E. S. JUSTH.

Boots and Shoes.

No. 169,006. Patented Oct. 19, 1875.

Fig. 1.

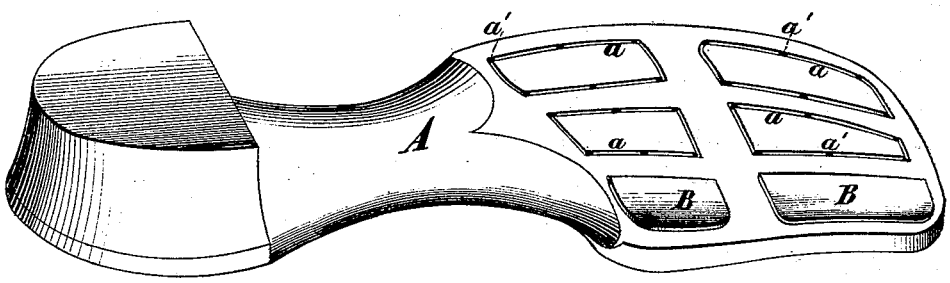
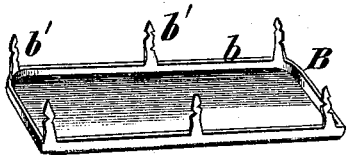


Fig. 2.



Witnesses.
A. Ruppert.
John Eils.

E. S. Justh
Inventor.
by Edw. J. Eils
his Atty

UNITED STATES PATENT OFFICE.

EMANUEL S. JUSTH, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. **169,006**, dated October 19, 1875; application filed September 24, 1875.

To all whom it may concern:

Be it known that I, EMANUEL S. JUSTH, of Washington, District of Columbia, have invented a new and useful Improvement in Boots and Shoes, of which the following is a specification:

This invention relates to a method of arming the soles of boots and shoes with metallic plates, applied in sections, so as to preserve the flexibility of the soles, and at points where the soles are most subject to wear, the plates being slightly raised above the surface of the sole, so that the space between two adjacent plates will be protected from wear.

My improvement consists in the use of such plates stamped out of sheet metal, having prongs for entering the sole, and also a low raised rib around the edge. This raised rib serves several very important purposes: first, it enables me to bend up the prongs of the blank without danger of breaking them off; secondly, the rib, entering a corresponding groove channeled in the sole, receives all strain on the plate, so that the prongs only hold it against withdrawal from the sole; thirdly, it provides a stiffened as well as smooth edge, not liable to catch or hook on carpeted floors or inequalities of the ground.

Figure 1 is a perspective view of the bottom of a boot or shoe, the sole of which is provided at two points with my improved metal plates. Fig. 2 is a perspective view of one of my improved plates.

The metal plates will be attached at the particular points where the person using them wears most on the sole, care being taken to leave a space between the plates, if more than one be used, along the line or lines where the sole bends in walking. In this particular case I have shown two plates applied along the inside edge of the sole. To allow of the proper attachment of the plate B shallow channels *a* are cut upon the lower surface of the sole A for the reception of, and corresponding to the size and shape of, the raised rib *b* on the plate. At proper distances holes *a'* are sunk in the channels for the reception of the barbed prongs *b'*. The prongs are barbed to enable them to take a better hold in the sole when driven. These plates may be applied all over the sole, suitable channels being cut, as I have shown in Fig. 1. The plates can be easily made and readily attached by anybody desirous of using them, and, of course, may have any preferred shape. They may be struck up from sheet iron, copper, brass, or any other suitable metal.

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

1. As a new article of manufacture for arming the soles of boots and shoes, a sheet-metal plate having a raised rib, *b*, around the edges, and holding-prongs *b'*, substantially as specified.

2. The lower surface of soles of boots and shoes provided with thin sheet-metal plates having an inwardly-raised rib, *b*, around the edges, entering corresponding channels *a* in the sole, and barbed prongs *b'*, in the manner and for the purpose herein described.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

E. S. JUSTH.

Witnesses:

B. EDW. J. EILS,

JOHN EILS.