W. J. MOORE.

HORSESHOE.

APPLICATION FILED JUNE 5, 1912.

1,068,917. Patented July 29, 1913.

Fig. 1.

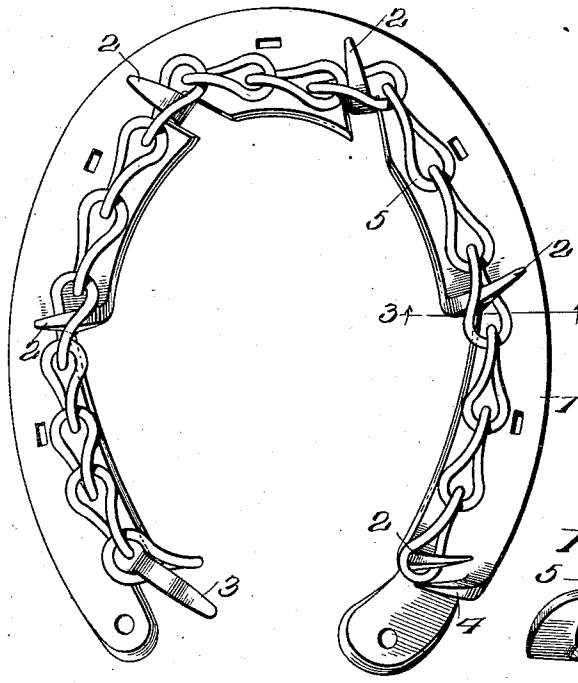


Fig. 5.

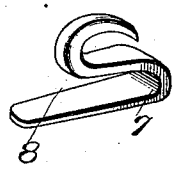


Fig. 4.

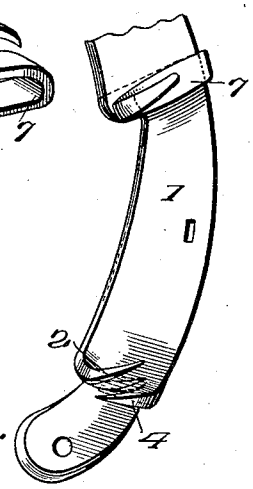


Fig. 3.

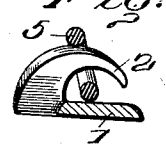
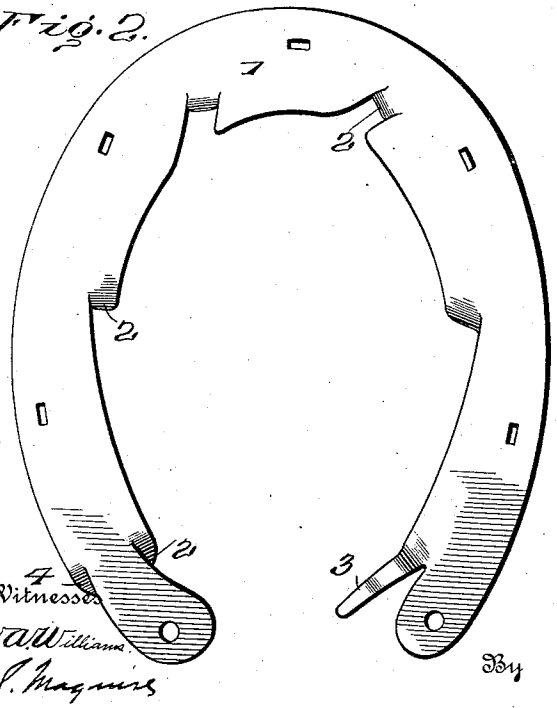


Fig. 2.



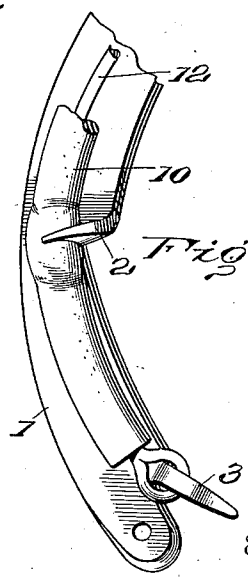


Fig. 6.

Witnesses

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HORSESHOE.

1,068,917. Specification of Letters Patent. Patented July 29, 1913.

Application filed June 5, 1912. Serial No. 701,926.

To all whom it may concern:

Be it known that I, WILLIAM J. MOORE, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The primary object of this invention is to provide a horseshoe with a readily detachable tread which may be replaced without removing the shoe.

A further object is to provide a horseshoe with a tread which will prevent slipping, and which may have a limited resiliency. And a further object is to provide auxiliary attaching means for the tread.

In the accompanying drawings, Figure 1 is a bottom plan view of a shoe constructed in accordance with my invention. Fig. 2 is a top plan view of the shoe. Fig. 3 is a cross-sectional view on line 3—3, Fig. 1. Fig. 4 is a bottom plan view of a portion of a shoe with the tread removed. Fig. 5 shows the auxiliary attaching element. Fig. 6 shows a resilient tread.

Briefly stated, my horseshoe comprises two members, namely, the body or shoe proper which is designed to be directly secured to the horse's hoof, and a continuous detachable tread or wearing portion which is designed to take all the wear. In consequence, the shoe proper may be made of comparatively thin metal, thus effecting a material reduction in cost. The tread is detachably held to the underside of the shoe, preferably by means of hooks projecting from the latter, the hooks at one end of the shoe being readily bendable so as to insure the fastening of the tread and its ready detachment. In its preferred form, the tread consists of a chain having a series of twisted links and so arranged that each of the links will equally take the weight of the horse, and as all of the links have a certain amount of movement balling is avoided.

