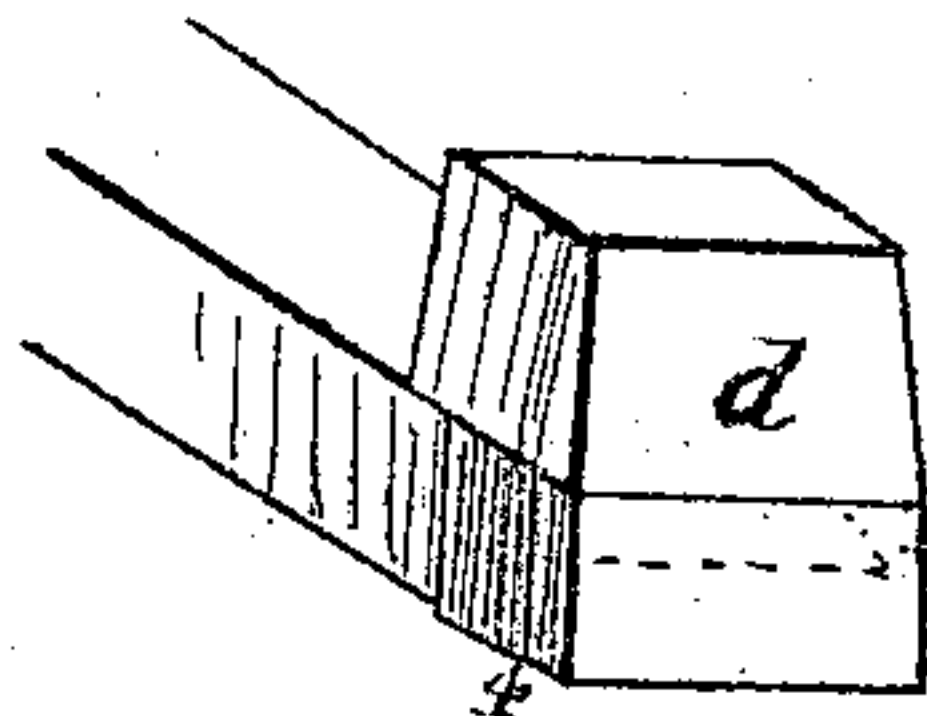
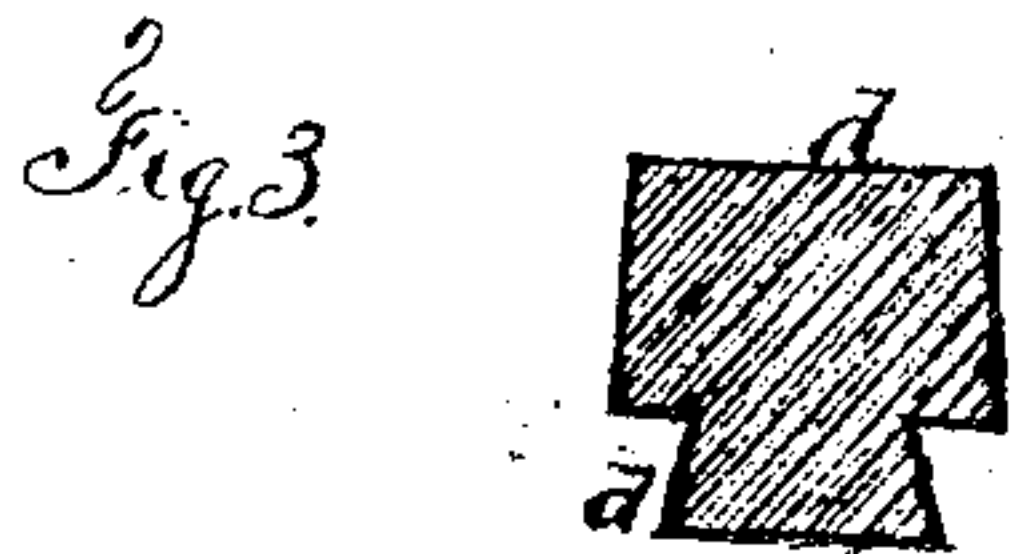
