Feb. 5, 1946. J. S. KAMBORIAN 2,393,989

SHOE

Filed Sept. 22, 1943 2 Sheets-Sheet 1

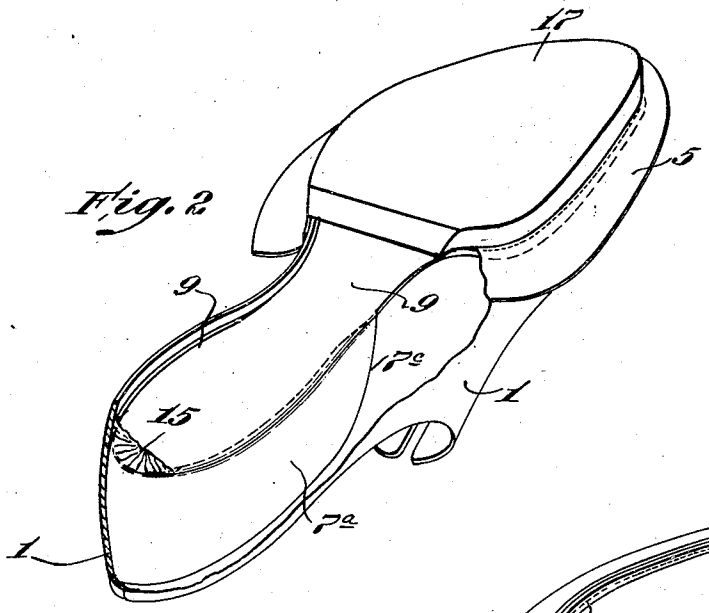


Fig. 2

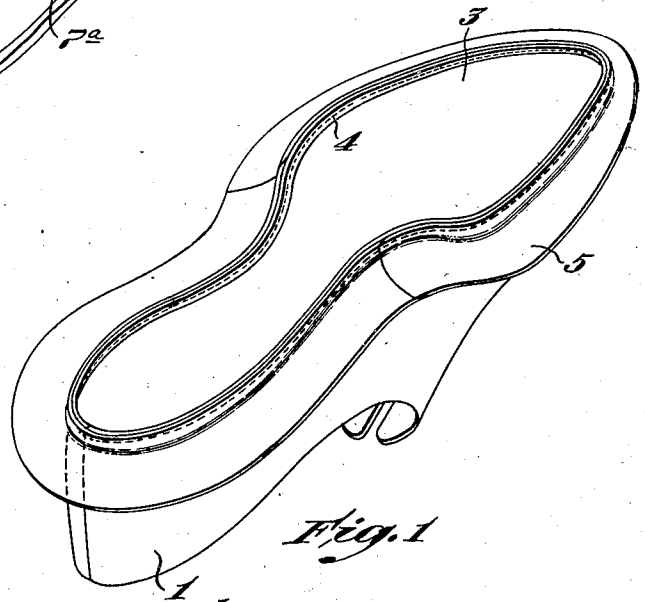


Fig. 1

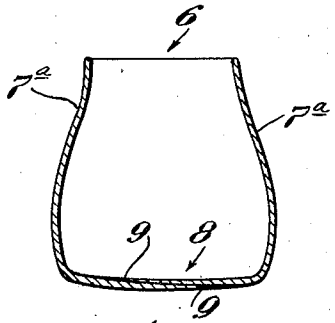


Fig. 4

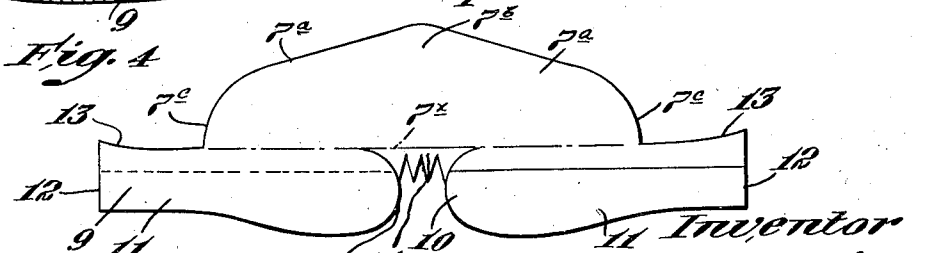


Fig. 3

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SHOE

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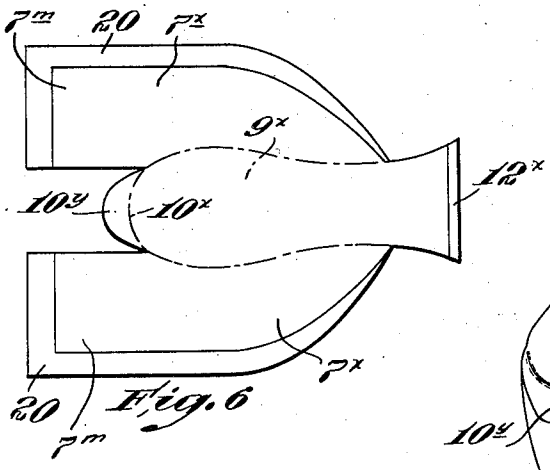


