April 9, 1940. J. J. DUDENHOFEN 2,196,856

METHOD OF MAKING SHOES

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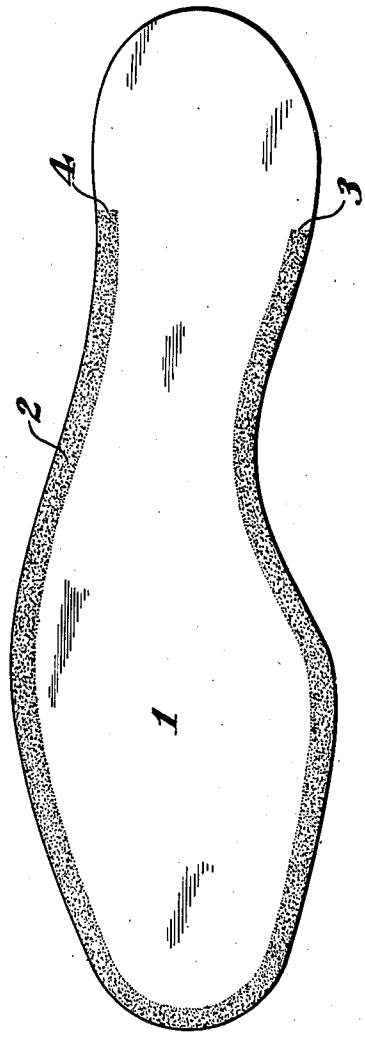


Fig. 1.

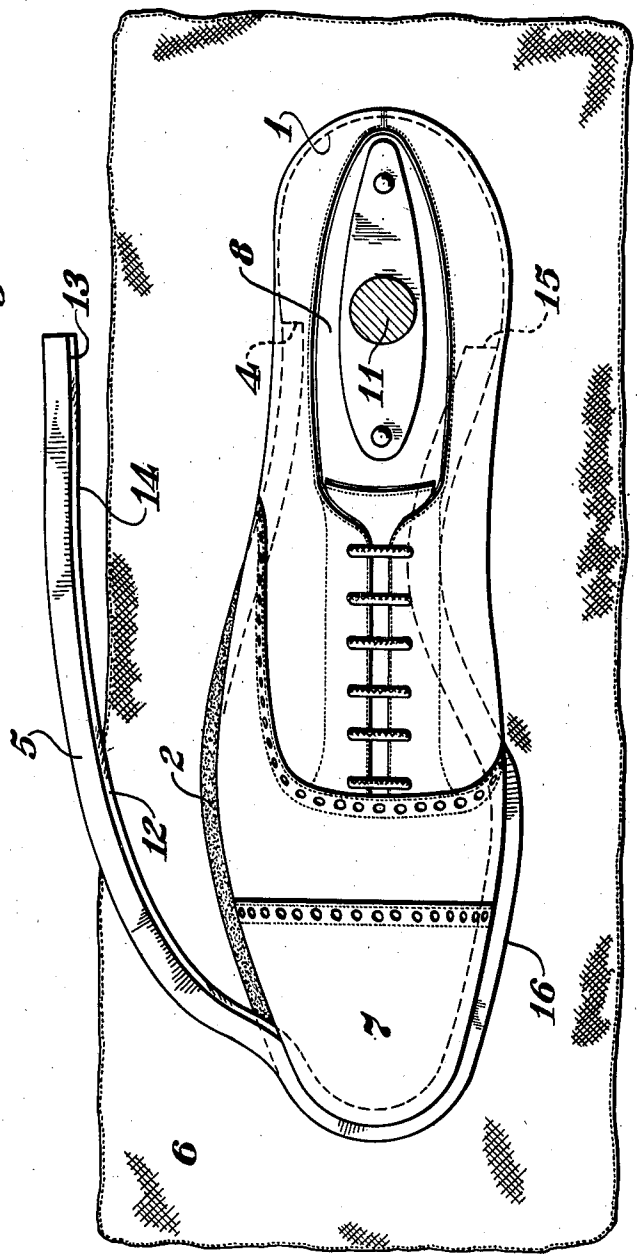


Fig. 2.

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Fig. 3.

