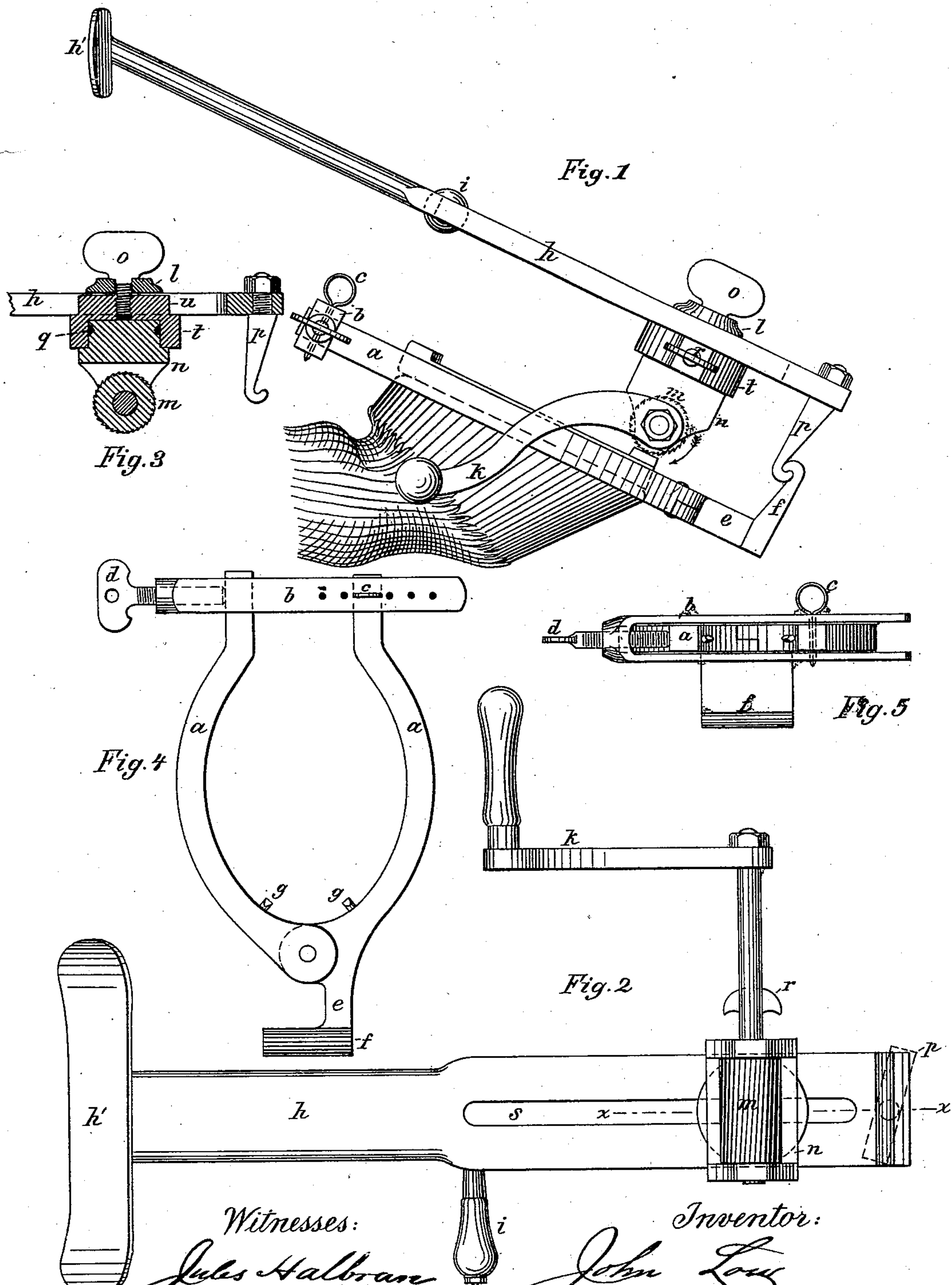


J. LOW.
Horseshoe-Calk Sharpener.

No. 226,408.

Patented April 13, 1880.



Witnesses:
Jules Halbran
David Repetto

Inventor:
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UNITED STATES PATENT OFFICE.

JOHN LOW, OF SHEFFIELD, MASSACHUSETTS.

HORSESHOE-CALK SHARPENER.

SPECIFICATION forming part of Letters Patent No. 226,408, dated April 13, 1880.

Application filed September 4, 1879.

