

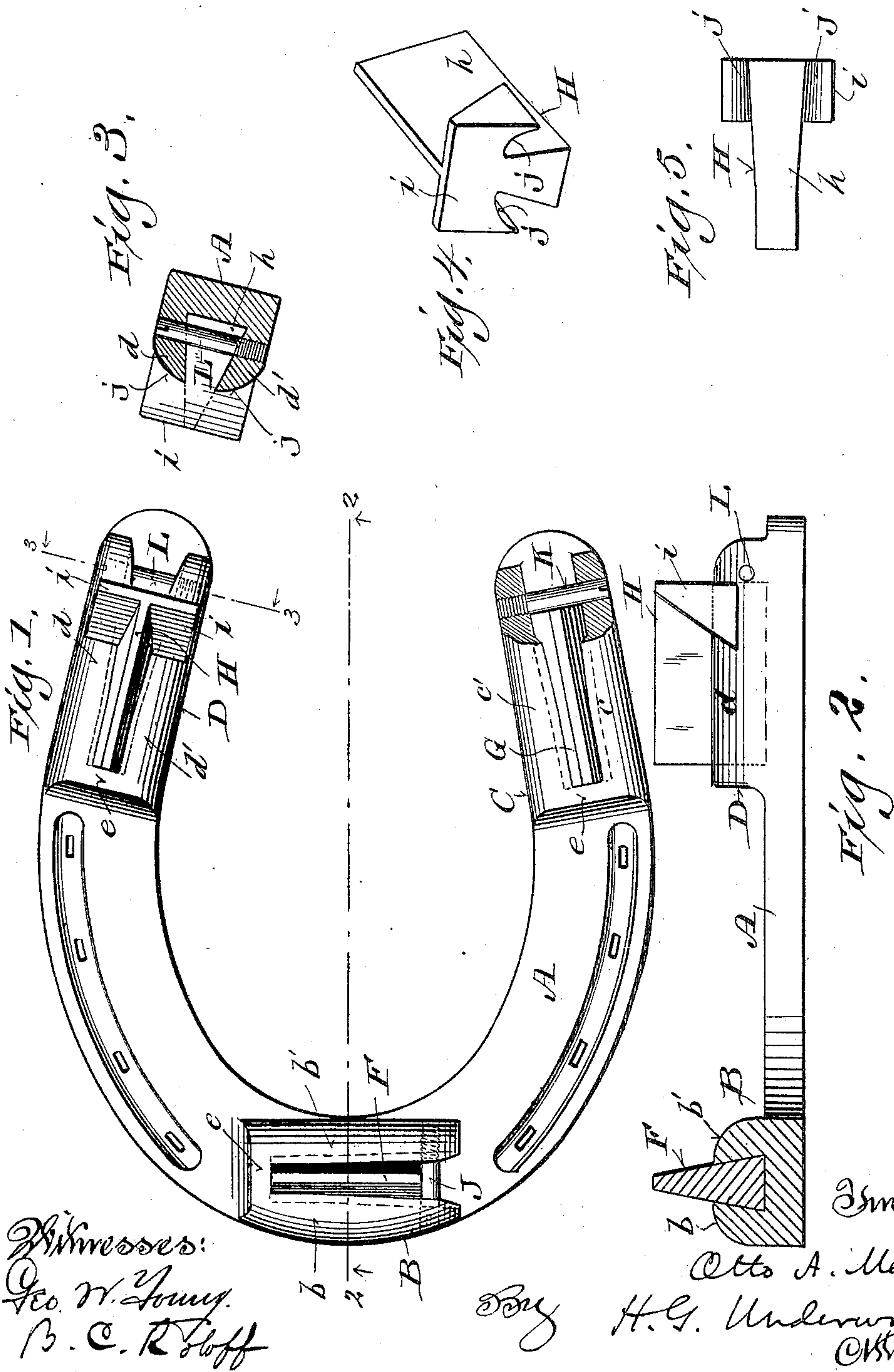
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Patented July 30, 1901.

O. A. MEYER.
HORSESHOE.

(Application filed Apr. 13, 1901.)

(No Model.)



Witnesses:
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HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 679,322, dated July 30, 1901.

Application filed April 13, 1901. Serial No. 55,632. (No model.)

To all whom it may concern:

Be it known that I, OTTO A. MEYER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to an improved horseshoe provided with removable and interchangeable calks; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is an inverted plan view of a horseshoe embodying my present invention, partly broken away to better illustrate certain details of construction. Fig. 2 is a central vertical sectional view of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a transverse vertical sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of the outer heel-calk in inverted position. Fig. 5 is a plan view of the said calk.

Referring to the drawings, A represents the said horseshoe, which is provided with three bosses B C D on its under side, each boss being formed with a peculiar dovetailed open groove therein, forming a socket for the reception of one of said calks, which latter have correspondingly - shaped longitudinal portions, so as to slide within and be engaged by the walls of said grooves or sockets. Each boss comprises two walls (marked, respectively, $b\ b'$, $c\ c'$, and $d\ d'$) united at one end, as shown at e , the exterior surface of each wall being convexly rounded, as best shown in the sectional views, Figs. 2 and 3, while the inner sides of said walls are oppositely beveled, so as to converge, forming the side walls of the described dovetailed open grooves or sockets. In addition the said side walls at their innermost ends next the solid end walls e of the grooves or sockets are formed on parallel lines for about one-third of their length and then diverge outwardly to the open ends of the grooves or sockets, as best indicated by the dotted lines on the bosses shown in Fig. 1, the exact outline of this partly-straight and partly divergently-ta-

