No. 776,116. PATENTED NOV. 29, 1904.

C. L. CRUSH.

HORSESHOE.

APPLICATION FILED JUNE 18, 1904.

NO MODEL.

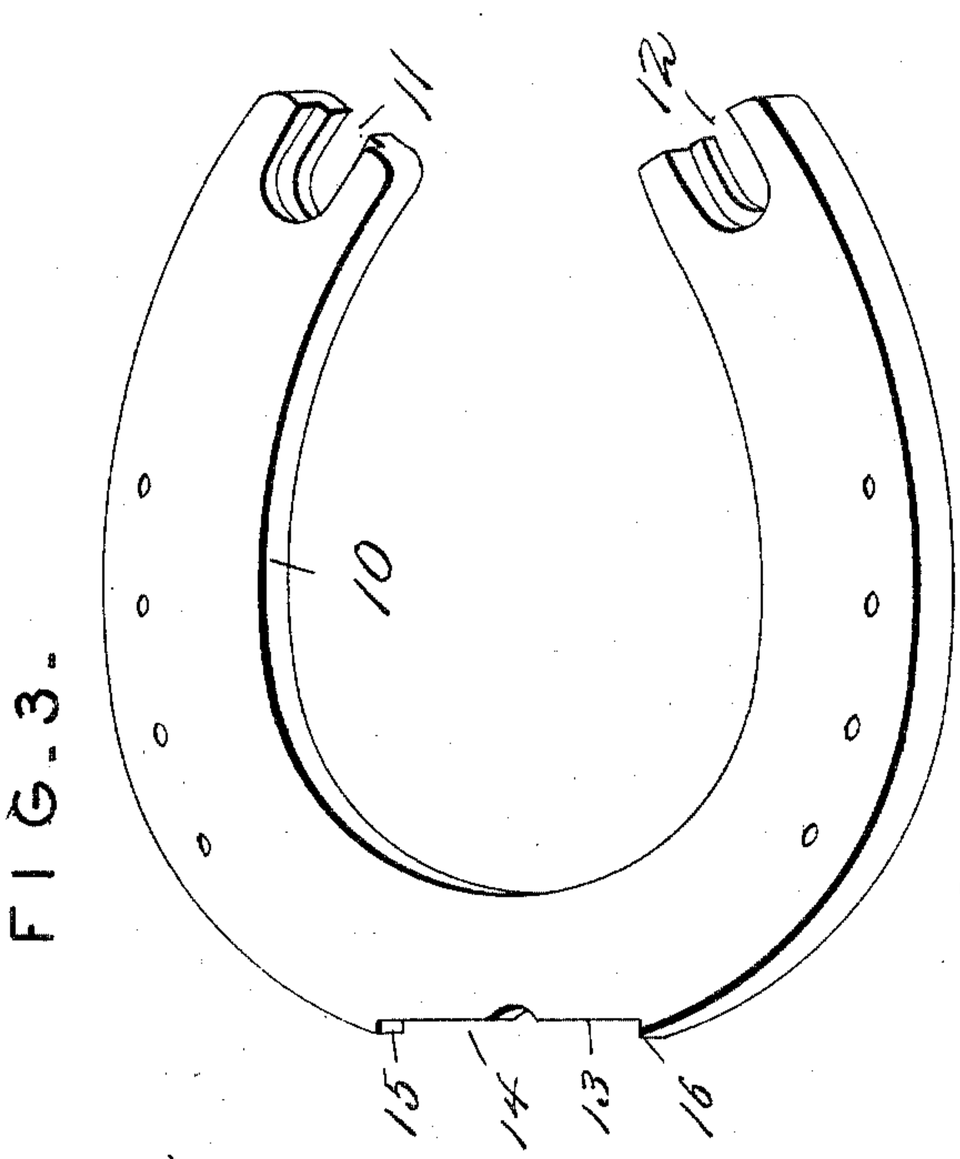

FIG. 3.

