

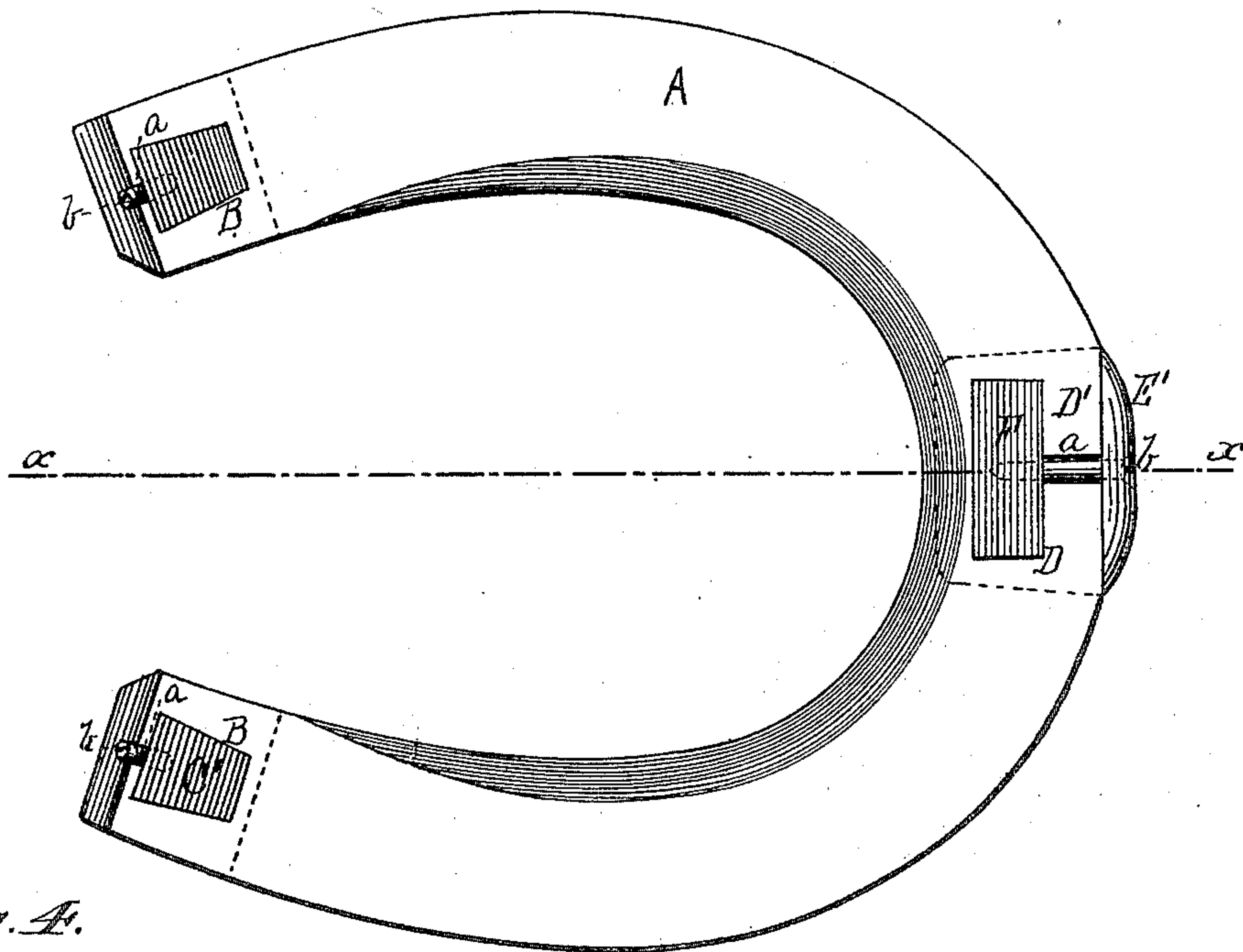
E. L. TEVIS.

HORSESHOE.

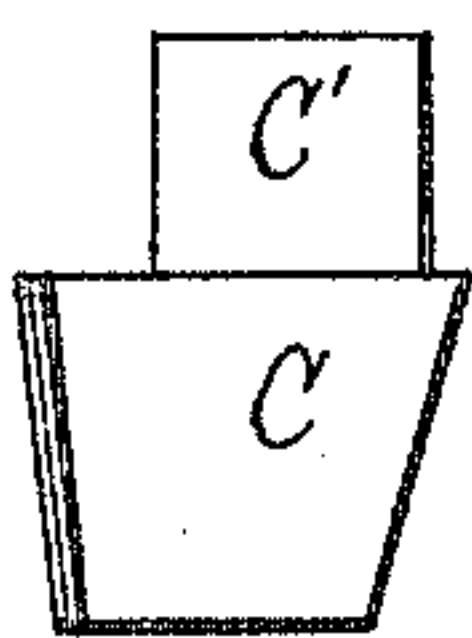
No. 172,523.

Patented Jan. 18, 1876.

