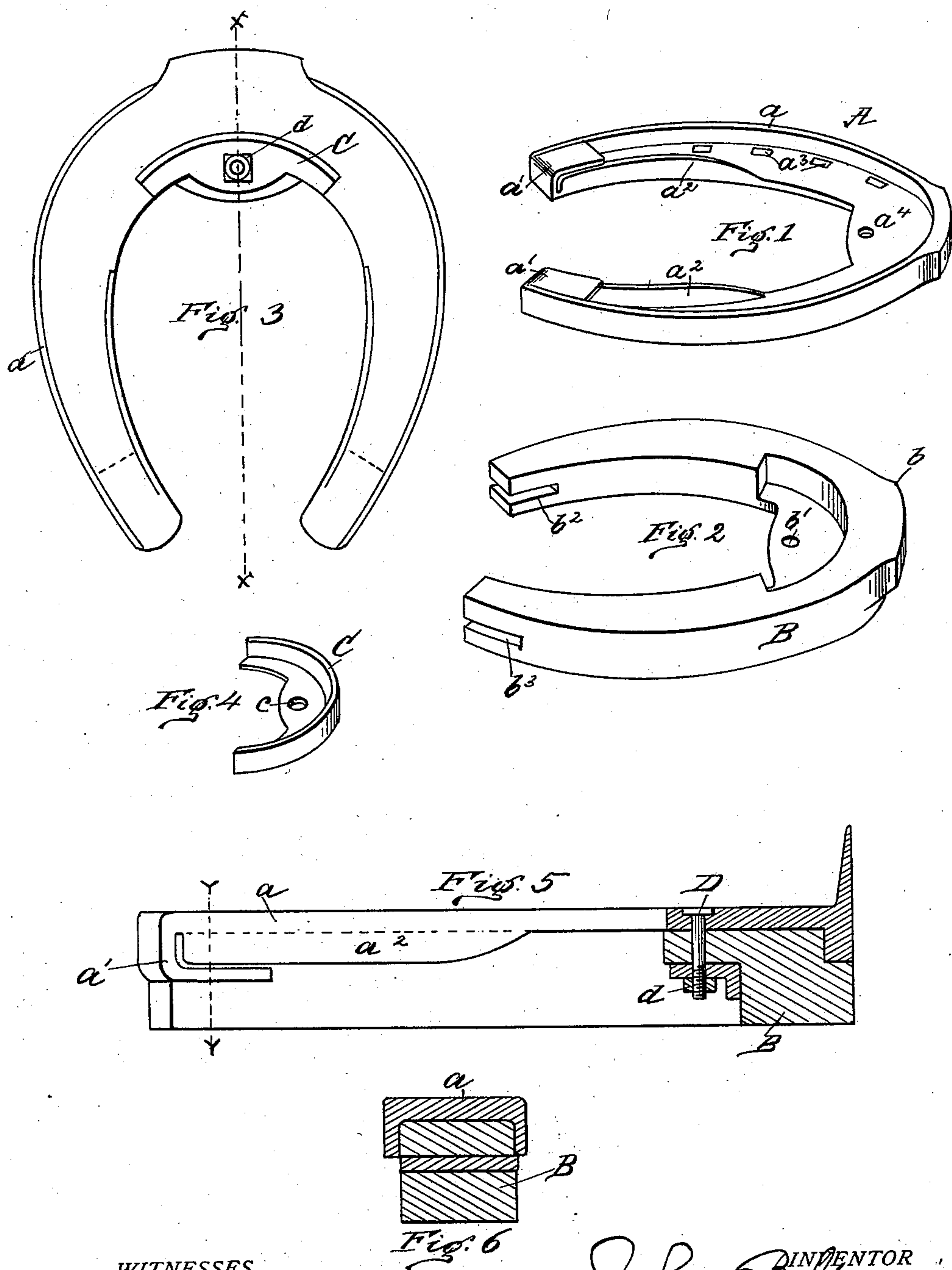


(No Model.)

J. B. GRAVIS.  
ELASTIC TREAD HORSESHOE.

No. 601,038.

Patented Mar. 22, 1898.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN B. GRAVIS, OF CANTON, OHIO, ASSIGNOR OF ONE-HALF TO M. D. WILSON, OF SAME PLACE.

## ELASTIC-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 601,038, dated March 22, 1898.

Application filed September 27, 1897. Serial No. 653,102. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. GRAVIS, a citizen of the United States, and a resident of the city of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Cushioned Horseshoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in horseshoes; and it consists of certain features of construction and combination of parts by which a soft-rubber cushion is held in engagement with the horseshoe by means of a clamping-plate located at the toe and intersecting lugs located at or near the heels of the shoe by means of which the rubber cushion may be readily removed, when desired, for the purpose of renewal, as will be hereinafter more fully described and claimed.

