

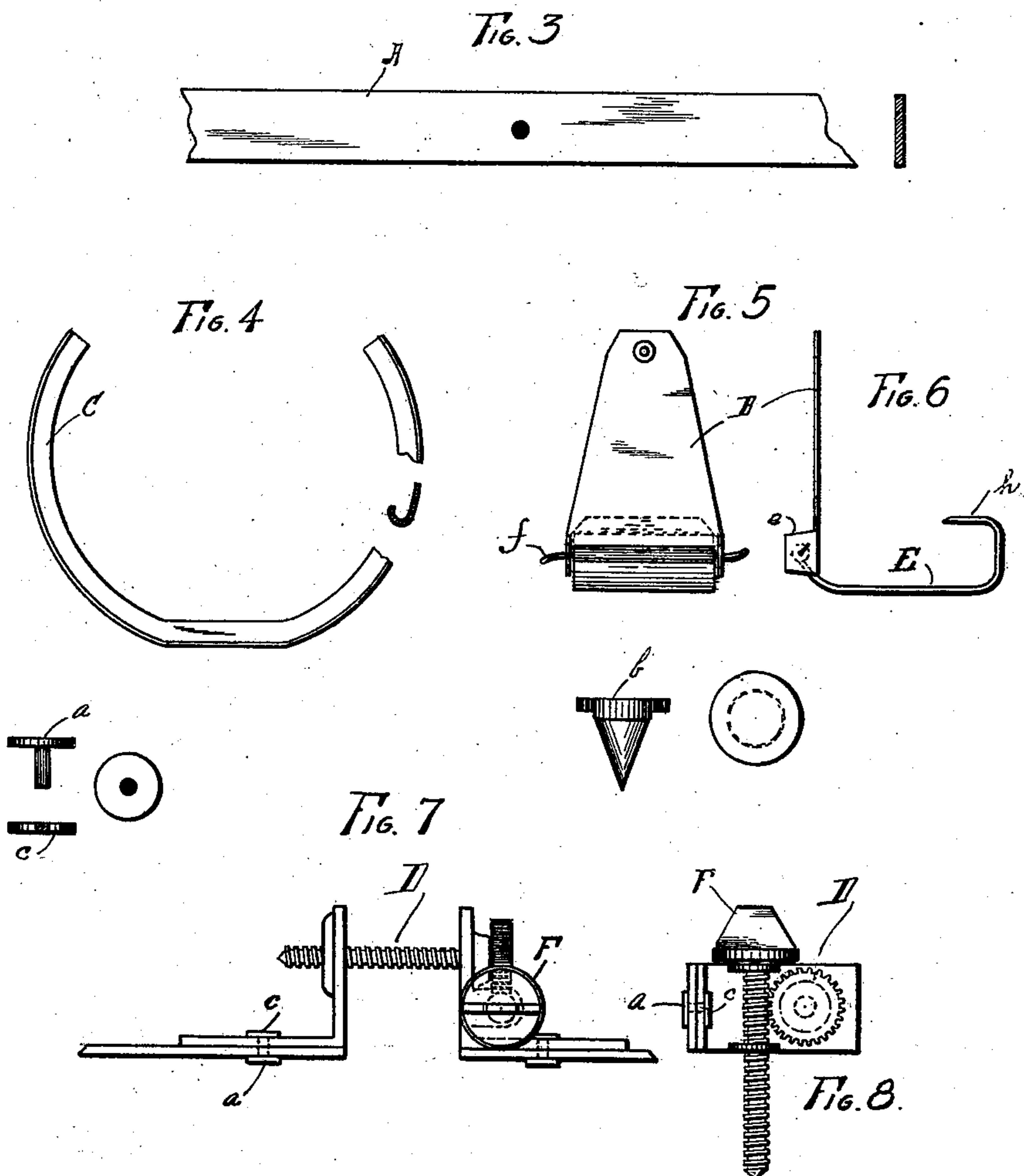
(No Model.)

2 Sheets—Sheet 2.

W. J. BROWNING.
REMOVABLE CALK FOR HORSESHOES.

No. 603,360.

Patented May 3, 1898.



WITNESSES:

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REMOVABLE CALK FOR HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 603,360, dated May 3, 1898.

Application filed December 31, 1897. Serial No. 664,904. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BROWNING, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Removable Calks for Horses' Shoes, of which the following is a specification.

My invention relates to calks; and the object of my improvement is to offer a cheap and durable device which can be readily removed from the shoes of horses and when adjusted will prevent a slipping on icy or smooth roadways.

The drawings fully illustrate my invention.

Figure 1 is a front elevation. Fig. 2 is a plan view. Fig. 3 shows part of the straps by which my calk is fastened to the hoof. Fig. 4 is a detailed view of the center metal strip which forms part of the support for my device. Fig. 5 is one of the metal plates which carry the spurs and shows the mode of connection with the strap. Fig. 6 is a side view thereof. Fig. 7 shows in detail the construction by which I can tighten the straps. Fig. 8 is a side elevation thereof.

In the main the article consists of a rubber or leather strap A, adapted to fasten around the upper part of the horse's hoof. Secured thereto by means of brads or their equivalent *a c* are a number of metallic plates B, preferably three in number, one in the front and one at each side, situated well toward the back. These plates are provided with side laps *e*, bent outward at a right angle and holding a wire *f* or its equivalent. This wire forms a suitable hinge for the free operation of metal plates E, bent with one end around the wire. The other end is bent to form the hook *h*, which fits between the shoe and the hoof and holds the calk in place.

The plates E are provided with spurs *b*, as illustrated. If convenient, I line the inner side of the plates with a layer of rubber *d*, (see right-hand side of Fig. 1,) which has a tendency to deaden the noise. The drawings also show a metallic strip C, situated in the center, shaped to fit the hollow in a horse's hoof and secured in any practical manner to the plates E, or adapted to be secured thereto by brads or their equivalent after the calk is strapped on. It will be found desirable to have the center strip permanently fastened to one or

more of the plates. One mode of doing this can easily be seen in the drawings and is the usual method of fastening parts of similar nature in other lines of manufacture.

Instead of strapping my device, as originally contemplated, I prefer the construction shown in Figs. 7 and 8, which allows a gradual tightening. The ends of the strap are fastened together by a screw D, which is actuated by a thumb-screw F, which fits with its thread into the head-thread of the screw D, and is adapted to tighten or loosen the strap when the thumb-screw is turned.

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

1. In a calk for horses' shoes, a strap A having secured thereto metal plates B, having side laps *e* which hold a wire *f*, which forms a suitable hinge for a plate E provided with spurs and adapted to be secured to a center strip C, substantially as shown and described.

2. In a removable calk for horses' shoes, a strap A having secured thereto plates B, plates E hinged thereto and provided with spurs and held in place by a center strip C, substantially as shown and described.

3. The combination, in a removable calk for horses' shoes, of a strap A held together by a threaded screw D operated by a thumb-screw F, and side plates B secured to the strap A and having hinged thereto plates E carrying spurs *b* and finding support through a fastening to a metal center strip C adapted to fit into the frog of a horse's foot, substantially as shown and described.

4. In a device of the sort described, a strap adapted to be tightened by a thumb-screw, operating a threaded screw, which holds the ends of the strap together, side plates secured to the strap, spur-carrying plates hinged thereto and adapted to be secured to a metal center strip fitting into the hoof of the horse's foot, substantially as shown and described.

Signed at Bayonne, in the county of Hudson and State of New Jersey, this 29th day of December, A. D. 1897.

WILLIAM J. BROWNING.

Witnesses:

FRED. F. SMITH,
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