

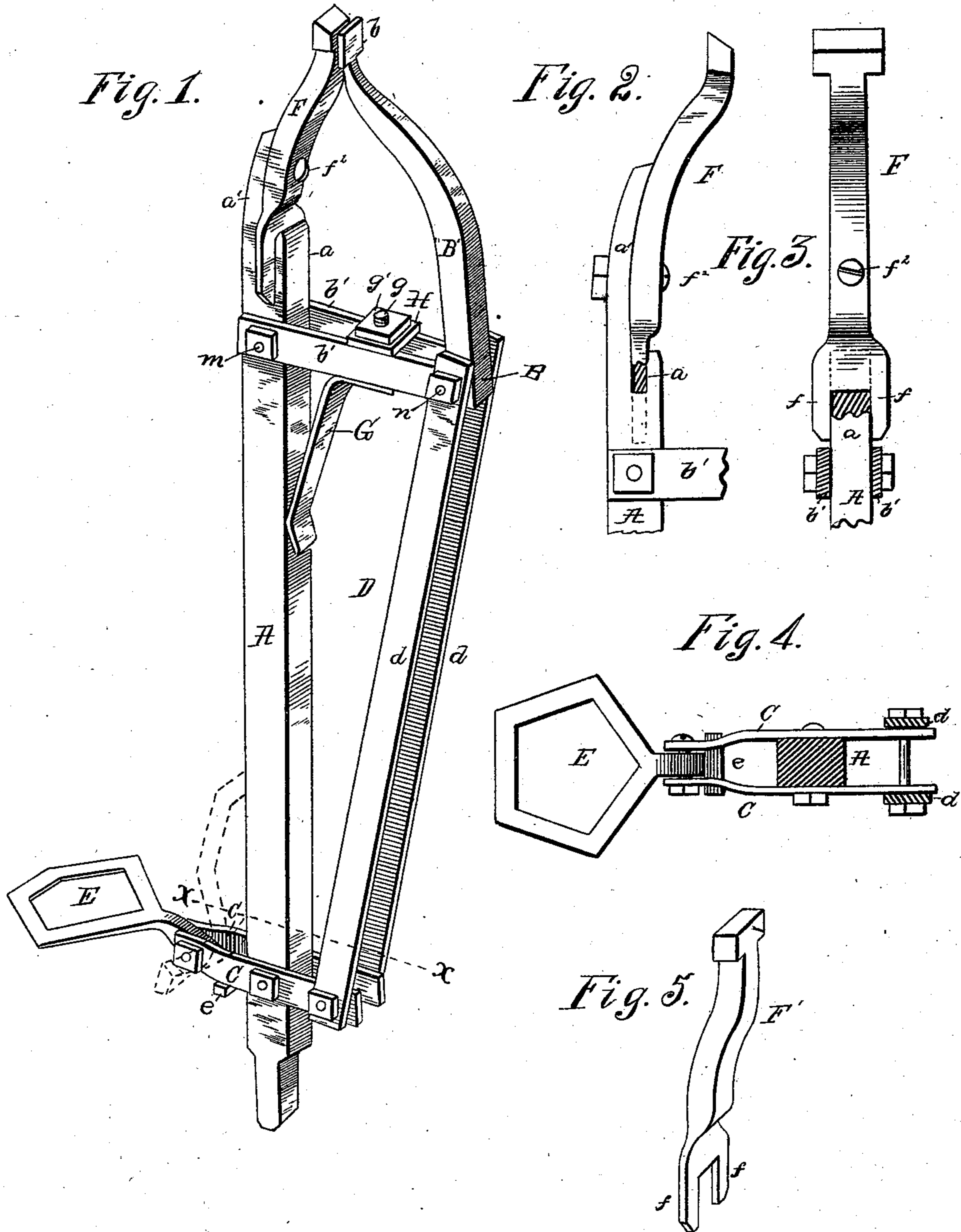
(No Model.)

J. C. & H. C. WILLIAMS.

DEVICE FOR SHARPENING TOE CALKS.

No. 376,697.

Patented Jan. 17, 1888.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN C. WILLIAMS AND HARRY C. WILLIAMS, OF HOOPER, NEBRASKA.

DEVICE FOR SHARPENING TOE-CALKS.

SPECIFICATION forming part of Letters Patent No. 376,697, dated January 17, 1888.

Application filed November 18, 1887. Serial No. 255,514. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. WILLIAMS and HARRY C. WILLIAMS, citizens of the United States, residing at Hooper, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Horseshoe-Calkers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to machines to facilitate the formation of calks on horseshoes.

The object of the invention is to improve the general construction of such machines as heretofore devised, whereby their capabilities are enlarged, their efficiency is increased, and they are rendered susceptible of being more conveniently handled and operated.

The improvement consists in having the standard provided with interchangeable jaws for forming the calks more or less directly under the shoe, and having the said standard provided with an elbow-shaped lever-jaw, which is pivoted thereto at its inner end, said lever-jaw being connected with the foot-lever by a rod interposed between its elbow and the said foot-lever. The foot-lever extends transversely across the standard, and has a foot-rest pivoted to its outer or free end, which is adapted to fold close to the standard, to be out of the way when the device is not in use. The lower end or horizontal branch of the lever-jaw is bifurcated, and embraces the standard, and its downward movement is limited by a stop adjustable on the horizontal branch, the stop being held to the lower end or the branch by a bolt passing between its separated or divided ends. The parts are so disposed that the lever-jaws will automatically fall down and away from the fixed jaw of the standard and elevate the free end of the foot-lever.

