

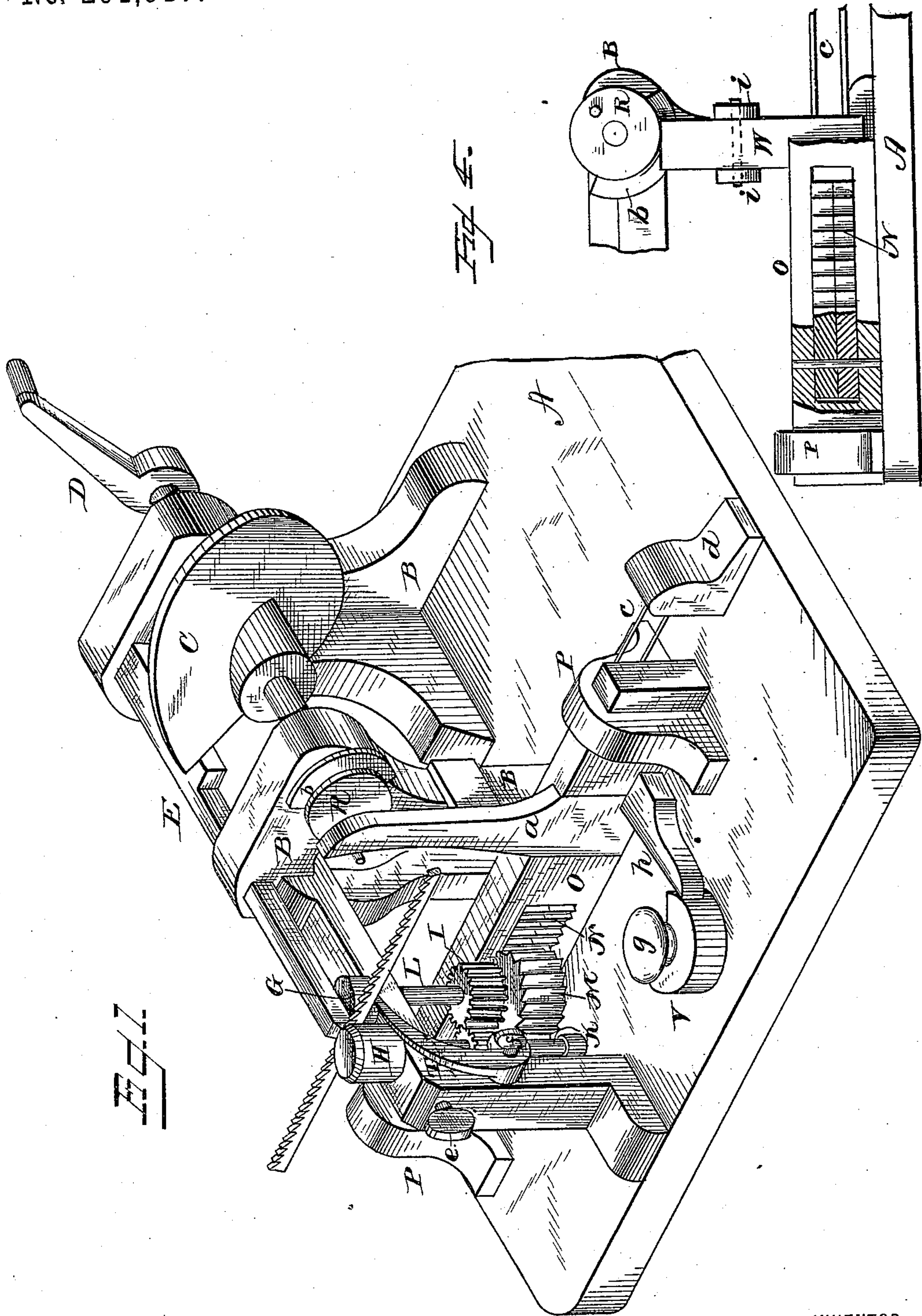
(Model.)

2 Sheets—Sheet 1.

H. MARSTALL.
SAW SETTING MACHINE.

No. 291,917.

Patented Jan. 15, 1884.



WITNESSES
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N. E. Oliphant

INVENTOR
Hermann Marstall
per *Chas. H. Fowler*
Attorney

(Model.)

2 Sheets—Sheet 2.

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Fig. 2.

