H. F. WHIDDEN.

Shoe-Nails.

No. 164,889. Patented June 22, 1875.

Fig. 1.

Fig. 3.


Fig. 5.


Fig. 7.

Fig. 2.

Fig. 4.

Fig. 6.

Fig. 8.

Witnesses.

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# UNITED STATES PATENT OFFICE.

HOSEA F. WHIDDEN, OF SOUTH ABINGTON, MASSACHUSETTS.

## IMPROVEMENT IN SHOE-NAILS.

Specification forming part of Letters Patent No. **164,889**, dated June 22, 1875; application filed June 5, 1875.

*To all whom it may concern:*

Be it known that I, HOSEA F. WHIDDEN, of South Abington, in the State of Massachusetts, have invented an Improvement in Shoe-Nails, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The present invention is an improvement on the shoe-nail patented to be in Letters Patent of the United States, No. 90,902; and consists in an elongation of the head of the nail above the frusto-conical head of my said previously patented nail.

The old nail is shown in Figures 1, 2, 3, and 4 of the drawings, while the nail embodying the present invention is shown in Figs. 5, 6, 7, and 8, Figs. 5 and 7 being, respectively, a side and an edge view of the same, and Figs. 6 and 8 being, respectively, an end view looking at the head, and an end view looking at the point.

In the manufacture of the new nail the blank is cut from a plate to a tapering form with a clinching point, the head upset and the edges indented or serrated, as in the manufacture of the old nail, and as set forth in my said Patent, No. 90,902, excepting that the header has a countersunk recess to modify the shape of the head—that is, in the manufacture of the old nail after each blank was cut to a tapering form the shank was grasped between a pair of grooved jaws, at one end of each of which grooves was a countersunk recess, the two forming, when closed together, a countersink, in which the head was formed to the shape shown in Figs. 1 and 3 by the blow of the header. In the manufacture of the new nail the frusto-conical part, marked *b* in the drawing, is formed in the countersink in the jaws, while the part marked *a* is formed in the countersink in the header. The recess in the header, as I have made my improved shoe-nail, is frusto-conical, and causes the elongated part of the head *a* to assume a frusto-conical shape, the reverse, or nearly so, of the part *b*. This frusto-conical shape for the elongated part of the head is preferred in the manufacture, since the nail is less liable to cling to the header than when the header and elongated part of the head are cylindrical; but the elongated part *a* of the nail might be cylindrical and the nail still be within my present invention, the object of the invention being to have and to preserve a large amount of metal at the wearing surface of the sole, while no more metal is taken for forming the shank than is necessary to form a sufficiently strong connection between the head and clinching point of the nail.

In the use of these improved nails both the serrations and the heads secure the outer sole from drawing off, and the clinched points prevent the nails from drawing out, and the heads impart a finish to the surfaces of the soles in the same manner as in the use of the nail previously patented to me, as aforesaid, the frusto-conical portion *b* of the new nail permitting the nails to be driven into the sole until the heads of the nails are flush with the sole. In this respect, as well as in having serrated corners or edges, the improved nail differs from hob-nails and other nails which have hitherto been made with elongated heads, but with no bevel at the junction of the shank, and head corresponding to the part *b* of my new nail. In the use of such old nails they could not be driven into the soles until the heads were flush with the sole without cutting the leather.

I claim—

A shoe-nail having a serrated shank and a frusto-conical head elongated, substantially as described.

HOSEA F. WHIDDEN.

Witnesses:

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