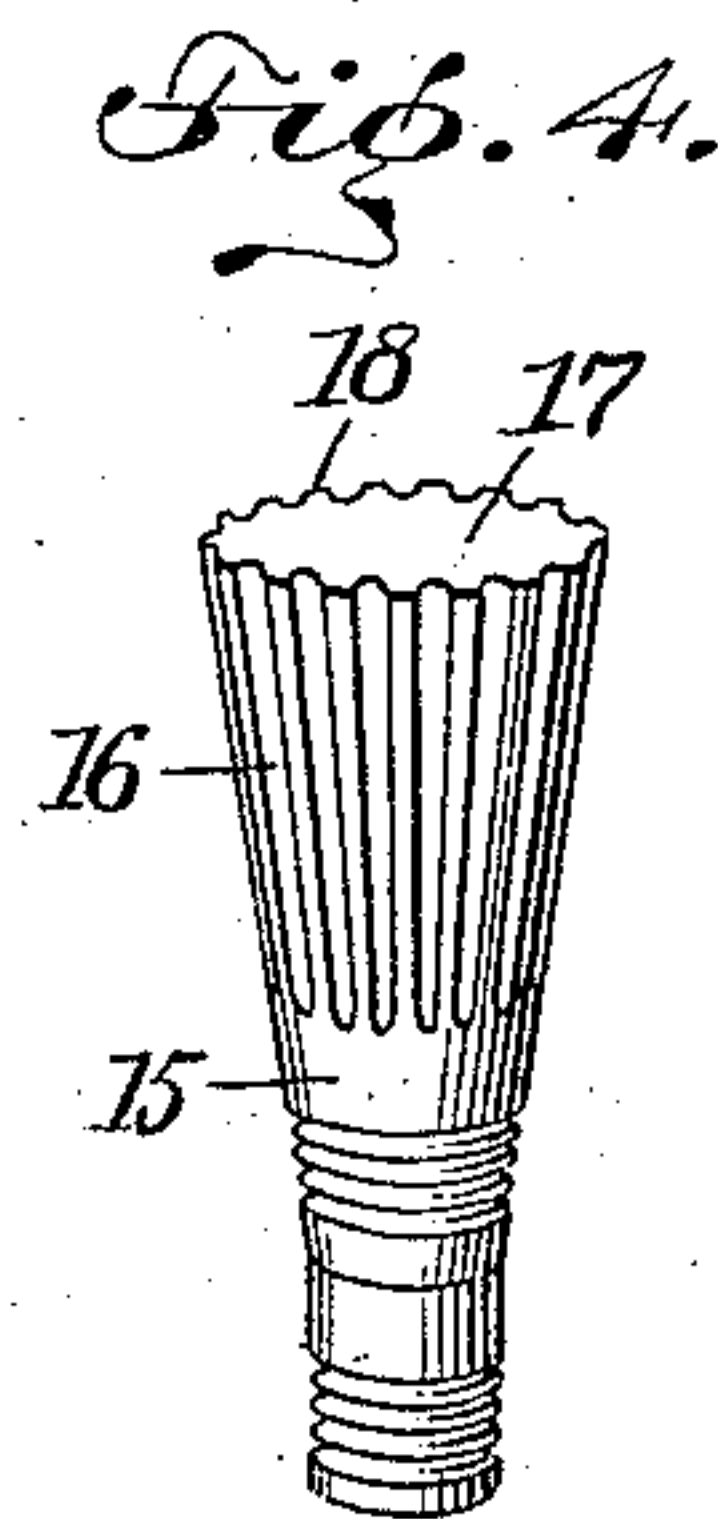