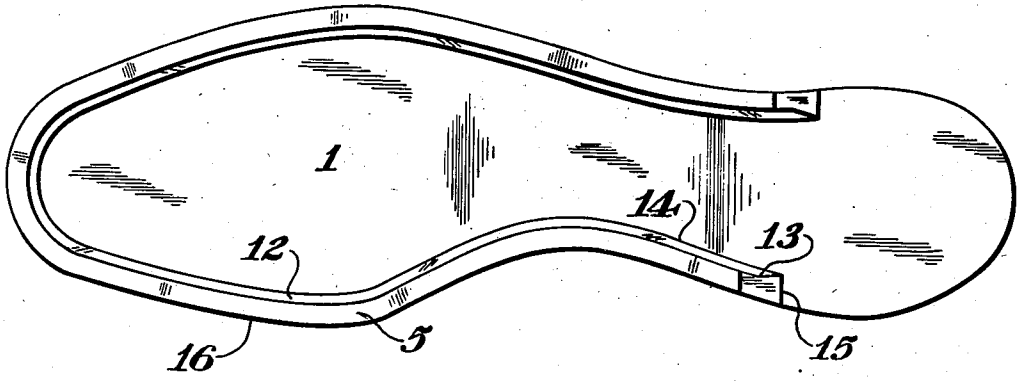


Fig. 4.

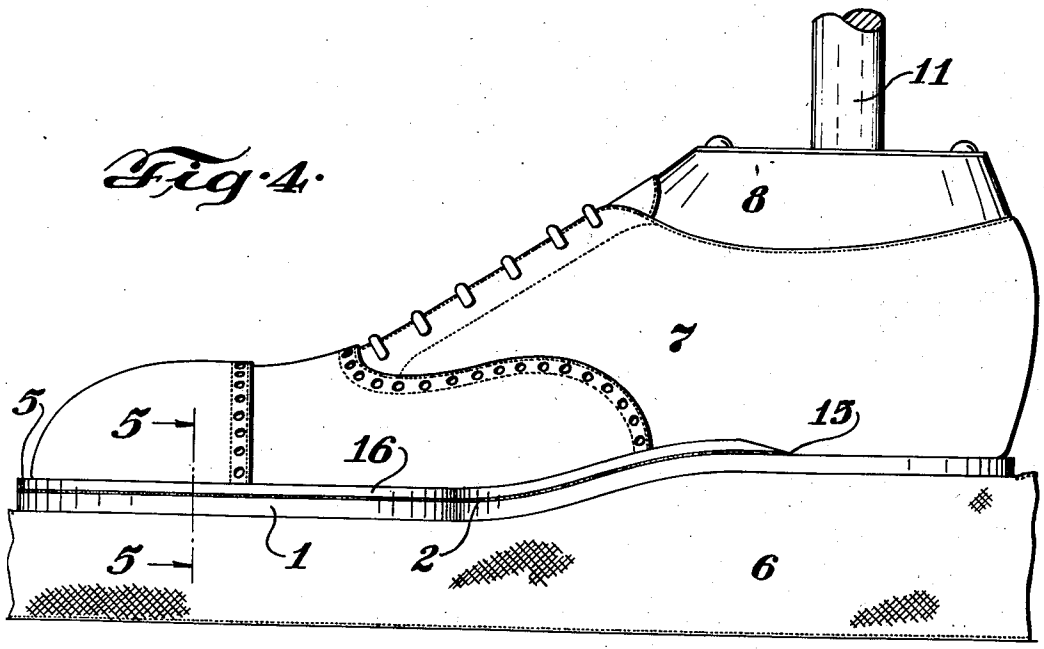
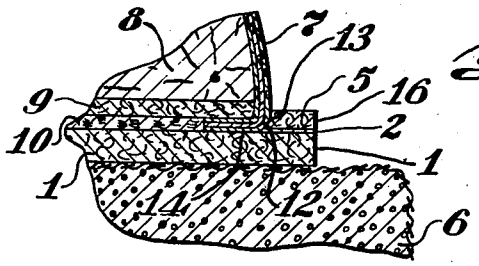


Fig. 5.



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METHOD OF MAKING SHOES

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Application April 8, 1938, Serial No. 200,883

5 Claims. (Cl. 12—142)

This invention relates, in general, to the process of making shoes and, more particularly, to that part of shoemaking in which the welt and sole are assembled to the shoe.

The object of the invention is to produce a new and improved shoe and method of making the same.

A further object of the invention is to produce a method whereby it is not necessary to sew the welt sole to the upper.

By the use of my invention, much time may be saved in the production of shoes, and a better and less expensive shoe obtained.

Other objects of my invention will appear from the following description and accompanying drawings, referring to which:

Figure 1 is a plan view of a shoe sole with cement placed thereon.

Figure 2 is a plan view of a shoe sole with lasted upper placed thereon, the welt partly laid in position and the whole set on a sand bag.

