G. V. OWEN.

HORSESHOE CALK.

APPLICATION FILED MAY 6, 1910.

989,866. Patented Apr. 18, 1911.

Fig. 1.

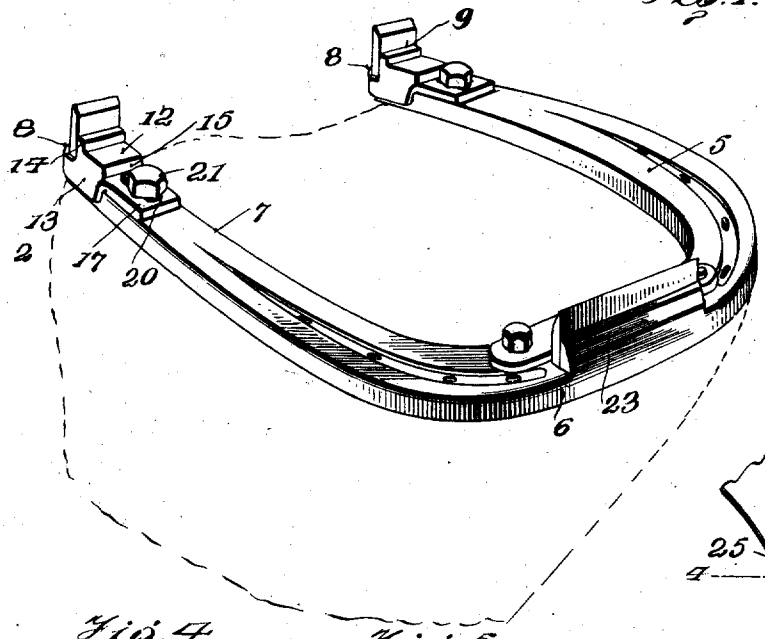


Fig. 4.

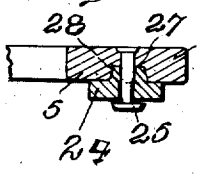
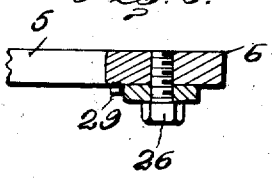


Fig. 5.



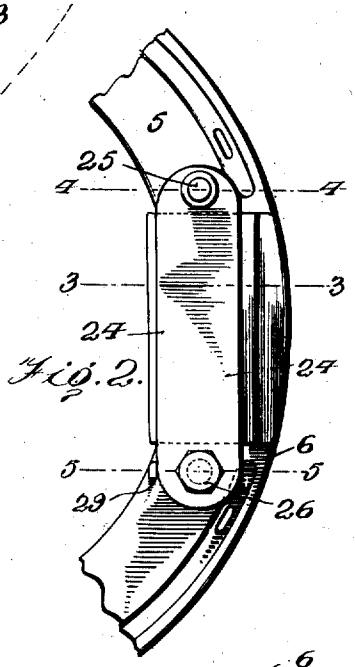
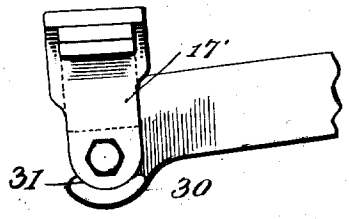


Fig. 2.

Fig. 7.



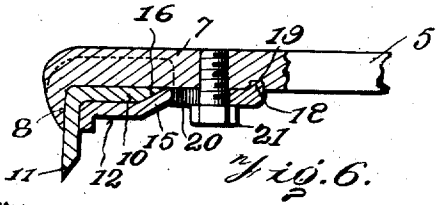


Fig. 6.

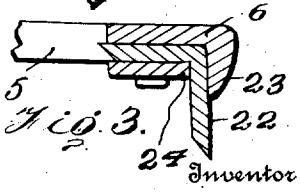


Fig. 3.

Witnesses

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GEORGE V. OWEN, OF BIRCHARDVILLE, PENNSYLVANIA.

HORSESHOE-CALK.

989,866. Specification of Letters Patent. Patented Apr. 18, 1911.

Application filed May 6, 1910. Serial No. 559,759.

To all whom it may concern:

Be it known that I, GEORGE V. OWEN, citizen of the United States, residing at Birchardville, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Horseshoe-Calks, of which the following is a specification.

This invention relates to horseshoes and more particularly to a reversible calk for attachment to the toe and heel of the shoe.

The object of the invention is to provide a comparatively simple and inexpensive calk of this character, capable of being readily attached to a horseshoe and which may be reversed or used as either a right or left hand calk.

A further object is to provide a novel form of clamp for retaining the heel calks in position on a horeshoe.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a horseshoe provided with reversible toe and heel calks constructed in accordance with my invention; Fig. 2 is a plan view of the toe portion of the shoe; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a similar view taken on the line 4—4 of Fig. 2; Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 2; Fig. 6 is a longitudinal sectional view of one of the heel calks; Fig. 7 is a plan view illustrating a modified form of the invention.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved calk forming the subject matter of the present invention is shown applied to a horseshoe of the ordinary construction, in which 5 designates the body portion, 6 the toe, and 7 the heels provided with depending stop lips or shoulders 8.

