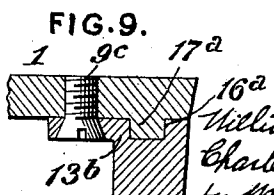
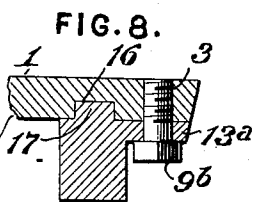
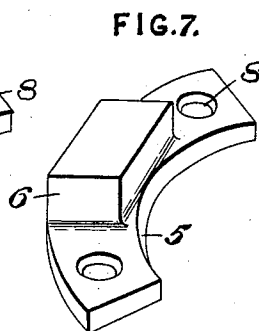
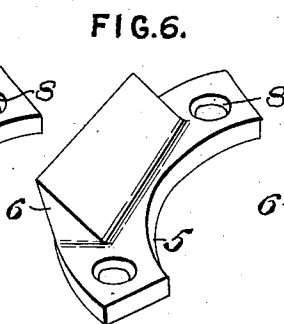
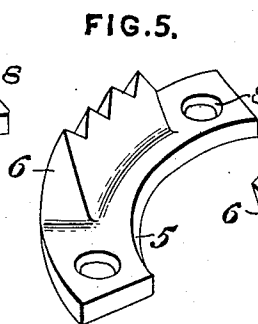
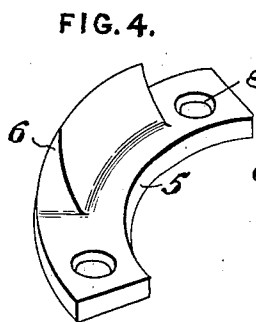
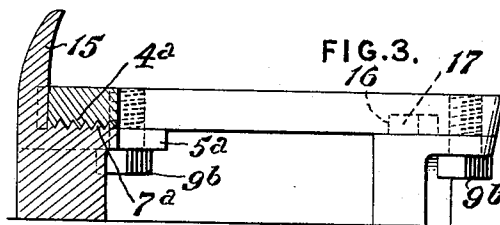
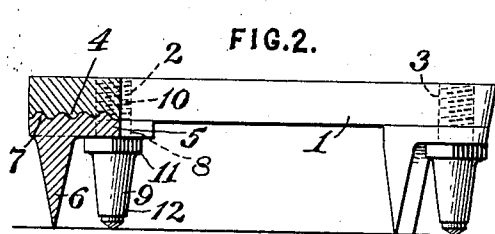


HORSESHOE.

APPLICATION FILED JUNE 22, 1911.

Patented July 23, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

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HORSESHOE.

1,033,402.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed June 22, 1911. Serial No. 634,786.

To all whom it may concern:

Be it known that we, WILLIAM J. HOOVER and CHARLES T. KURTZ, both of Clearfield, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

Our invention relates to horse-shoes, and more particularly to that class of horse-shoes having detachable calks.

An object of our invention is to provide a horse-shoe of the class specified comprising detachable calks that may be readily applied to and removed from the shoe proper.

A still further object of our invention is to provide detachable calks of various kinds adapted for different conditions of service.

In the accompanying drawing, which illustrates applications of our invention, Figure 1 is an inverted perspective view of a horse-shoe embodying our invention; Fig. 2, a part sectional view and a part elevational view of the form of Fig. 1; Fig. 3, a view similar to Fig. 2 showing a modified form of our invention; Figs. 4, 5, 6 and 7, perspective views of calk-plates showing various forms of calks formed integral therewith; and Figs. 8 and 9, detail sectional views showing modified forms of heel calk-plates and the manner of securing the same to the shoe.

Referring to the drawing, the horse-shoe proper, as illustrated and as preferred, comprises a body 1 formed with threaded toe perforations 2 and threaded heel perforations 3. In addition to the threaded perforations 2 and 3, the shoe at its toe portion is formed with corrugations 4.

5 designates a detachable toe calk-plate adapted to be applied to and removed from the toe of the shoe proper. As shown by the form of Fig. 1, the detachable calk-plate 5 has formed integral therewith a calk 6, a corrugated portion 7, and openings 8. When the detachable calk-plate 5 is applied to the shoe, the corrugated portion coincides with the corrugated portion of the shoe and the openings 8 of the calk-plate are adapted to register with the threaded perforations or openings 2 of the shoe. The calk-plate 5 may be secured to the shoe proper by any suitable means.

In the form of Fig. 1, we provide members 9 for securing the detachable calk-plate to the shoe. As illustrated, members 9 comprise a threaded shank 10 adapted to be

inserted through the openings of the calk-plate and entered in the threaded perforations 2 of the shoe, and each of the members 9 comprises a head 11 and a tapering body 12. The members 9, in addition to securing the plate 5 to the shoe proper, act as calks.

The heel calk-plates are designated by the numeral 13, and each has formed integral therewith a calk proper 14. These heel calk-plates, in the form of Fig. 1, are designed to be secured to the shoe in substantially the same manner as the toe calk-plate 5, except that for the heel calk-plates we employ only a single member 9 for each of the said heel calk-plates.

In the form of our invention as illustrated by Fig. 3, we have shown the toe calk-plate 5^a, formed with a blunt or square contacting surface, and the front upper edge thereof with a toe piece 15. In this form of our invention, the shoe, as well as the toe calk-plate, are each formed with a slightly different corrugated or notched portion 4^a and 7^a respectively, from the form of Fig. 1, and in this form, we have shown a modified form of means for securing the toe and heel calk-plates to the body of the shoe. In the form of Fig. 3, in place of the securing members 9, we employ securing members 9^b adapted to be passed through the openings of the calk-plates and engage the threaded perforations of the shoe.

In some instances we form the heel portions of the shoes with recesses 16 (see Fig. 8) and the heel calk-plates 13^a with lugs 17 adapted to be entered in the recesses. If desired, however, the heel calk-plates designated by 13^b (see Fig. 9) may be provided with recesses 16^a and the heel portions of the shoe with lugs 17^a. Fig. 9 shows a modified form of securing means 9^c.

As illustrated by Figs. 4, 5, 6 and 7, the calks proper, which in all cases are formed integral with the calk-plates, may assume various forms and configurations adapted for different service conditions.

What we claim is:

In a horse-shoe, the combination with a shoe proper having notches formed on the outer surface of the toe portion and threaded perforations in the toe portion at points on opposite sides of the center line of the shoe, of a curved detachable toe calk plate having a calk formed integral therewith and provided with openings registering with the toe perforations of the shoe and with

notches coacting with the notches of the shoe, and separable calk-members adapted to prevent sidewise slipping and for securing the calk-plate to the shoe, one of said separable
5 calk-members being spaced away from an end of the integral calk and disposed to the rear thereof, and the other separable calk-member spaced away from the opposite end of the integral calk and disposed to the rear
10 thereof, said separable calk-members each comprising a threaded shank portion passed through the calk-plate and entered in a

threaded toe perforation, a head adapted to bear against the calk-plate, and a tapering body portion projecting downwardly from the head.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM J. HOOVER.
CHARLES T. KURTZ.

Witnesses:

J. LAURENCE DOLE,
BESS M. TUCKER.

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