(No Model.)

C. M. BOYCE.

VISE.

No. 286,995. Patented Oct. 23, 1883.

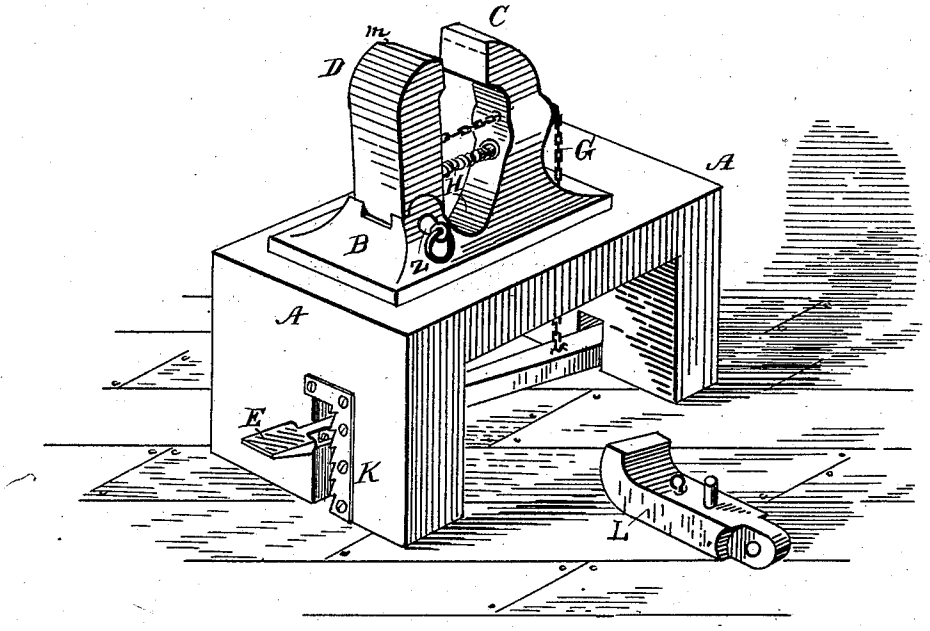


Fig. 1.

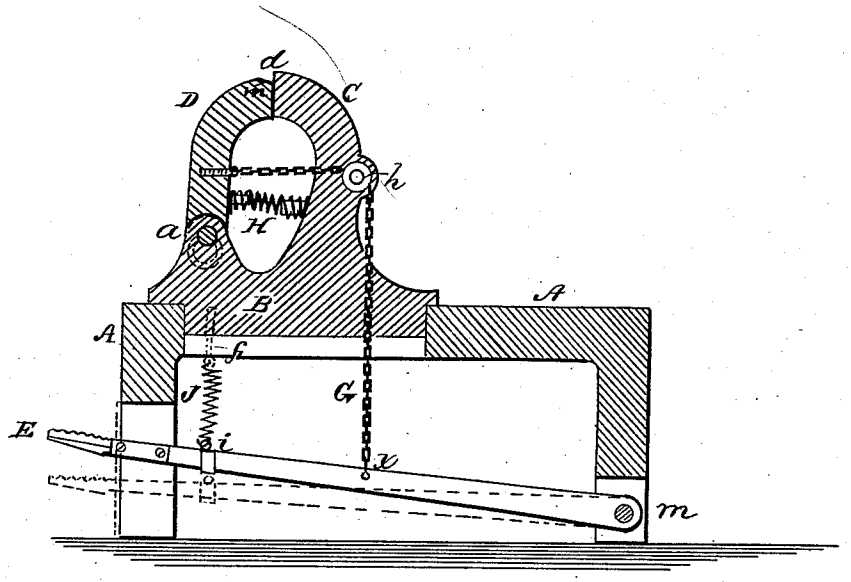


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES M. BOYCE, OF STONEHAM, MASSACHUSETTS.

VISE.

SPECIFICATION forming part of Letters Patent No. 286,995, dated October 23, 1883.

Application filed March 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BOYCE, of Stoneham, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Vises, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view of my improved vise, and Fig. 2 a vertical longitudinal section of the same.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to a vise designed for blacksmith's use in turning or forming the heel-calks of horseshoes; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents the bench on which the vise is mounted; B, the body or bed of the vise; C the fixed, and D the movable, jaw. The movable jaw is pivoted at *a* to the bed B, and is slightly shorter than the fixed jaw, so that when closed the fixed jaw projects above it and forms a shoulder, as shown at *d* in Fig. 2. A treadle, E, is pivoted at *m* in the bench A; and attached to the treadle, at X, there is a chain, G, which passes over a pulley, *h*, in the jaw C, and has its upper end connected at *g* to the body of the jaw D. A spiral spring, H, is arranged horizontally between the jaws, and acts expansively to open them in removing the work or when the treadle is elevated. Attached at *f* to the bed A there is a coiled spring, J, the lower end of which is secured to the treadle at *i*, this spring acting contractively to elevate the treadle.

In the use of my improvement the horseshoe, having first been properly heated, is placed between the jaws C D, with the heel of the shoe projecting above the short jaw D a distance corresponding with the length of the calk to be formed, the treadle at the same time being forced down by the foot of the workman, causing the jaws to firmly grasp or clamp the shoe between them. The calk is then formed or turned by bending the projecting end of the shoe over onto the short or movable jaw D, and shaping it by means of the ordinary hammer, in a manner which will be readily obvious without a more explicit description.

A serrated vertically-arranged bar or rack, K, is attached to the bench near the outer end of the treadle, the treadle being adapted to be swung laterally and engage the rack when it is depressed to its lowest point, and thereby assist in holding the shoe in the jaws of the vise while the calk is being formed. The difference in length between the jaws of the vise corresponds with the thickness of the shoe, so that when the calk is turned, as described, it may be properly hammered down without reducing the thickness of the shoe too much at the bend or where the calk joins the body of the shoe, the long jaw C acting as a guard to prevent such an occurrence.

The jaw D is chamfered or provided at its upper end with a bevel, *m*, the bevel inclining at an angle of about thirty degrees (more or less) to the face of the jaw. The object of the bevel is to enable a sharp calk to be formed on the shoe, the bevel corresponding with the incline of the forward side of the calk, so that when the calk is bent over, as described, it will assume a wedge shape, or be sharpened as it is hammered down onto the head of the jaw. For blunt or square calks the jaw L is used, in which the bevel *m* is dispensed with. The short jaw is pivoted to the bed by a removable bolt, *z*, and may be readily changed to correspond with the work being done. I prefer to make the short jaw movable; but it will

be obvious that this jaw may be fixed and the other pivoted, if desired, without departing from the spirit of my invention.

Having thus explained my invention, what I claim is—

An improvement in a vise, consisting of a fixed jaw, a pivoted jaw shorter than the fixed jaw, an inwardly-projecting lug on the inside of each jaw, a spring which engages the lugs and forces the jaws apart, a chain attached at one end to the pivoted jaw, at the other end to a treadle, a catch, and ratchet for holding the treadle, and a spring for throwing it up, substantially as described.

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Witnesses:
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