

July 1, 1930.

J. MELTZER
FOOTWEAR

1,769,449

Filed May 22, 1929

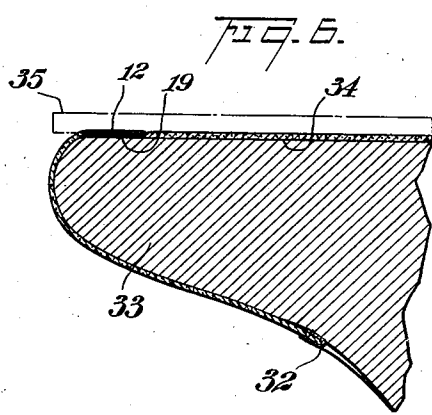
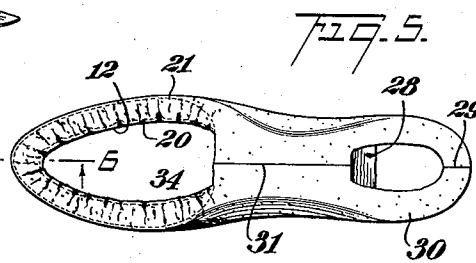
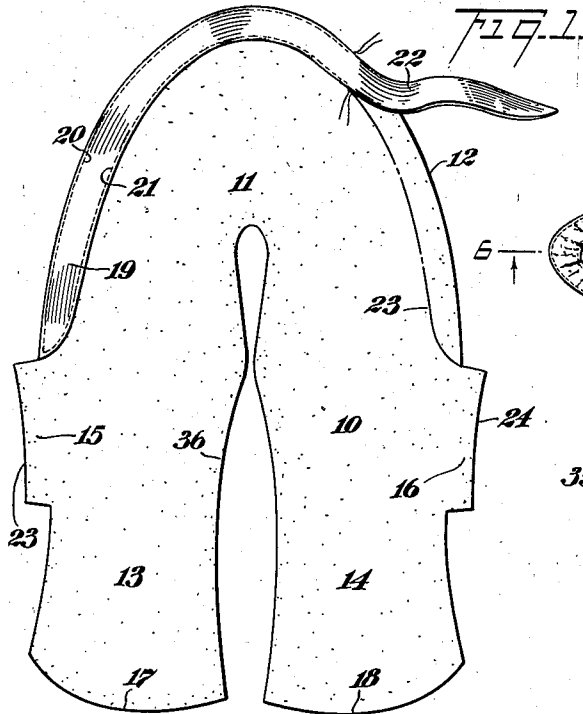
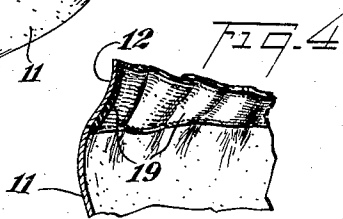
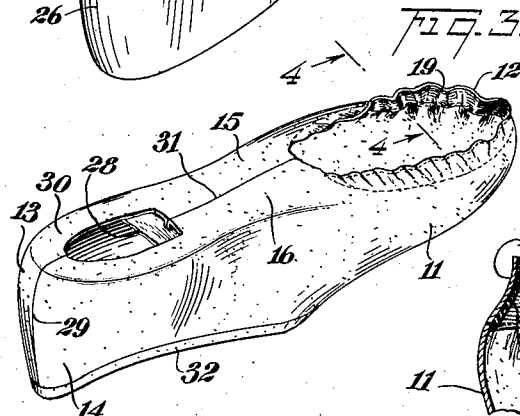
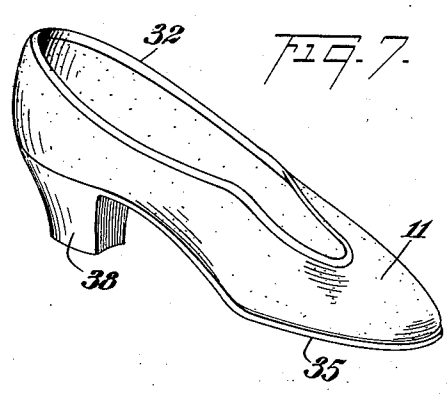
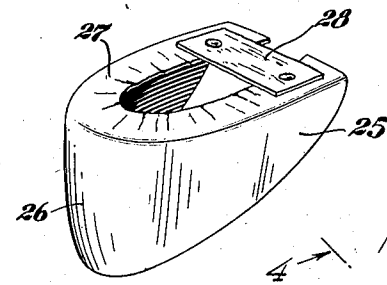


FIG. 2.



