

No. 613,991.

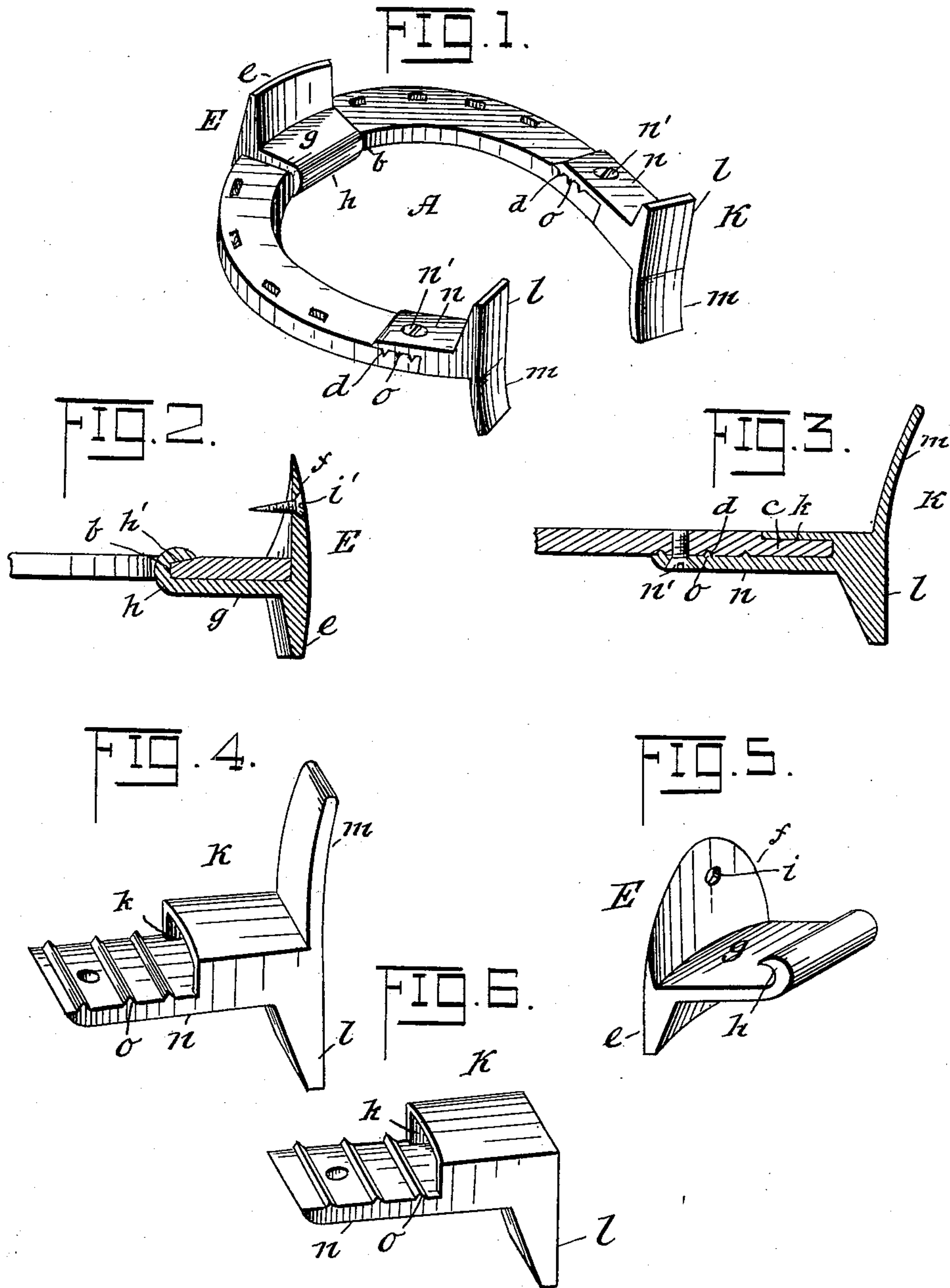
Patented Nov. 8, 1898.

