

(No Model.)

W. J. & M. J. MOHAN.
HORSESHOE.

No. 485,470

Patented Nov. 1, 1892.

Fig. 1.

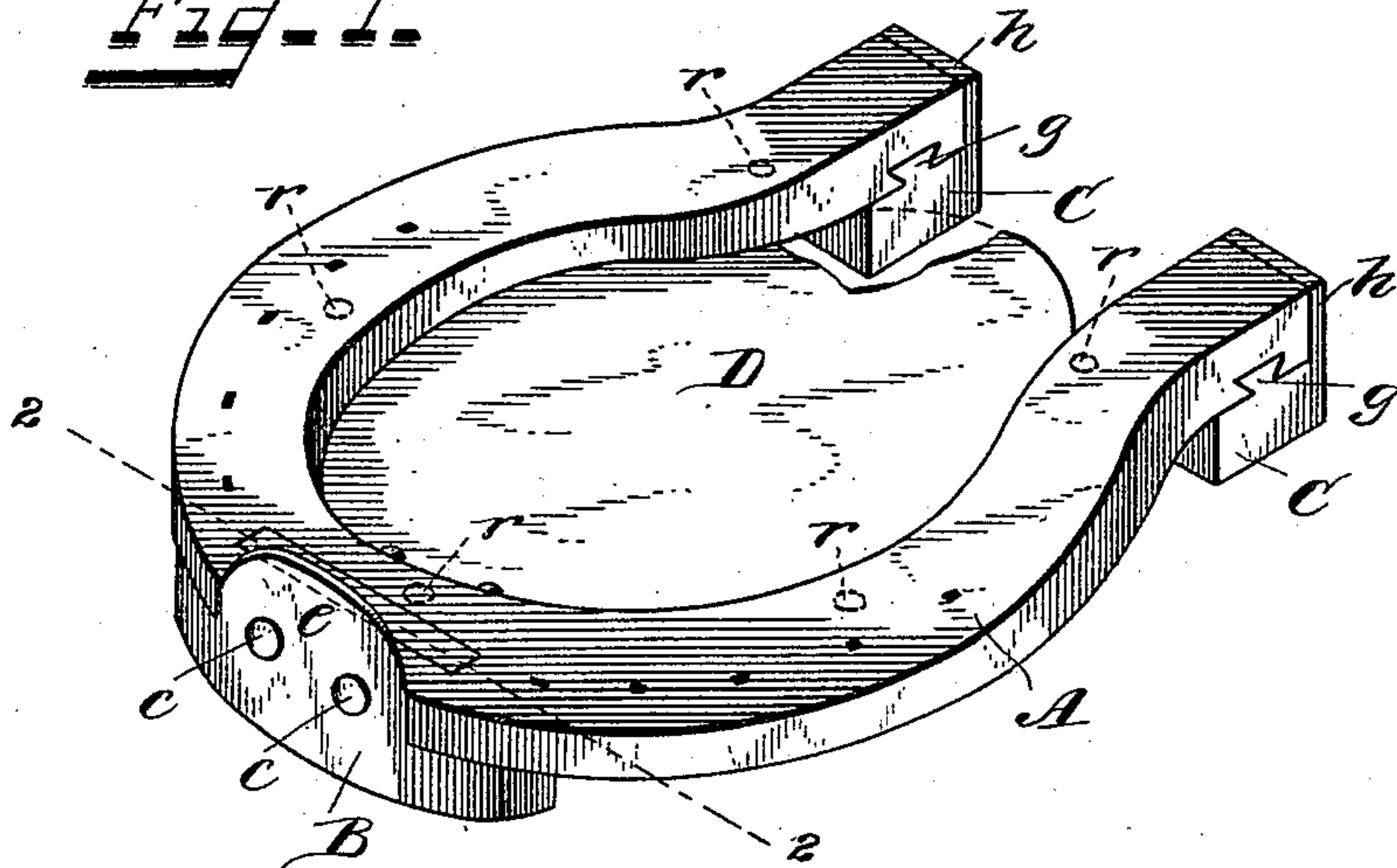


Fig. 2.

