F. E. JONES.

BOOT AND SHOE.

APPLICATION FILED DEC. 23, 1916.

1,266,535. Patented May 14, 1918.

Fig. 1.

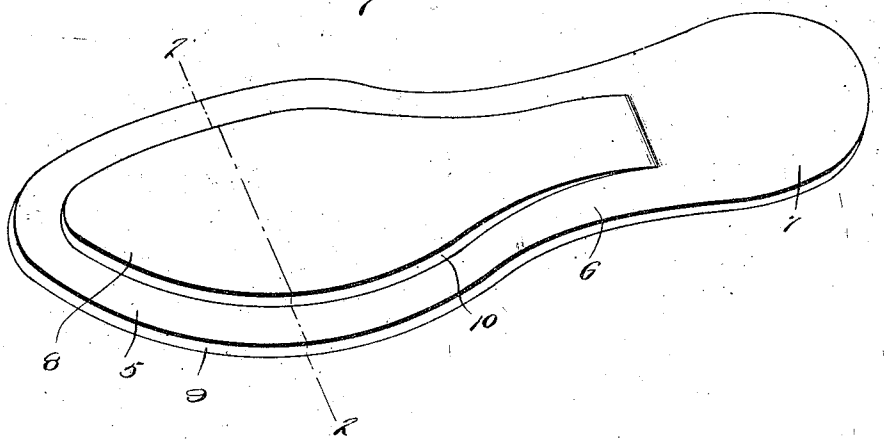


Fig. 2.

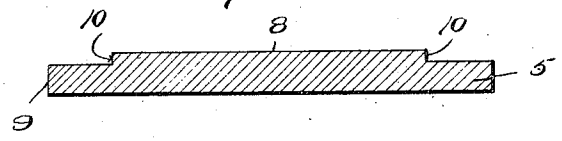
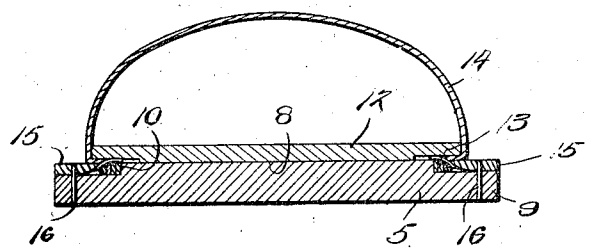


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BOOT AND SHOE.

1,266,535. Specification of Letters Patent. Patented May 14, 1918.

Application filed December 23, 1916. Serial No. 138,617.

To all whom it may concern:

Be it known that I, FRED E. JONES, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Boots and Shoes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to boots and shoes and particularly to an outer sole for what are termed "welt" shoes.

In the manufacture of welt shoes a rib is formed upon the lower side of the insole to which is stitched the upper and the welt, the outer sole being finally stitched to the welt. This leaves a space within the rib and between the insole and the outer sole which is customarily filled with some suitable composition such as ground cork or ground leather held together by a suitable binder. This filler material is generally applied while in a plastic condition to the insole in the space inclosed by the rib during the manufacturing process and before the outer sole is stitched to the welt. In the use of such shoes I have observed that the outer sole generally wears away at or near the center and very seldom on the sides and that the edges of the outer sole, during wear, show a tendency to turn or curl upwardly. This tendency is probably due, in a large measure, to the fact that the pressure of the ball of the foot at or near the center of the sole, tends to force the filler toward the toe part and sides of the shoe and to cause the insole to engage the outer sole so that when the outer sole wears through in the center the insole is exposed. When so exposed the insole, being generally of light porous material, permits the entrance of moisture and necessitates retapping of the shoes although the greater part of the outer sole has not been materially worn away.

The main object of my invention is to produce a boot and shoe of increased life and durability and to this end I provide a boot or shoe having an outer sole which is reinforced at the point of greatest wear.

Another object of the invention is to reduce the cost of manufacture by eliminating the necessity in welt shoes for using a filler material between the inner and outer soles and thereby reducing the number of operations and the time required in making the shoes.