N. HARDING.
HORSESHOE.

(Application filed Jan. 14, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

Sam R. Turner

C. C. Hines

Inventor:
Nathaniel Harding
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his Attorneys.

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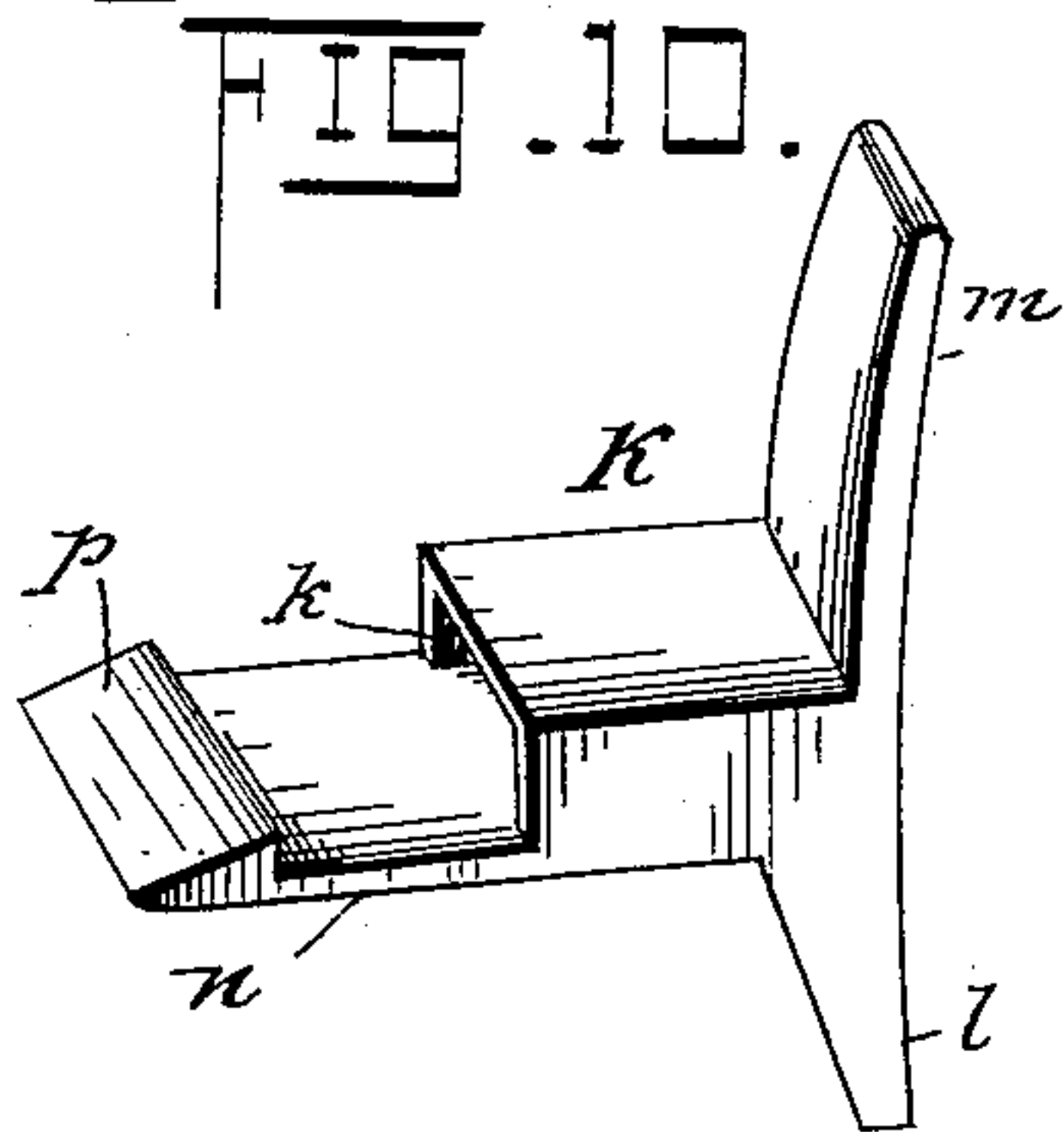