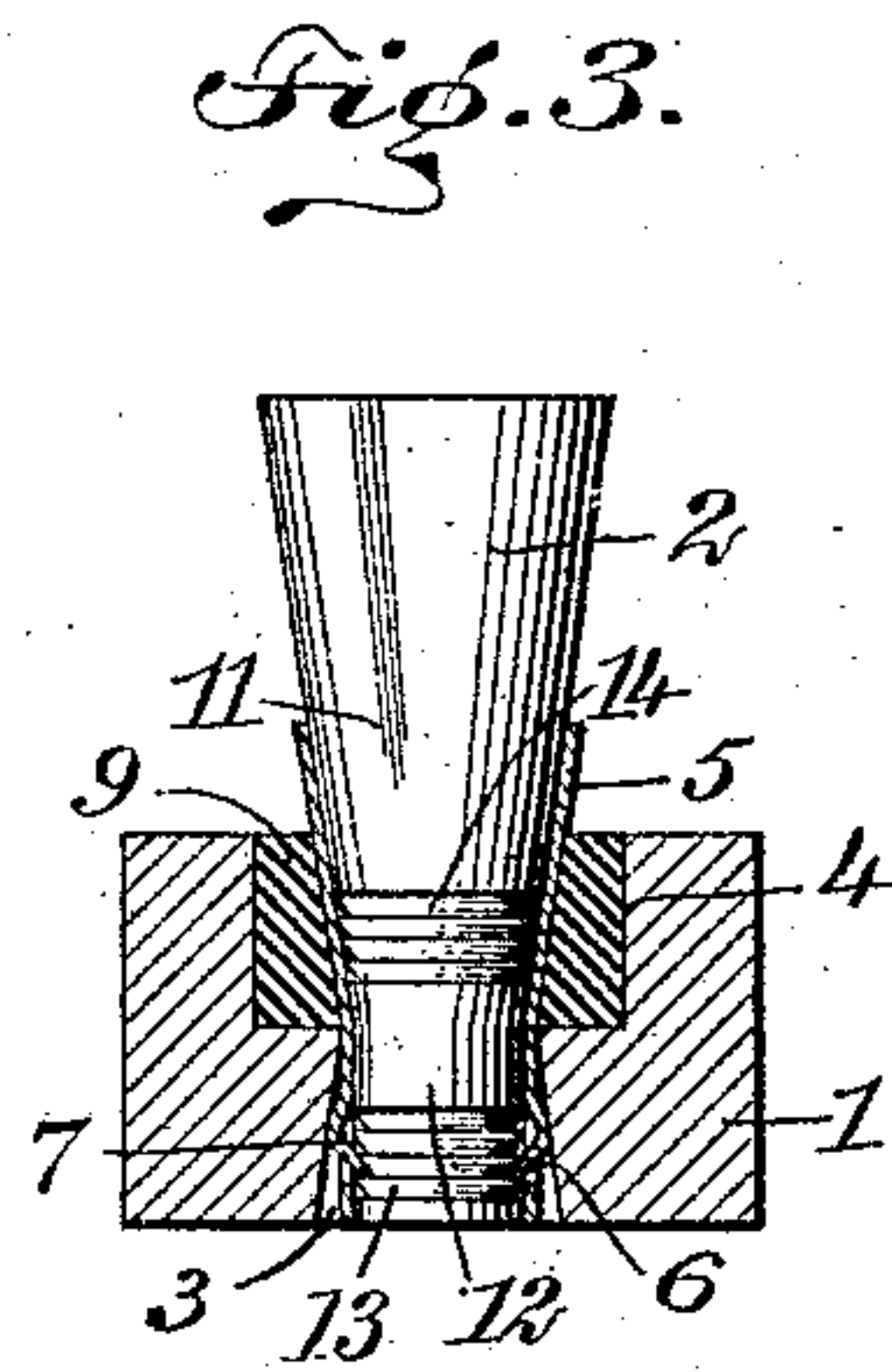
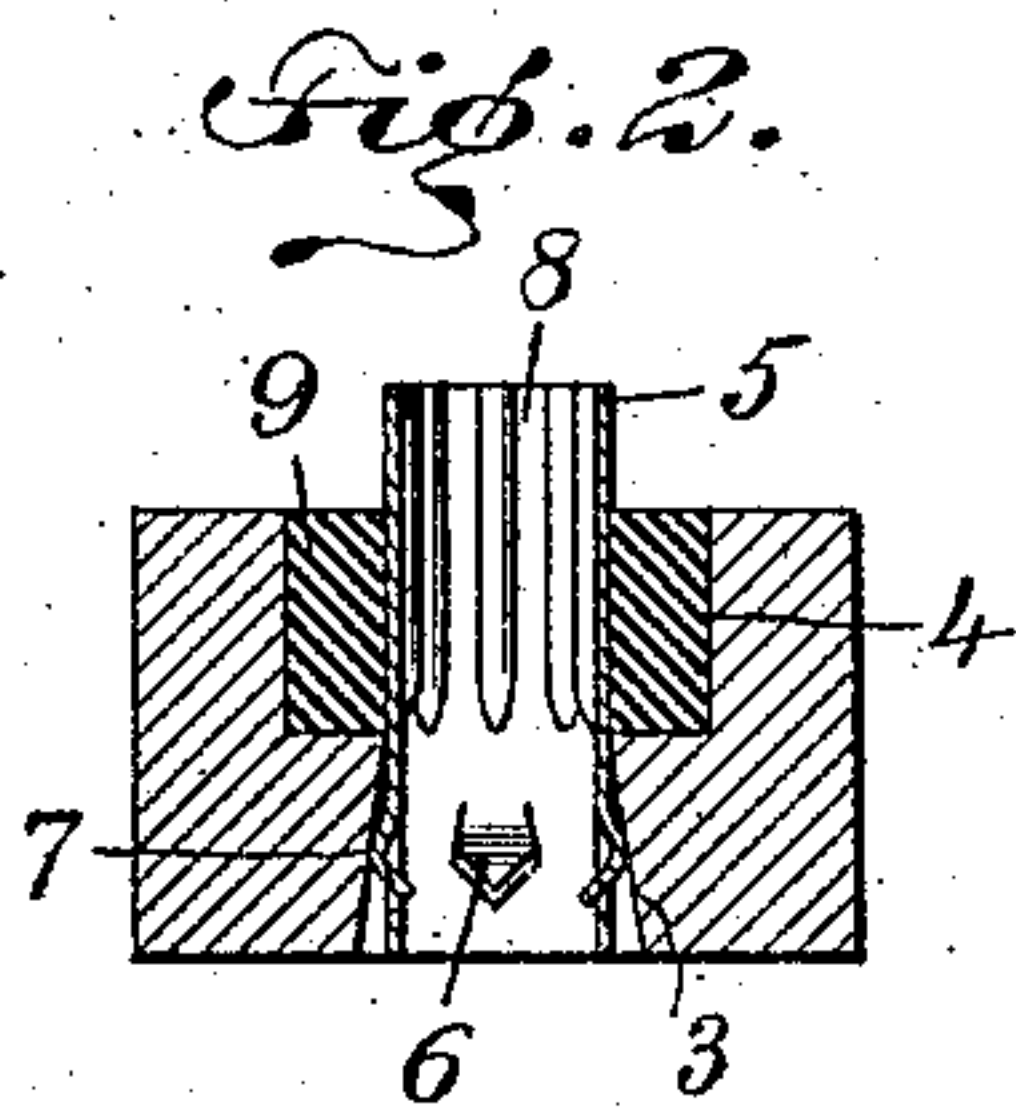