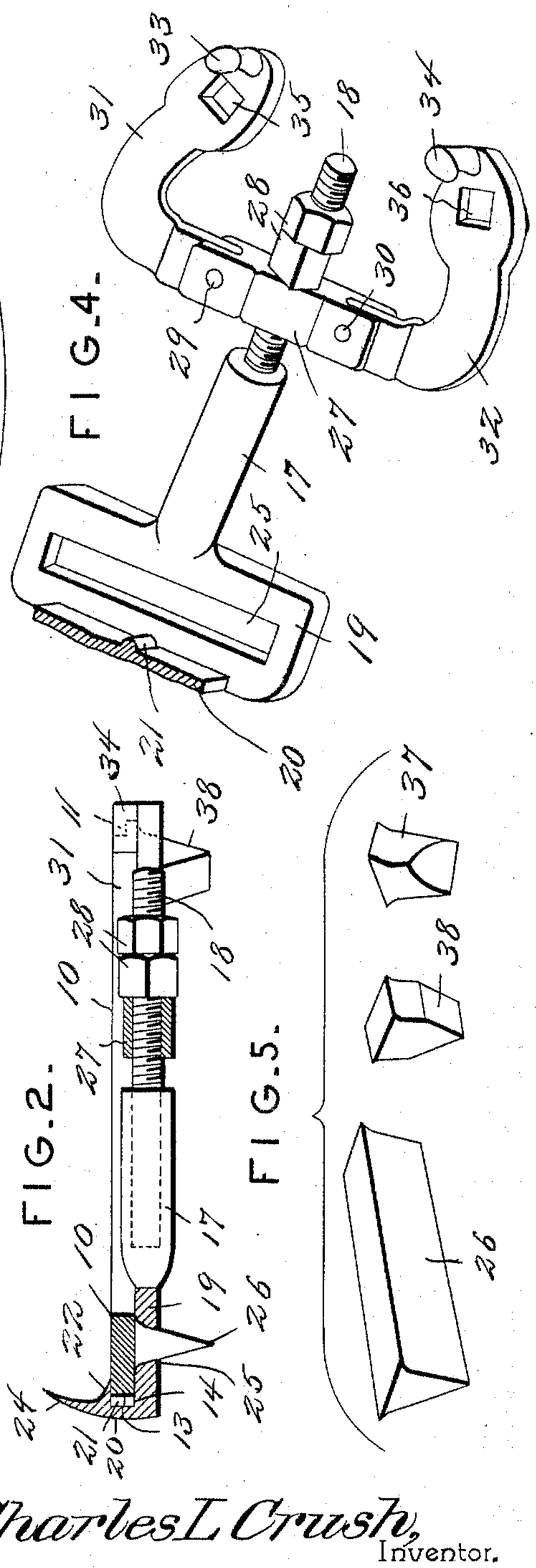

FIG. 4.

