(No Model.)

S. B. JEROME.

HORSESHOE.

No. 506,820. Patented Oct. 17, 1893.

FIG. 1.

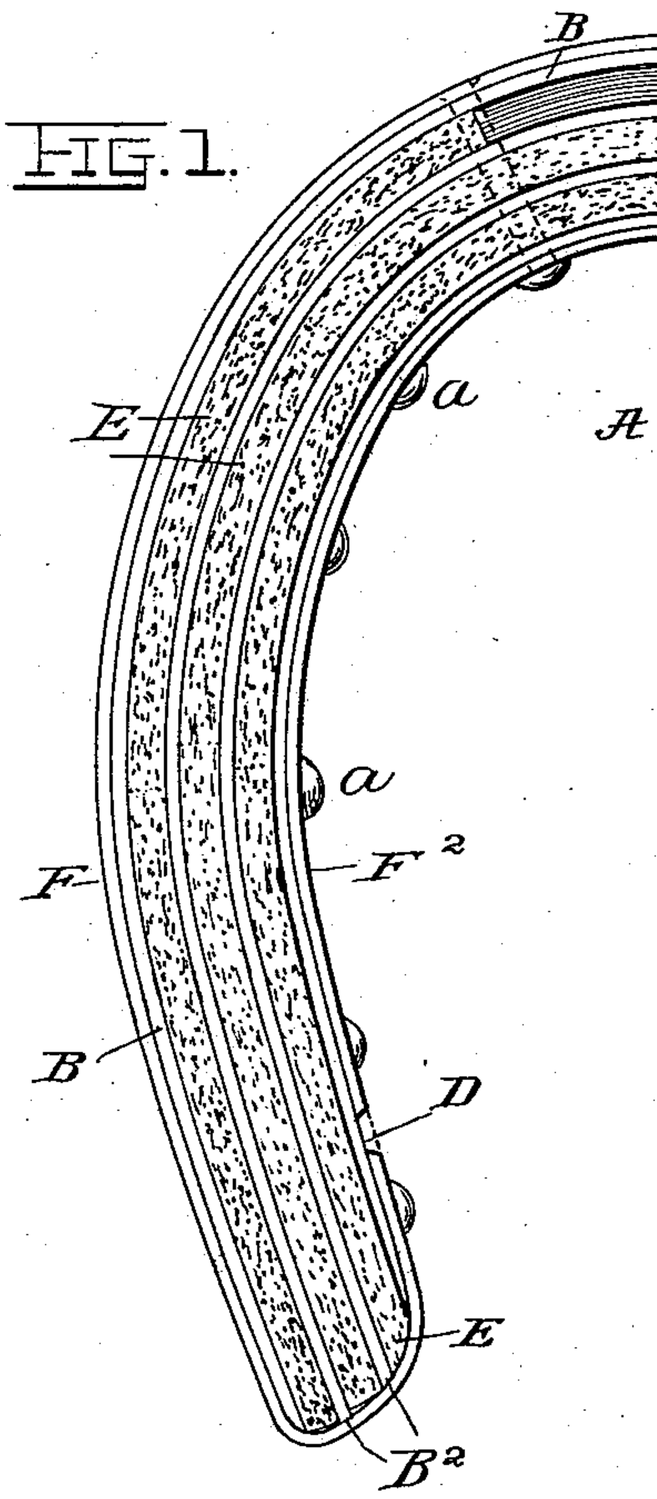


FIG. 2.

