R. BARCLAY.

HORSESHOE.

APPLICATION FILED AUG. 11, 1910.

979,365.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

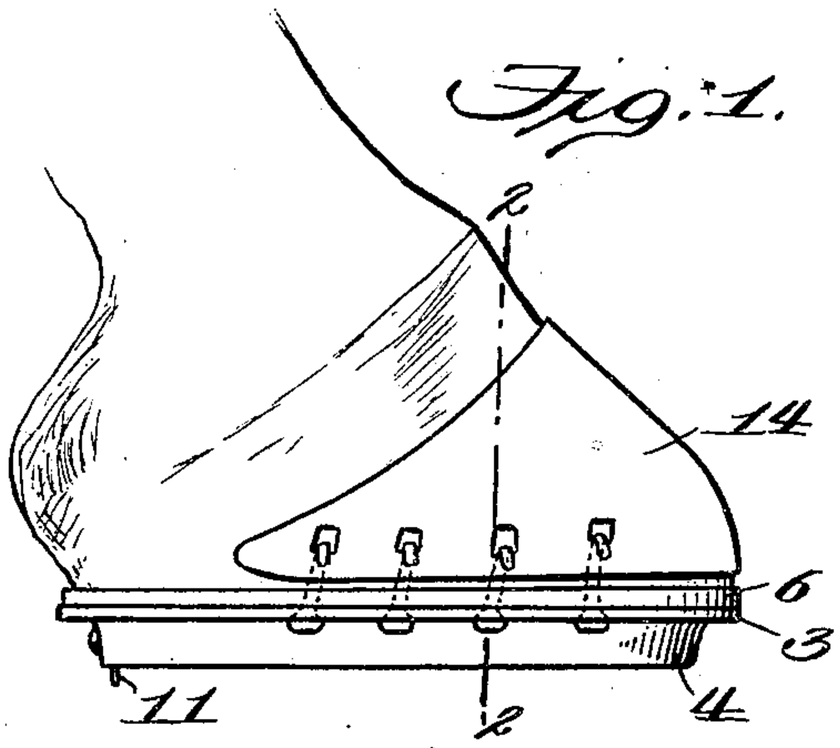


Fig. 2.

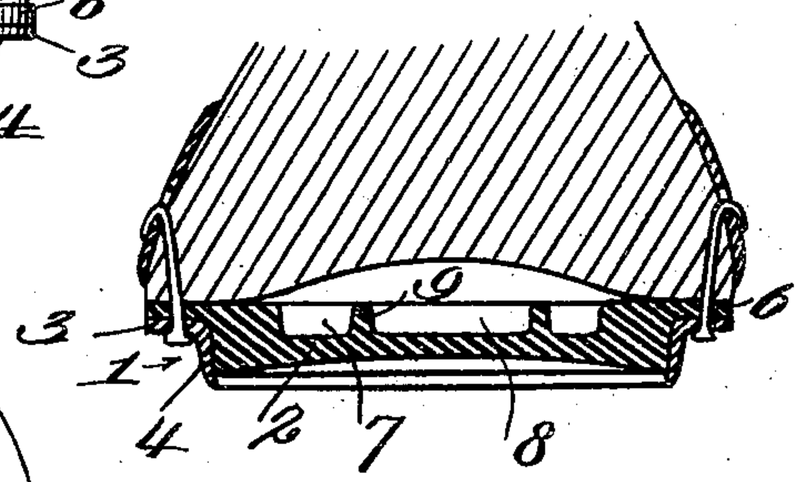


Fig. 3.

