

L. REINACH.
OVERSHOE FOR HORSES.
APPLICATION FILED MAR. 4, 1912.

1,037,534.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 2.

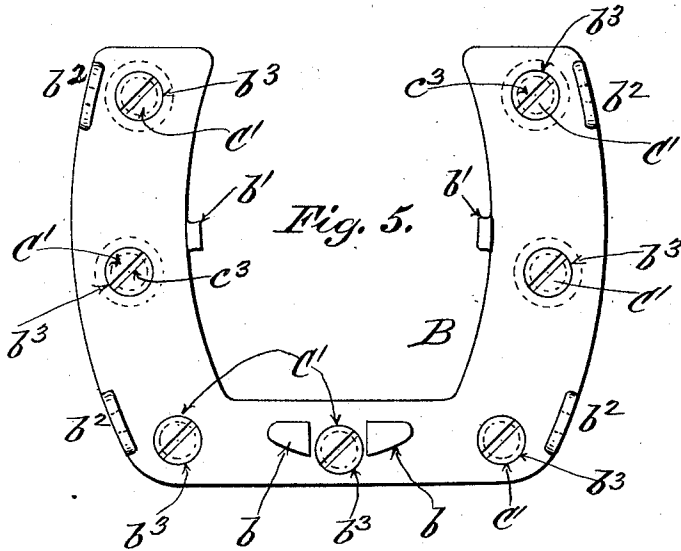


Fig. 8.

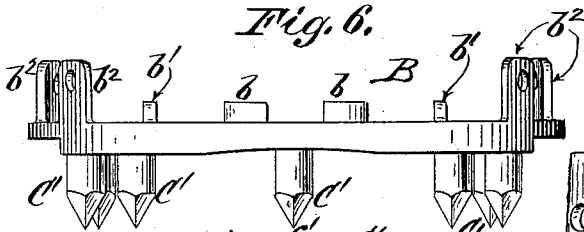
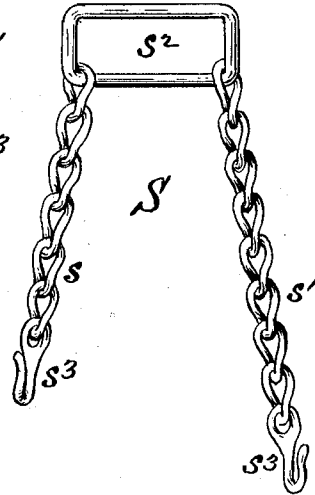


Fig. 9.

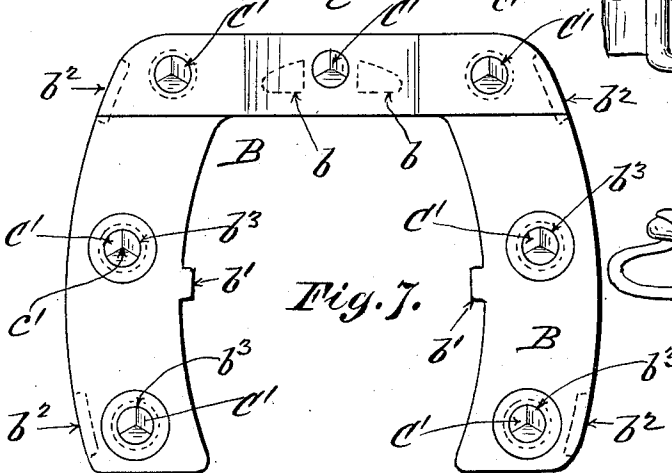
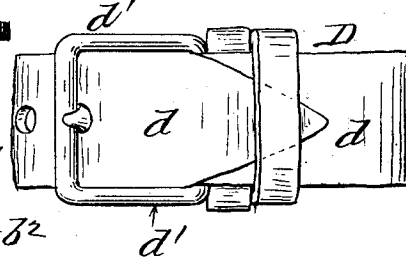
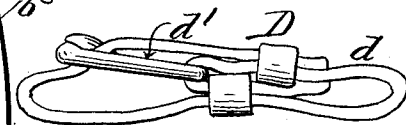


Fig. 10.



Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS REINACH, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO JOHN CURRY, OF NEW YORK, N. Y.

OVERSHOE FOR HORSES.

1,037,534.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed March 4, 1912. Serial No. 681,421.

To all whom it may concern:

Be it known that I, LOUIS REINACH, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Overshoes for Horses, of which the following is a specification.

The object of my invention is to afford a simple, but thoroughly effective overshoe for horses adapted to insure them a firm, safe foothold on smooth and slippery pavements, without injury or discomfort to the animal wearing the same,—the pressure and strain of use being sustained entirely by the usual horseshoe, over and upon which the overshoe is applied in such manner as to protect the frog and tender parts of the sole of the hoof, as hereinafter more fully set forth.

The invention consists in the specific construction and arrangement of parts described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved overshoe on the foot of a horse; Fig. 2, a view of the under side of the parts shown in Fig. 1. Fig. 3 shows detail views of one of the ice calks; Fig. 4, shows detail views of one of the asphalt calks; Fig. 5, is a top view of the calk plate; Fig. 6, a front view of the same; Fig. 7, a view of the under side thereof; Fig. 8, a detail view of one of the suspenders; Figs. 9 and 10, front and side views of the coupling.

