

W. WEAVER.
HORSESHOE CALKING VISE.

No. 170,319.

Patented Nov. 23, 1875.

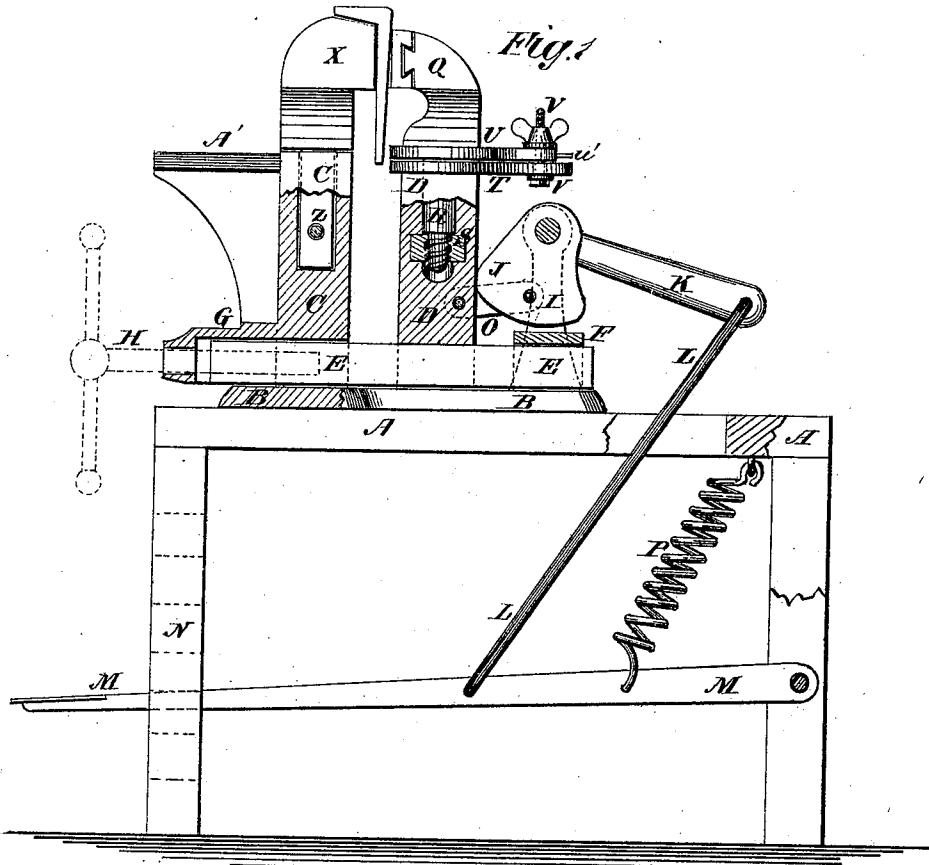


Fig. 2.

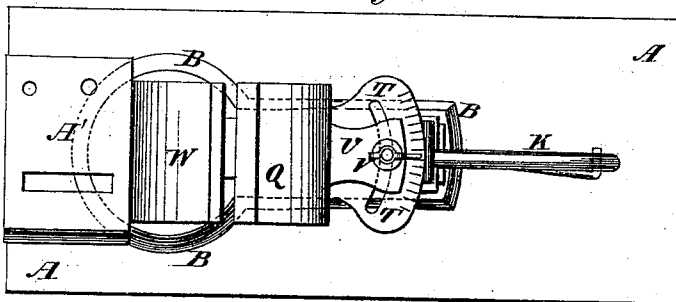
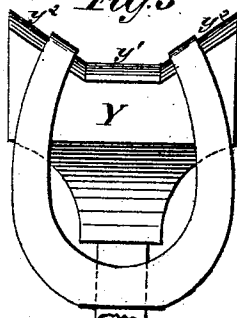


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE

WILLIAM WEAVER, OF GREENWICH, NEW YORK.

IMPROVEMENT IN HORSESHOE-CALKING VISES.

Specification forming part of Letters Patent No. **170,319**, dated November 23, 1875; application filed May 22, 1875.