The heel calks 9 are preferably formed with angularly disposed wings 10 having their free ends inclined or beveled to produce cutting edges 11 adapted to bite into the surface of the ground and thus prevent slipping when the draft animal is walking on snow or ice. One wing 10 of each heel calk bears against the adjacent face of the adjacent stop lip 8, while the other wing thereof bears flat against the bottom of the shoe, as best shown in Fig. 6 of the drawings.

The heel calks are retained in position on the shoe, by means of clamping plates 12 having oppositely disposed upwardly projecting flanges 13 which embrace the adjacent longitudinal edges of the shoe and serve to prevent lateral movement of said plates. One end of each clamping plate 12 is provided with a transverse flange 14 adapted to bear against the face of the adjacent calk, while the intermediate portion thereof is offset at 15 so as to present an inclined face 16 for engagement with the adjacent inclined face of said calk.

The metal at the offset portion 15, is extended longitudinally to produce a shank 17 having an upstanding lug 18 adapted to enter a correspondingly shaped recess 19 formed in the base of the shoe, thus holding the flange 14 in engagement with the adjacent wing of the calk. The shank 17 is provided with a longitudinally disposed slot 20 adapted to receive a bolt or similar fastening device 21, the latter being threaded in an opening in the base of the shoe, as best shown in Fig. 6 of the drawings. The slots 20 permit the clamping plates 12 to be adjusted longitudinally of the shoe when it is desired to remove or reverse the wings of the heel calks.

The toe calk 22 is similar in construction to the heel calks and is adapted to bear against a depending stop lip 23 formed on the toe portion 6. The toe calk 22 is retained in position on the shoe by a flat metallic plate 24, one end of which is secured to the bottom of the shoe by a pivot pin 25, while the other end thereof is fastened to the shoe by a screw 26. Thus it will be seen that by removing the screw 26 and swinging the plate laterally on its pivotal axis 25, the toe calk 22 may be detached

and reversed so as to present a new cutting edge to the ground. It will also be seen that by removing the clamping plates 12, the rear calks may be removed and reversed, or the calk on the right hand side of the shoe may be placed on the left hand side of said shoe.

The upper face of the toe plate 24 at the pivot 25, is provided with a boss 27 which enters a correspondingly shaped recess 28 formed in the bottom of the shoe, thus forming a bearing and at the same time relieve the pivot pin 25 of undue strain when moving the plate 24 to operative and inoperative positions. The lower face of the shoe is also preferably formed with an enlargement or stop shoulder 29 to relieve the strain on the screw 26 should the animal stub its toe. The plate 24 is disengaged from the shoulder 29 and swung laterally on the pivot 25, when it is desired to remove the toe calk, the pivot pin 25 having a loose connection with the plate 24 so as to permit turning movement of said plate without danger of bending the pivot.

In Fig. 7 of the drawings, there is illustrated a modified form of the invention, especially designed for use as a side calk. In this form of the device, the inner longitudinal edge of the shoe at the heel portion thereof is provided with an enlargement 30 having a curved inner face 31, the adjacent end of the shank 17′ being correspondingly curved for engagement therewith, the construction and operation of the device being otherwise similar to the heel calk shown in Fig. 1 of the drawings.

Having thus described the invention, what is claimed as new is:

1. A horseshoe having a depending stop lip at the toe portion thereof, a toe calk having angularly disposed wings, the ends of which are inclined to produce cutting edges, a retaining plate pivotally mounted on one end of the shoe and adapted to bear against one of the wings of the toe calk, and a fastening device extending through the other end of the retaining plate and engaging the lower face of the shoe.

2. A horseshoe having its toe portion provided with a depending stop lip, and its lower surface formed with a circular socket, a toe calk having angularly disposed wings, one of which bears against said stop lip and the other the adjacent lower face of the shoe, a retaining plate having a boss seated in the socket in the lower face of the shoe, a pivot pin extending through the retaining plate, boss and socket, a screw for clamping the retaining plate in engagement with the adjacent wing of the toe calk, and a stop shoulder formed on the lower face of the shoe and bearing against the adjacent edge of the retaining plate for taking the strain off of the screw.

3. A horseshoe having a reversible toe calk detachably secured to the toe portion thereof and provided with angularly disposed wings having terminal cutting edges, and a retaining plate secured to the lower face of the shoe and bearing against one of the angular wings of said toe calk.

4. A horseshoe having a reversible toe calk detachably secured to the toe portion thereof and provided with angularly disposed wings, a retaining plate secured to the lower face of the shoe and bearing against one of the angular wings, and a stop shoulder depending from the lower face of the shoe and bearing against one longitudinal edge of the retaining plate.

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

GEORGE V. OWEN. [L. S.]

Witnesses:
L. T. BIRCHARD,
WILLIAM A. OWEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."