No. 755,779. PATENTED MAR. 29, 1904.

H. E. IRWIN.

ELASTIC TREAD HORSESHOE.

APPLICATION FILED OCT. 28, 1903.

NO MODEL.

Fig. 1.

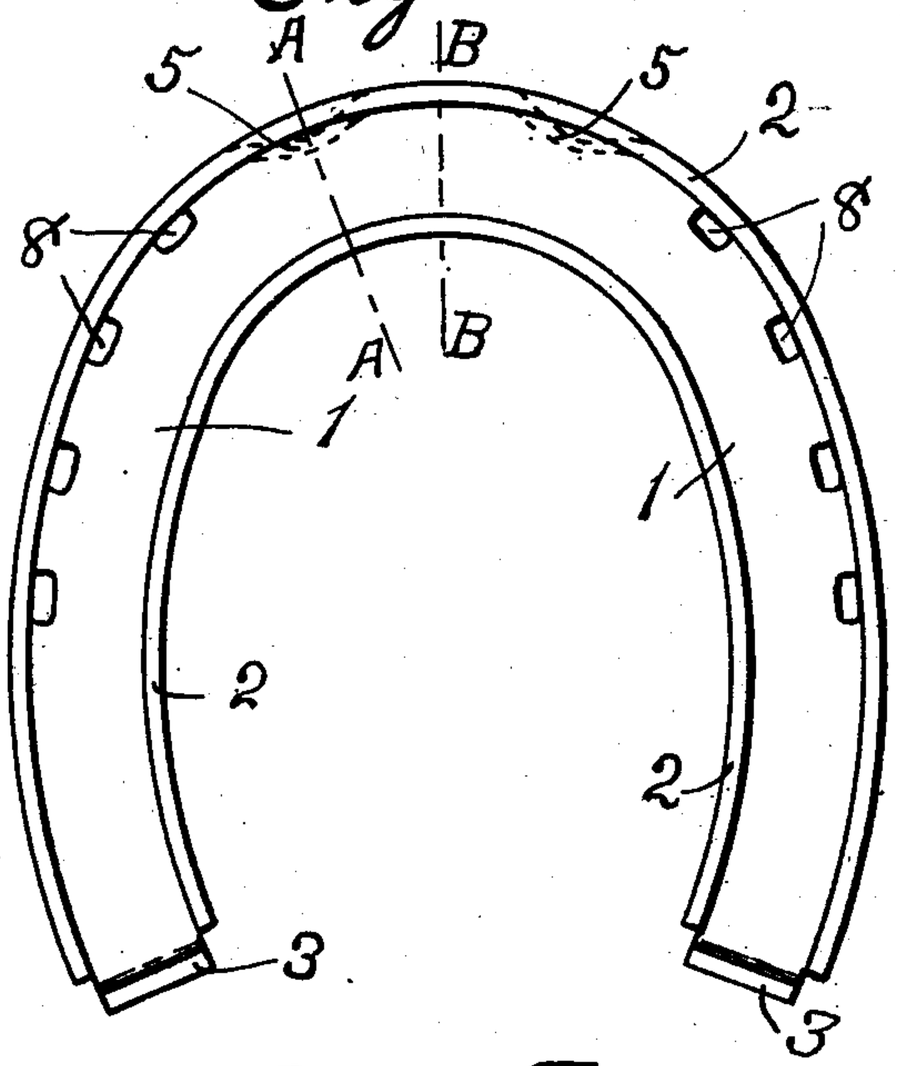


Fig. 2.