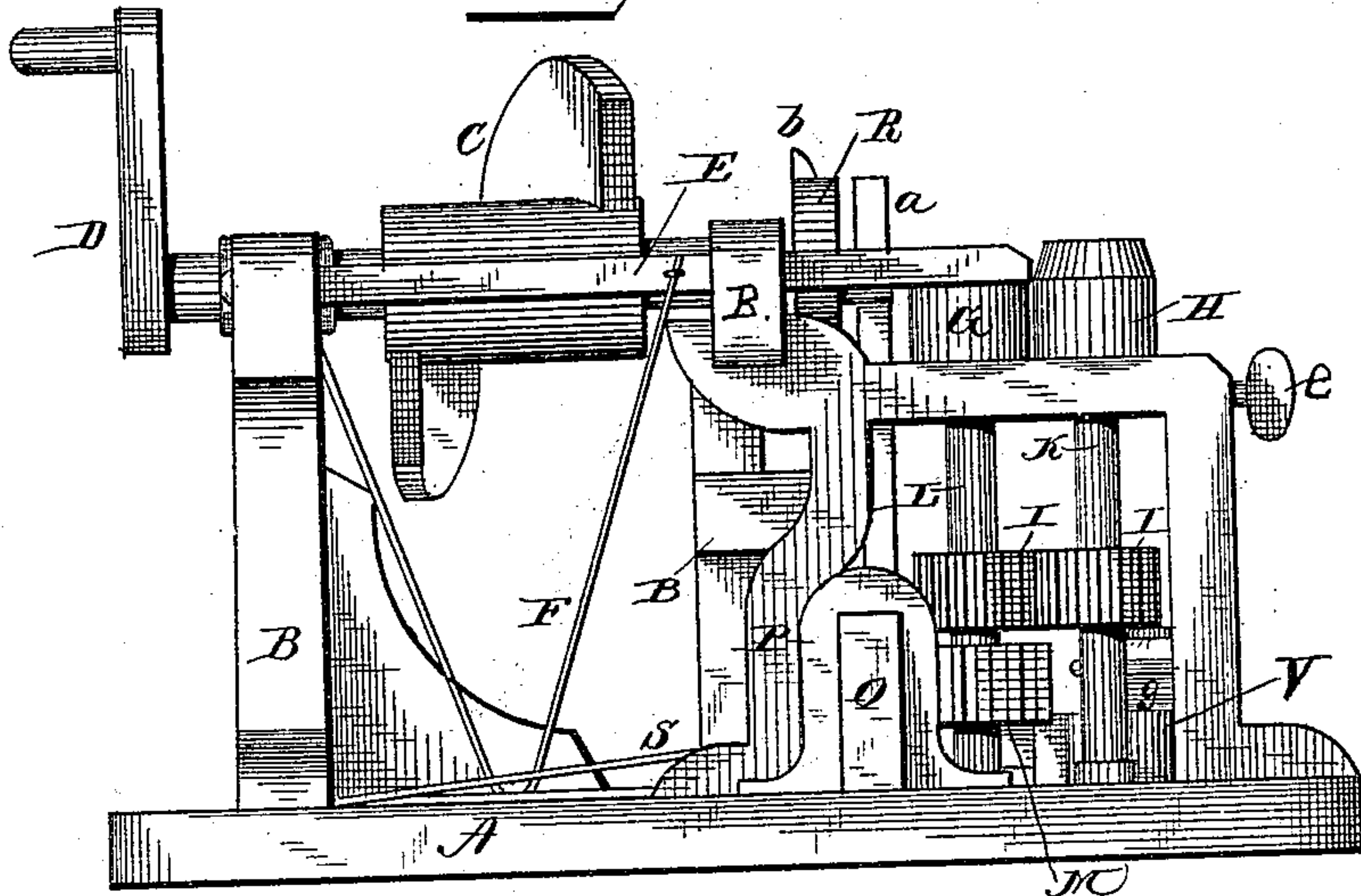
