

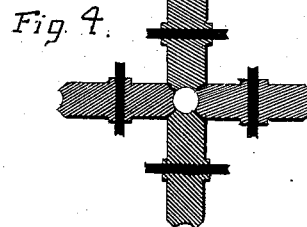
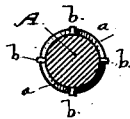
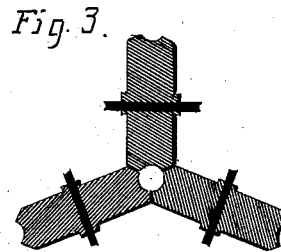
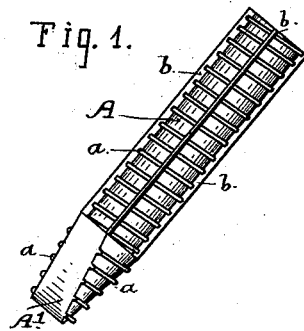
(No Model.)

G. A. CAVALLI.

NAIL OR RIVET FOR BOOTS OR SHOES.

No. 382,072.

Patented May 1, 1888.



Witnesses:

*Wm. Mayer*

*John L. Taggard*

Inventor:

*G. Andrew Cavalli*

By his Atty., *Charles Babson*

# UNITED STATES PATENT OFFICE.

G. ANDREA CAVALLI, OF SAN FRANCISCO, CALIFORNIA.

## NAIL OR RIVET FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 382,072, dated May 1, 1888.

Application filed January 20, 1887. Renewed October 7, 1887. Serial No. 251,769. (No model.)

*To all whom it may concern:*

Be it known that I, G. ANDREA CAVALLI, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented certain new and useful Improvements in Nails or Rivets for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the drawings that accompany and form part of this specification.

The object of my invention is to produce a nail or rivet for uniting soles and uppers in boots and shoes which shall possess the qualities of driving well and of holding in the leather and forming a firm and durable fastening.

It consists in the novel form and construction of nail or rivet with a threaded body and intersecting longitudinal ribs, as hereinafter fully described and pointed out.

In the drawings herein referred to, Figure 1 is a view, greatly enlarged, of the nail or rivet. Fig. 2 is a cross-section at any point through the body. Fig. 3 is a sectional view of three die-rollers used for forming the nail with three longitudinal ribs. Fig. 4 is a sectional view of four die-rollers for making the nail with four longitudinal ribs. Any number of these ribs may be formed, according to the number of rollers used.

A is the body of the nail, having the same thickness and a cylindrical form for the entire length.

a is a projecting thread running spirally and with regular pitch from end to end around the cylindrical body, and b b are longitudinal ribs

that project radially and for the whole length of the body from between the threads as well as over them. These ribs, being arranged at equal distance apart around the body, divide the threaded surface from end to end into sections, and their edges, being presented beyond the thread, meet and cut into the material first, and by their arrangement and position make it easier for the thread to take into the substance of the material into which it is being forced. A driving-point is produced at one end by tapering the cylindrical body from opposite sides to a sharp chisel-shaped edge, A'. The opposite end is left flat for driving.

Such a nail is readily formed from copper wire or brass wire by means of suitable dies; but it is best made by the use of revolving dies set as shown in Figs. 3 and 4. The number of these dies employed will govern the number of ribs or webs upon the nail, as will be understood from the above figures in the drawings.

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

1. The herein-described nail or rivet, having a thread, a, and longitudinal ribs b b, projecting beyond the thread.

2. The herein-described nail or rivet, having the thread a and the longitudinal ribs b b, extending beyond the thread, a flattened end, A', having threads on its sides, as shown.

G. ANDREA CAVALLI. [L. s.]

Witnesses:

JOHN L. TAGGARD,  
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