pered form of the grooves or sockets corresponding to the outline of the longitudinal portion h of the outer heel-calk H, as shown in the plan view, Fig. 5. The portions of the toe-calk F and the inner heel-calk G which are received within the grooves or sockets in the bosses B and C correspond exactly in shape to that of the longitudinal portion h of the calk H, Fig. 5, thus being partly straight and partly divergently tapered longitudinally and being inwardly beveled vertically, so as to fit snugly in their similarly-shaped dovetailed sockets, through which they project, as shown, to form the proper longitudinal horizontal bearing-surfaces, and the calk H only differs from the other calks by the addition of the integral transverse head i , whose outer or end surface is vertical and whose inner surface is oblique, while the horizontal bearing-surface of said head i is on the same plane as that of the bearing-surface of the longitudinal portion h of said calk and in line with the bearing-surfaces of the other calks, the laterally-projecting portions of the said head i on each side of the portion h being formed with rounded concavities $j\ j$ to receive and embrace the rounded convex outer surfaces of the walls $d\ d'$ of the boss D. All of the boss-walls at the open ends of the sockets or grooves project beyond the line of the calks and are bored transversely for the reception of the fastening-screws J K L, the outer boss-walls $b\ c\ d$ having smooth bores therethrough and the inner boss-walls $b'\ c'\ d'$ having screw-threaded bores therethrough to engage with the correspondingly screw-threaded inner ends of said screws, whose shanks are in contact with the straight outer ends of the several calks when the latter are in place within their several sockets, with the inner ends of said calks in contact with the described solid end walls e of their said sockets.

In assembling the described parts of the horseshoe the calks are slid to place by hand within their sockets until the tapered sides of the calks engage with the tapered side walls of the sockets, and then a blow from a hammer or other suitable tool is needed to drive them fully to place, so that the inner ends of the calks will come against the end walls e of the sockets, the calks being thus held tightly in place by the described

sharp driving fit; but to guard against their accidental displacement and loss they are further secured by the described screws J K L, which are first pushed by hand through the smooth bores in the outer boss-walls until the ends of the screws reach the screw-threaded bores in the inner boss-walls, and then a screw-driver is required to complete the work, the shanks of the said screws being then in contact with the outer ends of the calks, as already described.

The hereinbefore-described arrangement of the calks is designed for one of the hind shoes of a horse, and the calks on the other hind shoe would be correspondingly arranged—that is, with the relative positions of the hind calks reversed—so that the calk H (shown in Figs. 4 and 5) shall always be the outer heel-calk on each shoe; but as the longitudinal portions of all of the calks and the shape of the sockets or grooves in all of the bosses are the same and as the calks are removable and interchangeable it will be seen that only one pattern of the shoe A is required for the four hoofs of a horse, as either of the two forms of calks shown may be secured in any one of the boss-sockets of the shoe, as preferred, in any instance, and ordinarily the calks for the fore shoes would all be of the pattern shown by the calks F and G; but the peculiar calks H, when used as the outer heel-calk for each hind shoe, will be found of great service to the animal, particularly in starting up when drawing a heavy load.

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

1. A horseshoe formed with toe and heel bosses on the under side thereof, each boss comprising two walls, united at one end, and separated at the other end and from end to end, forming thereby an open socket, whose inner side walls converge vertically and which are longitudinally formed on parallel lines for a portion of their length adjacent to the closed end of the socket and thence on divergently-tapered lines to the open end of the socket, in combination with removable and interchangeable calks having correspondingly-shaped longitudinal portions engaging within said sockets, and having bearing-surfaces projecting below the plane of said bosses.

2. A horseshoe formed with toe and heel bosses on the under side thereof, each boss comprising two walls, united at one end, and

separated at the other end and from end to end, and the inner opposed surfaces of said walls converging vertically, and diverging longitudinally to form dovetailed tapered open sockets, one of said walls having a smooth bore, and the other wall having a screw-threaded bore extending transversely, in line with each other, through their separated ends, in combination with removable and interchangeable calks, having longitudinal portions corresponding in shape to said sockets but of less length than said sockets, and in engagement therewith, and fasteningscrews passing through said bores, and in engagement with the screw-threaded bores, and in contact with the adjacent ends of said calks.

3. A horseshoe formed with bosses thereon having dovetailed and longitudinally-tapered sockets therein, said sockets being closed at one end, and open at the other end and from end to end, in combination with removable calks having portions thereof tapered longitudinally and beveled vertically to correspond to the shape of said sockets, and horizontal longitudinal bearing-surfaces, and one of said calks having an integral transverse head, having a horizontal bearing-surface, the opposite surface of said head being formed with concavities to receive and embrace the adjacent surfaces of the boss on each side of the socket therein.

4. A horseshoe formed with bosses thereon, having convex exterior surfaces and dovetailed and longitudinally-tapered sockets therein, said sockets being closed at one end and open at the other end and from end to end, in combination with removable and interchangeable calks, having portions thereof corresponding in shape to said sockets, but of less length than said sockets and in engagement therewith, and one of said calks having an integral transverse head, formed with concavities to receive and embrace the convex exterior surfaces of the boss on each side of the socket therein, and fasteningscrews passed transversely through said bosses and in contact with the adjacent ends of said calks.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

OTTO A. MEYER.

Witnesses:

H. G. UNDERWOOD,
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