(No Model.)

M. A. LIEBERT.

HORSESHOE.

No. 508,142. Patented Nov. 7, 1893.

Fig: 1.

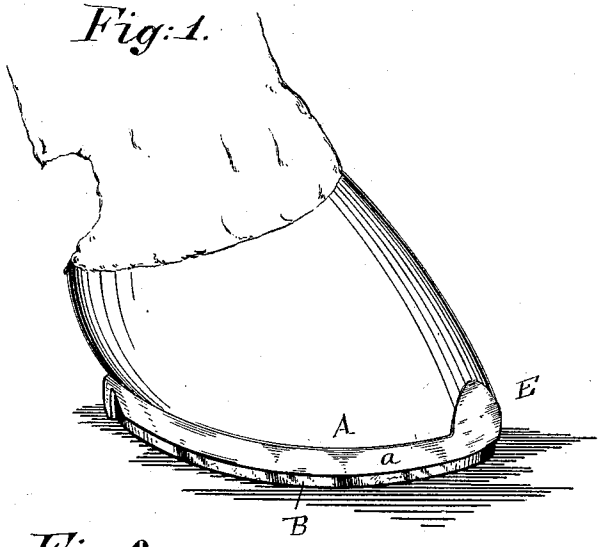


Fig: 2.

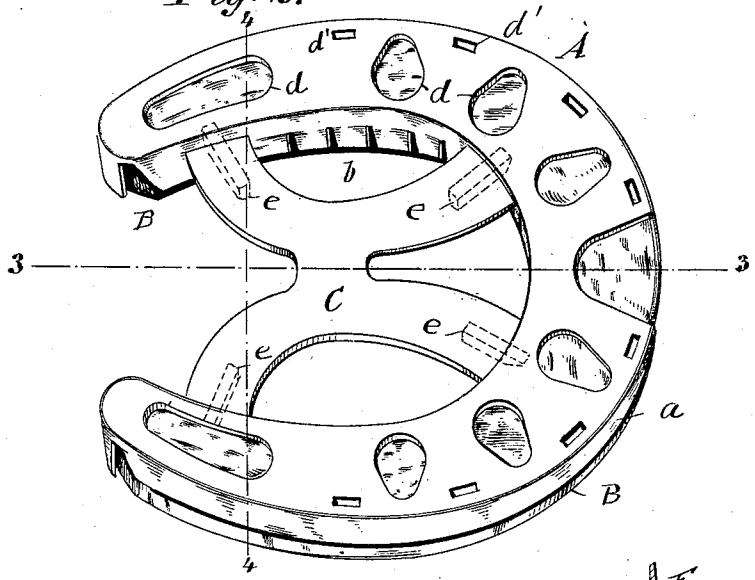
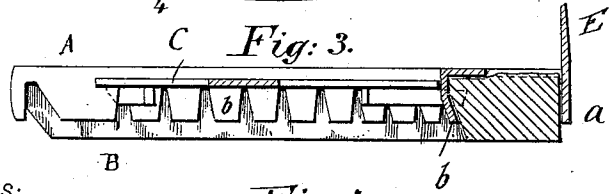


Fig: 3.

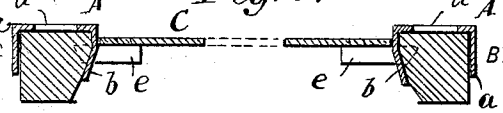


WITNESSES:

Charles Schroeder

Chas Kable

Fig: 4.



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HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 508,142, dated November 7, 1893.

Application filed August 4, 1893. Serial No. 482,341. (No model.)

To all whom it may concern:

Be it known that I, MORRIS A. LIEBERT, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Storm-Shoes, of which the following is a specification.

This invention relates to improvements in horse-shoes of that class which are mainly intended for use on asphalt streets in winter, when the ground is frozen and slippery, said shoe fitting snugly and comfortably to the foot and giving the hoof a firm and elastic hold on the ground.

The invention consists of a horse-shoe which is stamped up from suitable sheet metal and provided with an exterior and interior retaining flange, the opposite sides being connected by a spring web of suitable material, which is sprung by means of lugs into the recesses of the inner flange of the shoe, said web-shaped portion forming a protector for the frog, as will be fully described hereinafter, and finally be pointed out in the claim.

In the accompanying drawings, Figure 1 represents a perspective view of a horse's hoof, with my improved shoe attached thereto. Fig. 2 is a perspective view of the shoe. Figs. 3 and 4 are respectively a vertical longitudinal section, on line 3, 3, Fig. 2, and a vertical transverse section, on line 4, 4, Fig. 2.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a metallic body or shell which is made in the shape and size of the shoe to be produced, which is formed of sheet-metal of suitable thickness that is stamped in proper form by suitable dies. The metal shoe A is provided with an exterior downwardly-projecting flange *a* at right angles to the web of the shoe, and with an interior scalloped flange *b* which is bent in outward direction toward the flange *a*, so as to retain thereby the elastic body B which corresponds to the shape of the shoe A, and which is sprung into the same and retained by the exterior and interior flanges *a* and *b*. In the web of the shoe are arranged elongated openings *d*, formed by removing portions of the metal entirely from the web and which do not extend to the flanges *a*, *b*, on either side, but stop short of the same. The openings *d* serve not only to lighten the sheet-metal shoe or shell A, but serve mainly to permit the elastic portion to protrude toward the hoof which is supported upon the web as well as upon all portions thereof surrounding said openings. They also permit the access of air to the under side of the hoof, so as to provide a certain degree of ventilation to the same. The web is also provided intermediately between the openings *d* with oblong holes *d'* through which the nails by which the shoe is fastened to the hoof are passed. The entire metallic portion is stamped up from sheet-metal of suitable thickness and shaped in suitable dies to required size and shape, the clip E at the front end being cut from the stock and bent up at nearing right angles thereto, as shown in Fig. 3. The calks are dispensed with, as they are not necessary inasmuch as the elastic body B is made of greater thickness than the depth of the flanges *a* and *b*.

For protecting the frog, a spring-plate C is used, which is made approximately to the shape of a double V, said plate being provided at the ends with projecting lugs *e* that are riveted to the plate C and adapted to be sprung through recesses in the interior scalloped flange *b* into the space inclosed by the flanges *a* and *b* of the metallic shoe, said lugs pressing against the rubber body or cushion B, by the action of which, the frog-protecting plate C is reliably held in position. Owing to the yielding action of the frog-plate C the lugs can be readily sprung into the interior flange *b* of the shoe, the spring-plate forming thereby an effective protection for the frog and preventing the collecting of snow or ice below the same.

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

The combination, with a horse-shoe formed of a sheet-metal body having an exterior and an interior retaining flange, of a frog-protect-

ing spring-plate formed approximately of double V-shape, said spring-plate being provided with lugs at its ends that are adapted to engage recesses in the interior flange of the sheet-metal portion of the shoe, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MORRIS A. LIEBERT.

Witnesses:
OSCAR F. GUNZ,
CHARLES SCHROEDER.