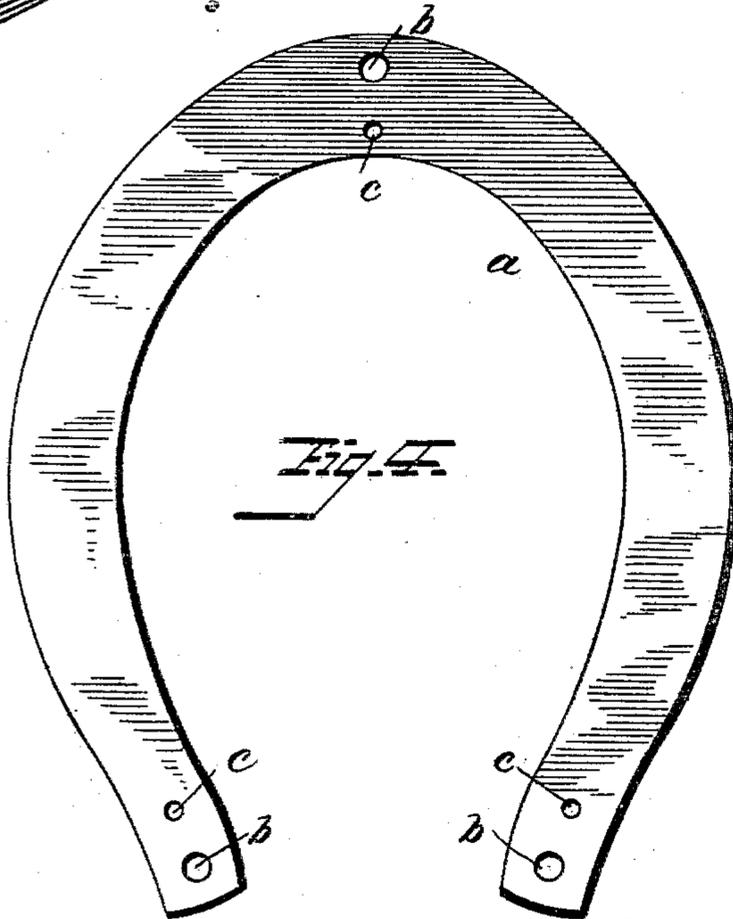
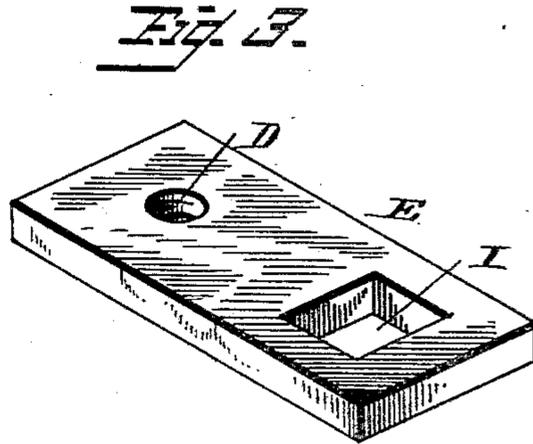
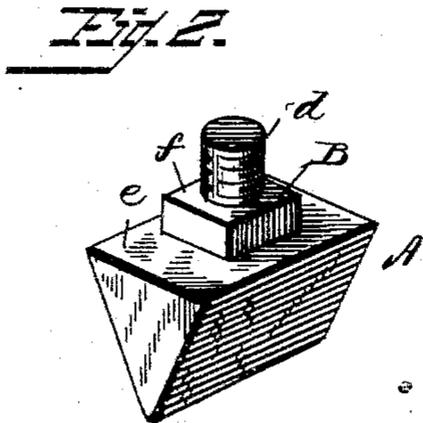
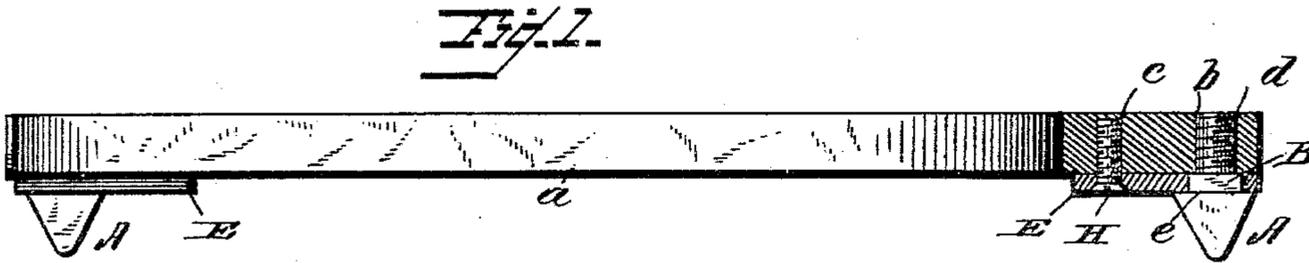


(No Model.)

