

(Model.)

H. H. GIBBS.  
ELASTIC TREAD HORSESHOE.

No. 522,789.

Patented July 10, 1894.

FIG. 1.

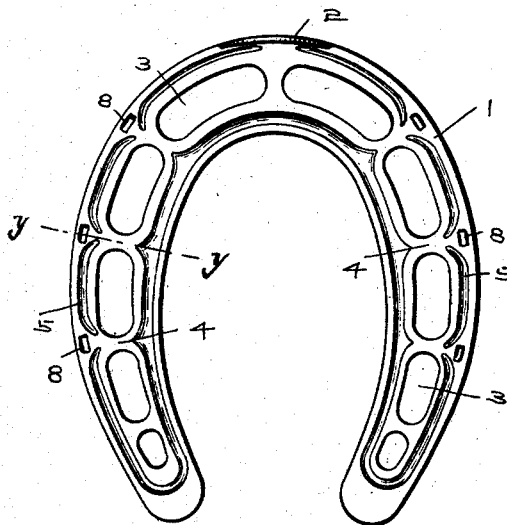


FIG. 2.

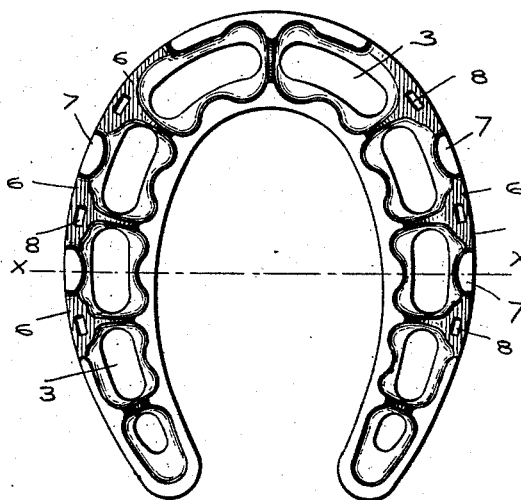


FIG. 3.

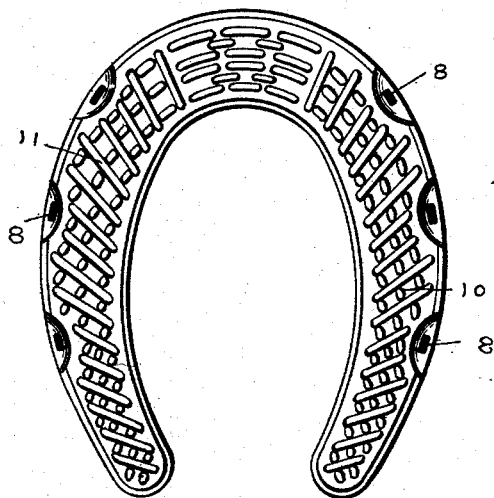


FIG. 4.

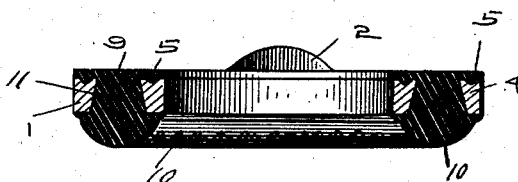
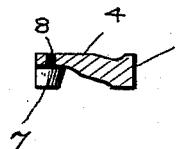


FIG. 5.



Witnesses

H. S. Neely.  
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# UNITED STATES PATENT OFFICE.

HIRAM H. GIBBS, OF INDIANAPOLIS, INDIANA.

## ELASTIC-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 522,789, dated July 10, 1894.

Application filed April 27, 1893. Serial No. 472,141. (Model.)

*To all whom it may concern:*

Be it known that I, HIRAM H. GIBBS, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful

Improvements in Horseshoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

My invention relates to an improvement in horse-shoes, and especially to a horse-shoe which is resilient or yielding to the horse's tread and is at the same time durable, and is of value especially on hard streets and roadways. It is well known that a hard roadway is very injurious to a horse's foot when shod with the shoes heretofore used and is more or less slippery, and the increasing use of such roadways in cities makes it very desirable to provide the horse with a resilient shoe.