INVENTOR
Jack Meltzer;
BY
Fredrick Brestenfel;
ATTORNEY

UNITED STATES PATENT OFFICE

JACK MELTZER, OF BROOKLYN, NEW YORK

FOOTWEAR

Application filed May 22, 1929. Serial No. 364,965.

My present invention relates generally to footwear, and has particular reference to the manufacture of shoes.

A general object of my invention is to provide a novel and improved shoe construction which is extremely light in weight, suitable for either indoor or outdoor use, and whose manufacture involves a minimum expenditure of time, labor, and material.

A more particular object is to provide a shoe which resembles a turned shoe of high quality and which is at the same time lighter and more flexible than such a turned shoe and less expensive to manufacture.

From one aspect, my invention relates to the relatively inexpensive type of shoe wherein the outer or main sole is held in adhesive association with the upper. The manufacture of this type of shoe involves the application of an upper to a last and the initial positioning of the lower edges of the upper around the margin of the upper surface of the last, after which the outer sole may be adhesively applied.

One procedure of the foregoing character involves the use of tacks, a sole member being initially laid upon the last and the lower edges of the upper being pulled around over the last and tacked down onto this sole member. Since the function of this sole member is completed after the outer sole has been cemented into place, it is a disadvantageous feature of this construction that the initial sole member into which the tacks are driven must be of suitable thickness and weight to support such tacks. Furthermore, where tacks are employed a wooden last is unsatisfactory because the tacks would enter such last, and accordingly, it is customarily necessary to apply a metal plate or the like to the upper surface of the last.

Quite apart from the foregoing disadvantage, the proper positioning and tacking down of the upper is a procedure requiring considerable skill and time and usually results in undesirable wrinkles. In general, the finished article is heavy and inflexible, generally wrinkled and bumpy, and quite incomparable with a turned shoe of high quality.

My present invention obviates the necessity for employing tacks or the like, thereby dispensing not only with the necessity for skill and the expenditure of considerable time, but also avoiding the existence in the finished article, of an inner sole member of undesirable weight and thickness.

Briefly, a shoe constructed in accordance with my invention embodies, when completed, nothing more than a main outer sole and an ornamental insole of extremely light material of the character usually employed in all types of shoe, the lower edges of the upper being sandwiched in an efficient manner between these two sole members. This advantageous result is attained without the necessity for employing tacks or the like by a novel and simple pre-treatment of the upper prior to its application to the last.

More particularly, my invention makes use of a substantially flat blank shaped to constitute the upper, the blank being so configured and treated prior to its application to the last that the latter procedure is automatically accompanied by the proper disposition of the upper upon the last in a receptive position with respect to the main sole presently to be applied.

For the attainment of the foregoing objects and such other objects as may hereinafter appear or be pointed out, I have constructed a device embodying the features of my invention and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a normally flat blank which may be used for the upper of a shoe, showing the method of treating the blank;

Figure 2 is a perspective view of a heel reinforcement which I prefer to employ;

Figure 3 is a perspective view taken in the same general direction as Figure 2, showing the blank of Figure 1 as it appears preparatory to applying the same to a last;

Figure 4 is a fragmentary cross-sectional view taken substantially along the line 4—4 of Figure 3;

Figure 5 is a plan view of the assembly of Figure 3 applied to a last;

Figure 6 is an enlarged fragmentary cross-

55

60

65

70

75

80

85

90

95

100

sectional view taken substantially along the line 6—6 of Figure 5 showing the manner in which the main outer sole is thereafter applied; and

5 Figure 7 is a perspective view of the finished article of footwear.

10 In Figure 1 I have shown a flat blank 10 which may be of leather, fabric, or other similar material suitable for use as the upper of a shoe. It is shaped to embody a forward or vamp portion 11 having a curved forward edge 12, and having a pair of spaced rearwardly extending heel portions 13 and 14. In accordance with my invention, this blank 15 may be symmetrical about a longitudinal axis, its method of treatment and the general nature of my invention rendering such blank usable for either a right or left shoe regardless of its symmetrical condition.

20 In accordance with my invention, I provide a pair of laterally extending portions 15 and 16 on the opposite sides of the blank behind the curved forward edge 12. I also shape the heel portions 13 and 14, and particularly the rear ends 17 and 18 thereof, 25 in a particular manner whose features will be presently set forth in greater detail.

