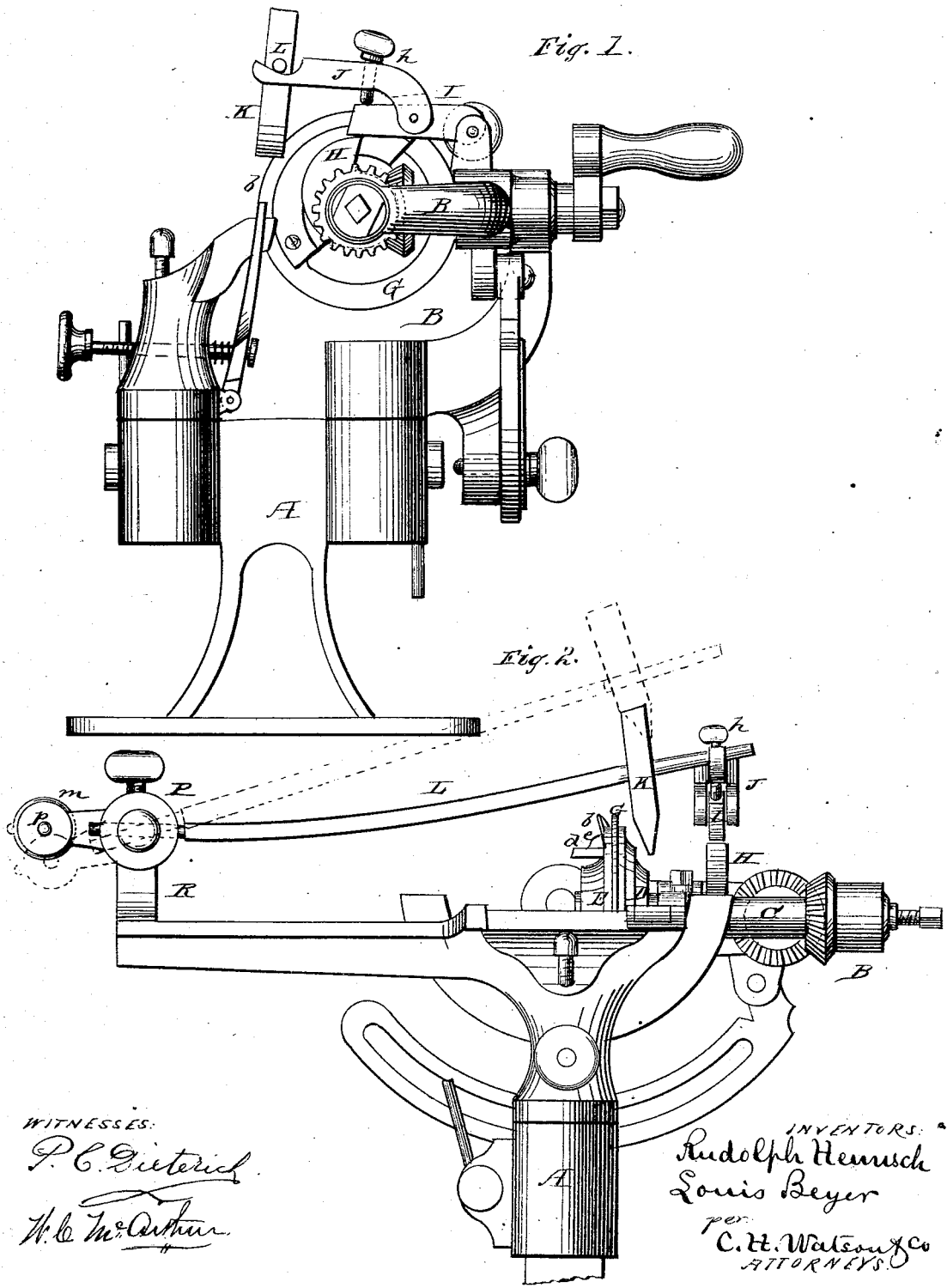


R. HEUNSCH & L. BEYER.
Machine for Setting Saws.

No. 163,776.

Patented May 25, 1875.



WITNESSES:
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Fig. 3.

