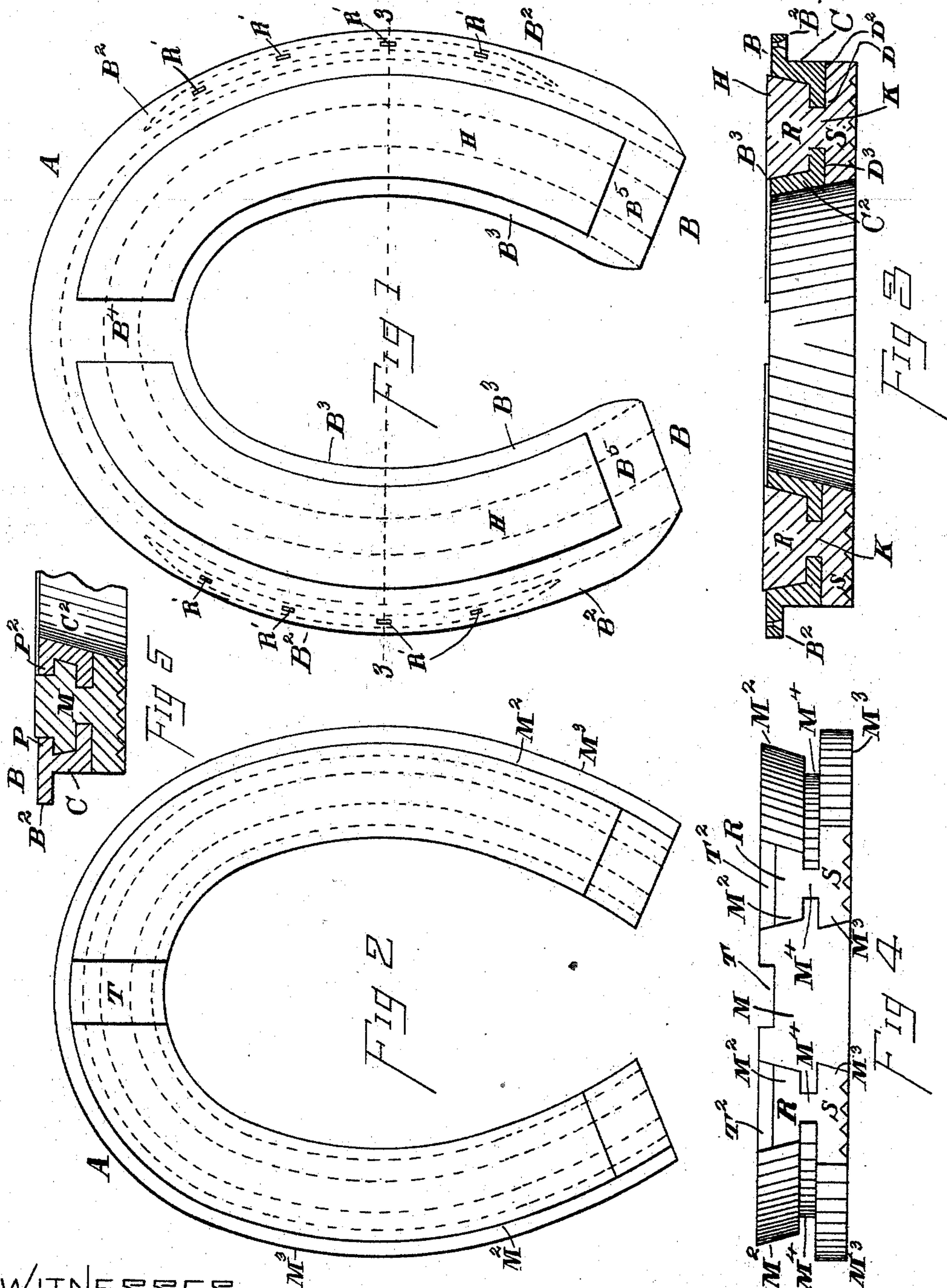


(No Model.)

L. A. ANDERSON.
ELASTIC TREAD HORSESHOE.

No. 526,671.

Patented Oct. 2, 1894.



WITNESSES

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ELASTIC-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 526,671, dated October 2, 1894.

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To all whom it may concern:

Be it known that I, LAWRENCE A. ANDERSON, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

The several features of my invention and the various advantages resulting from their use, conjointly or otherwise, will be apparent from the following description and claims.