Fig. 6

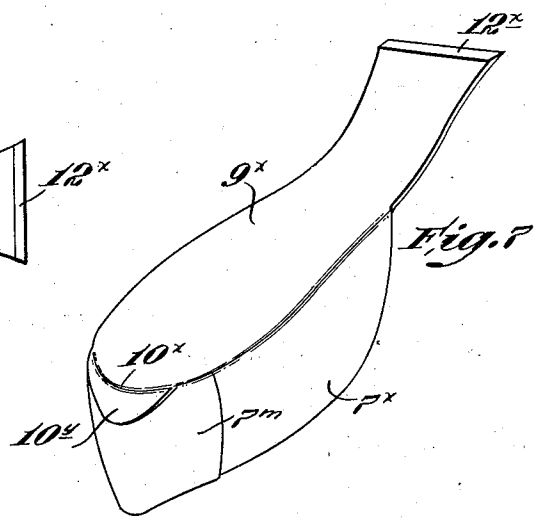


Fig. 7

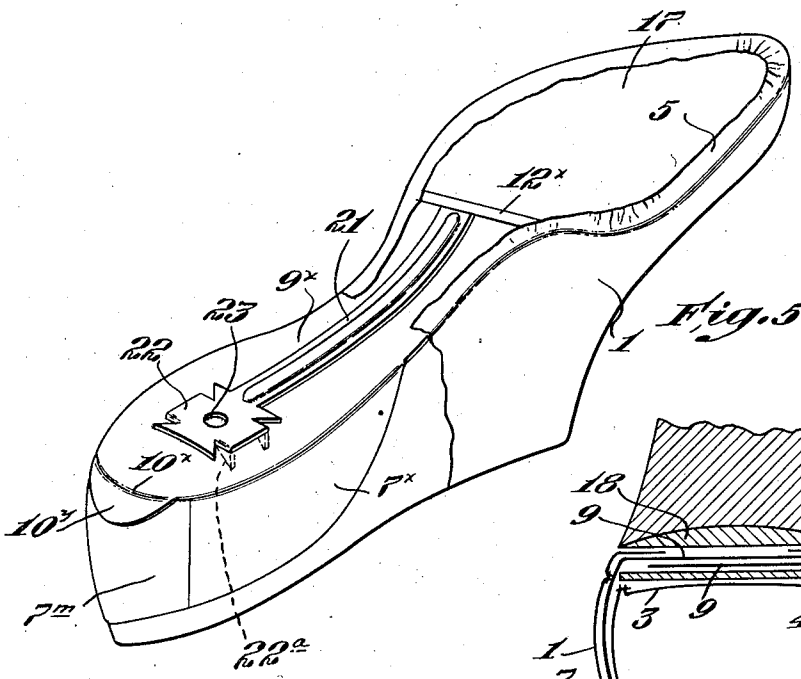


Fig. 5



Fig. 9

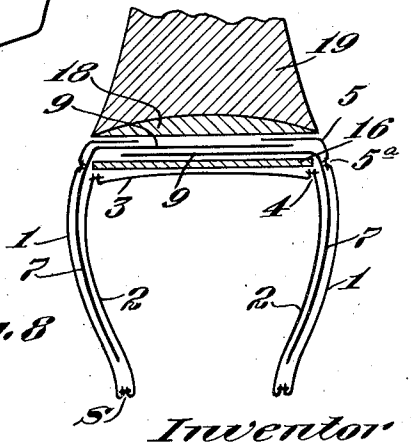


Fig. 8

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UNITED STATES PATENT OFFICE

2,393,989

SHOE

Jacob S. Kamborian, West Newton, Mass.

Application September 22, 1943, Serial No. 503,338

8 Claims. (Cl. 36—19.5)

This invention pertains to the manufacture of footwear and relates more especially to an improved bottom structure for shoes, and to a step product useful in the manufacture of shoes, and while in certain aspects of more general utility, it is primarily concerned with the manufacture of shoes of the force-lasted type.

In order to afford proper support for the foot, and to preserve the initial lasted shape and appearance of a shoe, it is usual to make the shank and heel portion of a shoe bottom structure as stiff as possible, commonly by the employment of a shank piece (often reinforced with metal) and by the use of a stiff, moulded counter within the heel portion of the upper, the counter having a bottom flange which underlies and is secured, as by tacking, to the rear end portion of the insole or equivalent element of the shoe bottom. However, the counter flange is customarily of small width and only borders the rear portion of the sole member so that the counter contributes little to the proper anchorage for the heel; the counter and shank piece must be applied separately, involving a plurality of operations; the counter and shank piece do not mutually support each other; and in making shoes of the force-lasted type, in particular, the necessity for counter lasting and tacking substantially lessens the economies normally a concomitant of force-lasting. Prior to applicant's novel method of making force-lasted shoes, as more fully described in his copending application Serial No. 503,336, filed September 22, 1943, it had been considered impractical to provide shoes of this type with the usual moulded counters. However, in accordance with applicant's improved process, as disclosed in said application, such counters may be introduced between the lining and outer ply of the upper of a force-lasted shoe.

