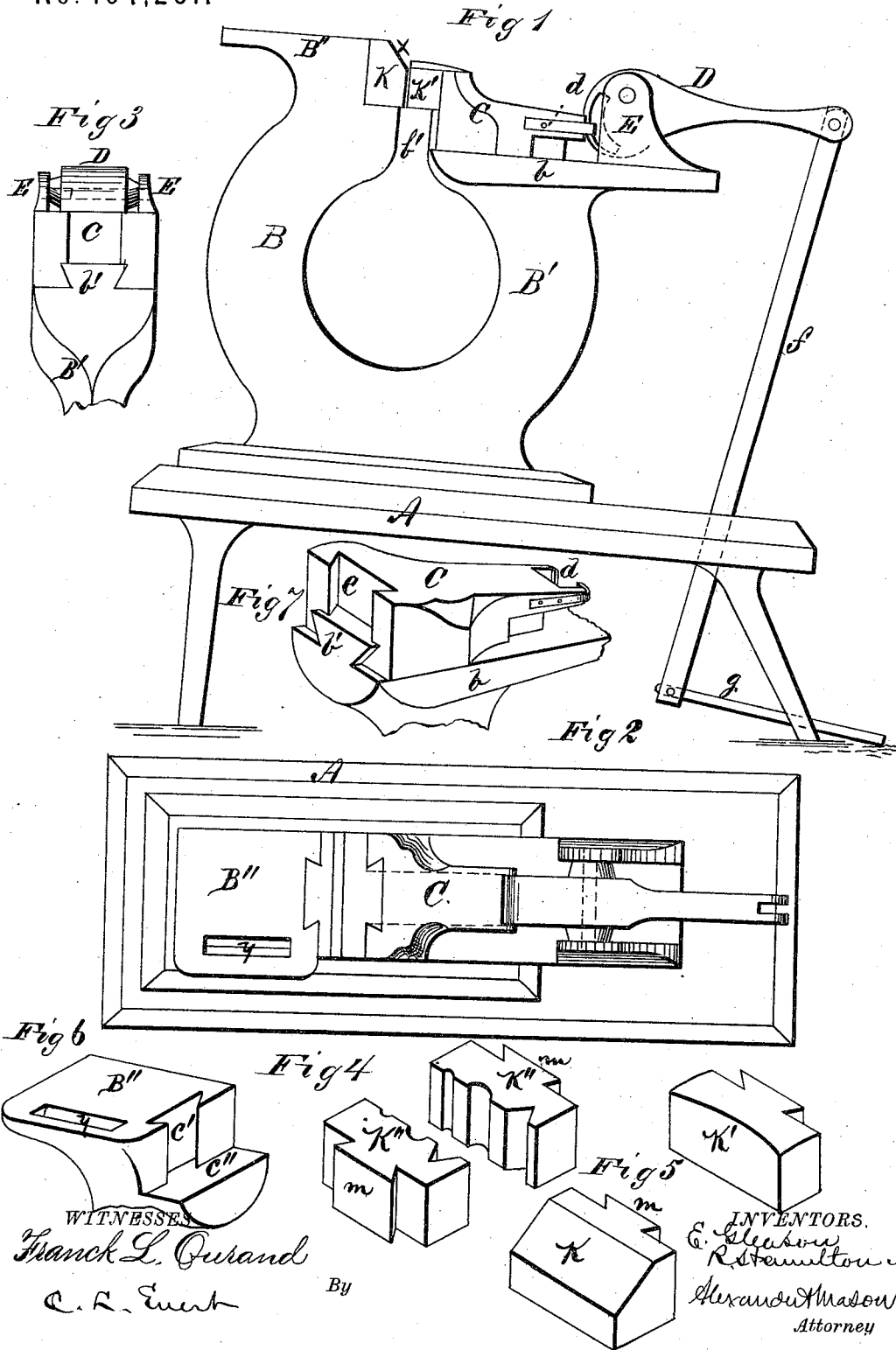


E. GLEASON & R. HAMILTON.
Machine for Calking Horseshoes.

No. 164,291.

Patented June 8, 1875.



WITNESSES
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ERASTUS GLEASON AND ROBERT HAMILTON, OF GREENWICH, NEW YORK.