In the accompanying drawings, making a part of this application, and to which reference is hereby made, Figure 1 is a plan or top view of a shoe embodying my invention. Fig. 2 is a view of the bottom or under side of the same. Fig. 3 is a vertical transverse section thereof, taken at the dotted line 3, 3, of Fig. 1. Fig. 4 is a view in elevation, showing one of my approved ways of making the rubber padding of the foot. Fig. 5 is a view in section of the shoe, the section being taken in the same manner as that of Fig. 2, but showing certain flanges of the metallic frame which are omitted in the section shown in Fig. 3.

A indicates the metallic frame not solid, but with openings therein. At the upper portion of the frame is the upper plate B consisting of the outer portion B² and the inner portion or rim B³. Between these are the openings H, H, leaving a neck or union B⁴ at the front end of the shoe and uniting pieces at the rear end. These unions or uniting pieces of the plate B serve to connect the two parts B² and B³ thereof, and are respectively indicated by the letters B⁴, B⁵, B⁵. A wall C connected at top to the rim B² extends down, and at its bottom is connected to the plate D. The plate D has long openings or slots K therein and through it substantially as shown, and the two long parts of the plate thus divided are respectively lettered D², D³. The portion B³ of the plate B is connected to the part D³ of plate D by a wall C².

It is understood that the framework just described is in plan view of the shape of the horse's foot to which it is to be applied.

I construct a padding or block M of soft material, preferably somewhat yielding and elastic, and for this purpose rubber is pre-

ferred. This padding or block will usually be in one piece. It is provided at each side with a flange or rib M² and a lower flange or rib M³. Between these is the neck M⁴. The padding may thus be said to consist of two rings R and S, united by the neck M⁴.

In practice, the padding is inserted into the metallic frame, and will then be combined therewith substantially as shown in the drawings. The part D² of the frame will enter the groove on the outer side of the padding and the part D³ will enter the groove in the other side of the padding, and they both will usually reach to their respective sides of the neck M⁴. The ring S of the padding will then lie below the plate D (D², D³), and the latter will rest on said ring. The ring R will rest upon the said plate D, and between the walls C, C², and being made thicker (from top to bottom), than the combined height of the walls C, C² and the plate B (B², B³), will project upward somewhat above the plate B.

The padding preferably has a recess T in the point of its top, and is cut away at each upper end leaving the depressions T², T². When the rubber is in place in the frame A, the neck B⁴ enters the recess T, and the connections B⁵, B⁵, respectively enter the depressions T², T².

The under side of the padding is roughened in corrugations or indentations, so as to afford a greater frictional contact with the ground. In addition to the foregoing advantage it is to be remarked that this formation of the bottom of the padding prevents the latter from wearing smooth, and becoming slippery.

The mode of applying this improved shoe to the foot of a horse is as follows: Holes R' are present, extending vertically through the rim B². These holes are usually located at the well known points where, when the shoe is applied to the hoof, the latter is well adapted to receive them. Nails are driven through these holes, and into the edge of the hoof, and clinched in the usual manner. Thus the metallic frame is secured to the hoof. The rubber being fast in the frame, is duly held in place. The bottom of the hoof, at and in the vicinity of its outer edge rests not upon the metal plate B (B², B³), but upon the upper surface of the rubber R. Hence when

the weight of the horse comes upon the foot, the latter cushions on the rubber, and this latter operation is of especial importance and value when the horse is traveling rapidly and forcibly and quickly brings down his foot upon the ground. The portion S of the rubber block comes into contact with the ground and prevents the metal frame from reaching the ground and coming into contact with it. This rubber takes the impact of the foot, and elastically and gently yields, thus preventing the leg and body of the horse from being shocked and jarred. Thus the travel of the horse is rendered easier and safer, and the knees and other joints of the legs are prevented from injury during travel.

When desired, the plate B may inwardly project over the walls C, C², forming the respective flanges P, P². These may serve to hold the elastic material or rubber M more fully in place, when necessary.

The metal or stiff frame is to be suitably connected to the hoof,—the preferred mode being by means of nails driven through holes R' in the outer rim B² of the plate B.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In an elastic horseshoe, a metal frame for the reception and support of the elastic padding, consisting essentially of an upper plate B having an opening H therein, and lower plate D united to the plate B by the outer neck or union C and the inner neck or union C², the lower plate D having opening K therein and extending inwardly from neck C and beyond the same in the form of a flange D², and extending over and beyond the union or neck C² in the form of a flange D³, the opening K being between the flanges D² and D³, the rubber tread extending across the shoe under the plate D, and extending down on either side flush with the outer walls of the shoe substantially as and for the purposes specified.