In Figs. 1 and 2 a horse's hoof H, is shown as having secured thereto the usual horse shoe h, with the toe calk h', and the heel calks h², h², made integral therewith, although my over-shoe is equally applicable to a plain horse shoe without permanent calks, such for instance as a racing shoe. The main portion of my over-shoe comprises what may be designated as a base or calk plate B, fitting over the horse shoe h, and between the toe and heel calks h', h², h², of the latter when present, although this is not an essential point, as above stated,—the spacing and positioning of the calk plate B, upon the horse shoe being effected by inner guard flanges b, b, b', b', on said calk plate, which overlap the inner edges of the horse shoe as indicated more particularly in Fig. 2 of the drawing. By preference two of these guard flanges b, b, are provided for

engagement with the inner edge of the toe-portion of the horse shoe h, and two b', b', for engagement with the inner "quarter" edges or side members of the horse shoe, thereby centralizing the calk plate B, in position on the shoe h, and preventing lateral movement thereon. As a matter of fact the number of inner guard flanges so used is not material provided at least three are used, so placed with relation to each other as to properly position the calk plate B, on the horse shoe. The base or calk plate B, being thus centralized and alined upon the horse shoe h, by inner guard flanges b, b', is secured in position by suspenders S, S, one situated on either side of the hoof H,—the suspenders being united across the front of the hoof by a suitable coupling device D. Each suspender S, consists preferably of flexible ligaments s, s', made preferably in the form of chains united by an elongated strap link s², adapted for engagement with the coupling device D, which latter in the construction shown in the drawing, consists of a strap d, and buckle d', which afford simple, adjustable means for taking up the slack of the suspenders S, S, and adapting them to the size of the hoof H. The front or toe ligaments s, are shorter than the rear or heel ligaments s',—the difference in length being sufficient to allow each suspender S, to conform to the shape of the hoof; and the strap d, may be passed either around the links s², or through the same, as required, said links s², thus affording means for practically lengthening or shortening the reach of the suspenders to an extent equivalent to the width of such links, so that, taken in conjunction with the adjustable coupling device D, ample provision is afforded for adapting the over-shoe to variations in the size of the hoof as compared with and related to the size of horse shoe. In other words, the base or calk plate B, is made to fit a certain standard size of horse shoe, but the suspenders and coupling device have a margin of adjustment to conform to the size and shape of the hoof.

Obviously the flexible ligaments s, s', although preferably made of chain links, are not necessarily so made, as flexible wire or other material of requisite strength may be substituted with like result, so that I do not limit myself in this respect, although the chain ligament is simple and

effective and adapts itself readily to the requirements of use. In any case the end of each flexible ligament is preferably provided with a hook s^3 , for engagement with a loop b^2 , formed for its reception on the upper outer edge of the base or calk plate B, which is provided with four of these loops b^2 ,—two for the toe ligaments s , and two for the heel ligaments s' , as shown particularly in Fig. 5; or if preferred the ligaments s , s' , of the suspenders S, S, may be permanently but articulary attached to the base plate B. In either case it will be seen that the suspenders S, S, and coupling device D, may be used to lock the inner guard flanges b , b' , firmly in position within and in contact with the inner edges of the horse shoe, so that practically a rigid attachment to the horse shoe is effected without direct contact with the frog or sole of the hoof.

The calks used in connection with the base plate B, are or may be of two kinds, according to the condition of the surface to be traversed. For asphalt and similar smooth pavements, calks C, having substantially flat but roughened or denticulated bearing surfaces c , are provided, while the calks C' , designed for use on ice are formed with ends c' , adapted to penetrate the surface of the ice. These calks C, C' , are formed with screw threads c^2 , at their upper ends, and with driving nicks n^3 ,—only a couple of convolutions of screw thread being provided by preference, so as to facilitate and expedite application to or removal from the screw sockets b^3 , formed for their reception in the base plate B. These sockets b^3 , are so situated in the base plate B, as to be covered in whole or in part by the horse shoe h , when the base plate is applied to the latter. Thus, where seven calks are used as shown in the drawings, the horse shoe h , will completely cover the heads of six of the calks (three on each side) and partially cover the head of the central or toe calk, thus locking all the calks in position and preventing their turning on their axes and working loose during the strain of use.

It will thus be seen that by my construction and arrangement of parts the horse

shoe proper h , is made to bear the brunt of the strain and pressure involved in the use of the over-shoe so that if it (the horse shoe) is properly secured to the hoof the latter will be fully protected,—the sole, frog, and sensitive parts of the hoof particularly being untouched and isolated. The calks, C, C' , being detachable and interchangeable, broken calks may be readily replaced in case of necessity, or the over-shoe changed from an ice shoe to an asphalt or smooth pavement shoe as may be found expedient,—a screw driver being the only extraneous means required to effect the change, and the operation requiring no skilled labor, and being expeditiously performed because only two or three rotations of each calk are necessary to release it or secure it in position. Furthermore, the hoof side suspenders, S, S, are also readily applied and detached, by hand, and bear entirely upon the broad hard frontal horny part of the hoof, the more sensitive heel portion being untouched and free from strain or pressure.

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

In an overshoe of the character designated, the combination of the calk plate B, formed with the inner guard flanges b , b' , b' , and loops b^2 , b^2 , and with the threaded calk sockets b^3 , b^3 , screw-threaded calks engaging said threaded calk sockets, the suspenders S, each consisting of an elongated strap link s^2 (shaped to permit the coupling strap d , to be passed either around or through it) of a short flexible toe ligament s , and of a longer flexible heel ligament s' , said flexible ligaments being formed with hooks s^3 , s^3 , for engagement with the loops b^2 , b^2 , on the calk plate B, and said coupling strap d , and its buckle d' , for connecting the elongated strap links s^2 , s^2 , on the suspenders S, S, as and for the purpose set forth.

LOUIS REINACH.

Witnesses:

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LILLIA MIATT.