(No Model.) 2 Sheets—Sheet 1.

W. W. BOX & F. J. BEADLE.

HORSESHOE.

No. 359,706. Patented Mar. 22, 1887.

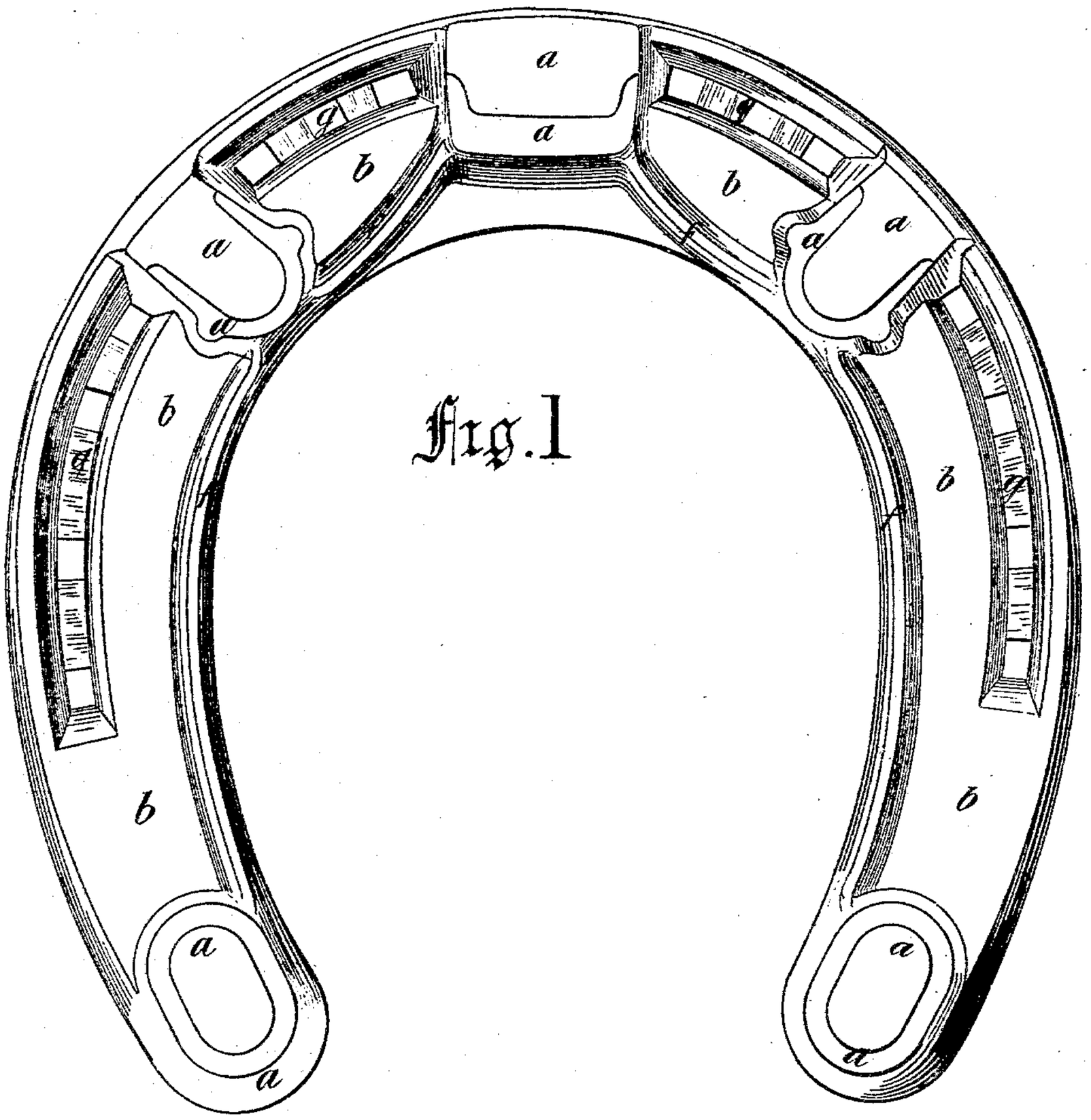
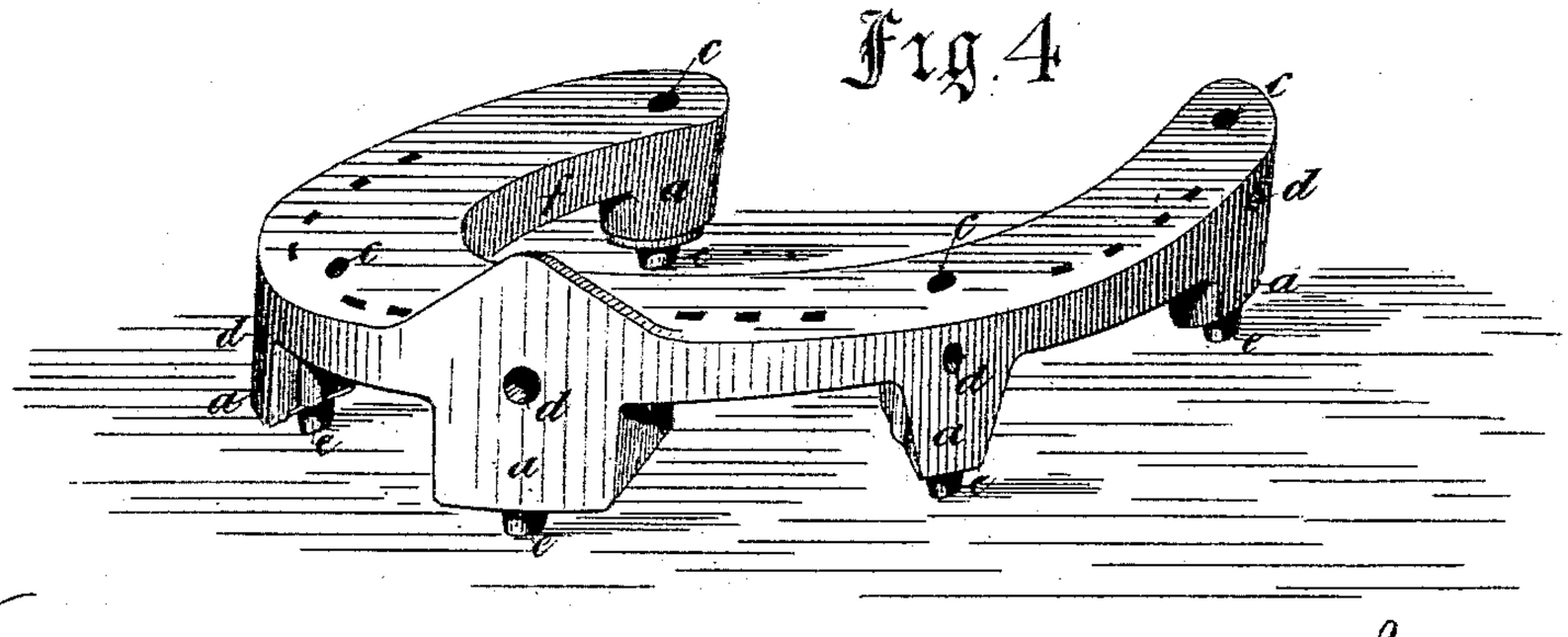