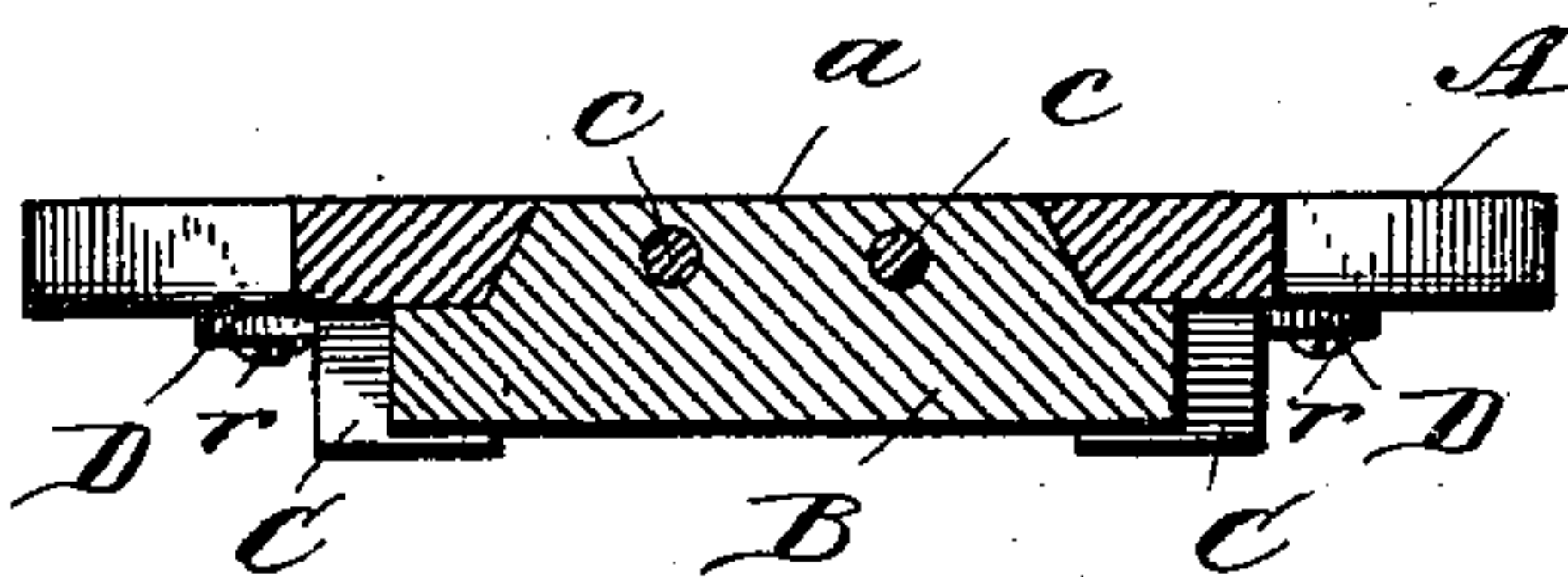


Fig. 3.

