

C. WERMSTROM.

HORSESHOE.

APPLICATION FILED AUG. 29, 1907.

914,903.

Patented Mar. 9, 1909.

Fig. 1

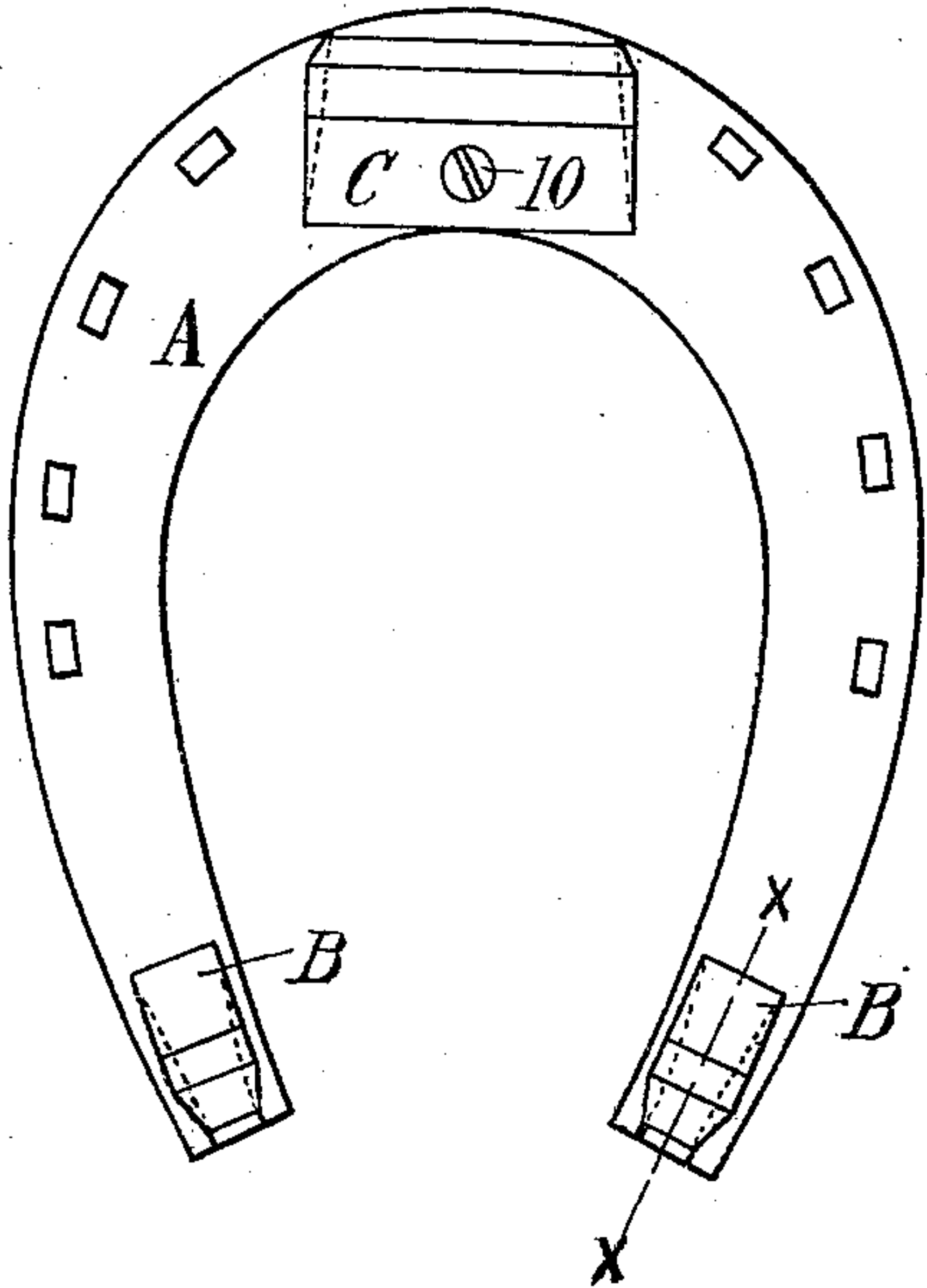


Fig. 2

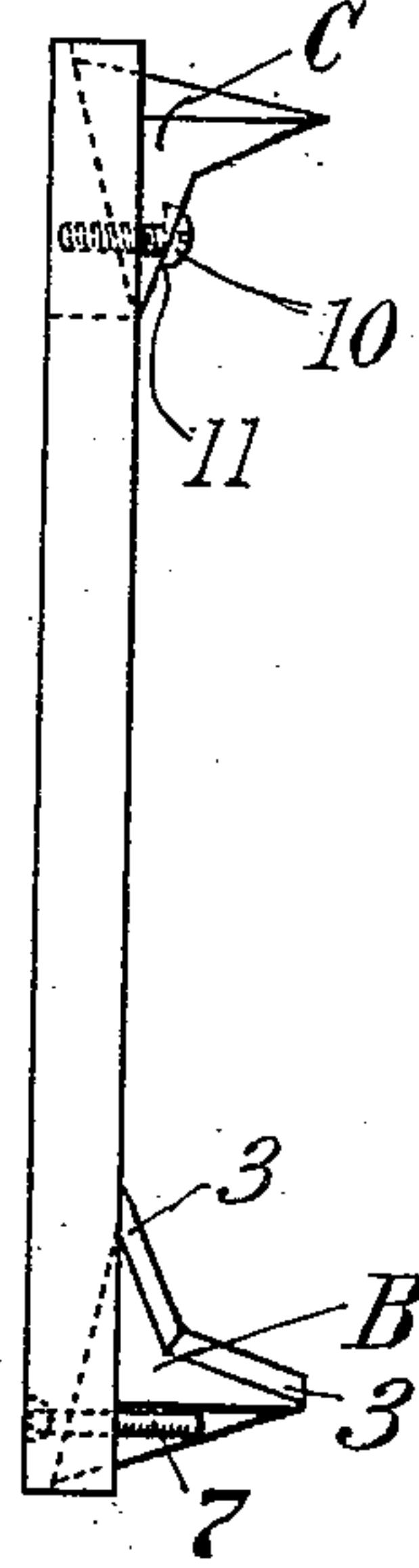


Fig. 3