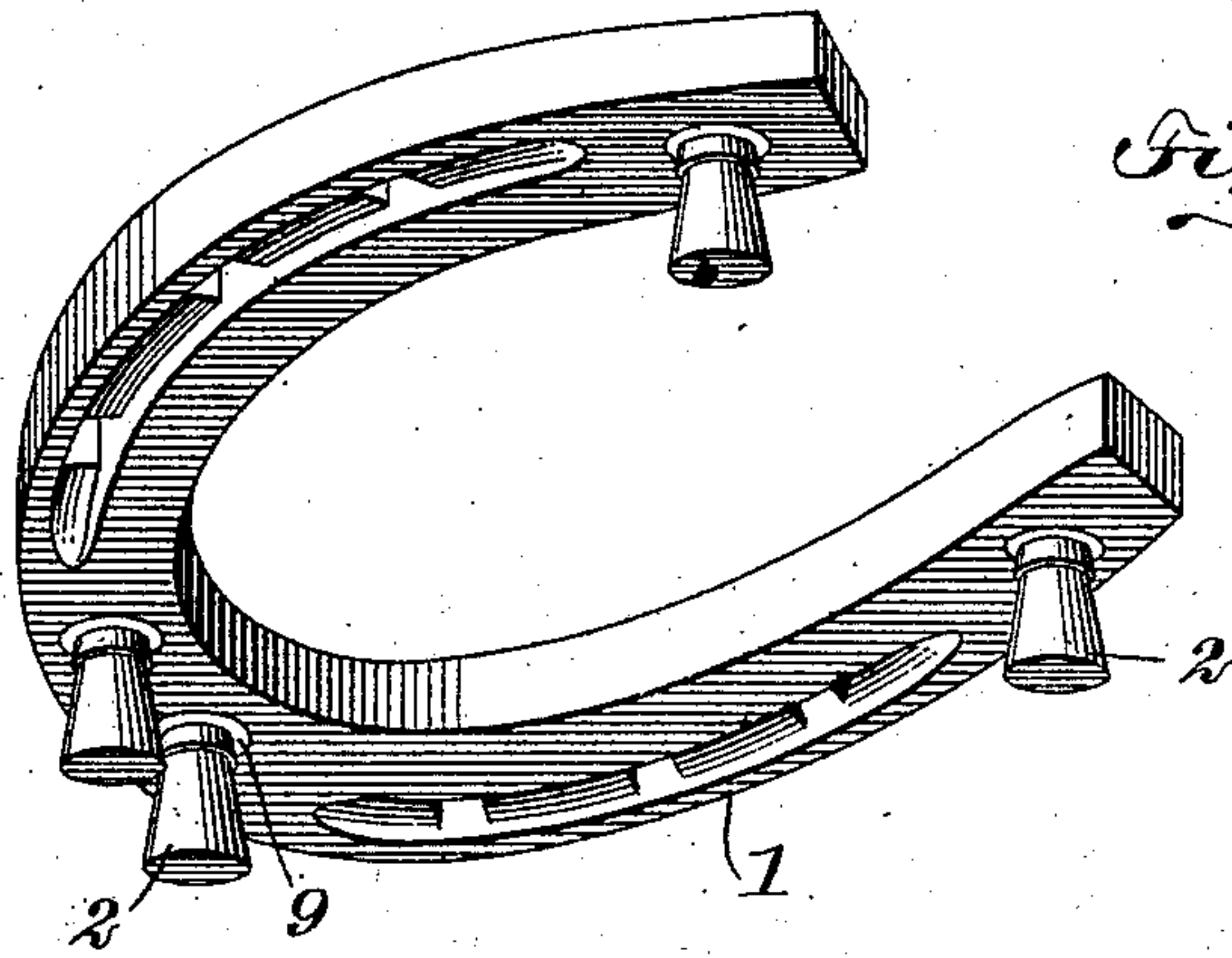


