

J. D. ABBOTT.
Sectional Horseshoes.

No. 142,547.

Patented September 9, 1873.

Fig. 1.

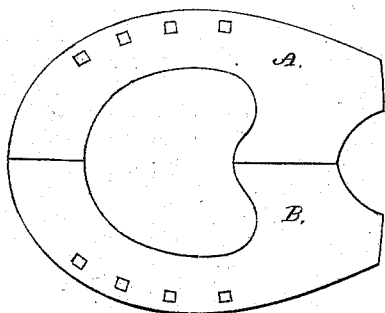


Fig. 2.

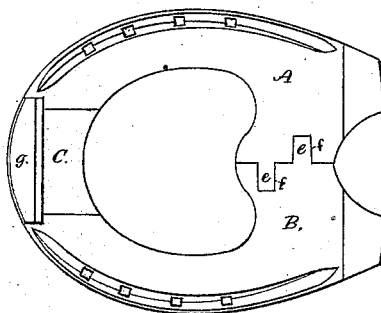


Fig. 3.

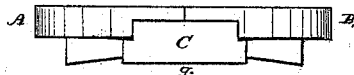
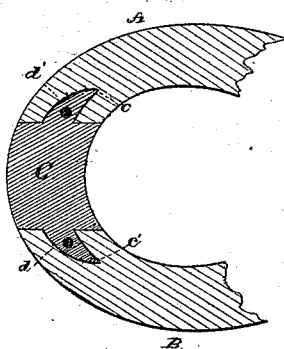


Fig. 4.



Witnesses.

Geo Pond

A. C. Hale

John D. Abbott.

by his attorney.

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UNITED STATES PATENT OFFICE.

JOHN D. ABBOTT, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR TO
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IMPROVEMENT IN SECTIONAL HORSESHOES.

Specification forming part of Letters Patent No. **142,547**, dated September 9, 1873; application filed May 8, 1872.

To all whom it may concern:

Be it known that I, JOHN D. ABBOTT, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented a new and useful Improvement in Horseshoes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, in which—

Figure 1 is an outside view; Fig. 2, an inner or under side view; Fig. 3, a front-end view; and Fig. 4, is a longitudinal section of the front portion of a horseshoe as constructed in accordance with my invention.

My invention relates generally to the "round-shoe" class, but is partially applicable to bow shoes. Although my improved shoe is adapted to be worn by any horse, it is especially designed for those whose feet have become so contracted by the wearing of rigid, unyielding shoes as to become "hoof-bound" or lame. My invention consists in a novel method of uniting the side plates and toe-plate of a sectional shoe, involving the combination therewith of a novel tenon-and-mortise joint, whereby the unequal strain on either side plate may be practically communicated to and shared by the other plate; also, in so uniting the side plates of a sectional round shoe, at toe and at heel, that each will be capable of having an independent movement in certain directions and within certain limits, whereby a diseased or weakened hoof may be strengthened and converted into a healthy condition; and, also, in a novel compound connection of the side plates at the heel.

As illustrated in the drawings, A and B denote the two side plates, and C the toe-plate. The toe-plate C is provided at each end with a curved horn-shaped tenon, *c*. Each of the side plates, at its front ends, is provided with mortises *d*, curved in their interior outline so as to correspond generally with the shape of the tenons *c*. The mouths of these mortises are somewhat larger than the tenons at their bases, so that, while the side plates may be slightly moved vertically and laterally independently of the toe-plate, they cannot be detached therefrom by a direct lateral strain.

It will be obvious, when a shoe having such

a joint is practically applied to a horse's hoof, that any undue strain occurring on one side plate will be successfully communicated to the other side plate by the way of the tenons and the toe-plate, and will therefore practically obviate the possibility of one-half of the shoe being torn from the hoof on one side, for the reason that the tenon-joint is ample to maintain and communicate all undue strain thereon from either side plate to the other.

As heretofore constructed, sectional horseshoes have been provided with pivotal joints, in which all undue strain on one side plate could only be conveyed to the other by the way of the pivots or rivets. In some instances abutting shoulders have been provided adjacent to the pivots for limiting the movement of the plates. In such cases the shoulders served practically as fulcrums, on which the side plates, as levers, might more readily rend the pivots asunder.

In my improved joint the strain is all borne by the tenons, and, although a pin is employed for tying the parts of the shoe together when detached from the hoof, it has no true function when applied to the hoof.

I am aware that mortises and tenons have been employed in many ways; but I have never, prior to my present invention, known of such an application or construction thereof as is herein shown.

The side plates A and B, at or near the heel, are also jointed in a peculiar manner by means of the tenons and mortises *e* and *f*, so that on the under side of the shoe the line of the joint is presented in lines parallel with the longitudinal center of the shoe, and also in lines at right angles thereto, while on the upper side the joint is straight, and in a line with the longitudinal center of the shoe. The tenons and mortises *e* and *f* are fitted to co-operate with the toe-joint, so that when the desired limit of the movement is reached the sides of the tenons nearest the heel of the shoe are in close contact with the adjacent sides of the mortises, and by such contact prevent further movement. The side plates are so attached to the plate on the top of the shoe that the toe-plate is entirely covered; and but a single joint occurs between the abutting ends of the side plates,

so that when the shoe is attached to a hoof the extent of the vertical movement of the side plates is greater at the edges than at the center of the shoe. The toe-plate is provided with a toe-calk, *g*, of the usual character, but so formed as to overlap, on the under side, the joints between the toe-plate and the side plates, and contributes largely to the strength of the shoe at that point. The rear end of the side plates may be turned so as to form the heel-calks, as in common practice.

It will be observed that my improved sectional shoe, as described, will have the requisite movement of the parts independent of each other to as great an extent as would be effected by the ordinary pivoted joint heretofore used, and yet have a greater degree of strength and capacity for withstanding further strain when the limit of movement was reached. It will also be obvious that my improved shoe possesses many of the desirable characteristics of the "round shoe," with the peculiar ground-bearing of the bow shoe. By its use every one of the numerous bones, muscles, and integuments incased by the hoof are permitted to be practically exercised, and therefore diseased hoofs are practically obviated. The extent of the vibration or independent move-

ment of the side plate may be varied to meet the seeming requirements in each case. As a general thing, the movement of both plates need seldom exceed one-eighth or three-sixteenths of an inch.

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

1. The combination of the side plates of a jointed horseshoe with a toe-plate having the curved tenons *c* loosely fitted to corresponding recesses in the ends of the side plates, whereby the strain may be communicated from one side plate to the other, substantially as described.

2. The improved sectional horseshoe composed of side plates, which are fitted and adjusted to each other at heel and toe, substantially as described, and which are limited in their capacity for movement, in the manner and for the purpose specified.

3. The matched tenons and mortises *e* and *f*, in combination with the side plates of a sectional shoe, substantially as and for the purposes specified.

Witnesses:

JOHN D. ABBOTT.

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