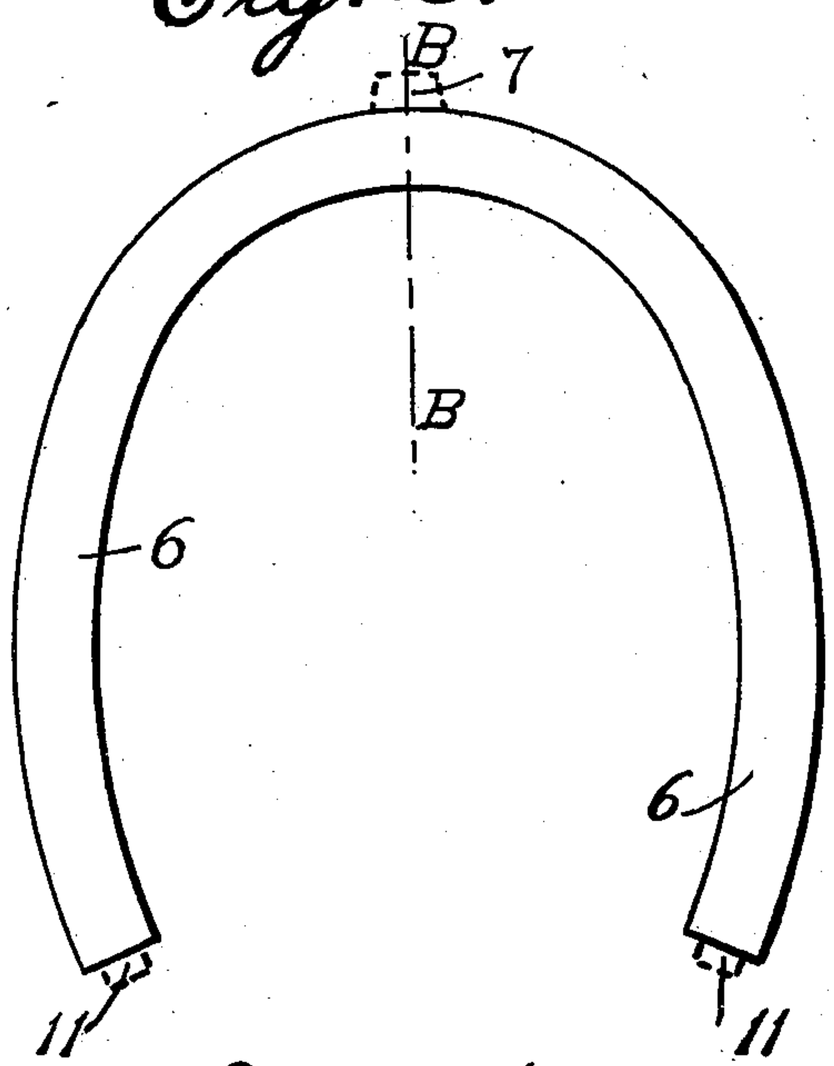


Fig. 3.

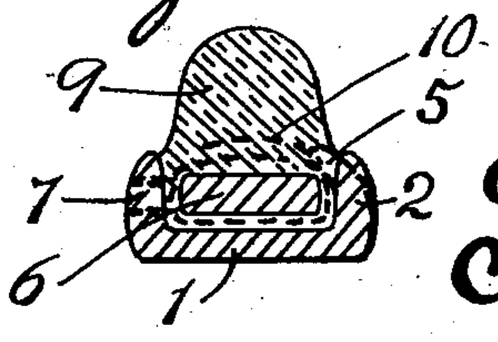


Fig. 4.

