T. W. McGOVERN.

INSOLE.

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1,120,959.

Patented Dec. 15, 1914.

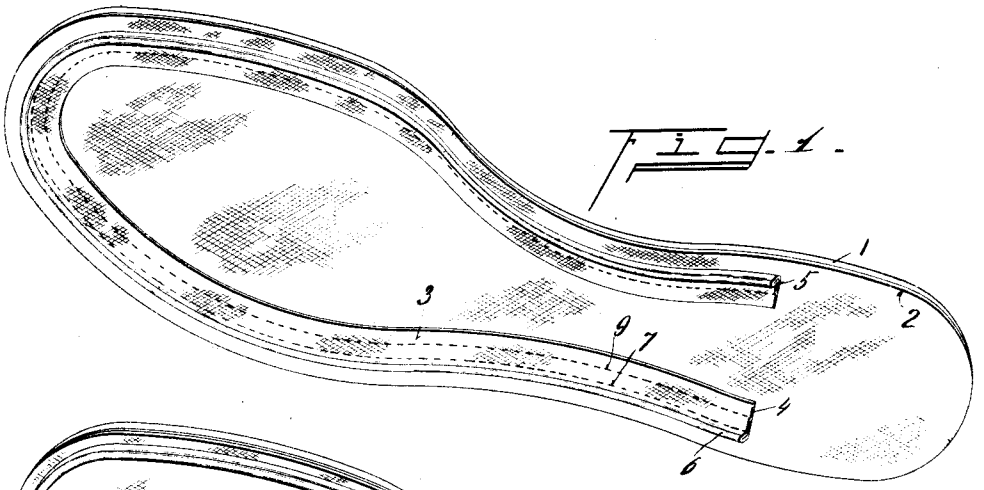


Fig. 1.

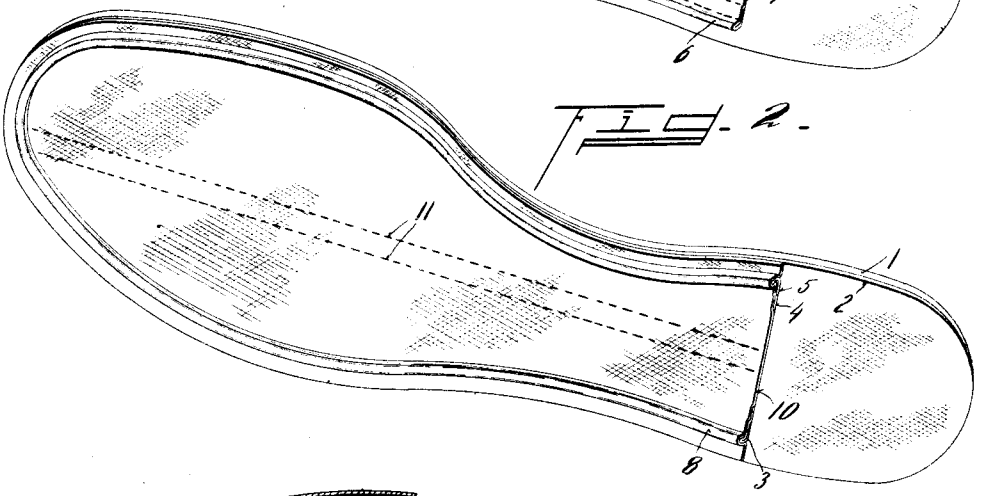


Fig. 2.

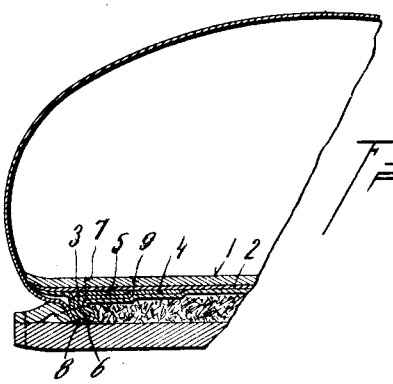


Fig. 3.

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UNITED STATES PATENT OFFICE.

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INSOLE.

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To all whom it may concern:

Be it known that I, THOMAS W. McGOVERN, a citizen of the United States, and residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Insole, of which the following specification is a full disclosure.

