No. 645,965. Patented Mar. 27, 1900.

T. J. LOVETT.

CUSHIONED HORSESHOE.

(Application filed June 17, 1898.)

(No Model.)

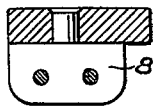

FIG. 3.

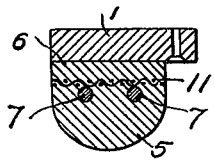

FIG. 4.

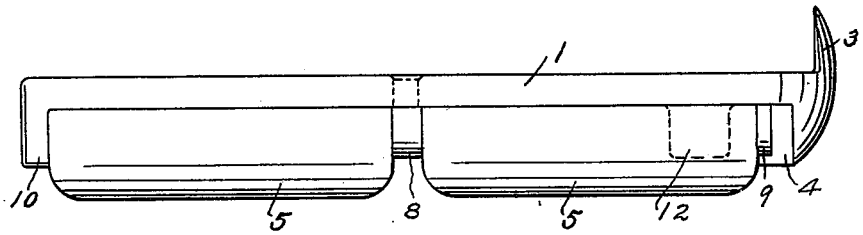

FIG. 2.

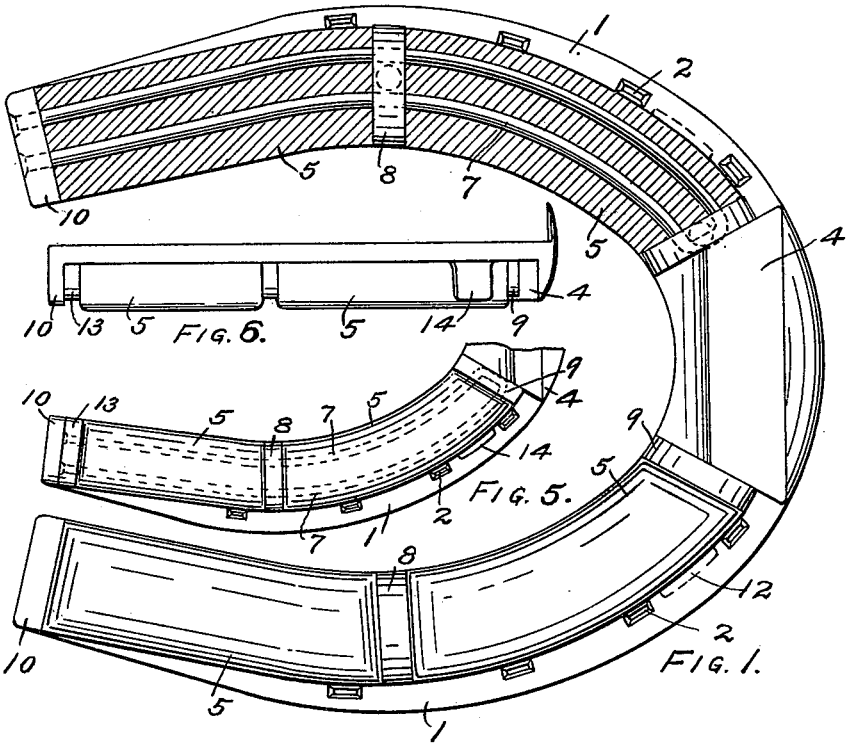

FIG. 6.

FIG. 5.

FIG. 1.

WITNESSES,

Ira L. Fish

R. A. Bates

INVENTOR.

Thomas J. Lovett

By Wilmarth & Thurston

ATT'Y.

UNITED STATES PATENT OFFICE.

THOMAS J. LOVETT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BUDD DOBLE TIRE COMPANY, OF NEW YORK, N. Y.

CUSHIONED HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 645,965, dated March 27, 1900.

Application filed June 17, 1898. Serial No. 683,692. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. LOVETT, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The invention relates to that class of horseshoes in which rubber or other suitable material is secured upon the under surface in order to prevent slipping upon smooth pavements and to deaden the shocks in traveling over rough and hard pavements.

The object of the invention is to provide simple and efficient means for securing the cushion-blocks to the under side of the plate of the shoe; and to this end the invention consists of the features hereinafter described and claimed.

Referring to the drawings, Figure 1 is a plan view of the bottom of a shoe embodying the present invention, one cushion-block being shown in section. Fig. 2 is a side elevation. Figs. 3 and 4 are detail views, and Figs. 5 and 6 are views of a modification.

