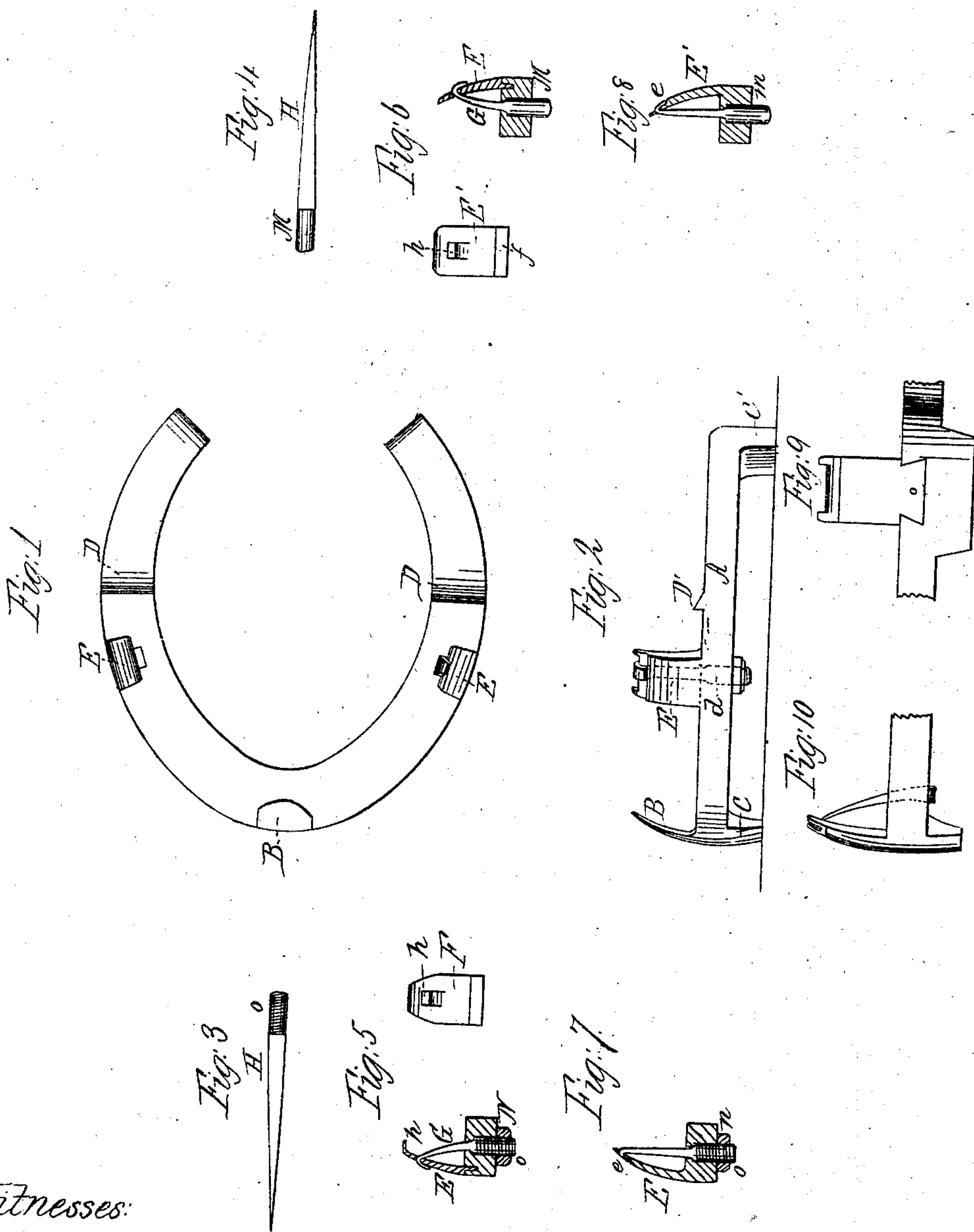


C. M. Werner, Horseshoe.

No 62,242.

Patented Feb. 19, 1867.



Witnesses:

J. I. Peyton
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attys

United States Patent Office.

CASSIUS M. WERNER, OF ROCKFORD, ILLINOIS.

Letters Patent No. 62,242, dated February 19, 1867.

IMPROVEMENT IN HORSE-SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CASSIUS M. WERNER, of Rockford, Winnebago county, and State of Illinois, have invented a new and useful Improvement in Horse-Shoes, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan view of a horse-shoe, to which my improvement is applied.

Figure 2 is a side or edge view of the same.