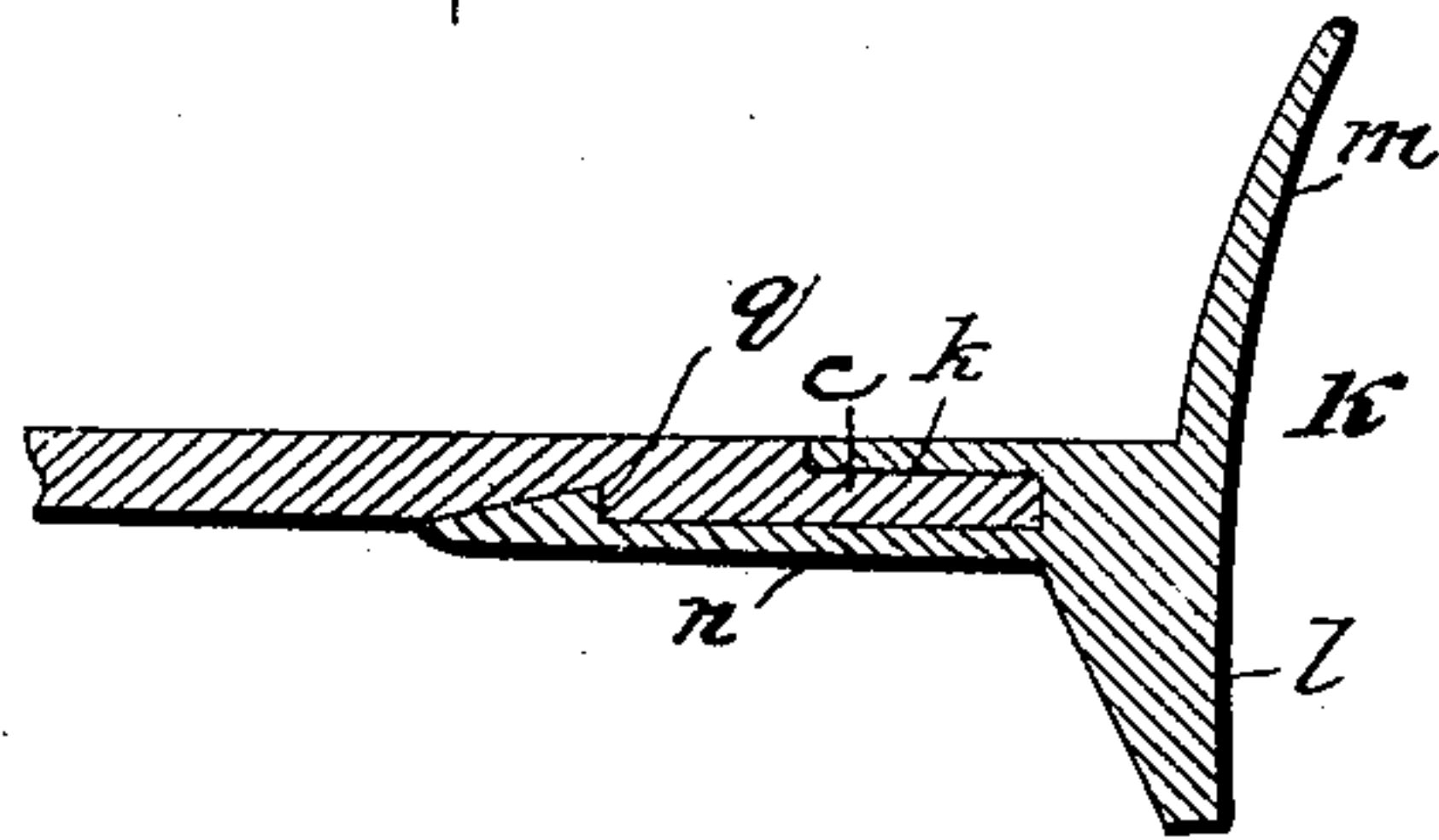
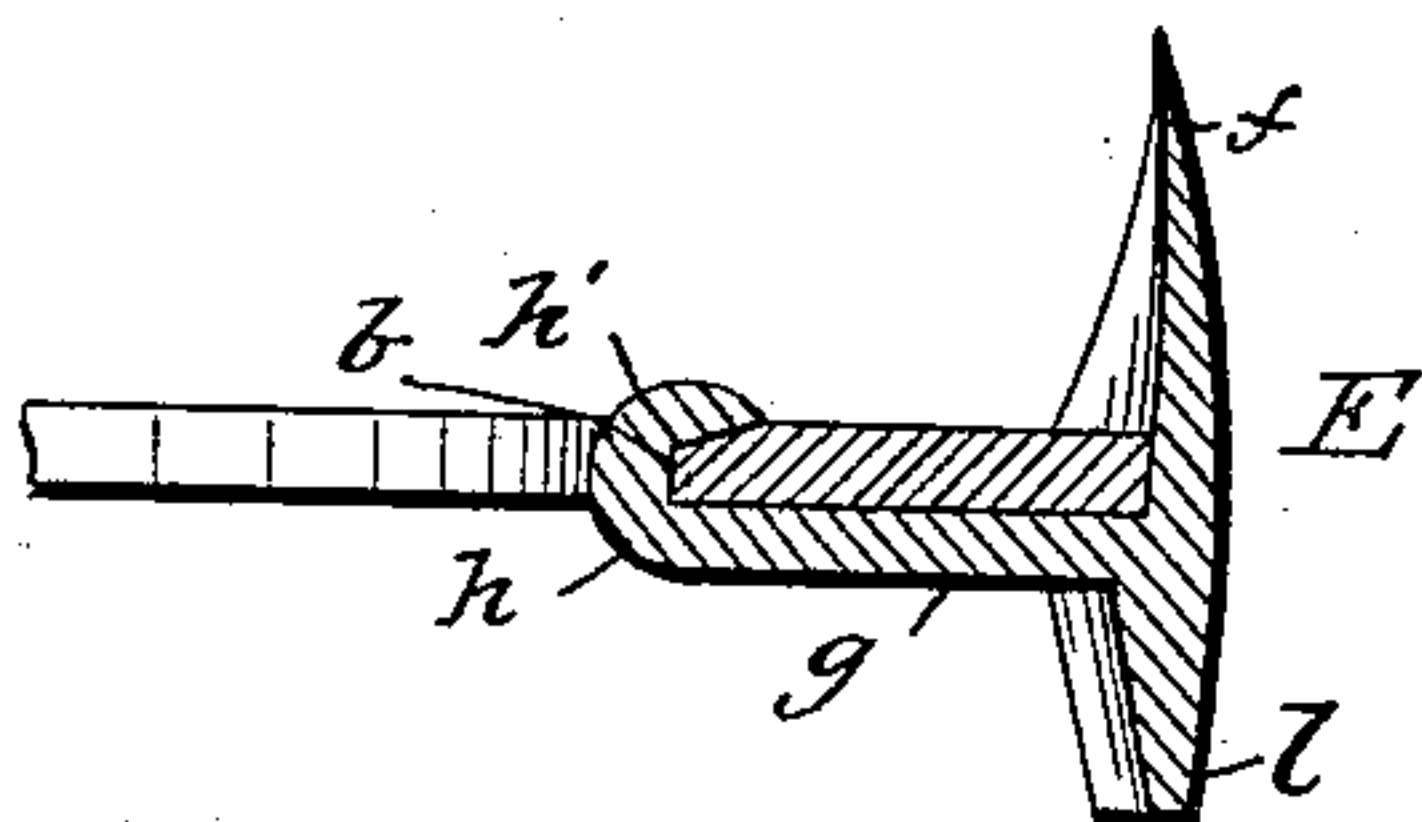
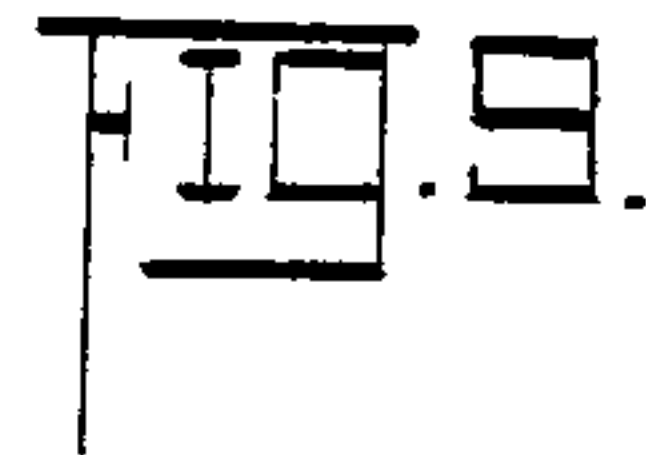
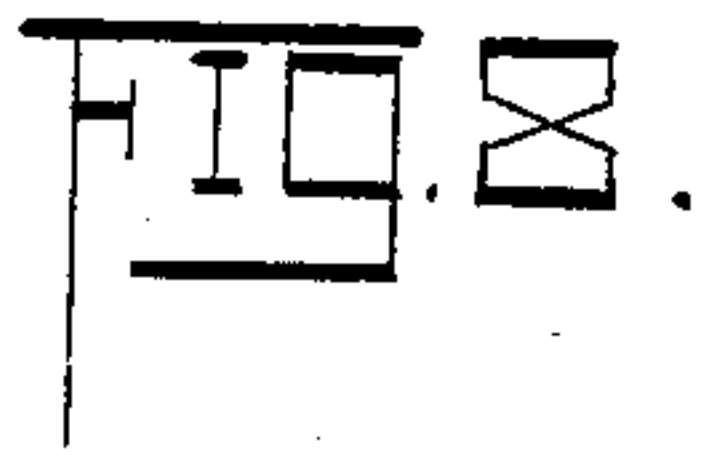
