(No Model.)

J. ATHERTON.

METALLIC SHOE SHANK.

No. 346,572. Patented Aug. 3, 1886.

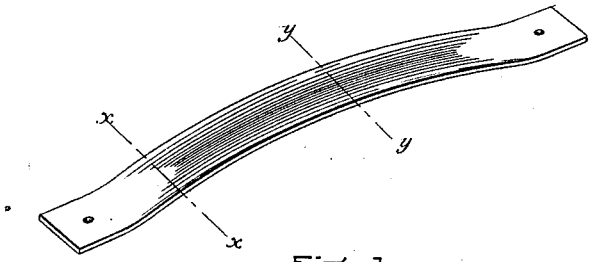

Fig. 1.

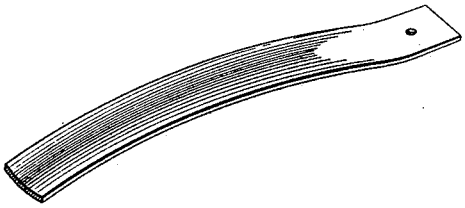

Fig. 2.

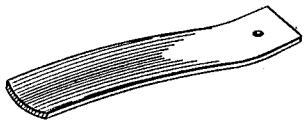

Fig. 3.

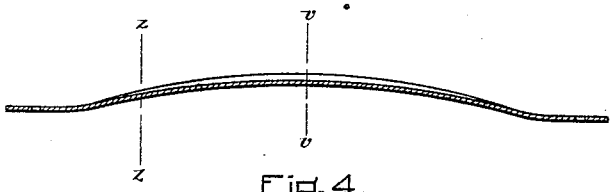

Fig. 4.

Fig. 5.

Fig. 6.

WITNESSES.

Geo. R. Washburn

F. H. Washburn

INVENTOR.

Jesse Atherton

by his attorney

Warren A. Reed

UNITED STATES PATENT OFFICE.

JESSE ATHERTON, OF BROCKTON, MASSACHUSETTS.

METALLIC SHOE-SHANK.

SPECIFICATION forming part of Letters Patent No. 346,572, dated August 3, 1886.

Application filed May 15, 1886. Serial No. 202,266. (No model.)

To all whom it may concern:

Be it known that I, JESSE ATHERTON, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Metallic Shoe-Shanks, of which the following is a specification.

My invention relates to the form of metallic shoe-shanks, and enables me to make the metallic shank of the necessary stiffness and elasticity with a smaller amount of stock than is now required, and to avoid the disfigurement of the shank of the finished shoe or boot produced in the burnishing-down process. In light shoes containing the metallic shank in forms now in use, the heavy pressure of the tool in the burnishing-down process upon the shank produces on the outside surface of the shank of the finished shoe two ridges or lines by the indentation of the edges of the metallic shank. By making the form of the metallic shank correspond more nearly to the natural shape of the shank, I am enabled to avoid this disfigurement.

In the drawings, Figure 1 represents my improved metallic shank convex on the under side in the direction of its length, and correspondingly concave on the upper side, as it is placed in the shoe, besides having the ordinary curve of a metallic shank. Fig. 2 represents the right-hand portion of the shank from the line *x x*. Fig. 3 represents the right-hand portion from the line *y y*, showing that the concavity is greater at the middle than toward the ends. Fig. 4 represents a longitudinal section showing the gradual curvature in the sides from the center toward the ends. Fig. 5 represents a cross-section through the shank on the line *z z*, and Fig. 6 a cross-section on the line *v v*.

The object of a metallic shoe-shank is to hold up to the foot the portion of the boot to which it is applied, and in wearing the shoe the tendency is to bend the shank by pressure on the middle, the ends being supported. In order to resist this pressure, I make use of the fact that the cylindrical form has far greater power of resisting such a pressure than a plane surface has.

My improvement consists in curving the side surfaces of the shank—that is, the top and bottom as it is in the shoe—by bending or hollowing it with the concave side upward throughout the whole or greater portion of its length by a gradually-increasing curve from near the ends to the center.

What I claim as my invention, and desire to secure by Letters Patent, is—

A metallic shoe-shank curved both longitudinally and transversely, substantially as described, and for the purpose set forth.

JESSE ATHERTON.

Witnesses:
WILLIAM S. GREEN,
LENA T. SOULE.