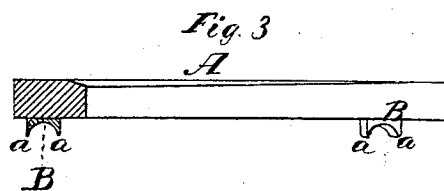
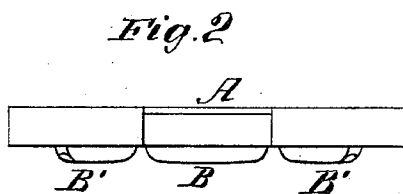
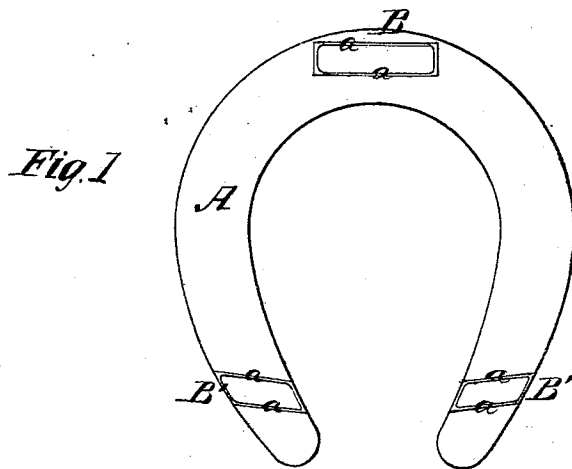


R. AUSTIN.

Manufacture of Horseshoes.

No. 148,916.

Patented March 24, 1874.



Witnesses.
George E. Upham,
Robert. Everett.

Inventor
Richard Austin,
Chipman & Austin & Co.,
Atty.

UNITED STATES PATENT OFFICE.

RICHARD AUSTIN, OF SING SING, NEW YORK.

IMPROVEMENT IN THE MANUFACTURE OF HORSESHOES.

Specification forming part of Letters Patent No. 148,916, dated March 24, 1874; application filed January 24, 1874.

To all whom it may concern:

Be it known that I, RICHARD AUSTIN, of Sing Sing, in the county of Westchester and State of New York, have invented a new and valuable Improvement in the Manufacture of Horseshoes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a bottom view of a horseshoe, showing my device. Fig. 2 is an end view of the same. Fig. 3 is a sectional view of the same.

This invention has relation to the manufacture of horseshoes; and it consists in first welding lugs of steel to the toe and heel portions of a shoe; then, after allowing these lugs to cool gradually, filing them so as to leave transverse grooves terminating in sharp edges; and then, as a final process, tempering the calks, as will be hereinafter explained.

The following is a description of my invention:

In the annexed drawings, A designates a horseshoe of the well-known form, and B B' B' are the toe and heel calks. These calks I make of steel, and arrange them as shown in

Fig. 1—that is to say, the calk is at right angles to the length of the shoe, and the heel calks stand at an angle thereto.

I first weld to the sole of the shoe three oblong lugs or blanks, and allow them to cool slowly, so as to leave them soft and easily filed. I then file grooves into them in a direction with their length, and form sharp edges *a a*, with a deep groove between them. I finally temper the calks, and thus render them hard and durable.

Calks thus constructed and applied to shoes will take a very firm hold into ice or snow, and they are not liable to become detached under the roughest usage.

What I claim as new, and desire to secure by Letters Patent, is—

The method herein described of first attaching the calks to the shoe by welding; secondly, filing the calks to the shape substantially as shown and described, and then tempering them, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

RICHARD AUSTIN.

Witnesses:

HENRY C. NELSON,
ISAAC B. NOXON.