

W. J. Berne,

Horseshoe.

No. 90,224.

Patented May 18, 1869.

Fig. 1.

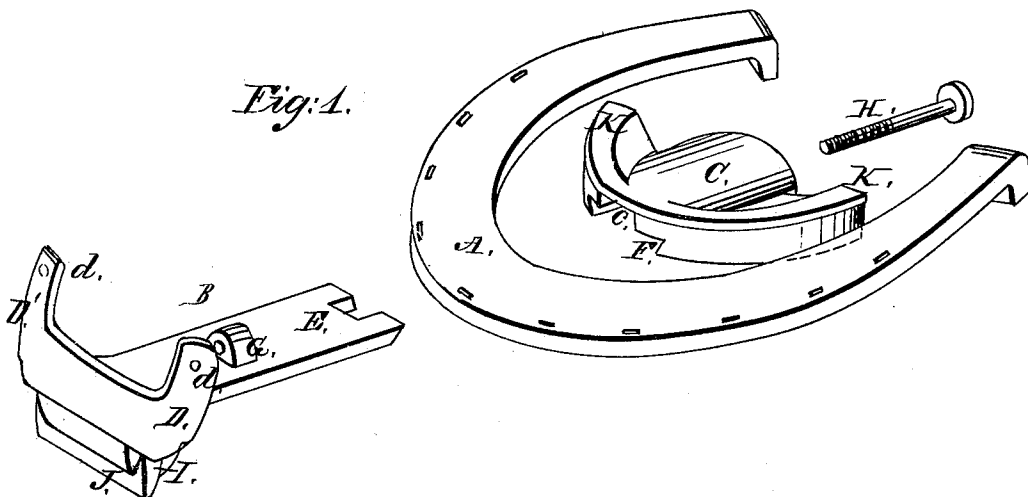


Fig. 2.

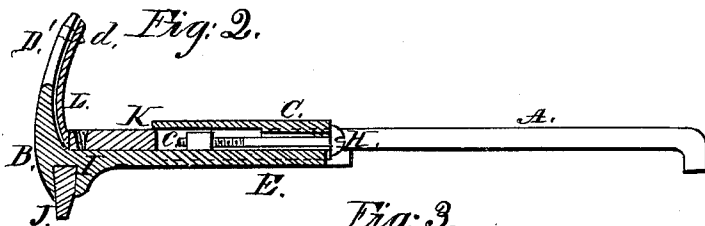
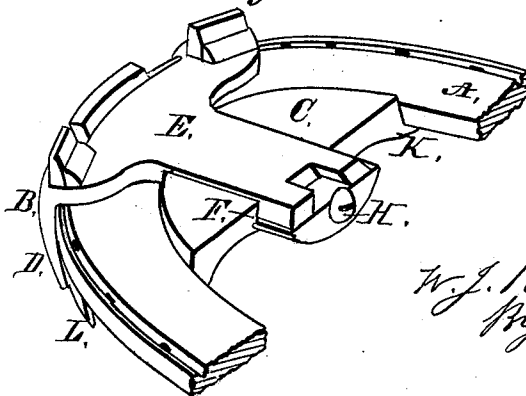


Fig. 3.



Witnesses;

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WILLIAM JONES BERNE, OF CINCINNATI, OHIO.

Letters Patent No. 90,224, dated May 18, 1869.

IMPROVEMENT IN DETACHABLE CALKS FOR HORSESHOES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, WILLIAM JONES BERNE, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Detachable Calk for Horseshoes; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

This invention relates to a compact and strong, yet light calk for ready attachment to, or removal from a horseshoe, while the latter is on the hoof of the animal.

Figure 1 represents the parts of my calk detached, viewed from above.

Figure 2 is a longitudinal section through the parts in position.

Figure 3 represents a modification of my improvement, viewed from below.

A, figs. 1 and 2, represents an ordinary horseshoe without toe.

B and C are two jaws, of malleable iron, adapted to grasp respectively the front and back edges of the horseshoe at its mid-length.

Of these pieces the jaw B consists essentially of a bifurcated flange, D D', which, extending upward in front of the shoe and hoof, is provided with spurs, d, which, when the jaw is screwed home, slightly penetrate the hoof; a dovetailed shank, E, which enters a correspondingly undercut gain or groove, F, in the jaw C; a nut, G, for the reception of a screw, H, which screw, passing through the jaw C, serves to draw and hold the two jaws together, and to cause them to tightly grasp the horseshoe.

The jaw B has also an undercut groove, I, on its under side, to receive and hold a steel bit, J, which constitutes the toe proper.

In addition to the parts named, the jaw C has a lip, K, which, overlapping the inner edge of the shoe, serves, in conjunction with the spurred flange D D' and the screw H, to hold the calk firmly to the shoe, and to prevent it dropping off of the latter when in use.

An excavation, c, in the jaw C, permits the nut G to enter said jaw as the parts are screwed home.

In order to protect the hoof, and to cause a uniform bearing against it of the jaw B, and to prevent rattling, a cushion, L, of India rubber or leather, may be interposed between the flange D D' and the front of the hoof.

Fig. 3 represents a modification of my invention, adapting it for use in shoes having a customary fixed toe-calk.

In this form of my invention the flange D D' bifurcates downward as well as upward, so as to avoid the fixed toe-calk, and each branch has a separate dovetailed groove and bit, as shown in said figure.

I am aware that a somewhat similar device has been patented by Edward Sneider, under date of October 2, 1866.

One difference existing between Sneider's invention, and my own is the exactly opposite manner in which the two work.

While his is fastened to the shoe by the pressure of one end of the screw-bolt against the rear edge of the shoe, my improvement is secured by the direct action of the same upon the detachable calk itself, the latter being drawn back by the screw, so as to take firm hold of the hoof, as heretofore described.

My invention is also an improvement upon Sneider's inasmuch as in mine the supplemental shoe described by him is dispensed with, as are also the split-spring washer and the studs on the rear extremity of the supplemental shoe described in his patent, and rendered necessary, the former by the manner in which the bolt acts upon the shoe, the latter to prevent lateral displacement.

In my improved detachable calk these cumbersome attachments are all rendered unnecessary by the peculiar construction of the parts B and C.

I also construct my improvement so that it may be applied to the common shoe, having the ordinary toe-calks in front.

My improvement is also supplied with a movable toe-piece proper J, which may be inserted or taken out at pleasure, by means of its wedge-form and the dovetailed groove I.

I do not claim the broad principle of attaching movable calks to horseshoes; but

What I do claim as new, and of my own invention, and for which I desire to secure Letters Patent, is—

1. The detachable calk, composed of the jaw B, spurred flange D D', dovetailed shank E, nut G, undercut groove I, steel bit J, jaw C c, gain F, lip K, and screw H, constructed and combined to operate substantially as and for the purposes set forth.

2. In combination with the detachable calk, the pad L, for the purposes specified.

In testimony of which invention, I hereunto set my hand.

WILLIAM JONES BERNE.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.