# J. D. ROSENBERGER.
## Calk Attachment.

No. 219,876.          Patented Sept. 23, 1879.

FIG.1

FIG.4

FIG.2

FIG.5

FIG.6

FIG.3

FIG.7          FIG.8

Witnesses.          Inventor

Thomas J. Bewley.

Chas. A. Dury          John D. Rosenberger.

per Stephen Ustick attorney
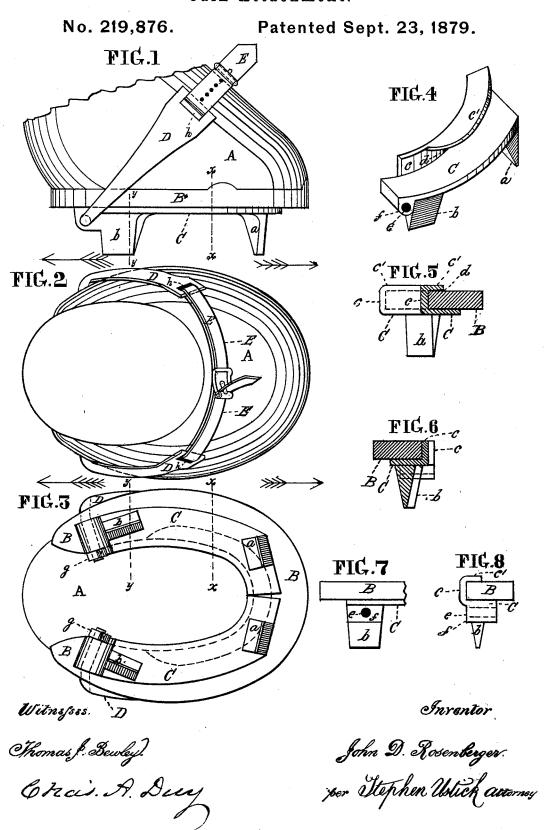
# UNITED STATES PATENT OFFICE.

## JOHN D. ROSENBERGER, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN CALK ATTACHMENTS.

*To all whom it may concern:*

Be it known that I, JOHN D. ROSENBERGER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Horseshoe-Calks, of which the following is a specification.

This invention is an improvement on my Patent No. 185,700.

The object of the invention is such a construction of the calk-plates as will admit of being firmly and expeditiously attached to ordinary horseshoes or detached therefrom easily and quickly; and the nature of the invention consists of a pair of metallic plates which fit the under side of the shoe and bind against its inner edge and the upper side of the shoe along said edge, in combination with a pair of metallic straps which are pivoted to lugs on the under side of said plates at their lower end, and at their upper ends have slots, with which are connected a tightening-strap, which is drawn over the upper part of the hoof and fastened, as hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a shoe and calk-plates and their attachments. Fig. 2 is a top view of the hoof and the attaching devices of the calk-plates C C. Fig. 3 is a bottom view, showing the connection of said plates with the shoe. Fig. 4 is a perspective view of one of the calk-plates C. Fig. 5 is a cross-section of one of the calk-plates and the side of the shoe with which it is connected, at the broken lines $x\ x$ of Figs. 1 and 3. Fig. 6 is a like section of the same at the broken lines $y\ y$. Fig. 7 is a side view of a portion of the rear end of one of the calk-plates C, showing a modification in the connection of straps D. Fig. 8 is an end elevation of the same.

Like letters of reference in all the figures indicate the same parts.

A represents the hoof of a horse; B, an ordinary shoe, and C C metallic plates having toe-calks $a$ and heel-calks $b$. These plates have at their inner edge a flange, $c$, which bears against the inner edge of the shoe, which flange has an extended flange, $c'$, whereby a groove, $d$, is formed of suitable dimensions for fitting the under side of the shoe, its inner edge, and around the upper corner, as seen clearly in Fig. 5.

D D are metallic straps, which have their lower ends bent inward and formed to fit the round holes $e$ in the lugs $f$ in the rear calks, $b$, of the plates C, and are provided with confining-nuts $g$.

The upper ends of the straps have slots $h$, with which is connected the flexible strap E, which is made of leather or other suitable material. It is drawn tightly over the front of the hoof A and buckled, as seen in Fig. 2, whereby the straps D D are drawn forward and the plates C C thereby forced toward the front of the shoe until their front ends meet each other, as seen in Fig. 3, and the plates brought firmly into connection with the shoe, the grooves $d$ partly encircling the inner edge thereof, as seen in Fig. 5. The grooves are somewhat narrowed at their bottom, to insure a tight fit upon the shoe.

Instead of having lugs $f$ in the rear of the calks $b$ they may be dispensed with by widening the calks, as shown in Figs. 7 and 8, and providing them with holes $e$ for the connection of the straps D. In this case the straps may have a screw connection with the holes and the nuts $g$ be dispensed with.

If desired, a chain may be used instead of the flexible strap E.

I claim as my invention—

1. The calk-plates C C, having lugs $f$, provided with holes $e$, substantially in the manner and for the purpose set forth.

2. The metallic straps D D, having their lower ends bent inward and their upper ends provided with slots $h$, in combination with the calk-plates C C and strap E, substantially in the manner and for the purpose set forth.

JOHN D. ROSENBERGER.

Witnesses:
  STEPHEN USTICK,
  WM. LANDON.