Aug. 5, 1952 L. P. VAIL 2,605,559

WELT SHOE HAVING THE INSOLE AND FILLER FREE FROM THE OUTSOLE IN THE FORE-PART

Filed Aug. 31, 1950

FIG. 1.

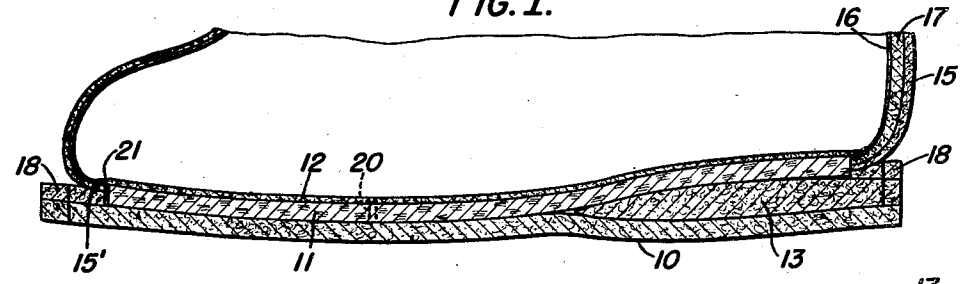


FIG. 2.

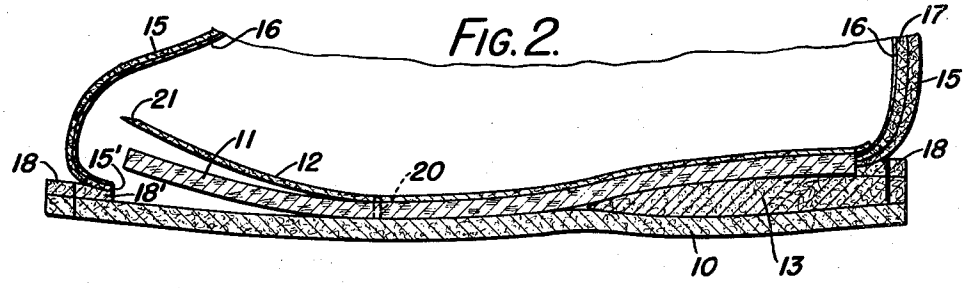


FIG. 3.

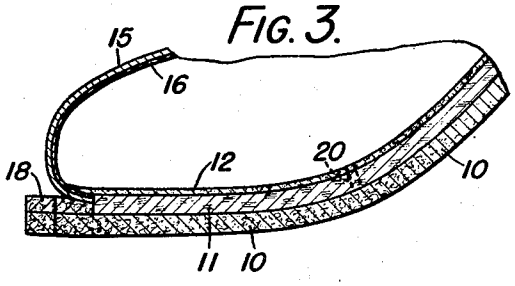


FIG. 4.

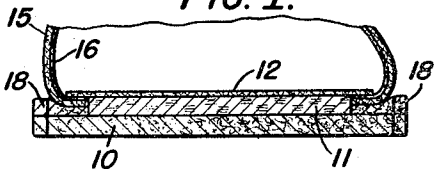


FIG. 5.

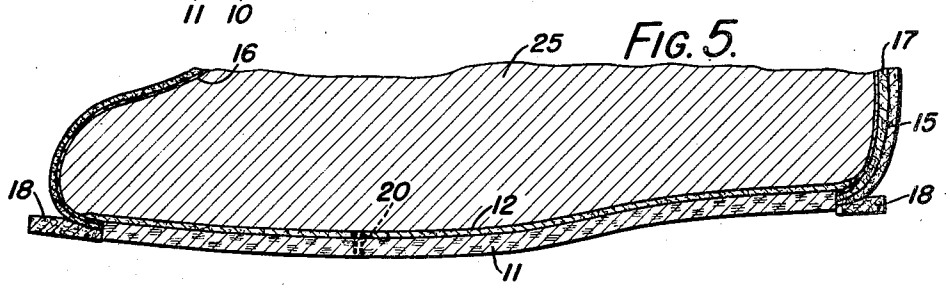
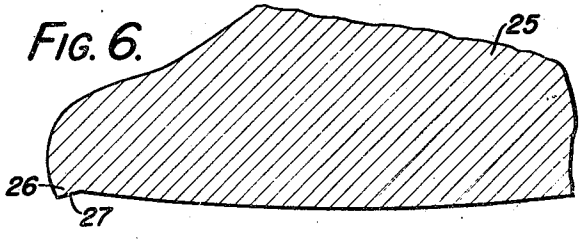


FIG. 6.