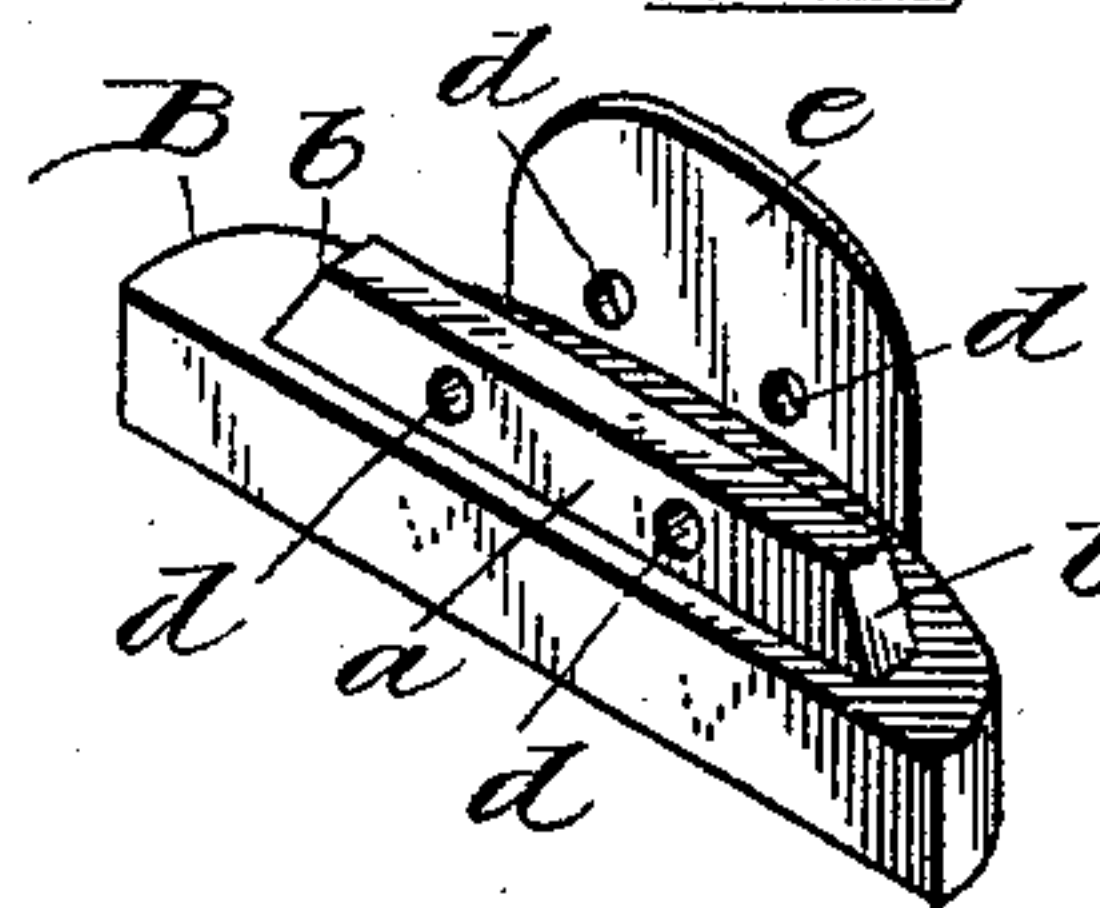


Fig. 4.

