

J. W. COLLINS.
HORSESHOE.

APPLICATION FILED MAR. 13, 1902.

NO MODEL.

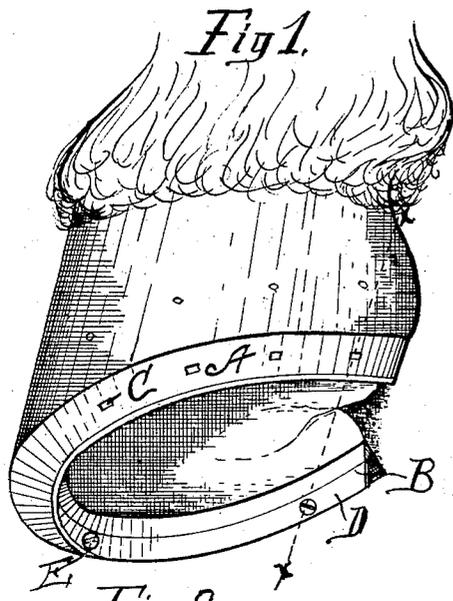


Fig. 2.

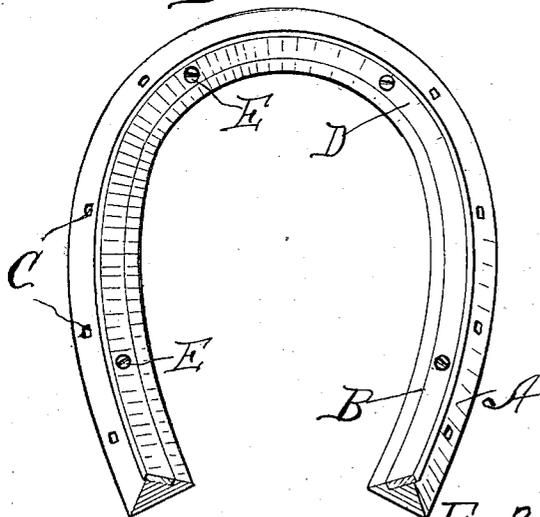
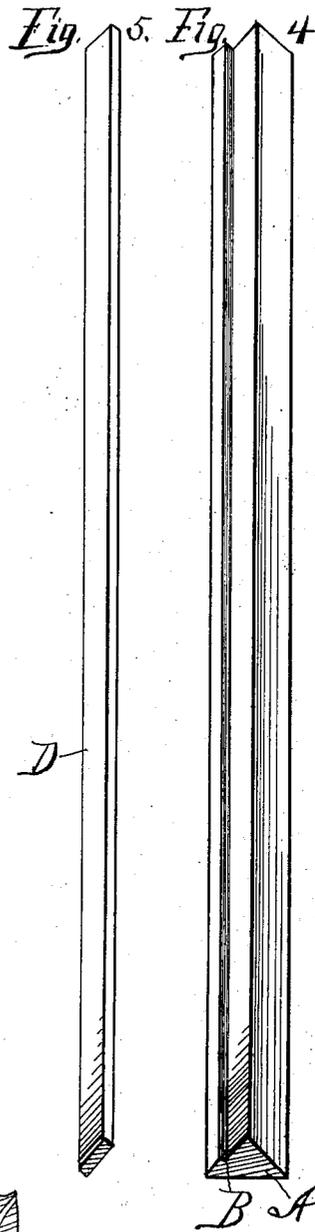
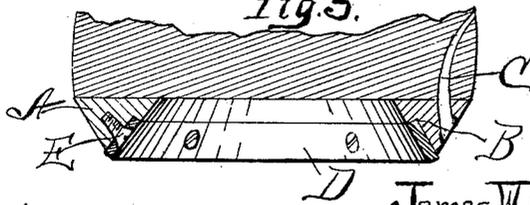


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. COLLINS, OF HOWARD, RHODE ISLAND.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 737,908, dated September 1, 1903.

Application filed March 13, 1902. Serial No. 97,990. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. COLLINS, a citizen of the United States, residing at Howard, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a horseshoe of a peculiar construction and of a conformation that will prevent or cure interfering or overreaching on the part of the horse; that will prevent the frog from becoming dry and hard by allowing for the natural expansion and contraction of the same; that will prevent accumulations of snow and ice within the shoe or the picking up and carrying of stones, whereby the horse may become permanently lamed; that will afford uniform bearing throughout the extent of the shoe; that will be renewable, self-sharpening, and always afford a good grip upon the ground, avoiding the necessity of supplemental calks or toes in icy weather, and that will combine cheapness with efficiency. I accomplish these objects by means of the construction set out in the accompanying drawings, in which like letters of reference indicate corresponding parts throughout, and in which—

Figure 1 is a view in perspective of a horse's foot bearing a shoe embodying my invention. Fig. 2 is a bottom plan view of the shoe. Fig. 3 is a cross-section on the line X X of Fig. 1. Fig. 4 represents a blank from which the body portion of the shoe is formed, and Fig. 5 represents a blank from which the bearing steel ring is formed.

