

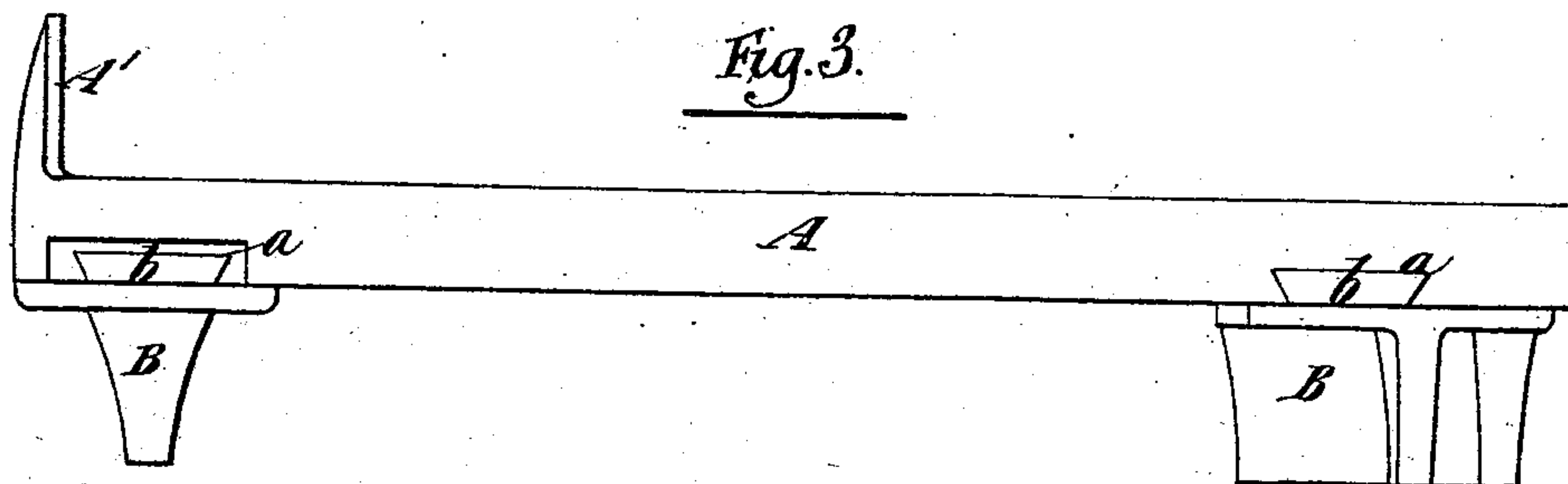
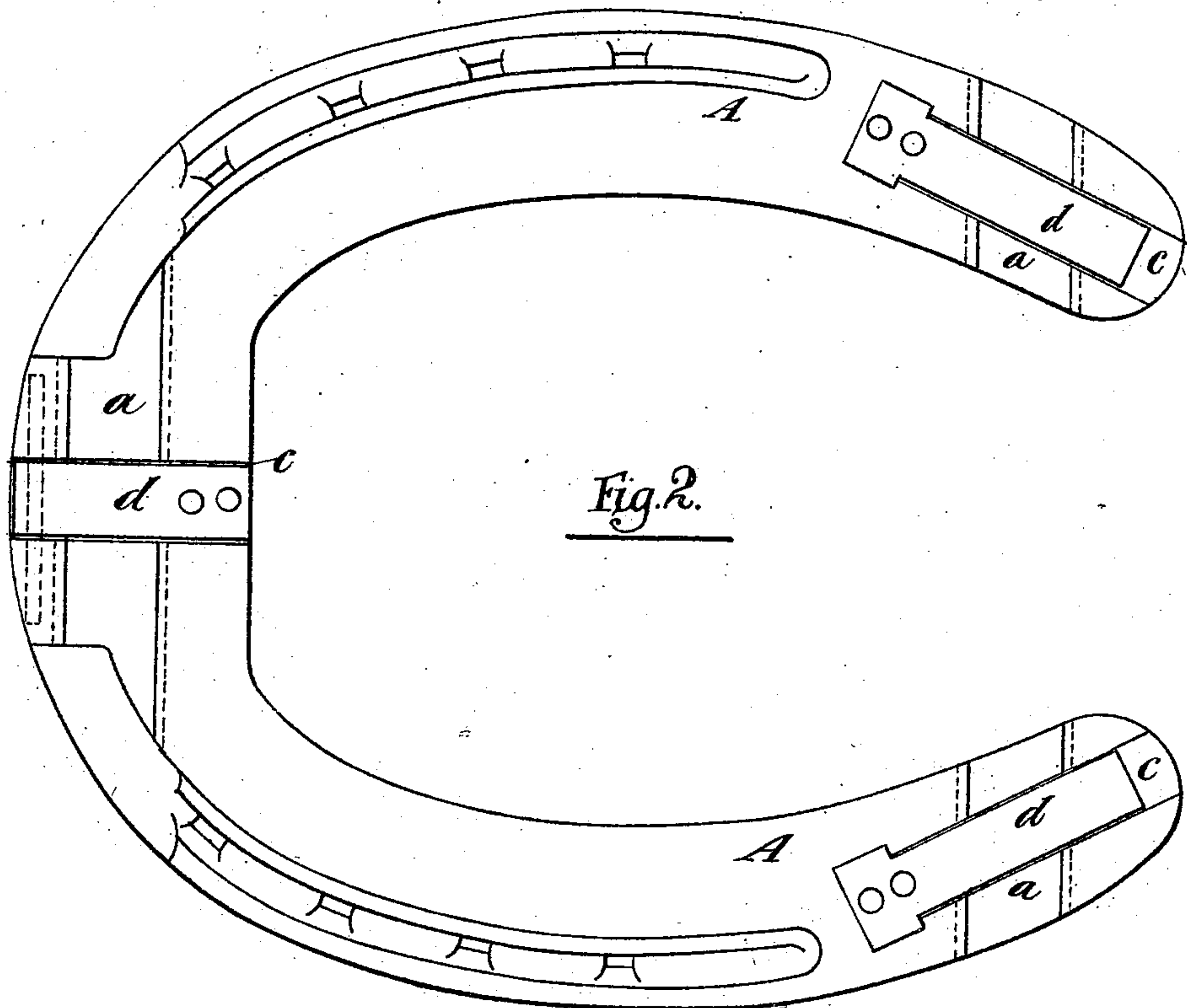
