(No Model.)

M. HALLANAN.

ELASTIC HORSESHOE.

No. 503,848. Patented Aug. 22, 1893.

Fig. 1

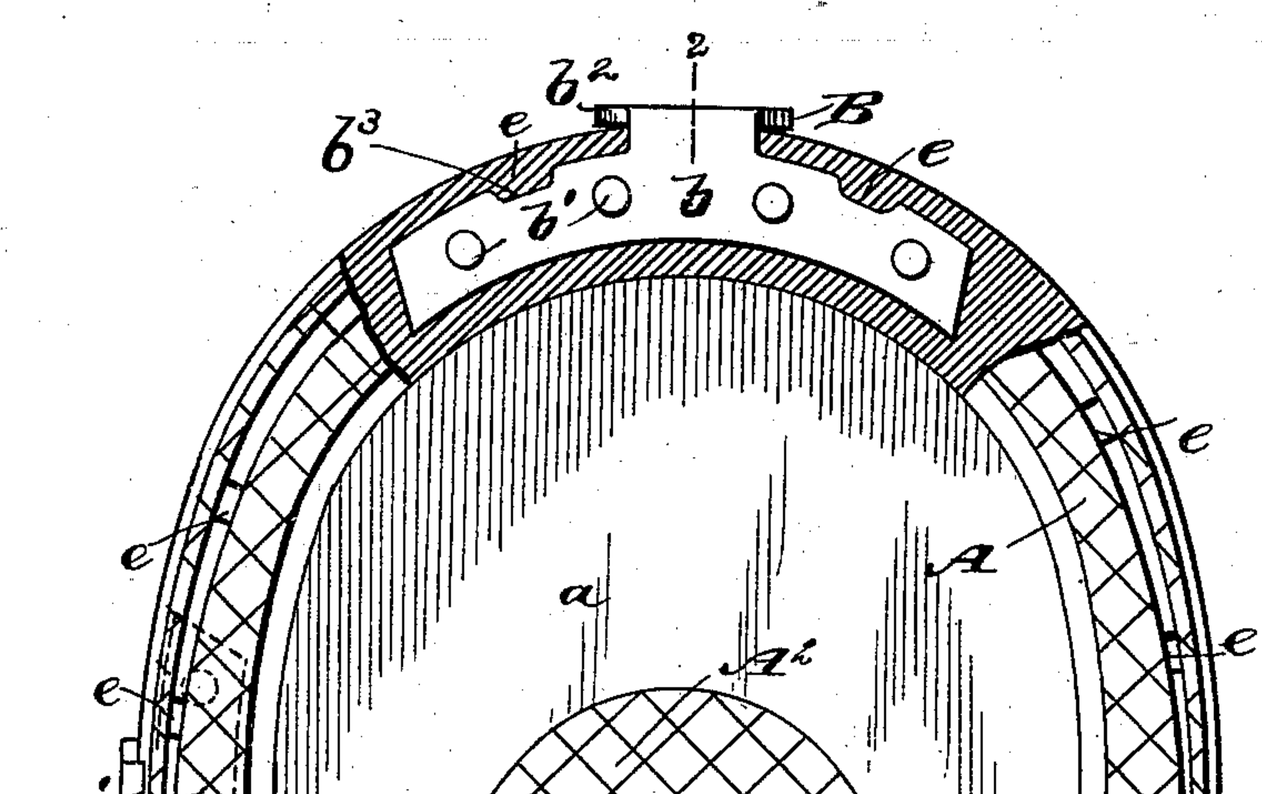


Fig. 2

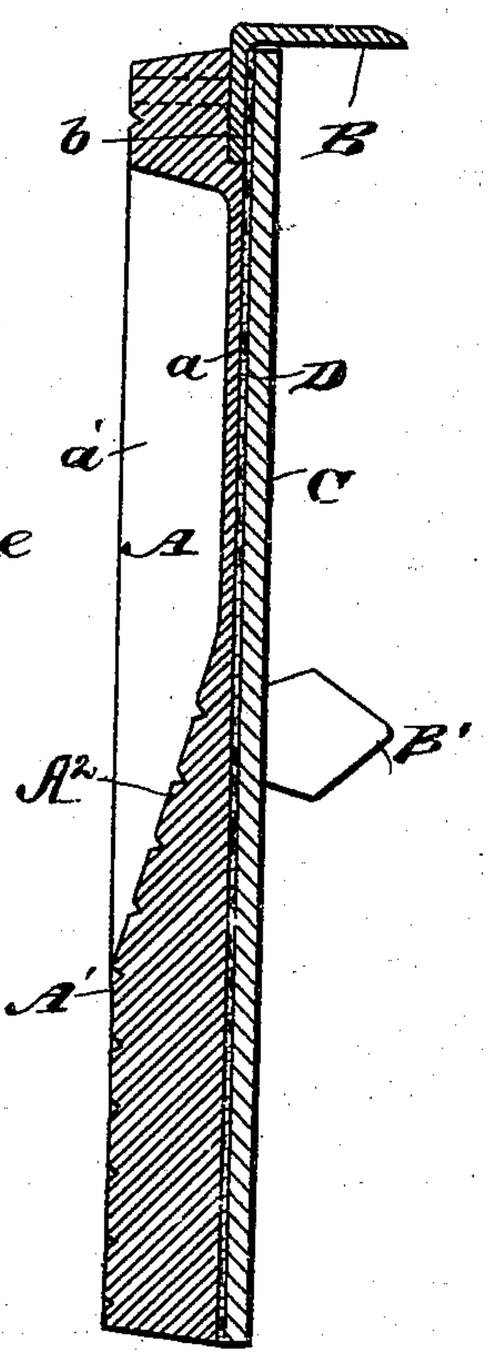
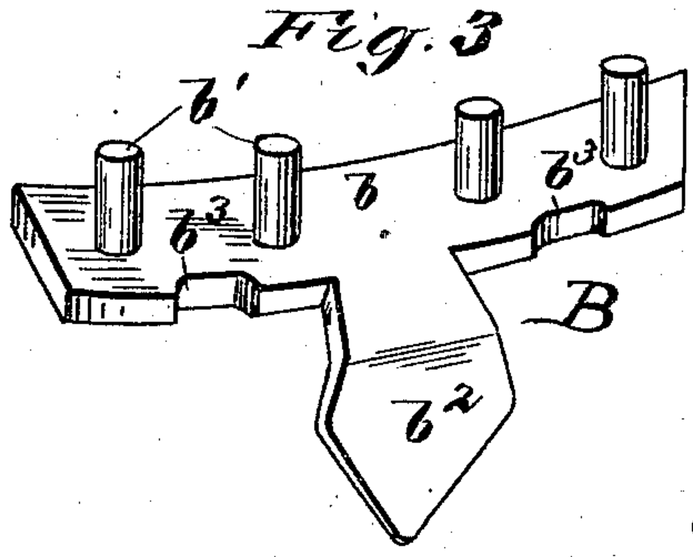


Fig. 3



WITNESSES:

J. a. Bergstrom

E. M. Clark

INVENTOR

Michael Hallanan

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

MICHAEL HALLANAN, OF NEW YORK, N. Y.

ELASTIC HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 503,848, dated August 22, 1893.

Application filed August 11, 1892. Serial No. 442,775. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL HALLANAN, of New York, in the county and State of New York, have invented a new and Improved Horseshoe, of which the following is a full, clear, and exact description.

The object of my invention is to provide a rubber horse shoe forming a complete closure of the hoof, and having an improved means of securing it to the hoof, and which shoe will form a combined shoe and pad, including a frog, the whole affording a firm bearing for the horse, and yielding to avoid all jar.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a face or bottom view of a shoe embodying my invention. Fig. 2 is a longitudinal section on line 2—2 of Fig. 1; and Fig. 3 is a perspective view of one of the clips removed from the shoe.

