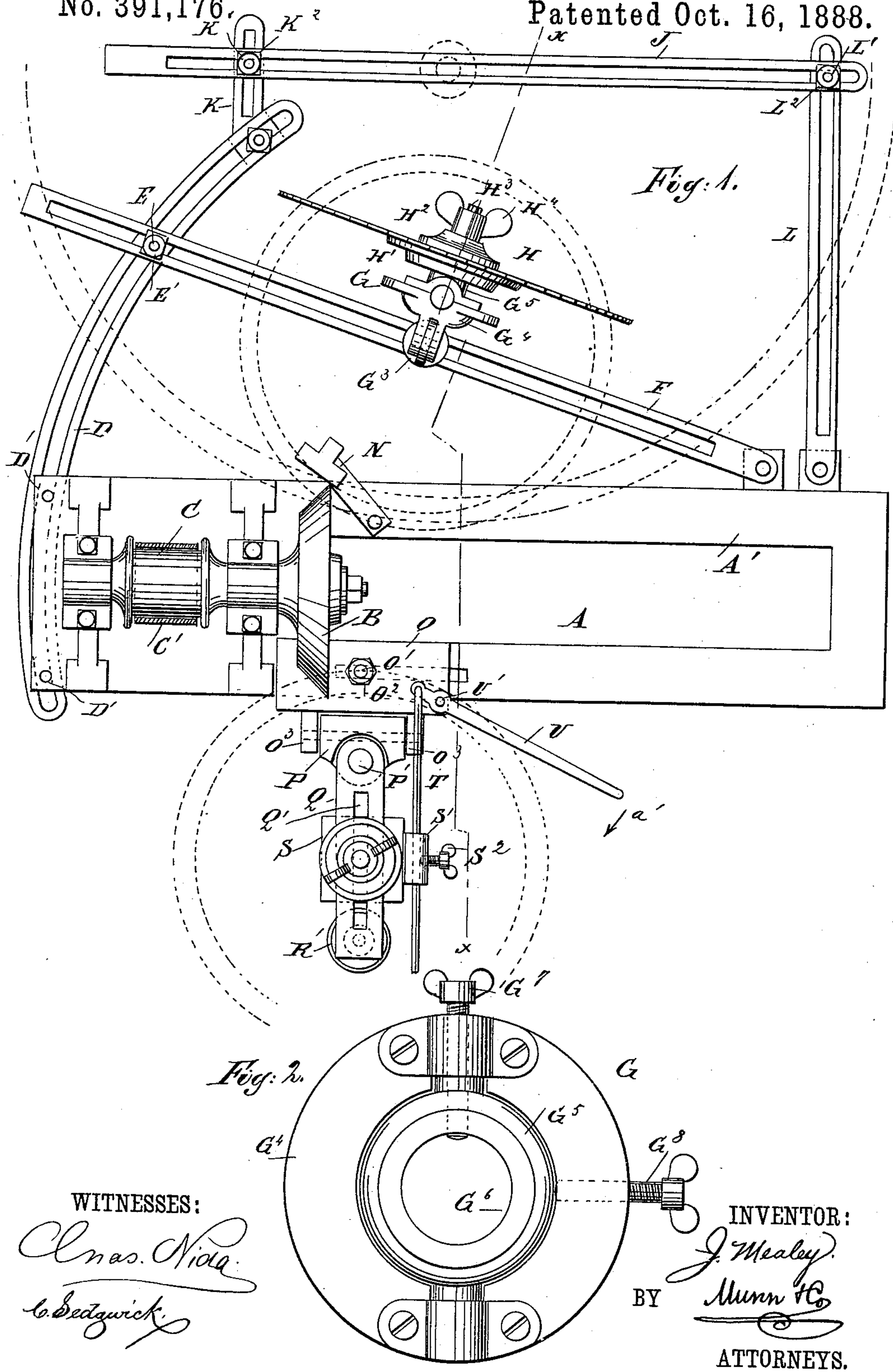


2 Sheets—Sheet 1.

MACHINE FOR SHARPENING AND GUMMING SAWS.

No. 391,176.

Patented Oct. 16, 1888.



N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.)

