

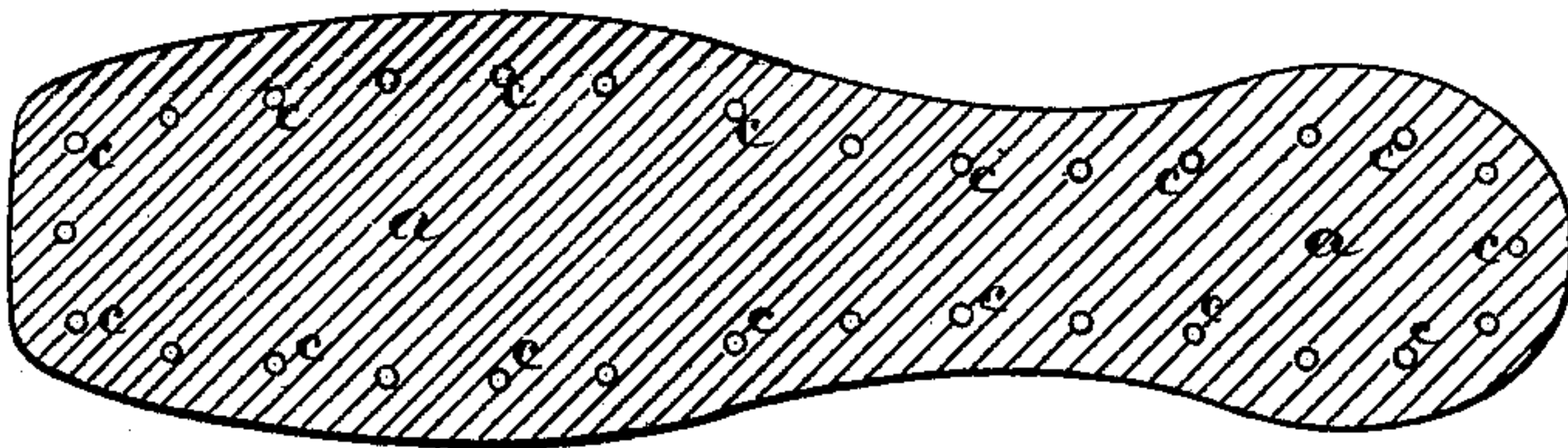
A. M. DANIELS.

INSOLE.

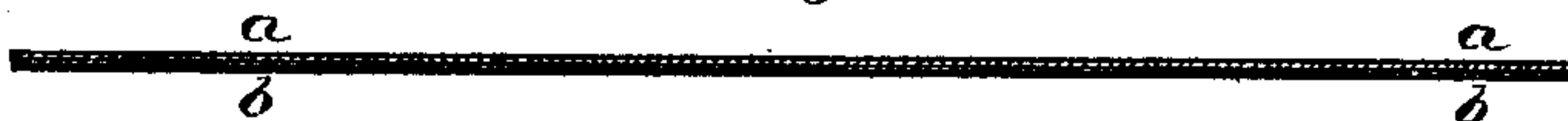
No. 176,428.

Patented April 25, 1876.

*Fig. 1.*



*Fig. 2.*



Witnesses.

John S. Peters  
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Inventor.

Aaron M. Daniels  
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# UNITED STATES PATENT OFFICE.

AARON M. DANIELS, OF HARTFORD, CONNECTICUT.

## IMPROVEMENT IN INSOLES.

Specification forming part of Letters Patent No. **176,428**, dated April 25, 1876; application filed March 24, 1876.

*To all whom it may concern:*

Be it known that I, AARON M. DANIELS, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Insoles; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to inner soles, such as are sometimes worn in boots and shoes, as an additional protection to the feet from cold or dampness, and which do not form an integral part of the boot or shoe.

These insoles have been made of cork, leather, and various other substances, all of which have been more or less imperfect in accomplishing the object for which they were designed.

The object of my invention is to provide an insole which shall be soft and warm, and at the same time not be liable to absorb and retain dampness.

My invention consists in a layer of medicated or prepared felt, usually attached to a layer of leather, or similar substance, and ordinarily provided with a number of holes through the same for the purpose of ventilation.

In the accompanying drawing, Figure 1 is a top view of my improved insole. Fig. 2 is a side view of the same.

*a* is the layer of prepared felt. *b* is a layer of artificial leather, or other suitable substance. *c c* are holes through the insole.

For the upper layer I prefer a felt made in layers of animal and vegetable fibers; but common felt, as ordinarily made, will answer. This felt is prepared by soaking it in a solution of alum in vinegar, in the proportion of three pounds of alum to five gallons of vinegar; or

an equivalent quantity of acetic acid may be used in place of the vinegar. The felt is dried, and loses in a great measure its power of absorbing moisture.

The alum and vinegar can be introduced into the felt during the process of manufacture, if made for this especial purpose.

After being prepared as above described, the felt is attached to the substance which is to form the under side, and soles are cut out of the desired form.

The two layers can be secured together either by some adhesive substance, or by stitching around the edges.

In some cases the felt can be used alone.

The insole thus made is perforated with a number of small holes, as shown in the drawing, to allow of a circulation of air under and through the sole, and to allow of the escape of moisture from the sole of the shoe, if it becomes damp.

For the purpose of giving a softer and smoother surface to the upper side of my improved insole, I prepare a felt with a thin layer or surface of silk on one side, using therefor the waste and broken cocoons that are unfit for ordinary spinning. This silk is felted onto the other fiber in the customary manner.

What I claim as my invention is—

1. An insole of felt prepared with alum and vinegar, substantially as herein described.
2. An insole composed of felt, prepared as described, with an under layer of artificial leather, or other suitable substance, substantially as herein described.
3. An insole composed of felt, prepared as described, having a surface of silk fiber, substantially as herein set forth.

AARON M. DANIELS.

Witnesses:

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