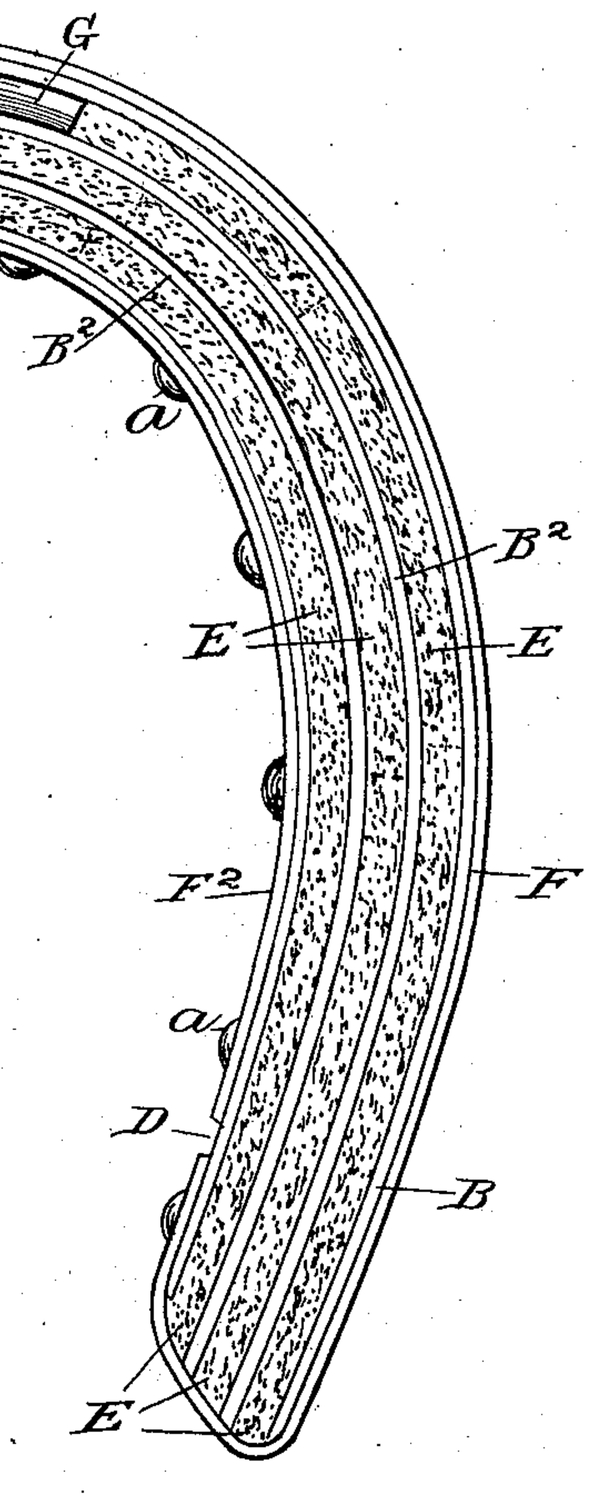


FIG. 3.

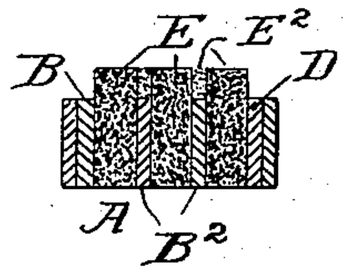
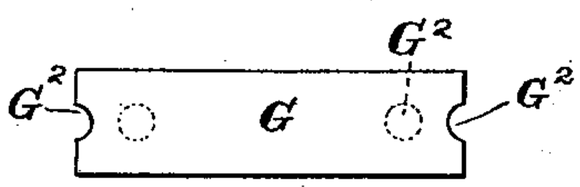


FIG. 5.



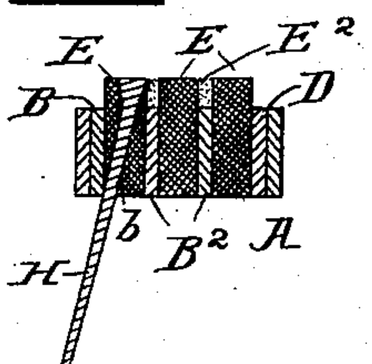


FIG. 4.

