T. L. DAVIDSON & H. WINNINGHAM.

Saw-Sharpening Machines.

No. 138,137. Patented April 22, 1873.

Fig. 1.

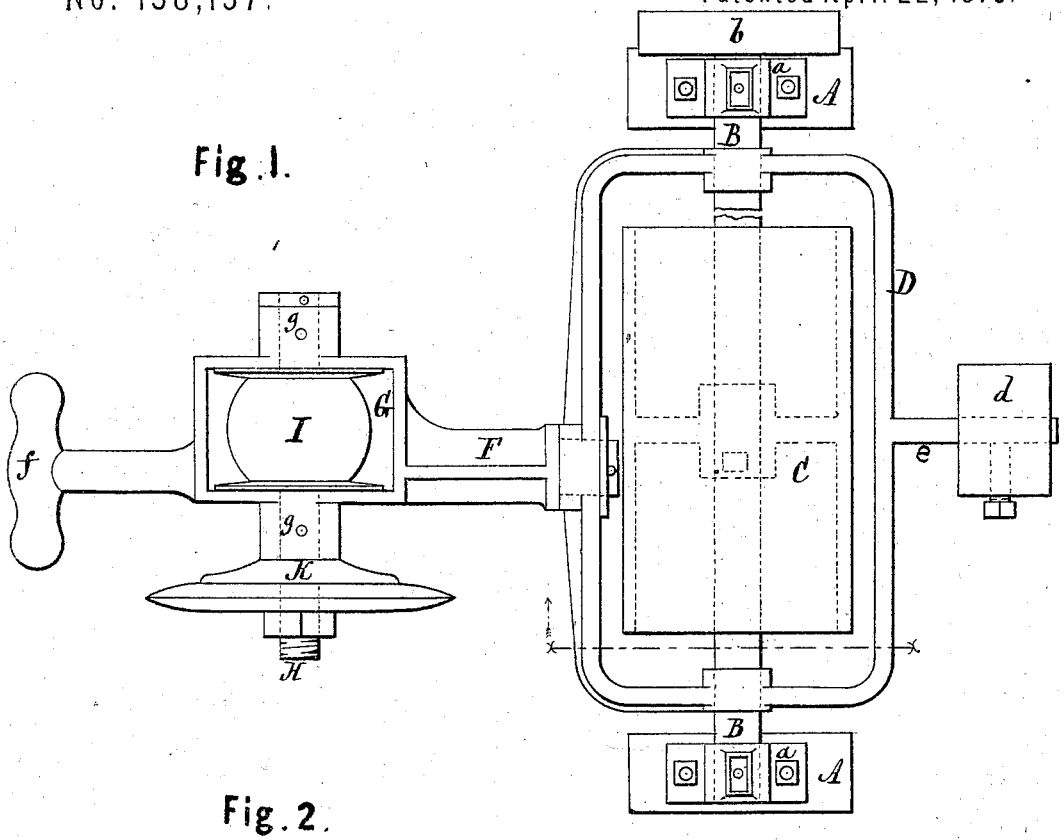
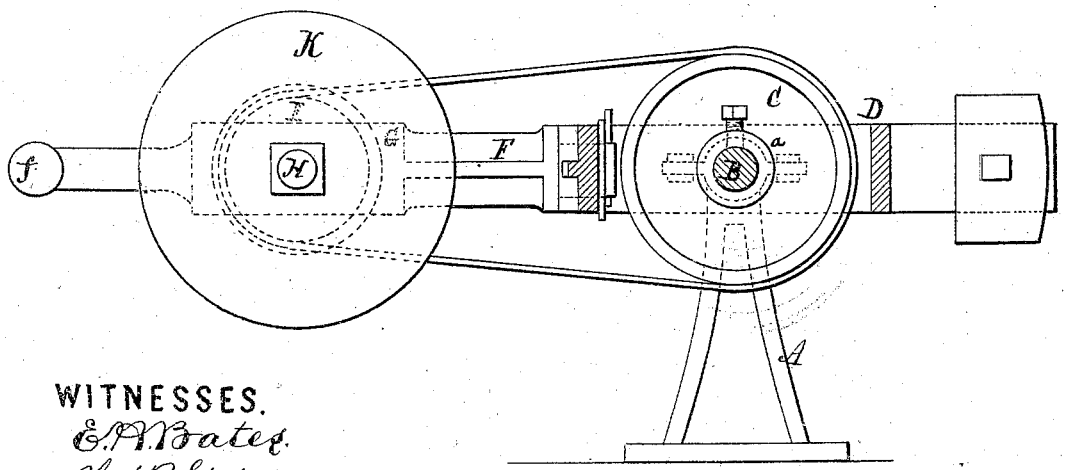


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

THOMAS L. DAVIDSON AND HENRY WINNINGHAM, OF CHARLESTON, S. C.

IMPROVEMENT IN SAW-SHARPENING MACHINES.

Specification forming part of Letters Patent No. **138,137**, dated April 22, 1873; application filed March 1, 1873.

To all whom it may concern:

Be it known that we, THOMAS L. DAVIDSON and HENRY WINNINGHAM, of Charleston, in the county of Charleston and State of South Carolina, have invented a new and valuable Improvement in Saw Sharpening and Gumming Machines; and we 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a top-plan view of our saw sharpener and gummer. Fig. 2 is a sectional view of the same.

This invention relates to an improved machine for sharpening and gumming saws; and it consists in the novel construction and arrangement of the parts hereinafter more fully described and claimed.

In the drawing, A A represent two standards supporting the gumming-machine underneath the frame in which the saw is held to be gummed. In the upper portions of the standards are journal-boxes *a a*, in which is journaled a horizontal shaft, B, carrying a broad pulley, C. Sliding horizontally on the shaft B is a yoke, D, on one side of which is a projecting arm, *e*, with the suspended weight *d*, and on the opposite side an arm, F, whose inner end is inserted in a round hole in the side of the yoke and secured by a washer and key, so that the arm may be rotated on its longitudinal axis. About midway of the length of the arm is a smaller yoke, G, in the sides of which are journal-boxes *g g*, in which is journaled a shaft, H, carrying within the yoke a spheroidal pulley, I, and on one end a gumming-wheel, K. On the outer end of the arm F is a handle, *f*. The weight of the arm F and its appendages is counterbalanced by the weight *d* on the opposite side of the yoke D. Power is applied to the shaft B through a pulley, *b*, on one end, and is communicated by a belt, M, from the pulley C to the pulley I, imparting a continuous rotary motion to the shaft H carrying the gumming-wheel K, the axis of which is immediately under or over the edge of the saw. The handle *f* is grasped by the operator, and by it he is enabled to shift the yoke D horizontally on the shaft B to raise or lower the arm F vertically, or to change the inclination of the wheel K, so as to bring the gumming-wheel in contact with the different teeth to cut to the required depth and to follow the pitch of the teeth.

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

1. The sliding yoke D, provided at its rear end or side with the projecting arm *e* and the adjustable weight *d*, having a horizontal reciprocating rotatory motion on the shaft B, as described, and for the purpose mentioned.

2. The combination and arrangement of the horizontal sliding yoke D, having the projecting arm *e* and adjustable weight *d*, the yoke G having the arm F, journal-boxes *g g*, and handle *f*, all constructed and arranged as shown and described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

T. L. DAVIDSON.
H. WINNINGHAM.

Witnesses to signature of DAVIDSON:
PHIL. C. MASI,
GEORGE E. UPHAM.

Witnesses to signature of WINNINGHAM:
D. SMITH,
H. L. P. BOLGER.