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MOLD FOR MAKING INNERSOLES.

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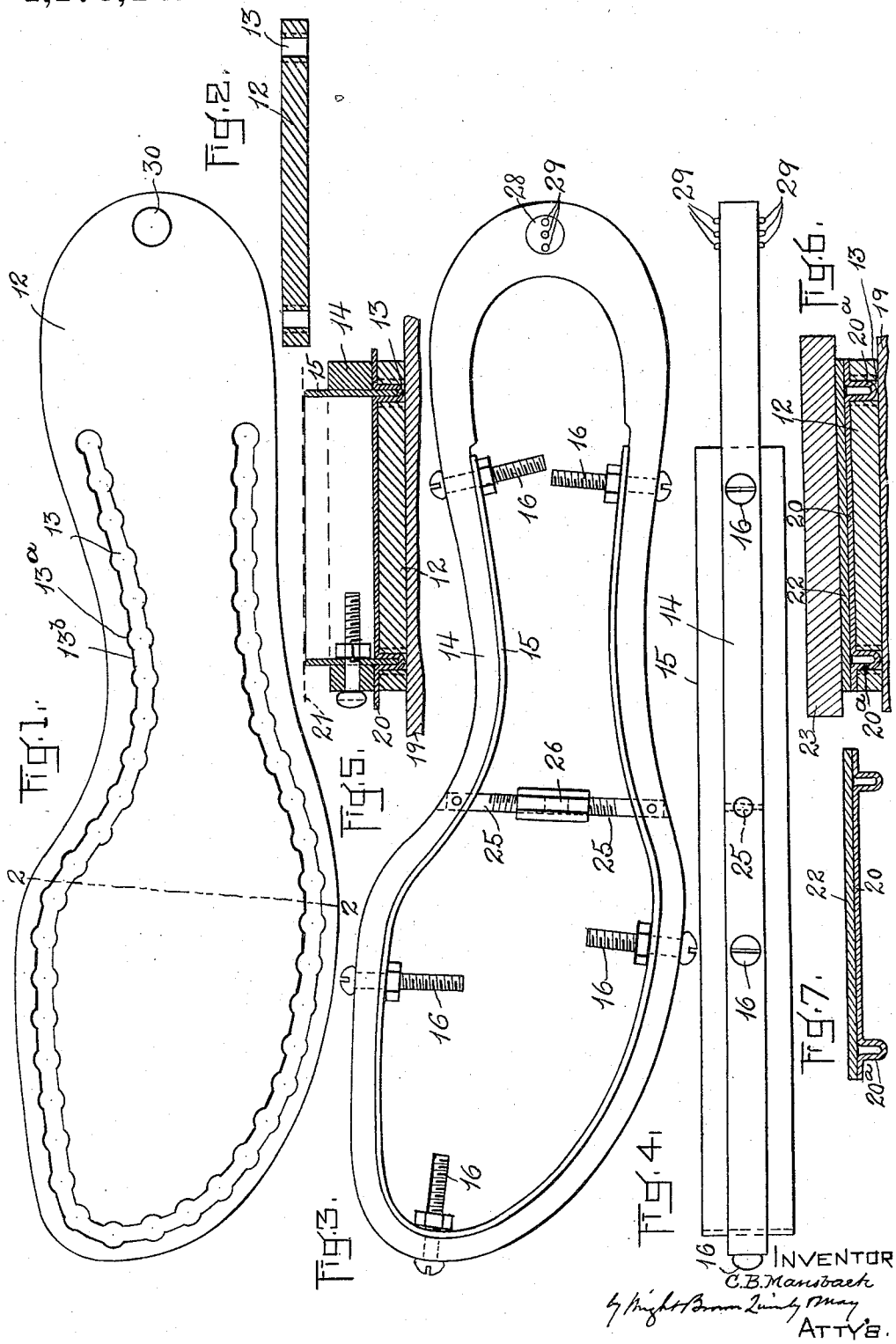
1,173,449. Patented Feb. 29, 1916.



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UNITED STATES PATENT OFFICE.

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MOLD FOR MAKING INNERSOLES.

1,173,449. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed May 21, 1915. Serial No. 29,503.

To all whom it may concern:

Be it known that I, CONRAD B. MANSBACH, a citizen of the United States, and resident of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Molds for Making Innersoles, of which the following is a specification.

This invention relates to appliances for use in the manufacture of an inner sole composed of a body layer of leather or like material and a facing layer of textile fabric, such as duck or canvas, covering one side of the body layer and having a raised hollow rib formed as an integral part of the fabric and constituting an inseam stitch-receiving lip.

The mold of my invention is embodied in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification: Figure 1 represents a top plan view of one of the members of my improved mold; Fig. 2 represents a section on line 2—2 of Fig. 1; Fig. 3 represents a plan view of the other member of the mold; Fig. 4 represents an edge view of the member shown by Fig. 3; Fig. 5 represents a sectional view showing the two mold members assembled and a layer of canvas interposed between the same; Fig. 6 represents a sectional view of the mold member shown by Fig. 1, and the two layers of the inner sole placed upon the same, said figure showing also a pressing member bearing on one of the sole layers; Fig. 7 represents a sectional view of the completed inner sole.