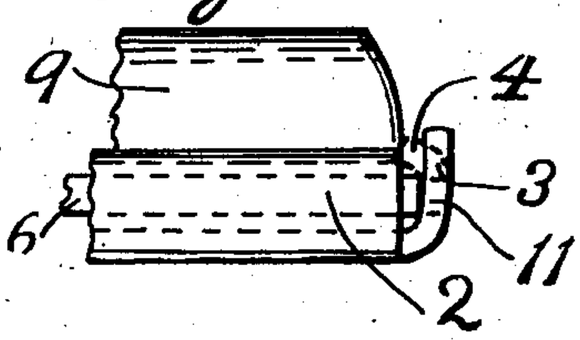
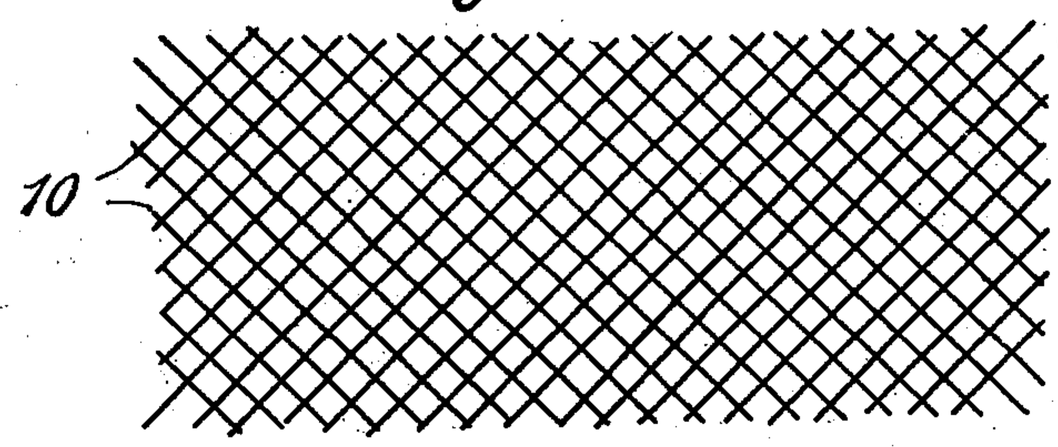


Fig. 5.



Witnesses:

Clyde Finney.

Geo. F. Swinson

Inventor:

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No. 755,779. Patented March 29, 1904.

UNITED STATES PATENT OFFICE.

HERBERT E. IRWIN, OF GALESBURG, ILLINOIS.

ELASTIC-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 755,779, dated March 29, 1904.

Application filed October 28, 1903. Serial No. 178,827. (No model.)

To all whom it may concern:

Be it known that I, HERBERT E. IRWIN, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Elastic-Tread Horseshoes, of which the following is a specification.

This invention relates to improvements in elastic-tread horseshoes, and has for its primary object to combine in such a horseshoe simplicity, durability, and a positive engagement of the elastic tread with the metallic shoe.

Another object of my invention is to provide an elastic-tread horseshoe so that the animal's weight may be borne where it should be—that is, on the outer or hoof part, and not on the inner or frog part, of the foot.

A further object of the invention is to provide a soft and elastic cushion for the toe as well as for the heels of the shoe.

A further object of this invention is to construct an elastic-tread horseshoe that may be shaped and fitted to an animal's hoof with the same ease and certainty afforded by the horseshoes of common form.

Another object of my invention is to provide an elastic-tread horseshoe whereby the rubber tread may be readily renewed, if desired, without removal of the shoe from the foot, which involves expense and labor.

Still a further object of the invention is to utilize channel-tire stock for the metallic base and rubber strips similar to solid-rubber vehicle-tires for the elastic tread, thereby simplifying the construction and reducing expense.

These and such other objects as may hereinafter appear are attained by the devices illustrated in the accompanying drawings, in which—

Figure 1 is a view of the under side of a shoe without the elastic tread. Fig. 2 is a view of a rib which is adapted to be inserted in the elastic tread. Fig. 3 is a transverse sectional view of the shoe with the elastic tread in place. Fig. 4 is a side view showing the heel and a segment of the elastic-tread horseshoe. Fig. 5 is a view of woven-wire fabric, such as is embedded in the elastic tread.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates the base of a channeled metallic shoe, which extends into upturned heel ends 3, having their ends turned in at 4.