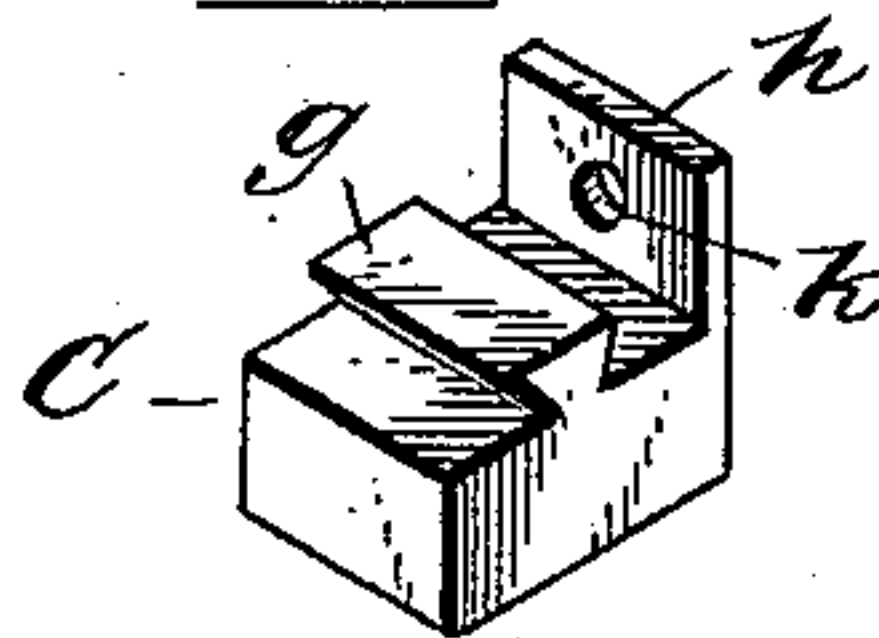


Fig. 5.

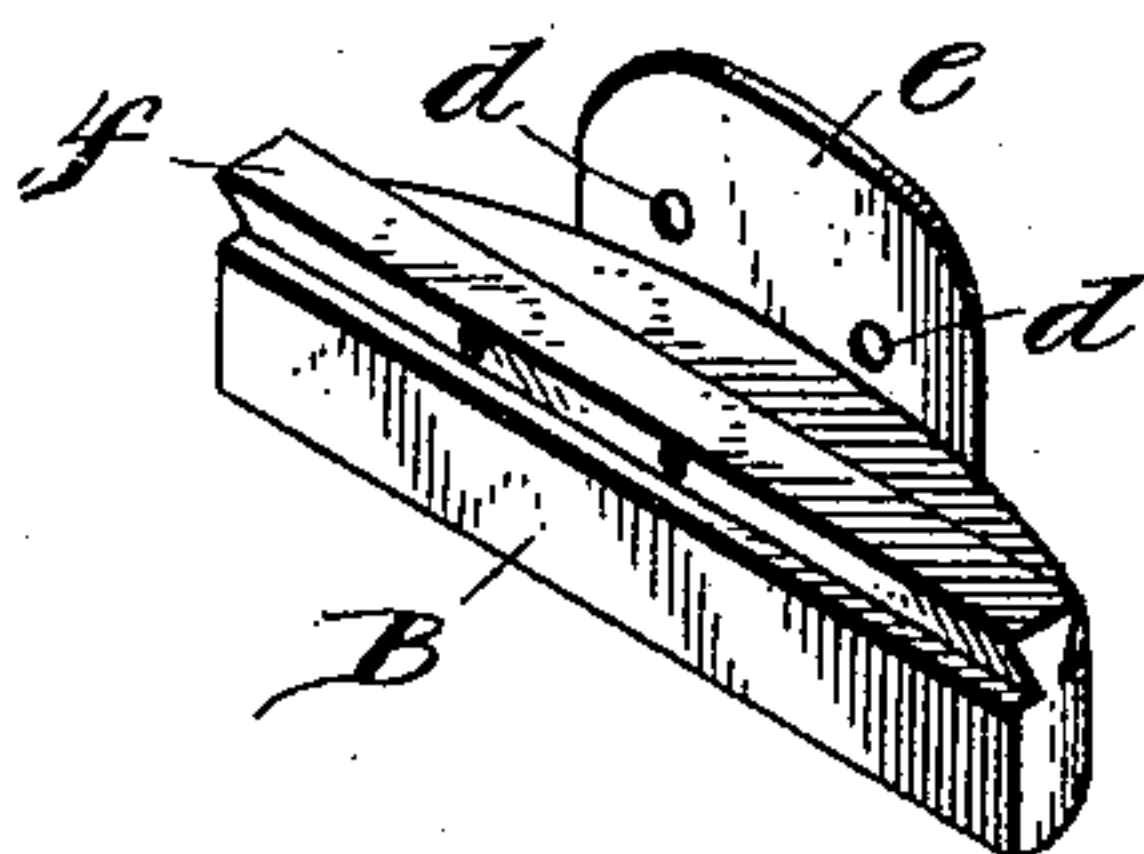


Fig. 6.

