

S. MOORE.
Shoe Nail.

No. 232,745.

Patented Sept. 28, 1880.

Fig. 1.

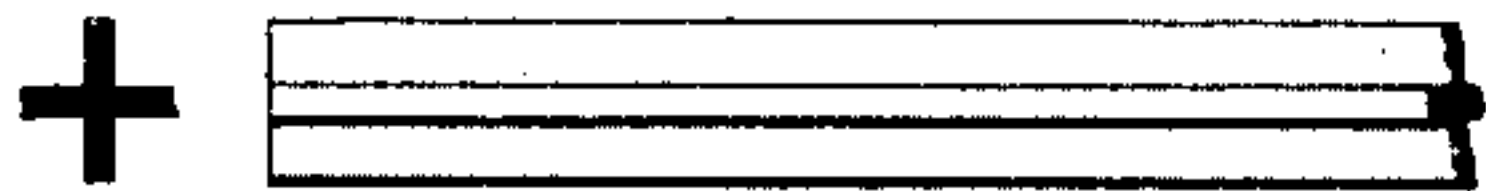


Fig. 2.



Fig. 3.



Fig. 4.

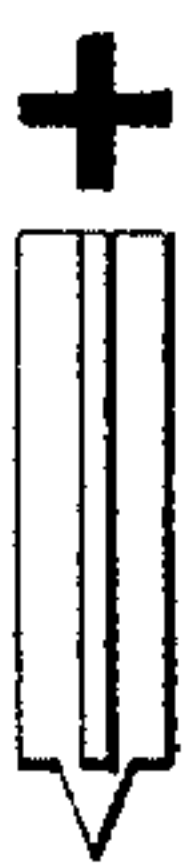


Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.

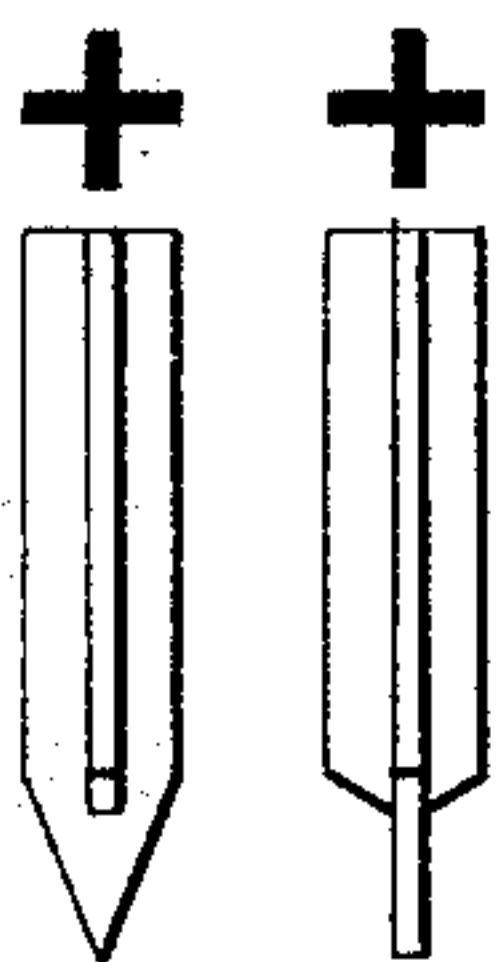


Fig. 9.