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WELT SHOE HAVING THE INSOLE AND FILLER FREE FROM THE OUTSOLE IN THE FORE-PART

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5 Claims. (Cl. 36—17)

1

The present invention relates to shoes and more especially to children's shoes.

In the conventional children's shoe the filler is sewed or glued to the outer sole and to the heel-wedge so as to be rigid with these parts, and the inner sole is sewed or glued to the filler so as to be rigid with the filler and outer sole. Furthermore, in the conventional shoe the filler abuts against the welt all around the inside of the welt. It has been found that if the inner sole gets wet from perspiration or from any other cause, the leather of the inner sole tends to stretch which causes it to curl into the toe portion of the shoe. This curl assumes a permanent set and thereafter the shoe is uncomfortable to the wearer and crowds his or her toes. It has also been found that the conventional shoe, constructed with the filler and inner sole rigidly secured to the outer sole, is hard and rigid along its whole length, and inflexible.

One object of the present invention is to provide a children's shoe which will be more comfortable than children's shoes as heretofore made, and which will remain comfortable and flexible throughout the whole life of the shoe.

Another object of the invention is to provide a simple inexpensive last for manufacturing this shoe.

Other objects of the invention will be apparent hereinafter from the specification and from the recital of the appended claims.

In the drawing:

Fig. 1 is a fragmentary longitudinal section of a child's shoe built according to one embodiment of the present invention;

Fig. 2 is a fragmentary longitudinal section of this shoe with the inner sole and filler raised, showing how the inner sole and filler are attached to the outer sole and showing the flexibility provided in this way;

Fig. 3 is a fragmentary longitudinal section showing how the shoe may be bent in walking without wrinkling the inner sole;

Fig. 4 is a fragmentary transverse section further showing the construction of the shoe;

Fig. 5 is a fragmentary longitudinal section showing the method of attaching the inner sole to the upper, and the last employed for that purpose; and

Fig. 6 is a fragmentary longitudinal section of this last.

In the drawing, 10 denotes the outer sole of the shoe which is made of chrome leather or other suitable material. 11 denotes the filler which may be made of cork and rubber. 12 denotes the inner sole which is made of a soft, pliable leather. 13 is the wedge which is inserted between the filler 11 and the outer sole 10 at the heel of the shoe in order to give the heel elevation. This is ordinarily made of leather. The upper is denoted at 15. 16 is the lining for the upper and 17 denotes the counter for the heel which is inserted between the lining 16 and the heel portion of the upper 15. This lining is made of fabric. The counter is ordinarily made of leather. The welt is denoted at 18.

2

In the shoe of this invention, the upper 15 is sewed to the welt 18 in conventional fashion, and the welt 18 is sewed or otherwise fastened to the front end of the sole 10 and to the rear of the wedge 13.

One feature of the shoe of the present invention is that the filler 11 terminates short of the inturned end 15' of the toe portion of the upper 15 and short of the inside surface 18' of the toe portion of the welt 18 (Figs. 1 and 2), when the shoe is at rest. From the ball of the foot to the heel end of the shoe, the inner sole 12 and filler are fixedly secured to one another as by glueing them together. From the ball of the foot to the heel of the shoe, the filler 11 is also glued or otherwise secured to the outer sole 10 and wedge 13. The inner sole 12 and filler 11 are sewed to one another at a point under the ball of the foot, as denoted by the stitching 20, but from the ball of the foot to the toe of the shoe, the inner sole 12 and filler 11 are unattached and free of one another and the outer sole 10 and filler 11 are unattached and free of one another.

Thus, from the heel of the shoe to a point such as the point 20 the inner sole, filler, wedge and outer sole are rigidly secured together, but from the ball of the foot forward, the filler 11 and inner sole 12 will be free of the outer sole 10 and free of one another so that they can readily flex. As a result of this construction the filler 11 and inner sole 12 can flex about the point 20 as a fulcrum. This makes for a more comfortable shoe.