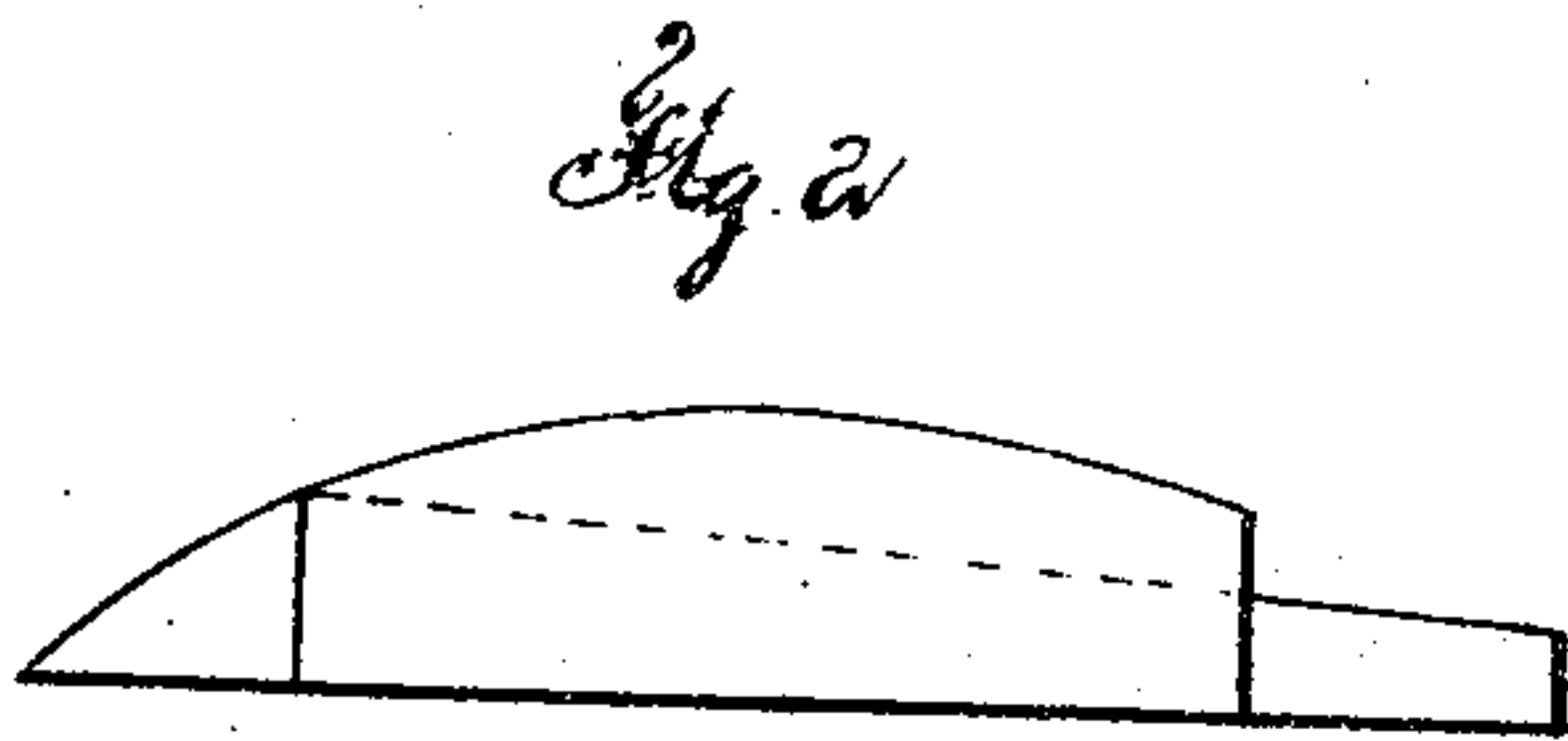
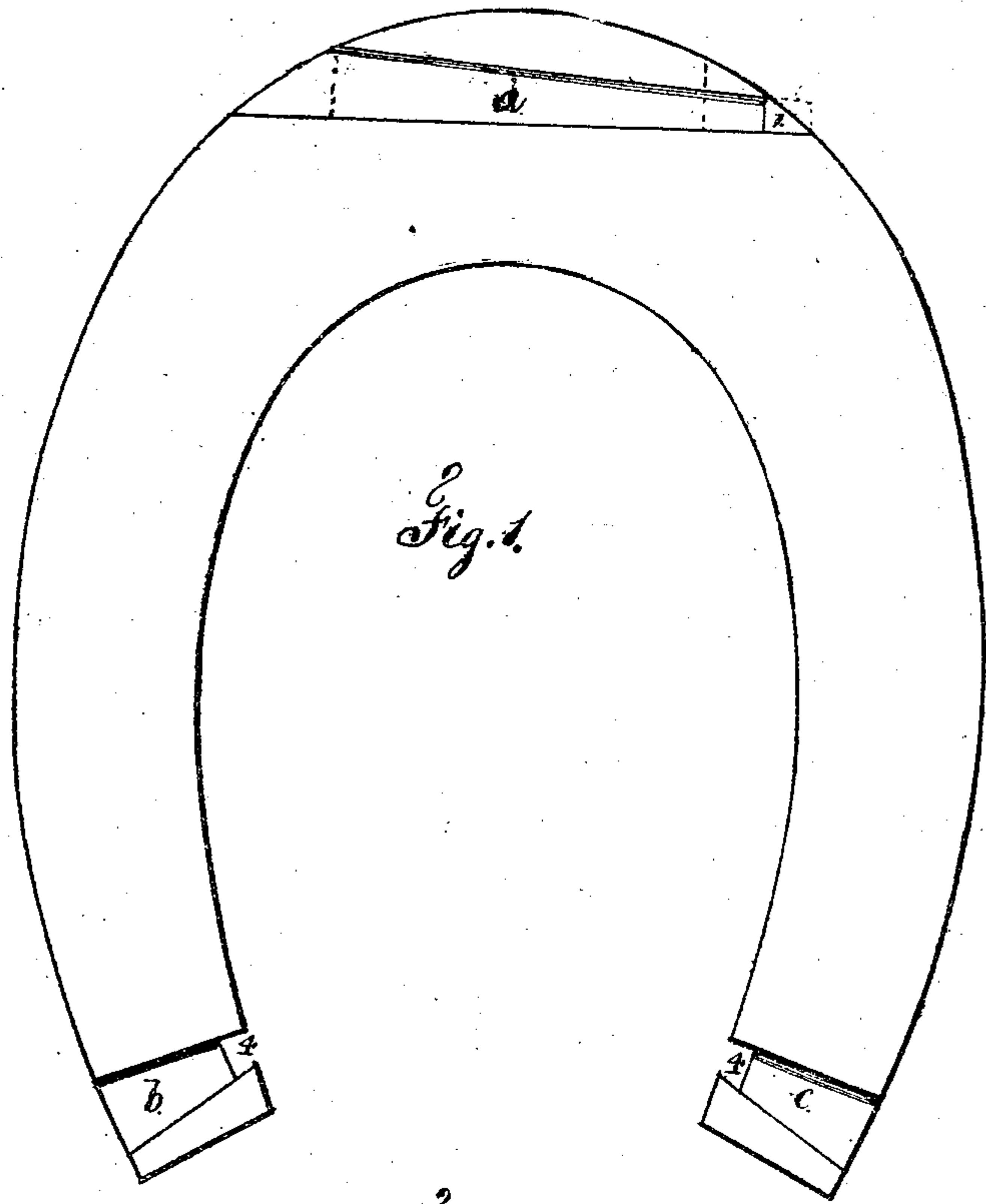


