

S. S. BRUSH.
HORSESHOE CALK.
APPLICATION FILED MAY 2, 1912.

1,057,326.

Patented Mar. 25, 1913.

Fig. 1.

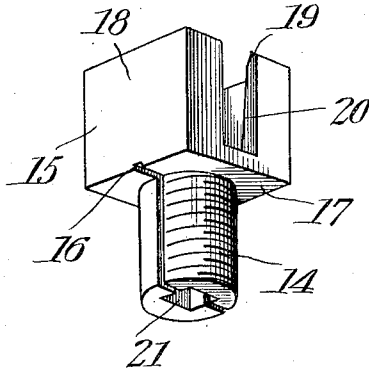


Fig. 2.

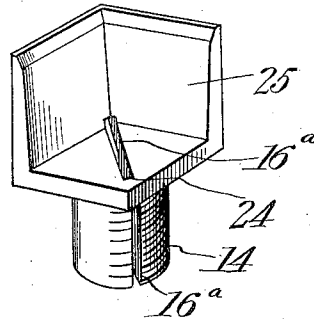


Fig. 3.

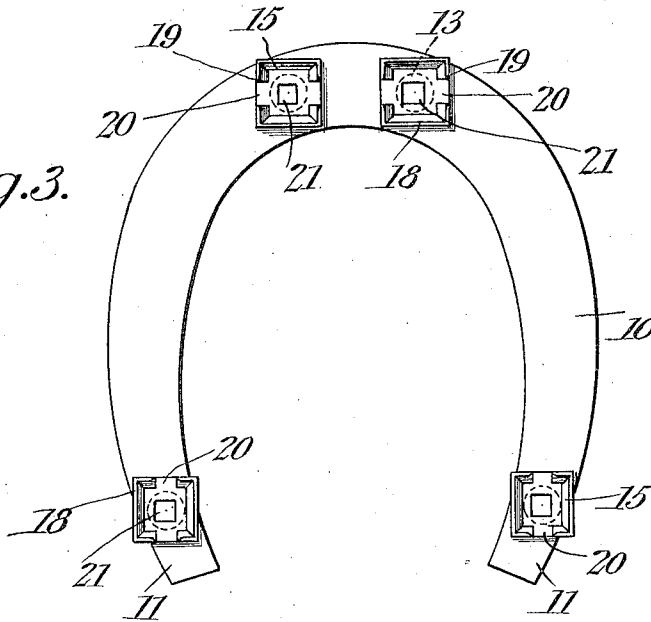


Fig. 4.

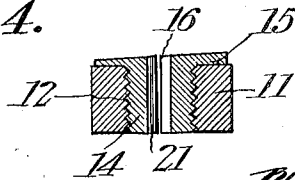
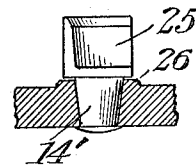


Fig. 5.



WITNESSES

Fenton W. Belt
Chr. R. Nielsen.

INVENTOR

S. S. Brush

By H. Woodward
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL S. BRUSH, OF BUFFALO, NEW YORK.

HORSESHOE-CALK.

1,057,326.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed May 2, 1912. Serial No. 694,693.

To all whom it may concern:

Be it known that I, SAMUEL S. BRUSH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Horseshoe-Calks, of which the following is a specification.

This invention relates to horse shoe calks, and has for an object to provide a calk of simple form which will supply a maximum gripping means.

Another object is to provide a detachable calk element adaptable to use either on the front or rear of a horseshoe, so that complications in its use may not arise from the necessity for carrying right and left forms for the rear, or enlarged or peculiarly shaped forms of calk for the front of a shoe.

An important object of the invention is to facilitate the removal of a calk which has been used until worn down close to or flush with the surface of a shoe, as often happens. It is a purpose to cause the calk-holding means to become loosened when such wear has occurred. This is of especial value, since many times the calk shanks become rusted in the shoe, and when worn off short, it is practically impossible to remove many forms of calks while the shoe is on the foot of a horse.

Other objects and advantages will be apparent from the following specification, and from the drawings, in which—

Figure 1 is a perspective bottom view of a calk element, Fig. 2 is a similar view of a modification thereof, Fig. 3 is a bottom view of a horse shoe equipped with my invention, Fig. 4 is a cross section of the shoe showing the calk worn off nearly to the shoe. Fig. 5 is a fragmentary sectional view of a shoe having another form of the calk engaged therewith.