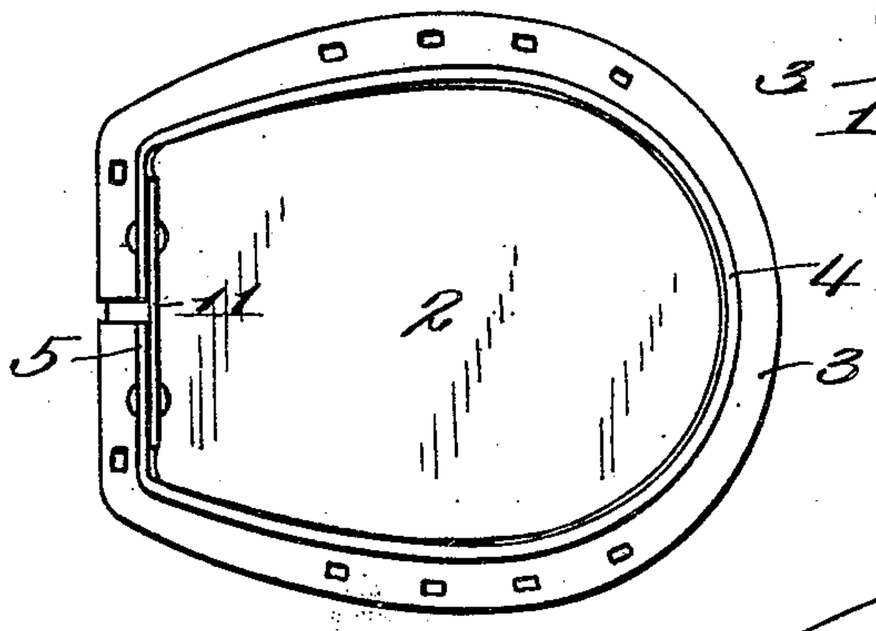


Fig. 4.

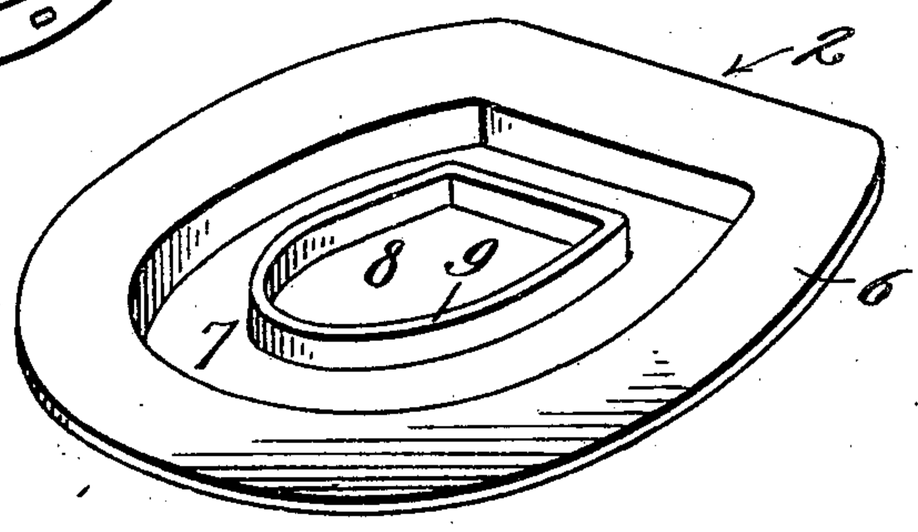


Fig. 5a

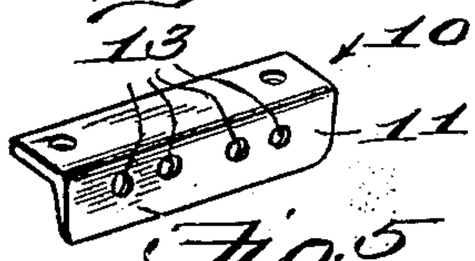
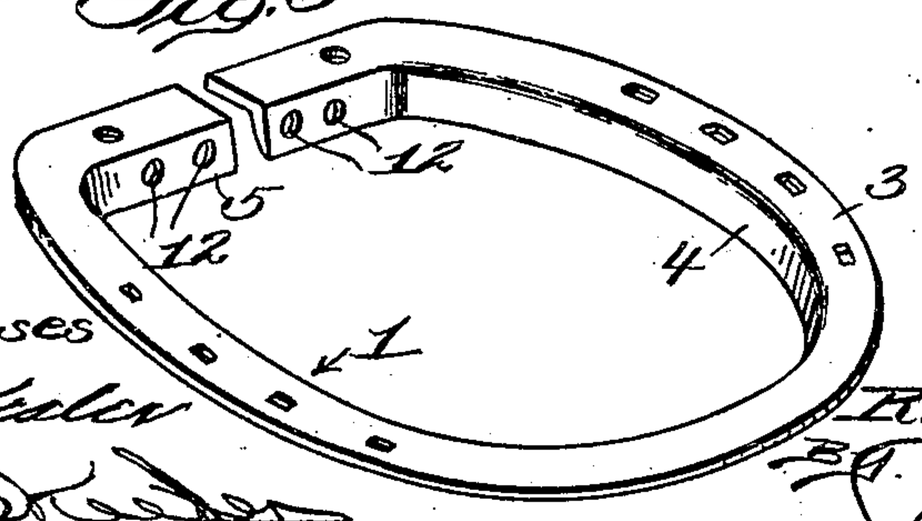


