

UNITED STATES PATENT OFFICE.

SAMUEL P. SMITH, OF ST. PARIS, OHIO.

CALK ATTACHMENT FOR HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 682,501, dated September 10, 1901.

Application filed May 29, 1901. Serial No. 62,411. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. SMITH, a citizen of the United States, residing at St. Paris, in the county of Champaign and State of Ohio, have invented a new and useful Calk Attachment for Horseshoes, of which the following is a specification.

The present invention is a calk attachment for horseshoes, and one object thereof is to provide a device that can be readily applied to and detached from an ordinary shoe without the necessity of altering or in any manner changing the same.

More particular features reside in a novel structure whereby the device will be rigidly locked upon a shoe, so that there is no danger of accidental displacement, at the same time permitting of its ready removal when desired.

Another feature resides in the construction and arrangement of the locking means, which is so located that it is protected to a great extent from engagement with the road or any hard objects which might injure it. At the same time it leaves the space between the sides of the shoe practically free and open, thus lessening the danger of "balling."

In the following specification and drawings there is described and shown the preferred embodiment of the present invention; but it will be understood that such slight changes may be made therefrom as fall within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of the bottom of a horse's hoof, showing the improved calk attachment applied to the shoe thereof. Fig. 2 is a longitudinal sectional view through the same. Fig. 3 is a vertical cross-section, and Fig. 4 is a perspective view of the attachment removed from the shoe.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

The construction, as shown in the accompanying drawings, comprises a toe member 10, side members 11, and a spreader 12, which are constructed, assembled, and operated in the following-described manner.

The toe member 10 comprises a body 13, having an outstanding flange 14 at its upper edge, which is arranged to engage over the

upper face of the toe of the horseshoe. An outstanding flange 15 is also located at the lower edge and is designed to engage the under side of the toe of the shoe. This under flange 15 is provided at its ends with horizontal lugs 16, having screw-openings 17, into which are threaded the calks 18. The opposite ends of the body portion 13 are provided with inset seats 19, in which are pivoted the front ends of the side members 11. These side members each comprise a curved body portion 20, provided along its upper outer edge with a retaining-flange 21 and at its free end with a depending outstanding lug 22, which lug is provided with a vertical threaded opening 23, into which is screwed a calk 24. Located in the inner faces of the side members 11, directly over the lugs 22, are angular sockets 25, these sockets therefore being directly opposite each other.

The spreader 12 is disposed transversely between the free ends of the side members and consists of oppositely-arranged arms 26, having offset keeper-studs 27 at their outer ends, which studs fit, respectively, in the sockets 25 of the side members. They are each, furthermore, provided with stems 28, one of which is screw-threaded, as shown at 29. Connecting these stems is the operating-nut 30, having a portion of its exterior face made angular, as at 31, to receive a wrench or other suitable tool. The nut 30 is provided with a longitudinally-disposed interior bore 32, which is screw-threaded and receives in one end the screw-threaded stem of one of the spreader-arms. The unthreaded shank of the other arm fits loosely in the opposite end of the nut.

The manner of applying the device will be readily apparent by referring to the drawings. The nut is rotated so that the side members 11 may be brought together sufficiently close to permit of their insertion between the opposite sides of the shoe. The toe member is then moved forwardly, so that the flanges thereof will embrace the under side of the toe of the shoe. The operating-nut is then rotated to spread the arms apart and force them into binding engagement with the side portions of the shoe. The device will thus be held securely in place against movement for the reason that the inner

flanges on the several members will prevent any outward movement of the attachment, and the projecting lugs that carry the calks will bear against the face of the shoe, thus
 5 relieving the several parts of the weight of the horse. At the same time because of the offset arrangement of the studs 27 the spreader-arms 26 and the nut connecting the same will be located well up within the space under the
 10 horse's hoof. There is comparatively little danger, therefore, of this portion of the device being engaged by stones or other devices that may project above the level of the road. It also leaves the greater portion of
 15 the space between the sides of the shoe practically free and reduces to a minimum the liability of snow or ice clogging therein and balling the hoof. The construction, therefore, accomplishes the several objects pointed
 20 out in the preliminary portion of the specification.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will
 25 be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing
 30 from the spirit or sacrificing any of the advantages of the invention.

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

35 1. A calk attachment comprising a toe member, side members pivoted to the ends of the toe member, said attachment being arranged to fit within a shoe, the toe member having spaced flanges that engage over the upper
 40 and under faces of the shoe, the outer flange

being provided with calks, the side members being each provided intermediate its ends with a flange that engages over the upper face of the shoe and at its outer or free end
 45 with an outstanding lug that extends beneath the shoe and carries a calk, and a spreader located between the side members for forcing them apart and holding them in operative relation to the shoe.

2. In a calk attachment, the combination 50 with pivotally-connected side members arranged to fit within a shoe, said members being provided with calks and holding means that engage the upper and under faces of the shoe, of an extensible spreader extending 55 across the space between and connecting the side members, said spreader having its intermediate portion offset and disposed above the plane of the shoe, so that it will be located in the space beneath the hoof. 60

3. In a calk attachment, the combination with pivotally-connected members carrying calks and provided with sockets in their opposing faces, of a spreader for the members located between the same, said spreader com- 65 prising arms having offset keepers that engage in the sockets of the members, one of the arms having a screw-threaded shank, and an operating-nut connecting the arms and provided with a screw-threaded opening in 70 which the screw-threaded shank of said arm engages.

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

SAMUEL P. SMITH.

Witnesses:

FRANK STEELMAN,
 A. C. BOLINGER.