

(No Model.)

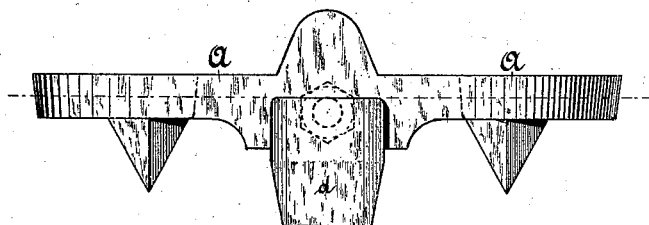
H. JONAS & C. HIRSCH.

HORSESHOE.

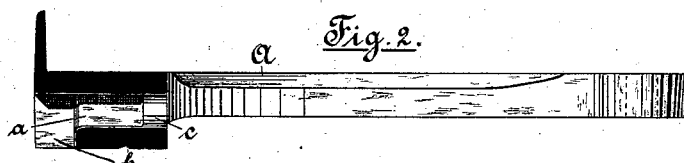
No. 382,040.

Patented May 1, 1888.

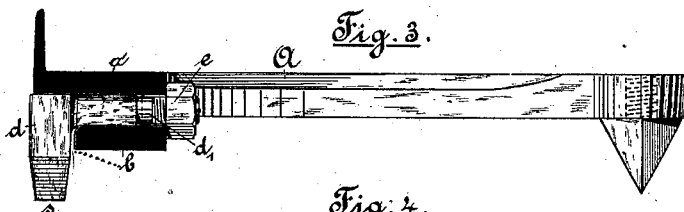
*Fig. 1.*



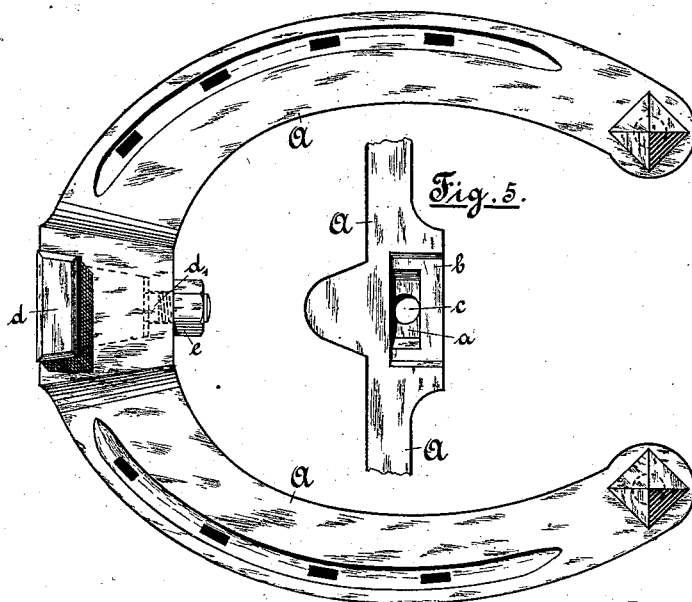
*Fig. 2.*



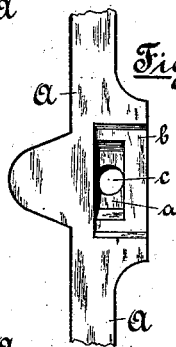
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



WITNESSES:

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B<sub>1</sub>

# UNITED STATES PATENT OFFICE.

HEINRICH JONAS AND CARL HIRSCH, OF DRESDEN, SAXONY, GERMANY.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 382,040, dated May 1, 1888.

Application filed June 28, 1887. Serial No. 242,773. (No model.) Patented in Germany November 2, 1886, No. 39,745.

### *To all whom it may concern:*

Be it known that we, HEINRICH JONAS and CARL HIRSCH, subjects of the Emperor of Germany, residing at Dresden, in the Kingdom of Saxony and Empire of Germany, have invented a new and useful Improvement in Horseshoes, (for which we have obtained a patent in Germany, No. 39,745, bearing date November 2, 1886,) of which the following is a specification.

Our invention relates to that class of horseshoes in which the toe-calks are removable, being attached to the shoe by means of screws and other fastening devices; and it consists in the details of construction substantially as illustrated in the drawings, hereinafter described, and subsequently pointed out in the claim.

Figure 1 illustrates a front view of our improved horseshoe with the removable toe on it. Fig. 2 illustrates a sectional view of the same without the removable toe. Fig. 3 also illustrates a sectional view of the same, but with the removable toe. Fig. 4 illustrates a bottom view of the same with the removable toe. Fig. 5 illustrates a detail view showing how the front of the shoe is constructed to accommodate the removable toe.

The calks and sides of this horseshoe may be of any well-known form, so that the shoe may be fastened to the horse's foot in any well-known way. In front, at the toe, the shoe is made thicker, so that it will be large enough to embrace the tapered mortise *a*, as illustrated in Fig. 2. In the middle of the back end of the mortise *a* is a cylindrical hole, *c*, which extends entirely through the shoe backward from the mortise. As much of the shoe as has thus far been described may either be forged of steel or wrought-iron, or it may be cast of malleable iron or soft steel. We prefer to cast it of malleable iron, forming the mortise *a* and the hole *c* with a dry-sand core. The top of the removable toe-piece is adapted to fit into a notch, *b*, formed in the shoe at the outer end

of the mortise *a*. This toe-piece has also a tenon, *a'*, adapted to fit into the mortise *a*, upon which tenon is a shank, *d*, adapted to the hole *c*. This shank is so long that when the toe-piece is in proper position it extends beyond the inner wall of the shoe. Upon the projecting end of this shank is cut a screw upon which works the nut *e*, which, binding on the inner wall of the shoe, secures the toe-piece in its place, but so that when the nut *e* is removed the toe-piece will be free to be taken out of the shoe. This toe-piece may be forged or cast of steel, or of any other proper material. The lower end, *s*, of the toe-piece is made narrow, so that when it is new it will be sharp and serviceable to the horse.

This shoe is used as horseshoes ordinarily are, except that when the toe-piece is old and worn it may be taken out and replaced by a new one. To take out this toe-piece, the operator first, holding up the horse's foot, takes off the nut *e* with a proper wrench. Then the toe-piece, being loose, can be easily lifted out. A new toe piece is set in the shoe, and the nut *e*, being put on, is secured in position. This may be repeated as often as is required.

What we claim, and desire to secure by Letters Patent, is—

The combination, with a horseshoe constructed with the tapered mortise *a*, the notch *b*, and the backward-extending hole *c*, of the removable toe piece *d*, made narrow at its lower end and adapted to fit the mortise *a*, the screw-threaded shank *d'*, adapted to the cylindrical hole *c*, and the nut *e*, working upon the projecting end of said shank, substantially as and for the purpose set forth.

In witness whereof we hereunto set our hands in presence of two witnesses.

HEINRICH JONAS.  
CARL HIRSCH.

Witnesses:

OTTO WOLFF,  
PAUL DRUCKMÜLLER.