Referring to the drawings, 1 designates the body or shoe proper, and 2 a series of hooks or prongs irregularly struck from the shoe, the line from which each prong is struck being divergent to the lines of the others and transversely oblique to the trend of the body, such prongs projecting downwardly and outwardly, the outer ends lying parallel with the shoe, and set at a slight angle.

Although the shoe itself is shown of the usual U-shape, yet if desired it may be formed from a solid plate which will extend entirely across the hoof. At one end the shoe has an inwardly extending hook 3, while the hook 2 at its opposite end is paralleled by an additional hook 4 which projects in the opposite direction to the end hook 2.

5 designates the tread, which is shown as composed of a series of units, preferably steel links, slightly twisted so that each will have its portion of the horse's weight. The chain is secured to the shoe by causing one end link to engage the end hook 3 and it is then passed over the under surface of the shoe in such manner that the several hooks 2 will interengage the links and thereby hold it in place. The other end of the chain after being passed over the end hook 2 is fastened by bending the additional hook 4 toward the end hook 2, or the latter toward the former, thereby drawing the chain taut. The retaining hooks are set at a slight angle to insure the proper engagement of the links therewith. If they were not so angled the links could not uniformly engage with the hooks. It is necessary, in applying the chain to begin at the hook 3, since otherwise proper engagement with the hooks is not possible.

If, in practice, the chain should become worn or broken it is only necessary to separate the hook 4 from the adjacent end hook 2, whereupon the chain may be readily removed from the shoe and a new one substituted. Should any one of the retaining hooks become broken, an auxiliary hook 6 may be substituted. Such hook is shown at 7, in Fig. 5, and it will be observed that it is formed with a U-shaped portion 8 for taking in either side of the shoe. This may be readily applied to the latter by a blacksmith, with the result that the breaking or injury of one of the tread-retaining hooks will not involve the loss of the shoe. In fact, if desired, instead of striking up the hooks from the shoe itself the latter may be made perfectly plain and a series of hooks applied thereto after the manner stated. Should either of the end hooks be broken the tread may be temporarily secured to the shoe by wires passed through the end links and openings 9 in the extreme ends of the shoe.

Although I have specially designed this shoe for a tread composed of a series of links bearing such relation to one another that the weight will be thrown equally upon all, yet if desired a different form of tread may be employed, as for instance, one having more or less resiliency. Such a tread may be especially desired where a horse is lame or for racing purposes. The form of the resilient tread may be widely varied. It may, for instance, be composed wholly of rubber or of heavy coiled wire, but best results may be obtained by one of rubber with a metallic core which latter will project beyond the ends of the rubber so as to form loops or links for engaging the end hooks of the shoe, the rubber being forced between the shoe and the intermediate retaining hooks. In Fig. 6 I have shown a tread of this character, the rubber being indicated at 10 and the core at 12.

The advantages arising from my invention are numerols and most of them will be apparent to those skilled in the art. Among these might be cited the fact that in using a tread composed of correspondingly formed links the danger of balling is avoided since the link members will move more or less, under the weight of a horse, and thereby serve to dislodge snow, ice, mud or stones which may become embedded in the shoe or the tread. In the use of my shoe, there is no danger of a horse injuring itself in the manner known as calking, and in standing on a wooden floor there is less injury than arises from calks. Furthermore, a practically new shoe may be provided by merely substituting a new tread, without having to remove the shoe from the foot.

Changes may be made without departing from the scope of my invention.

I claim as my invention:

1. A horseshoe comprising a body having a series of angularly disposed hooks projecting from the underside of the body substantially throughout its length, the radial line of each hook being divergent to the others, and transversely oblique to the trend of the body, and a tread composed of a series of flexibly connected links held in engagement therewith by said hooks.

2. A horseshoe comprising a body having retaining means at its two ends and a series of angularly disposed hooks projecting from the underside of the body, the radial line of each hook being divergent to the others, and transversely oblique to the trend of the body and a tread composed of a series of flexibly connected links designed to be held at its ends by said retaining means and to be engaged and held by said hooks.

3. A horseshoe comprising a body having hooks at its two ends, a series of hooks struck from said body on divergent lines and being transversely oblique to the trend of the body, and a tread composed of a chain secured to said end hooks and interengaging the intermediate hooks, and means for coöperating with one of said end hooks for detachably fastening the chain thereto.

4. A horseshoe comprising a body having hooks at its ends, a series of intermediate hooks, and an additional hook adjacent to one of said end hooks, and a tread composed of a chain of flexible twisted links held by said hooks, said additional hook being flexed to lock one end of said tread to one of said end hooks.

5. A horseshoe comprising a body having hooks at its ends, a series of intermediate hooks, and an additional hook adjacent to one of said end hooks, and a tread composed of a chain of flexible twisted links interengagingly held by said intermediate hooks, said additional hook being flexed to lock one end of said chain to one of said end hooks.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM J. MOORE.

Witnesses:
JAMES H. SHELLY,
FRANCIS S. MAGUIRE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."