30 One feature of my invention lies in attaching to the curved forward edge 12 an elastic strip 19, which strip is attached to the flat blank in a stretched condition. This elastic strip 19 may be adhesively applied or it may be stitched to the blank 10 as by 35 means of two substantially parallel lines of stitching 20 and 21. In Figure 1, I have shown the elastic strip 19 in process of attachment by means of stitches, and the application thereof in stretched condition will be clearly understood by observing the 40 normal unstretched length of the unattached end portion 22 which will ultimately overlie the marginal area defined by the dot and dash line 23.

45 The showing of Figure 1 is in one sense diagrammatic, because it will be obvious that the application of the strip 19 in stretched condition to the flat blank 10 will immediately cause the forward marginal portion of the blank 10 to be urged out of the normal plane of the blank 10 and to assume a 50 shirred or ruffled condition such as that illustrated in Figure 3.

55 The next step in the process of manufacture lies in mutually attaching the laterally extending portions 15 and 16 as by a line of stitching applied to the outer edges 23 and 24 of these portions. The latter are so positioned, sized, and shaped that they will ultimately underlie the arch portion of 60 the completed shoe.

65 The rear ends 17 and 18 are also stitched together and these ends are so shaped that when so stitched, the lower rear edge portion of the upper, viz., that portion which will underlie the heel of the finished shoe, will

lie substantially unwrinkled in a single substantially horizontal plane underlying such heel.

70 I also provide for the suitable attachment, at the same time as the foregoing steps are carried out, of any desired type of lining or the like, and I have not illustrated the manner of applying any lining material for the reason that its employment is a matter which will be clearly understood to those 75 skilled in the art, and has no special significance in connection with my present invention.

80 The foregoing procedures, including the mutual stitching of the edges 23, 24, and the rear ends 17, 18, results in an assembly as shown in Figure 3. During the construction of this assembly, together with whatever lining is desired, I apply a reinforcing insert 25 of the character shown most clearly in 85 Figure 2 to the rear portion of the assembly, preferably disposed between the material of the upper and the lining thereof. The member 25 may be of fiber or the like and may comprise a single blank of such material bent 90 and shaped to provide the cylindrical portion 26 and the marginal portion 27, the latter lying in a single plane substantially parallel to the sole of the finished shoe. A connecting strip 28 or the like may be applied across the forward ends of the reinforcement 25. 95

100 Upon reference to Figure 3, it is to be noted that the ends 17 and 18, when joined together substantially along the line 29, cause the rear portion of the upper to automatically assume a configuration which conforms substantially to the insert 25. In other words, the lower rear edge 30 of the upper automatically assumes a position in 105 a single substantially horizontal plane ultimately underlying the heel portion of the finished shoe. It is also to be noted that the mutual attachment of the edges 23 and 24 substantially along the line 31 causes the 110 medial portions of the lower edge of the upper on the opposite sides of the shoe to underlie what will ultimately be the arch portion of the shoe. The mutual attachment along the line 31 results in the shirred or 115 ruffled condition of the curved forward edge 12 as shown in this figure.

120 An edging 32 may be applied to the upper edge of the upper during the provision of the assembly of Figure 3.

125 The foregoing procedural steps may all be accomplished by relatively unskilled labor, without the employment of any special stitching machinery or the like, and entirely remote from any last. The next step lies 130 merely in applying the assembly of Figure 3 to a suitably configured last, whereupon the forward portion of the assembly will assume a stretched condition as shown most clearly in Figure 5. Regardless of the ini- 130

tial symmetry of the blank, this forward portion will automatically conform to the shape of the last whether the latter is for a right or left shoe. The constant tension of the elastic strip 19 will automatically hold the forward portion 12 of the lower edge of the upper in the position of Figure 5, which is the position heretofore achieved only by tedious and skillful manual operation accompanied by employment of tacks or the like.

Referring for the moment to Figure 6, wherein I have shown a portion of the last 33, I wish to point out that prior to the application of the assembly of Figure 3 to the last 33 I apply to the top surface of the last an ornamental insole 34, previously shaped in the proper manner and comprising a substantially flat blank of extreme lightness and thinness. The insole 34 is the very insole which has heretofore been customarily inserted into finished articles of footwear to conceal stitches and to impart a completed appearance to the article. It is not of any particular weight or thickness which might render the shoe inflexible and heavy.

