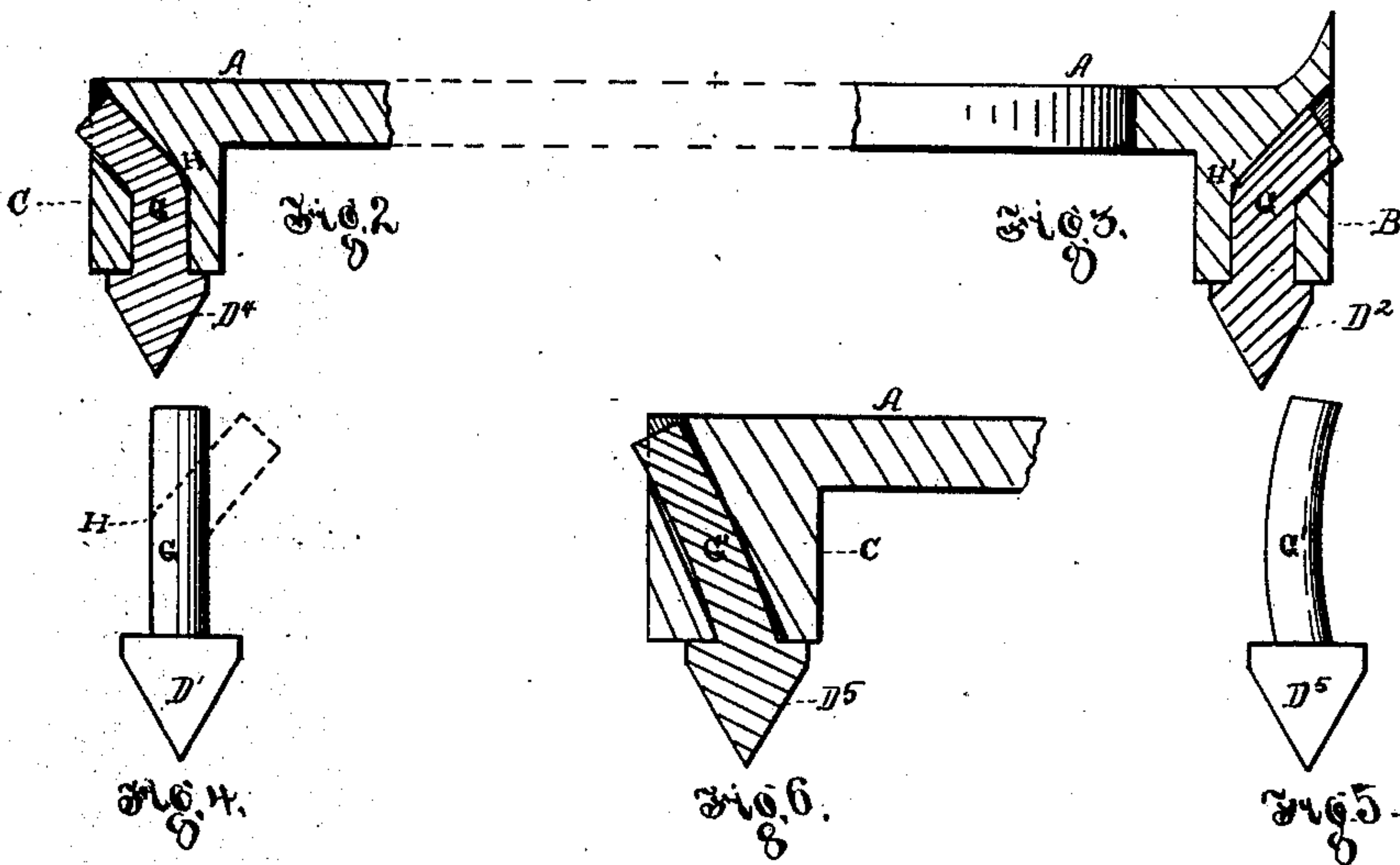
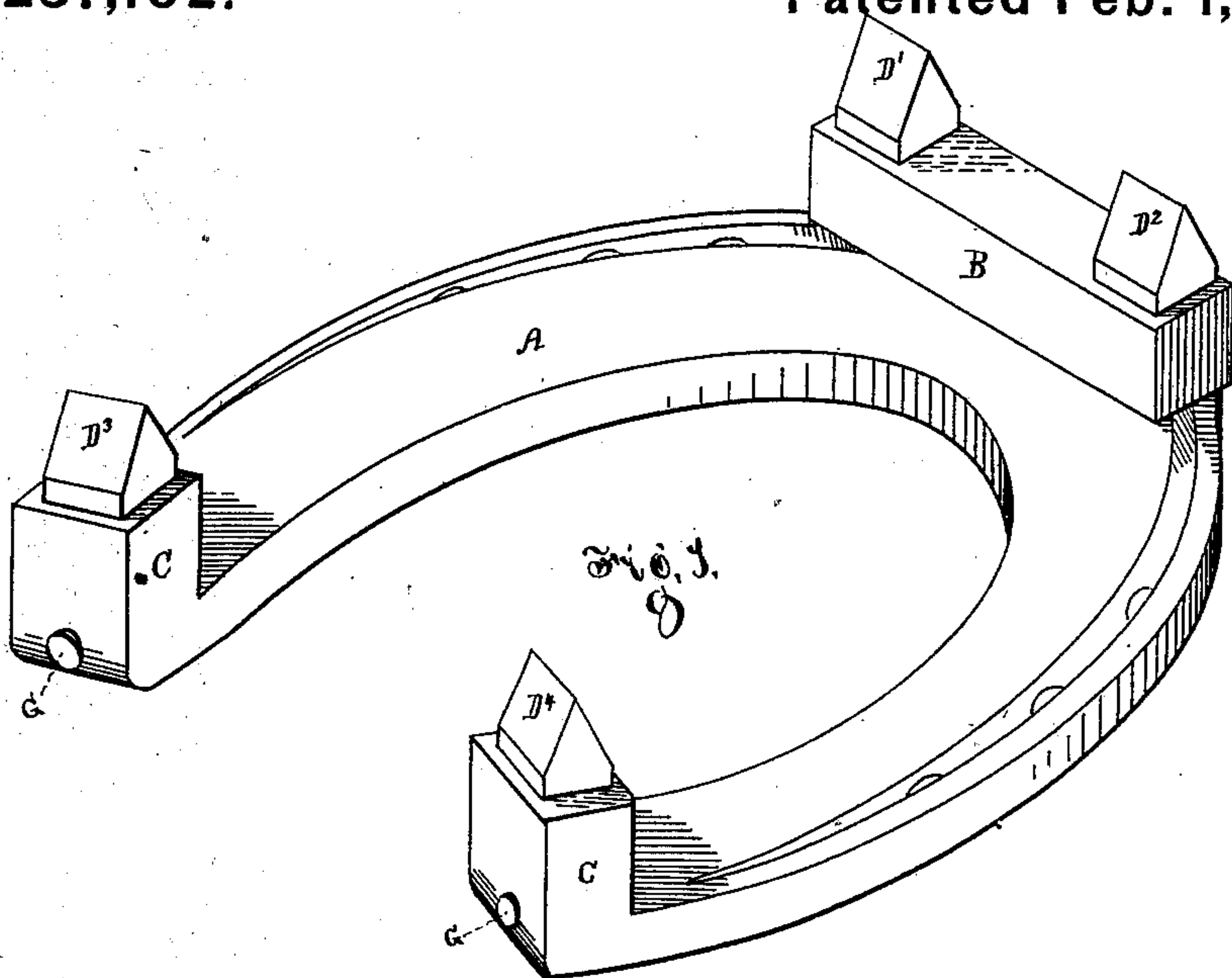


