J. WANSTALL.

Horseshoe.

No. 165,278. Patented July 6, 1875.

Fig. 1.

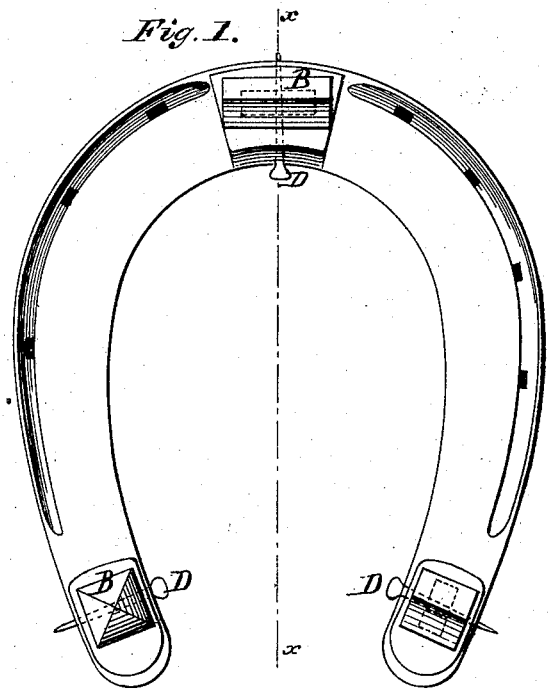


Fig. 2.

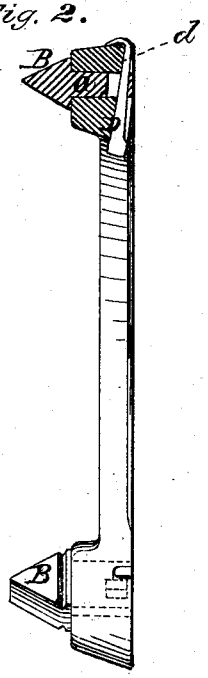


Fig. 3.

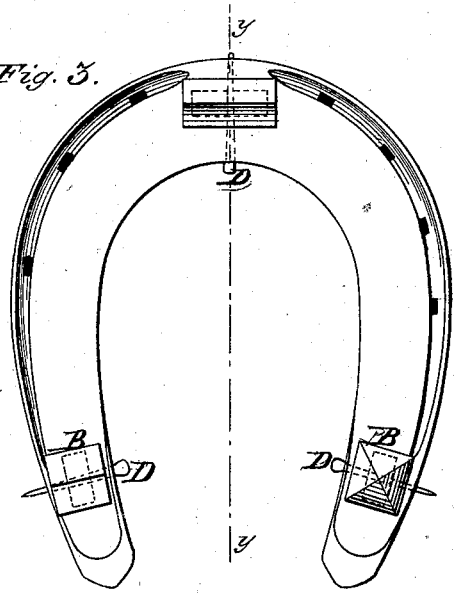
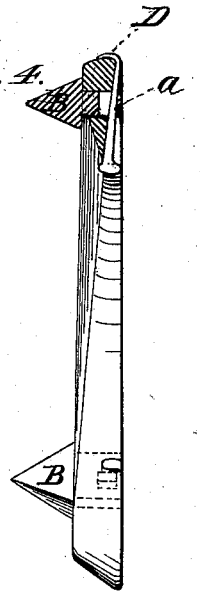


Fig. 4.



Witnesses:

C. W. Evans.

Arthur S. McIntire

Fig. 5.

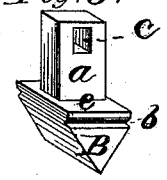


Fig. 6.

Inventor:

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By atty

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UNITED STATES PATENT OFFICE.

JOHN WANSTALL, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN HORSESHOES.

Specification forming part of Letters Patent No. **165,278**, dated July 6, 1875; application filed June 17, 1875.

