No. 779,757. PATENTED JAN. 10, 1905.

H. BARTLEY.

COMPOSITION HORSESHOE.

APPLICATION FILED JAN. 5, 1904.

Fig. 1.

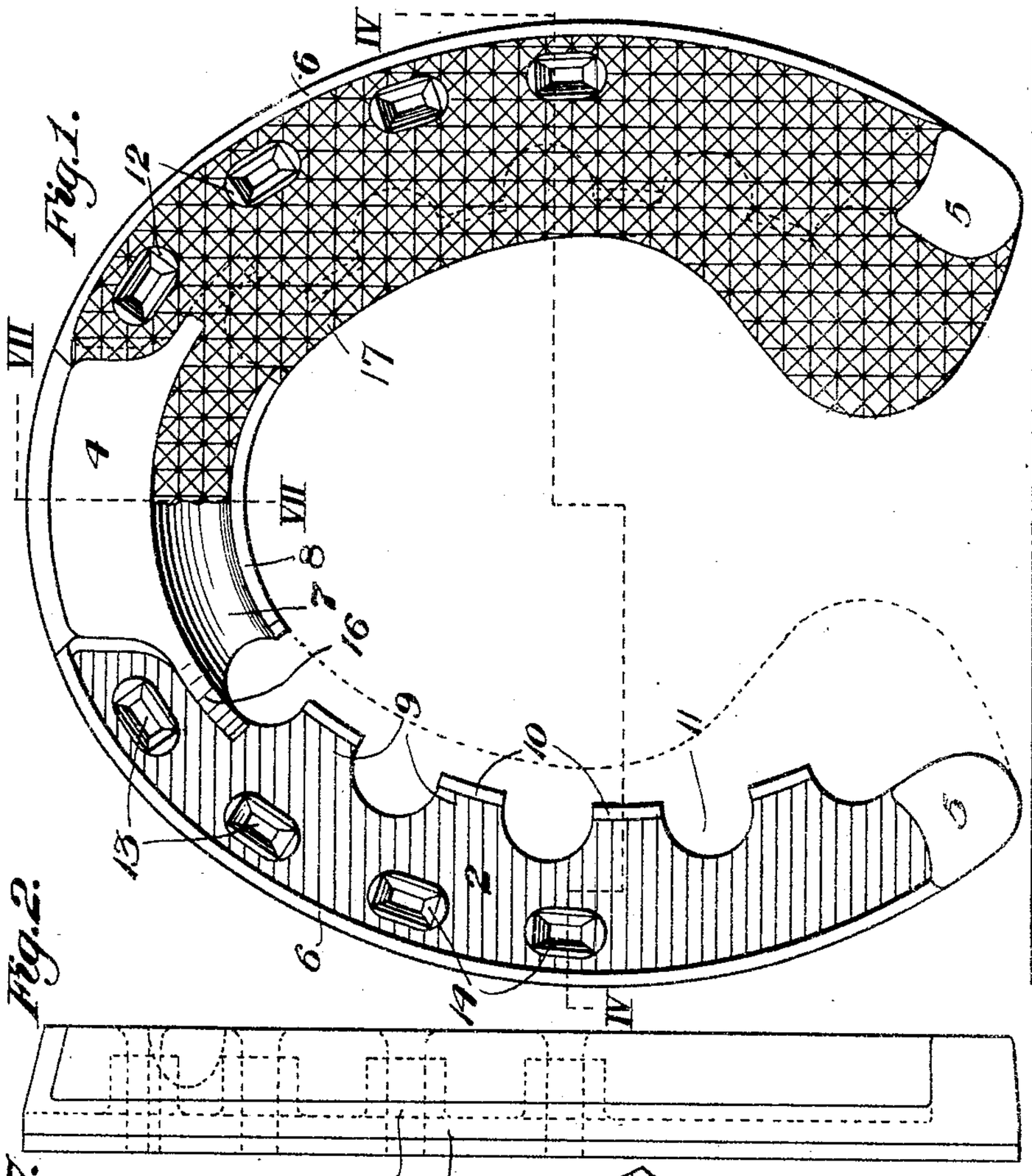

Fig. 2.

