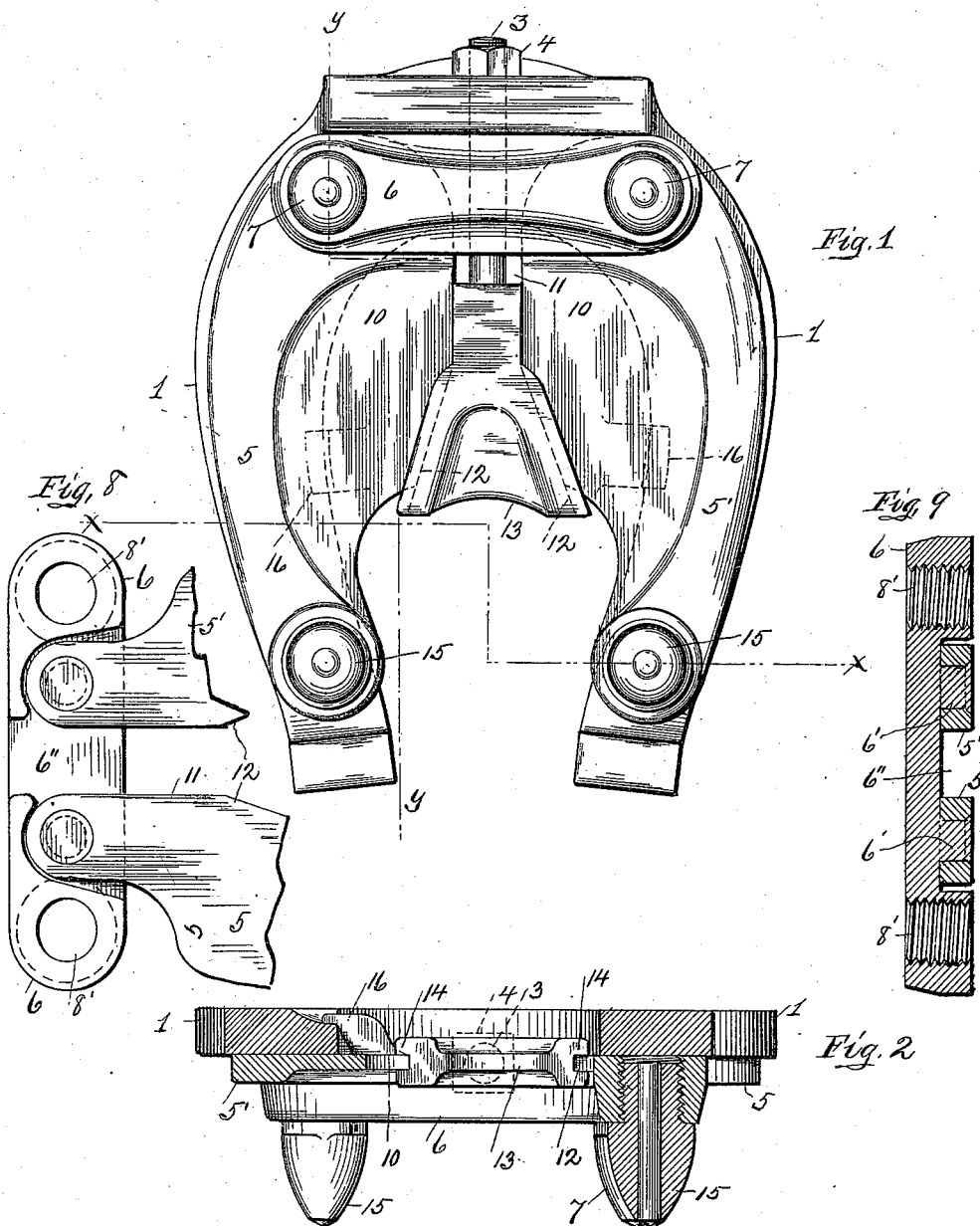


A. KENT.
HORSESHOE AND ANTISLIPPING ATTACHMENT.
APPLICATION FILED MAR. 24, 1910.

977,882.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 1.