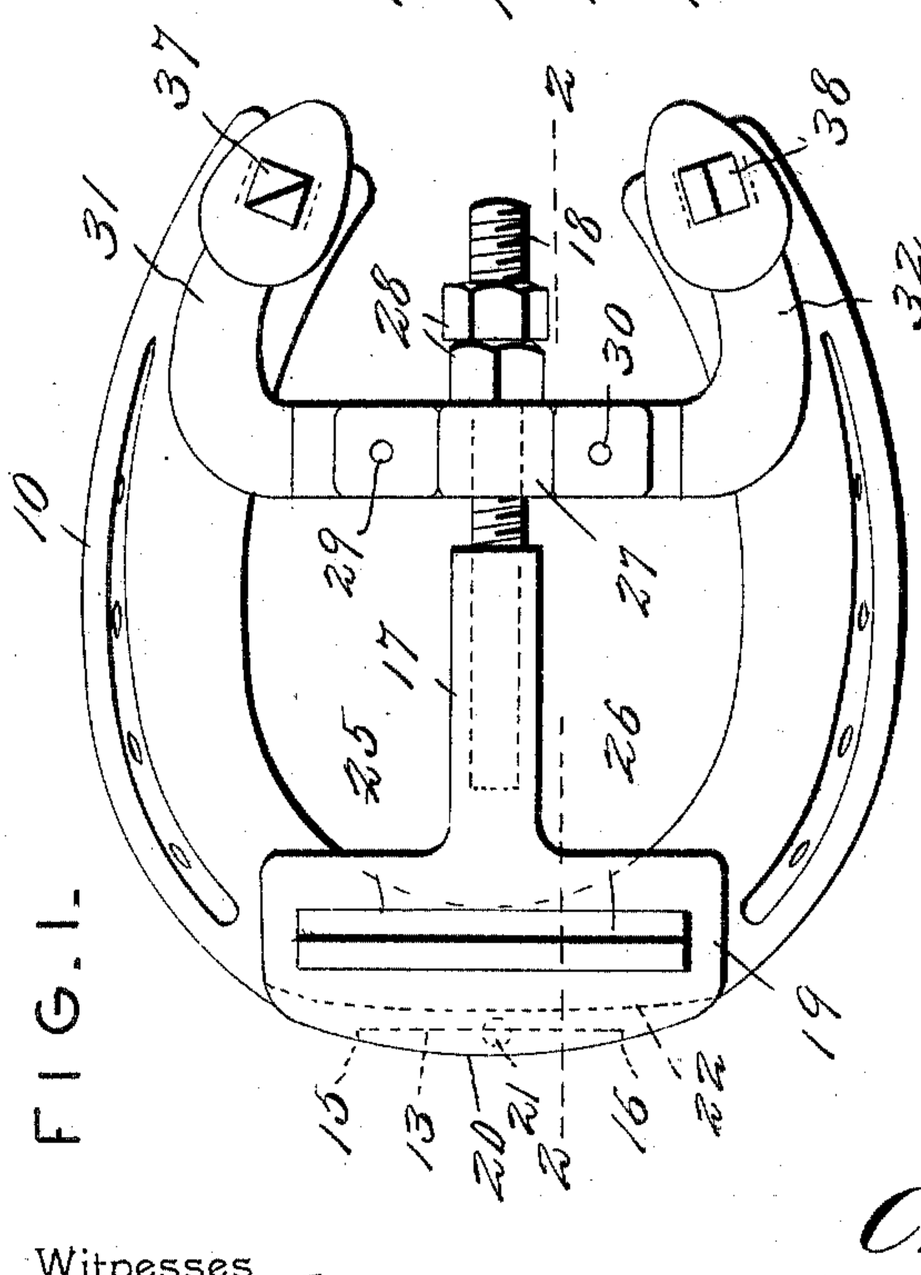

FIG. 1.

FIG. 2.

FIG. 5.

Witnesses

E. H. Stewart

C. N. Woodward.

Charles L. Crush,
Inventor.

by Crosby & Co
Attorneys

No. 776,116. Patented November 29, 1904.

UNITED STATES PATENT OFFICE.

CHARLES L. CRUSH, OF LOUISVILLE, KENTUCKY.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 776,116, dated November 29, 1904.

Application filed June 18, 1904. Serial No. 213,148. (No model.))

To all whom it may concern:

Be it known that I, CHARLES L. CRUSH, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Horseshoe, of which the following is a specification.

This invention relates to horseshoes having detachable and adjustable calks, and has for its object to simplify and improve the construction and produce a device of this character adapted to any size or form of shoe or to shoes adapted to any form of hoof, and which may be readily attached or detached for changing from sharp to dull or blunt calks as required.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the accompanying drawings, Figure 1 is a bottom plan view of a horseshoe embodying the improved features. Fig. 2 is a longitudinal sectional elevation on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the horseshoe. Fig. 4 is a perspective view of the calk-supporting attachment, viewed from above. Fig. 5 is a perspective view of the toe and heel calks detached.

In the improved device the horseshoe 10 is secured to the hoof of the animal in the usual manner by nailing and differs from the ordinary shoe only in having rearwardly-opening recesses 11 12 in the "heel" portions and flattened, as at 13, at the "toe" portion, with a vertical recess 14 centrally of the flattened portion. The flattened portion is sunk into the toe part of the shoe, so that lips or lugs 15 16 are formed projecting from its ends, and the upper sides of the recesses 11 12 are widened laterally, as shown in Figs. 2 and 3, the object to be hereinafter explained.

The calk-supporting attachment consists of a forward clamp-bar 17, threaded at one end, as at 18, and extended laterally at the other end, as at 19, and provided with a vertical flange 20 for bearing against the flattened portion 13 with the lugs 15 16 extending past its ends, the flange having a vertical lug 21 for entering the central recess 14 of the shoe. By this means the attachment will be firmly held from all lateral movement, and to prevent vertical movement between the shoe and attachment the flange 20 is provided with a rearwardly-projecting lip 22 for projecting over the top of the shoe and between the shoe and hoof, the attachment being further supported by a vertical lip 24 for extending in front of the toe portion of the hoof.