The same reference characters indicate the same or similar parts in all the views.

In the drawings, 12 represents a sole-shaped plate, which may be of aluminum or any other suitable material, and has flat opposite sides.

13 represents a slot extending through the plate 12 from side to side and continuously from a point at the heel portion near one edge to a point at the heel portion near the opposite edge, said slot being parallel with the margin of the plate at its shank and fore portion and constituting a mold cavity. The margin of the plate constitutes a guide or templet for use in trimming off the surplus edge of a fabric layer on which a rib has been formed, as hereinafter described.

The plate 12 is reversible and adapted to form a rib on a right sole when one of its sides is uppermost, and to form a rib on a left sole when its opposite side is uppermost.

14 represents an open sole-shaped frame constituting a holder to which is attached, as by screws 16, a narrow, elongated, relatively thin metal strip 15 which projects from the opposite sides of the frame, as indicated by Figs. 4 and 5. The strip 15 bears on the inner side of the frame or holder 14, and its projecting edge portions constitute flanges or male mold members, one for a right sole and the other for a left sole, each of said members being adapted to enter and coöperate with the slot 13, the latter constituting a female mold member.

In practice the plate 12 is placed on a press bed 19, as indicated by Fig. 5, and a layer 20 of canvas is spread upon its upper side. The lower flange of the other mold member is then placed upon the layer 20 in position to coincide with the slot 13, and the press platen 21 indicated by dotted lines in Fig. 5 is moved downwardly against the upper edge of the strip 15, thus pressing the lower edge and portions of the material of the layer 20 into the slot 13, thus forming a hollow rib 20^a on the layer 20, said rib being co-extensive with the slot 13 and constituting a stitch-receiving lip. The male mold member is now removed, leaving the layer 20 and its rib on the plate 12. The surplus material of the margin of the layer 20 may now be trimmed off by a suitable cutter guided by the margin of the plate 12, the latter constituting a templet. After the trimming operation a body layer 22 of leather or like material is placed upon the layer 20, the two layers being coated with cement. A pressing piece 23 is then placed on the layer 22 and the press platen is again depressed to cause the piece 23 to press the two layers together. This operation completes the inner sole.

The walls of the slot 13 are preferably formed to corrugate the sides of the rib 20^a, said walls being provided with alternating recesses 13^a and projections 13^b. A corrugated rib or lip, such as is formed by the walls of the slot, is shown in my application for Letters Patent of the United States filed March 31, 1915, Serial Number 18,259.

I prefer to provide the frame 14 with an adjustable connection between its side portions, whereby the width of the frame may

be varied to a slight extent to correct any slight lack of registration between the edges of the strip 15 and the slot 13. Said adjustable connection is preferably composed of studs 25 attached to the frame and projecting inwardly from the inner margin thereof, one of said studs having a right-hand thread and the other a left-hand thread, and a correspondingly threaded nut 26 engaged with the stud threads, said studs and nut constituting a turn-buckle. The frame 14 may be provided with a marking member 28 having one or more dies 29 projecting slightly from the opposite sides of the heel end of the plate and adapted to indent the layer 20 to indicate the size of the sole, the plate 12 being provided with an opening 30 coinciding with the member 28. Each die forms a boss on one side of said layer projecting into the opening 30, the number of the bosses indicating the size. The opening 30 extends through the plate 12 and permits bosses to be formed either on a right or a left sole.

Having described my invention, I claim:

1. A right and left inner sole mold, comprising a female mold and templet member composed of a reversible flat-sided sole-shaped bed-plate having a slot extending through it from side to side and continuously from a point at the heel portion near one edge to a point at the heel portion near the opposite edge, said slot constituting a mold cavity, the margin of said plate constituting a templet, and a male member composed of a holder formed as an open, sole-shaped frame, and narrow elongated flanges projecting from opposite sides thereof, the flange being formed to enter said cavity, one edge of the flange constituting the acting portion and the opposite edge the pressure-receiving portion of the male mold, said bed-plate and holder being reversible to adapt the mold to either right or left soles.

2. In an inner sole mold, a male member composed of a holder formed as an open sole-shaped frame, and an elongated metal strip bearing on the inner margin of the frame and projecting from both sides thereof, the frame being provided with an adjustable connection, between its side portions, whereby its width may be varied.

3. An inner sole mold, comprising a female member composed of a flat-sided plate having a slot extending through it from side to side and constituting a mold cavity adapted to form ribs on both right and left soles, and a male member composed of an open sole-shaped frame having narrow elongated flanges formed to enter said slot, said male member being provided with duplicate embossing dies projecting from its opposite sides, and the female member being provided with means permitting bosses formed on either a right or a left sole to project into said female member.

In testimony whereof I have affixed my signature.

CONRAD B. MANSBACH.

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