No. 644,133. Patented Feb. 27, 1900.

W. T. FRENCH.

SOFT TREAD HORSESHOE.

(Application filed Aug. 14, 1899.)

(No Model.)

Fig. 1

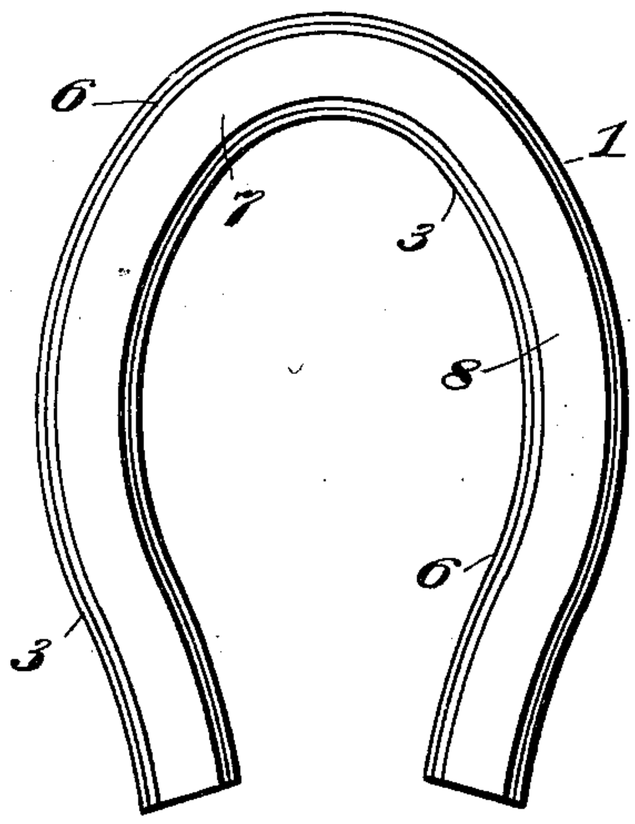


Fig. 2

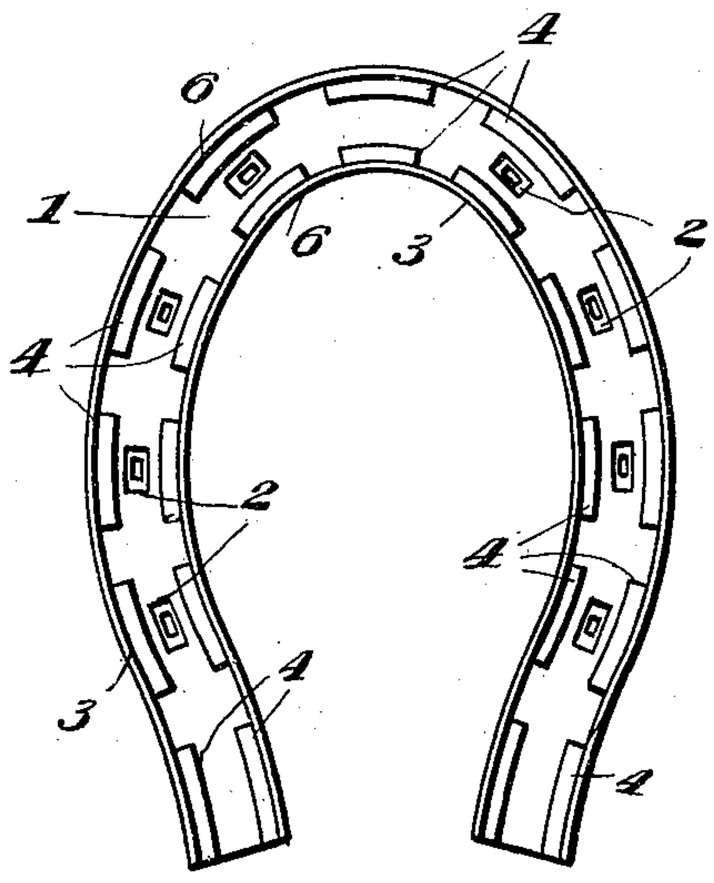


Fig. 3

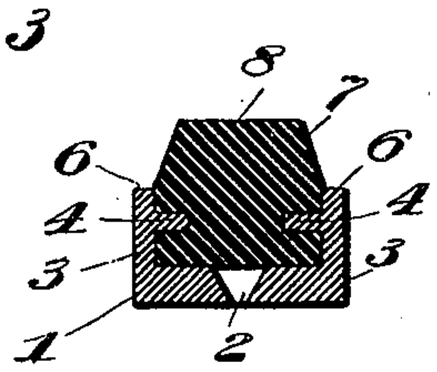


Fig. 4

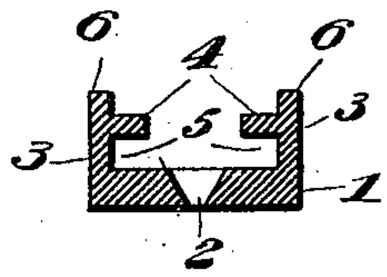


Fig. 5

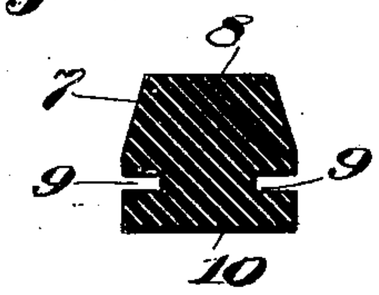
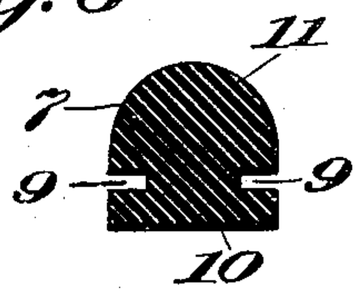


Fig. 6



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UNITED STATES PATENT OFFICE.