Fig. 1

Fig. 4



Witnesses
Chas. N. Smith
J. Stahl

Inventors
William W. Box.
Francis J. Beadle
per Lemuel W. Serrell
atts

(No Model.) 2 Sheets—Sheet 2.

W. W. BOX & F. J. BEADLE.

HORSESHOE.

No. 359,706. Patented Mar. 22, 1887.

Fig. 2

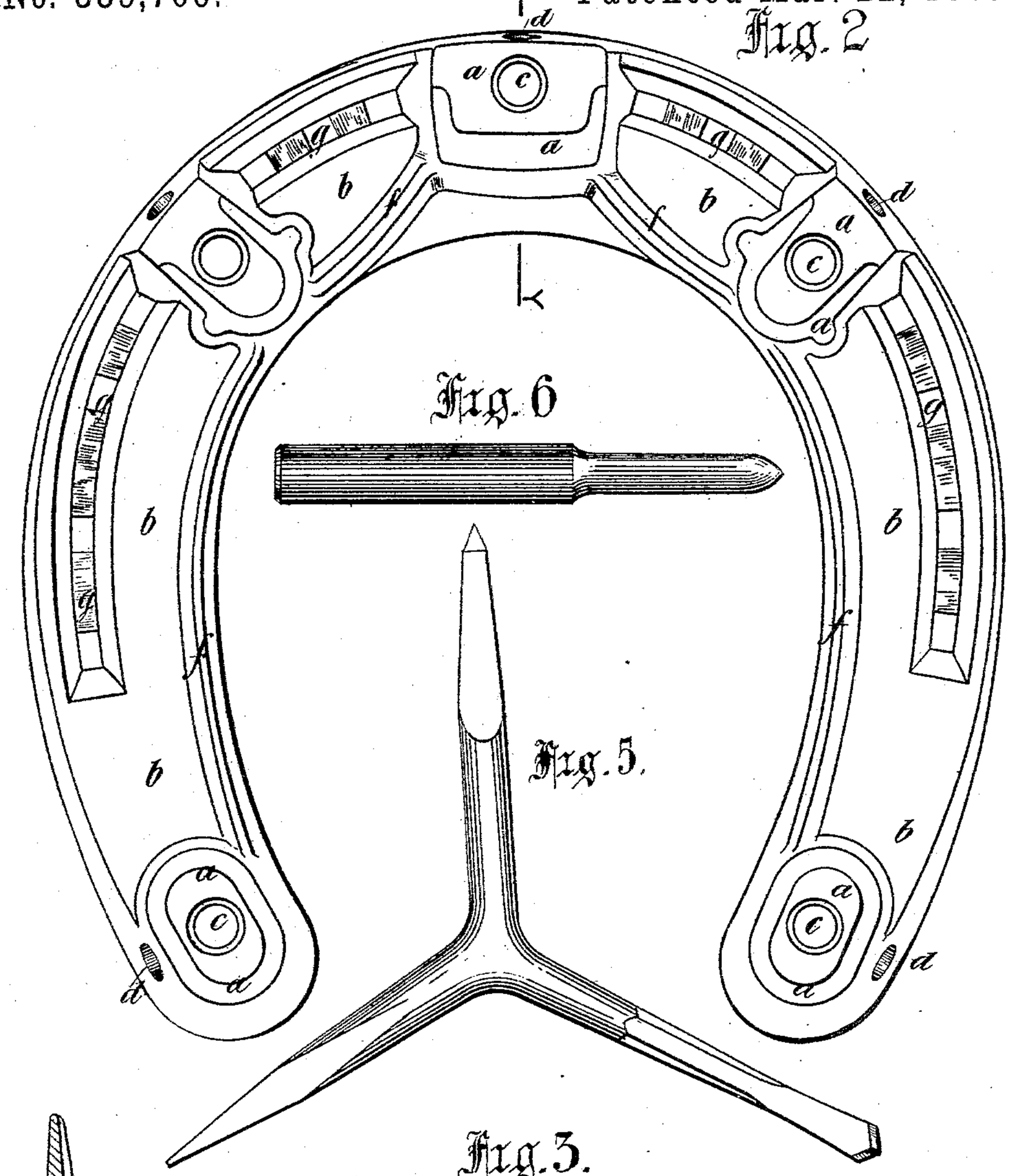


Fig. 6

Fig. 5.

Fig. 3.