A further object is to provide an outer sole of such form that the shape of the shoe will be preserved during wear.

Other objects of the invention will be more specifically pointed out and described hereinafter.

In the accompanying drawings illustrating the preferred embodiment of my invention, Figure 1 is a view in perspective of an outer sole made in accordance with my invention; Fig. 2 is a cross-sectional view on line 2—2 in Fig. 1 and Fig. 3 is a cross-sectional view of the forepart of a shoe having an outer sole embodying my invention.

In the illustrated embodiment of my invention there is shown an outer sole comprising a forepart 5, a shank 6 and a heel portion 7. The forepart upon the upper side, that is, the side adjacent the insole in the finished shoe, has a centrally disposed elevated or thickened portion 8 extending to within a short distance of the edge 9 of the sole. The elevated portion 8 is in outline parallel with the edge of the sole and its edge 10 may be made perpendicular to the inner face of the sole or may be made oblique thereto. At the shank portion 6 of the sole the elevated portion 8 is gradually tapered off.

In Fig. 3 of the drawings the outer sole is shown in position in a finished shoe in which 12 designates the insole having a rib 13 on its lower face, to which is stitched a vamp or upper 14 and a welt 15. The outer sole is secured to the welt 15 by suitable stitching 16 and the elevated portion 8 engages the lower side of the insole and fills the space within the rib 13 which would otherwise be occupied by the shoe filler.

My outer sole may be made of any suitable material and in any manner desired. The soles may be cut out in the form of blanks of a thickness equal to the thickness of the sole in the center of the forepart and the edge and heel portions cut away to leave the elevated portion as shown in the drawings or the sole may be cut out and the elevated portions added thereto or built up afterward.

My invention is especially applicable to soles made of rubber, rubber composition or other material capable of being molded or

compressed into the desired form. As a rule it will be found desirable to have the elevated portion slightly smaller in area than the area of the insole inclosed within the rib in order that the irregularities in the line of the rib after the upper and welt are stitched thereto may not interfere with the application of the outer sole to the shoe. In such cases the space between the rib and the edge of the elevated portion of the outer sole may be filled in with rubber cement or composition in order to make the shoe as near waterproof as possible.

It will be observed that the use of my invention does away with the filling operation and thereby reduces the number of operations required in the process of manufacturing shoes and saves the delay due to the filling operation and to the drying out or setting of the filler material.

One of the most important advantages secured by the use of my invention is the increase in the life and durability of the shoes. The increased thickness of the sole at the point of greatest wear adds substantially to the life of the sole without affecting the appearance of the shoe since the sole is not increased in thickness at the edge. In short, the space heretofore occupied by a filler material having no wearing qualities and being more or less unstable, is now taken up by a portion of the outer sole having the same stability and wearing qualities as the tread of the sole.

In addition to lengthening the life of the shoe, the use of my outer sole also tends to preserve the shape of the shoe by preventing the dropping or sagging of the inner sole and the consequent turning up of the edges of the sole and thereby secures a more even wear of the sole which also adds to the life of the shoe.

By doing away with the use of filler material, I avoid the defects following that use, namely, the bunching and shifting of the filler material during wear which frequently destroys the comfort of the shoe and the squeaking of the sole which renders the wearer mentally uncomfortable.

What I claim is:—

In a welt shoe, the combination with a shoe upper of an innersole and welt, said innersole having a rib to which said upper and welt are secured, and an outer sole secured to said welt, said outer sole having a raised or elevated portion centrally disposed upon the inner face of its forepart only, said raised or elevated portion having an edge parallel to the outer edge of the forepart of said outersole, and substantially perpendicular to the outer face thereof, the rear portion of said elevated or raised portion extending approximately throughout the length of the shank and being beveled gradually at its rear end down to the inner face of the sole, said raised or elevated portion projecting into and filling up the space within the rib on said insole which would otherwise be occupied by a shoe filler.

In witness whereof, I hereunto set my hand this first day of December, 1916.

FRED E. JONES.