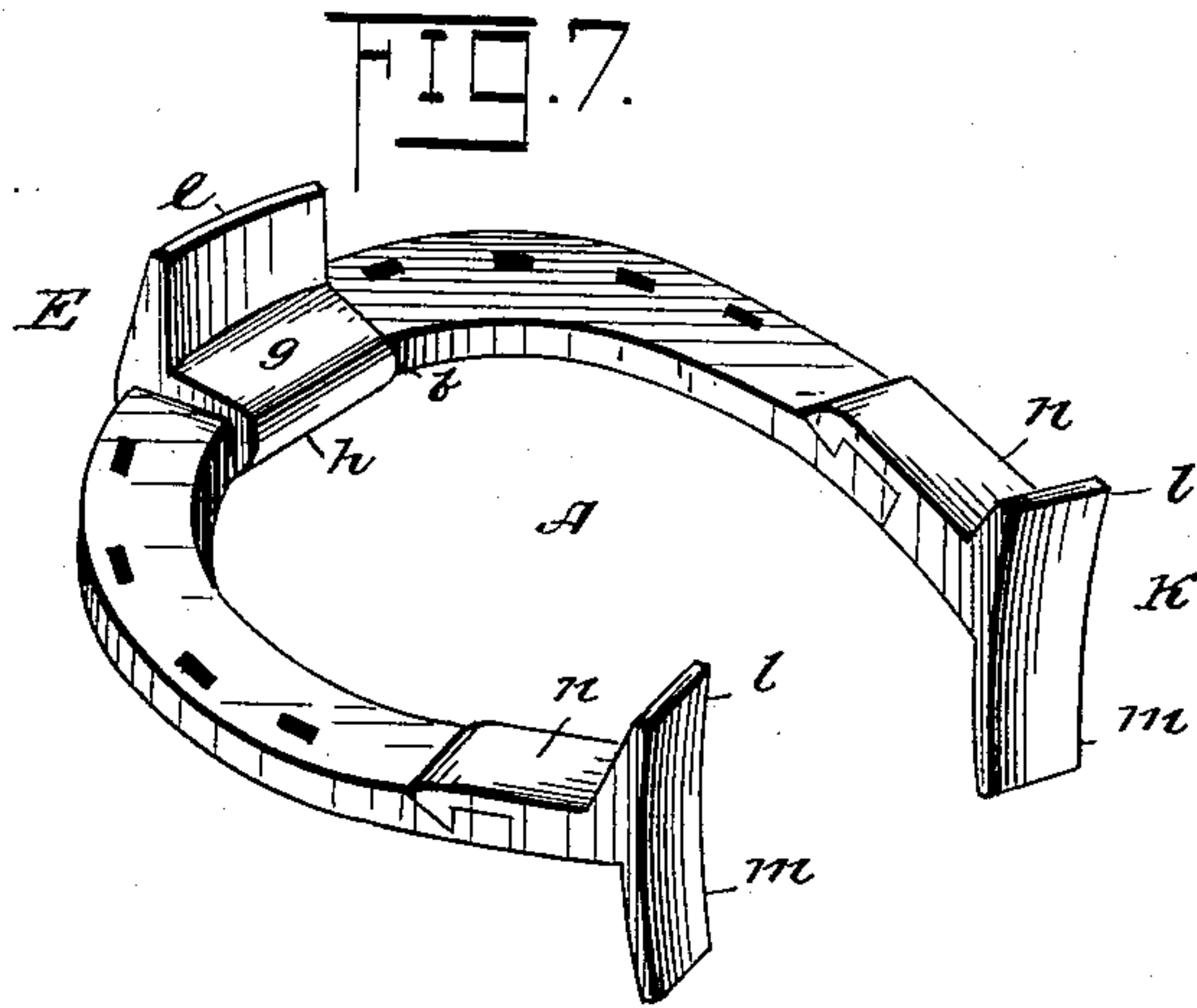
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2 Sheets—Sheet 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

