No. 658,152. Patented Sept. 18, 1900.

J. D. LECLERE, Dec'd.

M. P. LECLERE, Administratrix.

DEVICE FOR SHARPENING HORSESHOES.

(Application filed Jan. 24, 1900.)

(No Model.) 2 Sheets—Sheet 1.

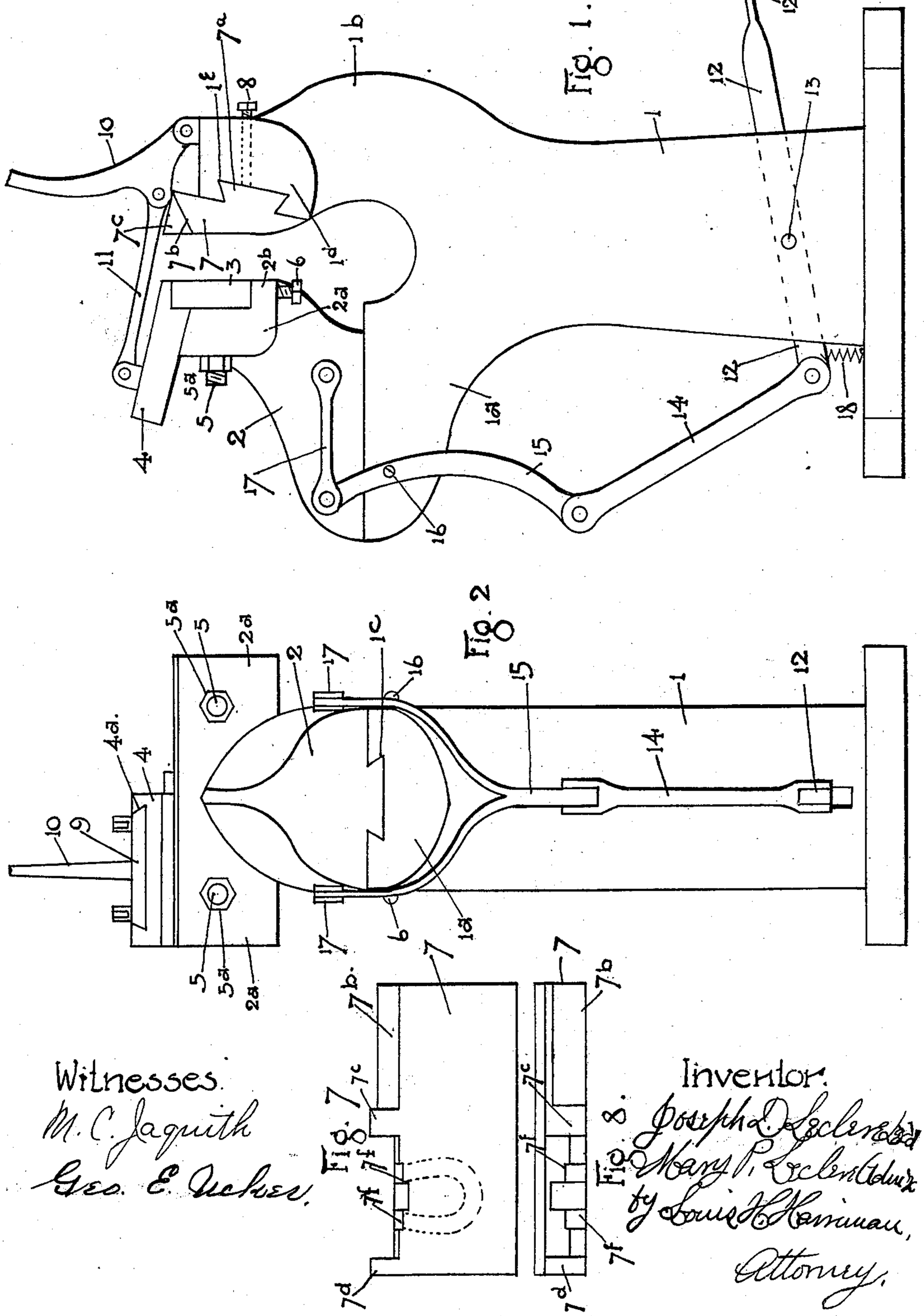

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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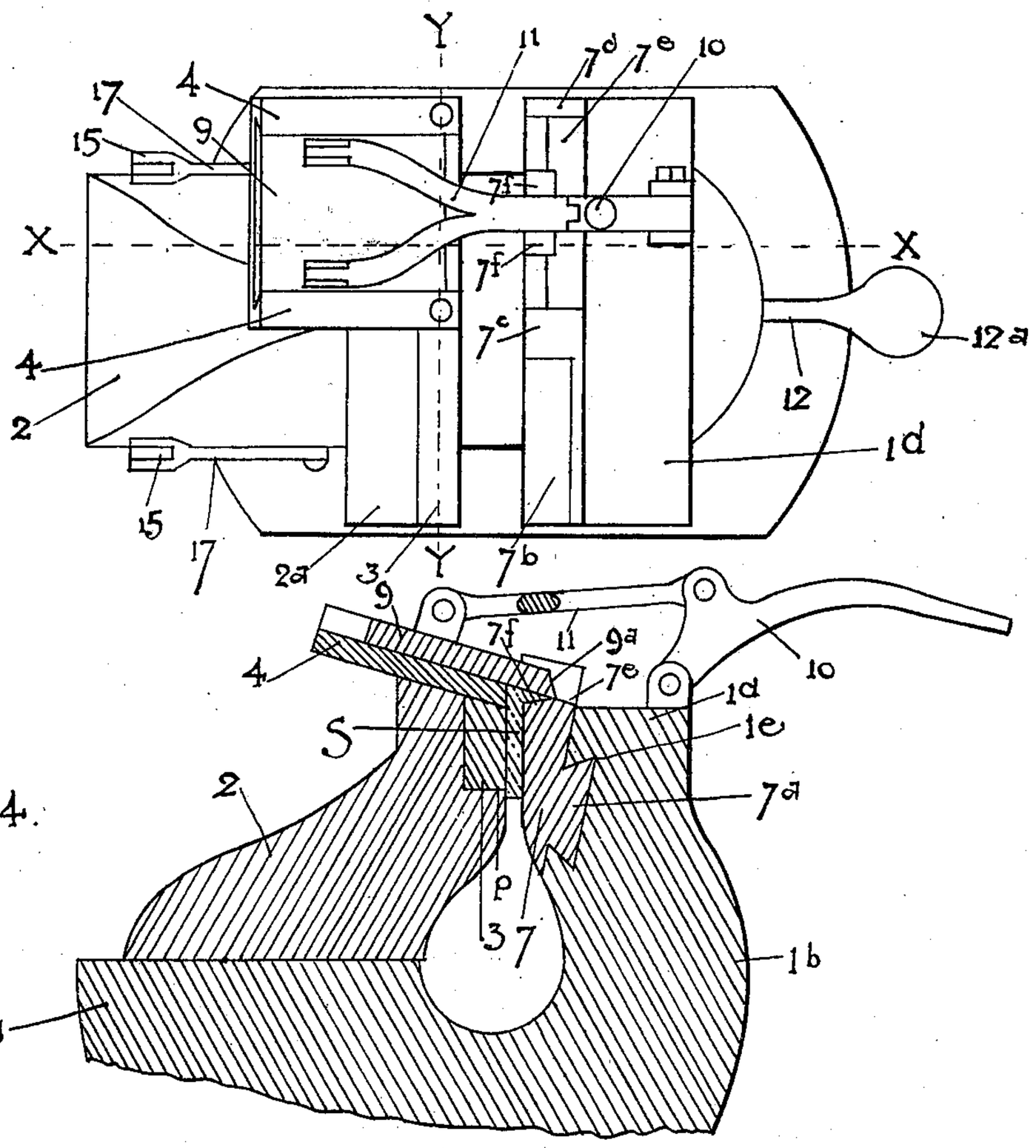

Fig. 3.

Fig. 4.

