



Witnesses.

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UNITED STATES PATENT OFFICE.

JEROME B. SWEETLAND, OF PONTIAC, MICHIGAN.

IMPROVEMENT IN DEVICES FOR GUMMING AND SHARPENING SAWS.

Specification forming part of Letters Patent No. 118,403, dated August 22, 1871.

To all whom it may concern:

Be it known that I, JEROME B. SWEETLAND, of Pontiac, in the county of Oakland and in the State of Michigan, have invented certain new and useful Improvements in Devices for Gumming and Sharpening Saws without Files; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a device for gumming and sharpening saws, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, Fig. 2 a plan view, and Fig. 3 a rear view of my machine.

A represents the bed-piece of my machine, upon which is secured a stationary standard, B. Through this stationary standard passes a vertically-movable standard, C, which is held at any desired height by means of a set-screw, *a*, the object of said movable standard being to raise or lower the emery-wheel to suit the size of the saw. D represents a yoke with a bearing, *e*, on each end to hold and support the entire working portion of the machine, while upon the side of the said yoke is a shaft or axle, *b*, which passes through the rounded upper end of the movable standard C. To the yoke D is attached an adjustable counter-balance, E, the object of which is to bring the machine always to a level. G is a hinged, pivoted, or swinging lever, with arbor *d* on its extreme outer end and a crotched or forked bearing, *f*, at its inner end, which straddles each end of the yoke on the outer ends of the bearings *e e*, and fastened by pins *i i*. Through the bearings *e e* of the yoke D is passed a shaft provided with a loose pulley, H, and stationary pulley H' between the ends of the yoke, so that a belt communicating with the power may be thrown onto either pulley to run the machine or not. Upon the end of the shaft is another pulley, I, connected, by a cord or belt, *h*, with a pulley, *k*, on one end of the arbor *d*, the emery-wheel J being mounted upon the other end of said arbor.

The crotched or forked bearings *f f* possess particular advantages. If they were left solid and bored out they could not be got onto the yoke without having either the yoke or the lever in two pieces, one end slipped on at a time, and then bolted together. And the same process had to be gone through with to take the lever off; but in this case when the lever is cast it slips on without any fitting.

To the upper side of the yoke D is attached a standard, K, the upper end of which is bent forward and connected, by a spring, *m*, with the lever G. On the back side of the movable standard C is a stop, *n*, and set-screw *p*. The object of the stop *n* is to level the machine, so that in gumming a saw the operator is enabled to get the tooth plumb and square on the front side. By raising or lowering the set-screw *p* it will enable the operator to give the tooth any desired level on the back side and make every tooth exactly alike. On the front side of the standard is a gauge, *r*, with set-screws *s* to gauge the depth of the tooth both in front and also on the back. When the lever strikes the set-screw it cannot go any further, and the emery-wheel cuts no further. On top of the same standard C is a set-screw, *t*, to hold the yoke and, consequently, the emery-wheel, in any desired position when doing any part of a saw which has to be done alike all the way around the saw without changing the position of the emery-wheel. In rear of the emery-wheel J, to the swinging lever G, is attached a spark-arrester, L, and over the pulleys H H' is a movable dust-pan, M, to prevent the dust from falling on the pulleys and into the bearings. At the front end of the lever G is attached a handle, N, having its ends turned upward, as shown.

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

1. The adjustable standard C provided with stop *n*, gauge *r*, and set-screws *p s t*, in combination with the yoke D provided with bearings *e e* and a shaft or axle, *b*, the latter passing through the adjustable standard, substantially as and for the purposes herein set forth.

2. The adjustable counter-balance E attached to the yoke D, substantially as and for the purposes herein set forth.

3. In combination with the adjustable standard C and yoke D, constructed as shown and described, the hinged, pivoted, or swinging lever

G, provided with arbor *d* and crotched or forked bearings *f f*, substantially as and for the purposes herein set forth.

4. The movable dust-pan, M, substantially for the purposes herein set forth.

5. The combination of the adjustable standard C, yoke D, swinging lever G, standard K, spring *m*, and adjustable counter-balance E, all con-

structed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of April, 1871.

JEROME B. SWEETLAND.

Witnesses:

ADOLPHUS W. BURTT,

ENOCH M. BEEBE.