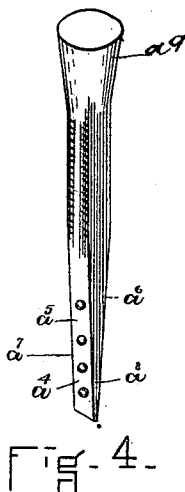
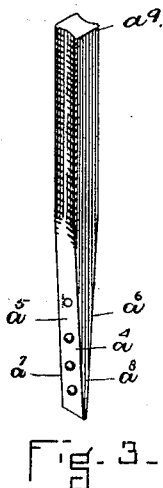
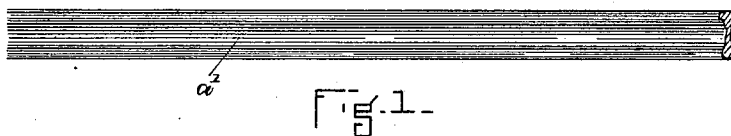
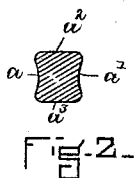


(No Model.)

F. F. RAYMOND, 2d.
SHOE NAIL.

No. 461,510.

Patented Oct. 20, 1891.



WITNESSES.

J. W. Dolan.
A. F. McDonald.

INVENTOR.

F. F. Raymond

UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

SHOE-NAIL.

SPECIFICATION forming part of Letters Patent No. 461,510, dated October 20, 1891.

Application filed February 11, 1889. Serial No. 299,514. (No model.)

To all whom it may concern:

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Shoe-Nails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to a shoe-nail made of wire, square or rectangular in cross-section and having the features hereinafter specified.

Referring to the drawings, Figure 1 represents a view in elevation of the wire or nail-stock formed to produce the nail in question, one of the concave sides being represented uppermost. Fig. 2 is a cross-section of the wire. Fig. 3 is a view in perspective of the nail unheaded. Fig. 4 is a view in perspective of the complete nail.

The wire or nail stock is preferably drawn, and is substantially square or rectangular in cross-section, although it may have the concave surfaces $a a'$, preferably upon opposite sides of the wire. The sides $a^2 a^3$ I prefer plane. A wire or nail-stock thus shaped is then subjected to the action of pointing devices, whereby the drawn point a^4 is formed.

The point represented in the drawings has the flat tapering surfaces $a^5 a^6$ and the straight edges $a^7 a^8$. I do not confine myself, however, to this form of point. Neither do I confine myself to a drawn point, as the point may be formed by swaging or cutting away sections of the wire. There is then formed, preferably by upsetting, although it may be formed by rolling in suitable dies, a head a^9 upon the wire. This head may be circular at its top, square, rectangular, or of any other desired shape, and preferably has inclined sides extending from its edge to the shank of the nail. The sides of the nail may be roughened or corrugated, as represented.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improved article of manufacture, a shoe-nail having a substantially square or rectangular shank in cross-section, two sides of which are concaved and roughened, an extended wedge-point having the two inclined sides $a^5 a^6$ and straight sides $a^7 a^8$, and a head a^9 , substantially as described.

FREEBORN F. RAYMOND, 2D.

In presence of—

A. F. MACDONALD,
J. M. DOLAN.