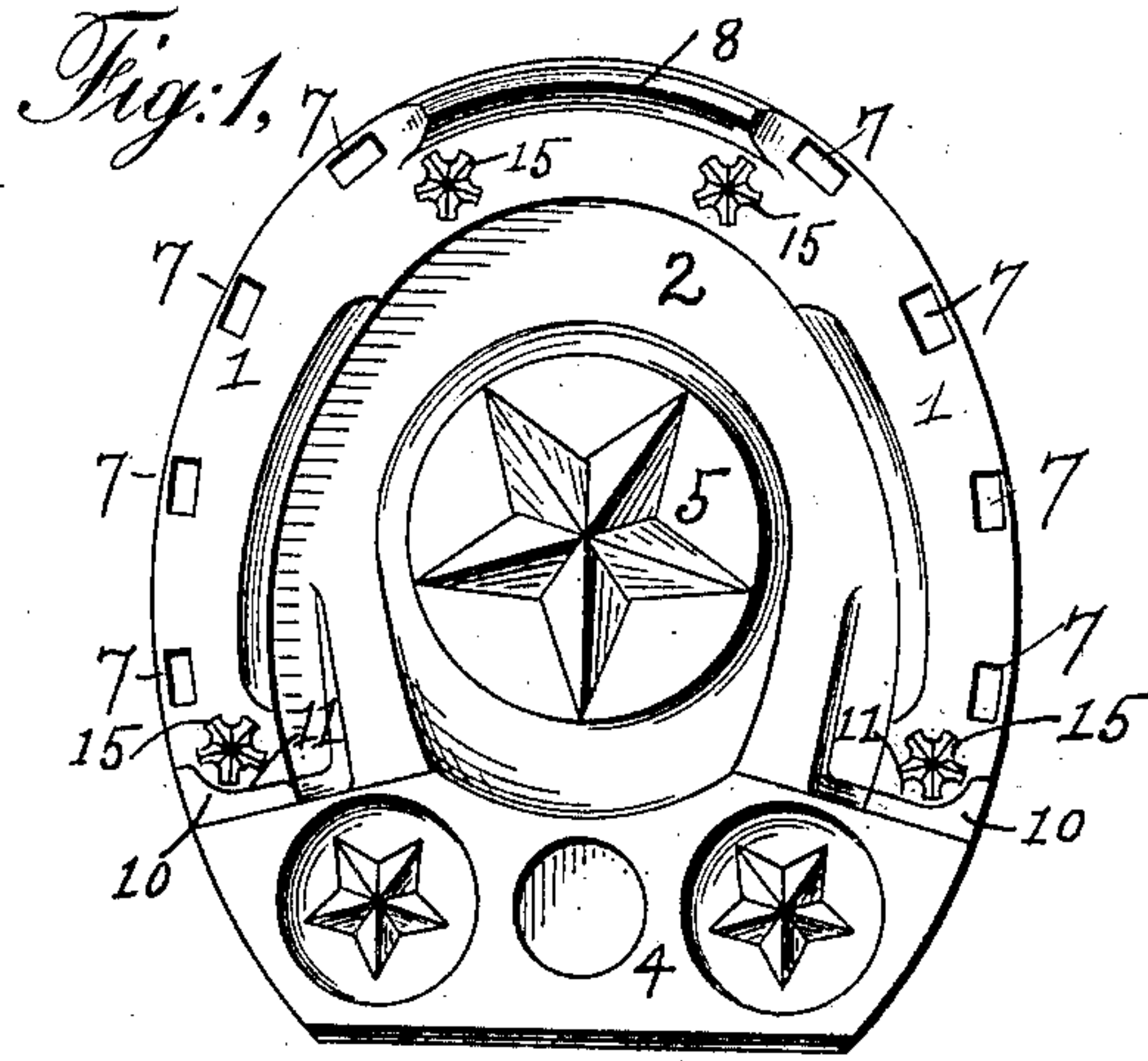


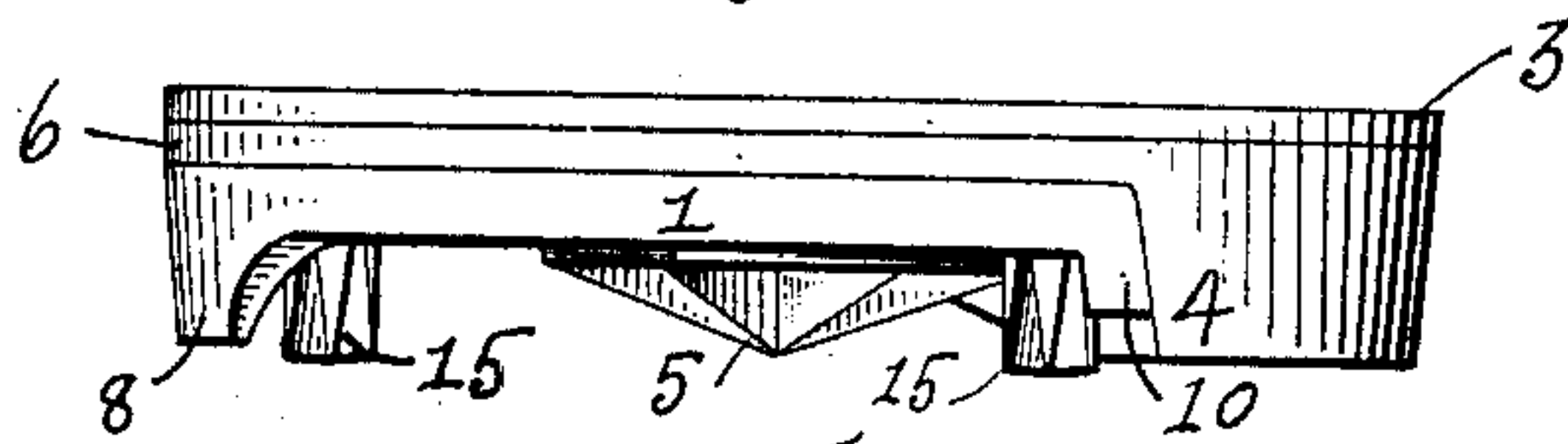
No. 829,647.

PATENTED AUG. 28, 1906.

