

(No Model.)

J. H. CAREY.
SOFT TREAD HORSESHOE.

No. 594,982.

Patented Dec. 7, 1897.

Fig. 1.

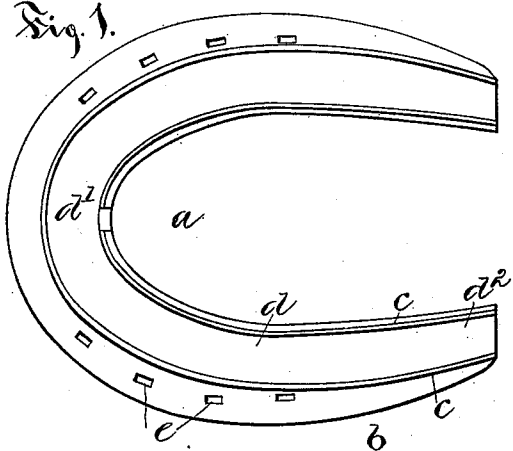


Fig. 2.

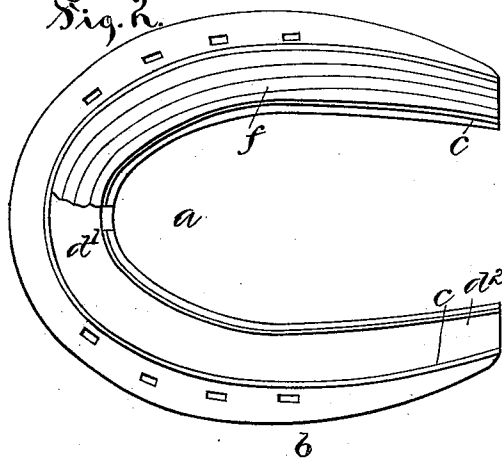


Fig. 3.

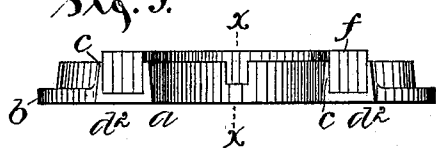


Fig. 4.

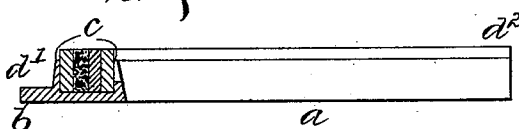
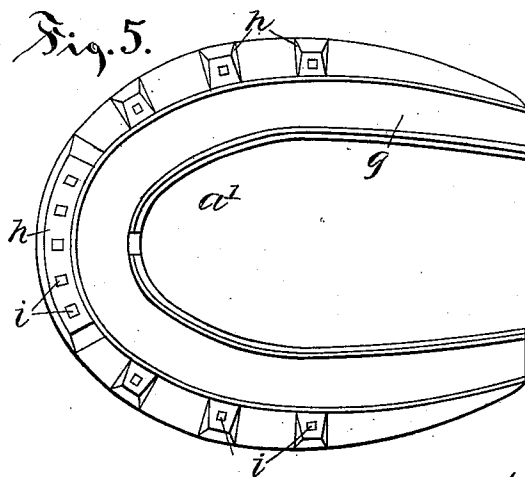


Fig. 5.



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SOFT-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 594,982, dated December 7, 1897.

Application filed September 2, 1896. Serial No. 604,657. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CAREY, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Horseshoes, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

The object of my invention is to provide a horseshoe which shall be comparatively noiseless and at the same time afford a firm hold on pavement, whether of granite blocks or asphalt.

To this end my invention consists in the horseshoe constructed as hereinafter described and in the combination of the parts making up the shoe as a whole, as hereinafter described, and more particularly set out in the claims.

Referring to the drawings, Figure 1 is a bottom view of the shoe, showing the cushion-socket. Fig. 2 is a bottom view of the shoe, showing the cushion in place and with part broken away. Fig. 3 is an end view of the shoe with cushion in place. Fig. 4 is a view in cross-section through the center of the shoe at the toe. Fig. 5 is a view of a modified form of my improved shoe adopted when the frame of the shoe is made of aluminium.