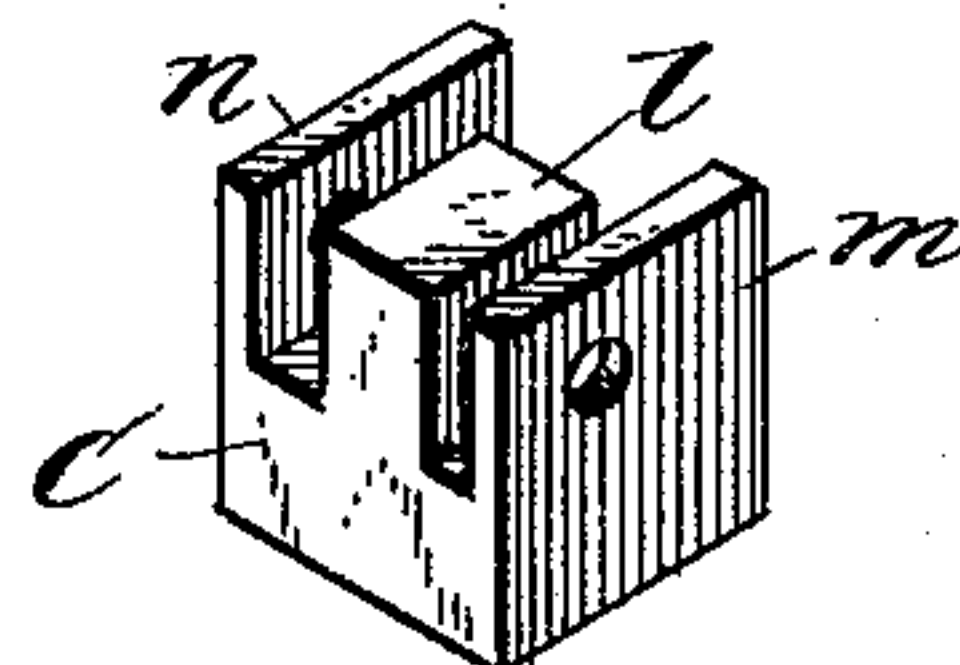
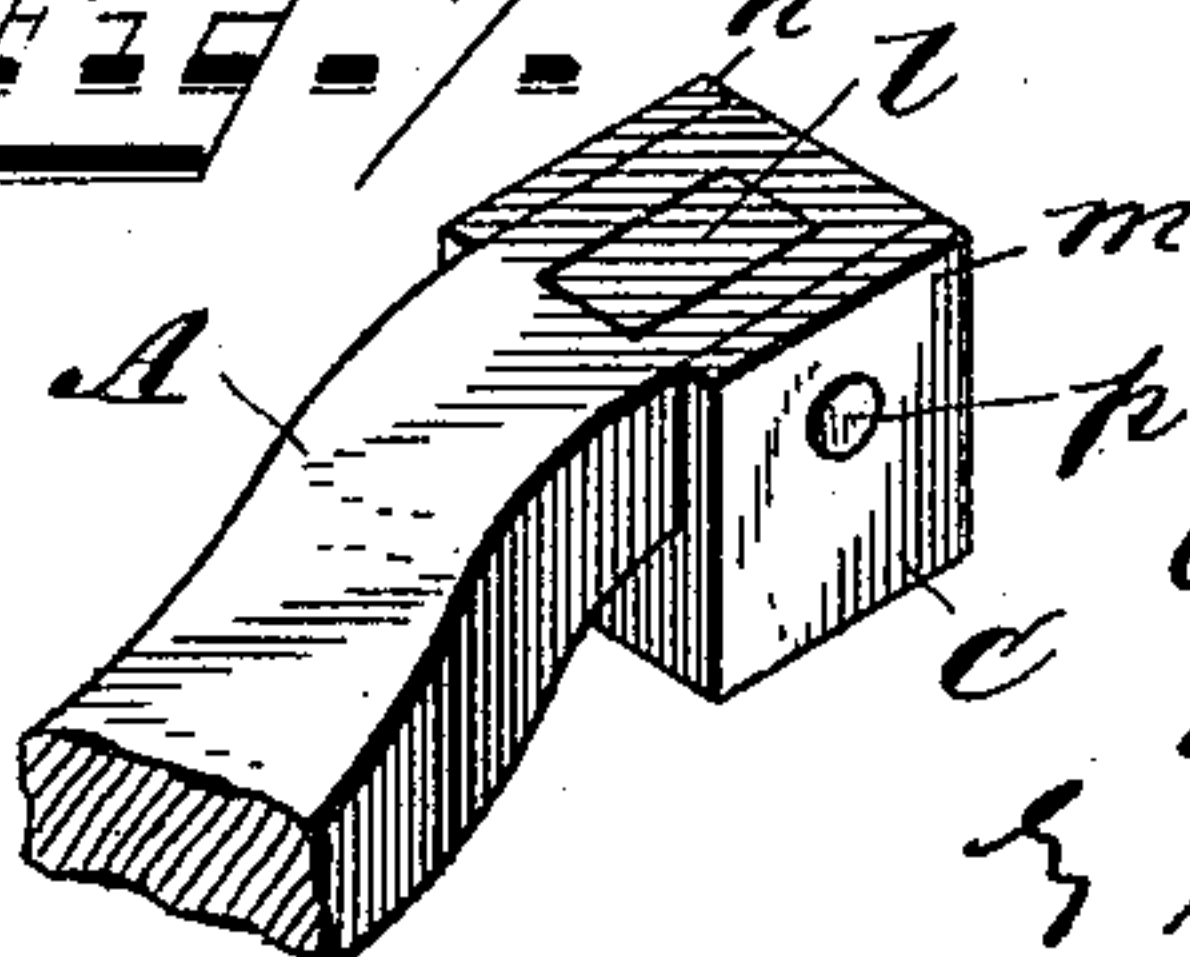


