

(No Model.)

G. W. WEMPLE.

HORSESHOE.

No. 396,521.

Patented Jan. 22, 1889.

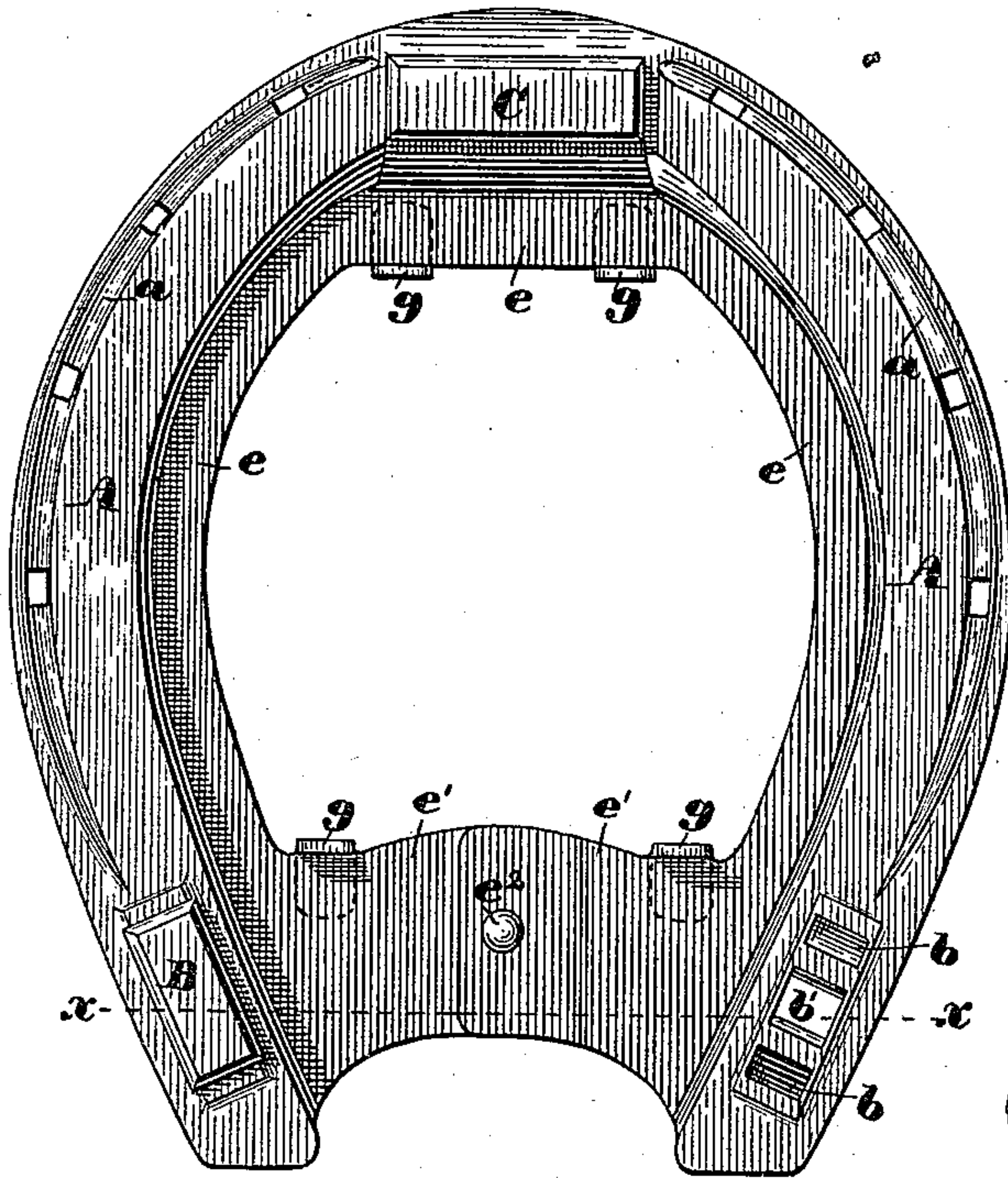


Fig. 1.

