No. 764,547. PATENTED JULY 12, 1904.

H. BARTLEY.

COMPOSITION HORSESHOE.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.

Fig. 3.

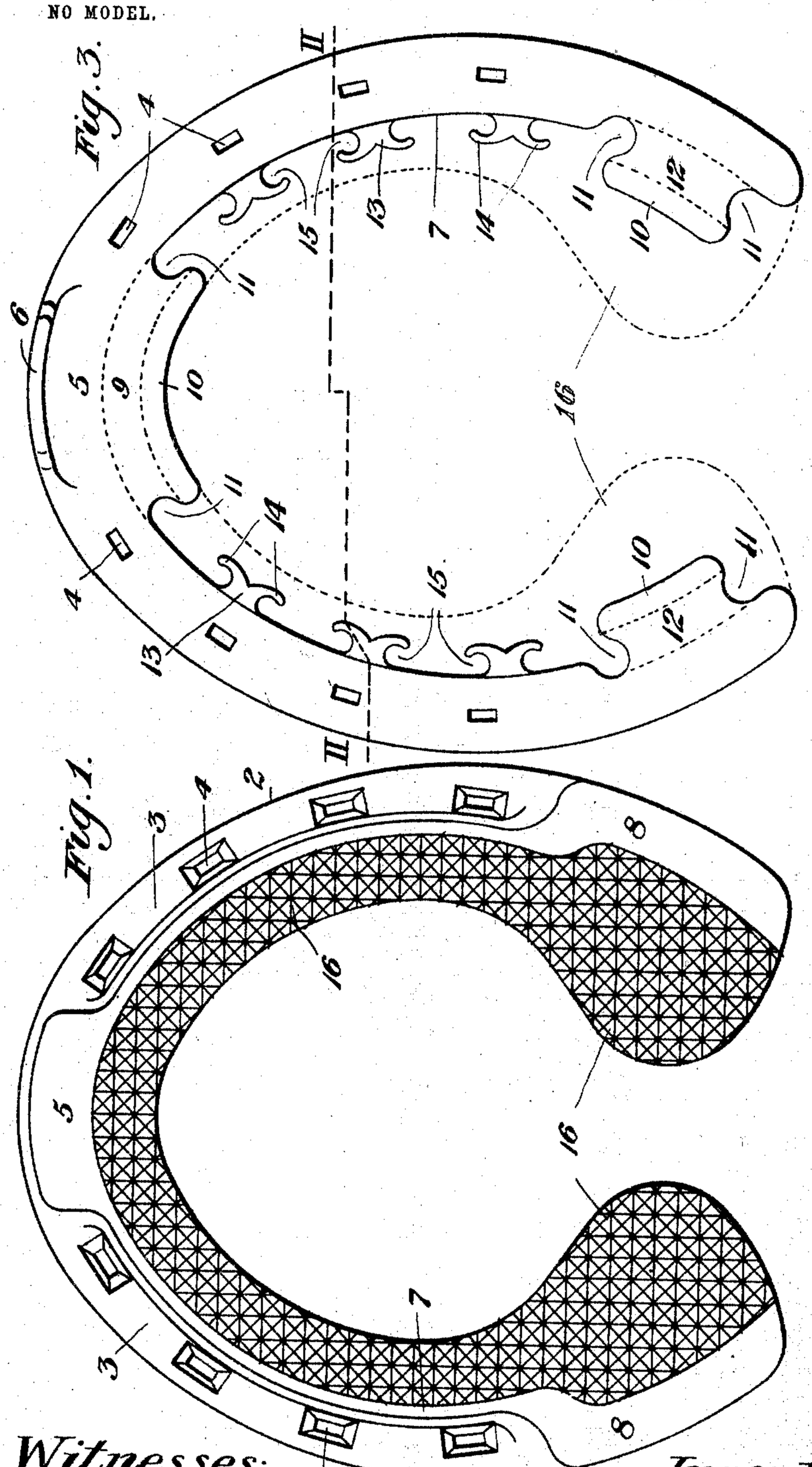



Fig. 4.