Referring to Figs. 1, 2, and 3 of the drawings, A represents the body of the shoe, which is substantially an equilateral triangle in cross-section throughout its extent, with its upper surface a horizontal plane and its outer and inner faces sloping to a meeting-point beneath the center of the upper surface, the inner face having its lower portion cut away to form a shoulder or offset B and its outer face provided with perforations extending up-

ward through the upper horizontal surface of the shoe and adapted to receive ordinary horseshoe-nails C for the purpose of securing the shoe to the foot of the horse.

D represents a ring or ribbon of steel, which is oblong in cross-section and of such size as to be sprung into position and fit closely within the offset formed on the inner face of the shoe and to extend beyond the meeting-point of the outer and inner sloping faces of the shoe and form a bearing-surface to contact with the ground when in use. The said ring or band when in use is supported against the offset or shoulder B and secured in position by means of flat-headed screws E.

Referring to Figs. 4 and 5, A' represents a blank from which the body portion of the shoe is formed, being a triangular bar of metal from which desired lengths may be cut. D represents a similar blank or flat bar of steel from which lengths may be cut to form the inner steel bearing-ring.

The peculiar advantages of the shoe formed according to my invention are that it can manifestly be manufactured at a minimum of initial cost, as the shoe is made by simply cutting off a piece of the blank A, bending to the desired shape, punching nail-holes in the outer face of the same, and forming therein holes for the reception of the screws to hold in position the flat steel band. A strip is then cut from the steel blank D, hammered to give it the desired outward flare, and punched with the screw-holes. As the steel band receives the wear in use it may be renewed as desired by simply removing the screws holding it in position within the shoe proper and inserting a new steel wearing-band.

Another advantage of my construction is that there are no calks or toes or clips to be formed upon the shoe, and hence that expense is wholly obviated.

A further advantage is that because of the inward-sloping outer surface the shoe does not project beyond the side of the foot, and consequently it is practically impossible for a horse to interfere, overreach, or calk himself, while the outward-flaring smooth inner face prevents the accumulation within the

shoe of mud, snow, or ice and precludes the possibility of the horse picking up a stone or other foreign matter, and, perhaps, thereby permanently laming himself, and, further, that the outward-sloping or downwardly-diverging form of the inner surface and its supported hard band causes the weight of the horse to expand the band against its seat.

The shoe is highly hygienic in that the bearing-surface upon the ground is uniform throughout, whereby the horse is not mounted upon stilts, as it were, to his great discomfort, but has a firm grip upon the ground at all points. Further, because of the fact that the air does not circulate beneath the foot it does not tend to dry and harden the frog, which is allowed full play for the natural expansion and contraction, the shoe constituting an approach, as nearly as possible, to the unshod foot, while at the same time affording the hard wearing-surface rendered necessary by paved streets. Further, the shoe is adapted to all seasons of the year, as it is at all times perfectly sharp by reason of the thin bearing edge of hardened steel, which will at all times be of uniform cross-section, so that while it has none of the objectionable features of the sharp calks ordinarily used in icy weather it does prevent slipping upon the ice, and is just as well adapted for use in the summer-time. The shoe is self-sharpening, for the reason that if left upon the foot until worn out the comparative hardness of the wearing steel band will cause it to wear more slowly than the body portion of softer metal, and thus maintain the sharp edge at all times. Moreover, if desired, the inner band may be renewed as often as it wears down to the body portion, thus avoiding the renewal of the body portion, which will in that case receive no wear at all.

While I have shown as my preferred construction a shoe in which the nail-holes extend through the outer face, the heads of the nails being seated flush with the surface and smoothed down, yet it will be understood that, if desired, the nails may project from the inner face upward and that after the nails are seated the band may then be placed in position covering the heads of the nails, thus leaving the outer face entirely unbroken and smooth, while the inner face will also be smooth, as the screws for holding the band in position will be seated flush with the surface of the band.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a horseshoe, the combination of a curved body portion provided with a downwardly-diverging seat on its inner surface, and a curved band of harder metal constructed to be sprung into position on said downwardly-diverging seat, whereby weight supported on the horseshoe acts to expand said band against its seat, substantially as described.

2. In a horseshoe, the combination of a curved body portion provided with a downwardly-diverging seat on its inner surface, and a curved band of rectangular cross-section constructed to be sprung into position on said downwardly-diverging seat, whereby weight supported on the horseshoe acts to expand said band against its seat, substantially as described.

3. In a horseshoe, the combination of a curved body portion provided with a downwardly-diverging seat on its inner surface, a curved band of harder metal constructed to be sprung into position on said downwardly-diverging seat, whereby weight supported on the horseshoe acts to expand said band against its seat, and means constructed to secure said band to the body portion, substantially as described.

4. In a horseshoe, the combination of a curved body portion provided along the entire length of its inner surface with a downwardly-diverging recess, and a curved band of harder metal formed and constructed to be sprung into position in said recess with its sides diverging downwardly, whereby weight supported on the horseshoe tends to expand said band against its seat, substantially as described.

5. In a horseshoe, the combination with a body portion substantially equilateral in cross-section throughout its extent and provided with nail-holes upon its outer face, and upon its inner face with an offset, of a flat annular band of harder metal rectangular in cross-section, and adapted to be removably secured within the said offset and to project beyond the edge of the body portion, thus constituting a wearing-surface, substantially as described.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

JAMES W. COLLINS.

Witnesses:

FRANK C. VIALL,
WILLIAM O. TOWNE.