NATHANIEL HARDING, OF FREEPORT, OHIO.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 613,991, dated November 8, 1898.

Application filed January 14, 1898. Serial No. 666,675. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL HARDING, a citizen of the United States, residing at Freeport, in the county of Harrison and State of Ohio, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in horseshoes, and particularly to detachable calks therefor.

The object of the invention is to provide novel detachable calks adapted to be readily and conveniently removed when worn or dull and replaced with new ones without the necessity of removing the shoe from the horse's hoof.

The detailed objects and advantages of the invention will appear in the course of the subjoined description.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a horseshoe embodying my invention. Fig. 2 is a sectional view of the toe of the shoe and toe-calk. Fig. 3 is a similar view of the heel and heel-calk. Figs. 4 and 5 are detached perspective views of the toe and heel calks, and Fig. 6 is a view of a modified form of heel-calk. Fig. 7 is a perspective view of a shoe having a modified form of heel-calk. Fig. 8 is a sectional view of the toe of the shoe and a modified form of the toe-calk. Fig. 9 is a similar view of the heel and heel-calk shown in Fig. 7. Fig. 10 is a detached perspective view of said heel-calk.

Referring now more particularly to the said drawings, A represents a horseshoe, which in accordance with my invention is formed with a notch *b* in the inner edge of its toe portion and with lugs or projections *c* and transverse grooves *d* at the heel, as shown.