No. 849,979.

PATENTED APR. 9, 1907.

H. DAHMS.
HORSESHOE.

APPLICATION FILED MAY 22, 1906.



WITNESSES

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HUGO DAHMS, OF BERLIN, GERMANY.

HORSESHOE.

No. 849,979.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed May 22, 1906. Serial No. 318,129.

To all whom it may concern:

Be it known that I, HUGO DAHMS, a subject of the King of Great Britain, and a resident of Berlin, Germany, have invented a new and Improved Horseshoe, of which the following is a full, clear, and exact description.

This invention relates to horseshoes; and the object of the invention is to provide a calk of improved form which will be secured in the horseshoe by improved means.

A special object of the invention is to provide a construction which will insure that the calk will remain tight during its period of usefulness, but which will enable the calk to be readily removed when it is to be replaced by another.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective of a horseshoe provided with calks according to my invention. Fig. 2 is a cross-section taken through the shoe and illustrating the arrangement of the parts when the calk is about to be set in position. Fig. 3 is a view similar to Fig. 2, but representing the calk secured in position and Fig. 4 is a perspective showing a special form of calk.

Referring more particularly to the parts, 1 represents the horseshoe, the body of which is of common form and adapted to be secured to the horse's hoof in any usual manner. On the under side of this hoof I attach a plurality of calks 2, the same being preferably arranged as indicated in Fig. 1—that is, with two toe-calks and two heel-calks, one of said heel-calks being disposed at each of the heels, as shown. The manner in which these calks are attached is very clearly illustrated in Figs. 2 and 3. These views represent the shoe in an inverted position. In order to apply the calk, the under side of the shoe, as viewed in Figs. 2 and 3, is provided with a tapered bore or recess 3. This recess preferably converges in diameter upwardly, and the upper face of the shoe is provided with a counterbore 4, which extends downwardly into the same to a point near the middle of the shoe-section, as shown. In the conical bore or recess 3 I place a sleeve 5, of

light sheet metal. This sleeve is of tubular form, and its lower extremity is provided with a plurality of small tongues or tabs 6, which are punched outwardly from the material of the sleeve, as shown. The body of each of these tongues is forced outwardly, so as to form a curved lip 7, and the lower extremity of the tongue projects inwardly in the manner shown most clearly in Fig. 2. These tongues render the inner portion of the sleeve expansible in a manner which will appear more fully hereinafter. The upper portion of the sleeve which lies within or adjacent to the counterbore 4 is provided with longitudinal flutes or grooves 8. The inner extremity of the sleeve 5 is disposed substantially flush with the lower face of the horseshoe, as indicated, while the upper extremity may project beyond the upper face of the shoe. Around the body of this sleeve and within the counterbore 4 I place a bushing or cushion 9, of rubber or similar material. The shoe is now ready to receive the calk 2, and this calk preferably has substantially the form shown—that is, it presents a conical body 11, the inner extremity whereof terminates in a short neck 12, which neck is of round or cylindrical form, as indicated. On the neck 12 I provide a plurality of circumferentially-disposed grooves 13, and similar grooves 14 are provided at the inner extremity of the body 11 of the calk. The neck 12 is introduced in the upper end of the sleeve 5 and is forced or hammered downwardly into the sleeve. In this way the neck 12 of the calk is made to advance into the recess 3, while the conical body of the calk expands the upper extremity of the sleeve into substantially the position shown in Fig. 3. As the neck 12 of the calk advances in the inner portion of the sleeve its surface engages the ends of the tabs 6, which project inwardly. In this way the lips 7 of the tabs are forced outwardly against the wall of the recess 3. The diameter of the sleeve 5, it should be said, is substantially the same as the diameter of the recess 3 at the upper portion thereof, so that the sleeve will fit nicely in position, as shown. With this arrangement when the tabs 6 are forced outwardly against the surface of the recess 3 the sleeve 5 is effectually locked against removal. The aforesaid grooves 13 are arranged in such a position that when the calk is driven in as described the ends of the tabs 6 will engage the grooves and prevent the calk from being