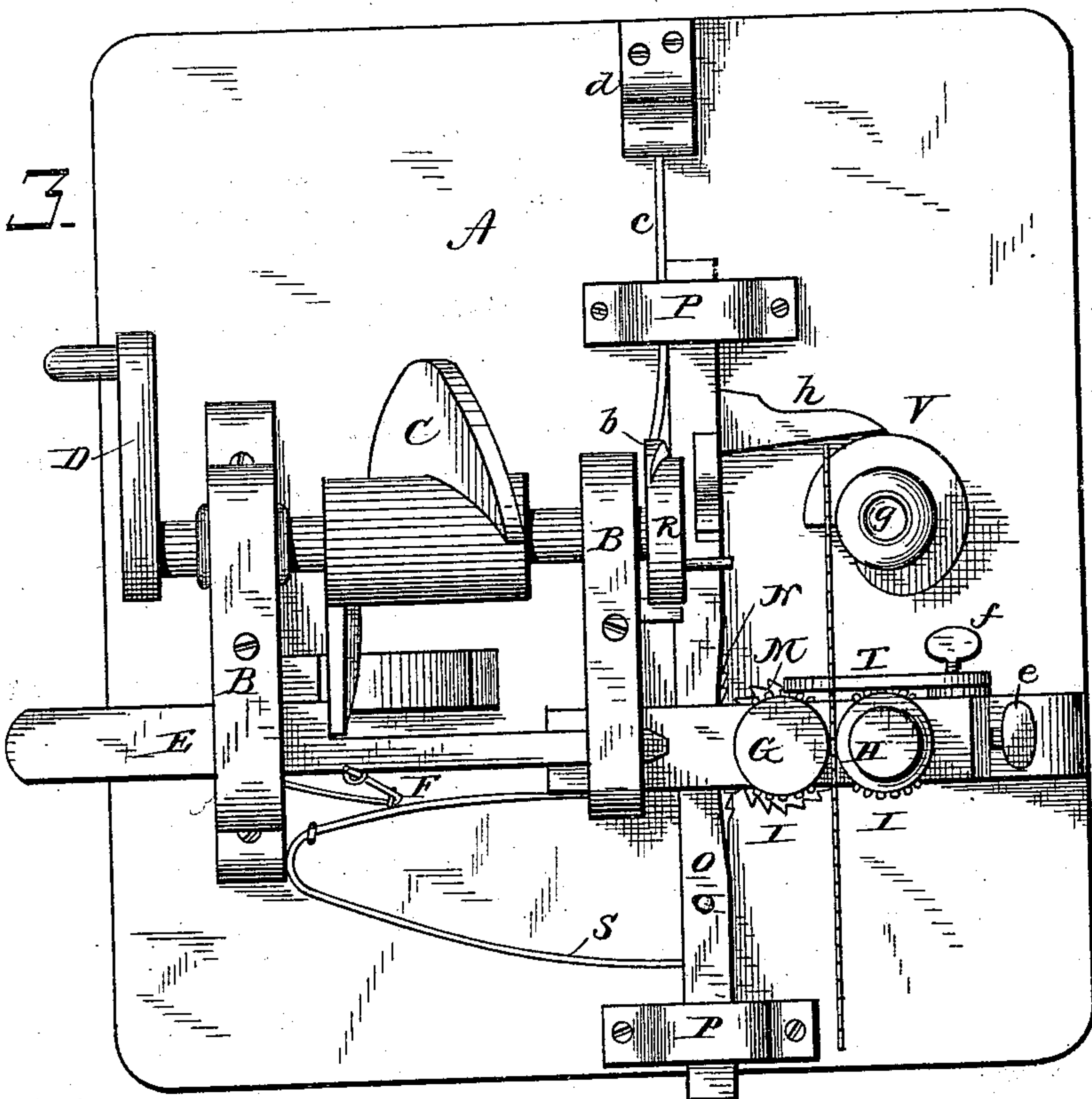


