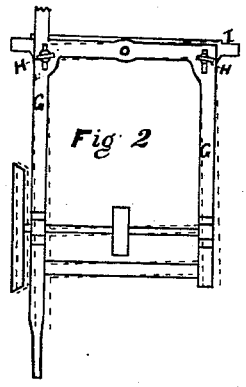
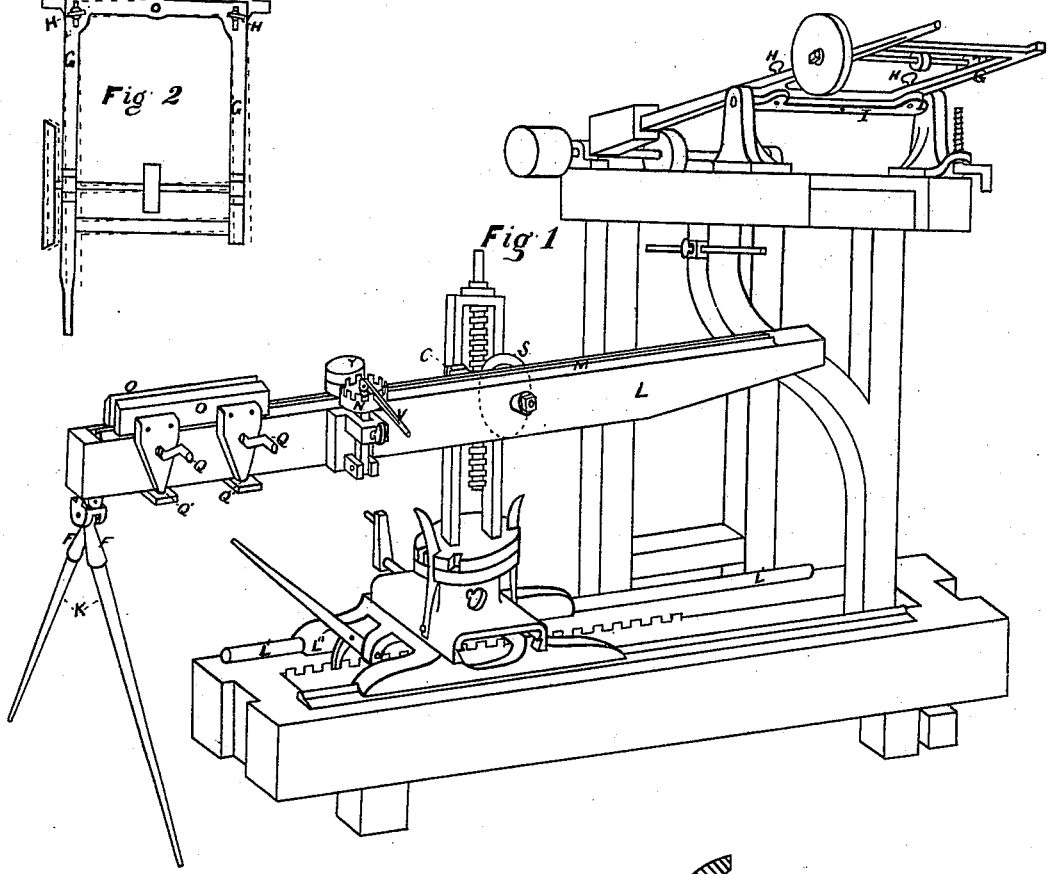
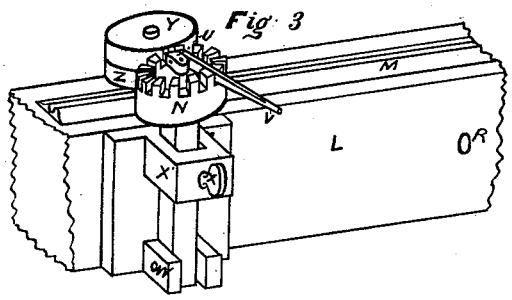
J. A. MILLER.

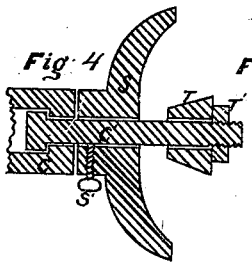
Saw-Sharpening Machine.

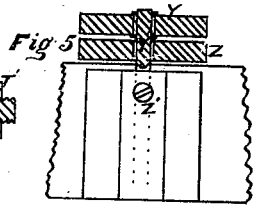
No. 201,271. Patented March 12, 1878.

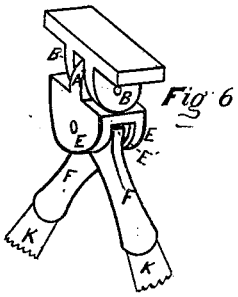












C. Palmer

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John A. Miller

Inventor

UNITED STATES PATENT OFFICE.

JOHN A. MILLER, OF OSHKOSH, WISCONSIN.

