by connection with the file cross-head draws said cross-head backward the full stroke of adjusting pitman-rod H, at which point the offset on the opposite side diametrically of the wheel I, coming between the rollers K, gives the inward motion to the file-slide C, to file cross-head D, and to file L, thereby bringing saw-raising device O to the under side of the tooth below the one already filed.

From the foregoing description and by reference to the accompanying drawings the skillful mechanic will readily understand the construction of my improvement in machines for filing band-saws and the relation that the several parts bear to each other. I will therefore proceed to describe the operation.

The machine is placed in position on its feet on the table of a band sawing-machine. The front or part to which power is applied facing the same direction as the teeth of the band-saw, the loose portion of clamp M is placed over the saw, with its shoulder R at the back of it, in such position that saw-raising device O comes in the position shown in Fig. 3. It is then ready to begin the operation of filing. The operator then turns crank J, moving for-

ward in file-slide C the file cross-head D. When the file reaches the point Q (shown in Figs. 1 and 2) through the medium of the offset in the flange of wheel I, the file is drawn outwardly. The pitman then traveling downwardly until it comes on its opposite center, at which point the opposite offset in the flange of the wheel I comes between the guide-rollers K, gives the inward motion to the file-slide C, the file cross-head D thereby bringing the point of saw-raising device O under the tooth of saw N, next below the tooth already filed, the continuation of which operation files a tooth of the saw N at every revolution of the wheel I.

Having thus described my improvement, what I claim as of my invention is—

In a machine for filing band-saws, the combination, with main frame A, and cam-wheel I, running between guide-rollers K, giving file-slide C its reciprocating movement, of pitman-rod H, attached to cam-wheel I and file cross-head D, giving the backward and forward motion to file cross-head D, which carries file L and the saw-feeding mechanism O, substantially as described.

ANDREW S. DUNN.

Witnesses:

ADOLPH HAEFELE,

JAMES HALL.