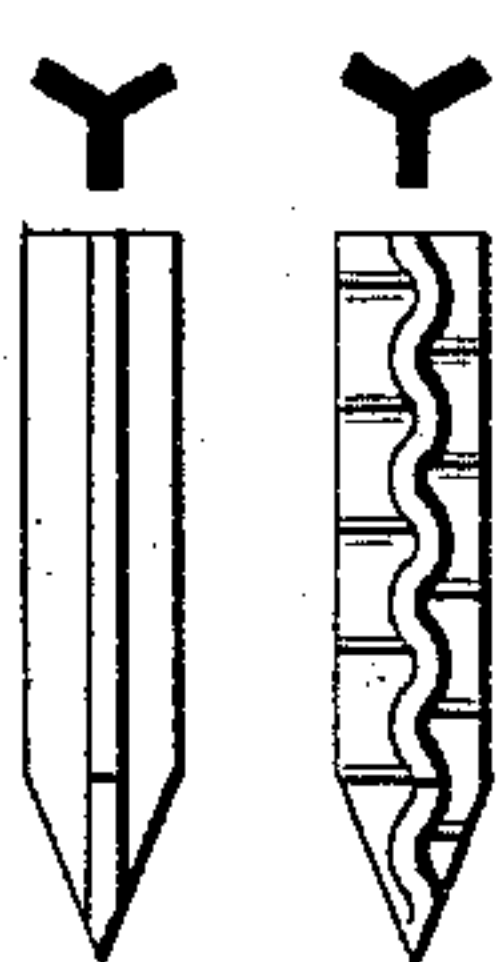
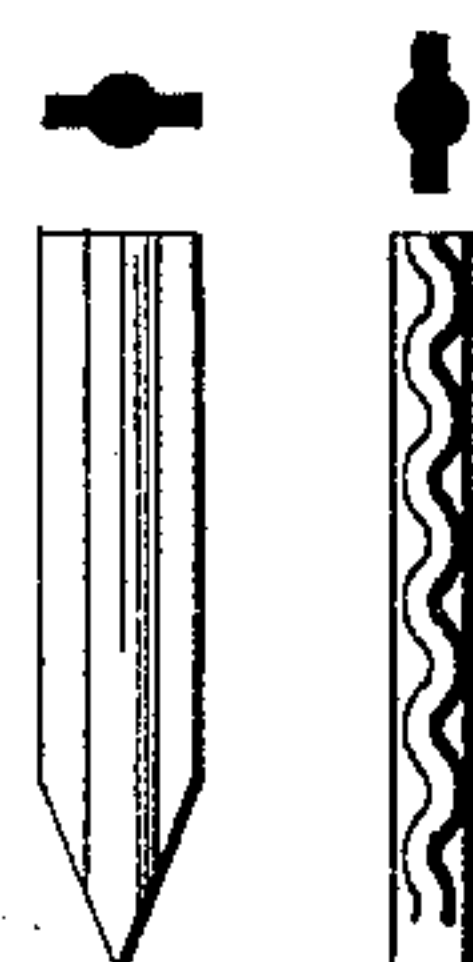


Fig. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL MOORE, OF PROVIDENCE, RHODE ISLAND.

SHOE-NAIL.

SPECIFICATION forming part of Letters Patent No. 232,745, dated September 28, 1880.

Application filed November 24, 1879.

To all whom it may concern:

Be it known that I, SAMUEL MOORE, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Shoe-Nails; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in metal nails used in boots and shoes, and also for other like purposes when leather or similar material is to be united; and the invention consists in a metal nail provided with two or more corrugated flanges for increasing the holding capacity of the nail.

Figure 1 is a view and section of a rolled or drawn, or rolled and drawn, wire formed with four radial flanges. Fig. 2 represents a piece of the wire shown in Fig. 1, with the flanges corrugated. Fig. 3 is a view, in side elevation and a cross-section, of a nail provided with corrugated flanges and formed with a conical point. Fig. 4 is a view, in side elevation and cross-section, of a nail provided with the projecting flanges before it has been corrugated, showing the point formed conical at the center, the webs or flanges being cut square. Fig. 5 is a view, in side elevation and cross-section, of the nail represented in Fig. 4 after it has been corrugated. Fig. 6 is a view, in side elevation and section, of a nail before it has been corrugated, the metal at the intersection of the flanges being increased and provided with an ogee-point. Fig. 7 shows a nail before it has been corrugated, with narrow webs and thick central portion. Fig. 8 shows a nail before it has been corrugated, with the point formed on one pair of flanges, the other pair being cut away. Fig. 9 shows a nail before and after it has been corrugated, the nail being provided with three flanges. Fig. 10 shows a nail before and after it has been corrugated, consisting of a central core and two thin flanges.

In nailing boots and shoes it is desirable that all parts of the material through which the nails are inserted be firmly united by the nails, so that when a portion of the sole or

heel is worn the remaining portion shall be as firmly united as when the whole was first nailed. The tensile strain on such nails is not great, and it would take but little metal to resist such strain; but the value of my improved nail consists in its increased frictional contact with the material into which it is inserted. By corrugating the flanges of the nail its frictional contact with the parts or material into which it is driven is increased and the wearing quality of the work improved.

The nails may be driven by hand or by a machine, in either case producing superior work.

In making these nails I roll out a metal rod to nearly the section required, and then draw the wire in a wire-drawing machine, through a draw-plate having a hole or holes of the shape desired for the finished wire, and then corrugate the flanges, two or more, by passing the wire through a set of corrugating-rolls arranged and grouped so as to corrugate the flanges as desired.

I am aware that spikes have been formed of rectangular concaved bars, twisted from point to head, the latter being formed solid with the body of the spike, and also that spikes of this kind have been made without twisting the bar. Further, I am aware that wire pegs have been made from a wire cable consisting of several strands of wire twisted together. Also, I am aware that metal pegs have been made with barbed flanges and with eyes or slots formed in the body of the metal peg, and hence I would have it understood that I make no claim to any of the forms of fastening devices above referred to; but,

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

A nail for boots and shoes, formed with two or more corrugated flanges, substantially as set forth.

In witness whereof I have hereunto affixed my name.

SAML. MOORE.

Witnesses:

JOSEPH A. MILLER,
J. A. MILLER, Jr.