Fig. 3.



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UNITED STATES PATENT OFFICE.

HERMANN MARSTALL, OF EVANSVILLE, INDIANA.

SAW-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 291,917, dated January 15, 1887.

Application filed July 16, 1883. (Model.)

To all whom it may concern:

Be it known that I, HERMANN MARSTALL, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Saw-Setting Machines; and I do hereby declare that the following is a full, clear, and exact description 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 perspective view of my invention; Fig. 2, a front elevation, and Fig. 3 a top plan view, of the same. Fig. 4 is a detail view of the mechanism for operating the pivoted rack-plates.

This invention relates to certain new and useful improvements in saw-sets, the object thereof being to produce such a device that will be simple in its construction, easy and effective in its operation, and capable of setting band-saws in much less time than is usually required to perform the work by hand or with such machines as may be already in use for the same purpose. These objects I attain by the construction substantially as shown in the accompanying drawings, and hereinafter more fully described.

In the drawings, A represents a suitable base supporting the frame and operative parts of the invention. Secured to this base A are standards B, having journaled therein the shaft of a cam-wheel, C, operated by a crank, D. This cam-wheel, when revolved, actuates a punch, E, sliding in suitable slots in the standards B, said slots forming guides, and the punch, when released from said cam-wheel, is caused to forcibly strike the saw-teeth by means of a spring, F, connected to said punch and to the base A and one of the standards B, the saw being placed between friction-rollers G and H, the latter being beveled upon its upper portion to form an anvil. These friction-rollers are operated by gear-wheels I, placed upon their respective vertical shafts K L, and meshing with each other, said shaft L being also provided with a ratchet-wheel, M, meshing with rack-plates N, pivotally secured in a sliding bar, O, working in guides P, and operated by an eccentric, R, upon the end of the cam-

wheel's shaft engaging with an upwardly-extending arm, a, secured to said sliding bar. This eccentric R is provided with a cam, b, against which bears the upper end of a lever, W, said lever being pivoted to lugs i on the standard B, and its lower end extending down between the springs c and sliding bar O, as shown in Fig. 4. When the cam moves in the proper direction, the lower end of the pivoted lever W will actuate the springs c, which are secured to a projection, d, upon the base A, and to the back of the pivoted rack-bar N, thereby automatically throwing said rack-bar in and out of gear with the ratchet-wheel M, secured to the vertical shaft L, at each revolution of the cam-wheel C, thus giving motion, through the medium of the gears I, to the friction-rollers G H to move the saw forward after being struck by the punch, a spring, S, secured to the base and to the sliding bar, acting to bring the latter into position after the disengagement of the rack-bar with the ratchet-wheel, ready for the next revolution of the cam-wheel. When desired to set a saw, the same is placed in position between the friction-rollers, so that the punch will strike full against the teeth. Then the thumb-screw e is tightened, so that said saw is held fast and prevented from slipping. The saw, when thus placed in position between the friction-rollers, is supported by a pivoted lever, T, held in place by a set-screw, f, so that the weight of said saw will not lower the same while the setting is being accomplished. The crank D is operated by the right hand, while the left is placed upon a knob, g, secured to a cam, V, which is used to regulate the feed of the saw according to the distance of the teeth thereon, said cam engaging with a stop, h, projecting from the sliding bar O, and is turned to the right or left at the will of the operator to govern the feed of the saw.

By the use of a device constructed as above described, I am enabled to set a band-saw at the rate of from eighteen to twenty feet in from ten to fifteen minutes, or in about one-fourth the time required to accomplish the same result by hand.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A machine for setting band-saws, consisting of a suitable base having secured thereto standards B, a cam-wheel, C, having its shaft journaled in said standards and operated by a crank, D, a punch, E, actuated by the cam-wheel, friction-rollers G H, and pivoted lever T, to propel and support the saw, a cam, V, for regulating the feed of said saw, and suitable mechanism for operating the friction-rollers at each revolution of the cam-wheel, all combined substantially as described, and for the purpose set forth.

2. The combination of the gear-wheels I, arranged upon parallel vertical shafts K L, to mesh with one another, and a ratchet-wheel, M, upon the shaft L, with a rack-plate, N, pivotally secured in a sliding bar, O, having an upwardly-extending arm, *a*, the eccentric R, secured to the end of the main shaft, and provided with a cam, *b*, and suitable spring mechanism for operating said rack-plate, substantially as and for the purpose specified.

3. The punch E, adapted to slide in slots in the standards B, and actuated by the cam-

wheel C, in combination with the spring F and the friction-rollers G H, substantially as and for the purpose described.

4. The friction-rollers G H, arranged upon the upper ends of parallel vertical shafts K L, the roller H, beveled upon its upper portion to form an anvil, in combination with the punch E, cam-wheel C, gear-wheels I, and means, substantially as described, for operating said gear-wheels, as and for the purpose set forth.

5. The sliding bar O, adapted to work in guides P upon the base A, and provided with an arm, *a*, in combination with the rack-plate N, pivoted therein, the spring S, and the mechanism, substantially as described, for operating said rack-plate, as and for the purpose specified.

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

HERMANN MARSTALL.

Witnesses:

J. HENRY SCHMITS,
ANTHONY DIETRICH.