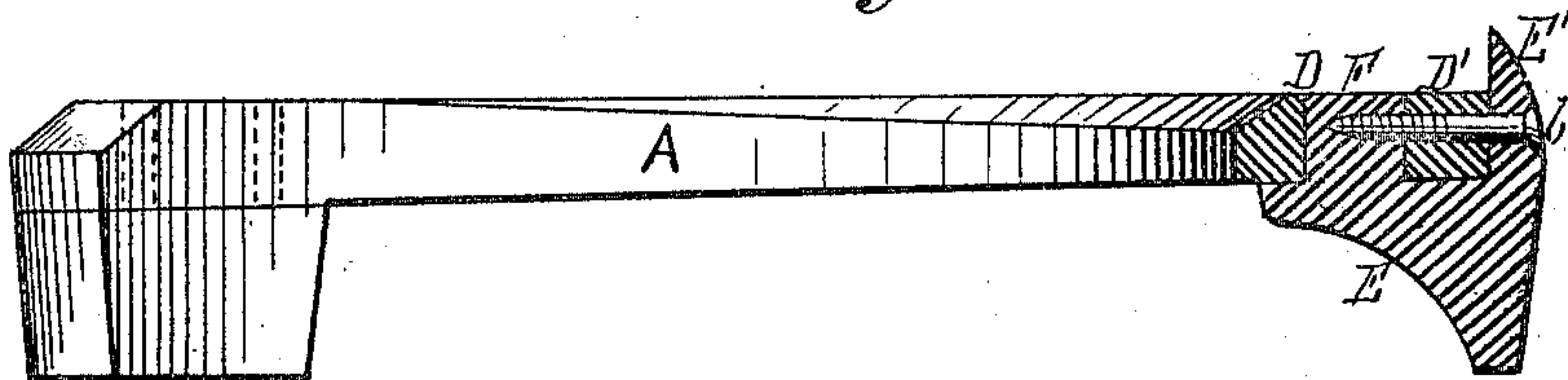
*Fig. 1.*



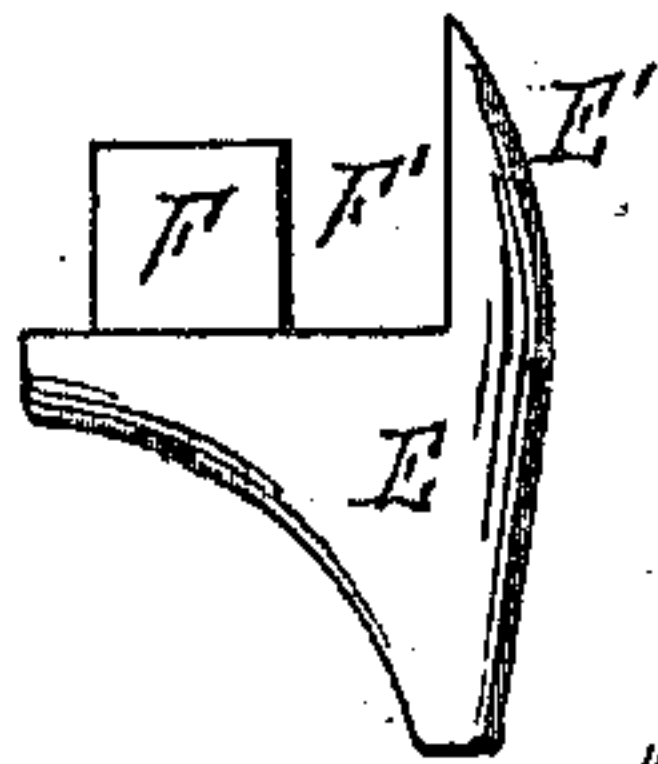
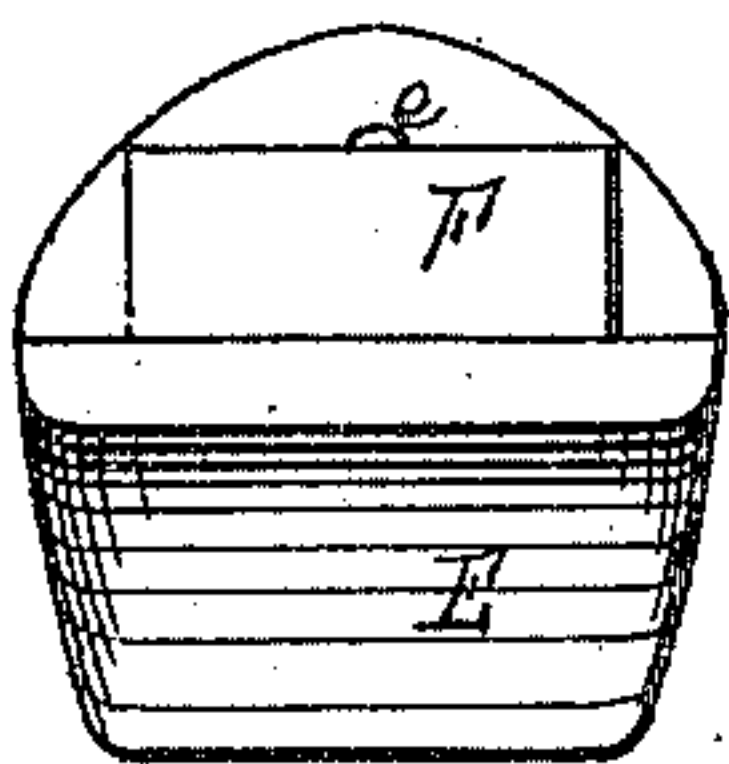
*Fig. 4.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

Edwin James.