2. In an elastic horseshoe, the framework consisting of the upper plate B and lower plate D, the outer portion of the plate B being connected to the outer portion of the plate D by a neck C, and the inner portion B³ of the plate B being connected to the inner portion of the plate D by a neck C², the outer portion of the plate B projecting inwardly beyond the neck C in the form of a horizontal flange, and the inner portion of the plate B projecting toward the flange P in the form of a flange P², the outer and inner portions of the plate D projecting toward each other in the form of flanges beyond their respective necks C and C², the plates being provided with openings H, H, said openings being limited by the connecting neck or union pieces B⁴, B⁵, and T, said union pieces not interfering with the opening of the interspaces H and K, which are continued to the ends of the shoe, in combination with one continuous elastic tread of a circular form, and having the upper enlarged portion R and lower enlarged portion S, the grooves between said

portions receiving the flanges D³ and D², substantially as and for the purposes specified.

3. In an elastic horseshoe, the framework consisting of the upper plate B and lower plate D, the outer portion of the plate B being connected to the outer portion of the plate D by a neck C, and the inner portion B³ of the plate B being connected to the inner portion of the plate D by a neck C², the outer portion of the plate B projecting inwardly beyond the neck C in the form of a horizontal flange, and the inner portion of the plate B projecting toward the flange P in the form of a flange P², the outer and inner portions of the plate D projecting toward each other in the form of flanges beyond their respective necks C and C², the plates being provided with openings H, H, said openings being limited by the connecting neck or union pieces B⁴, B⁵, in combination with the elastic padding consisting of the upper portion R provided at each side with the flange M² and a lower portion provided at each side with a flange M³, the said portions being connected by the neck M⁴, the said neck fitting in the opening K of the iron frame, while the upper ring R fills the opening H in said frame above the plate D, and ring S lies below the said plate D, substantially as and for the purposes specified.

4. In a horseshoe, a metallic frame having upper plate B and lower plate D, respectively provided with openings H and K, and united by walls C and C², and the padding or block, having rings or flanges M² and M³ and neck M⁴ between, the outer and inner portions of the lower plate entering between the said upper and lower rings or flanges, inner portions or flanges P and P² of plate B being present, substantially as and for the purposes specified.

5. In a horse shoe, the flanges D³, D², and the interspace, open at the ends and receiving the continuous flanged flexible rubber, capable of being drawn at the end, substantially as and for the purposes specified.

6. In a horseshoe, a metallic frame, outer wall C and inner wall C² of the frame, bounding a continuous interspace or opening or groove H, flange D² extending inwardly from the lower portion of wall C, and flange D³ extending from the lower portion of wall C² toward flange D², a continuous rubber padding elastic tread piece consisting of an enlarged upper portion and an enlarged lower portion connected by the neck M⁴, the said flanges D³ and D² entering between said upper and lower portions of the tread piece, the metallic frame being open at the rear ends of the shoe, so that the continuous interspace or groove H is open there, and freely admits therein the introduction of the continuous strip of elastic tread formed as described, and its withdrawal therefrom when worn out, by sliding the said tread horizontally through the interspace or groove H, substantially as and for the purposes specified.

7. In a horseshoe, a metallic frame having

upper plate B and lower plate D, respectively provided with openings H and K, and united by walls C and C², and the padding or block, having rings or flanges M² and M³ and neck M⁴ between, the outer and inner portions of the lower plate entering between the said upper and lower rings or flanges, inner portions or flanges P, P² of plate B being present, the ends of the shoe being open, and a continuous rubber padding or elastic tread piece having enlarged upper portion and enlarged lower portion connected by neck M⁴, the flanges D³ and D² entering between the upper and lower portions of the elastic tread piece, substantially as and for the purposes specified.

8. In an elastic horseshoe, a metal frame for the reception and support of the elastic padding, consisting essentially of an upper

plate B having an opening H therein, and lower plate D united to the plate B by the outer neck or union C and the inner neck or union C², the lower plate D having opening K therein and extending inwardly from neck C and beyond the same in the form of a flange D², and extending over and beyond the union or neck C² in the form of a flange D³, the opening K being between the flanges D² and D³, the rear ends of the shoe being open at the spaces H, K, in combination with a rubber tread having upper enlarged portion R and lower enlarged portion S and neck M⁴ receiving the flanges D³ and D², substantially as and for the purposes specified.

LAWRENCE A. ANDERSON.

Attest:

WM. E. JONES,
K. SMITH.