

*D. M. Ayer,
Shoe Upper,*

N^o 60,987.

Fig: 1 Patented Jan. 8, 1867.

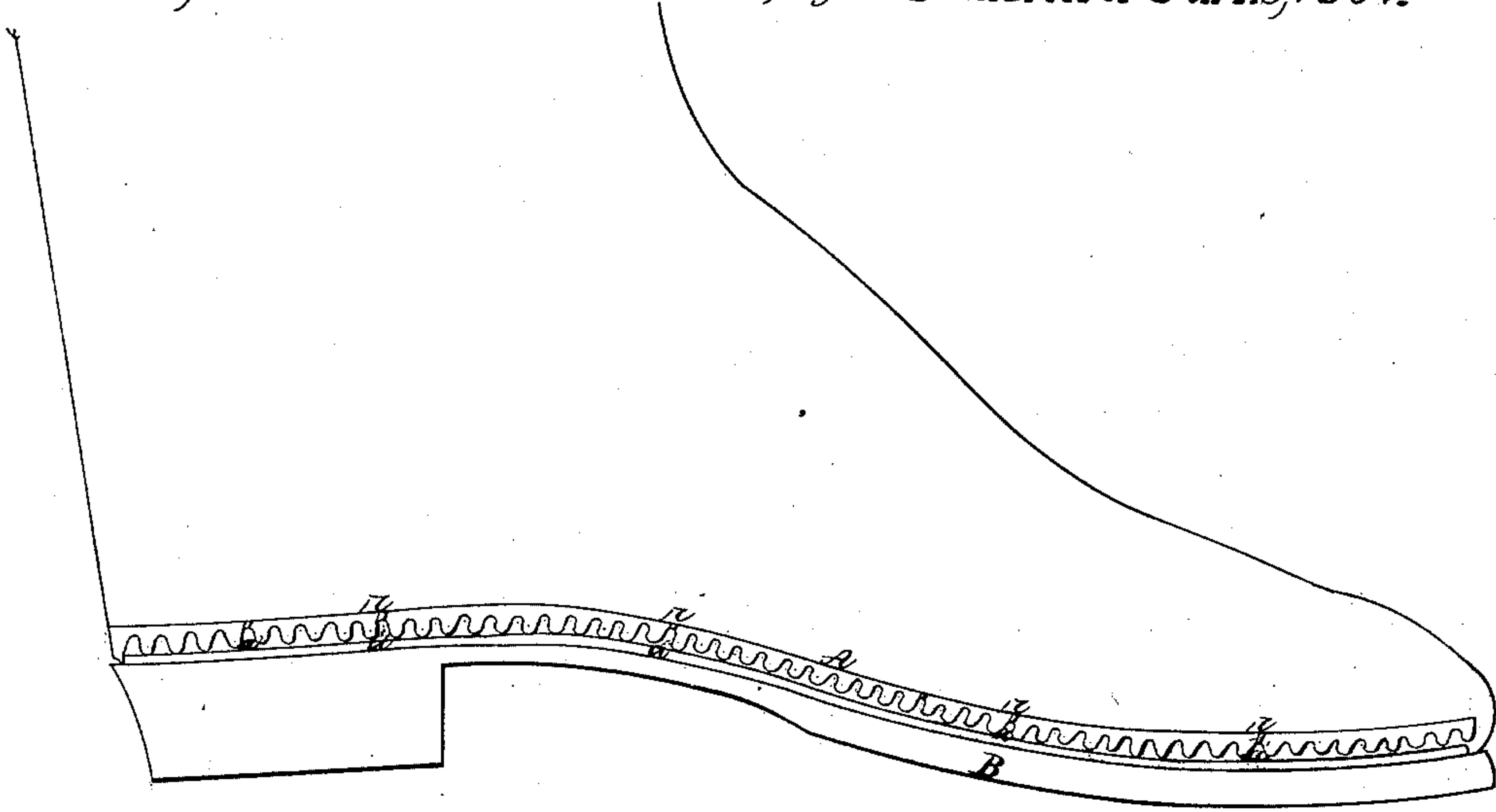


Fig: 2.