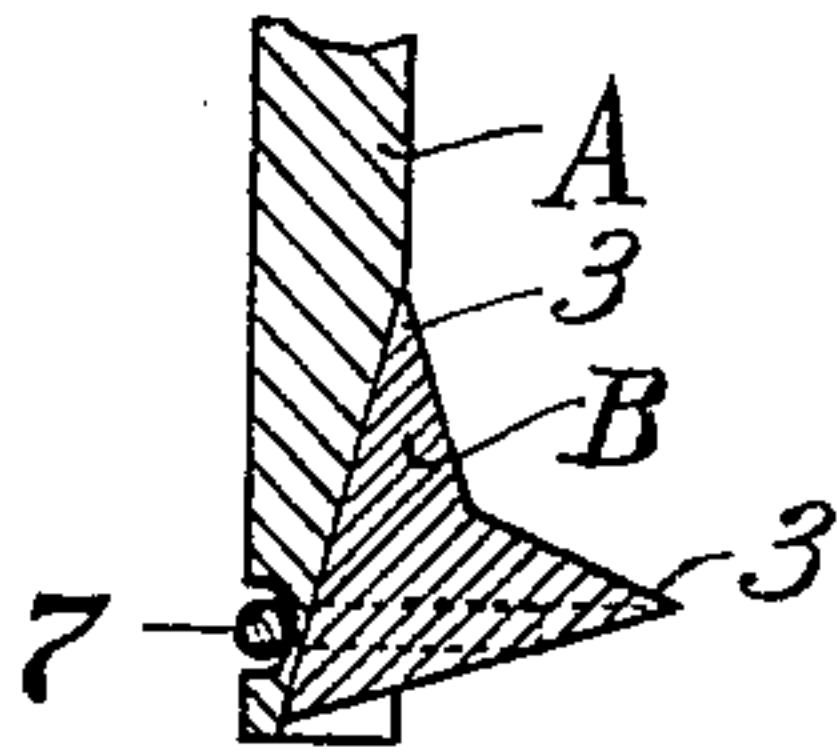


Fig. 5

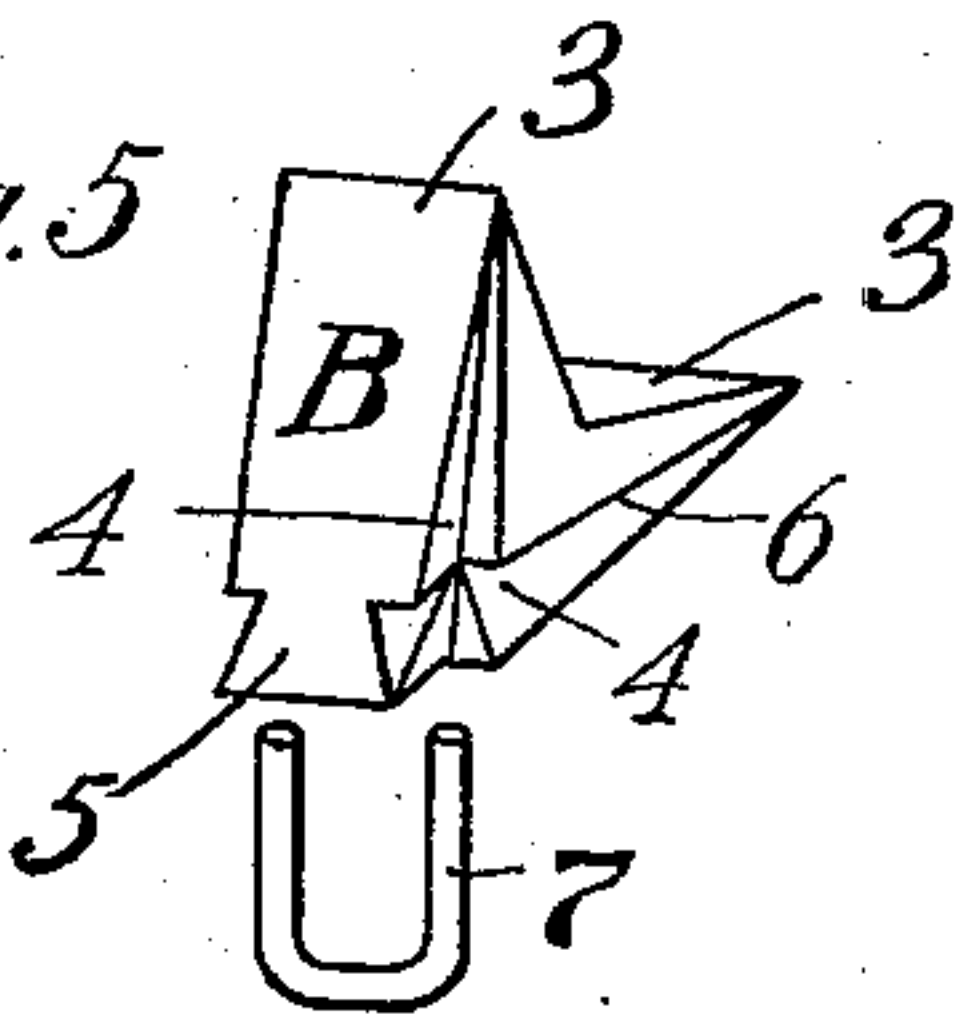


Fig. 7

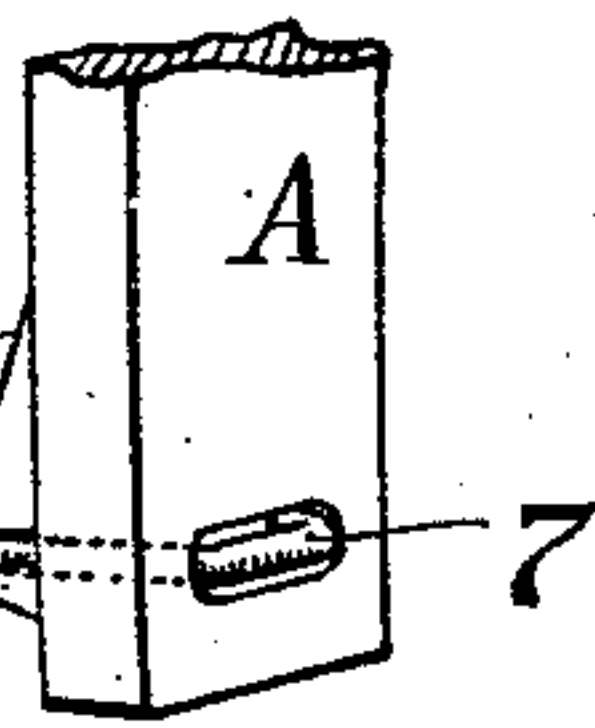