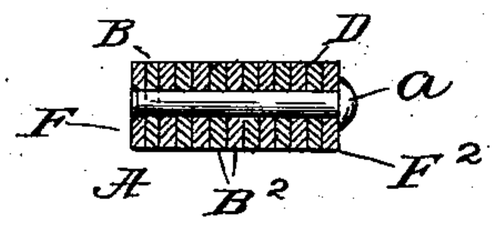
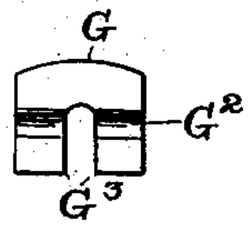


FIG. 6.



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UNITED STATES PATENT OFFICE.

SAMUEL B. JEROME, OF NEW YORK, N. Y.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 506,820, dated October 17, 1893.

Application filed December 17, 1892. Serial No. 455,503. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. JEROME, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

The object of my invention is to produce a horseshoe that shall be flexible or yielding to permit expansion of the horse's hoof, and yet be strong and durable, and which also shall have a wearing surface or tread of a tenacious or friction-like character to reduce the danger of slipping on smooth roadways, floors, &c., and produce a cushioning effect as the hoof is brought down upon the roadway.

The invention consists in the novel details of improvement and the combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein—

Figure 1 is a face view of the wearing side of my improved horseshoe. Figs. 2, 3 and 4, are cross sections thereof as hereinafter more fully explained. Fig. 5 is a side view of a toe-calk and Fig. 6 is an end view thereof.

In the accompanying drawings the letter A, indicates my improved horseshoe. The shoe is constructed of rows of strips or layers of suitable material, some or all of which strips are preferably placed on edge, and firmly bound together. In constructing the shoe I use two or more rows of thin metal strips B, D, preferably steel, placed on edge, and between said strips B, D, I place other rows of strips of suitable material, and bind them all firmly together by cross bolts, rivets, screws or the like *a*, that pass through the strips (see Figs. 1 and 4). The strip B is on the outer side of the shoe and the strip D on the inner side thereof, and these strips are bent to the desired shape to form the contour of the shoe, as in Fig. 1.

Between the metal strips B, D, I place parallel strips or layers E, of somewhat softer or yielding, yet tenacious and tough, material. I find that strips of cork or similar substance E give good results (see Figs. 1 and 2), as this acts as a cushion under the horse's foot, or I may use fabric, felt or leather E as indicated in Fig. 3. When the latter is used I preferably treat it with a waterproofing composition, such as cement, asphaltum, tar or their equivalent, which will also harden the fabric or leather, and cause its particles to adhere. Between the strips E of yielding, yet tough, material, I place strips B^2, of hard material, say metal, thereby forming alternate rows of rigid and yielding, yet tough, material. The rivets *a*, pass through and hold all these rows of strips firmly together.

I prefer that the strips of yielding material E should project beyond the outer edges of the rigid strips B, B^2 and D, to form the tread or wearing side of the shoe, whereby a friction surface will be formed to reduce the danger of slipping. These yielding strips E act to cushion the blow when the horse's foot is brought down upon the pavement or roadway. Even after the strips E have worn down level with the surfaces of strips B, B^2 and D, they will present an adhesive, yet yielding, surface, making it easier for the animal. Between the projecting edges of the strips E, I preferably fill in a hardening yet waterproofing substance E^2, such as tar, asphaltum, emery, sand or other suitable substance or cement. This strengthens the projecting edges of strips E and also keeps moisture from between strips B^2 and E. I may also make all the strips composing the shoe of metal (see Fig. 4), or may use strips E interchangeably as desired, that is to say, one strip E of one material, say cork or wood, and the other of fabric, or leather, as desired, and do not confine myself to making all the strips E of the same yielding material.

