F. A. BRACKETT.

INNERSOLE.

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1,198,101.

Patented Sept. 12, 1916.

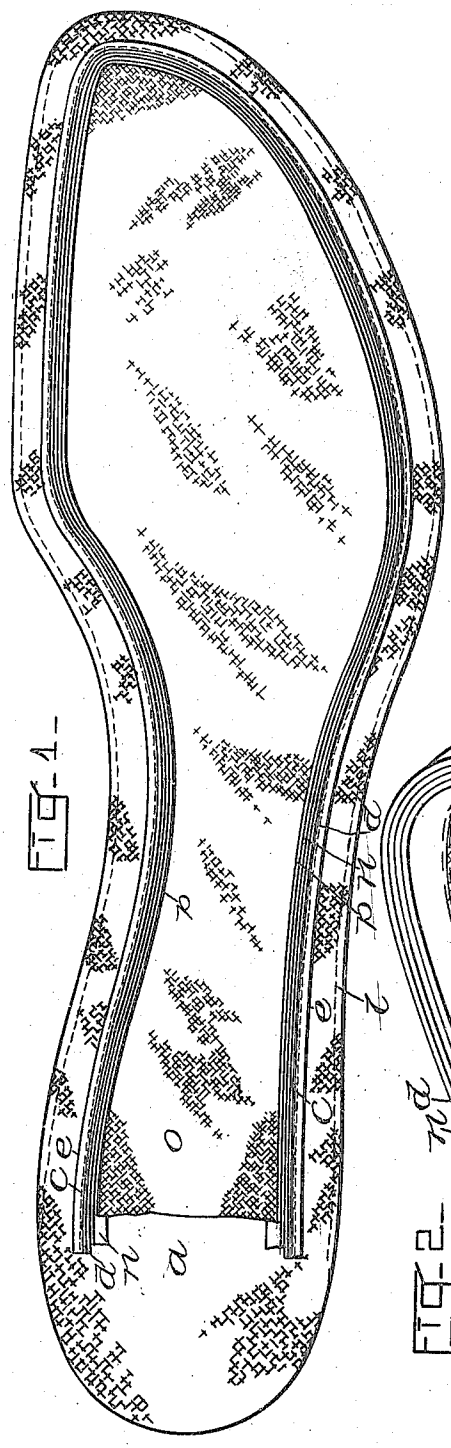


FIG. 1.

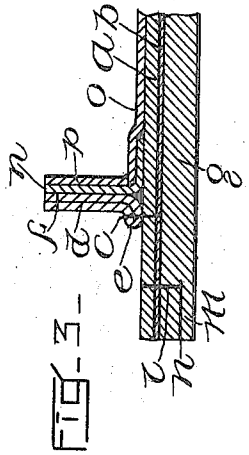


FIG. 3.