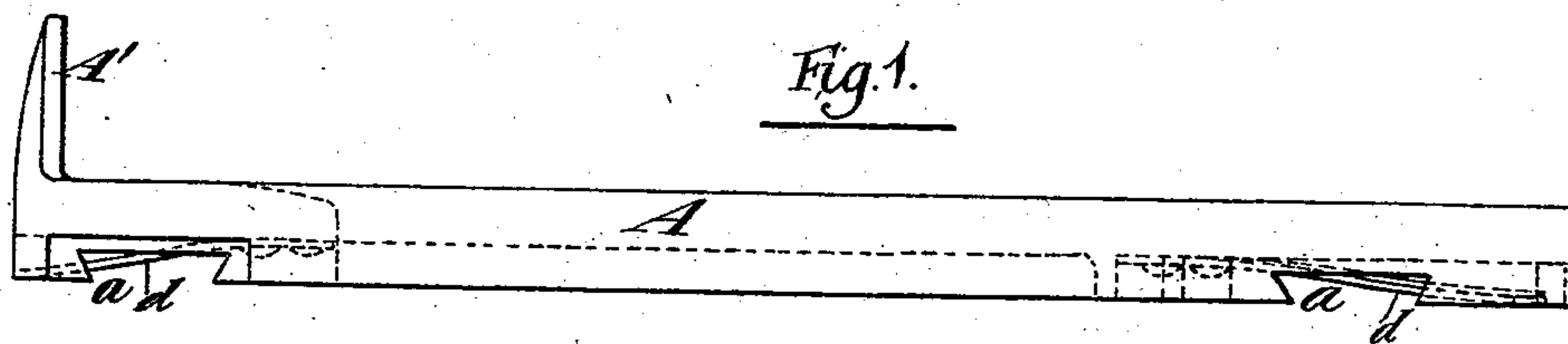
(No Model.)