Fig. 2 is a view showing in exaggerated manner the way in which the inner sole, filler and outer sole are separated from one another from the ball of the foot to the toe. With this construction, when the shoe is bent in walking, as shown in Fig. 3, that is, when the user puts the weight of the foot on the toe portion of the shoe, the filler and inner sole fit readily into the rest of the shoe without crowding. The inner sole 12 is beveled off at its toe end, as denoted at 21, so that it will be of thinner section at this end and

be able to fit into the toe of the shoe. When the inner sole becomes wet with perspiration and the leather stretches, then, the inner sole and filler will still fit the shoe without curling and bulging. Hence, the shoe remains comfortable to the child throughout the whole of its life and does not crowd his or her toes.

For manufacturing the shoe, a special type last **25** (Figs. 5 and 6) may be employed. This last is shaped like a conventional last except that it is formed on its under surface at the toe with a protrusion **26** which has an upwardly inclined surface **27** to fit the beveled portion **21** of the inner sole. In the manufacture of the shoe, the upper **15**, lining **16**, and counter **17** can be fitted and stretched around the last after the filler **11** has been sewed at **20** to the inner sole **12** and while the welt **18** is being sewed to the upper.

While the invention has been described in connection with a particular embodiment thereof, it will be understood that it is capable of further modification and this application is intended to cover any variations, uses, or adaptations of the invention, following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice in the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth and as fall within the scope of the invention or the limits of the appended claims.

Having thus described my invention, what I claim is:

1. A shoe comprising an upper, a welt, an outer sole, a filler and an inner sole, said upper being fastened to the welt, said welt being secured to the outer sole all around the edge thereof, said filler being secured to the outer sole from approximately the ball of the foot to the heel end thereof but being unattached to the outer sole from the ball of the foot forward, whereby the filler may flex about a fulcrum lying substantially under the ball of the foot.

2. A shoe comprising an upper, a welt, an outer sole, a filler and an inner sole, said upper being fastened to the welt, said welt being secured to the outer sole all around the edge thereof, said filler being secured to the outer sole from approximately the ball of the foot to the heel end thereof but being unattached to the outer sole from the ball of the foot forward, and said inner sole being secured to the filler from approximately the ball of the foot to the heel thereof but being unattached to the filler from the ball of the foot forward, whereby the filler and inner sole may flex about a fulcrum lying substantially under the ball of the foot.

3. A shoe comprising an upper, a welt, an outer sole, a filler and an inner sole, said upper being fastened to the welt, said welt being secured to the outer sole all around the edge thereof, said filler being secured to the outer sole from approximately the ball of the foot to the heel end thereof but being unattached to the outer sole from the ball of the foot forward, whereby the filler may flex about a fulcrum lying substantially under the ball of the foot, said filler abutting against the welt and upper at the heel but being slightly spaced from the welt and upper at its toe end.

4. A shoe comprising an upper, a welt, an outer sole, a filler and an inner sole, said upper being fastened to the welt, said welt being secured to the outer sole all around the edge thereof, said filler being secured to the outer sole from approximately the ball of the foot to the heel end thereof but being unattached to the outer sole from the ball of the foot forward, and said inner sole being secured to the filler from approximately the ball of the foot to the heel thereof but being unattached to the filler from the ball of the foot forward, whereby the filler and inner sole may flex about a fulcrum lying substantially under the ball of the foot, said filler abutting against the welt and upper at the heel but being spaced from the welt and upper at its toe and said inner sole being beveled at its toe to be of reduced thickness at its toe and overlying the toe portion of the upper.

5. A shoe comprising an upper, a welt, an outer sole, a wedge, a filler and an inner sole, said upper being fastened to the welt, said wedge being fastened to the outer sole at the heel thereof and constituting a lift for the heel, said welt being fastened to the outer sole and wedge, said filler being secured to the outer sole and wedge from approximately the ball of the foot to the heel end thereof but being unattached to the outer sole from the ball of the foot forward, said inner sole being secured to the filler from approximately the ball of the foot to the heel thereof but being unattached to the filler from the ball of the foot forward, whereby the filler and inner sole may flex about a fulcrum lying substantially under the ball of the foot, said filler abutting against the welt and upper at the heel but being spaced from the welt and upper at its toe, and said inner sole overlying the upper and being beveled at its toe to be of reduced thickness at its toe.

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