

E. A. MONROE.  
HORSESHOE.

Patented June 22, 1886.

[illegible]

Fig. 2.

A perspective view of a mechanical device, possibly a pump or engine component. The device features a curved, hatched upper section and a lower section with various labeled parts and dimensions. A vertical line labeled 'y' passes through the center.

Labels and dimensions include:

- $a$ : A dimension line indicating a length.
- $a^2$ : A dimension line indicating a length, appearing multiple times.
- $c$ : A dimension line indicating a length.
- $B$ : A label for a part of the upper section.
- $D$ : A label for a part of the upper section.
- $E$ : A label for a part of the upper section.
- $F$ : A label for a part of the upper section.
- $G$ : A label for a part of the upper section.
- $H$ : A label for a part of the lower section.
- $A$ : A label for a part of the lower section.
- $C$ : A label for a part of the lower section.

A detailed cross-sectional diagram of a mechanical device, likely a pump or engine component. The diagram shows a central curved body with various internal components. Labels include:

- H**: Points to the outer casing or housing.
- B**: Points to a specific part of the inner mechanism.
- D**: Points to a vertical rod or piston.
- E**: Points to a horizontal connecting link.
- F**: Points to another vertical rod or piston.
- G**: Points to a small circular component, possibly a valve or seal.
- C**: Points to the base or support structure.
- a**, **a¹**, **a²**: Points to different sections or surfaces of the base.

The diagram is signed "WITNESSES:" at the bottom left and includes the name "Twitchell" in cursive script.

Lorne Twitchell.  
 C. Sedgwick.

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# UNITED STATES PATENT OFFICE.

EDWIN A. MONROE, OF SARATOGA SPRINGS, NEW YORK.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 344,128, dated June 22, 1886.

Application filed April 19, 1886. Serial No. 199,346. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN A. MONROE, of Saratoga Springs, in the county of Saratoga and State of New York, have invented a new and Improved Horseshoe, of which the following is a full, clear, and exact description.

My invention relates to shoes for hoofed animals, particularly horses, and has for its object to provide a cheap, light, durable shoe, which may easily be applied by an amateur when fitted to the hoof, and will give support to the bars or braces of the foot, and will give a secure foothold to the animal, and will not "ball up," and will be self-clearing on the road or in the stable.

The invention consists in certain novel features of construction of the shoe, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a bottom view of a horse's hoof with my improved shoe applied. Fig. 2 is a detail longitudinal sectional elevation taken on the line *xx*, Fig. 1, with the hoof reversed or in normal position; and Fig. 3 is a vertical transverse sectional elevation taken on the line *yy*, Fig. 2.

I make the main body portion A of the shoe, from its heel portions clear around the front of the shoe, in the cross-sectional form, (shown clearly in Figs. 2 and 3,) or with a flat top part, *a*, which fits upon the lower edge of the wall or shell B of the hoof, and with a front part, *a'*, standing about at right angles to the top part, *a*; or, in other words, the entire inner face of the main body A of the shoe is concaved and its lower edge, *a*<sup>2</sup>, is quite sharp all around.

At the heel of the shoe its side parts or extremities are bent forward abruptly to form lips C C, which taper downward to a sharp edge, *c*, about in line or level with the sharp lower edge, *a*<sup>2</sup>, of the main body A of the shoe and form heel-calks. The broad upper faces of these lips or calks C C give support to the bars or braces D D of the animal's hoof, which are not to be cut away, as usually is done, but are to be preserved to give proper support to

the heel of the foot, as nature intended, and as shown in the drawings.

At the angles of the opposite heel parts of the shoe there are formed on it the upwardly-projecting lugs E E, into which are threaded the screws F F, which may be turned by their milled heads to force their ends against the inner sides of the outer wall of the hoof to prevent or cure contraction of the hoof, which is the cause of serious diseases of the navicular joint of the foot.

I attach the shoe to the foot by screws H, passed diagonally outward and upward through the top part or plate, *a*, of the shoe into the wall or shell of the hoof. The shoe is provided with countersunk holes to receive the screws and leave the heads of the screws about flush with the inner surface of the shoe, as best seen in Figs. 2 and 3.

It is obvious that the shoe may readily be put on a horse's foot by an amateur after being properly fitted by an expert, it being the intention to make the shoe of cast malleable iron or cast-steel and to fit it to the foot when cold. The shoes will be cast from patterns made in carefully-graduated sizes from impressions taken from horse's feet that are in normal condition.

This horseshoe will not ball up or pick up stones, and hence will clear itself in mud or snow, or in the stable, and the sharp edges *a*<sup>2</sup> *c* of the shoe give an excellent foothold to the horse on either pavements or soil or turf, especially when the animal is turning to either side, thereby giving the horse confidence to take longer strides, and the lower sharp edges of the shoe will sink into soft roads, whereby heavy concussion of the foot and leg-joints of the animal will be avoided.

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

1. As an improved article of manufacture, a horseshoe having a continuous calk, and provided at its heel with inwardly and forwardly projecting lips, and with upwardly-projecting lugs having screw-threaded apertures, as set forth.

2. An improved horseshoe having the apertured flat top part, *a*, the front part, *a'*, near-

ly at right angles to the top part, and provided at the heel with the lips C, having a sharp lower edge and broad upper faces to give support to the bars or braces of the foot,  
5 substantially as herein shown and described.

3. A horseshoe provided at the heel with upwardly - projecting lugs E, having screw-

threaded apertures, and the screws F, working in the apertures of the said lugs, substantially as and for the purpose set forth.

EDWIN A. MONROE.

Witnesses:

EDGAR T. BRACKETT,  
WM. E. MONROE.