Figure 3 is a plan view of a sole with the welt cemented to sole and the upper removed therefrom.

Figure 4 is a side elevation of a lasted upper and sole with welt attached thereto in the process of assembly and located on a sand bag.

Figure 5 is a vertical section along the line 5—5 of Figure 4.

Like numerals refer to like parts throughout the several views shown, as well as throughout the following description of my invention.

The numeral 1 refers to a leather outsole on which is placed cement 2. Proper selection of this cement is important, for it must have the property of setting or losing its ability to flow within one or two minutes after application, while it must remain in a "tacky" or sticky condition for at least several minutes longer. I have found that water soluble latex cement is particularly suitable for the purpose, although it is to be understood that other types of cement may be used if desirable. This cement will securely hold leather to leather when set, and is applied by a machine in the form of a ribbon of proper width and thickness. The outer edge of the cement 2 is coincident with the outer edge of the shoe sole and extends around the sole, terminating at 3 and 4 slightly posterior to the position which the anterior edge of the heel (not shown) will occupy. The width of the cement 2 is slightly less than that of the welt 5. The sole 1 may have the cement 2 applied either before or after placing on the sand bag 6. The sand bag 6 is of heavy fabric or light leather filled with sufficient sand to allow it to take the shape of the sole 1 on hammering, but rigid enough to retain this shape after removal of the sole.

After the sole 1 with the cement 2 thereon is placed on the sand bag 6, the lasted upper 7 is located on the sole 1 in the position which it will occupy when the shoe is complete. The upper 7 is on its last 8, the insole 9 and the cork filler 10 in place. Pressure just sufficient to hold the upper firmly in its position on the sole is applied to the last 8 by any convenient means shown diagrammatically by the rod 11.

The welt 5 is of flexible leather and has a projection 12 approximately one-fourth or one-fifth the total width of the welt. This projection 12 is a continuation of or extension from the lower edge of the welt, and at its base 13 is approximately from one-third to two-thirds of the thickness of the welt 5. From the base 13 it tapers to an edge 14. After applying cement to the sole and the lower side of the welt, one end of the welt 5 is laid into one of its terminal positions, as at 15, and fitted generally against the upper. The welt 5 is then fitted tightly between the upper 7 and sole 1 by hammering the edge 16. In fitting the welt to the sole, the lasted upper serves to locate its position, so that when the upper is finally cemented to the sole, the inner and upper corner of the welt fits closely to the upper, forming a support therefor. By allowing the cement to become tacky before applying the welt to the sole, it becomes strong enough to hold these parts together without chance of slippage, even though the welt is not held in position during the drying period, but merely firmly pressed into position and into contact with the sole.

The upper 7 still on its last 8 is removed from the sole 1. The sole 1 with the welt 5 properly located thereon is removed from the sand bag 6 and stored away until the cement 2 is completely dry and the sole 1 ready to be secured to the upper 7, at which time, the sole 1 is placed on the customary air pad (not shown), pyroxylin cement applied, and the upper pressed against the sole until the pyroxylin cement sets.

By this means, the welt 5 has already been fitted to the upper 7 and much time and expense is saved in the making of the shoe.

I claim:

1. The process of making shoes consisting of assembling an upper on a last, applying cement to a sole, placing said lasted upper on said sole, placing a welt on said cement, fitting said welt against said lasted upper, removing said lasted

upper, allowing said cement to set, pyroxylin cementing said upper to said sole.

2. The process of making shoes consisting of applying cement substantially around the periphery of a sole and on the top surface of said sole, placing a lasted upper on said sole, placing a welt on said cement, fitting said welt against said upper, removing said lasted upper, allowing said cement to set, fastening said upper to said sole.

3. The process of making shoes consisting of assembling an upper on a last, applying cement to a sole, placing said lasted upper on said sole, applying pressure to said last, placing a welt on said cement, fitting said welt against said upper, removing said lasted upper, allowing said cement to set, pyroxylin cementing said upper to said sole.

4. The method of making shoes which comprises placing the lasted shoe in contact with the sole, cementing the welt to the sole while using the lasted upper as a guide, removing the lasted upper from the sole, and finally cementing the lasted upper to the sole and welt.

5. The method of making shoes which comprises placing the lasted upper in position upon the sole, holding the lasted upper and sole firmly in proper relative position, fitting the welt to the sole while using the lasted upper as a guide, fixing the welt in position, and finally cementing the upper to the sole and welt.

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