J. D. Barnum. Removable Calk Horse shoes
 103827 PATENTED JUN 7 1870



Witnesses,
Asa Johnson
Wm. H. Johnson

Inventor
John D. Barnum
 by his attorney
Charles H. Smith

United States Patent Office.

JOHN D. BARNUM, OF AMENIA UNION, NEW YORK.

Letters Patent No. 103,827, dated June 7, 1870.

IMPROVEMENT IN REMOVABLE CALKS FOR HORSESHOES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN D. BARNUM, of Amenia Union, Dutchess county, State of New York, have invented an Improvement in "Removable Calks for Horseshoes;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing which forms part of this specification, in which—

Figure 1 represents the horseshoe before the insertion of the heel and toe-calks, showing the grooves.

Figure 2 is a separate view of the toe-calk.

Figure 3 is a separate view of the heel-calk in cross-section, showing the tenon.

Figure 4 shows a heel-calk when fastened in.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

I have the horseshoe made in any usual manner, without calks. I form transverse grooves in the shoe, at the heel and toe, as shown at *a b c*, in fig. 1.

I then provide calks *d e*, adapted for the heel and toe respectively, each having tenons *d' e'* thereon, of a dovetail or other equivalent shape, and also slightly tapering or wedge-like, the grooves in the shoe corresponding thereto, as shown in figs. 1 and 2, where the dotted lines indicate the location of said calks.

The small end *e'* of the tenons are made to project a little beyond the calk proper, to be used for securing the calk in place on the shoe.

At the narrow end of the grooves *a b c* small recesses 4 are formed in the side of the shoe, about at right angles to the groove, and corresponding in size to the small end of the wedge-shape tenon.

The calk is attached to the shoe by entering the small end of the tenon in the groove and then driving it tightly in. The projecting end *e'* of the tenon is then struck up or hammered into the recess 4, at the side of the shoe, forming a clinch with the small end of the wedge, as illustrated in fig. 4, which shows a heel-calk so fastened and secured.

When the calk has been worn and requires removal, it is only requisite to straighten out the clinched portion of the end of the tenon, and drive it out of the groove, when another calk may be inserted in the same manner as before, the shoe being uninjured by any number of changes.

I claim a removable calk, having a tenon projection, *e'*, at the end of the calk, in combination with a shoe provided with a recess, 4, in the side thereof, in addition to the grooves *a b c*, such recess receiving the projection *e'*, which is driven into it to secure the calk, substantially as described.

J. D. BARNUM.

Witnesses:

J. K. BARTLETT,
D. E. LAMBERT.