2 Sheets—Sheet 1.

O. LAMPE.

Mode of Securing Calks to Horseshoes.
No. 236,046.

Patented Dec. 28, 1880.



Witnesses:-

Louis M. Whitehead.
J. H. Haynes

Inventor:-

Otto Lampe
by his Attorneys
Brown & Brown

(No Model.)

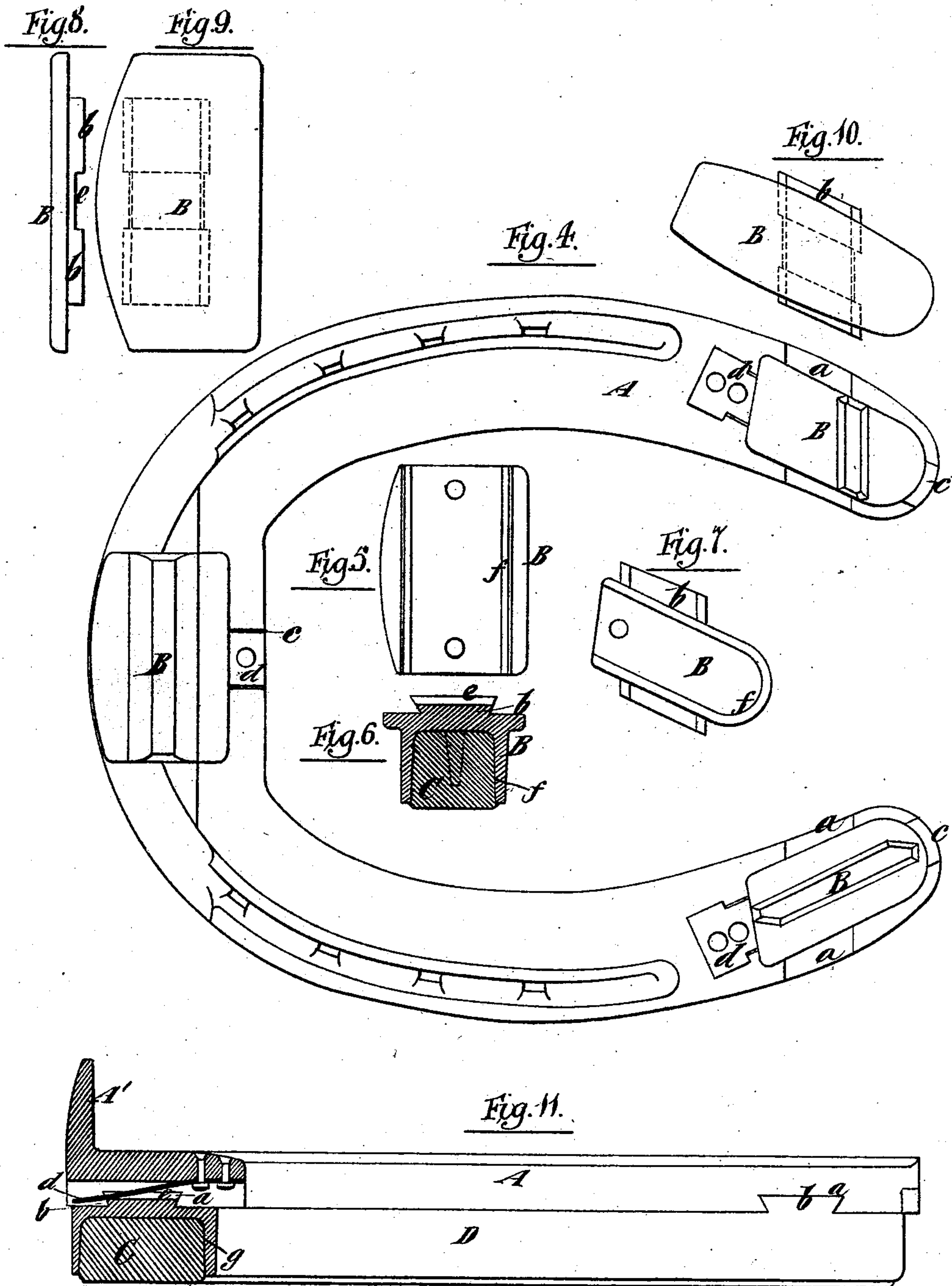
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Inventor:-

Otto Lampe
By Geo. A. Homage
Rount Brown

UNITED STATES PATENT OFFICE.