The base-plate 1 of the shoe is provided with the usual nail-holes 2 for securing the shoe to the hoof and may be provided with a toe-piece 3 for engaging the toe of the hoof. The shoe is provided on its under surface with cushion-blocks and studs secured to the base-plate between the blocks, and wires are passed through the blocks and intermediate studs and serve to hold the blocks firmly to the base-plate. Any desired number of cushion-blocks and interposed studs may be used, and said blocks and studs may extend entirely around the shoe, if desired. It is preferred, however, to provide the shoe with a toe-piece of hard substance, which is preferably in the form of a metal calk formed integral with the base-plate, and to arrange cushion-blocks and intermediate studs upon each side of the shoe between the toe-calk and heel. This preferred form of shoe is shown in the drawings. As shown, the shoe is provided on each side of the toe-calk 4 with two cushion-blocks 5. These blocks may be made of any suitable material—such as leather, rubber, or composition—or may be made of several different materials; but said blocks are preferably formed of rubber. The cushion-blocks are secured to the base-plate by means of one or more wires 7, which extend longitudinally through said sections and also through studs 8, secured to the base-plate between the blocks. The wires 7 are also secured to the base-plate at the toe by passing into the toe-calk or a stud 9, secured to the base-plate adjacent to the toe-calk, and are secured at the heel by passing into studs or into the heel-calks 10. The blocks 5 preferably extend below the surface of the studs and the toe and heel calks; but, if desired, the studs may be flush or nearly flush with the surface of the blocks, in which case said studs will relieve the wear upon the said blocks. A single strand of wire may be passed through the blocks and the intermediate studs; but it is preferred to provide two strands of wire and to arrange said wire as shown in Fig. 1. As shown in said figure, the wire 7 passes through the heel-calk 10, the blocks 5, and studs 8 and 9. Thus the tread of the shoe is made up of a number of comparatively-short cushion-blocks, which are firmly and securely held upon the base-plate by longitudinal wires, which are secured to the base-plate by passing through the studs, and all danger of displacement or distortion of the tread is prevented.

It may be desirable to embed a strip of strengthening material in the blocks 5 above the wires 7 in cases where there is liability that the wires will tear through the blocks owing to the character of the material of which they are formed. In Fig. 4 is shown a cross-section of a block provided with a strip of perforated strengthening material in the form or woven wire 11. In case the cushion-blocks are formed of rubber this strip may be incorporated therein in the vulcanization process, the rubber passing through the perforations between the wires and holding the strip firmly embedded in the rubber. In this case the wires 7 are substantially in contact with the woven wire and any tearing of the rubber by the wires is prevented.

In using the shoe the greater part of the wear comes upon the front or toe portion of

the shoe, and it may be desirable, therefore, to provide the shoe with clips, as indicated in dotted lines at 12, which clips will serve to relieve the wear upon the cushion-blocks at the toe portion of the shoe and will also protect said blocks from blows or shocks tending to displace said blocks at this portion of the shoe.

In Figs. 5 and 6 is shown a shoe in which the ends of the wires 7 are secured to the base-plate at the heel by means of a stud 13 instead of by being extended into the heel-calk 10. This shoe is provided with clips 14 on the outside of the blocks 5 near the toe to increase the durability of the tread at this part of the shoe and to protect the blocks at this point.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A horseshoe having a base-plate, a stud secured to the base-plate, a cushion-block upon each side of said stud, and a wire passing through said stud and blocks, substantially as described.

2. A horseshoe having a base-plate, a stud secured to the base-plate at each side of the shoe, cushion-blocks on each side of each of said studs, and a wire passing through each stud and the adjacent blocks, substantially as described.

3. A horseshoe having a base-plate, a stud secured to the base-plate at each side of the shoe, cushion-blocks on each side of each of said studs, and a wire passing through each stud, and the adjacent blocks, said wire being secured to the base-plate at the heel and toe, substantially as described.

4. A horseshoe having a base-plate, a toe-calk, two cushion-blocks on each side of the shoe, a stud secured to the base-plate on each side of the shoe between the blocks, and a wire passing through the blocks and stud at each side of the shoe, said wire being secured to the base-plate at the heel and toe, substantially as described.

5. A horseshoe having a base-plate, a stud secured to the base-plate, a cushion-block on each side of said stud extending below said stud, and a wire passing through said stud and blocks, substantially as described.

6. A horseshoe having a base-plate, a toe-calk, heel-calks, a stud secured to the base-plate between each heel-calk and the toe-calk, cushion-blocks between the heel-calks and studs, cushion-blocks between the studs and toe-calk, and wires passing through the blocks and studs, substantially as described.

7. A horseshoe having a base-plate, a toe-calk, heel-calks, a stud secured to the base-plate between each heel-calk and the toe-calk, cushion-blocks between the heel-calks and studs, cushion-blocks between the studs and the toe-calk, studs secured to the base-plate at the ends of the blocks adjacent to the toe-calk, wires looped through said latter studs and having their strands passing through the cushion-blocks and intermediate studs, substantially as described.

8. A horseshoe having a base-plate, two cushion-blocks on each side of the shoe, a stud secured to the base-plate on each side of the shoe between said blocks, a wire passing through the stud and blocks on each side of the shoe, and clips at the toe of the shoe outside the cushion-blocks, substantially as described.

THOMAS J. LOVETT.

Witnesses:
M. S. MACKENZIE,
M. J. FROST.