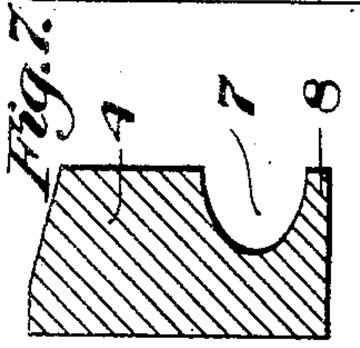

Fig. 7.

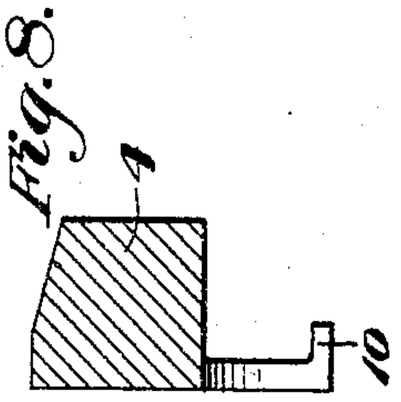

Fig. 8.

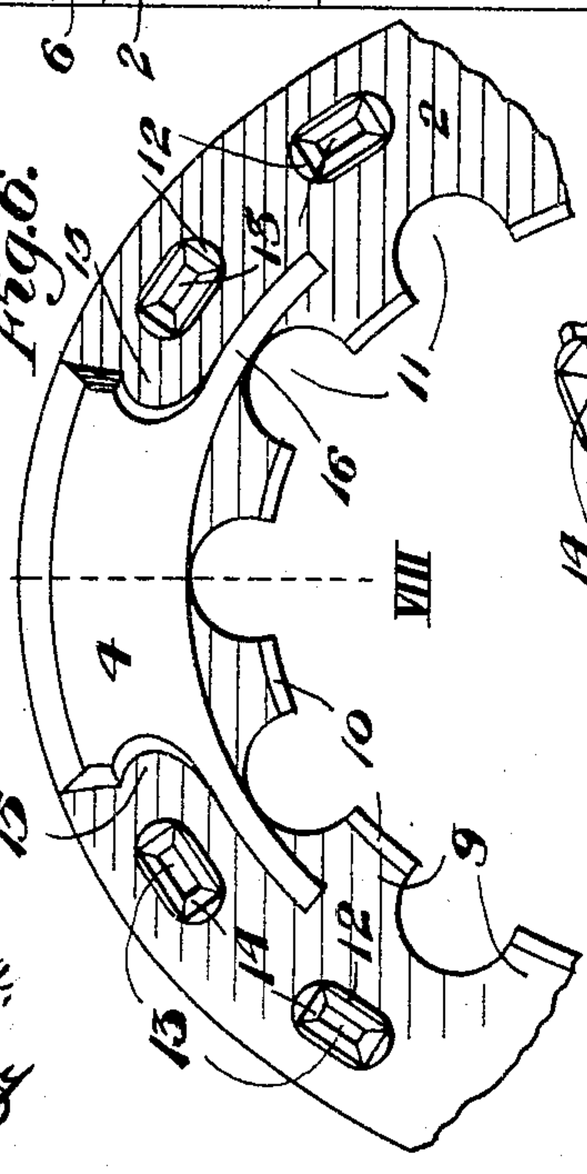

Fig. 6.

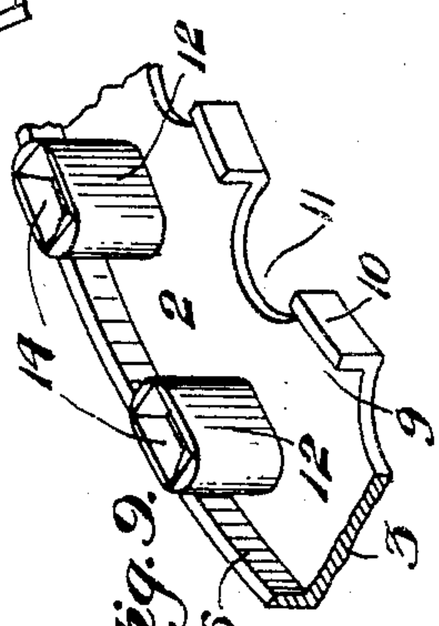

Fig. 9.