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM J. MOHAN AND MICHAEL J. MOHAN, OF COVINGTON, KENTUCKY.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 485,470, dated November 1, 1892.

Application filed December 26, 1891. Serial No. 416,166. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. MOHAN and MICHAEL J. MOHAN, citizens of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Horseshoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The object of our invention is to furnish the ordinary horseshoe with removable toe and heel calks, so that when the calks become worn or dull they may be replaced by new ones without taking the shoe from the hoof of the horse. The calks and shoe consist of separate pieces of metal, which are united by mortise and tenon or by dovetailing the parts, being held in place by pins, which may be readily removed when it is desired to renew the calks; and the improvements consist of a certain novel construction and arrangement whereby the calks may be held rigidly in place while in use and at the same time may be readily removed when desired, all of which will be hereinafter more particularly pointed out and claimed.

In the ordinary method of constructing horseshoes where the heels and toes are an integral part of the shoe these heels and toes wear down in a very short time—often on the rough granite streets of cities in a day or two—so that it is necessary to tear the shoe from the hoof every few days in order to keep them properly shod. This tearing off of old shoes to replace them with new ones often in a short time ruins the hoofs of the horse, requiring constant paring and burning of the hoof to fit the new shoe, and soon rendering it necessary to send the horse to pasture, often for months at a time, to allow the hoof to grow. Even when this is not necessary the constant shoeing of the horse wastes much valuable time in the active use of a horse. The waste of time and labor in thus constantly replacing old shoes with new ones also leads owners to neglect the proper shoeing of the horse and to take the chance of his slipping and falling on the streets. It is the object, therefore, of our invention to overcome these difficulties by making the toe and heel calks of separate

metal and arranging the shoe so that in a very few moments the horse may be newly shod by replacing the old and worn calks with new ones. This is all that it is necessary to do, as it is never the body of the shoe that becomes worn, but merely the toe and heel calks.

