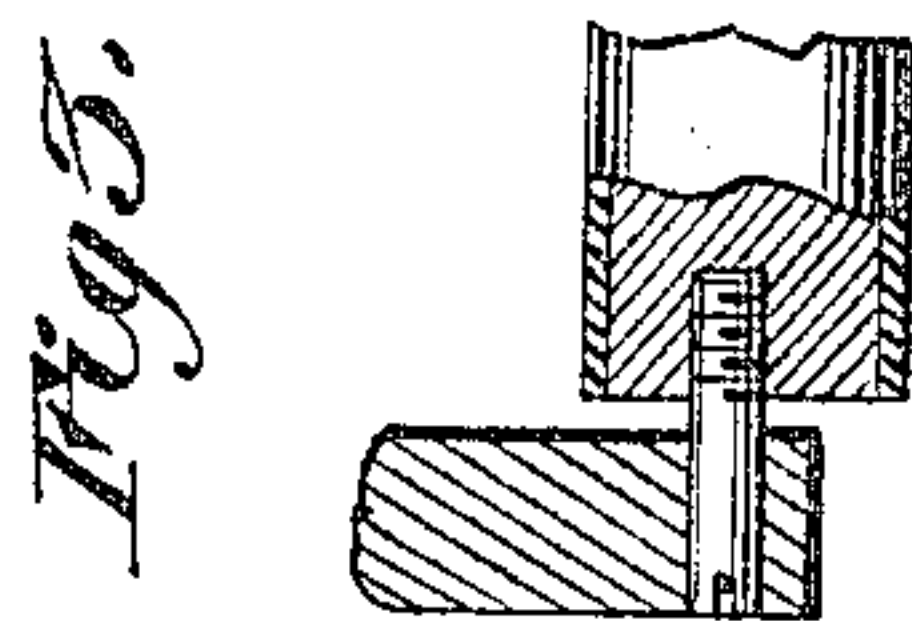
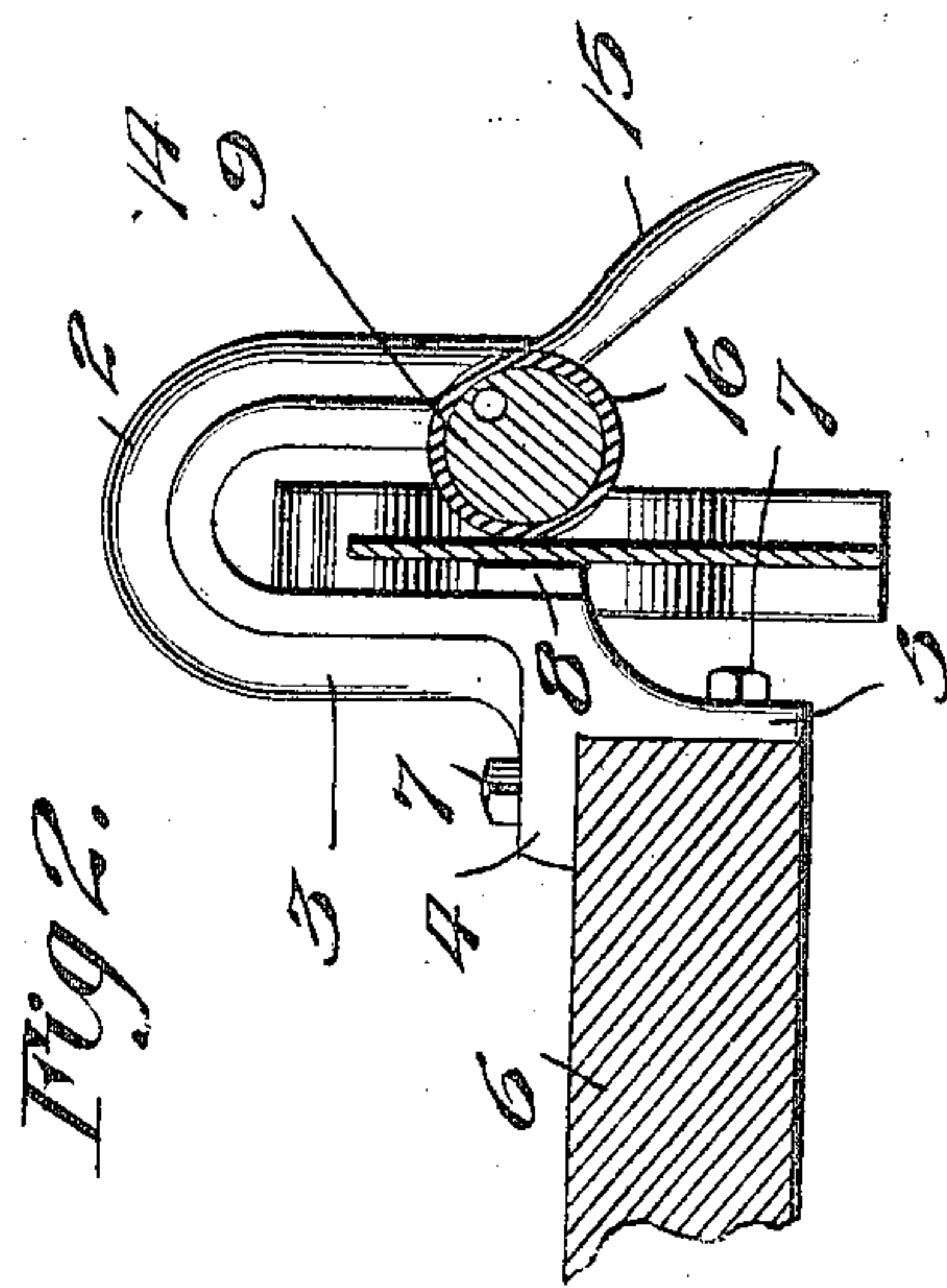