The toe-calk E is made of a single piece of metal and consists of a calk proper, *e*, a clip *f*, adapted to bear against the front face of the toe of the hoof, and a bottom plate *g*. This bottom plate bears against the bottom face of the shoe and is provided at its inner end with an inwardly-projecting hook *h*, which rests in the notch *b* and has its bill fit-

ting in a countersink *h'* in the upper face of the shoe, so as to lie substantially flush therewith. The clip *f* is provided with a hole *i* for passage of a screw *i'*, which enters the hoof and holds the front end of the calk against displacement.

Each heel-calk K comprises a body portion having a socket *k* for the reception of the lug or projection *c* on the heel of the shoe, a downwardly-projecting calk proper, *l*, an upwardly-projecting clip *m*, and a flange or connecting-plate *n*, which laps over upon the bottom face of the heel of the shoe. This connecting-plate is provided with a hole for passage of a screw *n'*, which enters a threaded orifice in the shoe and secures the heel-calk thereto, and with transverse ribs *o*, which enter the grooves *d* and prevent the calk from working back and forth and wearing the screw and enlarging the screw-hole. The clips *m* on the heel-calks project upwardly and cover the ends of the heel of the shoe which ordinarily project beyond the back of the hoof, and thereby prevent pulling off or casting of the fore shoes by overreaching. These clips are designed for use only on fore shoes.

In the modified form of heel-calk shown in Fig. 6 I dispense with the clip *m*; but otherwise the construction is the same. This form of calk may be used on either hind or fore shoes.

The toe-calk illustrated in Figs. 7 and 8 is constructed similarly to the calk shown in Figs. 1, 2, and 5, with the exception of the hole *i* in clip *f* for the passage of screw *i'*.

In the modified form of heel-calk illustrated in Figs. 7, 9, and 10 the connecting-plate *n* is provided upon its inner surface at its free end with a beveled lug *p*, which engages a transversely-extending notch or groove *q* in the under side of the shoe, thus holding the heel-calk in place without the employment of screws, as in the construction illustrated in Figs. 1, 3, and 4 of the drawings. The connecting-plate being of spring metal readily engages the notch or groove and secures the calk upon the heel of the shoe. In this modified construction the grooves *d* are omitted from the shoe and the ribs *o* from the calk.

From the above description, taken in connection with the accompanying drawings, the

construction and operation of my improved shoe and calks will be readily understood, and it will be seen that the invention provides simple and effective constructions of calks which may be readily and conveniently applied and removed without detaching the shoe.

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

1. In horseshoes, the combination of a shoe provided with a recess in the inner edge of its toe portion and with lugs or projections and transverse grooves at the heel, a toe-calk having a bottom plate bearing against the under side of the shoe and formed at its rear end with a hook fitting in said recess and projecting over against the upper face of the shoe and at its front end with a clip, and heel-calks, each consisting of a body portion having a socket for reception of the lug on the heel and a connecting-plate bearing against the bottom of the heel and provided with transverse ribs fitted in said grooves, substantially as described.

2. In horseshoes, the combination of a shoe provided with a recess in the inner edge of its toe portion and with lugs or projections and transverse grooves at the heel, a toe-calk having a bottom plate bearing against the under side of the shoe and formed at its rear

end with a hook fitting in said recess and projecting over upon the upper face of the shoe and at its front end with a clip, and heel-calks, each formed with a socket for reception of the lug on the heel, a connecting-plate bearing against the bottom of the heel, a downwardly-projecting calk, and an upwardly-projecting clip, substantially as and for the purpose described.

3. In horseshoes, the combination of a shoe provided with a recess in the inner edge of its toe portion, and with lugs or projections and notches at the heel, a toe-calk having a bottom plate bearing against the under side of the shoe and formed at its rear end with a hook fitting in said recess and projecting over upon the upper face of the shoe and at its front end with a clip, and heel-calks, each formed with a socket for the reception of the projection on the heel, a connecting-plate bearing against the bottom of the shoe and carrying lugs which engage the notches of the heel and a downwardly-extending calk, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NATHANIEL HARDING.

Witnesses:

IMMER BARRETT,
J. T. BARRETT.