My invention deals with the production of shoe insoles as a uniquely built-up or composite unit, wherein a cheaper grade of tenacious and pliable material may be largely used, resulting in a well-finished and durable product, adapted to be used in quality shoes.

One of the objects within the contemplation of this invention is to form a sequence of manipulative steps orderly related to one another, simplifying the manufacture of insoles, so that they, in their superior capacity, can be made at a cost less than that prevailing as to insoles constructed along lines now regarded as good practice.

Another object of my invention is in the formation of a composite insole of several layers of material united by stitching, preferably medially longitudinally thereof, and in which one layer marginally provides a lip or ridge for inseaming and preferably of a reinforced character, to which the welt and upper of a shoe are attached.

A further object is to create a well-finished and durable product by combining a series of layers, in which one may be defined as a veneer of high grade quality, for producing a rich surface finish, and utilized primarily as a lining layer in a completed shoe, with the remaining layers of a cheaper raw material, but very tenacious to furnish an anchorage for inseam stitching, and the whole, as a unit, very pliable and flexible, making it possible to produce a shoe with similar characteristics.

Other objects and advantages will be in part obvious from the annexed drawings, and in part indicated in the following description thereof, and in such drawings, like characters of reference denote corresponding parts throughout the several views, of which:—

Figure 1 is a perspective view of the under-side of an insole in a partial state of production. Fig. 2 is a similar view in completed form. Fig. 3 is an exaggerated, mutilated cross-section of a shoe, containing my improved insole.

It will be noted from the detail description, that the invention is more specifically aimed to the production of an improved insole of Goodyear type.

In the manufacture of the insoles, the use of leather or similar expensive material may entirely be dispensed with, and a cheaper grade of material substituted. It may be referred to as a built-up or composite unit, preparatorily the result of a progressive series of steps of a method or process, and this, although secondary to the invention as an article of manufacture, aids in a clear conception of the invention. As an initial step, the various elements of the composite insole are suitably blanked from the different kinds of material giving them the proper outline required.

1 indicates a layer of material, which may be termed "high-grade," preferably leather having a high finish, if desired, to serve as a sock lining for the shoe, and may be designated as a top facing or veneer for the insole. A second layer 2, preferably of a commercial duck material, or an inexpensive material, tenacious and flexible, and such material as a commercial product of preference is one, in which, one side has an adhesive coating, so that when placed upon layer 1 it can be cemented thereto. This may be defined as a composite blank, as a reinforced veneer, and functions as the body of the insole. The heel portion of the composite blank may be provided with a stiffening-piece, as of fiber-board, and upon one side to provide for an anchorage for the heel of the shoe. This, however, is omitted from the drawings, to avoid obscurity, as it forms no material feature of this invention. The stiffening-piece may be adhesively or otherwise united to the layer 2 or to the composite blank, and may also lie between the layers 1 and 2.

It is obvious and contemplated within the scope of this invention that a single thickness of material may equally answer as providing the body of the insole, instead of the composite blank of different kinds of material to qualify equally for tenacity, flexibility and surface finish, but a high quality leather veneer adds class and finish to the interior of the shoe, and its use as a veneer does not materially increase the cost of the insole.

Inseam lip or ridge—The unfinished side of the composite blank, or more definitely, layer 2, marginally is provided with a fold-

ed tape 3 secured thereto by stitching and preferably of a grade of material as that of layer 2, an adhesively surfaced duck. This is formed by folding a tape, with the laps 4 and 5 relatively unequal, so that one will overlap the other when united to the composite blank, with the short lap abutting the layer 2, and its folded edge 6 outward, following the blank marginally. It is thus secured by a line of stitches 7 passing through the two lap thicknesses, a slight distance inward from the folded edge, which stitching determines the width of a marginal lip 6, as being free from the blank or body to permit the same to be bent backwardly at the juncture of the stitching, providing a marginal ridge for inseam stitching. A second line of stitching 9 follows the first line of stitching in parallelism, secures the long lap to the blank, and this overlapping of laps inwardly produces a tapering surface, leaving no pronounced or abrupt edge to mar the finish surface of the insole, or protuberance, to discomfort the wearer of the shoe. The marginal edge or lip 6 provides an anchorage for the inseam stitching for the welt and upper of the shoe, but, in this instance, primarily qualifies as a reinforcing for an inseam ridge.