The shoe A is of rubber, and with the exception of the clips hereinafter described, forms the complete bearing surface of the shoe, and is formed at the rear with the frog A′, which is formed integral with the shoe proper A, forming by its face a continuation of the bearing face of said shoe and extending forward as at A^2 in simulation of the natural frog. The shoe A, is in the form of a rib or bead formed integral with the frog A′, and extends around the front and sides in unbroken continuity.

Between the frog A′ A^2 and the toe and side walls of the shoe A, the rubber forming the shoe is in the form of a web *a* which forms the bottom wall of a depression *a*′, the shoe thus forming a complete covering for the hoof.

A toe clip B, and quarter clip B′, are secured respectively at the toe and outside of the shoe, and vulcanized in the same. Each clip, as shown in Fig. 3, comprises a plate *b*, which is let into the shoe A, at the inner or top surface thereof, as in Fig. 2, studs *b*′ which project from the plate *b*, through the rubber to the face of the shoe, and the clips b^2 projecting in the opposite direction for engaging the hoof. The clips being vulcanized in the rubber are held in place without looseness and they afford a strengthening of the shoe and an increased resistance to wear at the points subjected to the greatest strain. The rubber shoe thus formed is backed by a leather plate C, and an intermediate layer D of canvas, the latter affording a means of uniting the rubber and leather better than a direct union by cement alone. The leather serves to properly strengthen the rubber shoe and has no ill effect on the hoof. The leather, and also preferably the canvas, overlay the plates of the clips as will be understood from Figs. 1 and 2. The usual nail holes *e* are formed in the rubber, as shown best in Fig. 1, and the plates *b* of the clips are notched at the edges as at b^3 for permitting the passage of the nails.

By the above described invention I combine in one the complete shoe and pad, provide clips that cannot become loosened, and that strengthen and make durable the shoe, and I securely unite the leather and rubber.

In the manufacture of the shoes the same are expanded or stretched laterally before giving the final set thereto, and I thus provide a great variation in the sizes. A slight lateral yielding or stretching is also possible with the completed shoe after the leather has been applied, by wetting the leather. In some cases also I may omit the leather or canvas or both back of the web *a*, to facilitate the stretching of the completed shoe.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combined horse shoe and pad consisting of a rubber shoe and an integral rubber pad, the two forming the substantially complete bearing surface, the same being formed with nail holes and having a suitable backing, substantially as described.

2. A horse-shoe formed of rubber, in which nail holes are provided, and metallic clips having integral plates at about right angles to the clips, said plates being embedded in the rubber, substantially as described.

3. A rubber horse shoe having metallic clips each comprising a plate secured at the top or inner side of the shoe and formed with a series of studs projecting therefrom through the rubber and forming strengtheners for the latter, substantially as described.

4. A horse shoe comprising a shoe proper

of rubber, and a rubber pad and frog integral therewith, the shoe being continuous to form a complete closure of the hoof, and a backing consisting of a leather plate and an interposed layer of canvas, the whole being united together, substantially as described.

5. A horse shoe comprising a shoe proper formed of rubber and having a rubber pad and frog integral therewith, metallic clips having plates let into the rubber at the top surface thereof, and a backing plate of leather, the clip plates being clamped between the leather and the rubber shoe, substantially as described.

6. The herein described improved foot covering for horses, the same comprising a facing of rubber, an intermediate layer of canvas cemented to the rubber, and a backing of leather, the whole being secured together, and the rubber facing having an integral frog and a bead or rib in the form of a horse-shoe extending from the frog around the front and sides of the shoe in unbroken continuity, substantially as described.

MICHAEL HALLANAN.

Witnesses:
J. L. McAULIFFE,
C. SEDGWICK.