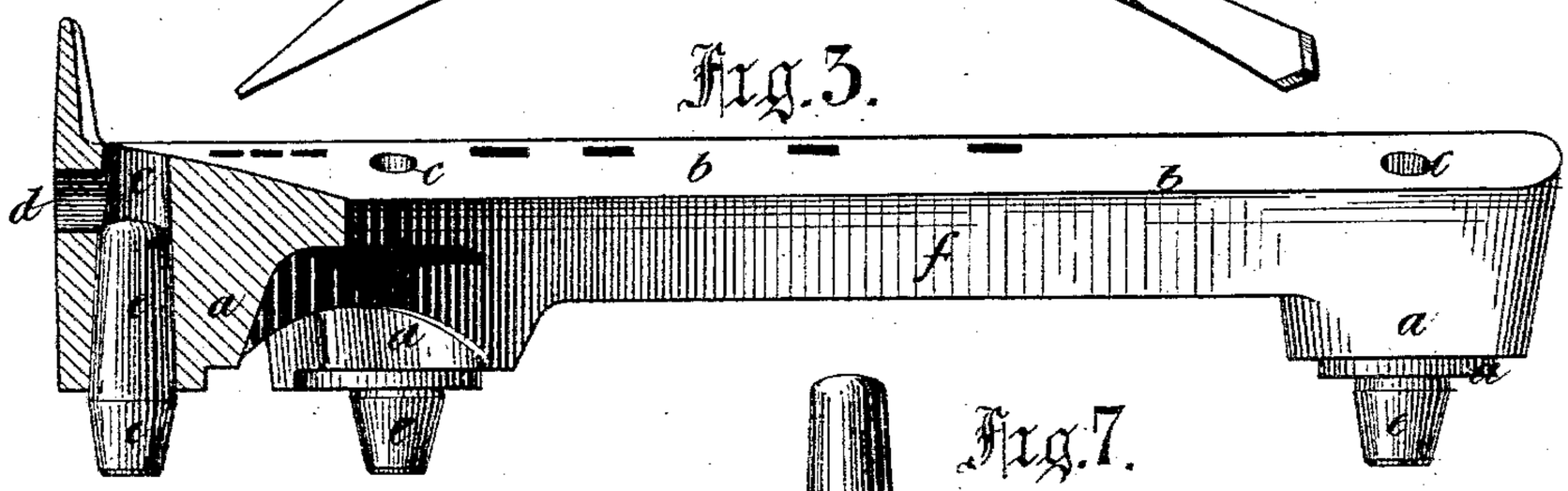
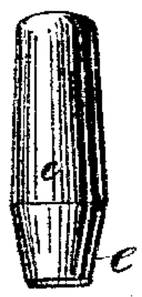


Fig. 7.



Witnesses
Chas. F. Smith
I. Stail

Inventors
William W. Box
Francis J. Beadle
per Lemuel W. Serrell atty

UNITED STATES PATENT OFFICE.

WILLIAM WILLIAMS BOX, OF CRAYFORD, AND FRANCIS JOHN BEADLE, OF ERITH, COUNTY OF KENT, ENGLAND; SAID BOX ASSIGNOR TO SAID BEADLE.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 359,706, dated March 22, 1887.

Application filed August 6, 1884. Serial No. 139,795. (No model.) Patented in England May 5, 1884, No. 7,234; in France July 2, 1884, No. 163,104; in Belgium July 4, 1884, No. 65,689; in Germany July 16, 1884, No. 31,579, and in Canada September 26, 1884, No. 20,697.

To all whom it may concern:

Be it known that we, WILLIAM WILLIAMS BOX and FRANCIS JOHN BEADLE, subjects of the Queen of Great Britain, residing, respectively, at Crayford and Erith, both in the county of Kent, England, have invented certain new and useful Improvements in and connected with Horseshoes, of which the following is a specification.

This invention has been patented in Great Britain by Letters Patent dated May 5, 1884, No. 7,234; in France by patent dated July 2, 1884, No. 163,104; in Belgium by patent dated July 4, 1884, No. 65,689; in Germany dated July 16, 1884, No. 31,579, and in Canada, dated September 26, 1884, No. 20,697.

