

1,015,839.

Patented Jan. 30, 1912.

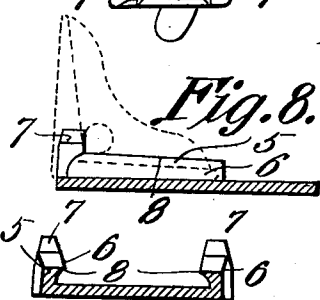
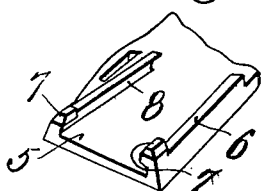
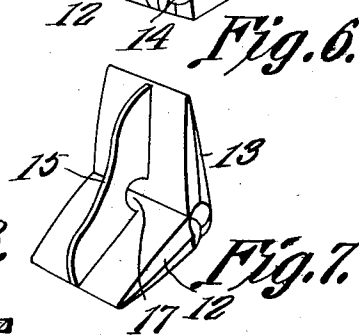
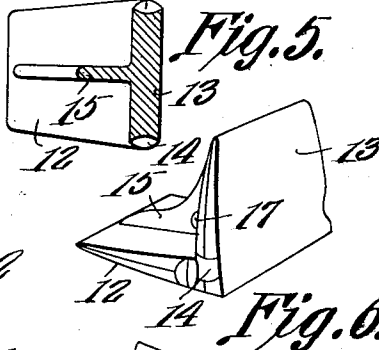
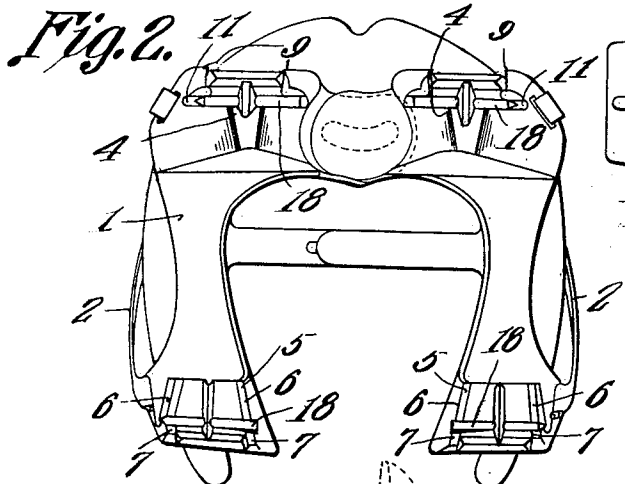
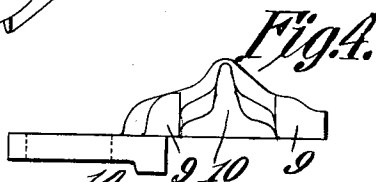
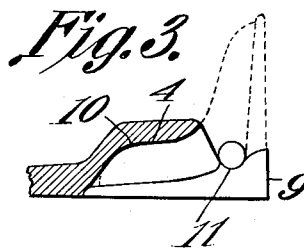
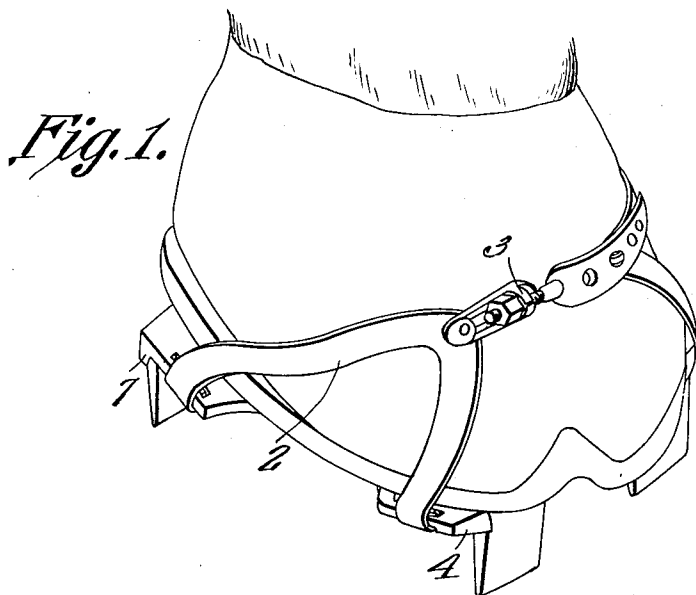


Fig. 10.

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UNITED STATES PATENT OFFICE.

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HORSESHOE-CALK.

1,015,839.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Application filed February 8, 1911. Serial No. 607,299.

To all whom it may concern:

Be it known that I, ANTHONY ROTH, JR., a citizen of the United States, residing at New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and useful Horseshoe-Calk, of which the following is a specification.

This invention has relation to detachable horse shoe calks and consists in the novel construction and arrangement of its parts as hereinafter described and claimed.

The object of the invention is to provide a calk horseshoe adapted to be detachably applied to the hoofs of an animal and provided at its heel and toe portions with sockets which may receive reversible calks of especial design. By such a provision the horseshoe may be used for an indefinite length of time as it is not subjected to extreme rough usage while the calks which are subjected to such usage may be reversed in their positions upon the horseshoe so as to present unused or sharpened portions.

