

E. L. ABBOTT.
HORSESHOE ATTACHMENT.
APPLICATION FILED MAR. 9, 1904.

Fig. 1.

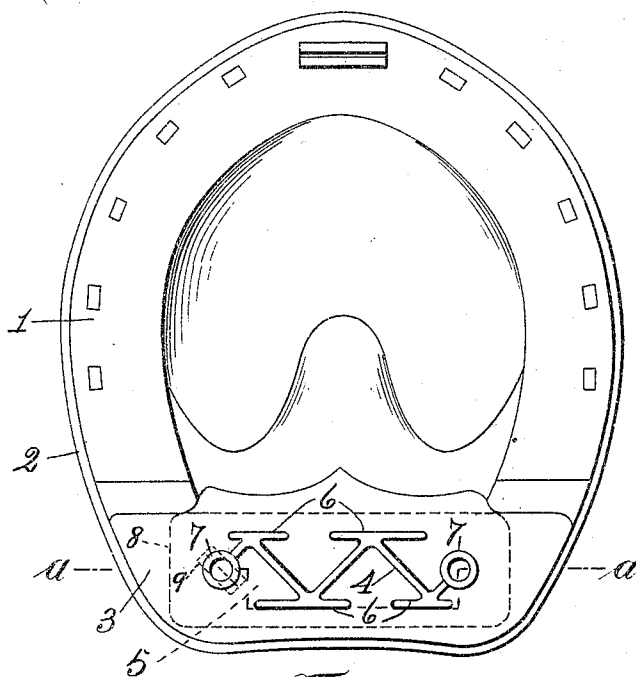


Fig. 2.

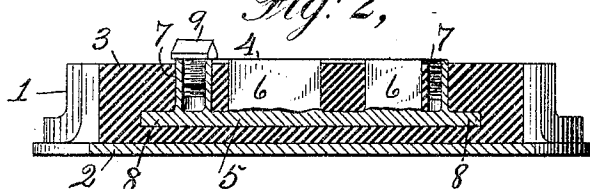
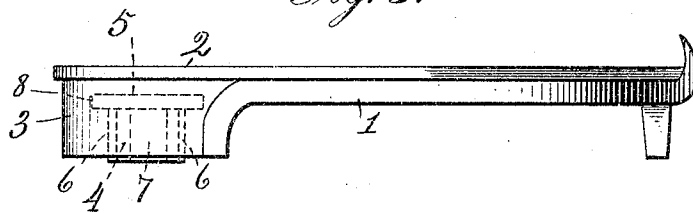


Fig. 3.



Witnesses
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Inventor
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By his Attorney Albert C. Farmer.

UNITED STATES PATENT OFFICE.

EVERETT L. ABBOTT, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES E. ABBOTT, OF NEW YORK, N. Y.

HORSESHOE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 779,148, dated January 3, 1905.

Application filed March 9, 1904. Serial No. 197,249.

To all whom it may concern:

Be it known that I, EVERETT L. ABBOTT, a citizen of the United States, residing in the borough of Manhattan, city of New York, county and State of New York, have invented certain new and useful Improvements in Horseshoe Attachments, which improvements are fully described and claimed in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a bottom plan; Fig. 2, a transverse section on line *a a*; and Fig. 3, a side elevation of the horseshoe, showing my attachment in dotted lines.

My invention relates to horseshoes provided with cushions to prevent slipping over smooth or icy pavements, and particularly to cushions such as are shown in my prior patent, No. 730,855, dated June 16, 1903, wherein the cushion is provided with an embedded vertical plate to prevent sidewise slip.

The object of my present invention is to make the union between the plate and the cushion more intimate and perfect, to permit the plate to yield slightly when the shoe strikes the ground, and to prevent such plate from cutting the cushion in the practical operation of the device.

In the drawings similar numerals indicate similar parts.

