E. P. TERRELL.

SAW-GRINDER.

No. 189,522. Patented April 10, 1877.

Fig. 1.

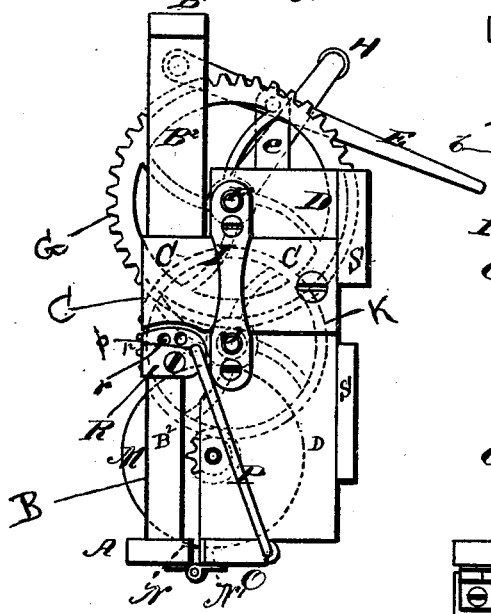
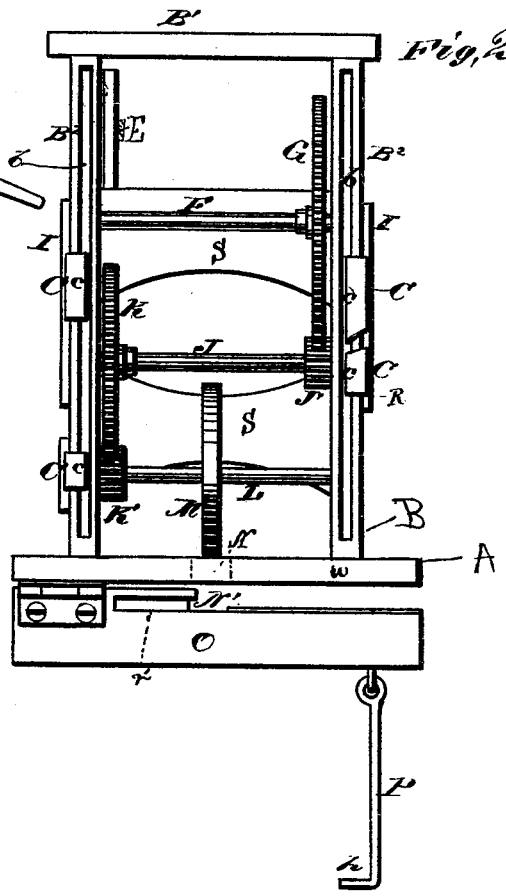


Fig. 2.



WITNESSES

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ENOCH P. TERRELL, OF BLOOM CENTRE, OHIO.

IMPROVEMENT IN SAW-GRINDERS.

Specification forming part of Letters Patent No. **189,522**, dated April 10, 1877; application filed October 28, 1876.

To all whom it may concern:

Be it known that I, ENOCH P. TERRELL, of Bloom Centre, in the county of Logan and State of Ohio, have invented a new and valuable Improvement in Saw-Dressing Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my saw-dressing machine, and Fig. 2 is a front elevation of same.

This invention relates to machines for dressing saws; and it consists in a train of wheels actuating an emery dressing-wheel, all of said wheels being journaled in a vertically-sliding frame or sash. It also consists in a hinged piece for holding the saw while being dressed, and in means for adjusting said hinged piece, substantially as hereinafter set forth.

In the annexed drawings, A designates the bed-piece of my device, having a frame secured thereon, which consists of a top cross-piece or lintel, B^1, and two side standards, B^2 B^2. Said standards are provided with longitudinal guide-grooves *b b* at their rear sides or edges, in which grooves work the guide-flanges *c c* of plates C C, which are secured to both sides of a sash-frame, D, provided with the back cross-supports S S. Said sash-frame may be raised or lowered by means of a lever, E, which is pivoted by its rear end to one of the standards B^2 on its inner side, near the top thereof, and which is connected to the top of one side of sash-frame D by means of an arm or bar, *e*.

In the upper part of said sash-frame D a driving-shaft, F, is journaled across the same. Said shaft carries a cog-wheel, G, and is operated by a crank, H, outside of said frame. On the outside of the opposite sides of said sash-frame are secured two elongated bearing-plates, I I, through the upper parts of which the journals of shaft F pass, so as to prevent said sash-frame from being unnecessarily worn.

In said sides of said sash-frame, and also in the lower parts of said bearing-plates I I, is journaled a second and lower shaft, J, which is provided with a pinion, J′, that receives motion from cog-wheel G, and also with a cog-wheel, K, that engages with and turns a pinion, K′, on dressing-wheel shaft L. M designates the dressing-wheel, which is secured to said shaft L at or near the middle thereof. The periphery of said wheel is toothless, and should be provided with an emery surface. The lower part of its circumference, when said wheel is in its lowest position, is in a recess, N, of bed-piece sill A, and a recess, N′, of a hinged front extension, O, of said bed-piece.

The saw to be dressed is held between this hinged piece O and the front face of the sill A′, so that the plane of the saw will be perpendicular to the plane of the grinder M, the said hinged piece or extension O being provided with a recess for the reception of the circular saw and a long rod, P, having a hook, *p*, which hook catches into one of a simicircular series of perforations or sockets, *r*, in a fastening-plate, R, that is rigidly secured to the outside of one of the standards B^2. The curved arrangement of said series of perforations is for the purpose of enabling said hinged extension to be adjusted so as to accommodate saws of various thickness. The same result would, however, be attained if the said perforations were arranged vertically or obliquely.

The vertical adjustability of sash-frame D enables me to regulate the depth of the dressing. The dressing-wheel is applied between the saw-teeth, and after a tooth has been sharpened the circular saw is turned on its axis the distance of a tooth and clamped, and the next tooth is ground, and so on successively for the remaining teeth until all are sharpened.

The above-described apparatus is especially designed for operating on the teeth of circular saws fixed on their arbors.

I am aware that a sliding frame carrying a grinding-wheel has heretofore been employed in machines for sharpening saws, and I, therefore, lay no claim, broadly, to the employment of such sliding frame.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a saw-sharpening machine, the piece O, hinged to the bed-piece A, and provided with a recess, r', for the reception of a circular saw, in combination with the hook P and sockets r, substantially as described, and for the purpose set forth.

2. The combination of shafts F, J, and L, with gear-wheels G, J, K, and K′, and dressing-wheel M, all journaled in sliding sash D, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ENOCH P. TERRELL.

Witnesses:
J. O. SWEET,
E. J. HOWENSTINE.