Fig. 5



Witnesses

E. E. Healey

Inventor

Richard Barclay

By James L. Norris, Jr.

Atty.

R. BARCLAY.

HORSESHOE.

APPLICATION FILED AUG. 11, 1910.

979,365.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 2.

Fig. 6.

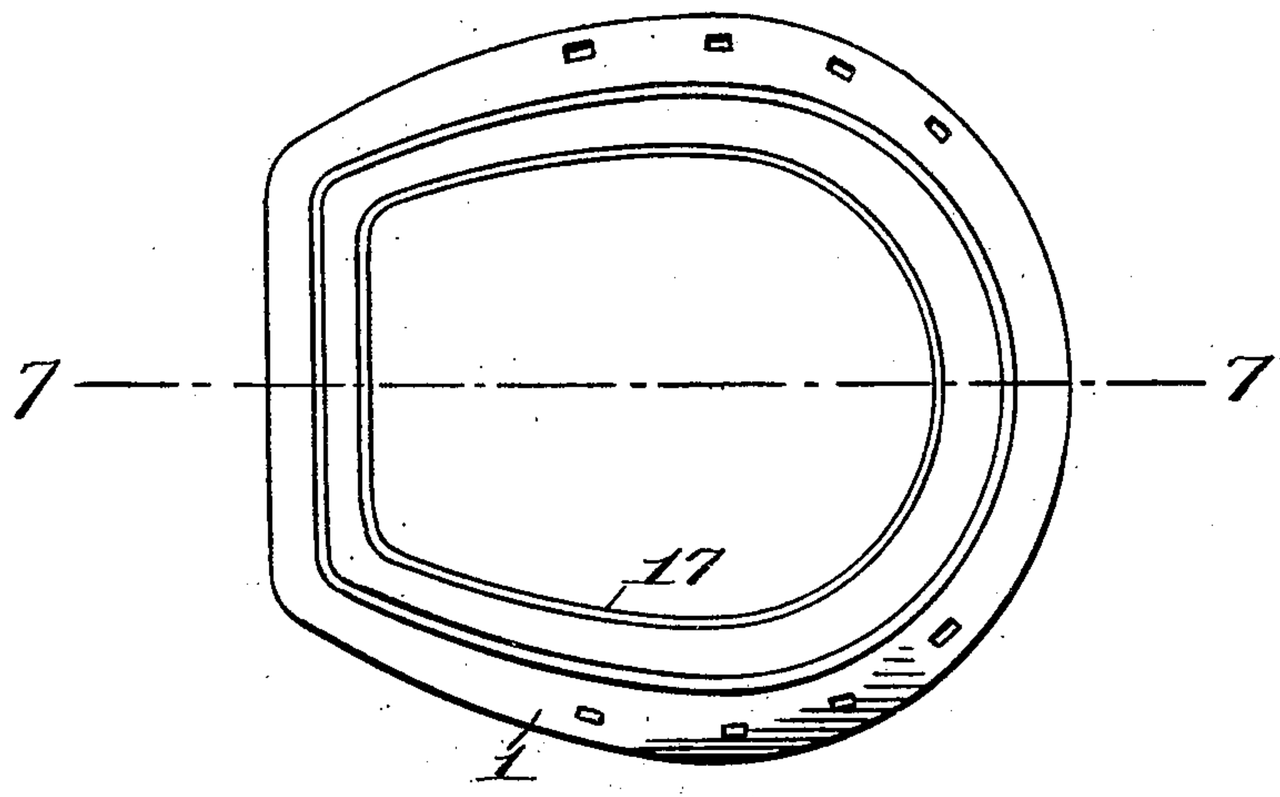


Fig. 7.