We are aware that it is old to thus use removable toe and heel calks; but in older constructions in order to properly secure the calks to the shoe it has been found difficult to simplify the arrangement so that the shoe would be practically useful, and such constructions have not gone generally into use. Simplicity, above all things, is essential. Otherwise in the rough usage to which the shoe is put the calks become jammed or twisted, and it is impossible to remove them when they become slightly worn. The method of securing the calks to the shoe must be extremely simple, so as neither to weaken the main body of the shoe or the calks themselves, and it is to this simplification and durability of connection that our invention is directed.

We also use in connection with our shoe a thin plate of metal properly secured to the body of the shoe and extending across the opening, in order to protect the foot of the horse from nails, glass, or other injurious matter which the horse is very apt to step on and drive into the frog of the foot.

In the drawings, Figure 1 is a perspective view of our improved horseshoe. Fig. 2 is a front sectional view taken on the lines 2 2 of Fig. 1. Fig. 3 is a perspective view of one form of toe-calk; Fig. 4, a similar view of one form of heel-calk; Fig. 5, a view of a modified toe-calk; Fig. 6, a view of a modified heel-calk. Fig. 7 represents a part of the shoe, showing the modified heel-calk in place.

A is the main body of the shoe, made in the ordinary way. B is the toe-calk. This calk is formed with a broad tenon *a*, nearly as wide as the calk and having outwardly-flaring ends *b b*. A corresponding mortise is formed in the shoe, and when the tenon of the toe-calk has been snugly fitted in place the calk is rigidly secured in position by the rivets or pins *c c*, which are driven in through the walls of the shoe and the openings *d d* in the calk. Integral with the front face of the calk and

extending upward is a lip or clip *e*, against which the hoof of the horse rests when the shoe is in place. Instead of the construction shown in Fig. 3 for securing the toe-calk, if
 5 desired, the calk may be dovetailed to the shoe, a dovetailed tenon *f* being formed on the calk, as shown in Fig. 5, to fit within a corresponding dovetailed groove in the shoe.

C is one of the heel-calks formed with a
 10 dovetailed tenon *g* to fit within a corresponding groove in the heel. Extending upward at the back of the heel-calk is a clip *h*, which fits over the end of the shoe, while a rivet or pin is passed through the opening *k* in the clip to
 15 hold the heel-calk in place. (See Fig. 4.) Another method of securing the heel-calks in place is shown in Figs. 6 and 7. A rectangular tenon *l* is formed on the calk, which fits into a corresponding mortise extending through
 20 the shoe, while clips *m* and *n*, one on each side, extend upwardly so as to embrace the sides of the shoe, and a pin or rivet *p* is passed through the shoe and both clips *m* and *n* to hold the calk in place.

25 In the construction above described it will be noticed that the points of attachment of the calks begin on the plane of the lower surface of the shoe and extend upward into or through the shoe, so that the calks can wear
 30 down flat with the surface of the shoe and the calks still be readily removed by driving out the rivets, when new calks can be easily in-

serted and fixed in place without removing the shoe from the hoof.

In connection with our shoe we also employ 35 the plate *D*, secured to the outer surface of the shoe by the screws *r r*. This plate extends entirely across the frog of the horse's foot and protects it from nails and the like.

Having thus described our invention, what 40 we claim, and desire to secure by Letters Patent, is—

1. In a horseshoe, the combination, with the body of the shoe having a groove, of a calk having a tenon fitted to said groove, and also 45 a lip, securing means passing through the tenon and lip into the body, and a plate extending across the opening in the shoe and detachably secured to the body of the shoe, as set forth. 50

2. In a horseshoe, the combination, with the body of the shoe having a rectangular mortise extending through the shoe lengthwise thereof, of a calk having a rectangular tenon fitted to said mortise, and a clip upon each side 55 of said tenon to embrace the sides of the shoe, and securing means passed through the body of the shoe, the tenon and clips, substantially as shown and described.

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Witnesses:

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