

(No Model.)

M. L. CHAMBERLAIN.
RUBBER TREAD HORSESHOE.

No. 510,402.

Patented Dec. 12, 1893.

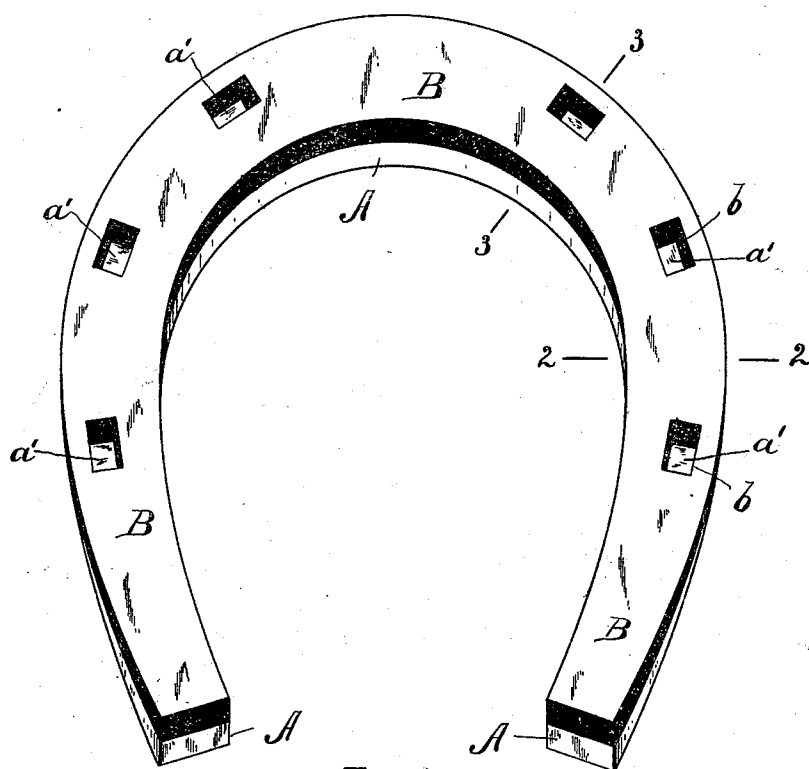


Fig. 1.

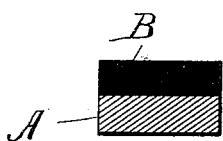


Fig. 2.

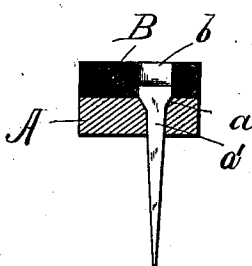


Fig. 3.

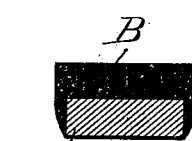


Fig. 4.

WITNESSES
Irving N. Gay.
J. Murphy.

INVENTOR
Myron L. Chamberlain
By *Jas. H. Churchill*
ATTY:

UNITED STATES PATENT OFFICE.

MYRON L. CHAMBERLAIN, OF BOSTON, MASSACHUSETTS.

RUBBER-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 510,402, dated December 12, 1893.

Application filed December 16, 1892. Serial No. 455,366. (No model.)

To all whom it may concern:

Be it known that I, MYRON L. CHAMBERLAIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Horseshoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide a horse-shoe with a wearing surface of india rubber, or the compounds of india rubber secured to the shoe by vulcanization.

My invention, therefore, consists in a shoe constructed substantially as hereinafter described and claimed.

Figure 1, is a perspective view of a horse-shoe embodying my invention; Fig. 2, a cross-section of one side of the shoe on the line 2—2, Fig. 1; Fig. 3, a cross-section on the line 3—3, Fig. 1, and Fig. 4, a cross-section of one side of the shoe showing an alternate mode of arranging the rubber wearing surface.

In the drawings, A represents a metal horse-shoe, of any ordinary construction, provided with holes *a*, for the reception of the nails *a'*, with which to attach it to the hoof of the horse.

B represents the wearing surface of the shoe, and is to be made of india rubber or the compounds of india rubber, and is united to the metal part of the shoe by vulcanization thereon. The thickness of both the metal and the rubber parts of the shoe, may be varied to suit the peculiarities of the horses to be shod and the kind of wear to which the shoe is to be subjected.

The metal part A of the shoe may be forged, cast, or otherwise worked into the desired shape, and its wearing surface B may and preferably will be united to the metal part A by placing the latter in a suitable mold and vulcanizing the rubber wearing surface B thereon, by any of the methods well-known in the art of vulcanization, and preferably after the process described in United States Patent No. 215,034, dated May 6, 1879; the metal part A of the shoe being copperized before the rubber wearing surface is vulcan-

ized thereto. Cores may be used in the mold, so that, holes *b* shall be formed in the part B of the shoe to permit the nails *a'* to be driven. The rubber wearing surface B of the shoe may be wholly on the lower surface of the metal part A, as shown in Fig. 1, or it may be extended to cover the edges of the metal part, as shown in Fig. 4, and if desired, the metal part A may have its lower surface provided with corrugations, indentations, or it may be roughened to afford additional surface to promote the adhesion between the rubber wearing surface and the prepared or treated metal portion of the shoe.

The wearing surface B of rubber preferably covers the entire lower surface of the metal part A, as shown in the drawings, and is especially advantageous, in that it prevents slipping, obviates straining the ligaments of the horse from the uneven surface of the road, and also avoids concussion.

I am aware that compound horse-shoes have been hitherto made in which vulcanized rubber and other elastic substances have been mechanically attached to or held in the metal part of the shoe, but I am not aware that, prior to my invention, a compound shoe has been made having a metal part to be attached to the hoof and having a rubber wearing surface which is secured to the metal part by a union, effected by vulcanization of the rubber to the prepared or treated metal part.

I claim—

A compound horse-shoe consisting of a metal portion provided with a copperized surface, and a wearing portion composed of india rubber or its compounds attached to the metal portion by a union of the rubber and the copperized surface, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MYRON L. CHAMBERLAIN.

Witnesses:

ELMER P. HOWE,
HARTLEY F. ATWOOD.