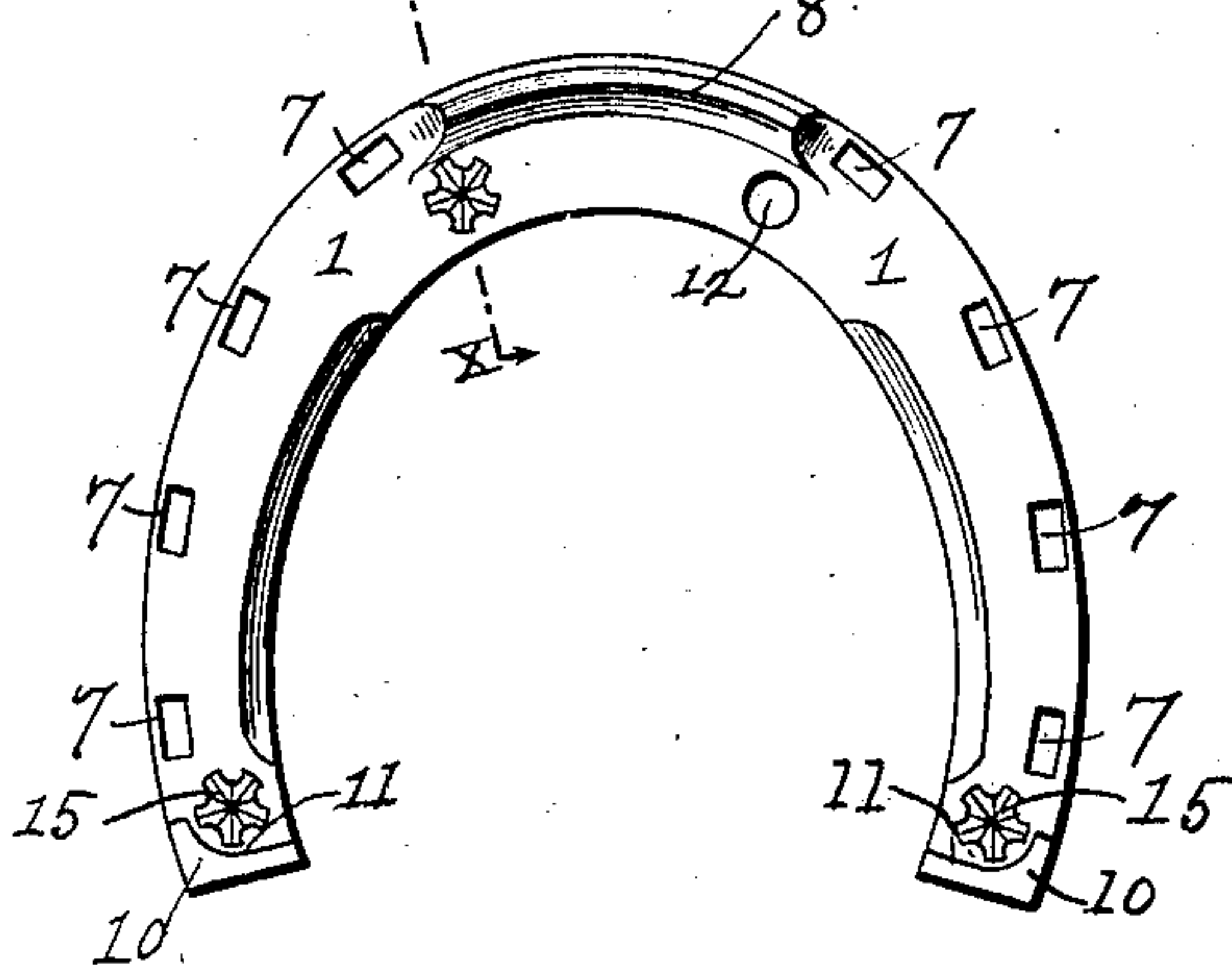
M. HALLANAN.  
DETACHABLE CALK HORSESHOE.  
APPLICATION FILED MAY 4, 1904.