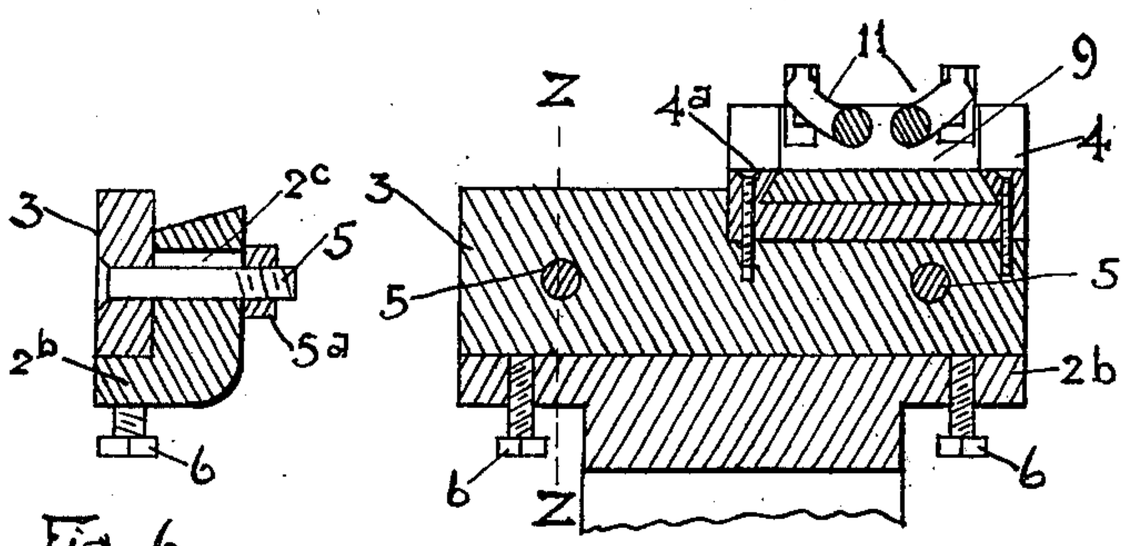

Fig. 6

Fig. 5

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UNITED STATES PATENT OFFICE.

MARY P. LECLERE, OF PLAISTOW, NEW HAMPSHIRE, ADMINISTRATRIX OF JOSEPH D. LECLERE, DECEASED.

DEVICE FOR SHARPENING HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 658,152, dated September 18, 1900.

Application filed January 24, 1900. Serial No. 2,650. (No model.)

To all whom it may concern:

Be it known that JOSEPH LECLERE, deceased, late a citizen of the United States, residing at Plaistow, State of New Hampshire, invented certain new and useful Improvements in Devices for Sharpening Horseshoes, of which the following is a specification.

This invention relates to a combined vise and anvil which is provided with an attachment for forming the calks on horseshoes; and it consists, in general, of a sliding piece of metal which is operated by a lever, so as to bend over the ends of the shoe and form the calks while the shoe is clamped between the jaws of the vise.

In the drawings, Figure 1 represents a side elevation of the device complete. Fig. 2 is an end view, and Fig. 3 a plan view, thereof. Fig. 4 is a cross-section taken on line X X of Fig. 3. Fig. 5 is a cross-section taken on the line Y Y of Fig. 3. Fig. 6 is a cross-section taken on the line Z Z of Fig. 5; and Figs. 7 and 8 are side and plan views, respectively, of one of the jaw-faces.

The same reference-numerals indicate the same parts throughout all the views.

The main standard 1 of the vise is provided with two arms 1^a and 1^b, the top of the arm 1^a being horizontal and being provided with a longitudinally-extending dovetail groove 1^c. The arm 1^b is provided with a laterally-extending head portion 1^d, having an inclined face which is provided with a laterally-extending dovetail groove 1^e. The sliding jaw 2 is dovetailed into the groove 1^c of the arm 1^a and is adapted to slide back and forth therein. The front portion of jaw 2 is provided with a laterally-extending head 2^a, which is formed integrally therewith, the front face of said head being vertical and provided with a horizontal shoulder 2^b. A jaw-face 3 is secured to the vertical face of head 2^a and rests on shoulder 2^b. The thickness of said face 3 is the same as the width of shoulder 2^b, so that the outer surface of the face 3 is flush with the edge of shoulder 2^b. The upper face of the jaw-face 3 has an inclined guideway 4 secured thereto by screws, and said guideway is provided with a dovetail groove 4^a, in which the plate or knife 9, having a beveled end 9^a, is fitted and adapted to slide. A lever 10 is pivoted to the top of head 1^d and is connected to plate 9 by pivoted link 11. The jaw-face 3 is secured to the head 2^a by horizontal bolts 5, which pass through vertical slots 2^c (see Fig. 6) in the head and are clamped in place by the nuts 5^a. The screws 6 are vertically arranged in the under side of the shoulder 2^b of the head 2^a and pass through the same, so that they may engage the under side of the jaw-face 3. As the bolts 5 pass through the vertical slots 2^c, the jaw-face may be vertically adjusted by loosening the nuts 5^a and turning up the bolts 6. A jaw-face 7 is provided with a dovetailed projection 7^a, which is fitted in the dovetailed groove 1^e and is held from lateral movement therein by set-screws 8. This jaw-face 7 is provided with an inclined top portion 7^b, which extends from one end to the central projection 7^c. A projection 7^d is formed at the opposite end of said face 7, the distance between the adjacent vertical sides of said projections being slightly greater than the width of plate 9 at its bottom and said sides being in line with the lower edge of said plate when face 7 is in position. The back portion 7^e of the top of jaw 7, between projections 7^c and 7^d, is inclined at the same angle as plate 9 and is of such a height that plate 9 may just pass above it when the plate is moved forward. The front portion of the top of face 7, between the projections 7^c and 7^d, is inclined in the opposite direction and is provided with two inclined notches 7^f, which are about the same distance apart as the distance between the ends of an ordinary horseshoe, and the space between the bottom of these notches and the bottom of plate 9 when it is drawn forward is of the same shape as that of the ordinary calks of a horseshoe. The inclined surfaces on the top of face 7 at the side of notches 7^f may be arranged at different heights and inclinations to accommodate shoes of different shapes and sizes, and other jaw-faces similar to face 7, which are adapted for shoes of still different sizes, may be substituted therefor. A foot-lever 12, having a treadle 12^a, passes through the center of the main standard 1 and is pivoted to the pivot-rod 13. The opposite end of the lever 12 from the treadle is provided with a link 14,