The lateral enlargement 19 is provided with an elongated aperture 25, enlarged laterally at the upper side, for receiving the toe-calk 26, the latter enlarged at the upper end to correspond to the aperture. The toe-calk thus bears beneath the lower surface of the toe portion of the shoe 10 and is firmly held in place when the attachment is secured.

Slidably disposed upon the threaded portion 18 of the forward clamp member is a "head" member 27, being adjustably maintained in position by nuts 28.

Pivoted at 29 30 to the ends of the head member 27 are rearward clamp-arms 31 32, having studs 33 34 for engaging the recesses 11 12, the studs having laterally-extending heads for entering the laterally-enlarged upper ends of the apertures 11 12 and preventing their withdrawal, as will be obvious.

The clamp members 31 32 are provided, respectively, with apertures 35 36, enlarged laterally at their upper sides and adapted to receive the "heel" calks 37 38, the latter enlarged at their upper ends to correspond to the apertures, so that they will bear by their

enlarged ends beneath the heel portions of the shoe and will be firmly supported in place when the attachment is secured. By this arrangement it will be obvious that by rotating the nuts 28 the clamp-bars may be firmly connected to the shoe and the "calks" held firmly in position, while at the same time readily detachable when required for renewal when worn or to substitute sharp for blunt calks, or vice versa, as required.

The calks being the only portions of the device which are subjected to wear, and these being very easily replaced, the "life" of the shoe may be prolonged indefinitely.

The device is thus very economical in operation and will very materially reduce the expense of keeping horses shod. It will be found especially valuable in localities where it is required to provide horses with sharp-shod shoes, as by means of this simple arrangement a set of sharp calks may be substituted for dull or blunt ones, or vice versa, in a very short time and at a trifling expense.

The rearward clamp-bars being pivoted to the head member 27 will freely adapt themselves to the variations in the sizes and forms of the shoes, and thus enable one size of attachment to fit all sizes and forms of shoes.

The heel-calks will preferably be disposed in opposite relations, as shown, so that lateral resistance to slipping will be offered as well as forwardly and rearwardly.

I claim—

1. The combination with a horseshoe having rearwardly-opening recesses in its heel portions enlarged laterally at the upper sides and with a central vertical recess in the toe end of the same, a forward clamp-bar having its rear end threaded and with a transverse aperture in its forward end enlarged laterally at the upper side and with a toe-lip overhanging the forward end of the shoe and provided with a lug for engaging the recess in the toe of the same, a head member slidable upon the threaded portion of said bar and retained thereon by clamp-nuts, lateral clamp-bars pivoted upon said head member and provided with lugs for engaging the recesses in the heel portions and provided with recesses enlarged laterally at their upper sides, a toe-calk having laterally-extending upper end for entering the aperture in said forward clamp-bar, and heel-calks having laterally-extended upper ends for entering the apertures in said lateral clamp-bars.

2. The combination with a horseshoe having a vertical recess in its toe portion, a forward clamp-bar having a transverse aperture enlarged laterally at the upper side and with a toe-lip overhanging the toe portion of the shoe, and with a stud for projection into the recess in the toe portion of the shoe, a toe-calk having laterally-extending upper end for entering the aperture in said forward clamp-bar and clamping means for connecting the rear end of said clamp-bar to the heel portions of said shoe.

3. The combination with a horseshoe, having rearwardly-opening recesses in its heel portions enlarged laterally at the upper sides, a forward clamp-bar having its rear end threaded and with means at its forward end for detachable connection to said horseshoe a head member slidable on the threaded portion of said forward clamp-bar and adjustably supported thereon by a nut engaging the threaded portion, lateral clamp-bars pivoted to said head member and having lugs for engaging said laterally-enlarged recesses and with apertures enlarged laterally at their upper sides, and heel-calks enlarged laterally at their upper sides for entering said clamp-bar apertures.

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

CHARLES L. CRUSH.

Witnesses:
A. C. SOMMER,
A. J. BRANDEIS.