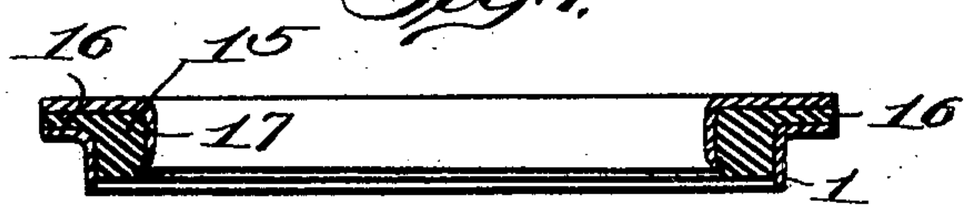


Fig. 8.

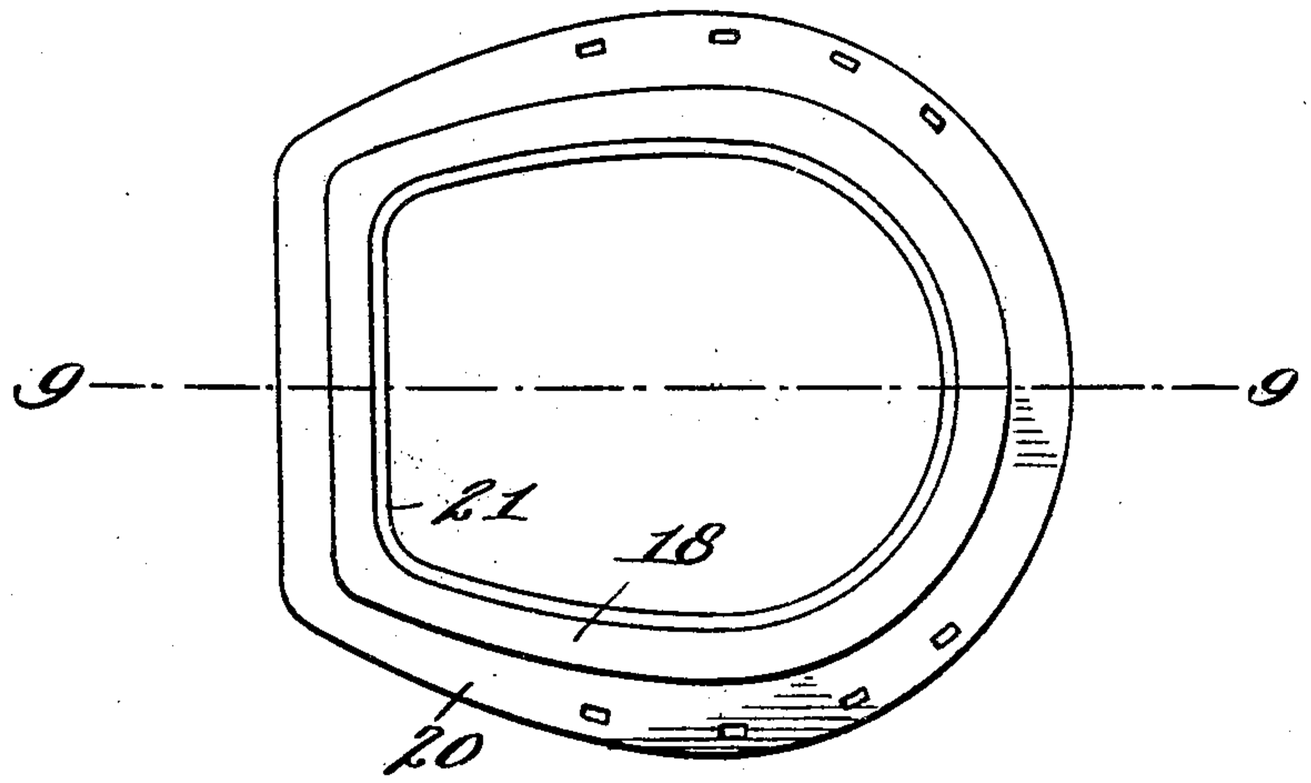
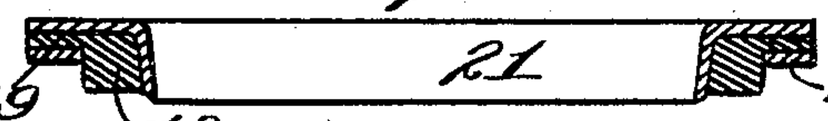