John H. Jones.

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# UNITED STATES PATENT OFFICE.

EDWIN LAWRENCE TEVIS, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN HORSESHOES.

Specification forming part of Letters Patent No. **172,523**, dated January 18, 1876; application filed December 28, 1875.

### CASE A.

*To all whom it may concern:*

Be it known that I, EDWIN LAWRENCE TEVIS, of the city and county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Horseshoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, and the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a top plan view. Fig. 2 is a longitudinal sectional view on the line *x x*, Fig. 1. Fig. 3 shows the formation of the front calk. Fig. 4 shows the formation of the rear calks.

The nature of my invention consists in attaching to a horseshoe, provided with suitable heel-calks, a toe-calk, the same being secured by means of a mortise or opening cut in the toe of the shoe, and the toe-calk formed with a tenon and a projecting face-plate, the tenon being of such dimensions as to permit of its entering and entirely filling the mortise at the toe of the shoe, the upper surface of the former being flush with the inner face of the shoe, and so relatively arranged, in connection with its face-plate, as to leave a socket-bearing between said tenon and plate of width and depth sufficient to receive and retain the outer wall of the mortise in which the tenon is secured. The toe-calk and shoe are then fastened together by means of a screw, which passes through an opening in the face-plate and tenon of the calk, and through the outer wall of the mortise, entering and being secured within the inner wall of the same, and thus rigidly locking the bearings of the calk and shoe together. Thus a most secure and durable attachment of the calk is provided, yet by a means so simple that, should the calk be broken, or when it becomes unduly worn, it can readily be removed and replaced by any ordinary groom or other attendant, and without the aid of a blacksmith, or the involving of scarcely any delay.

The construction and operation of my invention are as follows: A is a horseshoe, constructed in the usual form, and out of either wrought or malleable iron, and is provided at the heel with openings or mortises B B, of the

form shown in Fig. 1, and at the toe with a mortise, D, as clearly shown in Figs. 1 and 2, and with notched recesses *a a* to receive the screws *b b* that secure the tenons of the calks in the openings or mortises B B D. C C are the heel-calks, and may be made of any suitable metal; but, of course, as is almost invariably the custom, steel is preferred.

The heel-calks C C may be either sharp or blunt. In the accompanying drawing they are blunt, with all four sides tapering, and provided with a tenon, C', as clearly shown in Fig. 4. The dimensions and contour of these tenons C' C' must be such as to fit and fill exactly the mortises B B cut at the heel of the shoe A, and are firmly secured therein by means of screws *b b* passing through grooves *a a*, and entering the tenons C' C' sufficiently far to secure a fixed and rigid bearing, as clearly shown in Fig. 1.

The toe-calk E may also be constructed blunt; but the sharp form shown in the drawing is deemed best for the calk. This calk is also constructed of any suitable metal, steel, of course, being preferred. Its form in connection with its attachment to the shoe is clearly shown in Figs. 2 and 3. It has a projecting front flange, E', and which, in connection with the tenon F, forms a socket-bearing, F', between the tenon F and the projecting flange E', as shown in Fig. 3. The dimensions of this socket-bearing must be such as to exactly accommodate the outer wall D' of the socket D. The dimensions of the tenon F must be such as to exactly fit and entirely close the mortise or opening D. In the projecting flange E' there is a small opening, *e*, through which passes a screw, *b*, and which also passes through the tenon F, being firmly embedded in the outer wall D' of the opening D.

It will be seen that when either of the calks are broken, or too much worn, you simply have to remove the screw *b* of said calk and insert a new one, and fasten it by the screw *b*. Another great advantage is that the tenons entirely filling the mortises, the full quantum of metal is provided, so that the shoe is in no manner weakened.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

A horseshoe provided with suitable heel-calks and a toe mortise or opening, D, and a toe-calk, E, formed with a tenon, F, and projecting flange-plate E', the tenon and plate being relatively so arranged as to provide a socket-bearing, F', for the outer wall D' of the mortise, and the screw *b* passing through an opening in the tenon and face-plate of the calk and an opening in the outer wall of the mortise, and entering and having its bearing

in the inner wall of the same, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN LAWRENCE TEVIS.

Witnesses:

EDWIN JAMES,

J. W. HAMILTON JOHNSON.