

J. POPIEL & J. URBANSKI.
HORSESHOE.
APPLICATION FILED APR. 17, 1911.

999,255.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

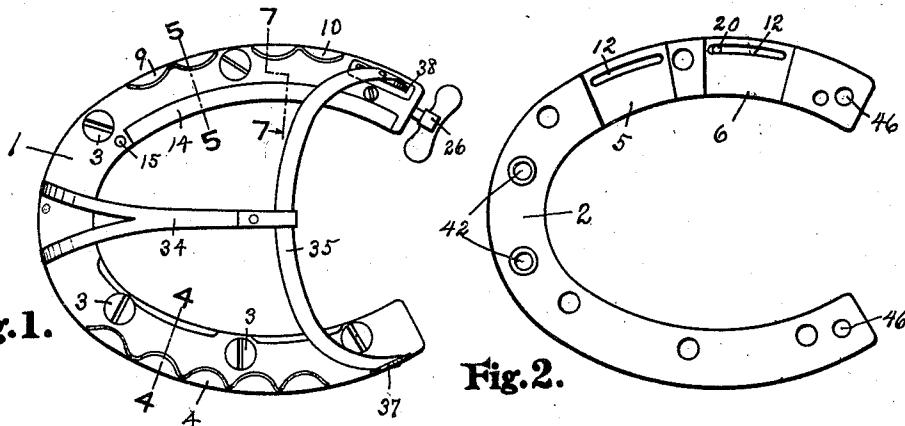


Fig. 1.

Fig. 2.

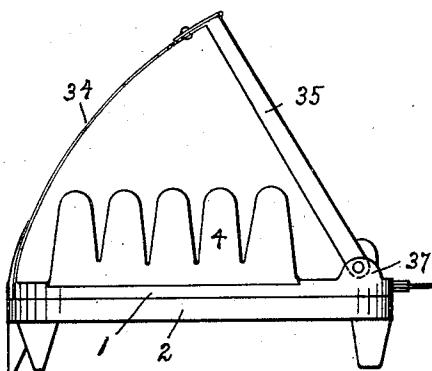


Fig. 3.

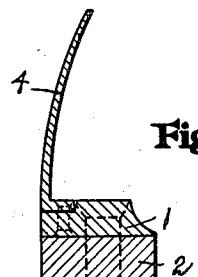


Fig. 4.

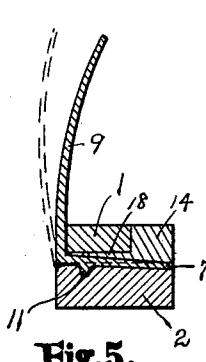


Fig. 5.

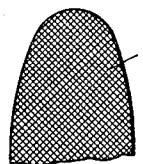


Fig. 6.

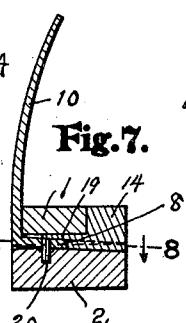


Fig. 7.

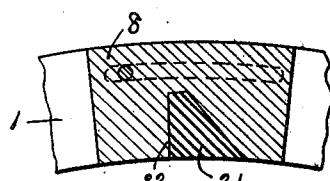


Fig. 8.

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2 SHEETS—SHEET 2.