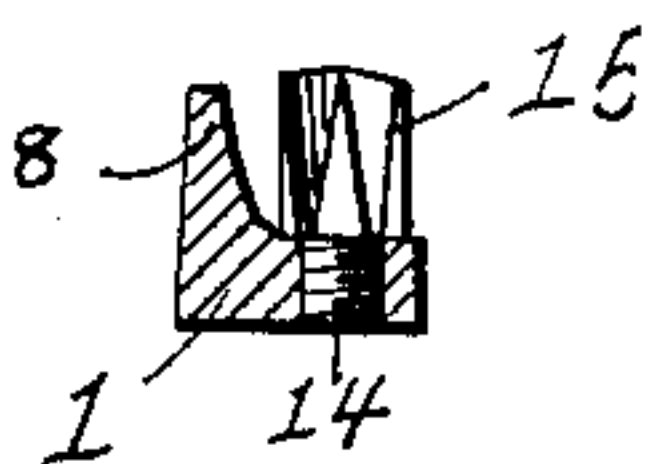
*Fig: 2,*



*Fig: 3,*



*Fig: 4,*



*Fig: 5.*



Witnesses  
Abner B. A. Doring  
Frank H. Wimmel.

Michael Hallanan,  
Inventor

By his Attorney  
Robt. B. Killgore.



# UNITED STATES PATENT OFFICE.

MICHAEL HALLANAN, OF NEW YORK, N. Y.

## DETACHABLE-CALK HORSESHOE.

No. 829,647.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed May 4, 1904. Serial No. 206,289.

*To all whom it may concern:*

Be it known that I, MICHAEL HALLANAN, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Detachable-Calk Horseshoes, of which the following is a specification.

My invention relates to improvements in metallic horseshoes provided with detachable calks; and the objects of my improvements are to provide a shoe which will be light in weight, which can be used either with or without the detachable calks, in combination with an elastic pad, if desired, to so construct the metallic shoe that the sockets for the detachable calks will be protected from injury when the shoe is used without the detachable calks, and to so construct the detachable calks that their holding powers will be retained until completely worn out. I attain these objects in the manner illustrated in the accompanying drawings, wherein similar reference-numerals relate to similar parts throughout the several views.

Figure 1 is a face view of my improved shoe combined with an elastic pad; Fig. 2, a side view of the structure of Fig. 1; Fig. 3, a view of the metallic shoe with one of the detachable calks removed; Fig. 4, a cross-section on the line  $x x$  of Fig. 3 looking in the direction of the arrows; Fig. 5, a view of one of the detachable calks.

