Feb. 3, 1948. A. BILLINGSLEY 2,435,337

LAMINATED INSOLE FOR SHOES

Filed April 12, 1946

Fig. 1.

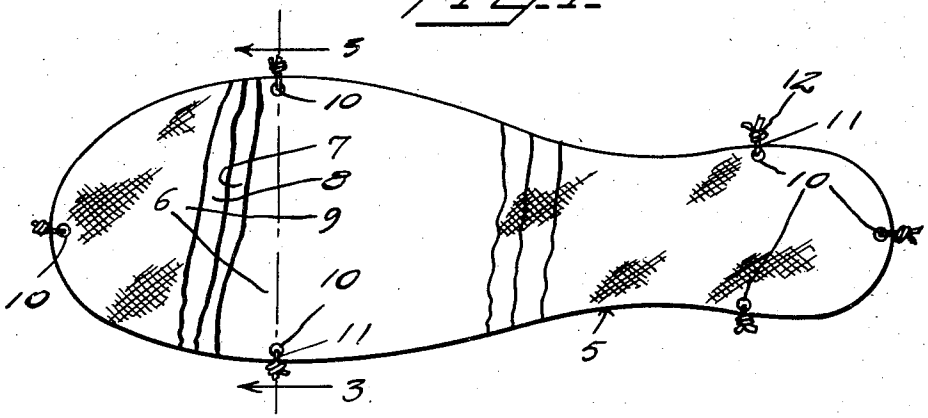



Fig. 2.

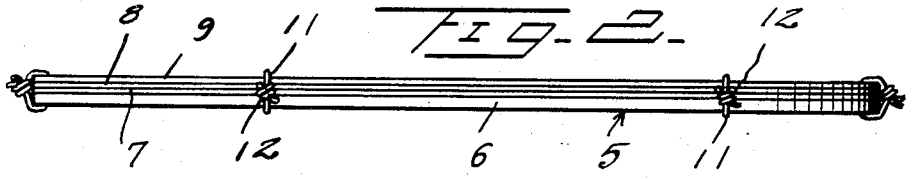



Fig. 3.

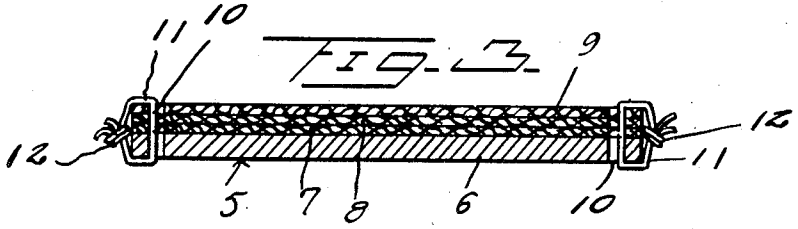
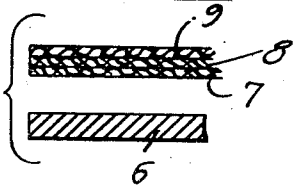



Fig. 4.




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# UNITED STATES PATENT OFFICE

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## LAMINATED INSOLE FOR SHOES

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Application April 12, 1946, Serial No. 661,821

2 Claims. (Cl. 36—44)

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This invention relates to a novel construction of insole for shoes of composite construction including a plurality of plies of different material, certain of which are invertable at the discretion of the user.

More particularly, it is aimed to provide an insole for shoes capable of being comfortably worn in either the winter or the summer and equipped with reversible means which will provide warmth and protection in the winter or a cooling and insulating effect in the summer.

Still another object of the invention is to provide an insole possessing the above described characteristics capable of being economically manufactured and sold and which can be readily reversed by the user depending upon the climatic conditions under which the insole is to be used.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, which illustrates a preferred embodiment thereof, and wherein:

Figure 1 is a plan view, partly in section of the insole;

Figure 2 is a side elevational view thereof;

Figure 3 is a cross-sectional view taken along a plane as indicated by the line 3—3 of Figure 1; and

Figure 4 is a fragmentary, exploded sectional view of a portion of the insole.

Referring more specifically to the drawing, wherein like reference characters designate like or corresponding parts throughout the several views, the improved insole is designated generally 5 and includes a base portion or bottom ply 6 preferably formed of soft flexible rubber, either natural or synthetic.

Super-imposed upon the base ply 6 are three plies 7, 8 and 9, reading from bottom to top, respectively. The lower two plies 7 and 8 are preferably formed of a relatively heavy canvas fabric and the upper ply 9 is preferably formed of a woolen or part woolen fabric. The plies 7, 8 and 9 are bonded together in any suitable manner, as by cementing.

As clearly illustrated in the drawing, the plies 6, 7, 8 and 9 are all of the same size and shape, varying only as to their thickness, and said plies are provided with aligned openings 10, located at the toe and heel thereof and at the sides in the ball and heel portions thereof. The aligned openings 10 are provided to receive flexible members, such as pieces of cord, which are passed therethrough and tied at 12 along the edge of the insole 5. The cords 11 may be readily removed, either by being untied or cut, for a purpose which will hereinafter be explained.

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As seen in Figure 1, the composite insole 5 is of the same size and shape on each side of its medial line so that the bonded plies 7, 8 and 9 may be removed from the base ply 6 and inverted. This is accomplished by cutting, untieing or otherwise removing the cords 11 and replacing them after the bonded plies have been inverted.

It will thus be readily apparent that the insole 5 may be worn with the uppermost ply 9, which is of woolen fabric, located next to the foot to afford additional warmth to the wearer during cold weather. When thus worn, the ply 6 and the plies 7 and 8 will, in addition to affording cushioning means, also act as insulating plies to prevent the passage of heat therethrough and to the foot of the wearer; and will also function to maintain the woolen ply 9 in a dry condition under inclement weather conditions. For use in hot climates or under hot weather conditions, the bonded plies 7, 8 and 9 are inverted to position the ply 9 next to the base ply 6 and so that the ply 7 will be uppermost and in engagement with the foot. The ply 7 being formed of canvas or the like will afford a cool contact with the foot of the wearer and the plies 6, 8 and 9 will function as insulating means to prevent heat being conducted therethrough from the shoe sole, not shown, to the foot. It will also be obvious that the insole will additionally function, as previously described, for cushioning the foot of the wearer and to prevent the passage of moisture therethrough.

Each of the plies is formed of a relatively flexible material so that the insole 5 is capable of flexing readily to conform to the curvature of the foot and the sole of the shoe, in which it is worn.

Various modifications and changes are contemplated and may obviously be resorted to without departing from the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim:

1. In an insole for shoes, a relatively thick base ply formed of a flexible, elastic and waterproof material, an upper section super-imposed thereon and comprising a plurality of fabric plies of different materials, the plies constituting said upper section being bonded together, and tie means for detachably securing said bonded plies to the base ply.

2. In an insole for shoes, a relatively thick base ply formed of a flexible, elastic and waterproof

material, an upper section super-imposed thereon and comprising a plurality of fabric plies of different materials, the plies constituting said upper section being bonded together, and tie means for detachably securing said bonded plies to the base ply, said plies being of the same size and contour on both sides of the medial line of the insole whereby the bonded plies may be removed and inverted and reapplied.

ALVA BILLINGSLEY.


REFERENCES CITED

The following references are of record in the file of this patent:





UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 450,920 | Snellenburg et al. | Apr. 21, 1891 |
| 1,630,135 | Roberts | May 24, 1927 |

FOREIGN PATENTS

| Number | Country | Date |
|---|---|---|
| 135,857 | Great Britain | May 26, 1921 |
| 223,262 | Great Britain | Oct. 15, 1924 |