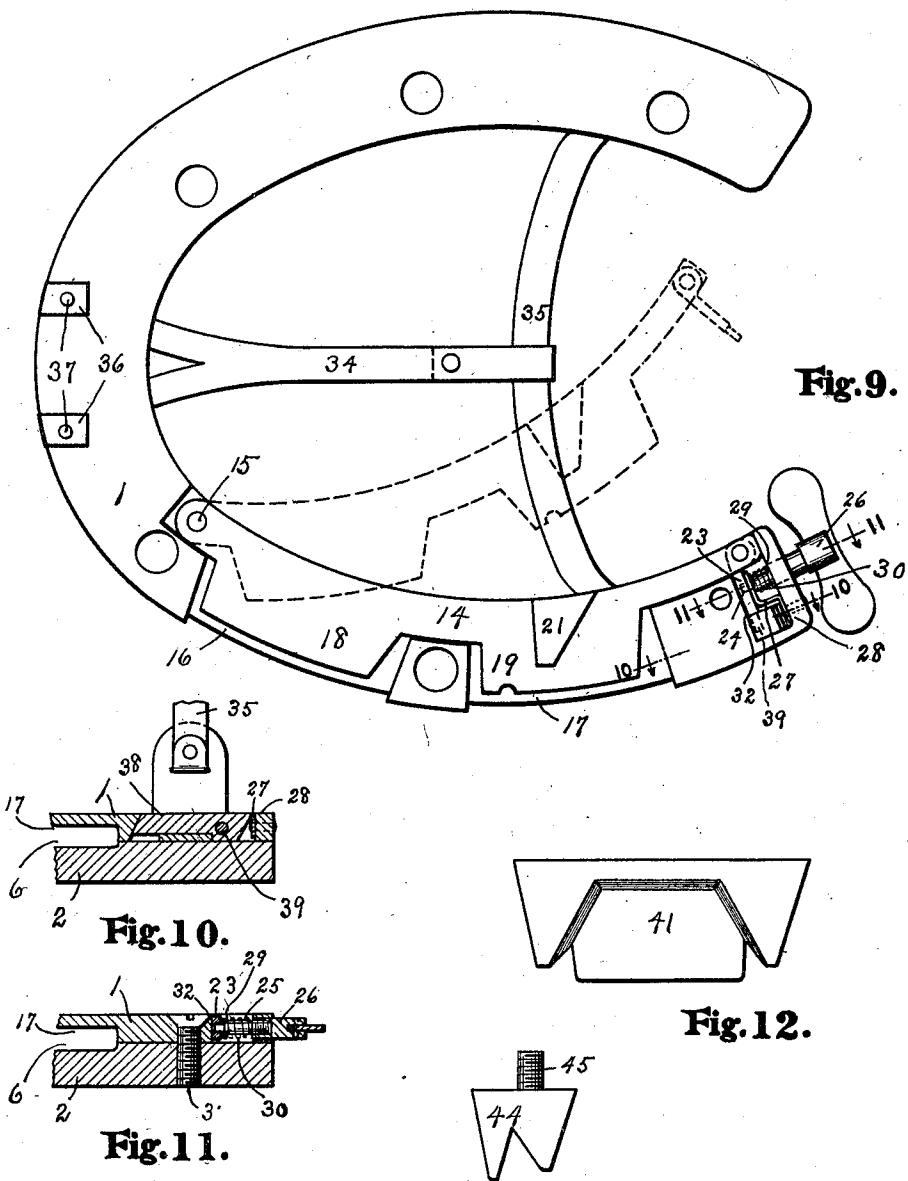


Fig. 13.

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JAN POPIEL AND JOSEF URBANSKI, OF DETROIT, MICHIGAN, ASSIGNEES OF ONE-THIRD TO AUGUST BEROWSKI, OF DETROIT, MICHIGAN.

HORSESHOE.

999,255.

Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed April 17, 1911. Serial No. 621,461.

To all whom it may concern:

Be it known that we, JAN POPIEL, a subject of the Emperor of Austria-Hungary, and JOSEF URBANSKI, a subject of the Emperor of Russia, and residents of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Horseshoe, of which the following is a specification.

This invention relates to horse-shoes adapted to be secured in position without the use of nails, and its object is to provide a detachable shoe which can be removed or secured in position at will at any time without the use of permanent securing devices, and without cutting or otherwise injuring the hoof.

In the accompanying drawings Figure 1 is a plan of this improved horse-shoe. Fig. 2 is a plan of the lower portion of the shoe. Fig. 3 is an elevation of the shoe. Fig. 4 is a section on the line 4-4 of Fig. 1. Fig. 5 is a section on the line 5-5 of Fig. 1. Fig. 6 is an elevation showing the corrugated inner side of the clamping members. Fig. 7 is a section on the line 7-7 of Fig. 1. Fig. 8 is a section on the line 8-8 of Fig. 7. Fig. 9 is a bottom view of the upper portion of the shoe. Figs. 10 and 11 are sections on the lines 10-10 and 11-11 respectively of Fig. 9. Fig. 12 is a rear elevation of the toe calk. Fig. 13 is a rear elevation of the heel calk.

Similar reference characters refer to like parts throughout the several views.

This shoe is formed of two portions; a permanent upper portion 1 which carries the securing means and a temporary or wearing lower portion 2 to which are attached the calks. These portions are normally secured together and act as a single shoe, and if properly taken care of so that the wear is confined to the calks, the life of the lower or wearing portion of a shoe may be as long as that of the upper member. Rigid clamping members 4 on one side of the hoof and yieldable clamping members on the other side hold the shoe on the hoof. The yieldable members may be swung outward to admit the hoof. Means are also provided for swinging these clamping yieldable members inwardly to securely clamp the hoof and hold the shoe in position. If desired, a strap may be employed to assist in holding the shoe firmly to the hoof.

The upper portion 1 and the lower por-

tion 2 may be secured together by means of screws 3. Rigidly attached to the part 1 are a series of clamping members 4, which project upward and slightly inward and are adapted to conform to and engage one side of the hoof. The opposite side of the lower portion 2 is recessed, as shown in Figs. 2 and 5, and in these recesses 5 and 6 are mounted the feet 7 and 8 of the yieldable clamping members 9 and 10. These recesses are so formed that the clamping members 9 and 10 can swing outwardly as shown in dotted lines in Fig. 5, the ribs 11 of the clamping members being pivoted in grooves 12 formed as shown in Fig. 2.