which is pivoted thereto. A fork-shaped lever 15 is pivoted on each side of the arm 1^a by the pivots 16. The lower end of said lever 15 is pivoted to the upper end of the link 14, and the upper end of said lever is pivoted to one end of the link 17, the opposite end of which is pivoted to the sliding jaw 2. When the treadle is depressed, the jaw 2 will be moved forward against the jaw-face 7. A spring 18, which is connected to the rear end of the lever 12, serves to return the jaw 2 to its normal position after the pressure on the treadle is removed.

The operation is as follows: The ends of the horseshoes having been heated it is placed with the ends uppermost in the vise, so that the ends come opposite the notches 7^f, as shown in dotted lines in Fig. 7. The treadle is depressed, so that the jaw 2 is moved forward and clamps the shoe between the faces 3 and 7, as shown in Fig. 4. The shoe is so placed that the ends thereof will project a short distance above the plane of the bottom of plate or knife 9. The lever 10 is then drawn backwardly, drawing forward the plate 9 to the position shown in Fig. 4. The beveled end 9^a of the plate 9 will engage the upwardly-projecting ends of the shoe and then bend them over and shave them off, so that a perfectly-sharp calk will be formed on each side of the shoe. The plate 9 is then forced back to its normal position, the shoe removed, and what little hammering that may be necessary is done on the surface 7^b.

The face 3 is made vertically adjustable, so that the thickness and sharpness of the calks may be varied, depending upon the size of the shoe which is to be sharpened.

The faces 3 and 7 are made removable, so that in the summer, when it is not desired to sharpen the horseshoes, jaw-faces may be inserted which are of the same shape as the jaws of a common vise.

What is claimed as new is—

1. A device for the purpose described consisting of a vise having two jaws, one of which is movable with respect to the other, a support secured to one of said jaws which is provided with a groove arranged at right angles to the jaw-faces, a knife which is adapted to slide therein, a lever pivoted to the other jaw, and a link connecting said lever and knife.

2. A device for the purpose described consisting of a vise having two jaws, one of which is movable with respect to the other, one of said jaws having a support secured thereto, a groove therein having inwardly-projecting edges and arranged laterally with respect to the faces of said jaws, a knife fitted in said groove and arranged to slide therein, a lever connected to the other jaw and to said knife, and an inclined surface extending upwardly from the edge of the latter jaw.

3. A device for the purpose described consisting of a vise having two jaws, one of which is moved with respect to the other, a vertically-adjustable face connected to one of said jaws, a knife-support carried thereby, a groove therein which is arranged laterally with respect to the jaw-faces, a knife which is adapted to slide therein, a lever fulcrumed to the opposite jaw, and a link connection between said knife and lever.

4. A device for the purpose described consisting of a vise having two jaws, a face which is removably connected to said jaws, a sliding knife carried by said face which is adapted to be moved over the face of the other jaw, and means for moving said knife.

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