

Feb. 12, 1929.

1,701,896

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METHOD FOR MANUFACTURING BOOTS AND SHOES

Filed Dec. 12, 1927

Fig. 1

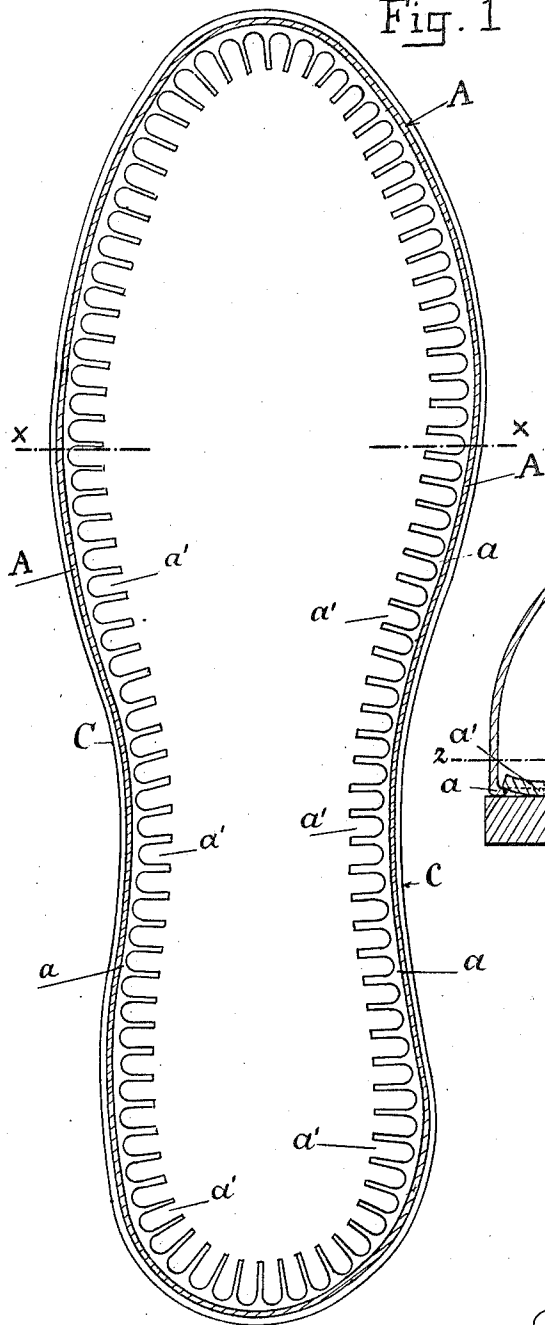
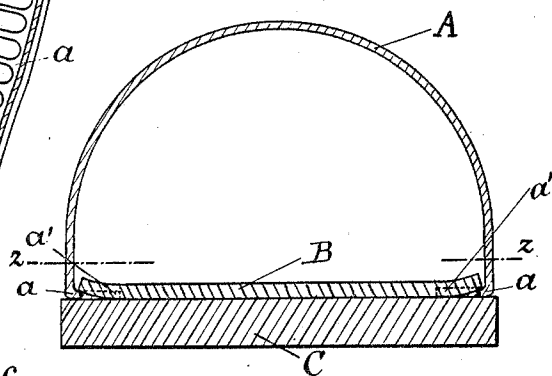


Fig. 2



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METHOD FOR MANUFACTURING BOOTS AND SHOES.

Application filed December 12, 1927, Serial No. 239,422, and in France October 28, 1927.

The present invention relates to methods for manufacturing boots and shoes of the type wherein all parts of the boot or shoe or a portion of them are firmly connected together merely by being cemented by a suitable solution.

A primary object of the invention is to provide a method of the aforesaid type whereby it is possible to manufacture boots and shoes comprising one or more soles made of crepe or smoked rubber and an upper made of a similar or different material as commonly used in shoe-making without the employment of tacks, stitches, rivets or similar securing means and without resorting to a vulcanizing process.

A further object of the invention is to provide a method of the aforesaid type whereby it is possible to manufacture boots and shoes comprising one or more outer and inner soles made of crepe or smoked rubber and a one-piece upper made of a similar or different material as commonly used in shoe-making without any welt.

A still further object of the invention is to provide a method of the aforesaid type whereby it is possible to easily and cheaply manufacture boots and shoes entirely made of crepe rubber, of waterproof, rugged and very durable structure without any stitching, seaming, tacking, riveting or similar securing means and without resorting to a vulcanizing process.

Further objects will appear from the detail description taken in connection with the accompanying drawing exemplifying the invention, in which:—

Figure 1 is a longitudinal section of a boot or shoe according to the invention, taken on the line $z-z$, Fig. 2, assuming the insole to be removed.

Figure 2 is a cross-section taken on the line $x-x$, Fig. 1.