The present invention has for one of its principal objects the provision of a novel bottom construction for shoes, particularly for shoes of the force-lasted type, and which is distinguished from prior usage by having a smooth heel seat and adequate rigidity of shank and counter without resort to counter lasting; a better appearance, and an adequate anchorage of the heel. A further object is to provide an improved stage product useful in the manufacture of shoes. Other and further objects and advantages of the invention will be pointed out by reference to the accompanying drawings wherein:

Fig. 1 is a fragmentary perspective view of a shoe embodying the present invention, the shoe being shown at an intermediate stage in the process of making it;

Fig. 2 is a fragmentary view similar to Fig. 1 but showing the shoe after further steps have been taken in the process;

Fig. 3 is a plan view to small scale of a combined counter and shank-forming blank useful in making the shoe illustrated in Fig. 1;

Fig. 4 is a vertical transverse section through a combined counter and shank made from the blank of Fig. 3;

Fig. 5 is a perspective view of a shoe comprising another embodiment of the invention;

Fig. 6 is a plan view of a combined counter and shank blank useful in making the shoe of Fig. 7;

Fig. 7 is a perspective view of the combined counter and shank made from the blank of Fig. 6 as it appears after moulding;

Fig. 8 is a digrammatic transverse section through the heel end of a shoe embodying the counter construction of Fig. 1; and

Fig. 9 is a fragmentary view, generally similar to Fig. 4, illustrating a modification.