To all whom it may concern:

Be it known that I, JOHN WANSTALL, of Washington city, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to a novel improvement in horseshoes. It has for its object to provide the shoe with removable calks, which, when in place, shall be perfectly secure, such securement being attained by little or no weakening of the shoe proper; and my invention consists in forming the shoe with rectangular slots at such points as may be desirable for the location of the calks, for the reception of the shanks of the same, and with transverse tapering grooves, through which the securing-nail shall pass, all as will be hereinafter more fully set forth.

To enable those skilled in the art to which my invention pertains to more fully understand the same, I will proceed to describe it, referring by letters to the accompanying drawings, in which—

Figure 1 is a bottom view of a horseshoe embodying the features of my invention. Fig. 2 is a longitudinal section at the line *x x* of Fig. 1. Fig. 3 is a bottom view of a horseshoe of a smaller size than that shown at Fig. 1, and without the thickened toe and heels; and Fig. 4 is a section at line *y y* of Fig. 3.

Similar letters indicate like parts in the several figures.

A represents an ordinary horseshoe, thickened up at the toe and heels, as seen at Figs. 1 and 2, or plain, as seen at Figs. 3 and 4. The shoe is provided with slots, rectangular in form, passing entirely through, and at such points as it may be desirable to locate the "calks." B are the calks, provided with a stem or shank, *a*, and any suitable groove or depression, *b*, (the latter to serve as a hold for nippers to pull the calk out.) The stem or shank *a* is provided with a transverse slot, *c*, through which the securing-nail D passes. The upper or foot side of the shoe is provided with tapering grooves *d*, running across each slot which receives the calk-shanks, and these grooves taper from the inside edge of the shoe out to the upper and outer edge, so that when the nail D is passed through the slots *c* in the shanks, the said nails will draw the calks "home" until the shoulders *e* shall lie flush up against the under side of the shoe, and the top end of the shank *a* shall lie in the plane of the upper or foot side thereof. When this has been accomplished the projecting point of the nail is clinched or turned down, as clearly seen at Figs. 2 and 4. The calks may be readily removed by straightening out the point of the nail and withdrawing it by the head, and then grasping the calk with nippers in the grooves *d* and pulling. When the calks are removed the greatest wear of the shoe is at the toe and in the direction of the dotted lines seen at Figs. 2 and 4, so that it is essentially important that the outside edge of the shoes should be very strong; one of the great disadvantages of removable calks, as heretofore constructed and applied by securing-pins, being that the pin-grooves cut away so much of the stock of the shoe as to very materially weaken the same. It will be observed that this disadvantage is entirely overcome, as the groove in which lies the securing pin or nail runs out practically to nothing, the taper of the groove acting with the nail to also draw the calk home to its place. When the shoe is worn without the calks the edges of the slots may be so battered as to slightly decrease the size of the slot, so that the calk designed for said shoe would not enter said slot, in which case I design using the calk made for the next smaller size, the shank of which is correspondingly shorter and thinner, so that it would readily enter the slot in the larger size shoe, and its decreased length would prevent its projecting above the plane of the upper surface of the shoe, which is essentially important to avoid pressing into the hoof of the horse. A slight projection, however, would work no ill results, as the hoof practically leaves the shoe from the outer edge, the nail of the hoof alone really resting upon the shoe. I also design using any suitable sheet-metal washers to compensate for any disproportion of the shoes and calks. This I have illustrated at Figs. 5

and 6 of the drawing, the former representing a perspective view of the calk, and the latter a similar view of a suitable washer adapted to slip over the shank or stem of the calk.

In the manufacture of the shoes and calks I propose making various sizes, the calks adapted to fit perfectly into their respective shoes; and, as before stated, when the shoes are worn previous to introducing calks, the calks of the next smaller size shoe are used. I do not wish to limit myself to the exact design of shoes or calks shown, as they may be varied according to demand or for the uses they are intended for; but

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

In combination with a horseshoe provided with vertical slots and tapering grooves, the calks with slotted shanks, and the securing-nail, substantially as and for the purposes described.

Witness my hand this 1st day of June, A. D. 1875.

JOHN WANSTALL.

Witnesses:
J. EAKIN GADSBY,
THOMAS RIGGLES.