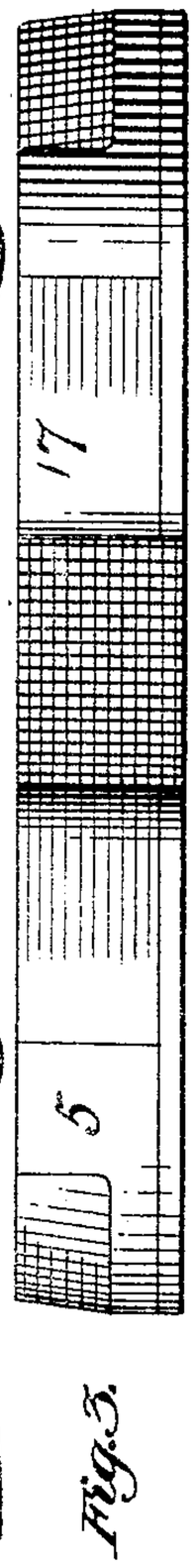

Fig. 3.

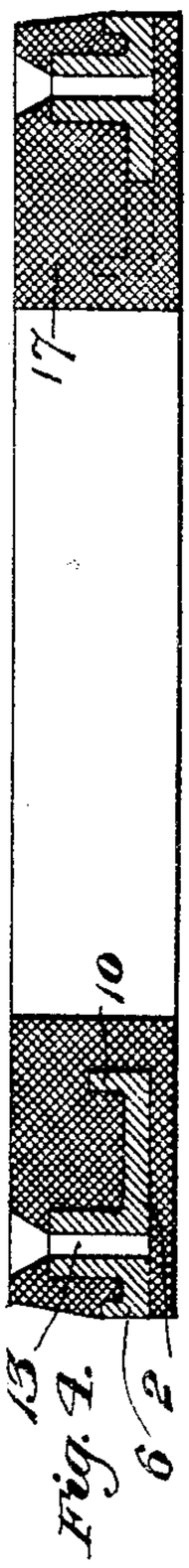

Fig. 4.

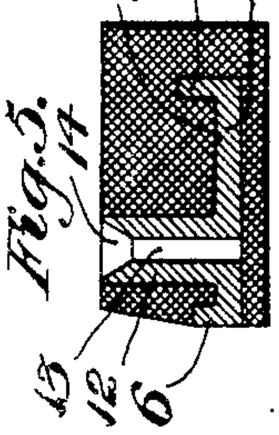

Fig. 5.

Witnesses:

E. L. Mackaye,

Chas. L. Ripley.

Inventor:

Harvey Bartley

by O. M. Clarke

his Attorney.

No. 779,757. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

HARVEY BARTLEY, OF PITTSBURG, PENNSYLVANIA.

COMPOSITION HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 779,757, dated January 10, 1905.

Application filed January 5, 1904. Serial No. 187,784.

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 a part of this specification, in which—

Figure 1 is a face view of the under side of my horseshoe, showing the cushioning substance removed from one-half of the base. Fig. 2 is an edge view of the shoe. Fig. 3 is a back end view. Fig. 4 is a cross-section on the line IV IV of Fig. 1. Fig. 5 is a partial similar section showing a modified form of nail-abutment. Fig. 6 is a partial face view of the base, similar to the exposed portion of Fig. 1, showing a modified arrangement of anchors at the front. Figs. 7 and 8 are cross-sections on the lines VII VII and VIII VIII of Figs. 1 and 6, respectively. Fig. 9 is a perspective detail view showing two of the nailing-abutments.

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 securing devices for the cushioning portion, whereby these parts are securely incorporated with each other; also to the reinforced nail-hole projections, the retaining edges of the base, and to the various other features of construction, as more fully hereinafter set forth.

Referring now to the drawings, 2 is the base, made of one integral piece of metal, preferably of forged or cast steel or aluminium. This metal portion is of substantially the full length and width of the finished shoe, its main body portion comprising a thin plate-like base of practically uniform thickness, as indicated at 3, having at the front end a reinforced toe 4, adapted to bear on the ground and at the rear, on each side, similar heel-reinforcements 5. The outer edge of the base may be of the same thickness as its body portion or may be provided at one or both sides, but preferably at the under side only, with a projecting flange or lip 6. Extending backwardly from the toe 4, with an intervening recess 7, is a reinforcing cushion-holding portion terminating in a downwardly-turned lip 8 of the same or less depth than the toe 4, although this element may be omitted and the construction shown in Fig. 6 used with good results.

