

(No Model.)

P. HELD,  
HORSESHOE CALK.

No. 595,711.

Patented Dec. 21, 1897.

Fig. 1.

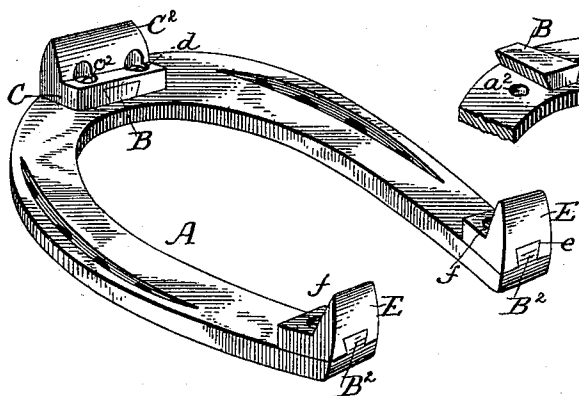


Fig. 2.

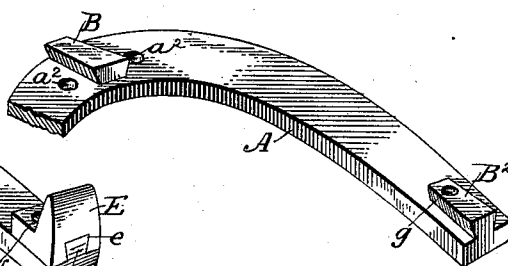


Fig. 3.

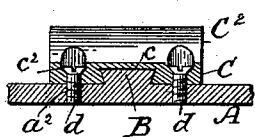
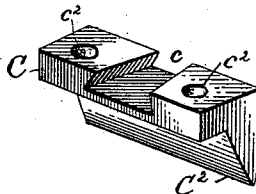


Fig. 4.



WITNESSES

*A. B. Digges*  
*J. J. Masson*

INVENTOR

*Paul Held*  
*by E. E. Masson, Attorney.*

# UNITED STATES PATENT OFFICE.

PAUL HELD, OF ST. CLOUD, MINNESOTA.

## HORSESHOE-CALK.

SPECIFICATION forming part of Letters Patent No. 595,711, dated December 21, 1897.

Application filed September 23, 1897. Serial No. 652,716. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL HELD, a citizen of the United States, residing at St. Cloud, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Horseshoe-Calks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to removable horseshoe-calks; and the improvement consists in the novel construction of the calk in connection with simple means for securing the same to horseshoes whether said shoes are unattached or attached to a horse's hoof. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a bottom perspective view of a horseshoe provided with calks constructed and connected thereto in accordance with my invention. Fig. 2 is a bottom perspective view of a portion of the horseshoe provided with tapering dovetailed lugs adapted to enter into engagement with a correspondingly-formed groove in the center of the top of the calk. Fig. 3 is a transverse section of the front calk and of the front portion of the shoe, showing the dovetailed connection and the fastening-screws therefor. Fig. 4 is a perspective view, on a larger scale, of the front calk in its normal position, as when applied to the bottom of a horseshoe.

Heretofore horseshoes provided with removable calks having substantially rectangular sides have generally been constructed with dovetailed grooves or with perforations in their under face to receive corresponding projections formed upon the calks, but such grooves or perforations have a tendency to materially weaken the shoe at the points where it should be the strongest. Angular horseshoe-calks having nearly the outline of mine, but without the dovetailed groove, have been secured by screws upon the bottom face of horseshoes, but said screws unaided by a dovetailed tongue are subjected to too much shearing strain. This defect has been partly remedied in other calks provided with a V-groove to receive a V-tongue pendent from the under face of the shoe; but the objects of my improvement are to provide the toe and heels of the shoe with tapering dovetailed tongues having their long axis in or

parallel to the long axis of the shoe, and for each tongue a calk having a tapering dovetailed groove adapted to straddle and engage each tongue, and screws having their heads received in holes countersunk in the body of the calk.

In the accompanying drawings, A represents a horseshoe that is provided on the under face of the toe portion with a tapering dovetailed tongue B, integral therewith, the narrowest portion of said tongue being preferably at the front edge. The toe-calk consists of a substantially rectangular body C, having pendent from its front edge a chisel-shaped spur C<sup>2</sup>. In the center of its top face the calk has a tapering dovetailed groove *c*, corresponding in size and shape with the tongue B, and on the side of said groove said calk has perforations *c*<sup>3</sup> for the passage of screws *d*, the thread portion of which is adapted to engage screw-tapped perforations *a*<sup>2</sup>, made in the body of the shoe. The outer ends of the perforations *c*<sup>3</sup> are enlarged and countersunk to receive the heads of the screws *d*, the depth of said countersinks being such that the head of each screw is under the level of the body C, so as to be protected by the latter, even when the spur C<sup>2</sup> is entirely worn away, to permit a screw-driver to enter into engagement with the screws to facilitate the removal of said body and its replacement by a new calk.

To provide the heels with a removable calk, each heel of the shoe is provided with a tapering dovetailed tongue B<sup>2</sup>, integral therewith and having its long axis substantially parallel with the long axis of the shoe, and an angular calk E, having its upper face provided with a tapering dovetailed groove *e*, is made to straddle and engage with each tongue B<sup>2</sup>, and a screw *f*, having its head countersunk in the body of the calk E and its screw-threaded portion in engagement with a perforation *g* in the body of the shoe, retains the calk securely united to the shoe.

The calks are preferably made of steel with suitable dies, so as to have their dovetailed grooves of uniform size to fit upon the corresponding tongues of the shoe.

Having now fully described my invention, I claim—

1. In combination with a horseshoe pro-

vided with three tapering dovetailed tongues having their long axes parallel with the long axis of the shoe, angular calks, each having a tapering dovetailed groove adapted to straddle and engage each tongue, and screws having their heads received in holes countersunk in the body of the calk and engaged with the shoe, substantially as described.

2. In combination with a horseshoe provided at the toe with a tapering dovetailed tongue having its long axis parallel with the long axis of the shoe, an angular calk having

a chisel-shaped spur on its outer face, and in its inner face having a tapering dovetailed groove adapted to straddle and engage the dovetailed tongue, and screws having their heads received in holes countersunk in the body of the calk, substantially as described.

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

PAUL HELD.

Witnesses:

ANDREW C. ROBERTSON,  
F. MCGUIRE.