IMPROVEMENT IN SAW-SHARPENING MACHINES.

Specification forming part of Letters Patent No. **201,271**, dated March 12, 1878; application filed June 26, 1877.

To all whom it may concern:

Be it known that I, JOHN A. MILLER, of the city of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain Improvements in Saw-Sharpening Machines, of which the following is a description:

The invention embraces certain improvements on my saw-sharpening machine patented 15th of June, 1875, No. 164,470; and refers, first, to an improved spindle, to which the bearing-bowl is attached, and against which the saw is pressed by a cone and nut, so that the spindle, bowl, and saw will turn together during grinding; second, to an adjustable table for holding long saws, provided with legs, attached by a universal joint, to assist or complement the office of the vertical carrier C in obtaining the requisite angle with the grinding-wheel; third, to a peculiarly-constructed adjustable friction-roller, provided with teeth or cogs, against which the lever for turning it operates, which lever is attached to a fulcrum-block pivoted to the axle of the roller, and in the combination, with the friction-roller, of a double or adjustable counter-roller constructed in two parts, one of which parts is attached to its shaft by collars, while the other slips freely up and down, the shaft being raised or lowered and fixed at any height by a set-screw; fourth, to the use of a round way and corresponding grasping-shoe, in combination with a ratchet and pawl for moving the carrier along the way, the round way preventing any tilting of the superincumbent parts during the operation of the lever and pawl in moving them.

Figure 1 is a perspective view of my machine, embracing the improvements. Fig. 2 is a view of the wheel-holding frame. Fig. 3 is an enlarged view of the friction-rollers. Fig. 4 is a section of the spindle, bowl, &c. Fig. 5 is a section of the double roller, showing, in elevation, its attachment to the table. Fig. 6 is an enlarged view of the universal joint of the table-legs.

C, in Fig. 4, is the vertical carrier, and C′ is the spindle, provided with a head, which bears against a corresponding shoulder in C. The bowl S, against which the saw is pressed by the cone T and nut T′, is fastened to the spindle by a set-screw, S′, and during grinding the spindle turns freely in the carrier C, carrying with it the bowl S and saw. The cone T serves to center the saw.

The grinding-wheel frame G is attached to the shaft I by a pivot, and may be turned right or left to adjust the grinding-wheel, as desired, with reference to the frame of the machine, and then clamped by clamping-screws H, passing through slots into the shaft I. L is the table used for long saws, and is slipped onto the spindle C′ at R. It is provided with legs K, attached to the table by a universal joint, constructed with ears B, attached to the table, to which is pivoted the ear A of the joint-block, which, again, has ears E, transverse to B and A, and to E are pivoted the tops F F of the legs. The spread of the legs may be regulated by a shoulder, E′, which may be either on the joint-block or on the ends F F.

The legs will fall together when lifted, and can be conveniently disposed of out of the way; and it is obvious that moving the feet forward or backward from the perpendicular will vary the angle of the table, the height of the spindle and carrier remaining the same. O O are clamping-jaws, for holding the saw during setting and swaging. They are operated by double-acting screws Q, the thread of which is cut right at one end, and left at the other, so that the jaws mutually recede from or approach each other. The jaws are loose jointed at Q′. However, I claim nothing for these, and shall probably dispense with them. N is the friction-roller, between which and the counter-roller Y Z the saw is introduced along the grooved way M. This roller N is toothed, substantially as shown, and is provided with and operated by a lever, V, attached by a pivot-joint to a fulcrum-block, U, which turns on the shaft of N. The friction of N is adjusted by a thumb-screw, X, passing by a thread through the loose stirrup X′, and its end pressing against the shaft of N, which is pivoted at W.

The counter-roller is in two parts, one of which, as Y, is provided with collars on the shaft Y′, and is raised or lowered with it, while Z slips loosely and remains below. The height of the roller Y is maintained by a set-screw, Z′.

The roller constructed in this manner can be accommodated to saws of any width, the object of raising Y for wide saws being to pre-

vent vibration. The partially-round way L′, grasped by the corresponding shoe L″, prevents tilting of the parts above it while it is being moved horizontally by the lever, pawl, and ratchet.

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

1. The shouldered spindle C′, in combination with corresponding box in C, bearing-bowl S, with set-screw S′, cone T, and nut T′, substantially as set forth, for the purpose specified.

2. The table L, having spindle-eye R, and legs attached by a universal joint, A B E F, in combination with the vertical carrier C and C′, substantially as and for the purpose specified.

3. The toothed friction-roller N, adjusting-screw X, lever V, and pivoted fulcrum-block U, in combination with the adjustable counter-rollers Y Z, and set-screw Z′, substantially as and for the purpose specified.

4. The round way L′ and shoe L″, in combination with the lever, pawl, and ratchet for moving the same, substantially as shown and described.

JOHN A. MILLER.

Witnesses:
E. PALMER,
E. M. HARNEY.