Extending inwardly from the base are a series of holding-anchors 9, terminating in downwardly-turned lips 10, concave recesses 11 being provided between adjacent anchors to facilitate the interengagement and holding embodiment of the cushioning substance with the shoe. As shown in Fig. 6, the series of such anchors is continuous around the inner edge of the base, and it will be seen that by this means suitable holding devices are provided at close intervals, with which the cushioning substance will closely engage and form a tight bond. Extending downwardly from the base, integral with it and suitably arranged as to location, are a series of nailing pipe-like abutments or projections 12, perforated clear through by suitable nail-holes 13. These projections may be of the full depth of the shoe, as in Fig. 5, in which case they are countersunk for the head of the shoe-nail, as at 14, or of a less depth, as in Fig. 4, in which case the nail-head is simply embedded in the cushion. In either construction the projections form piers or supplemental anchors around which the cushioning substance is embedded and with which it will become firmly incorporated, thereby greatly increasing the strength of the holding connection between the base and cushion.

For the purpose of providing additional holding-recesses the toe may be provided at each end with cavities or recesses 15, as in Fig. 6, and it will also be seen that the inner edge of the toe extends around at each side, as indicated at 16, thereby providing an additional holding element.

The cushioning substance, which is either of rubber or a combination of rubber and canvas or of any other suitable combination or other material, is indicated by the numeral 17 and is pressed into the holding-cavities and around the anchoring portions and abut-

ments of the shoe-base, so as to completely fill such cavities and surround the holding-cavities, as clearly shown. 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 13 and the upper cushioning layer and into the hoof in the usual manner.

By making the main body portion of the base thin and flat and inclosing it within the cushioning substance it will be seen that almost the entire wearing-surface of the shoe is composed of the rubber or other cushioning substance employed. This is of great advantage in offering a frictional bearing for the hoof and in reducing the metal bearing-surfaces to a minimum. As thus constructed I have provided a very serviceable and 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 changes are to be considered as within the scope of the following claims.

What I claim is—

1. A horseshoe-base provided on its inner sides with inwardly-extending holding-anchors having downwardly-turned lips and concave recesses between said anchors, substantially as set forth.

2. A horseshoe-base provided on its under side with integral hollow nailing-abutments projecting beyond the surrounding surface of the base, substantially as set forth.

3. A horseshoe-base provided on its under side with integral hollow nailing-abutments projecting beyond the surrounding surface of the base and having countersunk nail-head cavities, substantially as set forth.

4. A horseshoe-base provided with a plurality of inwardly-extending holding-anchors having downwardly-turned lips, intervening recesses, and a reinforced toe of the full depth of the shoe having an under retaining-groove between its front and back portions, substantially as set forth.

5. A horseshoe-base provided with a plurality of inwardly-extending holding-anchors having downwardly-turned lips, and a reinforced toe of the full depth of the shoe having an under retaining-groove between its front and back portions, and holding-recesses at its ends, substantially as set forth.

6. A composite horseshoe consisting of a base having inwardly-extending holding-anchors provided with downwardly-turned lips, with concave recesses between the anchors, and a cushioning substance incorporated therewith, substantially as set forth.

7. A composite horseshoe consisting of a base having integral downwardly-extending nail-hole abutments projecting beyond the surrounding surface of the base, and a cushioning substance incorporated therewith, substantially as set forth.

8. A composite horseshoe consisting of a base having inwardly-extending holding-anchors provided with downwardly-turned lips with concave recesses between the anchors, and a reinforced toe with holding-recesses therein, and a cushioning substance incorporated therewith, substantially as set forth.

9. A horseshoe-base provided on its under side with integral isolated hollow nailing-abutments, substantially as set forth.

10. A composite horseshoe consisting of a base having integral isolated downwardly-extending hollow nailing-abutments, 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.