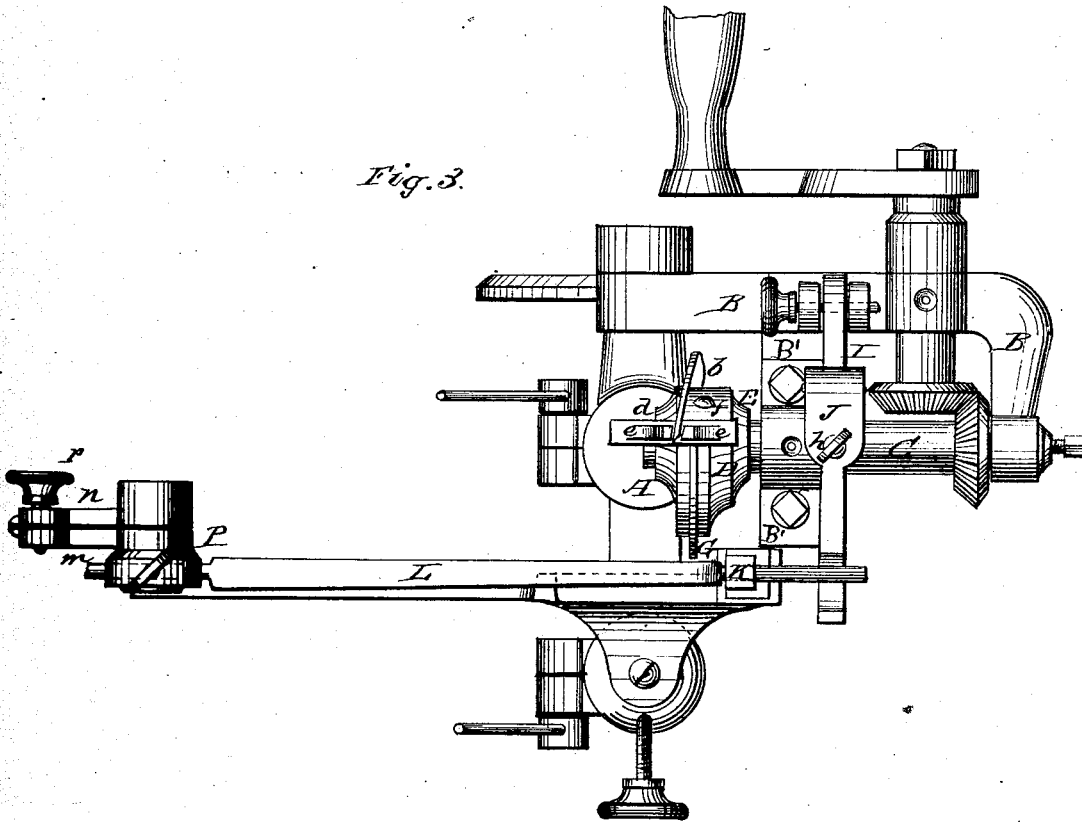


Fig. 4.

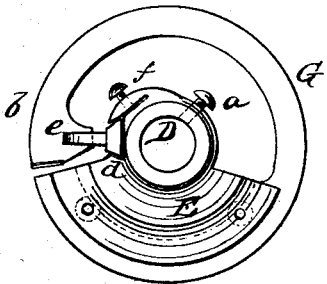


Fig. 5.

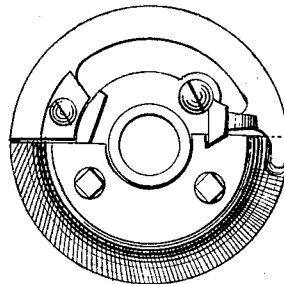
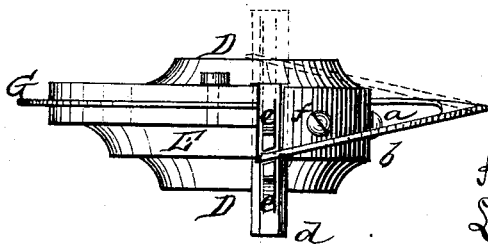


Fig. 6.



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UNITED STATES PATENT OFFICE.

RUDOLPH HEUNSCH AND LOUIS BEYER, OF WASHINGTON, D. C., ASSIGNOR
TO ROBERT C. HEWETT AND GEORGE FOLLANSBEE, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SETTING SAWS.