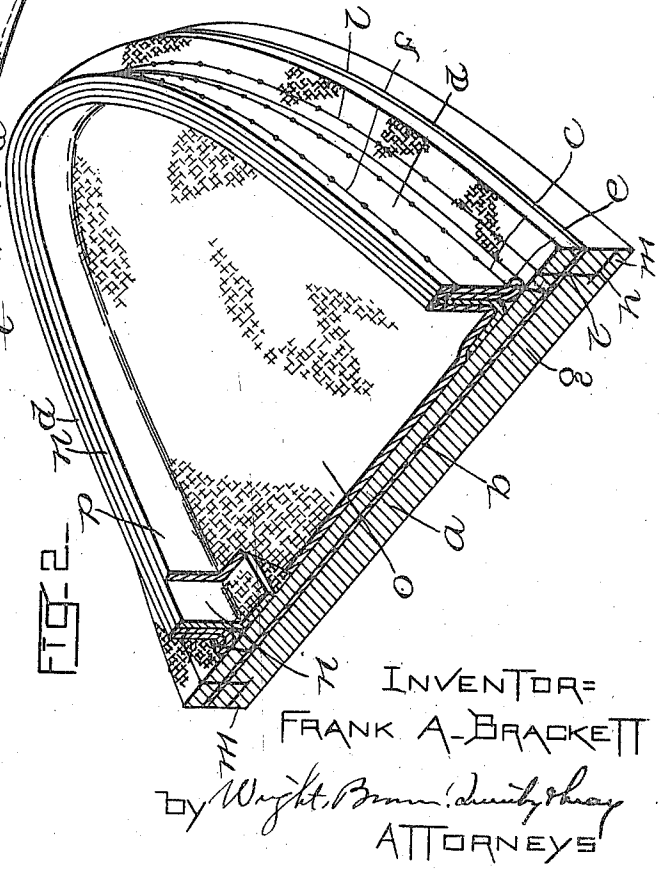


FIG. 2.

INVENTOR:
FRANK A. BRACKETT
By Wright, Brown, Quinby & Shaw
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK A. BRACKETT, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR TO W. H. McELWAIN COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

INNERSOLE.

1,198,101. Specification of Letters Patent. Patented Sept. 12, 1916.

Application filed August 7, 1915. Serial No. 44,254.

To all whom it may concern:

Be it known that I, FRANK A. BRACKETT, a citizen of the United States, and resident of Manchester, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Innersoles, of which the following is a specification.

The present invention relates to inner soles for welted boots or shoes and has for its general object to provide such an inner sole having greater strength than those heretofore produced and having the desirable quality of being capable of production at low cost of both labor and material; with the further characteristic, if desired, of having a smooth and continuous all-leather surface on the side thereof which is exposed to the interior of the finished shoe.

The precise nature of the invention and the features of which the same consists appear from the following detailed description.

In the drawings, Figure 1 is a plan view of an inner sole embodying the invention, showing that side of the sole which is exposed on the bottom of the shoe before the outer sole is placed. Fig. 2 is a perspective view showing the toe end of the inner sole. Fig. 3 is a cross section of a part of the same.

The same reference characters indicate the same parts in all the figures.

That part which I may call the base of the inner sole consists of a layer *a*, of sufficiently strong and heavy textile fabric. Without limiting the invention to any precise fabric I may state that buckram is suitable for the purpose. With the base layer *a* is associated a layer *b* of a thinner and lighter fabric, these two layers being cemented together. The second layer *b*, although desirable for some purposes, may be omitted without departure from the invention. The base layer *a* is preferably coated or impregnated with a stiffening or sizing solution. To the base layer is stitched, by means of a seam *c*, a rib *d* for receiving the stitches of the inseam whereby the upper and welt are connected to the inner sole. Said rib *d* is formed of a flexible strip, preferably of cotton fabric such as canvas, which is folded longitudinally throughout its length and bent so that the stitches of the seam *c* pass through it on a line near the fold *e*. In being applied to the base, this rib is placed in the required location and bent to conform generally to the outlines of the inner sole, so that it follows such outlines at the distance within the same and in the usual location for the rib of an inner sole. As appears from the drawing the plies of the strip which forms the rib *d* project approximately perpendicularly to the inner sole body, while the folded portion is turned outwardly toward the edge of such body so that the stitches of the seam *c* pass through both plies of the strip. The term "ply" as here used means the portion of the strip lying at either side of the longitudinal central fold *e*. The plies are connected together near their outer edges by a seam *f* to prevent separation of such edges, but such seam may be omitted, if desired, and the plies connected by adhesive, or left entirely unconnected.

The inner sole so constructed is cemented to a leather sole or lining layer *g*. To make the union with the leather layer more secure and permanent I may cut a channel *h* from the edge of the leather layer and stitch a seam *l* through the fabric layer *a* and the leather layer *g* outside of the rib and in the channel *h*, the flap *m* of such channel being then pasted or cemented down over the stitches of the seam *l*.