To all whom it may concern:

Be it known that I, WILLIAM WEAVER, of Greenwich, in the county of Washington and State of New York, have invented a new and useful Improvement in Bench-Vise, of which the following is a specification:

Figure 1 is a side view of my improved vise, parts being broken away to show the construction. Fig. 2 is a top view of the same. Fig. 3 is a face view of the jaw for sharpening horseshoe-calks.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A represents an ordinary work-bench, to which the base B of the vise is attached in the ordinary way. C is the front standard of the vise, which is formed solidly upon or rigidly attached to the base B. D is the rear standard of the vise, which is rigidly attached to a square bar, E, which slides upon the base B. The rear end of the bar E works in a square socket, F, attached to the rear part of the base B, and its forward end works in a square socket, G, formed in the lower end of the stationary forward standard C. The forward end of the socket G is closed, and has a hole formed through it for the passage of the hand-screw H, which screws into a longitudinal screw-hole formed in the forward end of the square sliding bar E, so that the rear standard of the vise may be moved forward and back by turning the said screw H, the shoulder of the screw H resting against the end of the socket G. To standards I, attached to the opposite side edges of the rear end of the base B, is pivoted a cam, J, to which is rigidly attached a lever, K. To the rear or free end of the lever K is pivoted the upper end of a connecting-rod, L, which passes down through a slot in the bench A, and its lower end is pivoted to the foot-lever or treadle M. The rear end of the treadle M is pivoted to the frame of the bench A, or to a support attached to said bench, and its forward end projects into such a position that it may be conveniently reached and operated by the workman with his foot. The forward part of the treadle M moves along the side of a notched bar, N, by

which the said lever may be caught and held, locking the vise. The cam J is connected with the rear standard D by two pivoted straps or plates, O, so that the said standards D may be drawn back by the said cam J.

P is a spring, one end of which is connected with the bench A, and its other end is connected with the treadle M, so that the rear standard D may be drawn back by simply releasing the treadle M from the notched bar N. Q is an ordinary vise-jaw, which is made with a round stem, R, which fits into a round hole or socket in the rear standard D.

The end of the stem R is turned down, and has a screw-thread cut upon it, which screws into a nut, S, let into the said standard D from its side, so as to prevent the jaw Q from rising when clamping heavy work. To the upper end of the standard D is attached a plate, T, which projects to the rearward, is widened, has a slot curved upon the arc of a circle, having its center in the axis of the stem R, formed in its rear part, and has a scale of degrees formed upon it along the outer side of said slot. To the shoulder of the jaw Q is attached a plate, U, which rests upon the plate T, projects to the rearward, and has a hole formed in it to receive the clamping-bolt V, which passes through the slot of the plate T, so that the jaw Q may be secured in place when adjusted. To the outer end of the plate U is attached a pointer, *w*, to point to the scale of degrees upon the plate T, for convenience in adjusting the jaw Q. In the stationary standard C is formed a square hole to receive the square stem of the detachable and exchangeable jaws W X Y, where they are secured in place by a pin or key, Z, as shown in Fig. 1. The jaw W is an ordinary vise-jaw. The jaw X has the forward part of its top made upon a bevel, so that it may be used for forming the heads of keys, as shown in Fig. 1, and other similar work. The jaw Y is made with a bevel, *y*¹, upon the forward middle part of its top, the length of which is made equal to, or a little greater than, the width of the toe-calk of a horseshoe, and the bevel of which is made at such an angle as will give the desired taper to said toe-calks.

Upon the side forward parts of the top of the jaw Y are formed two inclined and bev-

eled projections, y^2 , which are so formed as to give the proper taper and inclination to the heel-calks of a horseshoe, as shown in Fig. 3, the said projections being so formed that both the heel-calks may be supported at the same time in position to be operated upon. The jaw Y enables a shoe to be held firmly while the calks are being sharpened, even when the shoe has been so worn as to be inclined.

Upon the outer side of the forward standard C is formed, or to it is permanently or detachably attached, a table or anvil, A', in which are formed holes of various size, and which may be either countersunk or not, to adapt the table to be used for heading bolts,

straightening pieces of iron, holding dies, &c., as may be desired.

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

The combination, with standard D, fast to slide E, of the cam J, connected with said standard by pivoted straps O O, and pivoted in rigid uprights I, as and for the purpose described.

WILLIAM WEAVER.

Witnesses:

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EDWIN ANDREWS.