Referring to the drawings (Figs. 1 and 8) the numeral 1 designates the outer element of a shoe upper which also comprises the lining 2 (Fig. 8), the parts 1 and 2 being united at the upper edge of the shoe by a seam S (Fig. 8). When making force-lasted shoes in accordance with the present invention, the lining only of the upper is united to the margin of the sock lining 3 by the inseam 4, the outer element 1 of the upper being left free from the sock lining. As illustrated in Fig. 8, the lower margin of the outer element 1 of the upper is secured to the wrapper strip 5 by a seam at 5^a. However, it is contemplated that the wrapper strip may be an integral extension of the outer element 1 of the upper, if desired. The shoe is provided with a moulded counter, and in accordance with the present invention, this counter is made integral with a shank piece. An appropriate blank for forming such a combined shank piece and counter is illustrated in Fig. 3. This blank may be of any desirable counter-forming material, for example leather, or indurated fiber in sheet form. This blank is shaped to provide two counter wings 7^a integrally joined at their rear ends at the region 7^b. The blank is of maximum width at this part. The wings 7^a taper from this region of maximum width toward their ends 7^c, the latter constituting the forward edges of the counter after moulding. The broken line 7^x (Fig. 3) represents what would ordinarily be the lower cor-

ner of the counter, but in accordance with this invention, elongate shank-forming extensions 9 are integrally united to the counter wings along the line 7x. These counter-forming extensions 9 are spaced at their rear edges 10, and their forward edges 12 are spaced a substantial distance outwardly from the ends 7c of the counter wings. The outer edges 13 of the shank-forming extensions are curved corresponding to the curve of the edge of the shank portion of the shoe bottom. The adjacent ends of the extensions 9 are joined by a narrow, integral connecting portion 14 here shown as indented to facilitate moulding. This blank is subjected to a moulding operation in accordance with methods generally followed in moulding counters, with the result that the wings 7a become upright, as shown in Fig. 4, while the extensions 9 are disposed in a horizontal plane and in overlapping relationship. Preferably, these overlapping portions are united, for example, by adhesive or staples. Preferably the margins 11 of the extensions 9 are beveled before moulding but after moulding, the bottom wall of the counter where the parts 9 overlap, is preferably somewhat thicker at the center than at the lateral edges. During the moulding operation, the part 14 of the blank is folded or gathered as shown at 15 in Fig. 2, such portion closing the space between the rear edges 10 of the shank-forming extensions 9 and the moulded vertical rear wall of the counter. By this procedure the upstanding walls or wing portions of the counter are integrally joined to a bottom wall which extends across the entire width of the shoe bottom and which integrally merges with the shank. The shank is thus also of two-ply construction, affording very substantial stiffness and rigidity to the rear portion of the shoe bottom structure.

The moulded counter and shank is now introduced between the lining 2 and the outer element 1 of the upper, the bottom or shank portion of this combined shank and counter being cemented to the under side of the sock lining. The last is then forced into the upper to impart the desired lasted contour.

A middle sole is cemented to the forepart portion of the sock lining and so arranged as to cover the inseam 4. This middle sole may consist only of a thick "platform" of felt or the like, such as indicated at 17 (Fig. 1) or it may comprise a thinner part 16 which is directly attached to the sock lining and to which, in turn, the felt platform is secured. If such a thin sole member be used, it may be desirable to make its toe and heel ends of stiff material and the ball portion of flexible material. It may or may not extend from toe to heel. As indicated in Fig. 8, this sole member 16 extends to the heel and is arranged to underlie the parts 9 of the combined counter and shank. The cushioning layer or platform 17 may be coextensive with the middle sole, or may itself constitute the middle sole. If the middle sole terminate at the forward end of the shank, then, as above suggested, the shank portion of the combined counter and shank is secured directly to the sock lining. The wrapper 5 is wiped in over the middle sole and over the shank piece. An outer sole 18 (Fig. 8) is applied and a heel 19 attached. It may be noted that by the employment of a counter of the type here disclosed, an unusual thickness of material is made available for the reception of the fasteners by which the heel is attached.