Inseam anchorage layer—A layer 10 is next applied as a covering for the folded tape and layer 2 of the same stock material, namely, one side adhesively coated duck. This layer unites with the layer 2 and lipped tape auxiliarly by the adhesive coating and its marginal edge is flush with the composite blank and neatly binds the lip 6, and provides a ridge of four thicknesses of material. The layer is additionally secured to the composite blank or layers 1 and 2, by lines of stitching 11 extended medially, longitudinally of the insole, providing a reinforcing stitching, and divides the lateral strains upon the insole, confining them to opposite sides of a neutral line, so that no pulling strains from one side upon the inseam stitching can be distributed to the opposite inseam stitching or permit the layers to slip upon each other, or buckle and crimp. The margins of the insole, are, therefore, substantially relieved from strains to which it may be subjected as they are equally distributed over an increased area one side of a medial line of the insole. Three distinct lines or stitching in parallelism anchoring at different portions and through different thicknesses, divides the strains, equalizing them over the insole area, producing a very effective anchorage for the inseam stitching over methods heretofore practised.

It will be observed from Fig. 3, that the lip or ridge affords a very easy tracking for the inseam sewing machine, insuring an even seam, with no stitching crossing each other, or capable of being cut thereby, and consequently no impairment of the stitching in the manufacture of the shoe, as all stitching uniting the insole elements is inwardly from the inseam lip or ridge. A substantial clearance is obtained along the exterior side of the ridge, which allows the needle of the machine to follow a natural course, manifestly securing a tighter seam.

The normally flat disposition of the ridge makes it submit or yield radially to compression, without injury to the seam, so that no objectionable raised portions are perceptible in a finished shoe, which would result in the discomfort of the wearer or interfere with the flexibility of the shoe.

As an article of manufacture, the insole, as described, does not require in its production the use of any specially designed machines, but eliminates the use of many standard machines, ordinarily required in the manufacture of the insole under the general prevailing custom.

Having thus described my invention, I claim:—

1. A composite insole comprising a base layer, a folded tape of unequal width laps secured to said layer by two parallel marginal lines of stitches, with its folded edge toward the layer margin and the longer lap overreaching and enveloping the shorter, one line of said stitching passing through both laps, from which said folded edge is bent laterally forming a continuous marginal flap, and the second line of stitching through said overreaching portion of the longer lap, and a covering layer secured to said base layer overlapping said tape and its flap edge, and thereby forming a continuous ridge from its exposed face as a marginal anchorage to which the shoe upper may be secured.

2. A composite insole comprising a veneer base member comprising a finished surface layer and a tenacious fabric layer, a folded tape of unequal width laps secured to said member by two parallel marginal lines of stitches with its folded edge toward the member margin and the longer lap overreaching and enveloping the shorter, one line of said stitching passing through both laps, from which said folded edge is bent laterally forming a continual marginal flap, and the second line of stitching through said overreaching portion of the longer lap, and a covering layer secured by a longitudinal line of stitches to said member medially thereof and overlapping said tape and its flap edge, and thereby forming a continuous ridge from its exposed face as a marginal anchorage to which the shoe upper may be secured.

3. A composite insole comprising a veneer base layer, a folded tape secured, with its folded edge outward, to said layer by a marginal line of stitches, from which said

folded edge is bent laterally forming a marginal flap, and a covering layer secured to said base layer, by stitching intermediate of said tape, overreaching and snugly enveloping said flap and forming a continuous ridge from its exposed face as a marginal anchorage to which a shoe upper may be secured.

4. A composite insole comprising a primary layer, a folded tape united to said primary layer, its folded edge marginally forming a continuous transverse flap, and an anchorage layer secured to said primary layer overlapping said folded tape and flap, forming a continuous ridge as a marginal anchorage, to which the shoe upper may be secured.

In witness whereof, I hereunto subscribe my name, as attested by the two subscribing witnesses.

THOMAS W. McGOVERN.

Witnesses:
JOHN D. RYAN,
S. G. JOHNSON.