1 indicates a horseshoe of ordinary construction, except that the heel of the shoe terminates short of the heel of the hoof. Between the shoe and the hoof is a pad 2, of leather or other suitable material, which pad entirely covers the under surface of the hoof and therefrom projects beyond the heel-calks of the shoe proper.

3 is the cushion, of rubber, leather, or other suitable material, which fits upon and is connected to pad 2, filling the shoe at the rear of the hoof to the level of the heel-calks. While I have shown the cushion as attached to the pad 2, I do not limit myself to this construction, as it is not material. The cushion may be conjoined with the shoe in any of the various ways common to cushioned horseshoes.

In the cushion 3, which is recessed for a part of its depth for the reception thereof, I

embed the vertical plate 4, which is of suitable hardened or cast metal and has the base-plate 5 made integral with it. Plate 4 and base 5 are not as deep as the cushion 3, and the recess therefor being but part of the whole depth of the cushion there is interposed between the base-plate 5 and the pad 2 a comparatively thin section of cushion. This section is just thick enough to normally keep the edge of the plate 4 projecting slightly beyond the face of the cushion, as shown in Fig. 2.

I make the plate 4 corrugated in plan or in the form of a series of connected V's, and to securely interlock the plate with the cushion I provide at the apex of each angle a vertical locking-flange 6, made integral therewith and projecting on each side of the apex. This provides a dovetail into which the cushion fits and interlocks, thus making the cushion and the plate an integral whole and preventing the separation of the two. I extend the base-plate 5 beyond the area of the vertical web 4, as at 8, thus preventing the plate being pulled out from the cushion.

The ends of the plate 4 terminate in hollow pillars 7, which act to give an additional grip upon any icy surface, to stiffen the plate 4, and also receive the shank of removable calks 9. Preferably these calks screw into the pillars 7, and I have so shown them. These removable calks can quickly be put in place or removed, and thus the shoe is adaptable to suit the exigencies of any road condition that may arise in the course of a journey.

By allowing the edge of vertical plate 4 to project beyond the face of the cushion and having the base-plate 5 bear upon a section of said cushion I provide a means which shall positively bite into the surface of the road, and yet as the pressure comes upon it it will yield and give an easy tread.

It is obvious that the details shown may be varied without departing from the spirit of my invention.

Having described my invention, what I claim is—

1. The combination with a horseshoe terminating short of the heel of the hoof, of a pad

covering the under surface of the hoof, a yielding cushion behind the ends of the shoe connected thereto, said cushion being recessed for a part of its depth; and a vertical plate, 5 having a horizontal base-plate embedded in said recess and normally projecting slightly therefrom, substantially as described.

2. The combination with a horseshoe, of a yielding cushion connected thereto, recessed 10 for a part of its depth, and a vertical corrugated plate having a horizontal base-plate embedded in said recess and normally projecting slightly therefrom, and vertical flanges on said vertical plate for locking the plate to said 15 cushion, substantially as described.

3. The combination with a horseshoe, of a cushion connected thereto, a vertical corrugated plate embedded in said cushion, and vertical locking-flanges at the apices of the cor- 20 rugations for interlocking the plate securely with the cushion, substantially as described.

4. The combination with a cushion for horse- shoes, of a solid vertical plate embedded there- 25 in, said plate having dovetailed spaces into which the cushion projects, whereby the

cushion and plate are interlocked, substantially as described.

5. The combination with a horseshoe, of a cushion 3, a vertical corrugated plate 4, having a base-plate 5 embedded in said cushion, 30 locking-flanges 6 on plate 4, and pillars 7 at the ends of said plate 4, all substantially as described and shown.

6. The combination with a horseshoe, of a cushion connected thereto, a vertical plate em- 35 bedded in said cushion, hollow pillars at the ends of said plate, and removable calks engaging with said pillars, substantially as described.

7. In horseshoe, the combination with a 40 cushion, of hollow pillars shorter than the depths of the cushion embedded therein and resting thereon, and calks adapted to engage with said pillars for service or be detached 45 therefrom when desired, substantially as described.

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Witnesses:

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