Jan. 14, 1930. H. T. MASON 1,743,676

RUBBER SOLE

Filed April 18, 1929

Fig. 1.

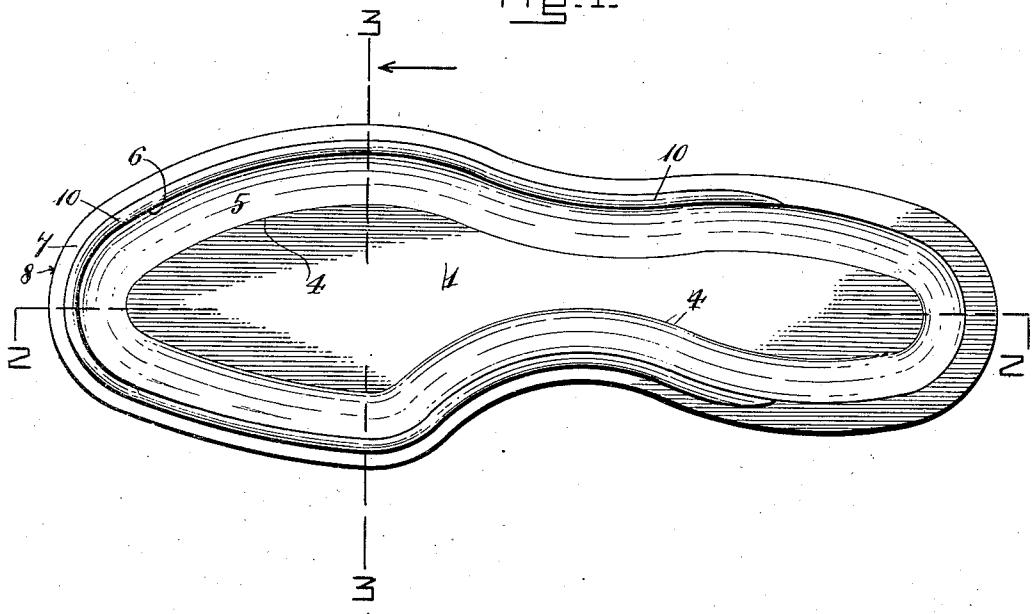


Fig. 2.

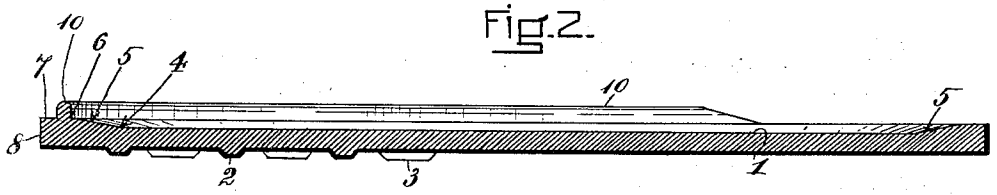


Fig. 3.

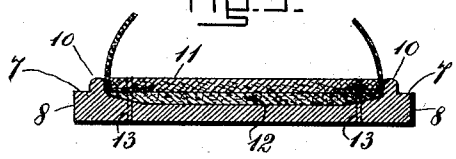


Fig. 4.



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UNITED STATES PATENT OFFICE

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RUBBER SOLE

Application filed April 18, 1929. Serial No. 356,017.

The invention relates to a rubber sole especially adapted as an outer or bottom sole for leather boots or shoes.

The object of the invention is to provide a relatively light rubber sole capable of being attached by nailing or screw fastening to the leather inner sole of a boot or shoe at points well inwardly removed from the edges of the two soles, and at the same time provide that the rubber sole will so co-ordinate with the inner sole along its edge as to make such tight joint or seal-forming connection therewith as will prevent the entry of water. The difficulty under such conditions of fastening for obtaining a tight joint around the edge of the inner sole and between it and the outer rubber sole resides in the fact that the two soles are being fastened together at points well inwardly removed from their edges. If the rubber sole be made sufficiently thick and heavy with little body flexibility a fairly good joint may be obtained under such condition of fastening between the rubber sole and the edge of the inner sole, but the difficulty is that if the rubber sole be made thus thick and heavy it lacks life and becomes too heavy and cumbersome, and cannot well be used in a light shoe.

A further object of the invention is to provide a shoe whereby a rubber sole possessing capabilities within the objects of the invention above referred to, shall also possess the capability of presenting around its outer edge and the exposed portion thereof adjacent its edge the finished appearance of a heavy sole.

The manner in which the objects of the invention are attained can best be seen and understood by reference to the drawings in which—

Figure 1 is a plan of a rubber sole embodying the invention,

Fig. 2 is a section of the sole shown in Fig. 1 on the line 2—2 of this figure.

