

(No Model.)

T. BARKER.

SOCK OR INSOLE FOR BOOTS OR SHOES.

No. 387,335.

Patented Aug. 7, 1888.

Fig: 1.

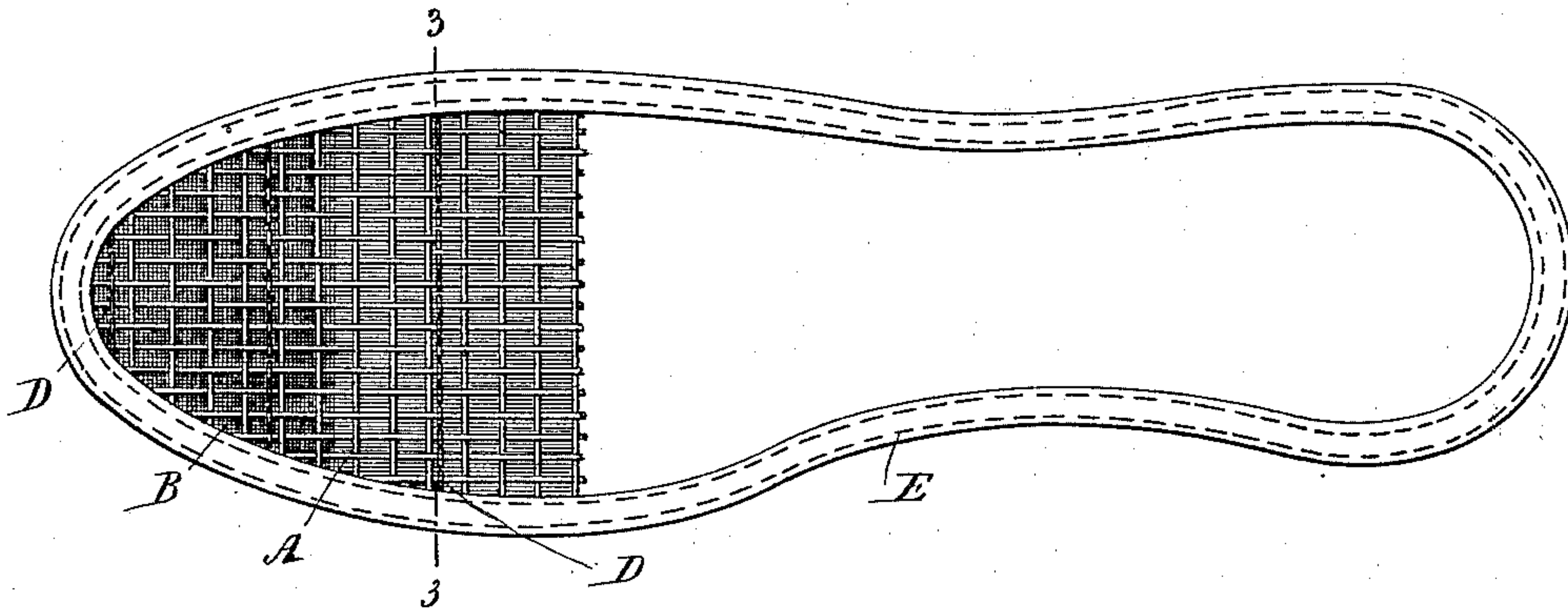


Fig: 2.