In the accompanying drawings:—Figure 1 is a perspective view of a hoof with the detachable horse shoe calk applied thereto. Fig. 2 is an under plan view of the same. Fig. 3 is a transverse sectional view through the toe portion of the detachable horse shoe calk. Fig. 4 is an edge view of the same. Fig. 5 is a plan view partly in section of one of the reversible calks. Fig. 6 is a perspective view of the same. Fig. 7 is a perspective view looking at the opposite side portion of the calk from that shown in Fig. 6. Fig. 8 is a longitudinal sectional view of the part of the structure adapted to hold the heel calk. Fig. 9 is a perspective view of the same. Fig. 10 is a transverse sectional view of the same.

The shoe for holding the reversible calks consists of members 1 which are pivotally connected together at their forward end portions as is usual and which are provided at their outer edge portions with hinged metallic straps 2. The upper portions of these straps are secured together by a traction device 3 which when applied is located above the forward portion of the hoof of the animal as illustrated in Fig. 1 of the drawings. The members 1 are provided at their forward ends with toe sockets 4 which open adjacent to and are sealed by the permanent shoe A, said sockets 4 being aligned with the flanges 9, whose under faces abut the permanent shoe, and at their rear ends with heel

sockets 5 formed by guides 6 which are raised upon the rear portions of the said members 1. The guides 6 are provided at their rear ends with stop lugs 7 and at their upper edges with inwardly disposed flanges 8. The sockets 4 open at their forward ends at the forward ends of the members 1 but the members 1 are provided at their forward ends and at the side edges of the sockets with inturned flanges 9 clearly shown in Figs. 2, 3, and 4. Depressions 10 are formed in the bottoms of the sockets 4 and are adapted to receive the webs of the toe calks as will be herein explained.

The members 1 are provided upon the under sides of their forward end portions and in the vicinity of the ends of the sockets 4 with valleys 11 adapted to receive calk securing devices as will be explained. Inasmuch as the heel and toe calks are of identical design and proportions a description of one will answer for all. Each calk has end portions 12 which are provided with outer surfaces 13 approximately at right angles to each other. The end portions 12 are sharpened at their outer edges and the side edges of the said portions 12 slightly converge toward each other toward the sharpened edges thereof.

The end portions 12 of each calk are provided at their side edges with channels 14 and the passageways through the channels upon one end portion 12 are at right angles to the passageways through the channels upon the other end portion. It is through these channels 14 that the flanges 8 of the guides 6 pass when the calks are inserted in the socket 5 at the heels of the members 1, the two stop lugs 7, which are for a similar purpose to that of the lugs 9 of the toe calk, form an abutting means for the lock pin as 18 when the same is inserted through the aperture 17 of the calk, the said pin engaging the inner faces of the stops 7 and thereby locking the calk at the heels of the member 1. The inner faces of the end portions 12 of each calk are connected together by a web 15 which is disposed in a plane approximately at right angles to the outer faces of the said end portions of the calks. The web 15 is provided at a point midway between its ends and at the angle formed by the intersection of the inner sides of the end portions 12 of the calk with an opening 17 through which a pin 18 or other securing device may be passed.

From the above description it will be seen that toe calks may be inserted in the sockets 4 at the forward ends of the members 1 so that one end portion of each calk will project below the lower face of the member 1 upon which it is mounted and the other end portion 12 of the calk together with the upper portion of the web 15 will be snugly received in the socket 4 and the depression 10 in the bottom thereof. The inturned flanges 9 will prevent the calks from working in a forward direction and when the calks are so seated the securing devices 18 are passed transversely through the furrows 11 and the openings 6 in the webs 15 of the calks by the coöperation of the pins 18, the webs 15 and the walls of the valleys 11. Thus the toe calks are securely held in place, this coöperation preventing any forward movement of the toe calks.

When these calks have become sufficiently worn in consequence of use to render it advisable to reverse them the securing devices 18 are removed and the forward ends of the calks are inserted in the sockets 4 while the unworn ends are projected below the lower surfaces of the members 1 and the calks are again secured. When the calks are inserted in the sockets 4 and the members 1 are applied to the permanent shoe upon the hoof of an animal the upper ends of the said calks will bear directly against the lower surface of the permanent shoe and thus the calks have ample independent bearing with relation to the hoof of the animal.

The heel calks are mounted upon the rear ends of the members 1 by being slipped within the guides 6 provided at the rear ends of the said members. One end portion of the calk is slipped between each pair of guides and the flanges 8 will lie over the edge portions of the inserted end of the calk and securing devices 18 are passed through the openings 16 in the webs 15 and lie against the forward ends of the lugs 7 in a

manner as indicated in Fig. 2 of the drawings. Thus the heel calks are secured in place. When the lower ends of the said heel calks have become worn in consequence of use, the said calks are removed and the worn ends are inserted between the flanges and the unworn ends of the said calks are disposed downwardly from the rear end portions of the members 1. This inclination on the part of the hoof and permanent shoe will give the calks a pitch with relation to the ground which will facilitate their biting action in the surface thereof as the animal travels.

Having described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. The combination with a horse shoe having a series of heel and toe calk receptacles, of calks insertible in said receptacles, each of said calks being reversible and having shoe engaging portions at right angles to each other, a web centrally of the inner face of the calk portions, and coöperative means for engaging said web and the walls of the receptacles to lock the calk in place.

2. The combination with a horse shoe provided with calk receptacles, said calk receptacles each having two opposed flanges forming calk receiving guides, each one of said flanges being provided with a lock receptacle in its forward end, of a calk provided with right angled terminals and a centrally disposed web having an aperture adapted to aline with the lock receptacles of the flanges, and a lock adapted to enter said receptacles and aperture of the web.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ANTHONY ROTH, JR.

Witnesses:

JAS. A. MORRISON,
ELMER J. MCMURTRY.