The improvement further consists in the peculiar construction and combination of parts, which will be more fully hereinafter set forth and claimed, and shown in the annexed drawings, in which—

Figure 1 is a perspective view of a horse-

shoe-calker embodying our invention; Fig. 2, a side view, parts being broken away, of the upper end of the standard; Fig. 3, a front view, parts being broken away, of the upper end of the standard; Fig. 4, a section on the line X X of Fig. 1, looking down; and Fig. 5, a perspective view of the modified form of jaw.

The standard A has its upper end slightly curved and provided with the jaw F. The jaw F is detachably connected with the standard, to be readily interchanged with another jaw, F'. The jaw F has an inclined end, which throws the calk near the edge of the shoe, and is used in general horseshoeing, while the jaw F' has a straight end, and is used for a special shoeing for forming the calks so they will extend farther under the shoe. This is necessary in shoeing stiff horses to prevent stumbling. By having jaw F removable it can be quickly detached for dressing its face when worn and battered, or for replacing it by a new one in the event of the old one being broken. A kerf, *a*, formed in the end of the standard, receives the lower end of the jaw, and the extension *a'*, projecting up and resting against the jaw, braces and re-enforces said jaw. The lower end of the jaw is notched to form the two legs *f*, which embrace the sides of the standard. The jaw is held to the extension *a'* of the standard by the bolt *f*².

The elbow-shaped lever B, composed of a vertical branch, B', and a horizontal branch, is pivoted at its inner lower end by bolt *m* to the standard, and its upper end terminates in the jaw *b*. The lower end or horizontal branch of the elbow jaw-lever B is divided or separated, forming the two branches *b'*, which embrace the standard, and have the bolt or pivot *m* passing through them. The stop G, having its lower end resting against the standard and having its upper end adjustably connected with the elbow-lever by the bolt *g*, which passes between the branches *b'*, limits the downward movement of the elbow jaw-lever. The plate H spans the branches *b'* and prevents the bolt dropping through, and the nut *g'* tightens the bolt and holds the stop in place.

The foot-lever, composed of two short bars, C, embracing the standard and pivoted thereto between its ends, is connected at one end with the elbow jaw-lever B by the connection D, which is composed of two rods, *d*, the upper

ends of the rods embracing the lever B being pivotally connected with B at the point of junction of its vertical and horizontal branches by the bolt or pivot *n*. The foot-rest E is pivoted between the other or free end of the short bars C. The outer end of the foot-rest is expanded to give a broad purchase for the foot of the operator, and its inner end has lateral projections *e*, which overlap the lower edges of bars C and prevent the foot-rest turning down when pressure is applied to its outer end.

When the device is not in use, the foot-rest can be folded to the standard, as shown by dotted lines in Fig. 1, to reduce the length of the foot-lever and be out of the way.

The elbow jaw-lever B turns about its pivotal connection *m* with the standard and about its pivotal connection *n* with D when opening and closing, being limited in its downward movement by the stop G. The weight of B, G, and D being to one side of the pivot *m* causes the lever B to fall down, and, turning about its pivotal connection with A at the same time, carries the jaw *b* outward and away from the fixed jaw.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with the standard, of the detachable jaw, substantially as and for the purpose specified.

2. The combination, with the standard, of the two interchangeable jaws, the one jaw having a beveled face and the other jaw a straight face, substantially as and for the purpose described.

3. The combination, with the standard having a kerf in its end, of the jaw having its lower end fitted in the said kerf, said lower end being notched to form legs which embrace the sides of the standard, substantially as described.

4. The combination, with the standard having an extension projecting up from its upper end, of the jaw resting against and re-enforced by the said extension, substantially as described, for the purpose specified.

5. The combination, with the standard having a kerf and an extension, of the jaw fitted in the kerf and having legs which embrace the standard, and means for securing the jaw to the extension, substantially as set forth.

6. The combination, with the standard and the elbow jaw-lever, of the adjustable stop.

7. The combination, with the standard and the elbow jaw-lever having its lower end separated, of the stop and the bolt passing through the separated ends of the elbow jaw-lever, substantially as and for the purpose described.

8. The combination, with the standard and the elbow jaw-lever pivoted at its inner end to the standard, of the foot-lever and the connection interposed between the foot-lever and the elbow of the said elbow jaw-lever, substantially as and for the purpose described.

9. The combination, with the standard, the elbow jaw-lever, the foot-lever, and the connection uniting the foot-lever with the said elbow jaw-lever, of the foot-rest having its outer end expanded and its inner end provided with means, as the lateral projections, for limiting its movement in one direction relative to the foot-lever, substantially as described, for the purpose specified.

10. The herein-specified horseshoe-calker, composed of the standard, the elbow jaw-lever having its lower end separated or divided and embracing the standard, the adjustable stop, the foot-lever embracing the standard, the connection uniting the foot-lever with the elbow of said elbow jaw-lever, and the foot-rest having one end expanded and its other end provided with lateral projections, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN C. WILLIAMS.
HARRY C. WILLIAMS.

Witnesses:

HENRY H. LOOSCHEN,
A. M. SPOONER.