Fig. 9.



Witnesses:
C. E. Keeler
W. B. Keeler

Inventor
Richard Barclay
By James L. Norris, Jr.
Atty.

UNITED STATES PATENT OFFICE.

RICHARD BARCLAY, OF YOUNGSTOWN, OHIO.

HORSESHOE.

979,365. Specification of Letters Patent. **Patented Dec. 20, 1910.**

Application filed August 11, 1910. Serial No. 576,681.

To all whom it may concern:

Be it known that I, RICHARD BARCLAY, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented new and useful Improvements in Horseshoes, of which the following is a specification.

This invention relates to improvements in horse shoes and it has for its object to provide a shoe of simple and inexpensive construction and which combines a number of features of advantage to be hereinafter particularly specified.

Embodiments of the invention are illustrated in the accompanying drawings, wherein—

Figure 1 is a view showing the improved shoe in use; Fig. 2 is a cross section on the line 2—2 of Fig. 1; Fig. 3 is a bottom plan view of the improved shoe; Fig. 4 is a perspective view showing a rubber frog-plate which forms a part of the shoe; Fig. 5 is a perspective view showing a frame which also forms a part of the shoe; Fig. 5ª is a detail view showing a fastening piece which is associated with the frame shown in Fig. 5; Fig. 6 is a bottom plan view of a modified construction; Fig. 7 is a section on the line 7—7 of Fig. 6; Fig. 8 is a bottom plan view of another modified construction; and Fig. 9 is a section on the line 9—9 of Fig. 8.

Similar characters of reference designate corresponding parts throughout the several views.

The form of construction shown in Fig. 1 embodies essentially a tread frame, as 1, and a frog-plate, as 2. The frame 1 is of an L-shaped cross section and embodies a horizontal attachment flange 3 and a tread flange 4 which depends from the inner edge of the wear flange. This frame has the general outline of an ordinary horse shoe and is provided at its heel end with inwardly directed extensions 5. The frame is resilient and is of such construction that it may be produced by a rolling operation which admits of the use of metal with a high percentage of carbon.

The frog-plate 2 shown in Figs. 2 and 4, is made of rubber and is designed to cover the frog of the hoof. The major portion of the plate is confined within the frame 1 and is circumscribed by a horizontal flange 6 which overlies the attachment flange 3, is confined between the latter and the underface of the hoof and affords a yielding bearing surface for the frame 1 whereby a bearing effect similar to that secured by a soft tread shoe, is obtained. The flange 6 also serves as a seal to prevent the dirt and moisture from passing to the frog of the hoof. The upper face of the plate 1 is formed with recesses 7 and 8 separated by an upstanding rib 9. This latter strengthens the frog-plate and serves also to bear against the hoof and protect the latter as well as maintain the proper relation of the frog-plate. The recesses 7 and 8 provide for interposing cotton batting or equivalent material between the frog-plate and the hoof. This batting is moistened and may be medicated and serves to prevent contraction of the hoof and to relieve corns and kindred troubles.