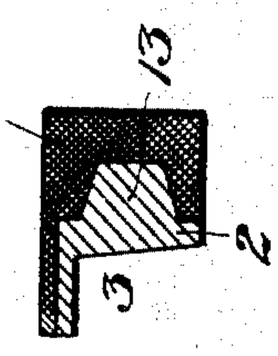
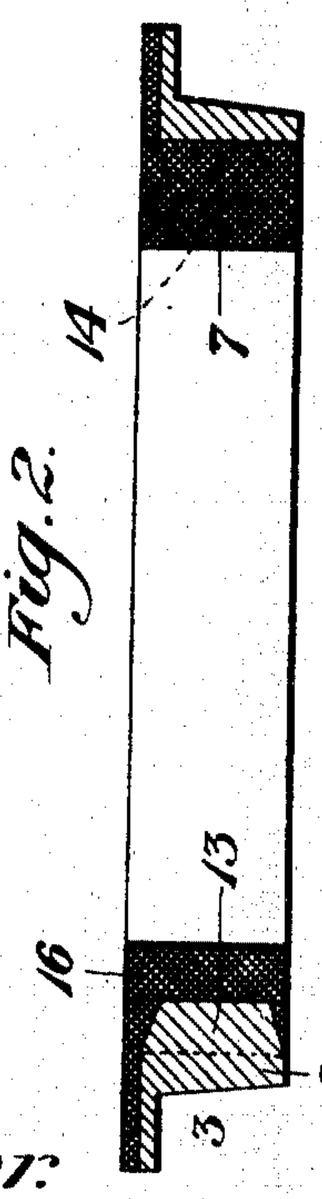



Fig. 2.




Witnesses:

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by O. M. Clarke

his Atty.

No. 764,547. Patented July 12, 1904.

# UNITED STATES PATENT OFFICE.

HARVEY BARTLEY, OF PITTSBURG, PENNSYLVANIA.

## COMPOSITION HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 764,547, dated July 12, 1904.

Application filed August 8, 1903. Serial No. 168,835. (No model.)

*To all whom it may concern:*

Be it known that I, HARVEY BARTLEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Composition Horseshoes, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an under plan view of my improved horseshoe. Fig. 2 is a cross-section taken on the line II II of Fig. 3. Fig. 3 is an upper plan view of the metal base. Fig. 4 is a partial sectional view similar to Fig. 2, showing a modified construction.

My invention relates to improvements in combination horseshoes in which a cushioning portion is incorporated with a holding-base; and it refers more particularly to the construction of the base and to the supporting and anchoring devices for the cushioning portion, whereby these parts are securely incorporated with each other.

Referring now to the drawings, 2 represents the base, made in one integral piece of metal, preferably of forged or cast steel or aluminium, the sides of which are recessed, as at 3, and provided with the usual nail-holes 4. The toe 5 is reinforced, as indicated, and is provided with the usual upwardly-extending tip 6 of suitable form to engage the toe of the hoof. The inner edge 7 of the base is preferably continued around for the full length of the shoe and of the same depth as the toe 5, being somewhat thickened at the rear portion, as indicated at 8, and adapted as thus formed to provide a surrounding rigid holding-frame for the cushion and also a wearing edge adapted to bear upon the pavement.

Extending backwardly from the toe 5 is a web portion 9, terminating in a downwardly-turned lip 10, forming an anchor adapted to engage and hold the cushion. Each end of such backwardly-extending anchor is preferably recessed or narrowed, as at 11, the terminal corners projecting so as to approximate a dovetail shape, which will maintain a firm binding hold upon the cushion. At the inner portion of the heels of the base are provided similar inwardly-projecting holding anchors or extensions 12, the ends of which are preferably recessed in a similar manner, as at 11, and provided with similar holding-lips 10.