The stitch-receiving rib *d* is reinforced, stiffened, and strengthened by a stay strip *n* bent longitudinally between its edges so as to form two flaps, one of which is laid against the inner face of the rib *d* and the other against the surface of the inner sole within the rib. The stay strip is secured in place by adhesive. In other words, the stay strip is cemented in what I may call the "inner lip angle" of the sole, that is, the angle between the rib and the base of the sole at the inner side of the rib. A final reinforcement is provided in a reinforcing layer *o* which is laid over the entire surface of the inner sole body within the rib and has its edges *p* turned up and laid against the inner face of the stay strip *n*. This layer is also cemented to the body and the stay strip.

I do not limit my invention to the combination including both the stay strip and the reinforcing layer, or either of them, since either the stay strip or the reinforcing layer may be used without the other, or both

may be omitted, without departure from the spirit of the invention.

In this specification I have not intended to limit my invention in regard to the materials to be used for the several parts of the inner sole. I prefer to use the materials named for the base layer, the rib *d* and the face layer *g*, and to use canvas for the reinforcing strip *n* and layer *o*, but I may use other materials for each and all of these parts. Neither have I intended any limitation of the invention by the terms "cemented" and "pasted", since under these terms I intend to include the union or attachment by means of any sort whatever of adhesive adapted for the purpose. I may in addition, stitch either the reinforcing strip *n* or the layer *o*, or both, to either the base of the sole or to the rib, or both.

Among other advantages following from my invention may be particularly noted the following: The rib *d* being of two ply construction, and being folded outside of the seam *c* which attaches it to the insole body, is especially strong and is united to the body with exceptional firmness. It is impossible for the rib to pull away from the seam *c*, and the strength of both of its plies is utilized in securing the inseam of the shoe. By uniting the base layer *g* to the insole body by a seam separate from that which unites the rib to the body, it is possible to place the former seam nearer the edge of the sole than the other seam, making it unnecessary to cut the channel so far in from the edge of the layer as would be required if a single seam were employed for both functions. It is necessary for a reason well understood in the art of shoemaking to place the rib at the shank part of the sole at a relatively great distance in from the edges of this part, which would require making a very deep channel at this part if the one seam were required to perform the two functions, with consequent difficulty in securing the channel flap and liability of the same becoming loose and causing trouble.

What I claim and desire to secure by Letters Patent is:

1. An inner sole comprising a base member, a rib attached to said base member, and a face layer disposed against the opposite side of the base member from the rib, having a channel with a covering flap adjacent to its margin, and stitches uniting the base member and face layer lying in said channel and being covered by said flap, said stitches being independent of the means for attaching the rib to the base member.

2. An inner sole comprising a base member, a rib stitched to said base member, and a face layer disposed at the opposite side of the base member from the rib, said face layer being channeled adjacent to its edge and united to the base member by a seam additional to the seam which unites the rib to the base member, the stitches of said additional seam lying in such channel.

3. An inner sole comprising a base member, a rib constituted by a longitudinally folded strip stitched to said base member along a line conforming generally to the outline of said member but located within the edges thereof, a face layer extending over the opposite side of the base member from the rib having a marginal channel and a covering flap, and a seam connecting the base member and face layer together and being located nearer to the edges of the inner sole than the stitches by which the rib is secured to the base member, said seam being contained in such channel and covered by the flap thereof.

4. An inner sole comprising a fabric base layer, a fabric rib stitched to said base layer and constituted by a folded strip arranged so that the attaching stitches pass through both plies thereof near the fold, and a leather face layer extending over the opposite surface of the base layer from said rib and covering the stitches by which the rib is attached to the base member.

5. An inner sole comprising a base layer, a longitudinally folded strip attached to said base layer, the attaching means passing through both plies near the fold and the said both plies being bent away from the base layer, a reinforcing stay strip occupying the inner angle between the base layer and said rib-forming strip and bent so as to bear against both the base layer and the rib, and a reinforcing layer overlying the entire area inclosed by the rib and having its edges turned up to bear against the inner surface of the reinforcing strip.

In testimony whereof I have affixed my signature.

FRANK A. BRACKETT.

Witnesses:
ELLIOT BARTEL,
HAROLD R. PERRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."