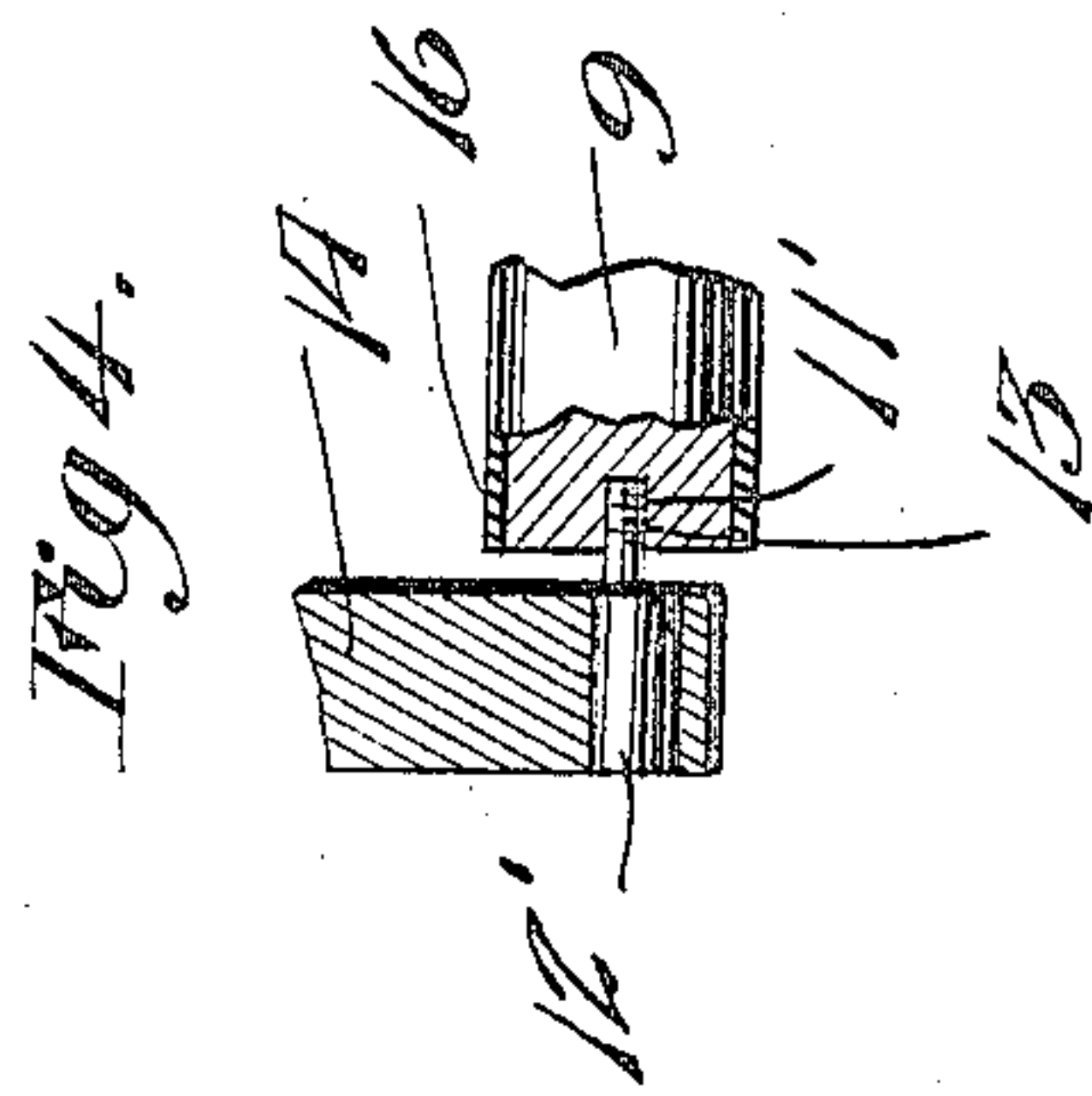
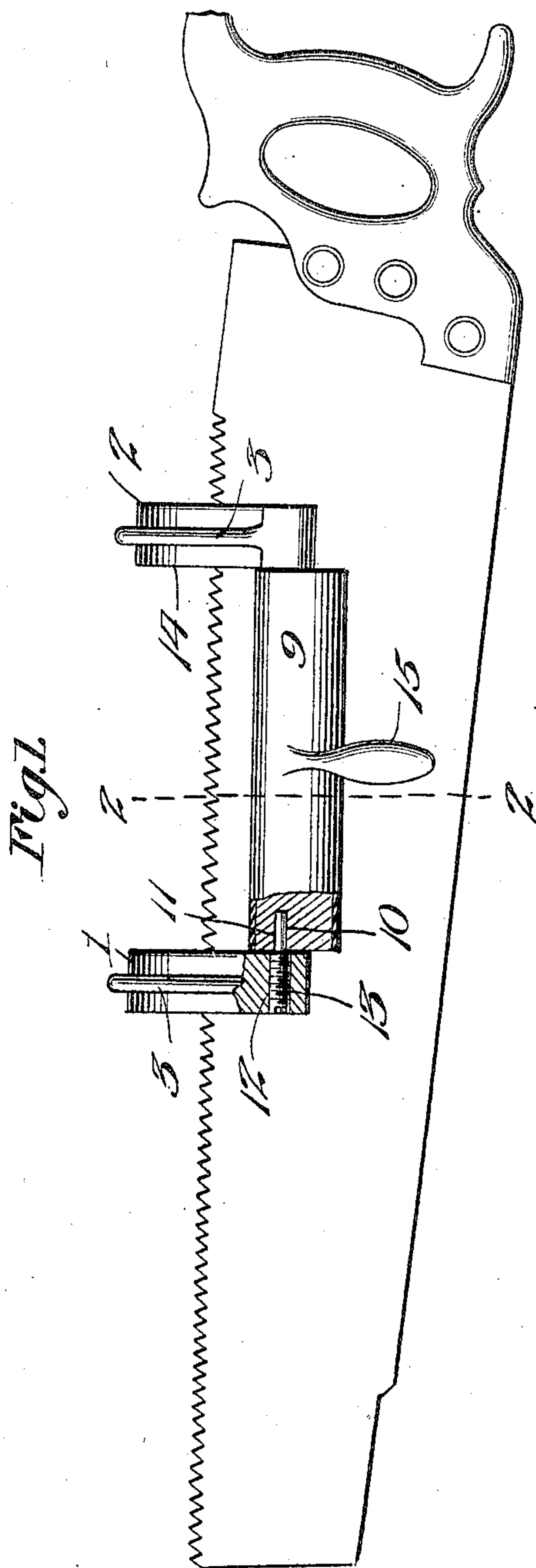