Between the forward and back holding-anchors 9 and 12, arranged along the inner edge of the base, are a series of inwardly-projecting tongues or supplemental anchors 13 of the full depth of the base, as shown in Fig. 2, or of a less depth, as shown in Fig. 4. These anchors are preferably tapered above and below, thereby allowing for sufficient sectional thickness of the composition, and terminate in oppositely-disposed hooked or turned extremities 14, between which extremities and the base are thus provided recesses 15, into which the cushioning substance is forced, so that it thus firmly embraces the terminals 14, while the tongues and their terminals are firmly embedded in the cushion with a binding hold. As thus arranged a holding-cavity for the cushion is provided between each of the adjacent pairs of anchors, into which the cushioning substance is forced and wherein it will be firmly held by the hooked terminals 14. Similar cavities are also provided between the endmost terminals and the toe and heel anchors 9 and 12, so that the entire inner side of the base is provided with closely-adjacent anchoring projections with alternating cavities for the cushioning substance. These hooked anchors may be of the full depth of the base or of a less depth, as shown in Fig. 4, their holding efficiency being practically the same, but varying according to their cross-sectional area. As thus constructed it will be seen that all of the holding-anchors and tongues extend inwardly and that the recessed cavities between them and between their curved terminals and the base provide efficient holding means for the cushion. The number of the holding-anchors and their location at the front, back, and intermediate portions of the base provide substantial bearing-surfaces against which the cushion will press and by which it will be well supported. While the arrangement of the anchors, as shown, is productive of good re-

sults, it is obvious that it may be varied, as by eliminating the front and back dovetail-form anchors and providing one continuous series of the anchors 13, having the curved terminals 14 and the intervening spaces 15.

The cushioning substance, either of rubber or a combination of rubber or canvas or of any other suitable combination of other material, (indicated by the numeral 16,) is pressed into the holding-cavities and around the anchoring portions of the shoe-base, so as to completely fill such cavities and surround the holding devices, as clearly shown. It will be understood that the cushioning substance is preferably forced around and over the entire upper portion of the base, thus providing a good bearing-surface for the hoof. In attaching the shoe the nails are driven through the openings 4 and the upper cushioning layer and into the hoof in the usual manner.

As thus constructed I have provided a very serviceable efficient horseshoe capable of long-continued use and of holding the cushioning substance tightly to the base without displacement under the excessive wear or jar incident to devices of this kind.

Changes and variations may be made by the skilled mechanic in the design, proportions, or other details of the invention—as, for instance, the number, location, and shape of the holding-anchors; but all such are to be considered as within the scope of the following claims.

What I claim is—

1. A horseshoe-base having inwardly-extending holding-anchors provided with double-hooked terminals, substantially as set forth.

2. A horseshoe-base having inwardly-extending holding-anchors, provided with double-hooked terminals and upper and lower tapering edges, substantially as set forth.

3. A horseshoe-base having a series of inwardly-extending holding-anchors provided with oppositely-disposed hooked terminals, substantially as set forth.

4. A horseshoe-base having a series of inwardly-extending holding-anchors provided with doubled-hooked terminals, with intervening recesses adapted to engage and hold a cushioning substance, substantially as set forth.

5. A horseshoe-base having a series of inwardly-extending holding-anchors provided with oppositely-disposed hooked terminals, with holding-recesses between the terminals of adjacent anchors, substantially as set forth.

6. A horseshoe-base having integral inwardly-extending double-hooked holding-anchors, substantially as set forth.

7. A horseshoe-base having a series of inwardly-extending double-hooked holding-anchors of a less depth than the depth of the base, substantially as set forth.

8. A horseshoe-base having front and back holding-anchors of dovetail form, and intervening series of inwardly-extending double-hooked holding-anchors, substantially as set forth.

9. A composite horseshoe consisting of a base having a series of inwardly-extending double-hooked holding-anchors, and a cushioning substance incorporated therewith, substantially as set forth.

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

HARVEY BARTLEY.

Witnesses:

JAS. J. MCAFEE,

C. M. CLARKE.