WILLIAM T. FRENCH, OF HARTWELL, OHIO.

SOFT-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 644,133, dated February 27, 1900.

Application filed August 14, 1899. Serial No. 727,108. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. FRENCH, a citizen of the United States, residing at Hartwell, 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.

My invention relates to certain improvements in horseshoes, and has for its object to provide a horseshoe having a cushioned tread for lessening the shock when a horse is driven over paved streets and adapted to prevent slipping of the horse upon smooth pavements, the construction of my improved horseshoe being simple and inexpensive and being of such a nature as to prevent the heating effects caused by the use of rubber shoes constructed in the ordinary manner.

My invention consists in certain novel features of construction, combination, and arrangement of the several parts of the improved horseshoe, whereby important advantages are attained and the shoe is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of my invention will be carefully defined in the claims.

In the accompanying drawings, illustrative of my invention, Figure 1 is an elevation showing the tread-surface of the improved horseshoe. Fig. 2 is an elevation similar to Fig. 1, but showing the under surface of the metal bed or foundation upon which the elastic cushion is carried. Fig. 3 is a cross-section, drawn to an enlarged scale and taken transversely through the improved shoe, showing the cushion in place; and Fig. 4 is a view similar to Fig. 3, but showing the metal bed or foundation only, the cushion being omitted. Fig. 5 is a section taken transversely through the cushion removed from the bed or foundation of the shoe; and Fig. 6 is a view similar to Fig. 5, but showing a modified form of the cushion.

Referring to the drawings, 1 indicates the metal bed or foundation of the shoe, made in the form of an elongated strip bent or curved to the ordinary horseshoe shape, having on one side a flat surface to fit snugly against the hoof of the horse and provided with a groove or channel, and having countersunk openings 2 2 to receive the horseshoe-nails, these openings being arranged in the ordinary way in two sets, one at each side of the shoe, taking through the bed into the channel, so that when the shoe is nailed to the hoof and the cushion inserted in place the nail holes and heads are all covered by the cushion. The opposite surface of the bed or foundation, or the under surface when the shoe is upon the hoof, is constructed with right-angled flanges 3 3, extending along its opposite sides and having on their inner surfaces inwardly-projecting ledges 4 4, arranged in pairs at intervals around the shoe, the pairs of ledges being separated, as shown in Fig. 2, by short spaces when the inner faces of the flanges 3 are left plain. The ledges of each face are also preferably arranged opposite to each other.

The flanges 3 and ledges 4 are made integral with the bed or foundation plate 1 of the shoe, and said flanges 3 are extended and made to project, as shown at 6, beyond the ledges 4, so as to form on the under side of said bed or foundation 1 a groove or channel conformed to the curvature of the metal strip from which the part 1 is formed and having an undercut or dovetail shape, as shown at 5 5, owing to the overhang of the ledges 4.

The groove or channel in the part 1 is adapted to receive the body of a cushion or tread part 7, made in the form of an elongated strip of rubber, by preference having at one side a suitably-formed tread-surface 8 and provided in the lateral faces of its body portion with longitudinal grooves or recesses 9 9, opposite each other and adapted to receive the ledges 4 when the cushion is in place in the channel of the bed 1, the body of the strip being formed beyond said grooves 9 with a part 10 to fit snugly within the undercut or dovetail parts 5 of the channel in the part 1 to hold the cushion securely in place.

In use the bed or foundation 1 is first nailed to the hoof, after which the cushion or tread part 7 is inserted at one of the open ends of the channel in said part 1 and slipped around to the position shown in Fig. 1, so as to form an elastic or cushioned tread for the shoe, to prevent slipping upon smooth pavements

and also to lessen the shock caused by the stepping of the horse upon hard roads or paved streets.

When the cushion 7 becomes worn, it may be readily removed and replaced by a new one, the cushion being held merely by frictional engagement with the walls of the groove in which it is arranged, although I do not limit myself to such frictional holding means. The shoe constructed according to my invention is extremely cheap, light, and inexpensive and also has the advantage that the rubber or other material of which the tread is formed does not come in contact with the hoof, so that the heating effect produced by cushioned shoes as ordinarily made is wholly avoided.

The extended parts 6 of the flanges 3 insure the proper holding of the cushion-strip 7 against lateral strains by engaging the opposite sides of said strip at points above the recesses 9. The metal bed of the shoe may, if desired, be constructed of aluminium or some suitable material, such as paper fiber, so as to give the improved shoe an element of lightness especially adapting it for use in racing and fast driving.

From the above description it will also be obvious that the improved shoe made according to my invention is capable of some modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts herein set forth. For example, instead of giving to the cushion-strip 7 a flat tread-surface 8, as shown in Figs. 1 and 3, it may have other forms of tread-surface, as a rounded surface, as shown at 11 in Fig. 6, or it may be made in sections of short length. Also the ledges 4 may be continued, if desired, entirely along the flanges 3.

Having thus described my invention, I claim—

1. In a horseshoe, the combination of a bed or foundation having a groove or channel formed around it, and having ledges on the inner walls of said groove or channel, said walls being extended out beyond said ledges, and a cushion or tread part formed of an elongated strip held in said groove or channel between the extended portions of the walls thereof and engaged by the ledges on the walls, substantially as set forth.

2. In a horseshoe, the combination of a bed or foundation formed of a metal strip in horseshoe shape and provided with a channel and nail-openings leading therefrom up through the bed and having along its opposite edges angular flanges provided on their inner surfaces with oppositely-arranged ledges, and being extended beyond said ledges, and a cushion or tread part having a body adapted for insertion between said flanges and having longitudinal recesses to receive the ledges, substantially as set forth.

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