

(No Model.)

A. EPPLER, Jr., & A. E. COLE.

METHOD OF UNITING SHOE SOLES TO UPPERS.

No. 354,051.

Patented Dec. 7, 1886.

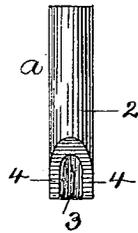


Fig. 1.

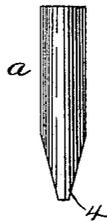


Fig. 2.

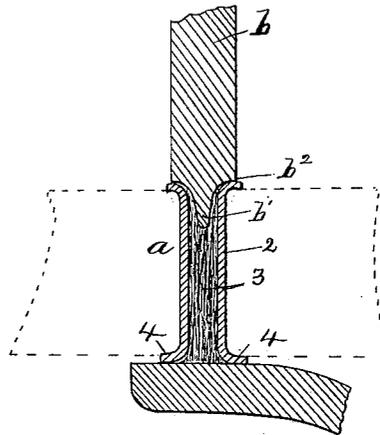


Fig. 3.

WITNESSES:
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UNITED STATES PATENT OFFICE.

ANDREW EPPLER, JR., AND ADAM E. COLE, OF BOSTON, MASSACHUSETTS,
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METHOD OF UNITING SHOE-SOLES TO UPPERS.

SPECIFICATION forming part of Letters Patent No. 354,051, dated December 7, 1886.

Application filed November 14, 1885. Serial No. 182,789. (No model.)

To all whom it may concern:

Be it known that we, ANDREW EPPLER, Jr., and ADAM E. COLE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Method of Applying Sole Fastenings, of which the following is a specification.

Our invention relates to an improved method of inserting boot and shoe fastenings; and it consists in employing, in connection with a tubular-shaped nail having its lower end V-shaped to form parallel spurs, a horn or support placed beneath the point at which said nail is driven, and a driver having a projection adapted to enter said tubular nail, and a driving shoulder, as hereinafter set forth.

It has been found that in some cases the absence of a head or enlargement makes it possible for the parts united by the nail to be separated more easily than is desirable. To overcome this objection, we use in carrying out our method a tool the driving end or surface of which is provided with a bearing-shoulder and a central protuberance adapted to partially enter the upper end of the metal tube composing the body of the nail and upset the same so as to form a head or enlargement. The bearing-shoulder insures the nail being positively forced through the leather, so that its lower end forcibly contacting against the horn will result in horizontally spreading the spurs forming the V-shaped end.

Of the accompanying drawings, forming a part of this specification, Figures 1 and 2 represent side views of the nail before it is driven; and Fig. 3 represents a sectional view of the

nail as driven, showing also the driver and the clinching-horn.

In the drawings, *a* represents the nail, which is composed of a metallic tube, 2, and may contain a fibrous core, 3. One end of the nail is beveled at opposite sides to form a point. The metal thus removed from the sides of the nails converts the end of the tube into two separate prongs or spurs, 4 4, which are spread by contact with the horn when the nail is driven, as shown in Fig. 3. The opposite end of the nail is entered and spread by the central protuberance, *b'*, of the driver *b*, the shoulder *b''*, surrounding said protuberance, acting at the same time to drive the nail. The nail is thus enabled to firmly hold the parts united by it, as will be readily seen.

We claim—

The method herein described of applying tubular fastenings or nails to boots and shoes, the same consisting in taking a metallic tube and beveling one end thereof on opposite sides so as to form opposing spurs 4 4, and then forcing the said metallic tube into the leather so as to simultaneously spread the spurs and upset the other end, the latter forming an annular flanged head, substantially as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 31st day of October, 1885.

ANDREW EPPLER, JR.
ADAM E. COLE.

Witnesses:

C. F. BROWN,
H. BROWN.