1 is a metallic horseshoe which may be either full size—that is, extending back to the heels—or of the tip or lunette type and used in conjunction with any suitable pad 2, as shown in Figs. 1 and 2, which pad has the heel-block 4 extending across the entire width, the central bulb 5, the flange 6, and the backing 3.

The shoe has the usual nail-holes 7 at proper intervals and is provided with a toe-calk 8, which is cut away so as to present the flat face in the rear, as shown in section in Fig.

4. At the rear or heel part are the calks 10 10, which are substantially square at the side and rear and concaved on the inner sides or corners, as at 11 11. These calks 8 10 10 may be termed the "permanent" calks. Immediately behind the toe-calk 8 and in the flat face of the shoe are two sockets, one of which, 12, is shown in Fig. 3. Similar sockets are made within or adjacent to the concaved portions of the heel-calks 10 10. While I have shown but four of these calk-sockets, I do not limit myself to any specific number. These

sockets are tapped to receive the threaded stems 14 of the calks 15. The calks are preferably star-shaped in cross-section, as illustrated in the various figures. Any suitable means of attachment may be used instead of the screw. These detachable calks are made slightly higher than the permanent calks 8 10 10. In ordinary weather the permanent calks give sufficient purchase to enable the horse to travel in safety; but when the pavements are extremely slippery the detachable calks may be inserted and give such purchase that the horse is at all times assured of a secure footing. The calks, being easily detachable, can be removed when the animal is in the stable, thereby saving wear on the floors, or worn calks may be quickly and easily replaced by new ones.

The permanent calks, being adjacent to and higher than the sockets for the removable calks, protect them from injury whether the calks are in place or removed. Heretofore detachable-calk shoes have been defective, because the sockets for the detachable calks were made in a flat shoe and unless the calks were always inserted the holes became battered and defaced by the pounding on the pavement and when it became necessary to insert the detachable calks they would not enter the sockets. As a result, the shoe had to be removed from the hoof and the sockets reamed out and refinished.

The star-shaped detachable calk used by me retains its holding powers until worn out, differing in this respect from the usual cone, which as it wears flat and smooth gradually loses its gripping powers.

If an elastic pad is to be used in conjunction with the shoe, the heel-block 4 is made slightly thicker than the height of the permanent calks, so that the full cushioning effect is obtained. The center of the pad may be depressed on its upper side, thereby lightening the weight and relieving frog-pressure.

The calks at the heels being cut off approximately square, as shown in Fig. 2, abut against the heel-block of the pad for a considerable vertical distance, thereby exerting sufficient pressure to hold the heel-block in place and prevent it from sagging away from the heel or flapping.

I am aware that square butt-joints have heretofore been used between the metal shoe and the heel-block of the pad; but the vertical line of contact has always been so short that no support has been afforded



the pad. If the shoe is thickened to secure a sufficient support, the weight is almost prohibitive. By using heel-calks abutting against the heel-block a light-weight shoe can be used and a sufficiently-long vertical line of contact secured to hold the heel-block of the pad in place.

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

1. A detachable-calk horseshoe having a permanent calk extending along the front edge at the toe, a flat surface behind said calk having sockets therein adapted to receive detachable calks; heel-calks at the rear of the shoe concaved on the inner corners; and sockets on the flat part of the shoe adjacent to the concavities adapted to receive the detachable calks.

2. A detachable-calk horseshoe having a permanent calk extending along the front edge at the toe, a flat surface behind said calk

having sockets therein; heel-calks at the rear of the shoe concaved at the inner corners and sockets on the flat part of the shoe adjacent to the concavities; and removable calks engaging said sockets.

3. The combination of a metallic horseshoe having a permanent calk along the toe, a flat face behind said calk, sockets in said face, heel-calks concaved on the inner corners, sockets in the flat part of the shoe adjacent thereto, and detachable calks having a substantially star-shaped cross-sectional wearing-surface and provided with means for engaging the sockets on the shoe.

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

MICHAEL HALLANAN

Witnesses:

ROBT. B. KILLGORE,  
FRANK H. WIMMEL.