withdrawn without the sleeve. In this way the calk and sleeve are both wedged or jammed in the shoe. The bushing or cushion 9 of course is compressed when the upper end of the sleeve 5 expands and is firmly held in position. By reason of the elasticity of this cushion or bushing a certain amount of elasticity is given to the connection at the same time that the calk is securely held in place. The bushing also acts as a contractor for the inner end of the calk, preventing stones or small pebbles from lodging in the counterbore 4 and also excluding moisture from the inner portion of the sleeve, as will be readily understood.

The upper grooves 14 in the calk tend to bite into the inner side of the sleeve, and these also assist in resisting any tendency of the calk to be pulled outwardly. It should be remembered, however, that when the shoe is in its natural position the calks project downwardly therefrom, and the weight of the animal upon the shoe is constantly tending to tighten the calks instead of to loosen them.

Evidently the calks may be applied to the shoe as readily while it is attached to the hoof as otherwise. When the calks are to be removed, this may be readily accomplished by pulling them outwardly with a sufficient degree of force.

Special attention is called to the form of the body of the calk. By having the calk of enlarged dimension at its extremity, so that the calk tapers inwardly, it is impossible for the calk to wear to a round form in use, as an edge will evidently always be presented at the wearing-face on one side or the other of the calk. In this way the calks tend to keep themselves sharp.

In Fig. 4 I illustrate a form of calk which is substantially similar to that illustrated in Fig. 3, except that the outer surface of the body 15 of the calk is provided with longitudinal grooves or flutes 16. At the point where these flutes intersect the outer face 17 of the calk a plurality of rudimentary teeth 18 are formed, which are adapted to give a good hold upon a slippery pavement or upon the ice. By reason of the fact that the flutes 16 extend substantially throughout the entire length of the body of the calk these teeth 18 will be presented until the calk is substantially worn away.

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

1. A horseshoe, having a tapered recess, a sleeve having an expansible portion mounted in said recess and adapted to interlock there-

with, and a calk forced into said sleeve through the small end of said recess, toward the large end thereof, and affording means for jamming said sleeve in said recess.

2. A horseshoe presenting a recess contracting toward the normal lower face of the shoe, a sleeve extending through said shoe and having an expansible portion disposed in said recess, and a calk forced into said recess and said sleeve, from the lower face of said shoe, and affording means for expanding the inner extremity of said sleeve in said recess.

3. A horseshoe presenting a recess contracting in diameter toward the normal lower face of the shoe, a sleeve mounted in said recess and having tabs struck from the material thereof, and a calk adapted to be driven into said sleeve and engaging said tabs, said calk affording means for forcing said tabs against the wall of said recess to secure said sleeve and said calk in said shoe.

4. A horseshoe, having a recess contracting in diameter, a sleeve having an expansible portion mounted in said recess, a calk adapted to be driven into said sleeve to expand the inner extremity thereof, said shoe having a counterbore surrounding said sleeve, and a bushing received in said counterbore.

5. A horseshoe, presenting a recess, a sleeve having tabs presenting lips adapted to engage the wall of said recess and having inwardly-projecting ends, and a calk adapted to be driven into said sleeve and having grooves engaging the ends of said tabs.

6. A horseshoe, having a substantially conical recess formed therein, and a counterbore communicating therewith, a sleeve mounted in said recess and said counterbore, a portion of said sleeve within said recess having tabs struck from the body thereof with inwardly-projecting ends and outwardly-projecting lips, the outer portion of said sleeve lying adjacent to said counterbore having longitudinal flutes formed therein, an elastic bushing surrounding said sleeve and disposed in said counterbore, and a calk having a substantially conical body adapted to be driven into said sleeve to expand the outer portion thereof, and having a neck adapted to lie within said recess, said neck having grooves adapted to engage the inner extremities of said tongues to force said lips outwardly against the wall of said recess.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HUGO DAHMS.

Witnesses:

F. D. AMMEN,

EVERARD B. MARSHALL.