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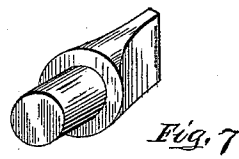
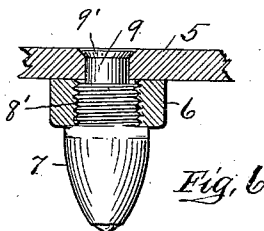
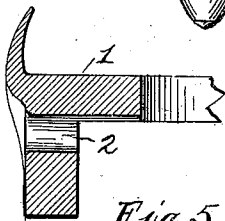
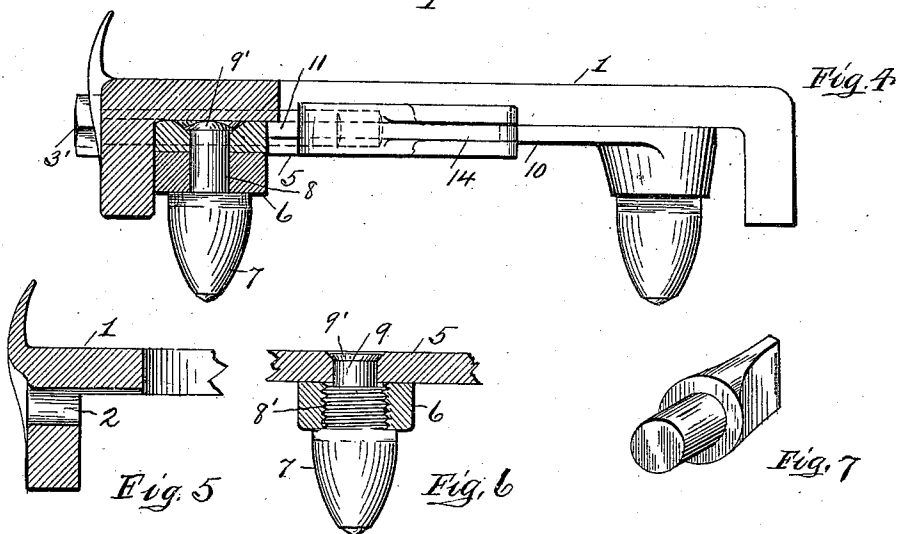
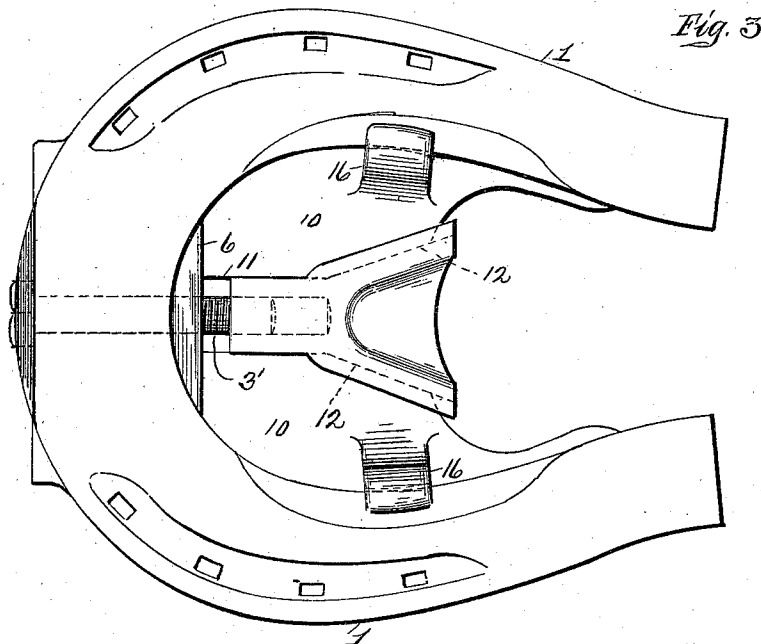
Attorney

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2 SHEETS—SHEET 2.



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AARON KENT, OF PITTSBURG, PENNSYLVANIA.

HORSESHOE AND ANTISLIPPING ATTACHMENT.

977,882.

Specification of Letters Patent.

Patented Dec. 6, 1910.

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To all whom it may concern:

Be it known that I, AARON KENT, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Horseshoes and Antislipping Attachments; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved horse-shoe and anti-slipping attachment for the same, and it comprises the forming of the shoe with a means whereby an attachment may be connected thereto, said attachment consisting of hinged members carrying calks which when secured to the shoe will enable the horse to travel upon ice without slipping.

A further object of the invention is to form the parts of the attachment in such manner that they may be adjusted to fit shoes of varying shapes and sizes, also to afford a means whereby the attachment may be easily connected to or removed from the shoe, also to provide the attachment with removable heel and toe calks, which calks may be readily disconnected when worn and replaced by others, and the invention further consists in the certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings;—Figure 1 is an inverted plan view of my improved horse shoe and anti-slipping attachment. Fig. 2 is a rear sectional view of the same, the section being taken on the line *x x*, of Fig. 1. Fig. 3 is a plan view of said shoe and attachment. Fig. 4 is a sectional side view of the shoe and attachment taken on the line *y y*, of Fig. 1. Fig. 5 is a sectional side view of a portion of the toe of the shoe showing the opening therethrough, by means of which the anti-slipping attachment is connected to the shoe. Fig. 6 is a sectional detailed view taken through one of the toe calks, connecting the cross or toe bar and one of the side members of the attachment. Fig. 7 is a perspective view of a modified form of a calk. Fig. 8 is a plan view showing a modified form of connecting the side

members to the cross or toe bar. Fig. 9 is a central sectional view of the same.

