(No Model.)

R. M. PINE.

MACHINE FOR SHARPENING SAWS.

No. 385,004. Patented June 26, 1888.

Fig. 1.

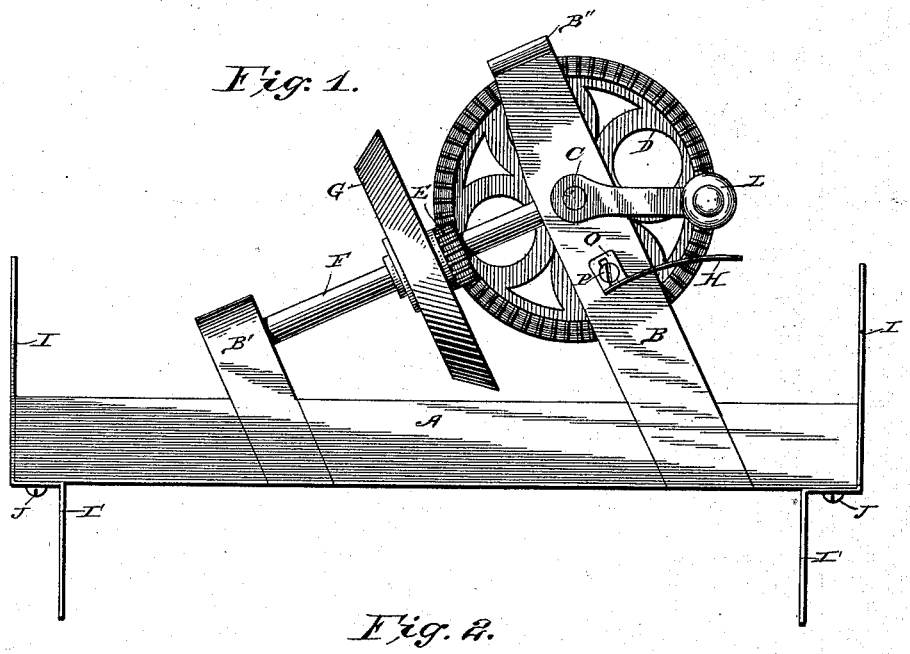


Fig. 2.

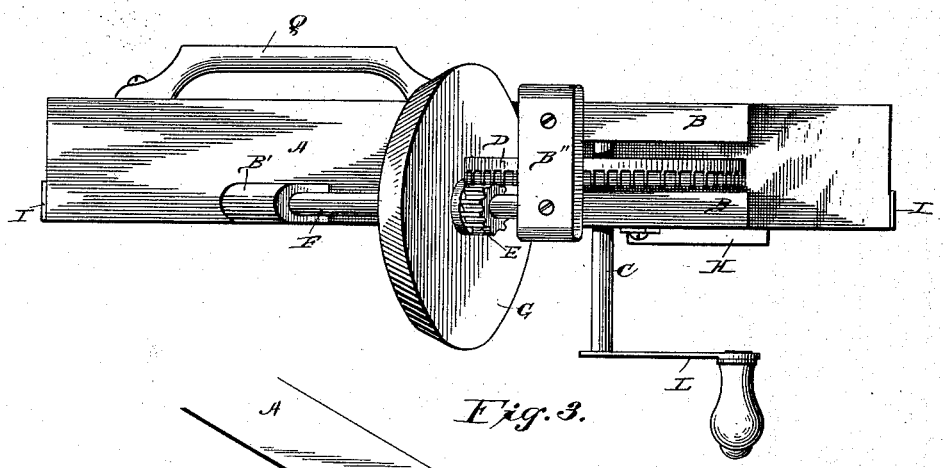
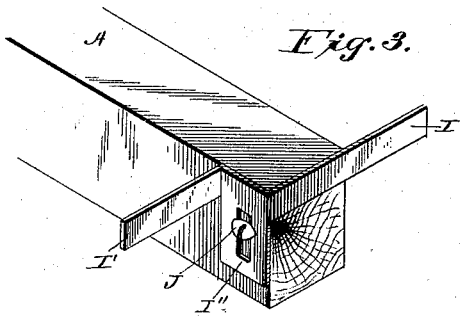


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

REUBEN M. PINE, OF COLUMBIA CITY, INDIANA.

MACHINE FOR SHARPENING SAWS.

SPECIFICATION forming part of Letters Patent No. 385,004, dated June 26, 1888.

Application filed March 26, 1888. Serial No. 268,457. (No model.)

To all whom it may concern:

Be it known that I, REUBEN M. PINE, a resident of Columbia City, in the county of Whitley and State of Indiana, have invented certain new and useful Improvements in Machines for Sharpening Saws; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improvement in machines for sharpening saws, of which the following is a specification.

In the accompanying drawings, Figure 1 is a side elevation of a saw-sharpening machine embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a detailed perspective view of one of the gages.

A represents the base or frame.

B represents a pair of aligned inclined standards that project from the upper side of the base near one end thereof and have their upper ends connected by a cross-plate, B″.

B′ represents a standard which is parallel with the standards B and is secured near the opposite end of the base. A shaft, C, is journaled in bearings in the standards B and has a rigid gear-wheel, D, which is arranged between the said standards, and to one end of said shaft is secured a crank, L.

F represents an inclined shaft, which is journaled in the standard B′ and in one of the standards B. Rigidly secured to this shaft is a pinion, E, that meshes with the wheel D, and an emery-wheel, G, that has its periphery beveled, as shown.

H represents a curved gage-arm, which is provided at its inner end with a right-angled slotted ear, O. A set-screw, P, extends through the slot in said ear and enters one of the standards B, and thereby secures the gage-arm H to said standard and adapts the same to be adjusted vertically or disposed at any desired angle.

I represents a pair of gages, which are arranged on the ends of the base A, and have the right-angled transversely-disposed slotted plates I″, which bear upon the lower side of the base, and from the inner sides of the said plates depend vertical arms I′. Set-screws J extend through the slots in the plates and enter the base, and thereby adapt the said gages to be secured to the base at any desired adjustment. On one side of the base is a hand-hold, Q, by means of which the machine may be readily grasped and manipulated.

The operation of the invention is as follows: A circular or straight-edge saw is secured in a suitable vise or is supported on the mandrel as when in operation, and the machine is applied to one side of the same, the gages I bearing against the inner side of the saw and the gage H bearing against the points of some of the teeth thereof. This causes the beveled edge of the emery or grinding wheel to enter the space between two of the saw-teeth, and by properly adjusting the gages the said grinding-wheel may be caused to grind the teeth to any desired depth and to any angle. Rotary motion is imparted to the grinding wheel when the crank-shaft is rotated by reason of the gears hereinbefore described, as will be readily understood.

Having thus described my invention, I claim—

1. A saw-sharpening machine comprising the base having the gages and the beveled grinding-wheel mounted on the base, substantially as described.

2. In a saw-sharpening machine, the combination of the base having the standards B B′, the shaft C, journaled in standards B and having the crank and the gear wheel D, the inclined shaft F, journaled in standard B′ and one of the standards B, and having the beveled grinding-wheel, and the pinion meshing with the wheel D, substantially as described.

3. The combination of the base, the beveled grinding-wheel mounted thereon, means, substantially as specified, to rotate said grinding-wheel, the laterally-adjustable gages I at the ends of the base, and the vertically-adjustable gage H above the base, said gage H being also adapted to be inclined, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

R. M. PINE.

Witnesses:
GEO. H. LAMAR,
SCHUYLER DURYEE.