OTTO LAMPE, OF HAMBURG, GERMANY.

MODE OF SECURING CALKS TO HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 236,046, dated December 28, 1880.

Application filed September 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, OTTO LAMPE, of Hamburg, in the Empire of Germany, have invented a certain new and useful Improvement in Horseshoes, of which the following is a specification.

The object of my invention is to provide in a convenient manner for securing the heel and toe calks, so that while the shoe is upon the horse the calks may be conveniently removed and sharpened, or replaced by others of the same or different form, and so that said calks cannot become accidentally detached.

To this end my invention consists in the combination, with a horseshoe having in its under side dovetailed grooves or recesses extending across the same, and springs arranged transversely to said recesses or grooves, of calks provided with correspondingly-dovetailed projections fitting said grooves or recesses, and with transverse notches receiving said springs, whereby the accidental displacement of the calks is precluded.

In the accompanying drawings, Figure 1 represents a side view of a shoe embodying my invention. Fig. 2 represents an inverted plan thereof. Fig. 3 represents a side view thereof with calks attached. Fig. 4 represents an inverted plan of such shoe with calks attached. Fig. 5 represents a plan, and Fig. 6 a transverse section, of a hollow toe-calk. Fig. 7 represents a plan of a hollow heel-calk. Figs. 8, 9, and 10 represent detail views of toe and heel calks of modified form, and Fig. 11 represents a section through a shoe embodying my invention having a packed auxiliary shoe attached.

Similar letters of reference designate corresponding parts in all the figures.

A designates an iron shoe, of any desirable form, provided with a front tongue, A'. Upon its under side, near the toe and heel, the shoe is provided with dovetailed grooves or recesses *a*, extending across it; and B designates toe and heel calks, which are made separate from the shoe, and have upon their upper sides dovetailed projections *b*, fitted to slide in the grooves *a*.

In order to lock the calks securely in the grooves *a* when in proper position, I construct

the shoe with recesses *c*, extending transversely across the grooves *a*, and in these recesses are placed springs *d*, which engage with transverse notches *e* in the projections *b* when the calks are in proper position, and prevent the calks from being taken off without moving the springs out of the notches.

When attached to the shoe as shown, the calks may be conveniently taken off for sharpening or for replacing them with new calks of corresponding or different form.

Instead of the calks being pointed, as shown in Figs. 3 and 4, I may employ calks of the form shown in Figs. 5, 6, and 7, having recesses or cavities *f* in their under surfaces, in which is inserted a packing, C, of hemp, rubber, or other yielding or elastic material.

Where horses are kept standing in the stable I may use calks or thin plates of the form shown in Figs. 8, 9, and 10, which are simply to fill up the grooves *a*, and keep them from being clogged up with dirt.

In lieu of separate calks, I may employ a single auxiliary shoe, D, (see Fig. 11,) having projections *b* upon its upper surface, which are adapted to fit into the grooves *a* in the shoe A and be locked in position by the springs *d*. As here shown the shoe D has a hollow or recess, *g*, at the under side, in which is inserted a packing, C; but, if desirable, a plain flat plate might be used in place of the auxiliary shoe D.

When shoes of my improved construction are used a horse will need to have the shoes themselves replaced much less frequently than at present, and calks of different forms may be kept on hand and used to suit the character of the ground or road over which the horse is to travel.

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

The combination, with a shoe, A, having dovetailed grooves *a*, of calks B, having dovetailed projections *b* and notches *e*, and the springs *d* fitting in said notches, substantially as specified.

OTTO LAMPE.

Witnesses:

A. SCHAPER,
R. MAYER.