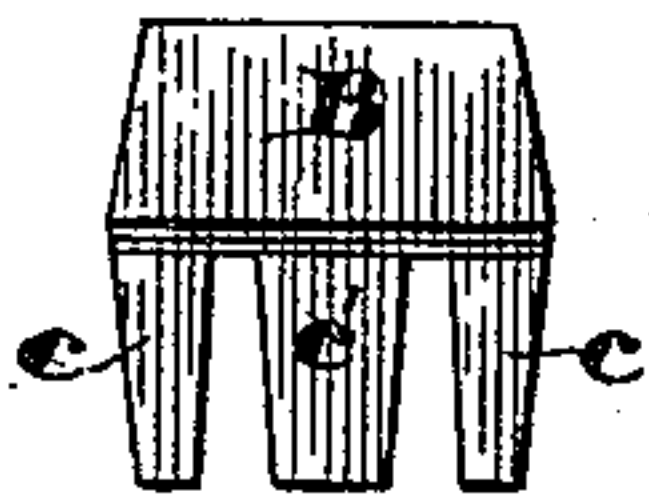


Fig. 4.

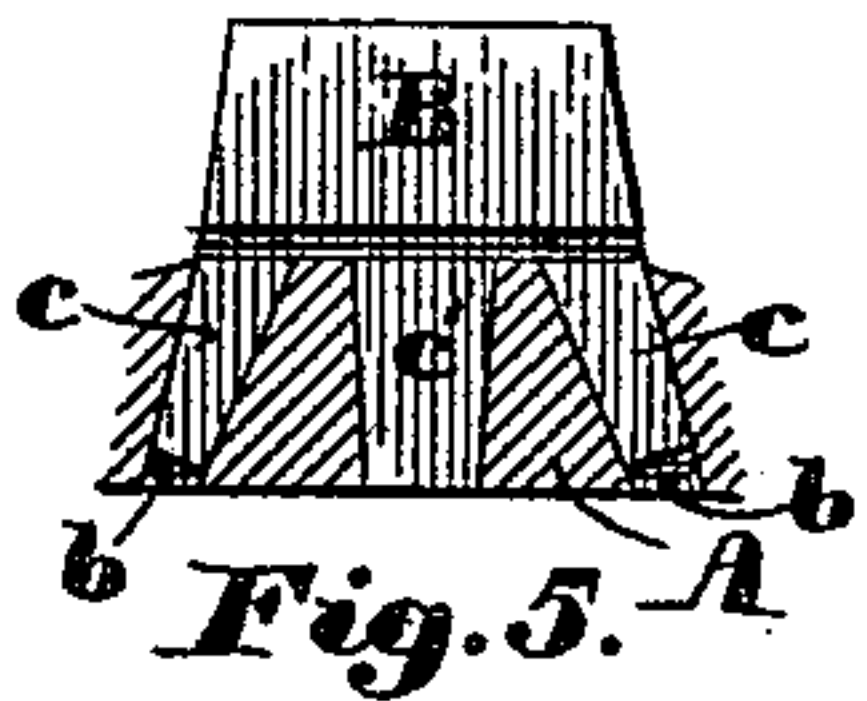


Fig. 5. A

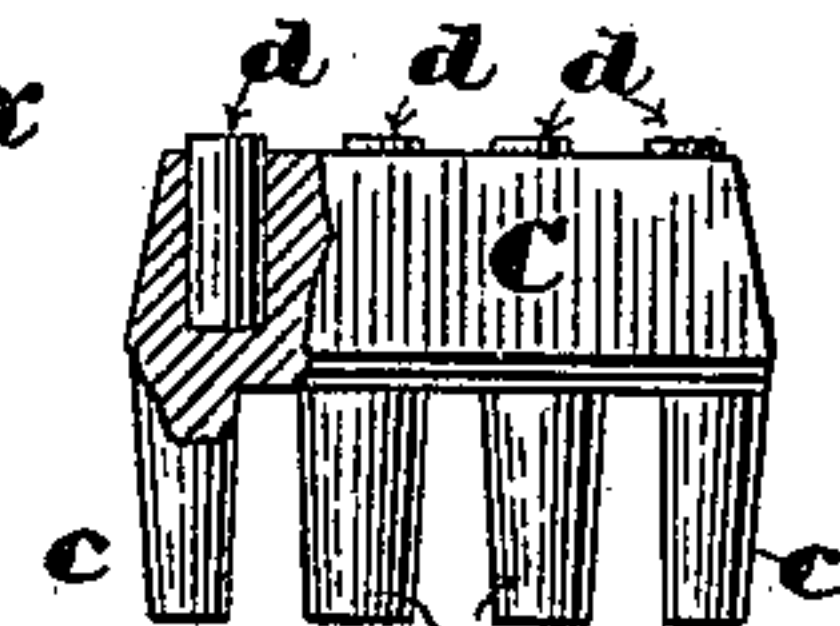


Fig. 6.

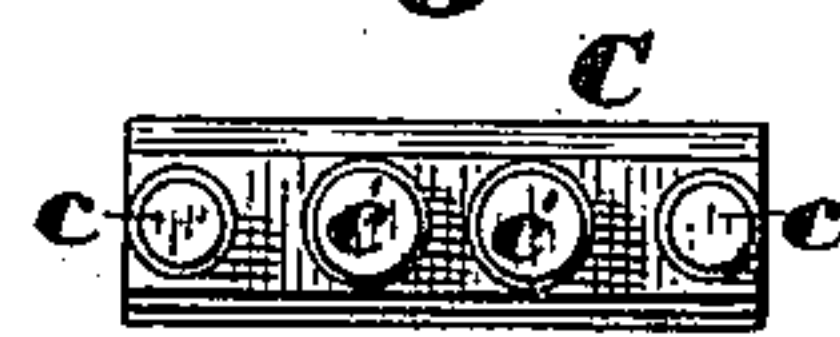


Fig. 7.