No. 813,036.

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C. W. CARDWELL.
SAW CLAMP.

APPLICATION FILED APR. 12, 1905.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES W. CARDWELL, OF JAMAICA, NEW YORK.

SAW-CLAMP.

No. 813,036.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed April 12, 1905. Serial No. 255,211.

To all whom it may concern:

Be it known that I, CHARLES W. CARDWELL, a citizen of the United States, residing at Jamaica, Long Island, in the county of Queens and State of New York, have invented new and useful Improvements in Saw-Clamps, of which the following is a specification.

This invention relates to improvements in clamps or vises for holding saws during the operation of sharpening the same, the object of the invention being to provide a vise or clamp which is simple of construction, durable and efficient in use, and inexpensive of manufacture, and which holds a saw firmly against vibration and renders the operation of sharpening practically noiseless.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a saw clamp or vise embodying my invention, showing a saw clamped thereby, a portion of one of the brackets and the bar or roll being broken away to show the eccentric and pivotal connection. Fig. 2 is a vertical cross-section taken on the line 2 2 of Fig. 1, and Figs. 3 and 4 are detail sectional views showing a modification in the means for pivotally mounting the clamping bar or roll.

Referring now more particularly to the drawings, the numerals 1 and 2 represent inverted-U-shaped brackets, the rear arms 3 of which are provided at their lower ends with horizontal and vertical flanges 4 and 5, adapted to engage the edge of a work bench or table 6, said flanges being pierced for the passage of screws or bolts 7 for securing the same thereto. The brackets may be secured, however, in any other preferred manner to a work-bench or any other suitable support.