The parts being in the position shown in Fig. 1, the shoe is slipped back beneath the hoof with the clamping members 4 against one side, and means are then employed to swing the other clamping members 9 and 10 against the hoof to firmly hold the shoe in position. A bar 14 is pivoted to the lower side of the member 1 on the pin 15 so that it can swing as shown in dotted lines in Fig. 9. The lower side of the part 1 is formed with notches 16 and 17 to receive the wedge members 18 and 19, which wedge members engage over the feet 7 and 8 respectively of the clamp members 9 and 10. As shown in Fig. 5 the wedge 18 will press down the inner edge of the foot 7 and swing the upper edge of the clamp 9 inwardly to grip the hoof. Similarly, the wedge 19 will swing the clamp 10 inwardly. The clamps are preferably corrugated on their inner faces as shown in Fig. 6, to assist in gripping the hoof. In addition to the ridge 11, the clamps may be held in position by the pin 20, as shown in Figs. 7 and 8. The holes through which the pins extend are made sufficiently large to permit the clamps to rock. A tongue 21 may be formed on the bottom of the wedge 19 and enter the notch 22 in the foot 8 and thus assist in holding the clamp 10 rigidly.

To hold the bar 14 in position, the construction shown in Figs. 9 and 11 may be employed. A small tongue 23 is pivoted to the end of the bar 14 and may have a notch to receive the inner end of the pin 25. This pin is threaded on its outer end to receive the key 26 which may screw onto this pin. A guide 27 may be secured to the shoulder 28 on the part 1, and against this guide a shoulder 29 of the pin 25 is held by the coil

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spring 30. The tongue 23 enters between the guide 27 and the shoulder 32, and the spring 30 forces the end of the pin 25 into locking position. When it is desired to release the bar 14, the key is screwed onto the pin 25, whereupon the end 24 of the pin can be withdrawn and the bar 14 released. The reason for making the key removable is that if the key were always in position, the shoe could 10 easily be stolen.

To assist the clamps to hold the shoe in position, the straps 34 and 35 may be employed. Notches in part 1 receive the bifurcated ends 36 of the strap 34, pins 37 being employed to secure the ends. The other end is looped around the strap 35. This strap has one end secured to the ear 37 at one heel of the upper portion 1 of the shoe. The other end of the strap is connected to the small head 38, which is adapted to enter a slot in the upper face of the portion 1 as shown in Figs. 1 and 10. The ends of the head and slot are preferably beveled, as shown in Fig. 10, and the head has a 25 perforation or notch to receive the reduced end 39 of the tongue 23, which holds the head in position.

Calks of any desired description may be employed with this shoe, the toe calk 41 shown being secured in position by screws which pass through the holes 42, Fig. 2. Heel calks 44 may be secured by forming them with a threaded portion 45 which screws into the holes 46. The arm 14 being in the position shown in dotted lines, Fig. 9, the shoe is slipped back beneath the hoof, to position, the straps 34 and 35 are arranged in their proper places, the head 38 is pressed into its slot, the clamps 9 and 10 are pressed inwardly and the bar 14 is swung outwardly to the position shown in Fig. 1. The wedges 18 and 19 will engage over the feet 7 and 8 of the clamps and force these clamps against the hoof. The end 39 of the tongue 23 will enter the small hole in the head 38 and lock the head in position. The pin 25 will lock the bar 14 in its operative position. To remove the shoe it is merely necessary to screw the key 26 onto the pin 25 and when the tongue 23 is free, to swing the bar 14 inwardly.

Many changes may be made in the details of construction without departing from the spirit of our invention, which we claim is:—

55 1. In a horse-shoe, the combination of upper and lower members, rigid clamping plates secured to one side of the shoe, movable clamping plates mounted at the other side of the shoe, a bar pivoted to the shoe,

and wedges carried by the bar to force the 60 movable clamping plates against the hoof.

2. In a horse shoe, the combination of upper and lower members, rigid clamping plates secured to one side of the shoe, movable clamping plates mounted at the other 65 side of the shoe, a bar pivoted to the shoe, wedges carried by the bar to force the movable clamping plates against the hoof, and means to lock the bar in clamping position.

3. In a horse shoe, the combination of 70 upper and lower members, means to secure them together, rigid clamping plates secured to one side of the shoe, movable clamping plates pivotally mounted at the other side of the shoe and having inwardly projecting feet, a bar pivoted at its front end to the shoe, wedges carried by the bar adapted to enter between the members of the shoe above the feet on the movable plates, a tongue at the rear end of the bar adapted 80 to enter a notch in said upper member, a spring-held pin mounted in said upper member and adapted to engage and lock said tongue, and means to withdraw the pin.

4. In a horse shoe, the combination of 85 upper and lower members, rigid clamping plates secured to one side of the shoe, movable clamping plates mounted at the other side of the shoe, a bar pivoted to the shoe, wedges mounted on the bar and adapted to 90 engage the movable clamping plates to force the same against the hoof, a strap connected to one heel of the shoe and having an engaging head at the other end, means to lock said bar and said head at the other heel of 95 the shoe, and a second strap connecting to the toe of the shoe and to the middle portion of the first strap.

5. In a horse shoe, the combination of upper and lower members, rigid clamping 100 plates secured to one side of the shoe, movable clamping plates mounted at the other side of the shoe formed with ridges on their lower faces which ridges are mounted in notches in the lower member and form pivots for the plates, a bar pivoted to the shoe, and wedges carried by the bar adapted to enter notches in the upper member and to force the movable clamping plates against the hoof.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

JAN POPIEL.
JOSEF URBANSKI.

Witnesses:

ALBERT A. HOFMANN,
AUGUST BEIROWSKI.