2 represents the side flanges of the metallic base. Rib 6 is adapted to be inserted in a longitudinal passage in the rubber tread 9, which is arranged to be seated in the channeled base or shoe and held in engagement therewith by means of tongues 7 and 11, which extend from the toe and heel portions of rib 6 through openings in the channeled metallic base, thereby locking the tread portion to the channeled shoe. This engagement is also obtained by bending over the outer flange 2 on the toe side, so as to form a lip, as shown at 5, and by bending over the heel ends, as shown at 4, to bind the tread in the channel of the metallic base. In order that the elastic tread may resist all strains subjected thereto and in order that it may maintain its stability and render a firm support for the rib, I have embedded longitudinally in the tread and around the passage through which the rib is inserted woven-wire fabric 10, which has the effect of stiffening the rubber and increasing the durability of the tread. Lips 5 are arranged to pierce the tread and be firmly pressed down upon the wire fabric, thereby insuring a positive engagement with the tread.

Fig. 3 is a sectional view showing lip 5 at A A of Fig. 1 and tongue 7 at B B of Figs. 1 and 2.

The metallic horseshoe-base is preferably composed of channel-tire stock similar to that which is commonly used upon vehicle-wheels in connection with rubber tires, and as shown in Fig. 1 is ready to be nailed to the animal's hoof by means of the nail-holes 8.

The elastic tread of the shoe is preferably made as solid vehicle-tires in a strip of any desired length having a uniform thickness, so that the shoe will have an evenly-cushioned

surface. By embedding the woven wire 10 in the rubber diagonally, substantially as is shown in Fig. 3—that is, by having each wire of the fabric at an angle to and not parallel with the tread sides—the tread can readily be bent to conform to the U shape of the rib over which it is drawn.

The channeled shoe-base, as shown in Fig. 1, is first nailed to the animal's hoof, and in order that the tread portion may be positively engaged therewith I provide rib 6 with a tongue 7 or bend the outer channel edge over, so that by inserting the toe part of the tread under the overhanging lip 5 or the tongue 7 into a hole made for it in the channel side of the base and afterward by bending the heel ends 4 over the rib ends, as shown in Fig. 4, the tread portion is securely held in engagement with the channeled base.

After the tread has become sufficiently worn it can be easily renewed without removing the channeled base of the shoe from the hoof, which need only be done when the hoof requires trimming and may be replaced again, as it receives no perceptible wear.

It will be observed that my horseshoe embodies economical construction, durability, and simplicity and allows the weight of the animal to be borne at the proper place.

Changes in the forms of the fastening means as provided in the overhanging lips of the channeled base and in the tongues which engage therewith, as well as changes in the forms of the woven-wire fabric, may be made without departing from the spirit of my invention, and all such changes are contemplated by the following claims.

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

1. In an elastic-tread horseshoe, a channeled metallic base with perforations therethrough whereby it may be nailed to the animal's hoof, an elastic tread having woven wire embedded therein surrounding a rib inserted therethrough and means for securing said tread in the channeled base, substantially as described.

2. In an elastic-tread horseshoe, a channeled metallic base with perforations therethrough whereby it may be nailed to the animal's hoof, an elastic tread inserted in the said channel and having a strip of stiffening material inserted therein, the toe end of said elastic tread being held in place by means of inwardly-extending channel-lips 5 adapted to pierce the elastic tread and to be pressed down upon the stiffening material, substantially as described.

3. In an elastic-tread horseshoe, a channeled metallic base with perforations therethrough whereby it may be nailed to the animal's hoof, an elastic tread inserted in the said channel and having a flat rib inserted therethrough, the ends of the said rib being adapted to lie under overhanging heel portions of the metallic base, substantially as described.

4. In an elastic-tread horseshoe, a channeled metallic base with perforations therethrough whereby it may be nailed to the animal's hoof, an elastic tread inserted in the said channel and having a flat rib inserted therethrough, the ends of the said rib terminating in tongues 11 adapted to enter holes in the metallic base, substantially as described.

5. In an elastic-tread horseshoe, a channeled metallic base with perforations therethrough whereby it may be nailed to the animal's hoof, an elastic tread inserted in the said channel and having a flat rib inserted therethrough provided with a tongue 7 adapted to enter a hole in the channel side 2 at the toe of the metallic base, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HERBERT E. IRWIN.

Witnesses:
J. H. LESEY,
A. S. HAMILTON.