Extending longitudinally between and suitably secured to the lower rear faces of the arms 3 of the brackets is a cross-bar 8, constituting the fixed jaw of the clamp or vise, and arranged in advance thereof is a clamping bar or roll 9, pivotally mounted to engage the blade of the saw and clamp it against the jaw 8.

As shown, the bar or roll 9 is cylindrical in form and is provided at its ends with eccentric bearing-sockets 10 to receive spindles or journal-pins 11, carried by fastening-screws 12, engaging threaded transverse openings 13, formed in the lower ends of the front arms

14 of the brackets 1 and 2, each screw having its outer end nicked or otherwise constructed to receive a screw-driver, bit, or other tool to adapt it to be readily applied and removed. The sockets 10 and pins 11 are arranged eccentric to the axis of the roll 9, whereby when the latter is swung downwardly and inwardly to bring that portion of its face or periphery lying farthest from the plane of the pivotal connection into engagement with the blade of the saw the latter will be clamped firmly and securely against the jaw 8. By this construction of the clamping-roll an instantaneous variable adjustment of the same is attained to permit of the quick clamping of the blades of saws varying in thickness. The roll is provided upon the outer portion of its periphery with an actuating-handle 15 and is also provided with a sheathing or covering 16, of rubber or other suitable non-resonant material, which will frictionally engage the surface of the saw-blade and prevent slipping thereof and at the same time absorb and prevent vibrations of the blade of the saw during the operation of sharpening the teeth thereof, thereby preventing the noise customarily produced and rendering the operation of sharpening practically noiseless. The roll 9 extends longitudinally the full length of the space between the brackets 1 and 2, thus giving a maximum extent of clamping-surface.

Instead of making the roll 9 of cylindrical form it may be of any other shape suitable for the purpose and may consist of an eccentrically-pivoted bar having an acting face of proper shape or curvature to engage and clamp the blade of the saw. Also, instead of mounting the clamping roll or bar upon the pivot pins or journals 11 the screws 12 may be mounted in threaded sockets in the ends of the rolls and the pins 11 journaled in bearing-openings in the arms 14, as shown in Fig. 3, this construction merely constituting the reversal of that shown in Fig. 1. I may also mount the bar or roll 9 concentrically or coaxially upon the threaded stems 11', carried by eccentric journals 12', as shown in Fig. 4, so that the same action will be obtained when the bar or roll is adjusted.

It will be seen that my invention provides a simple, cheap, and effective construction of clamp or vise which will securely hold a saw-blade, which may be quickly and conveniently adjusted, and which will entirely pre-

vent or diminish the noise usually resulting in the operation of sharpening the teeth of the saw to a material extent.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of the invention will be apparent without a further extended description.

Changes in the form, proportions, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

1. A saw vise or clamp comprising an arched frame, an elongated jaw disposed at the base of the arch and fixed to one of the sides of the frame, an elongated clamping bar or roll eccentrically mounted upon the opposite side of the frame and coextensive in length with and disposed opposite said fixed jaw, and an operating-handle projecting from the outer side of the roll, substantially as described.

2. A saw vise or clamp comprising spaced brackets, each formed of inner and outer arms joined at their upper ends by a short arched portion, the inner arm being provided at its lower end with means for attaching the bracket to a support, an elongated jaw disposed at the base of the arch and fixedly attached to the inner arms, an elongated clamping bar or roll eccentrically mounted upon the outer arms of the brackets and coextensive in length with and disposed opposite the fixed jaw, and an operating-handle projecting from the outer side of the roll, substantially as described.

3. A saw vise or clamp comprising a frame

provided with an elongated fixed jaw, an elongated clamping-roll eccentrically mounted upon the frame opposite said fixed jaw and coextensive in length therewith, said roll having a covering of resilient, non-resonant material completely enveloping the periphery thereof to prevent the emission of sound-vibrations from the saw and sympathetic vibrations from any portion of the roll, and an operating-handle applied to the roll.

4. A saw clamp or vise comprising an arched frame, an elongated clamping-jaw disposed at the base of the arch and fixed to one of the sides of the frame, a clamping bar or roll disposed opposite said fixed jaw and coextensive in length therewith, and connections pivotally mounting the roll eccentrically upon the outer side of the frame, each connection comprising a stem having a screw-threaded portion attached to one of the parts and a journal portion engaging the other part, one of said portions being set eccentric to the other portion.

5. A saw clamp or vise comprising an arched frame, an elongated jaw disposed at the base of the arch and fixed to the inner side of the frame, a clamping bar or roll disposed opposite said fixed jaw and coextensive in length therewith, and connections pivotally mounting the roll upon the outer side of the frame, each of said connections comprising a threaded stem fixedly engaging the bar or roll and an eccentric journal revolubly mounted in the frame.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. CARDWELL.

Witnesses:

W. H. COOPER,
K. COMISKEY.