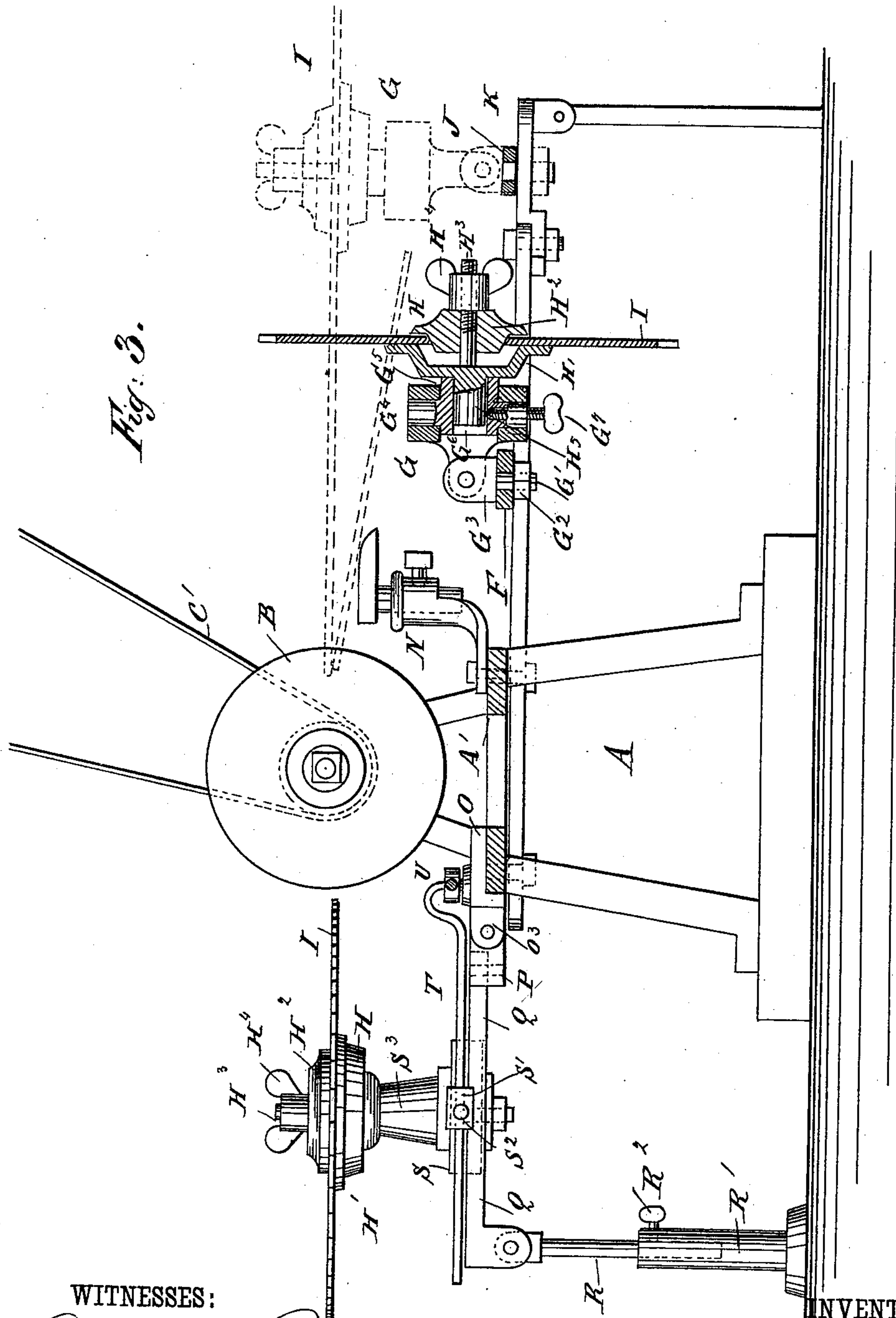
2 Sheets—Sheet 2.

J. MEALEY.

MACHINE FOR SHARPENING AND GUMMING SAWS.

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JOHN MEALEY, OF FAIRVILLE, NEW BRUNSWICK, CANADA.

MACHINE FOR SHARPENING AND GUMMING SAWS.

SPECIFICATION forming part of Letters Patent No. 391,176, dated October 16, 1888.

Application filed December 3, 1887. Serial No. 256,878. (No model.)

To all whom it may concern:

Be it known that I, JOHN MEALEY, of Fairville, in the county of St. John, Province of New Brunswick, and Dominion of Canada, have invented a new and Improved Circular-Saw Sharpener and Gumming Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine for sharpening and gumming circular saws of all sizes very rapidly and effectively.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improvement. Fig. 2 is an enlarged face view of the saw-rest, and Fig. 3 is a vertical cross-section of my improvement on the line *xx* of Fig. 1.

The main frame A, of suitable construction, is provided with the bed-plate A', on which is mounted near one end the grinding-wheel B, which is beveled on its periphery and receives a rotary motion by means of the pulley C and the belt C'. On the under side of one end of the bed-plate A is placed a segmental slotted arm, D, held against the bed-plate A' by means of the bolts D' D', which permit a sliding motion of said arm D to or from the bed-plate A'. Near the other end of the bed-plate A' is pivotally attached the slotted arm F, which reaches over the segmental slotted arm D, and is adapted to be secured to the same by the bolt and nut E and E', respectively.

The saw-rest G is placed on the slotted arm F, and is fastened to the same at any desired point by means of the bolt G' and the nut G², as illustrated in Fig. 3. The saw-rest G consists of the shank G³, provided on its under side with the aforesaid bolt G', and of the bearing G⁴, which is pivotally attached to the shank G³, and of the saw-clamp holder G⁵, which is journaled in the bearing G⁴ and provided with a central aperture, G⁶. (See detailed view, Figs. 2 and 3.)