The boot or shoe as illustrated comprises an upper A advantageously made of crepe rubber or any other suitable material as commonly used in the shoe-making industry (leather, chrome tanned leather, fabric, rubber, rubberized cloth, etc.) and having any desired shape according to fashion or practical requirements. This upper A is preferably in one piece i. e. comprises the vamp, the upper proper and the quarter; its bent peripheral edge or border a is formed preferably throughout its length with suitably

spaced and sized indentations, notches, crenellations or like cut away portions a' .

The indented, notched, crenellated or similarly cut away border a of the upper A is engaged between the marginal edges of the relatively thin insole B and a relatively thick outer sole C both advantageously made of crepe rubber, an additional loose or cemented insole being optionally provided inside the boot or shoe i. e. between the insole B and the wearer's foot in cases where for example a better insulation is required.

The process for invariably and firmly securing the border a of the upper A to the insole B and outer sole C as illustrated comprises no vulcanization, no stitching, seaming, tacking, riveting or like securing means. It merely comprises the steps of causing the said parts to adhere together by being cemented. This may be conveniently done in either one or the other of the two different ways as follows.

The border a of the upper A is preferably sandpapered or otherwise suitably roughened and then cemented to the insole B by means of an india rubber solution or the like whereafter it is similarly cemented to the outer sole, the necessary pressure being applied for bringing the border a and the marginal edges of the soles B and C into close contact during the required time whereby, as illustrated in Figure 2, the insole B will adhere to the outer sole C through the cut away portions of said border a i. e. somewhat in zigzag form.

Alternatively the border a of the upper A is preferably sandpapered or otherwise suitably roughened and caused to successively adhere to the insole B and outer sole C by powerfully rubbing or frictioning their marginal edges in any approved way (for instance by means of fast-rotating friction wheels or stone-wheels) until they are sufficiently softened or rendered tacky for readily adhering to the border a on a suitable pressure being applied.

The two ways of causing the border of the upper and the marginal edges of the insole and outer sole to adhere, as aforesaid, can be combined by rubbing the marginal edges of the insole and outer sole before coating them with the solution or cement, and they can also be applied where either of said soles or both is or are made of a material other than crepe rubber but having substantially similar characteristics and properties.

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

1. A method of the type set forth for manufacturing boots and shoes comprising rough-
5 ening the peripheral border of a one-piece upper made of crepe rubber throughout its length, powerfully rubbing the marginal edges of an insole and an outer sole, both made of crepe rubber, to render them tacky,
10 inserting the thus roughened border between the tacky edges of the insole and outer sole, and firmly uniting said edges and border by exerting pressure to cause them to adhere together.

15 2. A method of the type set forth for manufacturing boots and shoes comprising cutting away the peripheral border of a one-piece upper made of crepe rubber throughout its length to form a series of slightly spaced indentations therein, roughening the said border,
20 powerfully rubbing the marginal edges of an insole and an outer sole both made of crepe rubber to render them tacky, inwardly bending and inserting the thus indented and roughened border between the tacky marginal
25 edges of the insole and outer sole, and firmly uniting said edges and border by exerting pressure to cause them to adhere together.

3. A method of the type set forth for manufacturing boots and shoes comprising cutting away the peripheral border of a one-piece upper made of crepe rubber throughout its length to form a series of slightly spaced indentations therein, roughening the said
30 border on both sides, powerfully rubbing the marginal edges of an insole and an outer sole both made of crepe paper to render them tacky, applying a cementitious substance to the said cooperative edges, inserting the thus

indented and roughened border between the tacky marginal edges of the insole and outer sole, and firmly uniting said edges and border by applying pressure thereto. 40

4. A method of the type set forth for manufacturing boots and shoes of any desired
45 shape comprising cutting away the peripheral border of a one-piece upper made of crepe rubber throughout its length to provide a series of slightly spaced indentations therein, roughening the said border on both sides,
50 powerfully rubbing the marginal edges of a relatively thin insole and a relatively thick outer sole both made of crepe rubber to render them tacky, applying a cementitious substance to the said cooperative edges, inserting
55 the thus indented and roughened border between the tacky marginal edges of the insole and outer sole, and firmly uniting said edges and border by applying pressure thereto.

5. A method of the type set forth for manufacturing boots and shoes of any desired
60 shape comprising cutting away the peripheral border of a one-piece upper made of crepe rubber throughout its length to form a series of slightly spaced indentations therein,
65 roughening the said border on both sides, powerfully rubbing the marginal edges of a relatively thin insole and a relatively thick outer sole both made of crepe rubber to render them tacky, and firmly uniting the said
70 marginal edges and border by successively applying an india rubber solution between the edge of the tacky insole and the border and between the edge of the tacky outer sole and the border and exerting pressure. 75

In testimony whereof I affix my signature.

RÉMY RICHARD.