Specification forming part of Letters Patent No. 163,776, dated May 25, 1875; application filed
May 11, 1875.

To all whom it may concern:

Be it known that we, RUDOLPH HEUNSCH and LOUIS BEYER, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Saw-Setting Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to saw-setting machines, and consists in improvements upon Patents Nos. 116,189, 116,190, 157,517, and 148,701, as follows: first, in the construction of a guide or gage for automatically moving the saw to be set either to the right or left; second, in the device for regulating the blow of the hammer or setting-die; third, in the construction of the holder in which the handle of the setting-die is fastened, all as herein-after more fully set forth.

In the annexed drawings, Figures 1 and 2 are elevations, Fig. 3 is a plan view, and Figs. 4, 5, and 6 are details, of a machine embodying our invention.

A represents a standard, upon which is the frame B. We have located the arm B' of the frame farther in on the main bar, and extend the shaft C a suitable distance beyond said arm, so that the filing-tool can be simply slipped over the end of said shaft, and when required to change the tool it can readily be done without disturbing the shaft.

In setting saws a gage is placed on the end of the shaft C for moving the saw a certain distance at each revolution of the shaft, such distance corresponding with the distance between the teeth.

Our improved gage consists of a hub, D, fastened on the shaft by a set-screw, *a*. This hub is provided on its exterior with a clamp, E, extending about one-third of its circumference, and in which the blade G is held. This blade is in circular form cut out from the center, so that a portion thereof may be held in the clamp E, and the remainder forms a spring,

b, one end of which is separated from the main part of the gage-blade. This end is, on the inner side, provided with a projecting lip placed between two lugs, *ee*, on a sliding bar, *d*, moving longitudinally in a groove in the hub D.

By means of the slide *d* and the springy nature of the gage-blade, the blade may be set to feed the saw either to the right or left, and any desired distance at each revolution of the shaft, it being of course understood that the gage-blade operates against the straight side of the saw-tooth, and that the main or circular part of the blade is against the tooth, while the setting-die operates against another tooth, and that it is only while the setting-die is elevated that the spiral or spring part *b* is in contact with the tooth, and moves the saw. The slide *d* is held at any point desired by a set-screw, *f*, to prevent its slipping out of place. On the shaft C is secured the cam H, for operating the lifting-lever, which we make in two parts, I and J. The part I is hinged to the frame B in any suitable manner. The rear end of the part J is forked, and straddles and is pivoted to the part I. Through the part J is passed a set-screw, *h*, to bear against the upper surface of the part I, and by turning this set-screw the relative position of the two parts may be adjusted at pleasure, so as to cause the lever to raise the setting-die more or less, and thus give a stronger or weaker blow, as required. K represents the setting-die, and L the spring-arm, upon which it is placed. The spring-arm L is held by a set-screw in a stud, P, pivoted to the overhanging bracket R. The stud and bracket are respectively provided with arms *m* and *n*, and through said arms is passed a pin, bolt, or screw, *p*. It will readily be seen that when the pin *p* is in the arms *m n*, the stud P is held stationary and cannot turn, and hence the spring-arm will act when operated upon by the lifting-lever. When the pin P is removed the stud P is allowed to turn, and the spring-arm will not operate.

It is of great importance to have a device whereby the setting-die can be easily and quickly, so to say, thrown out of gear; and especially is it desirable to prevent the spring-

arm from acting when placing the saw in position in the machine, so as to allow the operator to try the die and adjust it on the arm.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The feeding-gage, consisting of the blade G, held in a clamp, E, on the hub D, and formed with the spring part *b*, movable to the right or left by means of the slide *d*, substantially as and for the purposes herein set forth.

2. The lifting-lever, made in two parts, I and J, hinged one upon the other, and their relative position adjusted by means of a set-screw, in combination with the spring-helve

L and hammer K, substantially as and for the purposes herein set forth.

3. The combination, with the spring-arm L, carrying the setting-die K, of the pivoted stud P, bracket R, arms *m n*, and pin *p*, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

RUDOLPH HEUNSCH.
LOUIS BEYER.

Witnesses:

C. H. WATSON,
WILLIAM L. BRAMHALL.