Figures 3 and 4 represent horse-shoe nails, the former having a screw cut on its head.

Figures 5 and 6 represent my new clip on both sides of the shoe, with the nails passing through and clinched upon the clips; and

Figures 7 and 8 represent the nails clinched over the tops of the clips.

It is the object of my invention to fix the shoe on the hoof firmly, cheaply, with little labor, and without injuring the hoof, and leaving the heel perfectly free to expand, and thus prevent contraction; to which end my invention consists in forming two side clips to the top of the shoe, over, upon, or through which the nails are clinched; in securing the shoe in place by two nails, with or without screws on their heads; in grooving the top of the clip, or punching it to receive the clinch of the nail, by all of which I am enabled to secure the shoe rigidly to the hoof, and leave the heel entire freedom of expansion.

To the shoe A, of the usual form, whether made of wrought or malleable iron, and without calks or with calks, C and C', I attach, in any proper manner, a front clip, B, to protect the toe of the hoof and prevent the shoe from slipping backwards. On the top of the plate, and behind the side clips, I secure transverse angular ridges, D and D', to be let into the hoof to assist in preventing the shoe from slipping. A little forward of the longitudinal centre of the shoe I place clips, E and E', inside of which the nail holes are punched, leaving a sufficient space between the clip and inner side of the nail hole to receive the larger portion of the thickness of the wall of the hoof, through which the nail must pass to hold securely. These clips E and E' may be welded, brazed, or in any way fastened to the shoe, or they may be cast with the cast-iron shoe; but at their top, which must rise as high as the point where the nail is made to pass out of the hoof, they must be grooved as at *e*, that the nail may be clinched down over the top of the clip, as shown in figs. 7 and 8. With this modification, the ordinary rigid clip may be advantageously used, which I prefer; however, I can use my new clip, consisting of a detached piece, of which an inside view is given at F, and an outside view at F', with edge views in figs. 5 and 6. My clips are made in detached pieces, let into punched recesses in the shoe, and have shoulders, *f*, at the bottom to rest on the sides of the punched recesses, while holes, *h*, are punched at their tops through the clips, with a bevel from the outside of the clip to the inner edge of the hole. The nail G is driven in the usual way, and its point, after passing out of the wall of the hoof, enters the hole *h* in the clip, and is bent down and securely clinched upon the clip. The body of the nails I use is made in the usual rectangular form, but the head is rounded for a distance considerably exceeding the thickness of the shoe, and the nail holes are sunk by a punch or drill, in a circular form, nearly through the plate from its bottom, and the remainder of the distance through the plate with a rectangular hole to fit the nail above its head, as shown at *d* in red lines in fig. 2. The nail heads may have screws, *o*, cut upon them to receive nuts, *n*, or the heads may remain plain and unfurnished with screws, as at *m*; and whether with or without screws, may project below the plates like common nails, or when a smooth under surface is desired for the shoe, the nail heads may be trimmed flush with the plate, into which the nuts, when nuts and screws are used, may be countersunk. A modification of my invention would be to introduce the clips with a dove-tailed joint into the edge of the plate, as shown in Figure 9, and when the clip over the toe is so secured, the common nail, as shown in Figure 10, will give additional support to the front of the shoe. Thus constructed my shoe can be easily fitted and secured to the hoof, even by the unskilful, and when slightly loosened by wear, can be tightened securely by screwing up the nuts on the nail heads, or by driving the nails and tightening the clinch through the clip. And it is obvious, however tight my shoe may be drawn by the nails on the hoof, that the nails will not break the hoof at the nail holes; but, on the contrary, clinching the nail over the clip will give the hoof perfect protection against the tearing action of drawing the nails. And what is of equal or more importance to the comfort of the animal wearing my shoe, it is obvious that leaving the heel at perfect freedom will permit it to expand as the hoof grows, and thus secure the horse against those

painful diseases, grease, and contracted hoof, for example, to which all horses wearing the common rigid shoes are liable.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The clip F, formed with a shoulder at its base and a hole at its top, substantially as and for the purpose set forth.

2. Securing the shoe to the hoof by two nails, clinched over or through side clips, substantially as and for the purpose set forth.

3. Grooving the top of the clip, or punching the clip, to clinch the nails and protect the hoof, substantially as set forth.

4. The combination of the clip, whether grooved or punched, with the plate by a nail clinched over or through the clip, and tightened by a screw-nut under the plate, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

CASSIUS M. WERNER.

Witnesses:

J. M. SOUTHGATE,

CRIM MILLER.