Fig. 6

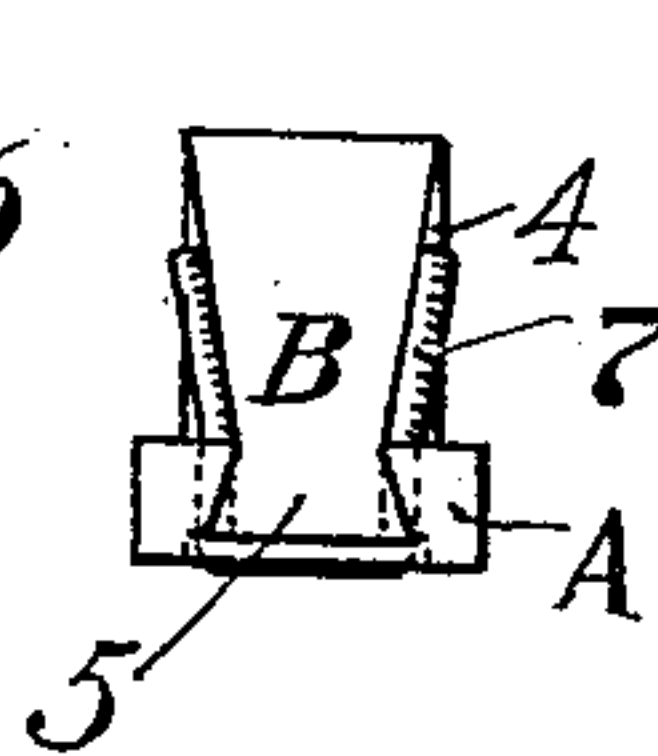
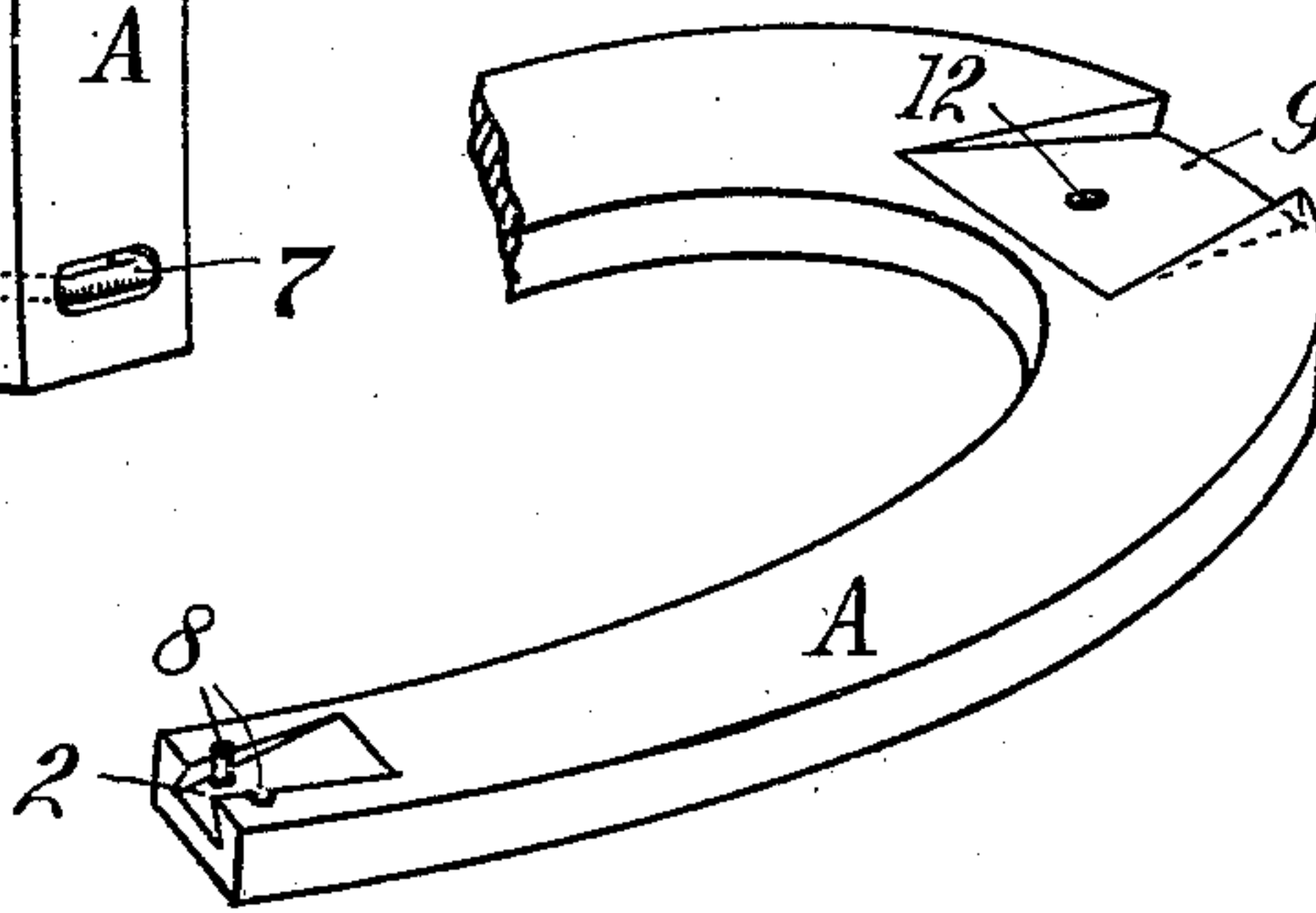


