

(No Model.)

I. FENNO.  
HORSESHOE.

No. 304,516.

Patented Sept. 2, 1884.

Fig. 1.

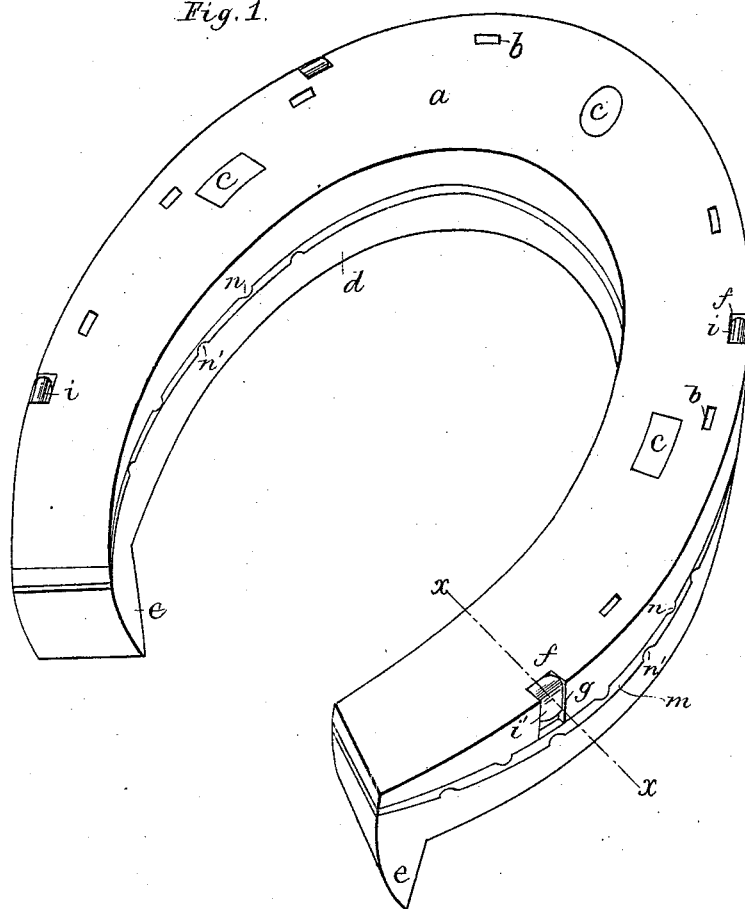
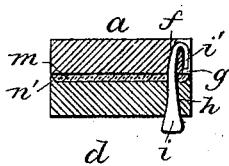


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 304,516, dated September 2, 1884.

Application filed March 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC FENNO, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Horseshoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to horseshoes of the class in which each hoof of the animal is provided with a double shoe, one portion of which is permanently attached to the hoof by nails or other suitable or usual fastening, and is herein called the "permanent shoe," and the other portion of which, herein called the "detachable shoe," the one bearing on the ground, is connected with the permanent shoe by a fastening that can be easily applied and removed, so that the said detachable shoe may be readily taken off and a new one, or one of another character, substituted when the nature of the road renders such a change in the character of the shoe desirable. The permanent shoe is provided with mortises or sockets, and the detachable shoe with projecting tenons or dowels, to enter the said sockets and prevent lateral movement of the said detachable shoe on the permanent shoe, so that it is only necessary for the fastenings employed to sustain the weight of the detachable shoe or prevent it from being thrown off by the movement of the hoof.

The invention consists, mainly, in the means employed for fastening the detachable shoe to the permanent shoe, which latter is provided with a number of holes of proper size to receive an ordinary horseshoe-nail, the said holes being located near its edge, which is preferably also provided with a recess or channel parallel with the nail-hole. The detachable shoe is provided with a series of nail-holes countersunk at the under side of the shoe, and corresponding in position with the nail-holes of the permanent shoe, and the detachable shoe is connected with or fastened to the permanent shoe by means of malleable nails, which may be of the same character as those employed to fasten the permanent shoe to the hoof. The said nails are driven through the corresponding holes in both shoes, and then have their upper ends turned over or clinched, and pref-

erably bent down into the channels made in the side of the permanent shoe, so that it will present a smooth edge.

Figure 1 is a perspective view of a compound or double horseshoe embodying this invention, and Fig. 2 a transverse section thereof on line *x x*.

The upper or permanent shoe *a* is securely fastened to the hoof by nails driven through the nail-holes *b* and into the hoof, or in any other suitable or usual manner. The said permanent shoe is provided with a series of mortises to receive corresponding tenons, *c*, forming a part of the lower or detachable shoe, *d*, which is shown in this instance as provided with long calks *e*, such as required for use on icy roads. The upper or permanent shoe, *a*, is also provided with a number of nail-holes, *f*, located near the edge of the shoe, which is preferably also provided with recesses or channels *g*, adjacent to the said nail-holes. The shoe *d* is also provided with a series of nail-holes, *h*, corresponding in position with the holes *f* of the shoe *a*, they being countersunk at the under side of the shoe, as shown in Fig. 2, to receive the head of a nail or fastening, *i*, which is preferably of the same character and material as the nail employed to fasten the permanent shoe to the hoof, except that the nail or fastening *i* does not terminate in a sharp point and is shorter than the usual horseshoe-nails.

In applying the shoe *d* to the permanent shoe *a* the tenons or projections *c* are placed in the corresponding holes or sockets of the shoe *a*, and the fastenings *i*, which are then straight, are driven up through the holes *h f*, then in line with one another, against a suitable hard surface held against the side of the horse's hoof at the edge of the permanent shoe, which surface causes the end of the fastening *i* to turn over or clinch, as shown in the drawings, thus drawing the detachable shoe tightly against the permanent shoe. The bent-over end *i'* of the fastening is received in the recess *g*, as shown, so as not to project from the permanent shoe.

It will usually be desirable to put a pad or washer, *m*, of elastic or yielding material between the permanent and detachable shoes; and in order to keep the said pad from moving out of place, the shoes are provided with small pro-

jections *n n'* at their edges, which engage the edges of the said washer or pad and prevent it from slipping out of place.

When desired to remove the detachable shoe  
5 when worn out, or in order to put on one of another character, it is only necessary to insert the point of a chisel or similar tool under the turned-down end *i'* of the nail, turning the latter up or straightening the nail, when the  
10 shoe *d* may easily be pried off from the permanent shoe *a* and another one be applied.

I claim—

1. A permanent shoe to be nailed or otherwise securely fastened to the hoof, provided  
15 with nail-holes *f* near its edge, combined with the detachable shoe provided with nail-holes corresponding in position with those of the permanent shoe, the said holes of the permanent and detachable shoe receiving nails or  
20 fastenings driven through them and bent over

or clinched upon the said permanent shoe, substantially as described.

2. The permanent shoe to be nailed or securely fastened to the hoof, provided with nail-holes near the edge and corresponding recesses 25 in the edge, combined with the detachable shoe provided with nail-holes corresponding in position with those of the permanent shoe, the said corresponding nail-holes of the two shoes receiving within them nails or fastenings, 30 the ends of which are bent over and sunk into the recesses or channels in the edge of the permanent shoe, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two sub- 35 scribing witnesses.

ISAAC FENNO.

Witnesses:

JOS. P. LIVERMORE,  
W. H. SIGSTON.