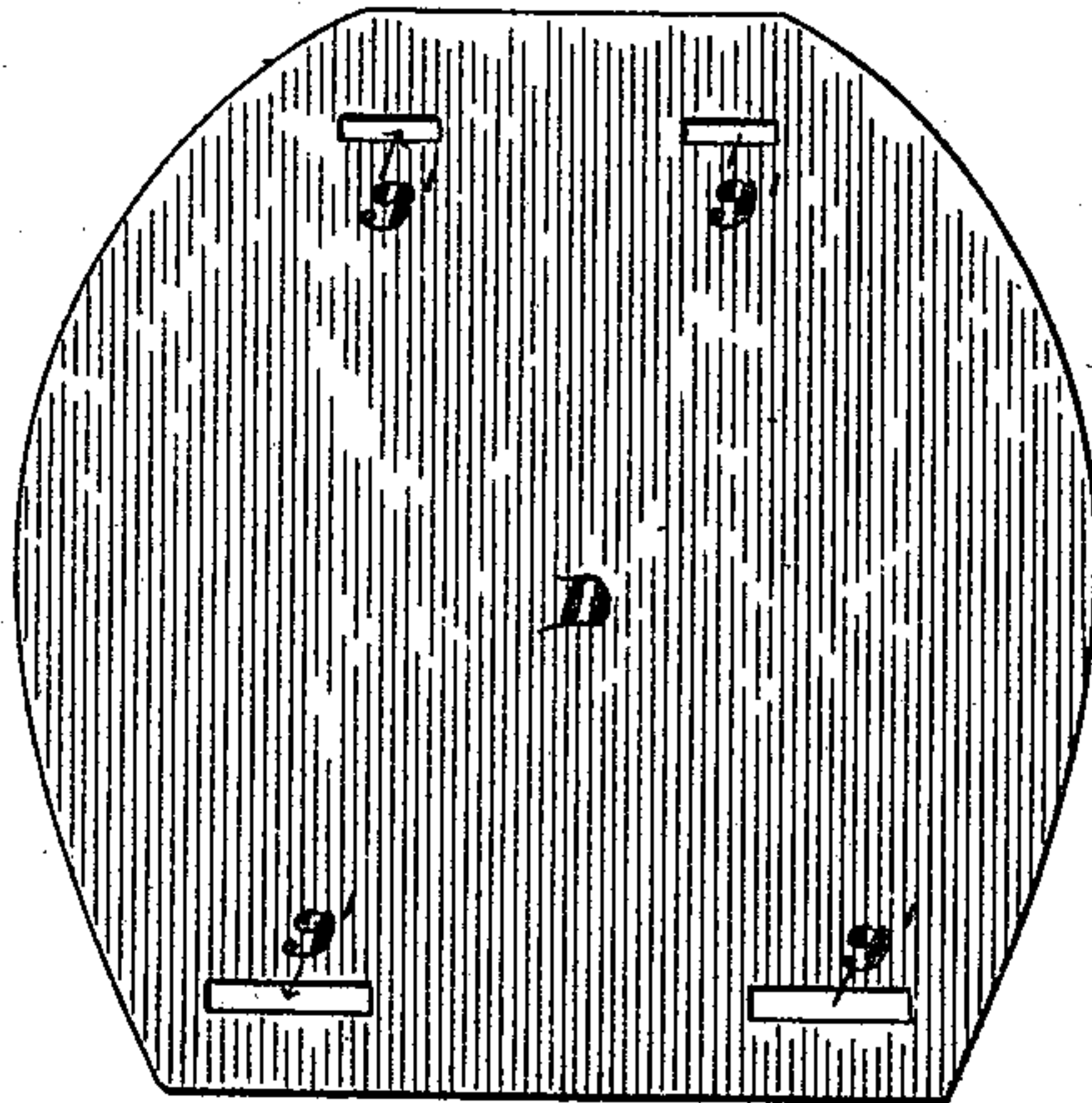


Fig. 2.

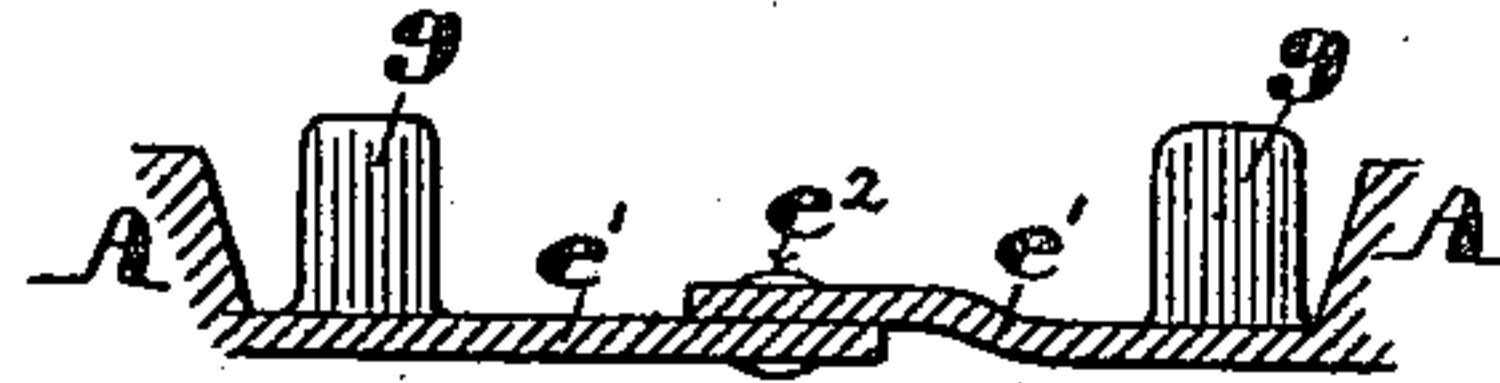


Fig. 3.

Witnesses:
Walter E. Lombard.
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UNITED STATES PATENT OFFICE.

GEORGE W. WEMPLE, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF NINETWENTIETHS TO BRAINARD W. CHILD, OF SAME PLACE.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 396,521, dated January 22, 1889.

Application filed December 1, 1887. Serial No. 256,634. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WEMPLE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Horseshoes, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to horseshoes, and particularly to that class of horseshoes which
10 are provided with removable calks; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the drawings, and to the
15 claims to be hereinafter given.