Fig. 4



Witnesses,  
George Voelker  
Nattie Smith.

Inventor,  
Carl Wermstrom  
by Lothrop & Johnson  
his Attorneys.



# UNITED STATES PATENT OFFICE.

CARL WERMSTROM, OF ST. PAUL, MINNESOTA.

## HORSESHOE.

No. 914,903.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed August 29, 1907. Serial No. 390,628.

*To all whom it may concern:*

Be it known that I, CARL WERMSTROM, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

My invention relates to improvements in horseshoes and has for its objects to provide a horseshoe having removable and reversible calks which are simple in construction and may be easily removed and replaced with others, or reversed in position; and which, when fitted to the shoe, shall be held securely and solidly in place thereon and not become loosened by wear.

To this end the invention consists in the construction, combination and arrangement of parts hereinafter described and claimed. In the accompanying drawings forming part of this specification, Figure 1 is a bottom view of the improved horseshoe with the calks in place, Fig. 2 is a side view thereof, Fig. 3 is a section through the heel end on line  $x-x$  of Fig. 1, Fig. 4 is a bottom view of the shoe with the calks removed and one of the heel ends broken away; Fig. 5 is a perspective view of one of the heel calks alone and its securing staple; Fig. 6 is a rear view of one of the heel ends of the shoe with the calk in place, and Fig. 7 is a perspective view of the same viewed from the underside and showing the shoe partly broken away.

