

(No Model.)

D. E. GOLDTHWAIT.

INSOLE.

No. 343,990.

Patented June 22, 1886.

Fig. 1.

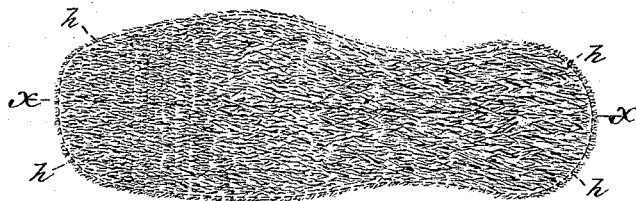


Fig. 2.

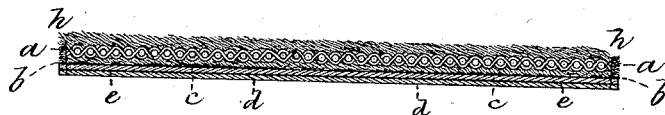


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

DAVID E. GOLDTHWAIT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
CHARLES GRANT, JR., OF SAME PLACE.

INSOLE.

SPECIFICATION forming part of Letters Patent No. 343,990, dated June 22, 1886.

Application filed March 31, 1886. Serial No. 197,304. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. GOLDTHWAIT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Insoles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of an insole of my improved construction. Fig. 2 is a vertical section on the line *x x* of Fig. 1, three layers being shown. Fig. 3 is a vertical section through an insole composed of two layers.

My invention consists in an innersole formed of layers or thicknesses, having for its leading feature an upper layer composed of teaseled woven hair, either spun or not, said layers or thicknesses being united by adhesive material, sewing, or other suitable fastening, the hair of the upper layer affording a soft yielding bearing for the sole of the foot and contributing to the warmth of the same.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

One description of insole embodying my invention is formed in the following manner. A woven fabric composed of warps of cotton, linen, or woolen, and a filling of the hair of animals—for instance, ox-hair—either spun or not, and having its upper surface teaseled, so as to cause the ends of the hairs to separate or stand off from the warp, is cut into sheets *a* of convenient size, and attached by glue or other adhesive material, *b*, to a second sheet, *c*, of similar size, of card-board, straw-board, pasteboard, leather-board, wood veneer, cork,

cloth, &c., the said adhesive substance being laid upon the upper side of this second sheet or upon the under side or unteaseled surface of the woven-hair fabric to which it is to be attached. A third sheet, *d*, of similar size, of paper or leather, either enameled or not, with its smooth surface outside or underneath, is then attached by glue or other adhesive substance, *e*, and the three layers *a c d* left to dry, after which a pattern of the desired size and form of insole is placed on the three-ply sheet and the latter cut up into insoles, and a line of stitching, *h*, run around close to the edge of each insole, to keep the edges of the layers from separating.

The three layers *a c d* may be united by rows of stitching either made longitudinally or transversely with the sole, and the adhesive material may be dispensed with, or the latter may be employed in connection with the stitching.

The insole may consist of only two thicknesses or layers, Fig. 3, the upper one being of woven hair, with its upper or outer surface teaseled, and the lower layer of enameled leather, paper, or cloth.

I claim—

An insole consisting of an upper layer or ply of a teaseled woven-hair fabric and one or more layers of card or other board, cork, leather, cloth, &c., united by adhesive material or stitching, or by both, as described.

Witness my hand this 25th day of March, 1886.

DAVID E. GOLDTHWAIT.

In presence of—

N. W. STEARNS,
C. GRANT, Jr.