The saw-clamp holder G⁵ can be fastened in

the bearing G⁴ by the set-screw G⁵, and said holder G⁵ supports the saw-clamp H, which consists of a recessed plate, H', on the face of which is placed and clamped the saw I by means of the beveled clamping device H², held centrally on the bolt H³ and pressed up against the saw by the nut H⁴ screwing on said bolt H³. The plate H' is also provided in its center with a spindle, H⁵, which extends in an opposite direction from the bolt H³ and fits into the aperture G⁶ of the saw-clamp holder G⁵. When the spindle H⁵ is placed in the holder G⁵, it can be turned therein and firmly secured in place by the set-screw G⁷ screwing in the said holder G⁵, as illustrated in Figs. 2 and 3.

It will be seen that the saw I can be placed at any desired angle in relation to the grinding-wheel B by means of the universal-jointed saw-rest G, so that the teeth of the saw can be sharpened at right angles to the face of the saw or at an inclination to the same, so as to form a beveled tooth. The operator can move the saw to or from the grinding-wheel B by sliding the segmental arm D forward or backward on its bolts D', and the saw I can be turned on its axis, as the spindle H⁵, placed in the aperture G⁶ of the saw-rest G, permits a rotary motion of the saw-clamp H, and consequently of the saw I.

In order to grind saws of a very large diameter, I provide an additional slotted arm, J, which is similar to the slotted arm F, and is placed in the slotted extension K, attached by bolts or other means to the segmental arm D. The other end of the slotted arm J is connected with the slotted arm L, pivotally connected with the bed-plate A'. The slotted arm J is fastened on the extension K and on the arm L by means of the bolts K' and L' and the nuts K² and L², respectively. The segmental arm D, the extension K, and the arm L are preferably provided near their outer ends with legs, so as to support the same firmly in a horizontal plane, as illustrated in Fig. 3. To the bed-plate A is pivotally secured the rest N, which can be swung to the center of the bed-plate A or to the edge of the wheel D, so as to support a saw when the same is being ground.

When the teeth of the saw have been sharpened in the manner above described, the saw is gummed by the means presently to be de-

scribed. On the bed-plate A' is held to slide longitudinally a carriage, O, which can be fastened to said bed-plate A' by a bolt, O', and nut O². The carriage O is provided with the lugs 5 O³, which project in front of the machine, and on the same is fulcrumed the carrier P, on which is fulcrumed horizontally at P' the slotted arm Q, on which is pivoted at its outer end the downwardly-extending rod R, fitting into 10 a hollow standard, R', provided with a set-screw, R², so as to fasten said rod R in said standard R', which latter rests on the ground.

It will be seen that the slotted arm Q can be placed in a horizontal or an inclined position 15 by adjusting the rod in the slotted standard R' by means of the set-screw R². On the slotted arm Q is held to slide the plate S, having a lug, S', through which passes the rod T, which can be secured at any point to said lug S' by the 20 set-screw S². The inner end of the rod T is pivotally connected with one end of a lever, U, fulcrumed on the carriage O and serving to move said plate S inward and outward on the slotted arm Q. The plate S supports in its 25 center a standard, S³, provided on top with an aperture corresponding to the diameter of the spindle H⁵, so that the latter can be placed in said standard S³, thereby supporting the saw I, as illustrated in Figs. 1 and 3. It will be 30 seen that the saw I, with its clamp H, is removed from the saw-clamp holder after the saw is ground and placed in the standard S³ for gumming.

The operator, by pressing the lever U in the 35 direction of the arrow a', causes an equal movement of the plate S with the saw I, so that the teeth of the latter are brought in contact with the grinding-wheel B. The slotted arm Q is placed in such an inclined position as to correspond with the inclination which it is intended 40 to give to the edge of the saw-tooth.

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

1. In a saw sharpener and gumming machine, 45 the saw-rest G, provided with the shank G³, the bearing G⁴, and the saw-clamp holder G⁵, having a central aperture, G⁶, in combination with the saw-clamp H, consisting of the recessed plate H', the clamping-teeth H², the bolt 50 H³, the nut H⁴, and the spindle H⁵, which fits into said central aperture, G⁶, of the saw-clamp holder, substantially as shown and described.

2. In a saw sharpener and gumming machine, the recessed plate H', provided with the spindle 55 H⁵, with which said plate turns, in combination with the pivoted clamping-piece H², the bolt H³, on which said clamping-piece H² is held, and the nut H⁴, for screwing said clamping-piece H² against the saw-blade held on said 60 recessed plate H', substantially as shown and described.

3. In a saw sharpener and gumming machine, the combination, with a beveled grinding-wheel, of the carriage O, held adjustably on a 55 bed-plate, the carrier P, fulcrumed on said carriage, the slotted arm Q, fulcrumed on said carrier, a plate, S, held to slide on said slotted arm Q, a rod, T, adapted to be secured to said plate S, and the lever U, fulcrumed on the carriage O and pivotally connected with said rod 70 T to move said plate S forward and backward, so that the saw supported on the plate S is moved to or from said grinding-wheel, substantially as shown and described.

JOHN MEALEY.

Witnesses:

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GEORGE MEALEY.