

UNITED STATES PATENT OFFICE.

SENTENEY S. GASTINEAU, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO JOHN W. STOKES, OF SAME PLACE.

CALK ATTACHMENT FOR HORSESHOES:

SPECIFICATION forming part of Letters Patent No. 644,134, dated February 27, 1900.

Application filed November 1, 1899. Serial No. 735,519. (No model.)

To all whom it may concern:

Be it known that I, SENTENEY S. GASTINEAU, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Calk Attachments for Horseshoes, of which the following is a specification.

This invention relates to means whereby a horse shod with smooth shoes can be kept from slipping in icy weather by the addition of removable calks to said shoes; and the object of the invention is to provide means whereby the calks can be supplied to shoes of different thicknesses and quickly renewed when dulled by use and to provide means whereby the supplementary calks can be supplied to shoes having heel and toe calks as readily as to smooth shoes and to attach the calks in a manner and by means that will insure a more certain fastening the harder the horse strikes with its feet or pulls.

I accomplish the objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an under side perspective view of a horse's shod foot supplied with my invention; Fig. 2, a detail in end elevation of my invention, showing the same attached to a horseshoe, which is in vertical section and showing the foot of the horse in dotted lines; and Fig. 3 is a vertical section on the dotted line 3 3 of Fig. 2.

Like letters of reference indicate like parts throughout the several views of the drawings.

A is the horse's foot, and B a horseshoe of common form, the shoe here shown being of the class without heel or toe calks; but as will appear the existence or non-existence of the heel or toe calks makes no difference in the application of my invention.

A pair of clamping-bars D and D', each having end hooks *d*, are slipped from opposite directions onto the toe and heel of the shoe. The bars are perforated at their middles to receive the bolt C, having the nut *c*, whereby the two bars are drawn toward each other. The bars are shorter than the maximum width of the shoe and are in consequence locked against the middle swell of the shoe by tightening up the nut on the bolt C. Outward removal of

the bars is prevented by giving the inner sides of the end hooks a taper, which causes the hooks to overhang the inner corner of the shoe edge, and a fit for shoes of different thicknesses is obtained by this inclined side, because the inner shoe edge will engage the inclined surface at more or less distance from the clamping-bars, according to the thickness of the shoe and the position of the bar with relation to the heel or toe of the shoe. This construction, by lengthening or shortening the bolt uniting the bars D and D', allows of considerable latitude in fitting the device to different-sized shoes. In order to obtain a more direct pull against the hooks than would attend the use of straight bars, I prefer to bend the bars toward each other. By so bending the bars I also provide a curved seat for the nut *c*, which serves as a lock to keep the nut from working off of the bolt, for the reason that the bar next to the nut has to spring in before the nut can pass over the portions of the bars near it in turning around. This is an important feature of my invention, as the working loose of the nut would be a fatal defect in the practical operation of the device. The bending in of the bars makes them less liable to spring through accident than would be the case were the bars straight. The said bars D and D', near each of their ends, are provided with tapering slots, which form the seats for the calks E, which are projected through the slots from the inside before the bars are clamped onto the horseshoe, and being tapering and closely fitted to the tapering seats in size are retained in position, with their pointed ends projecting below the clamping-bar. The broad inner ends of the calks bear against the bottom of the horseshoe.

Attention is called to the fact that the striking of the horse's foot against the front calks causes a tightening pull to be exerted on the rear bar through the connecting-bolt, and when the horse is pulling heavily with all of the calks (both front and back) in the ground the tendency of the horse's foot again causes the bolt to tighten and holds the bars more firmly in place.

I am aware that wedge-shaped calks seated in tapering holes are not new, and that bent bars having end hooks and under side calks

and held together by a bolt have been arranged longitudinally of the shoe.

I am also aware that plates drawn toward each other by a bolt placed longitudinally of the shoe have been used, said plates having a pair of arms pivoted thereto, with upwardly-extended end hooks and calks connected to the under side thereof, and I do not claim such constructions broadly; but

What I do claim as new, and wish to secure by Letters Patent, is—

The herein-described calk attachment for horseshoes, consisting of a pair of bars having their ends bent up to form hooks to engage the edge of the horseshoe and having a sloping inner face as described, said bars being shorter than the maximum width of the shoes and being bent laterally toward each other for the purpose specified and applied

transversely of the shoe from opposite directions or toe and heel thereof, and said bars having downwardly-tapering holes near their ends and middle holes transverse to the end holes, wedge-shaped calks seated in the tapering holes, and a threaded bolt passing through the middle holes, and a nut on said bolt whereby the bars are drawn toward each other and clamped to the shoe, said nut being normally locked in the concavity of the bent bar, substantially as described and shown.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 27th day of October, A. D. 1899.

SENTENEY S. GASTINEAU. [L. S.]

Witnesses:

JOSEPH A. MINTURN,
CHAS. A. FAILLES.