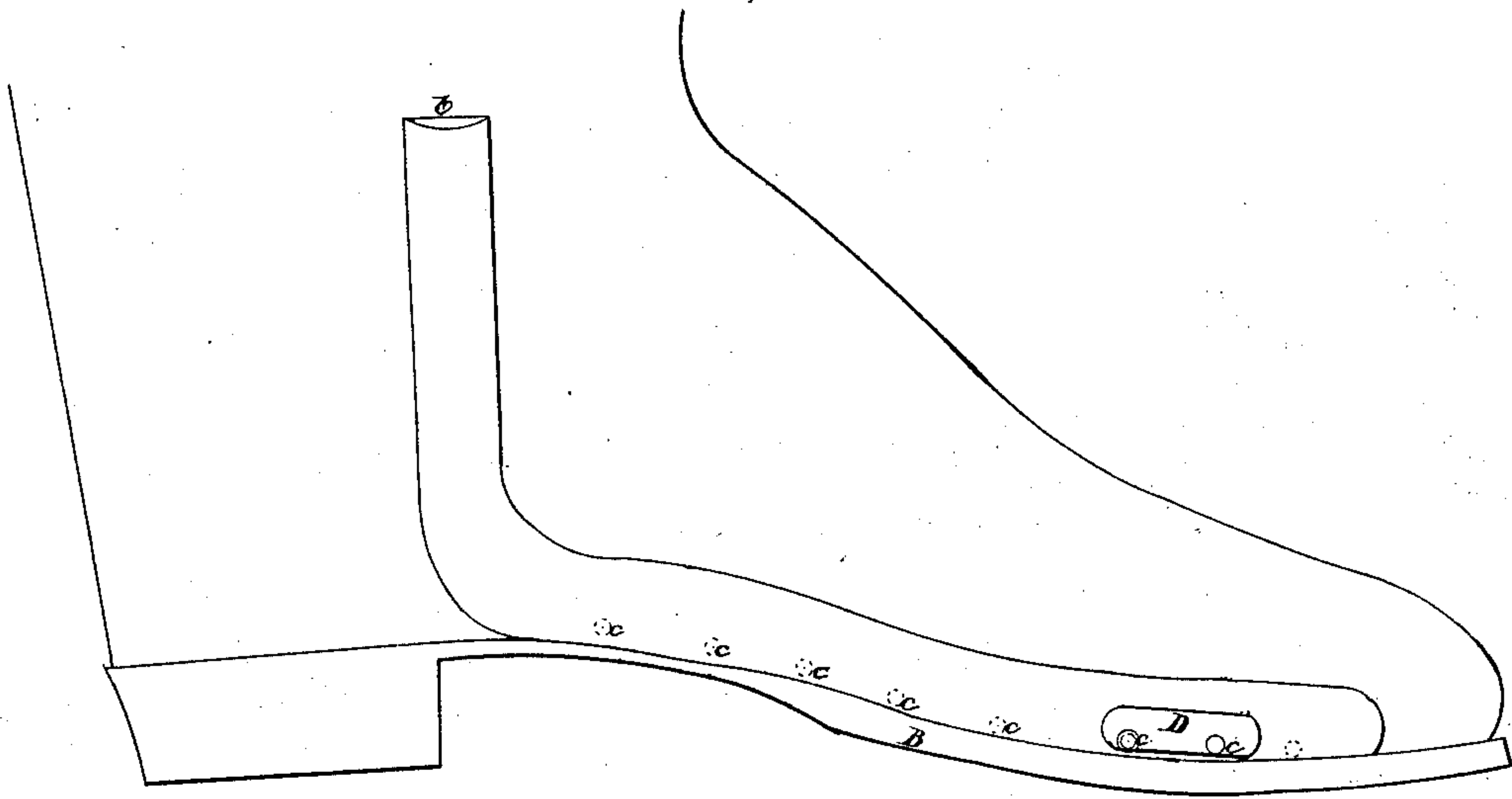
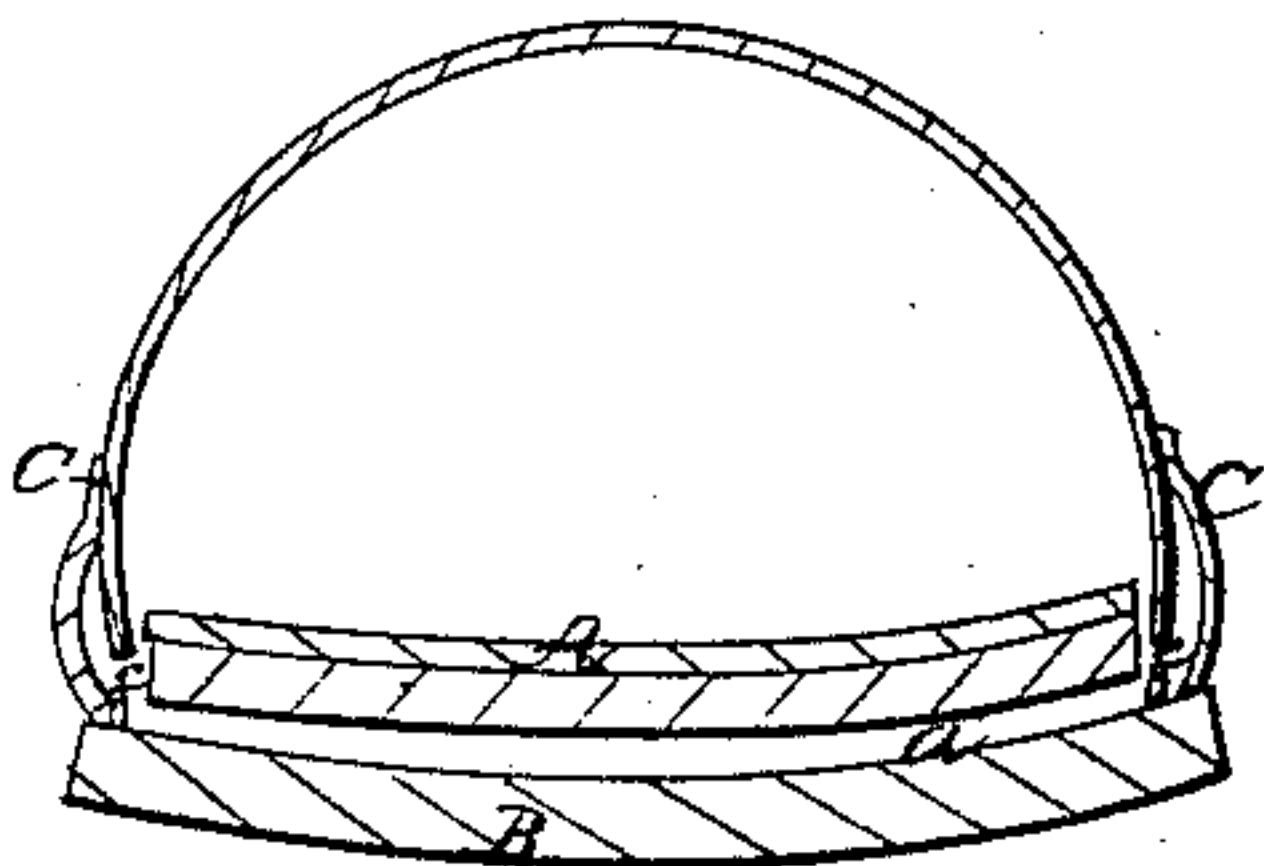


