H. N. ALLEN.

Nails for Boots and Shoes.

No. 200,240. Patented Feb. 12, 1878.

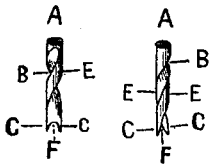

Fig. 1.

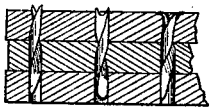

Fig. 2.

Fig. 3.

Witnesses:

H. S. Talbot

Edward Edmunds

Inventor:

Horatio N. Allen,

By Sylvanus Walker

Atty

UNITED STATES PATENT OFFICE.

HORATIO N. ALLEN, OF NORWOOD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO W. H. KIMBALL, OF SAME PLACE.

IMPROVEMENT IN NAILS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **200,240**, dated February 12, 1878; application filed December 7, 1877.

To all whom it may concern:

Be it known that I, HORATIO N. ALLEN, of Norwood, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Fastenings for the Soles of Boots and Shoes, of which the following is a specification:

The object of my invention is to provide a cheap, simple, durable, and efficient metallic fastening for boots and shoes, which may be driven without previously making a hole to receive the same, so that the act of driving such nails shall cause them to make a partial turn in their course through the several layers of leather forming the soles of boots and shoes, and thereby draw or press the outer sole firmly upon the next one beneath, on account of the peculiar structure of the nail, being wedge-shaped, and having grooves and curved or twist flanges, terminating in two oblique points, which will clinch over in opposite directions when driven against a metal-faced last, as heretofore employed.

It consists of a metallic nail having two gain-twist grooves, making about half a turn from head to point, and increasing in depth from the head downward, forming two wedge-shaped, twist, curve, or spiral flanges, which terminate in two oblique points, as hereinafter more fully described and set forth.

Figure 1 shows perspective views of nails constructed according to my invention. Fig. 2 shows the invention as driven through several thicknesses or soles of leather. Fig. 3 is a transverse section of same.

A represents the head of the nail, and B B two grooves formed on opposite sides of the body of the nail, commencing at or near the head of the same, and extending on a curve, twist, or spirally downward, increasing in depth and diminishing in curve or twist toward the points C C, which are formed by the two correspondingly curved or twist flanges E E, or the union of the two grooves B B, which meet near the points C C, thus forming a sharp or cutting edge, F, between the said points C C, which stand oblique to the center of the body or nail, as shown in Fig. 1.

A transverse section of the nail is shown at Fig. 3, where the grooves B B are half-round, or nearly so. This form I consider most desirable, as it may be more readily formed by a suitable milling-tool; but other forms may be employed, if desired, and the twist of the grooves I prefer to gradually diminish downward toward the points; but, if preferred, they may be constructed of uniform twist or curve from their commencement at the head to the points, which, on account of the curve or twist of the grooves forming or leaving the correspondingly shaped or curved twist flanges, leaves the points standing oblique, so that when driven their peculiar structure causes the nail to make a half revolution or turn in its passage into or through the several soles, thereby uniting the outer and inner soles and the uppers very firmly, when the said points are clinched by contact with a metal-faced last employed for the purpose.

They may be constructed of brass, iron, or steel cylindric wire, and the twist or curved flanges left by cutting the grooves, or may be formed by swaging and twisting the metal, so as to form the essential features characteristic of my invention.

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

1. As an improved article of manufacture, a double-pointed nail having a twist-grooved body and cylindric head, as and for the purposes set forth.

2. A nail having two gain-twist grooves, with angles of taper on opposite sides, leaving corresponding ribs or flanges, which terminate in oblique points, as and for the purposes specified.

3. A nail having gain-twist flanges on opposite sides, and corresponding grooves with angles of taper which meet, forming a cutting-edge between the two oblique clinching-points, substantially as and for the purposes set forth.

HORATIO N. ALLEN.

Witnesses:

SYLVENUS WALKER,

W. H. KIMBALL.