In the drawings A represents a horseshoe of the usual curved shape. At each of its rear or heel ends it is formed with a dovetailed recess 2 in its underside to receive slidably the heel calk B. The recess is inclined upwardly from front to rear, as best shown in Figs. 2 and 4. Each heel calk consists of a block having two wedge shaped spurs 3 arranged at an angle of less than 180 degrees with each other, and disposed symmetrically on either side of a line bisecting the angle between them. Each spur is formed with a dovetailed groove 4 extending from its outer end or tip entirely through the base or heel of the calk, so that the grooves in the two spurs intersect one another at their common base, as shown in Fig. 5. The grooves are so cut that the dovetail portion 5 between them will fit snugly and slidably into the recess 2 in the shoe, and the shoulders 6 on the inner side of the grooves will abut against the underside of the shoe when the calk is slid into place.

The heel calks are fitted to the shoe by sliding them, heel end foremost, into the recesses 2 toward the heel end of the shoe. They are slid along the recesses until their shoulders 6 engage and abut against the under face of the shoe, and stop further movement in that direction. As shown in the drawings the lines of the shoulders 6 bisect their respective spurs and run at right angles with each other so that the axes of the spurs shall stand, one parallel with, and the other perpendicular to, the under face of the shoe.

In ordinary use the pressure against the calk will be toward the heel. Such pressure will tend to drive the calk the more firmly into the recess 2; but to guard against the calk being pushed back toward the toe, I prefer to use a suitable locking device, such as the staple 7 shown in the drawings. The prongs or pins of the staple are driven through holes 8 made in the shoe in line with the grooves 4 of the upstanding calk, so that the prongs, after passing through the holes, will enter the grooves 4 and hold the calk firmly between them. Thus the grooves which are arranged symmetrically on either side of a line bisecting the angle between the spurs, serve both as slides and as channels to receive the staple prongs according to the way in which the calk is turned. By removing the staple the calk may be slid forward out of the recess 2, and turned so as to bring the other spur into upstanding position and replaced in the recess, as before.

At its toe end the shoe is formed with a dovetailed recess 9 in its underside to receive slidably the toe calk C. The recess is inclined upwardly from rear to front, as shown in Figs. 2 and 4. The toe calk C is precisely similar in construction and operation to the heel calks, except that it is made wider to fit the recess 9. Instead of securing it to the shoe by a staple, I have shown it secured by means of a bolt or screw 10 which may be screwed into the registering holes 11 in the calk and 12 in the shoe.

It will be noticed that both heel and toe calks are arranged to be slid outwardly away from each other and toward their respective ends of the shoe, so that the pressure to which they are normally subjected in use shall tend to drive them into their recesses.

I claim as my invention:

1. The combination, with a horse shoe having a dovetailed recess inclined upwardly



and outwardly toward the adjacent end of the shoe, of a removable calk having two spurs arranged at an angle with each other and disposed symmetrically on either side of a line bisecting the angle between them, both spurs being dovetailed to fit slidingly into the recess.

2. The combination, with a horse shoe having a dovetailed recess inclined upwardly and outwardly toward the adjacent end of the shoe, of a removable calk dovetailed to fit slidingly into the recess and formed above the dovetailed portion with shoulders adapted to abut against the underside of the shoe when the calk is slid into place, and form stops to limit its outward movement.

3. The combination, with a horse shoe having an upwardly inclined recess, of a removable calk comprising two spurs arranged at an angle with each other and symmetrically disposed on either side of the line bisecting such angle, said spurs being formed

with mutually intersecting dovetail grooves whereby either spur may be slid into the dovetailed recess, and pins extending through the shoe and into the grooves of the upstanding calk for securing it in place.

4. The combination, with a horse shoe having a dovetailed recess inclined upwardly and outwardly toward the adjacent end of the shoe, of a removable calk having two spurs arranged at an angle with each other, said spurs being formed with dovetail grooves to fit slidingly into the recess, and with shoulders along the sides of the grooves adapted to abut against the underside of the shoe when the calk is slid into place.

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

CARL WERMSTROM.

Witnesses:

ARTHUR P. LOTHROP,  
HATTIE SMITH.