When the assembly is applied as shown in Figures 5 and 6, a suitable adhesive is inserted beneath the shirred forward lower edge of the upper and thereupon a steaming operation is carried out whereby this forward edge is not only adhesively pressed downwardly upon the forward marginal portion of the insole 34 but is also squeezed into a substantially flat and unwrinkled condition. After this has been accomplished, additional adhesive is applied to the marginal part of the shoe bottom thus presented upwardly on the last, and a main outer sole 35 of suitable quality, material, and thickness is pressed downwardly upon the shoe bottom thus presented. Finally, a heel 38, is applied in a customary manner to the shoe, and when the assembly is then removed from the last the article of footwear is complete, as shown in Figure 7.

I do not mean to limit myself to any particular configuration of the upper nor necessarily to the provision of the entire upper in the form of a single blank as shown in Figure 1. Thus, the provision of the elastic strip 19 around the forward portion of the upper is a feature of my invention having independent utility with respect to the integral nature of the blank 10. Moreover, while the blank I have shown in Figure 1 has an interior edge 36 configured in a particular manner whereby a shoe in the nature of a slipper is provided, it will be obvious that this particular configuration is immaterial from certain aspects, and may be altered to suit requirements.

It will be understood that as to certain phases of my invention, the cementing of

an outer sole to the upper is not necessarily essential. That is, so far as the provision of an elastic strip around the marginal forward portion of the upper is concerned, the advantages of this elastic strip may be obtained regardless of whether the main outer sole is thereafter adhesively secured in position, stitched, or otherwise applied. Also, while I have in the illustrated embodiment shown the elastic strip overlying one surface of the shoe upper, it will be understood that this elastic strip may also be provided to fulfill the same advantageous function by simply securing one edge thereof to the extreme outer edge of the upper.

My invention results in the provision of a completed shoe as shown in Figure 7 wherein the sole 35 lies substantially flat, wherein no bulky stitches or tacks are present, and wherein no unnecessary auxiliary soles or portions are employed. The finished shoe is not only light and flexible and the result of a simple and expeditious manufacturing procedure, but it resembles in all respects a finished shoe of the relatively expensive stitched and turned variety.

It will be obvious that changes in the details herein described and illustrated for the purpose of explaining the nature of my invention may be made by those skilled in the art without departing from the spirit and scope of the invention as expressed in the appended claims. It is therefore intended that these details be interpreted as illustrative, and not in a limiting sense.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is—

1. In a shoe, the combination with an insole and a main outer sole, of an upper having an outer exposed surface and an inner surface and having its lower edge interposed between said soles, and a relatively thin and highly elastic strip carried by the forward portion of the said edge; said upper being formed from a normally flat blank, and said strip being attached under tension and along both edges of the strip to the inner surface of the forward marginal portion of said blank while the latter is flat.

2. In a shoe, the combination with an insole and a main outer sole, of an upper having its lower edge interposed between said soles, the medial portions of said edge on the opposite sides of the shoe being directly connected together beneath the shank of the shoe, and an elastic strip carried by said edge forwardly of said directly connected together portions.

3. For use in a shoe, an upper comprising a normally flat blank having an outer surface and an inner surface and with a curved forward edge, and a relatively thin and highly elastic strip attached under tension

and along both edges of said strip to the inner surface of said forward edge so as to urge the latter out of the plane of the blank.

5 4. For use in a shoe, an upper comprising a normally flat blank with a curved forward edge, laterally extending portions on the opposite sides of said blank behind said forward edge and adapted to be directly connected together beneath the shoe shank when
10 the upper is employed, and an elastic strip attached under tension to said forward edge so as to retain the latter in shirred condition out of the plane of the blank.

15 5. In a shoe, an upper comprising a normally flat blank having a vamp portion with a curved forward edge, a pair of laterally extending portions on the opposite sides of said blank behind said forward edge, and a
20 pair of spaced rearwardly extending heel portions; said heel portions being so shaped that when the rear ends thereof are directly connected together the lower rear edge of the upper will lie substantially unwrinkled
25 beneath the heel of the shoe, said laterally extending portions being directly connected together beneath the shank of the shoe, an elastic strip attached to said curved forward edge and urging the latter inwardly
30 into puckered condition; and an outer sole underlying and attached to said forward edge and the shank of the shoe.

6. The herein-described method of making a shoe which consists in forming a flat
35 blank for the upper of the shoe, attaching an elastic strip under tension to the forward marginal portion of said blank, stitching together the medial portions of the opposite side edges of the blank, applying an insole
40 to the upper surface of a last, applying said blank to said last, whereby said stitches and said strip will retain the lower portions of the upper in snug position over the insole, and applying and attaching a main outer
45 sole to the shoe bottom thus presented on the last.

In witness whereof I have signed this specification this 18th day of May, 1929.

JACK MELTZER.

50

55

60

65