To all whom it may concern:

Be it known that I, JOHN LOW, of Sheffield, county of Berkshire, State of Massachusetts, have invented certain new and useful Improvements in Horseshoe-Calk Sharpeners; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side elevation of the machine when applied for use; Fig. 2, a plan view of the reverse side of the frame, showing the cutter and operative parts; Fig. 3, a longitudinal section on the line *x x*, Fig. 2; Fig. 4, a plan view of the yoke or clamp detached, and Fig. 5 an elevation of the rear end of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to provide a portable machine for sharpening the calks of horseshoes without removing the shoe from the animal's foot; and the invention consists in the adaptation to a light portable frame-work of a rotating cutter and devices for adjusting the same to a proper position to act upon the toe and heel calks respectively, and to be conveniently operated by hand.

In order that others may understand and use my invention, I will first proceed to describe the construction and relative arrangement of the several parts of a machine embodying the same, and subsequently to explain its operation, and point out in the claims its novel characteristics.

In the drawings, *a* represents a pivoted yoke designed to embrace the shoe, as shown in Fig. 1, and secured thereto by means of the adjustable bifurcated cross-bar *b*, the latter being connected to one arm of the yoke, as shown in Figs. 4 and 5, by means of a removable transverse pin, *c*, passing vertically through the same, a series of holes being provided in the cross-bar, as shown in Fig. 4, to adapt the yoke to shoes of different sizes. The closed end of the bifurcated cross-bar is then swung over the end of the opposite or pivoted arm of the yoke, and the respective arms forced together and tightly clamped to the shoe by means of the set-screw *d*, which passes through the closed end of the cross-bar and bears upon

the pivoted arm of the yoke. The yoke is also constructed with an extension, *e*, upon which a rigid projecting hook, *f*, is formed, herein-after more particularly referred to, and internal projecting studs *g g* are also provided to bear upon the surface of the shoe and maintain the yoke in its proper relative position.

h represents the brace or stock of the machine, provided at one end with a cross-plate, *h'*, designed to bear against the body of the operator, and at its opposite end with a hook, *p*, corresponding to the hook *f* upon the yoke *a*, with which it engages when the machine is applied for use. The hook *p* is swiveled or pivoted to the stock *h*, so that it will preserve its engagement with the hook *f* whenever the stock *h* is moved to the right or left, the bearing of the respective hooks upon each other being elongated to insure their engagement during such movement of the stock.

The rotating cutter *m* is mounted in a journaled block, *n*, and rotated by means of the crank *k*, arranged upon the right hand of the stock, a rigid handle, *i*, being located upon the opposite side of said stock, to be grasped by the left hand of the operator, the position of these parts being reversed when the machine is adapted for a left-handed operator.

The block *n*, carrying the cutter *m* and its operating-crank, is constructed with a round tenon, as shown in the sectional view, Fig. 3, which is provided with a circumferential groove, *q*. This tenon is fitted to rotate within a socket, *t*, the parts being connected together by means of a set-screw, *r*, which passes through one side of said socket and projects within the circumferential groove *q*, this connection permitting an adjustment of the cutter to any desired angle with the stock *h*, and also providing for a separation of the parts.

The socket *t* is provided with a rib or extension, *u*, which passes into a longitudinal slot, *s*, in the stock *h*, and is secured therein by means of the clamp-screw *o* and intermediate washer, *l*. The slot *s* is formed of sufficient length to permit of a longitudinal adjustment of the socket *t*, so that the cutter *m* may be brought in position to act upon both the heel and toe calks.

Having described the several parts composing the machine, its operation will be readily

understood by referring to Fig. 1 of the drawings hereto annexed, the parts being shown in the relative position in applying the machine to the toe-calks, the position of the operator being astride of the animal's leg, with the cross-plate *h'* resting against his body.

When the cutter is applied to the heel-calks the clamp-screw *o* is loosened, the socket *t* moved to the rear end of the slot *s* and fastened, and the cutter-block *n* turned and set to the desired angle for such application.

The cutter shown is made of tempered steel and provided with cutting-edges spirally arranged, as in the ordinary milling-tool; but a grinding-wheel may be substituted therefor if desired.

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

1. A portable calk-sharpener consisting of the pivoted yoke *a*, adapted to shoes of different sizes, and the detachable hand-stock *h*, carrying a rotating cutter and capable of a vertical and a lateral pivoted adjustment relatively with the fixed yoke *a*, substantially as shown.

2. The hand-stock *h*, carrying the adjustable cutter *m* and provided with the bearing-plate *h'*, handle *i*, and pivoted hook *p*, in combination with the yoke *a*, having the rigid hook *f*, substantially as described.

JOHN LOW.

Witnesses:

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