While the counter above described is preferred, it is contemplated that a desirable counter may be made as more particularly illustrated in Figs. 5, 6 and 7. In Fig. 6 there is shown a counter blank consisting of appropriate sheet material and comprising a central portion 9x shaped more or less like the conventional shoe shank piece, having the forward edge 12x and the rear end 10x but being provided with the integral rearwardly projecting tab 10y. Counter-forming wings 7x are integrally joined to the side edges of the piece 9x. These counter-forming wings have portions 7m projecting rearwardly beyond the tab 10y, and preferably these wings have beveled edges 20. This blank is moulded so as to provide the combined counter and shank of Fig. 7 in which the wing members 7x are arranged to stand substantially vertically with their rear extensions 7m overlapping to form a double-thickness rear wall for the counter and with the tab 10y overlapping the rear wall at its junction with the part 9x. This combined counter and shank piece is associated with the upper in the same way as the counter above described. If desired, an elongate metal shank stiffener 21 may be associated with the part 9x. This stiffener is shown as having a flat plate portion 22 at one end designed to underlie the shoe heel. Preferably this plate-like portion or head has integral prongs 22a which extend through the shoe bottom structure and which are clenched over at the upper surface of the sock lining. The head 22 has an aperture 23 for the reception of a heel-attaching fastener. As illustrated in Fig. 9, the stiffener 21 is interposed between the overlapped plies 9 of the combined shank and counter.

While certain desirable embodiments of the invention have been shown and described by way of example, it is to be understood that the invention is broadly inclusive of all equivalents falling within the terms of the appended claims.

I claim:

1. A shoe including an upper comprising a lining and an outer element, a sock lining attached to the lining only of the upper at the rear end of the shoe, and a moulded counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter having wing portions disposed at opposite sides of the shoe and a shank piece underlying and attached to the sock lining, the shank piece being integrally joined to the counter.

2. A shoe including an upper comprising a lining and an outer element, a sock lining attached to the lining only of the upper at the rear end of the shoe, a moulded counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, and a shank piece underlying and attached to the sock lining, the shank piece being integrally joined to the lower part of the counter.

3. A shoe including an upper comprising a lining and an outer element, a sock lining attached to the lining only of the upper at the rear end of the shoe, a moulded counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter having wing portions disposed at opposite sides of the shoe, and a shank piece underlying the sock lining, the shank piece being integrally joined to the lower edges of the respective wing portions of the counter.

4. A shoe including an upper comprising a lining and an outer element, a sock lining at-

tached to the lining only of the upper at the rear end of the shoe, a moulded counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter having wing portions disposed at opposite sides of the shoe, and a shank piece underlying the sock lining, the shank piece comprising two superposed plies of the counter material, one of said plies being integrally joined to each wing portion respectively of the counter.

5. A shoe of the force-lasted type including an upper comprising a lining and an outer element, a thin, flexible sock lining attached to the lining only of the upper at the rear end of the shoe, and a counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter comprising wing portions disposed at opposite sides of the shoe, each wing portion of the counter having an elongate integral extension which underlies the rear part of the thin sock lining, said extensions overlapping and being so shaped as collectively to constitute a two-ply shank piece.

6. A shoe of the force-lasted type including an upper comprising a lining and an outer element, a sock lining attached to the lining only of the upper at the rear end of the shoe, a moulded counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter having wing portions disposed at opposite sides of the shoe, and a two-ply shank piece underlying the sock lining, the respective plies of the shank piece being integrally joined to the lower edges of the respective counter wings, and being united to each other.

7. In combination in a shoe of the type having an upper comprising a lining and an outer element a sock lining attached to the lining only of the upper at the rear end of the shoe, a shank piece of sheet material underlying the rear part of the sock lining, a counter interposed between the outer element and the attached lining of the upper at the rear end of the shoe, the counter being integral with the shank piece, and a shank stiffener extending lengthwise of the shank piece at the under side of the latter, the shank stiffener having prongs at its rear end which project upwardly through the shank piece.

8. In combination in a shoe of the type wherein a sock lining is attached to the lining of the upper, a shank piece of sheet material underlying the rear part of the sock lining, a counter interposed between the outer element and lining of the upper, the counter being integral with the shank piece and a shank stiffener extending longitudinally of the shoe at the under side of the shank piece, the stiffener having an integral plate at its rear end provided with a plurality of prongs which project upwardly through the shank piece and sock lining and whose tips are clenched over at the upper side of the sock lining, said plate being apertured for the reception of heel-attaching means.

JACOB S. KAMBORIAN.