F. F. LUTZ.  
HORSESHOE.

No. 319,103.

Patented June 2, 1885.



WITNESSES  
*John S. ...*  
*John S. ...*

INVENTOR  
*Ferdinand F. Lutz.*  
by *Frank Sweeney.*  
Attorney

# UNITED STATES PATENT OFFICE.

FERDINAND F. LUTZ, OF LOUISVILLE, KENTUCKY.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 319,103, dated June 2, 1885.

Application filed January 12, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND F. LUTZ, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Horseshoes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in horseshoes; and it consists in the construction and novel arrangement of devices, as will be hereinafter more fully set forth, and particularly pointed out in the claim appended.

The object of this invention is to improve horseshoes on which removable calks are employed by simplifying the construction and adapting the parts, so as to allow others than horseshoers to remove and replace the calks upon a shoe, and to obviate the necessity of removing the shoe from the foot of an animal.

Heretofore horseshoes have been provided at both the toe and heel portions with vertical threaded apertures to receive the threaded stem of a calk, and in some cases the under face of the shoe has been recessed for the reception of a plate abutting against one side of the calk, the plate being transversely perforated and held to the shoe and against the said calk by means of a screw.

In the accompanying drawings, illustrating my invention, Figure 1 is a sectional view of a shoe showing my improvements applied. Fig. 2 is a view of the calk removed from the shoe. Fig. 3 is a detached view of the securing-plate, and Fig. 4 is a plan view of a shoe with the calks and securing-plates removed.

Referring to the said drawings by letter, *a* indicates a shoe, which may be of any ordinary or approved construction. This shoe I provide at the toe and heel portions, respectively, with vertical internally-threaded apertures *b* and *c*, the former being designed to receive the externally-threaded stem of the

calk, and the latter a screw for retaining the securing-plate.

*A* indicates one of the calks, which may be pointed, round, square, or other suitable shape, having a threaded stem, *d*, of the usual construction. At the base of this stem is formed a rectangular shoulder, *B*, of less diameter than that of the body of the calk, and is of a depth equal to the thickness of the securing-plate, so that when a calk is applied to the shoe, with the plate in position thereon, the shoulder or base *e* of the point portion of the calk will firmly engage the under side of the securing-plate, with the rectangular shouldered portion of the calk fitting snugly in a correspondingly-shaped aperture in the securing-plate, and the outer flat side, *f*, of the shouldered portion resting against the shoe.

*D* indicates the aperture in the securing-plate *E* for the screw *H*, which will be brought directly over the aperture *c* when the stem of the calk has been passed through the rectangular aperture in the said plate and screwed home into the shoe by simply turning the securing-plate *E*, which serves the additional function of a lever or means for screwing the calks into the shoe.

It will be perceived that the securing-plate surrounds the shouldered portion of the calk-stem by all the walls of the rectangular aperture *I*, and thereby effectually prevents the calk from turning in the shoe when the screw *H* in the perforation *D* is screwed into the threaded aperture of the shoe.

The only thing necessary to adapt a shoe for the reception of my improvements is to provide it with the threaded apertures at the toe and heel portions, as before described. The calk may then be quickly applied and removed from a shoe by any one without having a knowledge of horseshoeing.

It is sometimes desirable to use two calks or points at the toe of the shoe to form a broad and firm footing, and in such cases this is provided for by simply forming the aperture in shoe-plate and the aperture for the securing-screw in the middle or other suitable portion of the plate, and two rectangular apertures at a suitable distance therefrom; the sole function of the said screw being to hold the plate to the shoe.

Having thus described this invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The combination, with a horseshoe having threaded apertures, of a calk having a threaded stem and an angular portion at the base thereof, and a securing-plate adapted to engage the said angular portion and serve the

additional function of a lever for screwing the calk into a shoe, substantially as specified. 10

In testimony whereof I affix my signature in presence of two witnesses.

FERDINAND F. LUTZ.

Witnesses:

JOHN C. GRAVES,  
EDWARD STORKER.