Of the drawings, Figure 1 represents a plan of my improved horseshoe with its plate removed. Fig. 2 represents a plan of the removable plate. Fig. 3 represents a partial
20 sectional elevation of said shoe, the cutting plane being on line *x x* on Fig. 1. Fig. 4 represents an elevation of one of the removable calks. Fig. 5 represents an elevation of the same after it has been driven into the shoe;
25 and Figs. 6 and 7 represent, respectively, an elevation and an inverted plan of a modified form of calk.

In the drawings, A is a horseshoe provided on either side thereof with the fullering or
30 crease *a*, in which are located the nail-holes, by means of which the shoe is nailed to the horse's hoof. The heel end of the shoe is provided on either side with three mortises, *b b* and *b'*, the center one, *b'*, of which passes
35 straight through the shoe while the others incline from each other, so that when the tenons *c c* and *c'* of the heel-calks B are driven into said mortises the outer tenons, *c c*, in entering the mortises *b b*, are turned outward in such a
40 manner as to form a clinch and firmly lock said calks in position without the use of screws or other modes of fastening. The tenons *c c* and *c'* are made tapered, so as to make a driving fit with the mortises *b b* and *b'*, thus more
45 securely locking the calks in position. The toe end of the shoe is also provided with a toe-calk, which is secured in the same manner.

The tenons *c c* and *c'* may be square, round, or any other form in cross-section without al-
50 tering the principles of my invention. The

calks B and C are preferably made of cast-steel with their wearing-surfaces hardened; but in winter weather, when the ground is covered with ice, it is found desirable to use a calk
such as is shown in Fig. 6, which is made of
55 cast-steel and provided with several hardened steel pins or bolts, *d d*, which project slightly beyond the main portion of the calk and thereby give a firmer hold upon the ice. When these calks B and C are worn so as to
60 be useless, they may easily be removed and replaced by new ones, while at the same time it is impossible for them to become loosened by common usage.

The advantages of a calk which may readily
65 be secured to a horseshoe without the aid of screws or other fastening, but which may be readily removed and replaced by a new one, are so obvious as to need no mention here. The inner edge of the shoe is provided with an
70 inwardly-projecting flange, *e*, which at the heel projects inward past the center, so that one portion will overlap the other portion, thus forming a connecting-bar, *e' e'*, between the
75 two heel ends of said shoe. When the shoe has been fitted to the horse's hoof, the two portions of the bar *e' e'* are connected together securely by the rivet *e²*, thus making a rigid connection. By this method the shoe can be
80 accurately fitted to the horse's hoof and then riveted together, so as to enjoy all the advantages of a solid bar-shoe. The flange *e* is provided with several ears, *g g*, which correspond
in number and position to the holes or openings in the plate D, so that said plate may be
85 placed in position within the shoe, resting upon the flange *e*, with said ears *g g* projecting through the openings *g' g'* in the plate D and the ears bent down (as shown in dotted lines in Fig. 1) upon said plate, thus firmly holding
90 the same in position for the purpose of holding packing when desired, or for the purpose of preventing the hoofs "snow-balling" in winter weather. When it is desired to use the shoe without the plate D, the ears *g g* may
95 be bent downward upon the flange *e*, as shown in dotted lines in Fig. 1.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A horseshoe provided with two diverging 100

inclined holes passing through or partially through the same, in combination with a calk provided with two tenons at right angles to the under surface of said calk and constructed
5 and arranged to be driven into said holes and follow the inclination thereof, bending upon themselves to form a clinch to firmly hold the calk in position.

2. A horseshoe provided with two diverging
10 inclined holes and a central hole at right angles with the surface of said shoe, in combination with a calk provided with three tenons at right angles to the under surface of said

calk and constructed and arranged to be driven into said holes, the outer tenons bending upon themselves and following the inclination of said diverging holes, thus forming a clinch to firmly hold said calk in position. 15

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of November, A. D. 1887. 20

GEORGE W. WEMPLE.

Witnesses:

WALTER E. LOMBARD,
N. C. LOMBARD.