G. K. FLOWER.  
Horseshoe.

No. 237,102.

Patented Feb. 1, 1881.



WITNESSES.

R. C. Winchell  
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# UNITED STATES PATENT OFFICE.

GEORGE K. FLOWER, OF PITTSBURG, PENNSYLVANIA.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 237,102, dated February 1, 1881.

Application filed December 18, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE K. FLOWER, of Pittsburg, Pennsylvania, have invented a new and useful Improvement in Horseshoes, of which the following is a specification.

The object of my invention is to provide a safe, expeditious, and inexpensive method of roughing horses for winter travel, by inserting into the shoes steel or iron calks with projecting heads in such a manner that they will not become loosened by use, and still may be easily removed at will.

The accompanying drawings illustrate the manner in which the object of my invention is attained, similar letters referring to similar parts throughout the several views.

Figure 1 is a perspective view of a horseshoe having calks with pointed heads inserted in the calk-bases of the shoe, B C C indicating the toe and heel calk bases of the shoe, and D' D<sup>2</sup> D<sup>3</sup> D<sup>4</sup> the heads of the calks, with stems or shanks G, for insertion into the calk-bases.

Figs. 2 and 3 are sectional views with curved or angular lines, which indicate the direction of the orifices in the shoe and of the shanks of the calks passing through the same.

The dotted line H, Fig. 4, indicates the bending of the shank due to its insertion in the crooked or curved orifice.

Fig. 5 indicates a calk having a curved shank, G', and Fig. 6 a shoe with a straight orifice passing through one of the calk-bases, in which said calk is inserted.

In the following description the mode of application and use of my invention are fully set forth.

Horseshoes being made with angular, curved, or laterally-inclined orifices in each heel-calk base C C, extending from the bottom of the calk-base to the upper angle or bend of the shoe, close behind the bearing-point of the heel of the horse's foot, and other orifices being made in the toe of the shoe from the bottom

of the calk-base to the upper outer edges of the shoe in front, the shanks or stems of the calks are inserted and driven in, each shank bending to conform to the differing line of direction of the orifice. The calks are made with heads of greater thickness than the shanks, to afford a shoulder to rest against the bottom of the calk-base, said heads being conical, wedge-shaped, square, or round, to roughen the horse or simply add to the wear of the shoe, as required.

The insertion of the calks into the calk-bases may be done either before or after the shoeing of the horse, and the calks or fragments thereof may be driven back from the top without removing the shoes from the horse's feet. In this manner one set of shoes will outlast many sets of calks, and thereby save the labor, time, and expense of removing the shoes to be sharpened or for repairs.

My invention consists in having the orifices in the shoes so differing from the shape of the shank of the calks before their insertion that the bending of the latter in their passage through the orifices will cause them to stay there with sufficient permanency for use, allowing at the same time an easy removal of the calks, when desired.

I claim—

The improved horseshoe described and shown, comprehending a shoe and integral calk-bases perforated from below upward, for the reception of the stems of the calks proper, said perforations being severally curved or crooked, and calks made separate, but confined to the shoe by the curvature or crook of the stem due to its having been driven through said holes or perforations in the operation of attaching said calks.

GEORGE K. FLOWER.

Witnesses:

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