IMPROVEMENT IN MACHINES FOR CALKING HORSESHOES.

Specification forming part of Letters Patent No. **164,291**, dated June 8, 1875; application filed April 23, 1875.

To all whom it may concern:

Be it known that we, ERASTUS GLEASON and ROBERT HAMILTON, of Greenwich, in the county of Washington and in the State of New York, have invented certain new and useful Improvements in Machines for Calking Horseshoes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

Our invention relates to improvement upon Letters Patent granted to us February 16, 1875, No. 159,918; and it consists in the construction and arrangement of a machine for sharpening horseshoe-calks and for other purposes, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to construct and use our invention we will proceed to more specifically describe the same, referring to the accompanying drawing, making a part of this specification.

In it Figure 1 represents a side elevation; Fig. 2, a plan view; Fig. 3, an end view of the slide which holds one of the calks; Figs. 4 and 5, detailed views of the movable dies; Fig. 6, a perspective view of the top of one of the standards; Fig. 7, a perspective view of the top of the other standard, and the movable slide placed thereon.

Like letters of reference indicate like parts.

A represents a suitable bench or support upon which are mounted two uprights, B B', formed of one piece of metal, or other suitable material, as shown. The standard B' is shorter than the standard B, and is provided with a horizontal projection or support, *b*, on the front portion of which is formed an upward-projecting dovetailed strip, *b'*, and on the rear end are formed ears E E. C represents a slide grooved to fit over the dovetail *b*, and having a vertical dovetail-groove, *c*, as shown in Fig. 7. Pivoted between the ears E is a cam, D, which is suitably connected at *d* to the rear end of the slide C. This cam D has a rearward-extending arm, at the end of which is connected a pitman, *f*, which passes down through the bench A, and to the lower end of which is connected a treadle, *g*. The stand-

ard B is also formed with a projecting surface, B'', at its top, and is cut away to form a shoulder, *e''*, and is provided with a dovetailed groove, *e'*, projecting from said shoulder to the top. K and K' represent dies, each of which is provided on its rear portion with a dovetailed tongue, *m*. The die K is provided with a beveled face at its top, and is placed within the groove *c* of the standard B. The die K' is fitted in the groove *c* in the slide C, and moves back and forth with said slide. This die K' has a curved top, as shown, and when used for calking horseshoes the die K is placed with its bevel *x* upward, and the die K' has its curved top upward.

It will be understood with our present invention that we can use it for calking horseshoes, or use it as a vice, or use it for heading bolts.

For calking horseshoes the dies are placed as shown in Fig. 1.

To use the invention for a vise, the die K is slipped out from its groove and turned upside-downward, with its bevel underneath, and the die K' is slipped out of its groove and turned upside-downward, with its curved surface beneath. In this position the dies K'' K'' both have vertical faces and flat tops.

When our invention is used for heading bolts, the dies K K' are removed and the notched dies K'' K'' are substituted therefor. The operation of our machine is substantially as follows: Suitable dies are placed in the grooves *c c'*, and of the respective parts, and the cam-lever D is thrown upward so that the slide C will be thrown back upon its table *b*. The article to be clamped is then inserted between the two jaws, when pressure is exerted upon the treadle *g*, which will draw down the pitman *f*, and with it the lever D, which, by means of its cam, will force forward the slide C, and its die placed thereon, effectually clamping the article between the two parts. In the upper surface of the part B'' is a V-shaped groove, *y*, for the insertion of the calks of the shoe when required to straighten the same.

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

1. The combination of the standard B, hav-

ing top surface B'', shoulder c'', and vertical dovetail-groove c', with the standard B', having projecting top b, dovetailed projections b', and the slide C, having vertical dovetail-groove c, and operated by the cam-lever D, substantially as set forth.

2. The combination of the reversible dies having dovetailed projections m, with the standards B B' and slide C, substantially as and for the purposes set forth.

3. The combination of the standards B B', and slide C, having dovetailed groove c' and

c, and removable dies and cam-lever D, pivoted between the ears E, the pitman f, and a treadle, g, all substantially as and for the purposes set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 29th day of March, 1875.

ERASTUS GLEASON.
ROBERT HAMILTON.

Witnesses:

C. L. EVERT,
L. H. FINCH.