Around the outer sides of a shoe constructed as above I preferably place a band F of metal, and if desired an inner band F^2, and rivet, screw or bolt the entire series of strips together, as in Fig. 4. Or I can make the strips F and F^2 in one continuous piece (as indicated by dotted lines in Fig. 1), the ends projecting together as at the right in Fig. 1. The strip F is carried around the ends of strips B, B^2 and D at the heel of the shoe, to protect the ends of said strips and form a firm and secure structure, as shown, in which case the ends of strip F will extend partially or wholly along the inner side of the shoe. This construction overcomes any danger of

the ends of metal strips B, B² and D injuring the animal, and prevents the softer or yielding strips E from being chipped or broken off.

At the toe of the shoe I may place, between the metal strips, a short hard metal strip or calk G, to prevent undue wear at that point. This strip or calk G may be suitably fastened between the other strips, say by rivets or screws *a*, passing into sockets or recesses G² or through apertures therein, as in Fig. 5. The strip or calk G, may also straddle a strip B², in which case the under side of strip G would have a groove or recess G³, to receive strip B², see Fig. 6. This arrangement will constitute a firm structure for holding the strip or calk G.

The nails H for holding the shoe upon the hoof are driven between two metal strips, as in Fig. 3, and pierce one of the yielding strips E, passing through an aperture *b* therein. The nail head is of such a width that it can be forced between the metal strips, but will not pull entirely through between said strips, whereby the shoe can be securely attached to the hoof.

A shoe constructed as above, will be flexible to allow for spreading or bending of the hoof in either direction, yet it will be strong and durable. By having a yielding surface the impact upon the roadway will be cushioned and the strain upon the horse of an ordinary iron shoe will be lessened or overcome. The shoe is light, cheap to manufacture and comfortable to the horse, as well as easily applied to the hoof.

Having now described my invention, what I claim is—

1. A horseshoe composed of separate strips or layers of material bent to conform to the contour of the shoe, placed on edge and bound together by laterally extending rivets or the like passing through all the layers, and an outer band F passing around the other layers and around the ends of said layers at the heel substantially as described.

2. A horseshoe composed of interior strips or layers of different materials with their edges vertical to the tread surface, and having an outer band of metal, substantially as described.

3. A horseshoe composed of alternate layers of contrasting material with their edges vertical to the tread surface, and having an outer band of metal that passes around the heel of the shoe, substantially as described.

4. A horseshoe composed of alternate strips or layers of rigid material B², and yielding material E, with an outer layer of metal B, and an exterior layer of metal F passing around the layer B and around the ends of layers B, B², and E, substantially as described.

5. In a horseshoe, an inner portion composed of an outer and an inner strip of metal B, and D, with other strips B² and E, between B and D, all bound firmly together by rivets or screws, substantially as described.

6. In a horseshoe an inner portion composed of outer and inner strips of metal B, D, and alternate strips of metal and yielding material located between B and D, the strips being placed on edge, and bent laterally to conform to the shape of the shoe, substantially as described.

7. A horseshoe composed of alternate strips of metal and two or more strips of yielding material, the yielding material projecting beyond the edges of the metal strips, and forming a space between them at their projecting parts, substantially as described.

8. A horseshoe composed of strips of metal and yielding material, the yielding material projecting beyond the edges of the metal strips, and with a filling E² of hardening substance between the projecting parts of strips E, substantially as described.

9. A horseshoe composed of strips of material bound together and having a strip or calk of metal G placed between other strips at the toe, and held in place by rivets or screws substantially as described.

10. A horseshoe composed of strips of material bound together with rivets or screws, and a calk or strip G having recesses or apertures to receive said rivets or screws, substantially as described.

11. A horse shoe composed of strips of material bound together, and a calk or strip G having a longitudinal groove G³ to receive one of the other strips, and rivets for holding said strip G in place, substantially as described.

12. A horseshoe composed of strips or layers of metal and intermediate strips of yielding material, the space between the metal strips being of such a width that the head of the nail to be used for holding the shoe upon the hoof will not pull through, as and for the purposes specified.

Signed at New York, in the county of New York and State of New York, this 15th day of December, A. D. 1892.

SAMUEL B. JEROME.

Witnesses:
T. F. BOURNE,
E. P. HITCHCOCK.