Fig. 3 is a section of the rubber sole taken on the line 3—3 of Fig. 1, and showing in addition a section of an inner sole with which the rubber sole is co-ordinating and to which it is fastened, and

Fig. 4 is a side elevation of the rubber sole shown in Fig. 1.

In the drawings:—

1 represents the body of the sole which is made of rubber or rubber compound. The sole body is made relatively light except for the thickening thereof as approach is made to the edge of the sole as will later be explained, and except, also, for the non-slip corrugations 2, and raised protuberances or bosses 3 on its outer or bottom face.

Starting from a point 4 on its top surface some distance inwardly removed from its outer edge 8, the rubber sole is gradually thickened by an outwardly and upwardly beveled portion 5. This beveled portion extends outwardly to the point 6 inwardly removed from the edge 8 of the sole and from this point the sole presents a flat top surface 7 all around and adjacent the edge 8. The effect is that while the body 1 of the sole is relatively thin the sole will present along its outer edge 8 and top surface 7 adjacent this edge the appearance of a heavy sole. In fact, the sole is made relatively heavy adjacent its outer edge with relation to its body and which heaviness or increased thickness is obtained by the beveling as aforesaid.

Formed or moulded integral with the sole and upstanding from the top surface 7 thereof at a point inwardly removed from the edge 8 of the sole is a rib or bead 10. This rib or bead is extended all around the top surface 7 of the sole except at its heel portion.

With the rubber sole thus formed it is ready for application and fastening to an inner sole 11. Before this is done, however, the cavity left in the top of the rubber sole by the beveling and increased thickness thereof all around its edge 8, is filled with some light material or filling 12 so as to increase the thickness of the interior or thinner portion of the rubber sole so that it will substantially equal the thickness of the sole around its edge. The rubber sole is applied to the inner sole, or rather the inner sole is applied to it, by snugly fitting the inner sole into the socket provided by the upstand-

ing rib or bead 10 on the rubber sole, the two soles being so co-ordinated that such application may be obtained. After this the two soles are connected by fastenings 13 passed from the bottom or under side of the outer sole through the inner sole at a point well inwardly removed from the outer edges of the two soles.

With all the parts thus co-ordinated and combined the shoe will be found equipped with a relatively light rubber sole or one having a relatively light body but which is heavily reinforced around its edge not only by thickening the body of the sole adjacent its edge but also by the reinforcement obtained by the upstanding rib or bead 10 which acts as a reinforcement in the manner of a flange. In consequence, although the main body portion of the rubber sole may be relatively light its edge reinforced as it is will not drop away from the edge of the inner sole as might be the case if the edge were made less thick or heavy like the main body. In other words, a proper tight joint is made and will be maintained between the rubber sole and the edge of the inner sole, and this joint is further protected and sealed by the upstanding rib or bead 10 against which the outer edge of the inner sole is snugly fitting.

In point of finish the edge of the rubber sole will present the finished appearance of a wide, heavy sole. The upstanding rib or bead 10 will conceal the joint between the two soles which adds to the appearance and, at the same time, will provide a fixed marker for obtaining precise and proper co-ordination between the two soles and accurate positioning of the outer or rubber sole with relation to the entire boot or shoe.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:—

1. A rubber sole attachable as an outer sole to footwear having an inner sole, said rubber sole having an integral moulded structure and comprising a relatively thin main body portion, a relatively thick edge portion all around its outer edge presenting a flat top suface, a portion of gradually increasing thickness presenting a beveled top surface having upward and outward inclination and extending from the top surface of the main body portion of the sole, at a point inwardly removed from the thickened edge portion thereof, to the flat top surface presented by said relatively thick edge portion of the sole, and a flange-forming rib rising from the flat top surface of the relatively thick edge portion of the sole at a point inwardly removed from the outer edge of the sole and extending around the toe portion of the sole and along the sides thereof.

2. In combination with footwear having an inner sole, a rubber sole attachable as an outer sole to the inner sole, said rubber sole having an integral moulded structure and comprising a relatively thin main body portion, a relatively thick edge portion all around its outer edge presenting a flat top surface, a portion of gradually increasing thickness presenting a beveled top surface having upward and outward inclination and extending from the top surface of the main body portion of the sole, at a point inwardly removed from the thickened edge portion thereof, to the flat top surface presented by said relatively thick edge portion of the sole, and a flange-forming rib rising from the flat top surface of the relatively thick edge portion of the sole at a point inwardly removed from the outer edge of the sole and extending around the toe portion of the sole and along the sides thereof, the said inner sole fitting snugly within said flange-forming rib and having outer edge contact therewith, a filling between the two soles lying within the cavity formed by the beveled portion of the rubber sole, and means for fastening the two soles together.

HERBERT T. MASON.