The frame 1, as previously stated, is resilient in order that it may be adapted to frog-plates of different sizes, and said frame is positively clamped upon the frog-plate, the means for this purpose consisting of a part 10 of L shape in cross section as shown in Fig. 5ª. The part 10 includes a tread flange 11 which is of greater depth than the tread flange 4 and projects beyond the latter so as to afford, in effect, a heel calk. The extensions 5 are provided in their depending flanges with any desired number of apertures 12, and the tread flange 11 is provided with corresponding apertures 13. The frame 1 may thus be fitted upon frog-plates of different sizes and when so fitted is secured by pins or other suitable fastenings which are passed through the apertures 12 and 13, it being understood that the parts 10 are made in different sizes and that a particular size is selected in accordance with a particular adjustment of the frame 1. The part 10 is also attached to the flange 3 of the frame 1, said flange and the corresponding flange of the part 10 being provided with suitable openings through which fastening pins may be passed.

The flange 3 is provided with openings through which the attachment nails are passed, these openings being arranged in the usual manner and the ends of the nails being preferably clenched through openings in an apron 14 which fits over the upper front surface of the hoof.

The tread flange 4 is of a depth to project below the plate 2, as shown in Fig. 2.

The shoe, thus described, is, in strictness, not a soft tread shoe, although it has a some-

what similar action. It differs essentially from a soft tread shoe, however, in that it does not present a flat or extended surface for engagement with the ground but on the contrary presents an edge-like engaging surface which is very efficient in preventing slipping and has the advantages in this respect of the calks commonly employed. The flange 11 is efficient in preventing slipping on down grades or when backing. The tread flange is of narrow thickness and possesses the further advantage of being kept sharp by use.

The form of construction shown in Figs. 6 and 7 is especially intended for use in speed contests, or on similar occasions. In this form, the frame 1 is of the construction above described, except that it may be made continuous, as by a stamping operation, instead of split. The frog-plate 2 is not employed. In lieu thereof, I employ a filling ring or strip 15 of a suitable quality of rubber and which is fitted within the frame 1, having a continuous projecting flange 16 which overlies the attachment flange of the frame. The filler ring or strip 15 produces the yielding bearing action previously referred to and is held in position by a clamping ring 17 which has an L-shaped cross section. The ring 17 is fitted within the filler ring or strip with its horizontal flange overlying the flange 16 and with its depending flange shaped to bite into the material of the filler ring.

In the construction shown in Figs. 8 and 9, a composite tread surface is provided. In this case, a ring or strip 18 of a suitable quality of rubber is employed and is provided with a continuous horizontal flange 19. An attachment ring 20 is arranged under the flange 19 and of course surrounds the body of the ring or strip 18. A continuous frame 21 is snugly fitted within the latter, the frame 21 being of an L-shaped cross section and having a horizontal flange which overlies the flange 19 and a depending tread flange which is flush with the bearing face of the ring or strip 18.

Having fully described my invention, I claim:

1. A horse shoe comprising a metallic frame which has a tread flange of narrow cross section and of ordinary horse shoe shape, and which also has a horizontal attachment flange projecting outwardly from the tread flange and a rubber member concentrically fitted within the tread flange and of less depth than said flange, the rubber member having a horizontal flange which overlies the horizontal flange of the frame.

2. A horse shoe comprising a metallic frame which has a tread flange of narrow cross section and of ordinary horse shoe shape and which also has a horizontal attachment flange projecting outwardly from the tread flange and a rubber frog-plate concentrically fitted within the tread flange and of less depth than said flange, the frog-plate having a horizontal flange which overlies the horizontal flange of the frame and having also recesses in its upper face and an upstanding rib separating the recesses.

3. A horse shoe comprising a metallic frame having a split heel portion and being of L-shaped cross section whereby a depending tread flange and an outwardly projecting horizontal flange are provided, a rubber member concentrically associated with the tread flange and a fastening part for binding together the ends of the split heel portion, the fastening part being of L-shaped cross section and having a tread flange which is of greater depth than the tread flange first named.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RICHARD BARCLAY.

Witnesses:
P. N. BOGGANS,
M. H. BURKE.