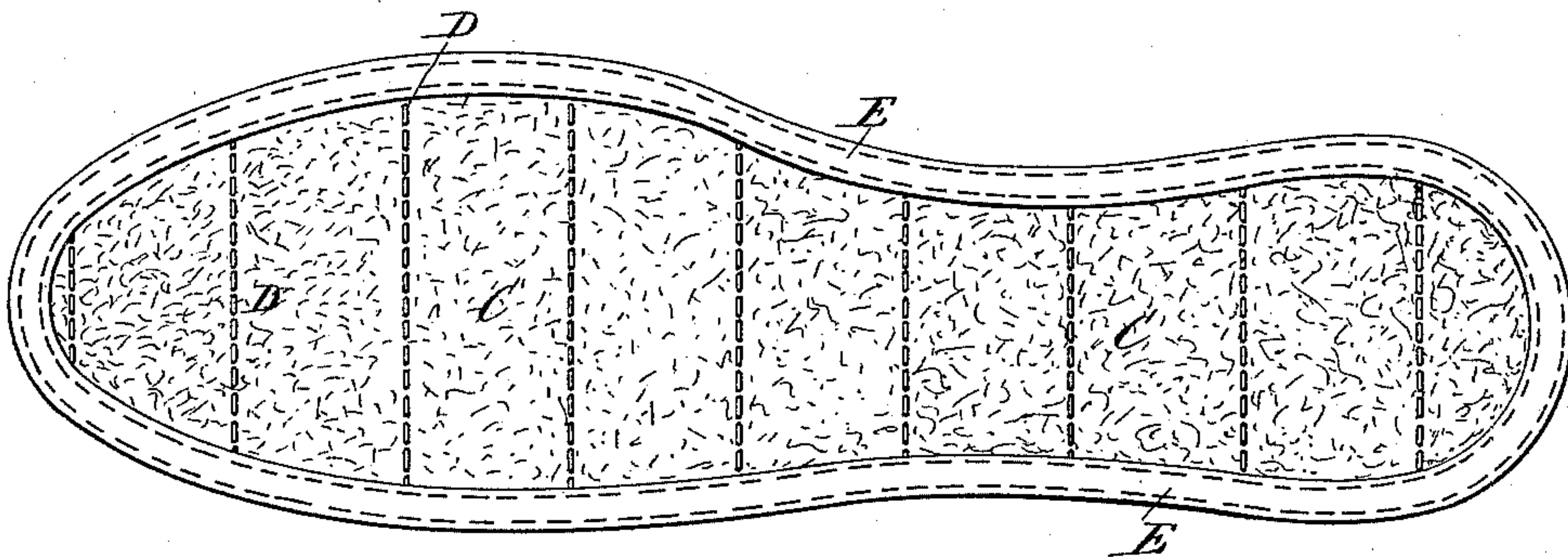
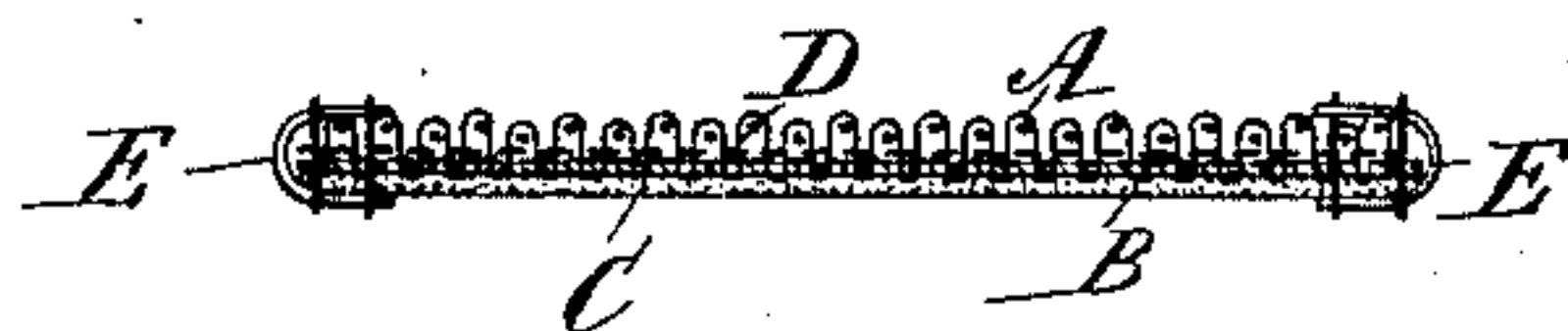


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS BARKER, OF TODMORDEN, COUNTY OF LANCASTER, ENGLAND.

SOCK OR INSOLE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 387,335, dated August 7, 1888.

Application filed May 21, 1887. Serial No. 238,949. (No model.) Patented in England June 11, 1886, No. 7,830.