To put my invention into practice and thereby provide an anti-slipping attachment capable of being readily attached to or removed from a horse shoe 1, I first form at a suitable position in the toe of said shoe, an opening 2, said opening extending in the direction of the length of the shoe and being capable or receiving the shank of a bolt 3, said bolt being either in the form of a "tap" 3', as at Fig. 3, or that of an ordinary bolt with nut 4.

The anti-slipping attachment comprises two members 5, 5', which are hinged together by a cross piece 6, and conform to the general contour of the perimeter of the shoe and are adapted to rest evenly upon the lower side of the same. These two members 5 and 5' are pivotally connected at their front ends by the cross bar 6 and calks 7 said calks having shanks 8, which pass through said cross bar and side members and are clenched or riveted (9') as will be seen at Fig. 4; or the parts may be hinged together by calks such as shown at Fig. 6, which comprise an enlarged threaded shank 8', a reduced plain shank 9, riveted or clenched to the side member. These means of hinging the parts will admit of the members 5 and 5' being adjusted toward and away from each other, and the said connections may be made in other ways to accomplish the same result. Each of the members 5 and 5' is formed with a reduced inner part 10, which when the said members are in position lie in the same plane and also having a portion 11, the edges of which are approximately parallel and a portion 12, which are inclined or tapered. Operating upon these inclined edges 12 of the two members is a sliding wedge-shaped piece 13, which is formed with side grooves to engage with said inclined edges and act as guides. This sliding piece 13 is provided with a head 14, which may have a threaded socket, as at Fig. 3, or be connected direct with the bolt 3, as at Fig. 1.

The hinged members 5 and 5' are fitted with calks 15, which may be formed integral with said members or riveted or otherwise attached thereto, as by means of screw threads, in which latter case, said calks may be removed and replaced. On the top surface of the hinged members and integral therewith, are lugs 16, which engage with

the inside periphery of the shoe, and are so arranged as to be beneath the top surface of the same; the said lugs together with the sliding wedge serve as a means of holding the attachment to the shoe.

In operation and to adjust the attachment to the shoe, the hinged members are moved about their pivotal points toward each other to a position that will permit the lugs 16 to enter into the inside peripheral edge of the shoe and engage with the top edges of the same. The bolt or nut is now operated to draw the wedge toward the toe of the shoe, which movement expands or forces the members 5 and 5' outward, to bring said lugs tightly against the inner side walls of the shoe, thereby holding the attachment rigidly to the same.

To remove the attachment it is only necessary to reverse the above-described operation.

In the drawings four calks are shown to each shoe, but it is obvious that as many as desired may be used, either formed integral with the several parts or removably placed thereon, and that various forms or shapes of calks or toe plates may be used as well as various methods of attachment, and that other modifications may be made without departing from the spirit of the invention, such as hinging the side members 5 and 5', to the toe or cross bar 6, as shown at Figs. 8 and 9, in which said cross piece is formed with integral pins 6' located in a recess 6'', to which pins are hinged and riveted the front ends of said side members.

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

1. In a horse shoe having an opening formed through the same, a bolt arranged in

said opening, an anti-slipping attachment comprising hinged members having lugs to engage with the side walls of the shoe, and a sliding wedge connected to and operated by said bolt.

2. In a horse shoe having an opening formed through the toe end of the same, a bolt arranged to operate in said opening, an anti-slipping attachment comprising hinged members having lugs to engage with the inside walls of the shoe, and a sliding wedge connected to and operated by said bolt, whereby said members may be forced apart.

3. In a horse shoe having a longitudinal opening formed through the toe end and in the direction of the length of the same, a bolt arranged to operate in said opening, an anti-slipping attachment comprising hinged members having lugs to engage the inside walls of the shoe, calks arranged in connection with said members, and a sliding wedge connected to and operated by said bolt, whereby said members may be forced apart.

4. In a horse shoe having an opening formed through the front or toe end of the same, a bolt arranged in said opening, an anti-slipping attachment comprising members carrying calks, lugs formed on said members to engage the inside walls of the shoe, a connecting bar having calks, means for hinging said connecting bar to said members, and a sliding wedge engaging said members to force the same apart, said wedge being operated by said bolt.

In testimony whereof, I affix my signature, in presence of two witnesses.

AARON KENT.

Witnesses:

JOHN A. SNEE,
C. L. SEXTON.