The method I have adopted to effect this object consists in vulcanizing or otherwise securing india-rubber or other resilient material on a metallic frame or horse-shoe in such manner that there will be a cushion above the shoe and between the hoof and the metal and the resilient material will extend through long slots and fill a continuous recess on the under side of the shoe, so that it will contact with the street. For this purpose rubber is preferable but leather, oakum or other yielding substances can be used, if desired. When a yielding material is placed on the bottom of the shoe and contacts with the pavement, its resiliency to a considerable extent destroys the effectiveness of the blow of the horse's foot against the pavement, whereby the wear on the shoe is rendered so slight as to make this kind of horse-shoe very durable. This horse-shoe is very easy and comfortable to the horse and is likewise very helpful to him while traveling faster than a walk, because of the spring given by the resilient material.

Figure 1 is a plan or top view of the metallic frame of my horse-shoe and Fig. 2 is a bottom view of the same. Fig. 3 is a bottom view of the shoe when complete showing the rubber bottom. Fig. 4 is a central cross section of the complete shoe on a line corresponding with  $x-x$  of Fig. 2. Fig. 5 is a cross section of one side of the complete shoe on a line corresponding to  $y-y$ , Fig. 1.

1 is a metallic frame shaped like the ordinary horse-shoe with the clip 2, and it can be provided with toe and heel calks as desired. It is centrally and longitudinally cut out to make a series of long openings at 3, leaving between such openings the partitions or ribs 4. The top of the frame as shown in Fig. 1 is provided with grooves at 5 extending around near the outer and inner peripheries of the frame to prevent the lateral movement of the rubber.

The bottom of the frame 1 is cut out as shown in Fig. 2 in such manner that the sides of the openings will be beveled, thereby making the openings larger at the bottom than at the top, so the rubber or other material which extends through the openings, because of the beveled faces of the openings, will not be materially pressed upward by the weight of the horse and resistance of the pavement. The partitions 4 are slightly cut away on the under side. The outer peripheral flange or edge of the frame on the under side is partly cut away at 6, leaving extensions or lugs 7 which gives the outer periphery of the frame where the lugs 7 are located the same thickness as the inner periphery. The purpose of these lugs is to protect the head of the nails from contact with the pavement and at the same time to assist somewhat in holding the rubber in place. The eyes 8 are provided for the insertion of the nails.

After the frame has been formed as above described preferably of metal, india-rubber is vulcanized on it in a mold of such form that there will be a layer 9 of rubber above the metallic frame and between the frame and the hoof, as shown in Fig. 4, and extending through the long slots in the frame and filling the cut out portion of the under side of the frame, whereby the upper layer or cushion is held in place. To this end the openings 3 are beveled as heretofore described and as shown in cross section in Fig. 4, so the frame 1 and the partitions 4 will hold the rubber firmly in place and not cut the same. The upper layer 9 of the rubber of course fits snugly in the grooves 5 on the upper side of the frame which prevents the upper layer from having a lateral movement on the frame. The lower layer 10 is formed preferably convex in cross section but may be made in any

desired form. In its outer periphery this lower layer 10 is cut away at 12 over the nail eyes 8. If any other material besides rubber be used it can be secured to the shoe in the most suitable manner so as to form upper and lower layers strongly connected to each other by any suitable means through the apertures in the frames.

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

A horseshoe consisting of a metal frame provided with a series from one end to the other of long bevel-sided slots through it and

separated by narrow partitions, and recesses on the upper surface of the frame near the edges, and a resilient material so secured to the frame as to extend through such slots and bear on the ground when in use and to form a cushion above such frame, substantially as shown and described.

In witness whereof I have hereunto set my hand this 22d day of April, 1893.

HIRAM H. GIBBS.

Witnesses:

H. D. NEALY,  
N. D. TILFORD.