There is illustrated a shoe 10, similar in form to the common horse shoe, having in each heel 11 a threaded opening 12, and having laterally spaced similar openings 13 at the toe portion. Engaged in each opening there is a split threaded shank 14 of the calk member 15, the shank being split diametrically throughout its length, and if desired, the slit may extend part way into the calk, as shown at 16. The calk comprises the rectangular base or head 17 formed integrally upon the shank, its inner side abutting snugly against the surface of the horseshoe, when the shank is screwed home. The

head carries on each side flush with its edges calk elements proper 18 comprising parallel cutting and gripping blades or walls, their outer sides being vertical to the plane of the head and their inner sides inclined slightly inward, so that they are gradually thickened toward the base, but have fairly sharp outer edges. At each end these walls are extended slightly toward each other, as shown at 19, these extensions being flush with the respective sides of the head, and having spaces 20 therebetween extending from the head to the outer edges of the walls. These spaces 20 are great aid in the attachment of the calks in the event that they have to be put in place by a driver in an isolated situation without tools suitable for engaging a threaded member in place. It will be appreciated that any flat piece of metal or ordinary sheet iron might be engaged in the spaces 20 to rotate the calk, or a small bar might be laid therein and used to turn the calk. A screwdriver or knife-blade would be available. It will be seen that a considerable space is left within the calk between the walls 18 and centrally of this space a rectangular opening 21 is formed through the head and shank, whereby a suitable tool may be ordinarily engaged therein for attachment or detachment of the calk.

By tapering the openings 12 and 13 toward the upper side of the shoe, the sides of the shank will be sprung toward each other when engaged therein, the binding action thus produced lessening the likelihood of casual disengagement thereof. However, it is desirable that these openings should not taper so much as to press the opposite sides of the shank into contact, but should leave a slight space therebetween.

In Fig. 2 there is shown a modification in which the slit 16^a in the shank is continued through the head, and extends diagonally thereacross, from a point near one corner, as at 24, entirely through the opposite corner, opening on the edges of the head and extending slightly into the blade element. Joining over this open end of the slot through the head are the calk walls or blades 25 formed on the head flush with the adjacent edges and thus forming a right angle or V-shaped road engaging edge. In the first described form it will be noted that the slit 16 extends through the shank in a plane at right angles to the planes of the walls 18, so that if this slit is extended into

the head the liability of breakage or bending by strains sustained by the walls themselves is minimized, and casual loosening of the calk shank in the shoe further obviated.

It will be seen that when a shank is engaged with a shoe and has become worn flush with the shoe the shank will be left in two pieces, which will set loosely in the openings of the shoe and may easily be removed. If the slit is extended into the head the shanks become loosened before the calk is worn off flush with the shoe and the earlier removal of the calk made possible.

In the form shown in Fig. 2 the joining portion between the opposite sides of the head at 24 will tend to hold the parts in place against loose movement after the blades are worn off, and the operation of the device thus improved by protecting the shoe from considerable wear by the retention of the head thereover until such time as convenient for renewal of the calk, but a blow with a hammer or other suitable object will serve to compress the sides and make the detachment of the device easy. Another important advantage of this construction is that it is not necessary to wait until the calk is completely worn off before replacing it, and it is thus possible to guard against objectionable delays on that account while an animal is being driven. And yet it is possible to obtain the full wearing value of the calk if desired. As long as the head in either form of the device remains unworn, its detachment may be accomplished by the use of a monkey-wrench engaged therewith, as in the case of a nut, but when worn off entirely the slit in the shank will allow the engagement of a screwdriver, or the rectangular tool engaged in the rectangular opening 21.

By making the slots 16 and 16^a of sufficient width, the space thereby provided might even allow the shank sections to be drawn directly out of the shoe without being unscrewed.

In Fig. 5 there is shown a modification of the device in which it is readily apparent

that if found desirable, the calks may be provided with shanks without threads, adapted to be driven into suitable apertures in shoes, which in this case, would preferably be provided with a boss 26 on the under side of the shoe corresponding in size or form to the shape of the head of the calk, the walls of which calk may be formed in either of the shapes before described, and the shank may be fitted in either of the manners already described, or not. The shank 14' is preferably so proportioned that it will snugly fit in the aperture of the shoe before the head is quite flush with the adjacent surfaces of the boss 26, as shown in Fig. 6.

What is claimed is:

1. A calk for horseshoes comprising a shank adapted to be engaged tightly in the opening of a horseshoe, and an integral calk element carried thereby, a slot being formed through the shank from the end opposite the calk whereby the shank is divided into a plurality of spaced sections, the slot extending into the calk element and opening on one side thereof, but stopping short of the opposite side; whereby when the calk is worn down to the slot a connecting portion remains holding the sections yieldably in operative position.

2. A calk for horseshoes comprising a shank adapted to be secured in a horseshoe, an integral head portion thereon, and calk blades carried thereby, a longitudinal slit being formed across the shank whereby it is divided into a plurality of spaced sections, the slit extending through the head and a spaced distance into the said blades, opening on one side of the device, but stopping short of the other side, for the purposes described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SAMUEL S. BRUSH.

Witnesses:

F. W. SHAW,
WILLIAM D. HEATH.