The main objects of this invention are to produce a light and strong shoe which shall afford a better foothold and prevent slipping, and which shall also wear a long time. For this purpose we make the shoe of steel or wrought-iron, and the body of the shoe thin or shallow, with calks projecting on the under side, and with ribs along the inner or outer side, or both, the calk being formed in the forging or stamping, or hydraulic pressing, or casting; or the steel calks may, if the shoe is made of wrought-iron, be partly formed by welding on. These calks are provided with taper-holes to receive taper-pegs, and we make transverse holes towards each peg-hole to receive a punch, or for a punch to be inserted for removing the pegs when required.

Figure 1 of the accompanying drawings is a view in plan of the under side of a horseshoe with the projecting calks, before the holes are introduced for the removable calks. Fig. 2 is a view in plan of the underside of a shoe provided with calks and pegs for roughing according to our invention. Fig. 3 is a section through the line *x y* of Fig. 2, and Fig. 4 is a perspective view of the same shoe. Fig. 5 is a plan view of the reamer-tool, and Fig. 6 shows the center punch-like drift.

Similar letters of reference refer to like parts in all the figures.

a a are the steel calks, and *b* is the thin or shallow wrought-iron body of the shoe, to which body the steel calks *a a* are welded.

f is the rib: (Shown only on one side of the shoe.)

g g are the slots or recesses in which the holes for the nails are formed.

c c are the taper-holes, which are bored in the calks *a* when the shoes are made for roughing.

d d are the transverse holes to receive the drift for removing the pegs when required.

e e are the pegs, one of which is shown detached at Fig. 7. These pegs are made of a shape to correspond with the shape of the taper-holes *c*.

When the shoes are to be roughed, we insert the taper hardened steel pegs *e* into the taper-holes *c*, and said pegs project below the faces of the projecting calks upon the shoe, as best seen at Fig. 3. In order to remove and replace the pegs *e* when worn down to the face, we provide the transverse or slanting hole *d* across or toward each peg-hole *c*, and by inserting the center punch-like drift, (shown at Fig. 6,) having, however, by preference, a somewhat rounded point, as shown, we are enabled to loosen the peg *e*, which can be removed, if desired, before the horse is taken into the stable, or replaced whenever desired by a fresh one.

The calks *a* may be of any suitable section or contour—such as round, square, or oval—and the holes *c*, with the taper-pegs *e*, also the part of peg protruding, may also be of any desired form (more or less) to correspond therewith. These pegs *e* and the cross or slanting holes *d* for removing them may also be used with other forms of horseshoes, whether formed with projecting calks or not. For the purpose of preserving the proper taper of the peg-holes or for removing any accumulation, as required, after removal of a worn peg, or before insertion of a new peg, we employ the crutch-handled or other reamer shown at Fig. 5, of, say, square or other suitable form and of the proper taper. One prong may be a drill, another a square point, and the third a reamer. If by any means a peg should be broken off, the stump remain-

ing in the hole is easily removed by means of the aforesaid drift shown at Fig. 7.

We do not claim a horseshoe with a rim or flange forming the calk or part of the calk. Neither do we claim removable steel pegs or calks.

We claim as our invention—

1. In a horseshoe, the downwardly-projecting calks *a a*, having tapering holes passing up through them and transverse holes D intersecting the vertical holes, in combination with removable tapering hard roughing-pegs that fit into the tapering holes in the calks, substantially as set forth.

2. The horseshoe having a thin foundation plate or body and projecting calks, and ribs that extend between the respective calks, and tapering holes in the calks, and lateral holes that extend from the said tapering holes outwardly through the edge of the shoe, in combination with the removable tapering pegs or calks, substantially as specified.

WILLIAM WILLIAMS BOX.
FRANCIS JOHN BEADLE.

Witnesses:
JOHN DEAN,
THOMAS LAKE.
Both of 17 *Gracechurch Street, London.*