To all whom it may concern:

Be it known that I, THOMAS BARKER, a subject of the Queen of Great Britain, residing at Todmorden, county of Lancaster, England, have invented certain new and useful Improvements in Insoles for Boots or Shoes, of which the following is a specification.

This invention relates to insoles for boots or shoes, which are interposed between the foot of the wearer and the sole of the boot or shoe, thereby preventing direct contact of the sole of the foot with the leather of the boot or shoe.

Various insoles of this class have been made heretofore, some being constructed of layers of two or more materials; but these have all had certain disadvantages which my invention seeks to overcome.

The object of my invention is to make insoles which will be warm and soft, will absorb the moisture which collects under the foot of the wearer, and will permit a circulation of air in the boot or shoe.

To this end my improved insole is constructed of three different materials or layers—a foraminous metallic bottom layer, an intermediate layer of hair, and a layer of soft fibrous substance, such as wool or swan's-down.

In the accompanying drawings, Figure 1 is an underside plan of my improved insole. Fig. 2 is a plan of the upper side thereof, and Fig. 3 is a cross-section thereof taken on the line 3 3 in Fig. 1.

Referring to the drawings, let A represent a layer of foraminous metal, as wire gauze or netting, which forms the under side of my improved insole. This material is both tough and flexible, and therefore well adapted to receive the wear consequent upon its contact with the sole of the shoe and to accommodate itself to the bending of the foot. Upon this wire netting I place an intermediate layer of hair, B. This serves as an elastic porous and non-conducting cushion between the wire-netting and the upper layer, and is exceedingly durable.

C is the next and upper layer, which is the one coming in contact with the foot. This is composed of some soft absorbent material which is a non-conductor of heat, such as wool or swan's-down. I apply this layer by placing the substance on the hair and then retaining

the three materials in place by rows of stitching through the insole.

D is the ordinary binding which it is desirable to stitch around the edge of the insole to improve its appearance.

The wire-netting A receives all the friction of the contact with the shoe and is not injured thereby, owing to its toughness. It is made sufficiently flexible to conform to the shape of the shoe and accommodate the movements of the foot. In the event of moisture in the shoe it will collect between the open meshes of the wire and will not reach the wearer's foot. The hair B, in its immediate position between the wire-netting and the top covering of the insole, serves to cushion the latter, owing to its elastic nature, and also provides through its interstices for ventilation between the top and bottom layers. The slippery quality of the hair renders it peculiarly adapted for a middle layer in the insole, as the continual movement of the insole when in use causes considerable relative movement of the different layers, which is partly accommodated by the movement of the hairs on each other. The wear which would result from such movement of the layers upon each other is also greatly reduced by the ease with which the top and bottom layers slide upon the hair.

In use, when one part of this insole is compressed by the pressure of the foot, the parts not under pressure are expanded by the elasticity of the material, and thus a movement of air is caused, which assists in keeping the insole dry.

My improved insole may be made separate from the boot or shoe and be placed loosely therein, or it may be made as part of the sole of the boot or shoe.

These insoles are exceedingly comfortable, as the upper layer, which comes in contact with the foot, is a non-conductor of heat, and is sufficiently porous to allow air or perspiration to pass through it, and its elasticity, together with that of the layer of hair beneath it, forms a soft and yielding cushion for the foot. The open meshes of the bottom layer of wire-netting allow a certain amount of air to lodge under the insole, which assists in keeping the boot or shoe warm and dry while worn.

I find that swan's-down is an excellent material for the upper layer of my improved insole.

Cork may be substituted for the intermediate layer of hair, if desired.

5 Instead of the wire-netting, I may use a sheet of closely-perforated flexible metal for the bottom layer of my insole, although this is not so desirable as the netting.

I claim as my invention—

10 1. An insole for boots or shoes, consisting of a bottom layer of foraminous metal, an intermediate layer of hair, and a layer of soft fibrous material, the whole fastened together, substantially as set forth.

2. An insole for boots or shoes, consisting 15 of a bottom layer of wire-netting, an intermediate layer of hair, and a layer of wool, the whole fastened together, substantially as set forth.

In witness whereof I have hereunto signed 20 my name in the presence of two subscribing witnesses.

THOMAS BARKER.

Witnesses:

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