Fig: 3.



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DAVID M. AYER, OF LEWISTON, MAINE.

Letters Patent No. 60,987, dated January 8, 1867.

IMPROVEMENTS IN BOOTS AND SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID M. AYER, of Lewiston, in the county of Androscoggin, and State of Maine, have invented a new and useful Improvement in Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to secure a more uniform temperature by the introduction of air under and around the foot, so as to prevent it from becoming heated and sweaty, and also to prevent taking cold in going from a warm room onto the cold, damp ground. The nature of the invention consists in forming air-cells or spaces between the outer and inner soles, which shall always be filled with air, and also in connecting said air-cells or spaces with the outer air by means of ventilating ducts, as hereinafter more particularly described.

In the accompanying drawings—

Figure 1 is a longitudinal section of the foot of a boot made in pursuance of my invention.

Figure 2 is an exterior view of the same; and

Figure 3 is a cross-section.

A is the inner sole; B, the outer sole; *a a a*, air-cells or spaces between the inner and outer soles, which are formed by corrugating or fluting the inner sole, as represented in the drawing, fig. 1; and *i i i* are holes through the inner sole, connecting with the air-cells *a a a*. C C, figs. 2 and 3, is a strip of leather, plain or ornamented, firmly secured between the soles, with the upper leather of the boot, and firmly stitched at its upper edge to said upper leather of the boot, and so arranged as to form an air-passage between the strip and the upper of the boot with an opening at the top on the side of the leg, at *b*, for the introduction or escape of air. The air-space between said strip and the upper of the boot connects with the air-cells between the soles by means of holes *c c* in the upper, as is clearly shown in fig. 3, thereby allowing the air to pass in and out, as circumstances may require, or as may be induced by the action of the foot and the temperature of the surrounding air. D represents a part of the strip C C cut away to show the holes *c c* through the upper of the boot. These strips should be applied on each side of the boot. It is not, however, absolutely necessary that the air-cells or spaces between the outer and inner soles should communicate with the outer air to secure some of the advantages of my invention, and therefore the air-ducts or passages formed by means of said strips C may be dispensed with, and still beneficial effects will result from the air-cells or spaces between the soles, though operating only to contain confined or dead air. The air-cells between the outer and inner soles may be formed by introducing into the boot or shoe a false or movable sole, corrugated or fluted on the under side, as described. I corrugate and harden the inner sole to produce the air-cells or spaces *a a* by a process for which Letters Patent were allowed me on the 10th of December, 1866. The strips C C may be so arranged and attached to the boot or shoe as to form a number of air-ducts or passages along the sides, so high as not to admit water under any ordinary circumstances, for the introduction of air to the air-cells between the soles, or its escape therefrom.

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

1. Forming air-cells or spaces between the outer and inner soles of boots and shoes by means of corrugated or fluted sole-leather, substantially as described.

2. In combination with air-cells or spaces between the outer and inner soles of boots and shoes, formed by means of corrugated or fluted sole-leather, as described, I claim air-ducts or passages communicating with the outer air, substantially as described.

D. M. AYER.

Witnesses:

J. J. COOMBS,

JOS. L. COOMBS.