In the accompanying drawings the letter *a* denotes the frame of the horseshoe, which is made of the usual outline in plan view and of a material which is flexible to a degree sufficient to enable the shoe to be bent slightly in fitting it to shape on the hoof of a horse. It may be of wrought metal or of cast metal and is made up of the plate *b*, which is comparatively thin as compared with the total depth of the shoe, and the walls *c*, which, standing at substantially right angles to the plate, form a socket *d* in the lower face of the shoe. The inner faces of these walls are preferably at about right angles to the plate, and the socket formed between them is wider at the toe part *d'* than at the heels *d''*, the socket being continuous along the under surface of the shoe from one heel around through the toe portion back to the other heel. That portion of the plate extending beyond the outer wall of the socket forms a flange in which nail-holes *e* are

punched for the reception of the nails used in securing the horseshoe to the hoof.

An elastic cushion *f*, composed, preferably, in part of fibrous material, is removably secured in the socket. The means of holding this cushion in the socket forms one important feature of my invention. As already stated, the socket is wider at the toe than at the heel, and the cushion is shaped to correspond with the socket, being widest at the toe portion and tapering toward the heel, conforming to the taper of the socket. The cushion is pressed into the socket and in use tends to retain its place owing to the fact that the horse in moving over the ground strikes the toe portion first, and the force of the impact tends to drive the cushion upward and rearward, thus wedging it more firmly into place at each step. This peculiar construction of the socket and cushion to provide for the wedging action forms the principal means of securing the cushion in place. As an additional means the flexible walls may be bent in at one or two points, if desired, but experiment has shown this to be not necessary.

The preferred form of cushion is made of strips of rawhide combined with one or more strips of fibrous material, the rawhide furnishing the wearing qualities and the fibrous material preventing slipping. These strips are secured together as by means of rivets through and through the fibrous strip or strips, being held between those of the more durable material. The fibrous strip may be made of a composition in which any known fiber—as wool, cotton, linen, hemp, jute, or asbestos—is mixed with just sufficient rubber and sulfur to enable it to be vulcanized and firmly compressed to hold its shape and prevent too rapid fraying of the strip in the mass. The cushion may be made by other means and of other materials, the main requirement being that it shall be of the proper shape to be wedged in place and of sufficient durability to secure approval when it is used in connection with a shoe having the peculiar-shaped socket and that the strips shall be presented edgewise to form a wearing-surface. This feature of my improvement—the cushion built up of rawhide and of a fibrous material, so as to combine in the one struc-

ture the durability of the rawhide and the qualities of the fibrous material, which will prevent slipping even on wet pavements—may be used in combination with a socketed shoe where any convenient means of securing such cushion in place in the socket are used.

In the form of the invention shown in Fig. 5 of the drawings there is represented a frame made of aluminium cast to shape, the frame *a'* having a socket *g*, the outer wall of which is provided with thickened portions *h*, forming braces. A further object of these braces, particularly at the toe of the shoe, is to support the steel reinforce *i*, which prevents the too rapid wearing down of the outer wall, which is of the softer metal, aluminium. This frame is provided with the removable cushion, as in the form already described, the socket being properly shaped to receive and retain the cushion in use.

The cushion in either form of the shoe is easily removed by lifting out the toe portion first, as by means of any suitable tool, and for this purpose a slight indentation or groove may be made in the inner wall of the toe portion of the shoe, so as to form a fulcrum on which to rest the pointed end of a suitable lever to get a hold upon the cushion near its under surface.

I claim as my invention—

1. In combination in a horseshoe, a plate having a continuous socket in the under surface open at its ends and tapering from the wider portion at the toe to the narrower portion at the heels, and a non-metallic cushion built up in part of fibrous material tightly fitting the socket removable and reinsertible and held therein by the wedging action in use, all substantially as described.

2. In combination in a horseshoe, a plate having a socket in the under surface open at the ends and a cushion of non-metallic material secured within the socket, the said cushion being composed of strips of rawhide and of fibrous material firmly pressed and held within the socket in edgewise presentation, the cushion extending beyond the lower edges of the walls of the socket, all substantially as described.

3. In combination in a horseshoe, a plate having a continuous socket in the under surface tapering from the wider portion at the toe to the narrower portion at the heel, and a removable non-metallic cushion having a center of fibrous material and with strips of rawhide on each side thereof.

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