Figure 1 is a perspective view of the horseshoe. Fig. 2 is a perspective view of the rubber cushion. Fig. 3 is a top view of the shoe, showing the rubber cushion in position. Fig. 4 is a perspective view of the clamping-plate. Fig. 5 is a sectional view through the toe or front of the shoe at a point indicated by the dotted line  $xx$  in Fig. 3, showing the relative positions of the several parts. Fig. 6 is a sectional view through the heel of the shoe at the point indicated by the dotted line  $yy$  in Fig. 5.

In the accompanying drawings similar letters of reference refer to similar parts.

A represents a metallic horseshoe having formed upon its outer edge clips  $a$ , terminating in closed heels  $a'$ . Along the inner edge and extending from the toe forward there are provided clips  $a^2$ . In the base of the shoe are provided the usual perforations  $a^3$  for the passage of the nails, and in the center of the forward portion thereof adjacent to the toe there is provided a hole  $a^4$ , through which passes a T-headed retaining-bolt, which will hereinafter be referred to. The closed heels  $a'$  I have shown to be extended and bent forward and down upon the clips  $a$  and  $a^2$ , thus forming a lug to be engaged with slots  $b^2$  and  $b^3$  in the heels of the rubber cushion, as will be hereinafter more fully described and

set forth. These lugs, formed by bending forward and downward the closed end of the heel, may be done away with and corresponding lugs may be formed upon either or both of the clips  $a$  and  $a^2$  on either side of the heel of the shoe, the point being to provide at the heel a lug or projection which shall engage with the rubber cushion and hold it in position.

B represents a soft-rubber cushion adapted to conform to the shape of the inner portion of the shoe A and having a projecting toe  $b$ , which rests upon the metal toe of the shoe A. In the forward inner portion of the rubber cushion B there is countersunk a flange to conform in shape to and to receive the clamping-plate C. In both of the heels of the rubber cushion there are provided slotted apertures  $b^2$  and  $b^3$  to engage with lugs formed upon the heels of the metallic shoe A.

C is a small light metal clamping or retaining plate adapted to conform in shape to the configuration of the countersunk flanged portion of the soft-rubber cushion and having through its center a perforation  $c$ , through which passes the retaining-bolt D, which is T-headed at its base and screw-threaded to receive the locking-nut  $d$ .

I have found it desirable in the manufacture of the rubber cushion B to have the lower portion thereof slightly hardened or vulcanized, and the result is that it is held more firmly in position in the shoe and at the same time, the upper portion of the cushion being of soft rubber, the resiliency of the cushion is not interfered with.

In operation the shoe or base-plate A is first fitted to and then nailed to the foot of the horse. The rubber cushion B is then placed in position, the slotted apertures  $b^2$  and  $b^3$  in the heels engaging the corresponding lugs in the heels of the metallic shoe. The locking-plate C is then placed in position, and the nut  $d$  is then screwed down upon the locking-bolt, holding and clamping the cushion B in position. In case it should be desired to remove the cushion B for any purpose of renewal or otherwise, the nut is removed, the clamping or locking plate is then readily withdrawn, and the rubber cushion is free to be removed or adjusted, as may be desired.



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

1. An elastic-tread horseshoe having formed upon its outer edge clips terminating in vertical flanges at the heels, and corresponding clips located upon the inner edge near the heels, horizontal flanges projecting from the heels, a rubber cushion adapted to be seated in the metallic plate and having slotted apertures in the heels thereof, and a projecting toe which rests upon the metal toe of the shoe, a clamping-plate adapted to be countersunk in the rubber cushion, and a retaining-bolt by means of which the metallic plate and clamping-plate are held in engagement, substantially as described and for the purpose set forth.

2. The combination in an elastic-tread horseshoe, of a metallic plate having formed upon its outer and inner edges clips, closed heels at right angles thereto and having formed thereon horizontal lugs; a rubber cushion adapted to be seated therein and

having slotted apertures to engage with the horizontal lugs; a countersunk clamping-plate, and a retaining-bolt by means of which the metallic plate and clamping-plate are held in engagement, substantially as described and for the purpose set forth.

3. An elastic-tread horseshoe comprising a metallic plate having formed upon its inner and outer edges clips terminating in closed heels; horizontal flanges, a rubber cushion adapted to be seated in the metallic plate and having slotted apertures for engagement with the horizontal flanges; a clamping-plate, and a locking-bolt located in the rear of the toe by means of which the parts are held in engagement, substantially as described and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 25th day of September, A. D. 1897.

JOHN B. GRAVIS.

Witnesses:

CHAS. R. MILLER,  
CHAS. M. BALL.