

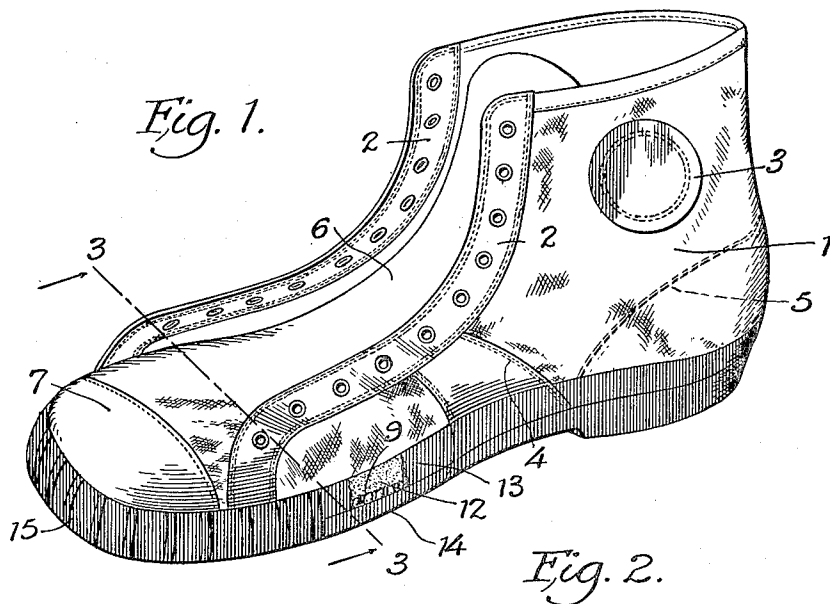
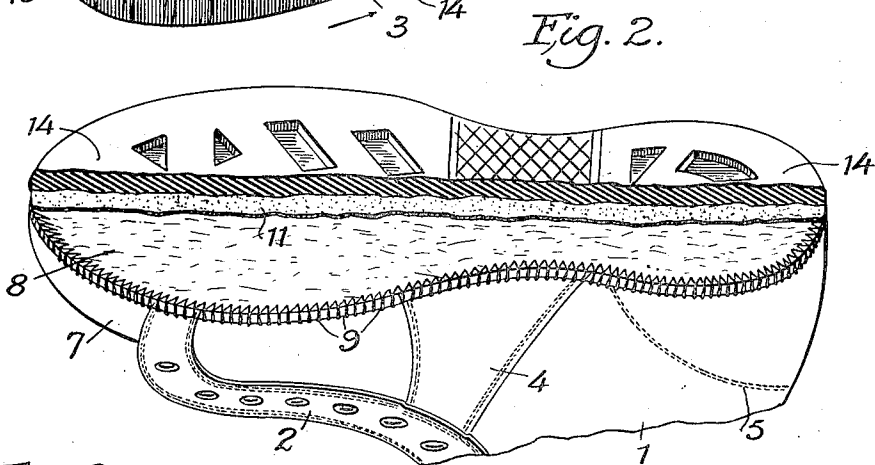
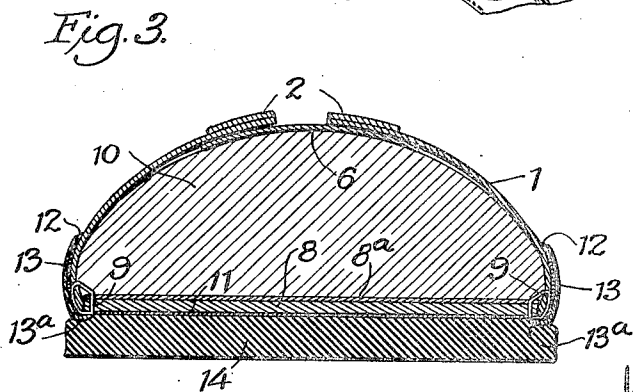
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ATHLETIC SHOE AND METHOD OF MAKING SAME

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ATHLETIC SHOE AND METHOD OF MAKING SAME

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This invention is a novel improvement in athletic shoes and in the method of making same, and the principal objects thereof are to provide a vulcanized athletic shoe having
 5 a canvas or other fabric upper and having a vulcanized rubber sole, which shoe will be less expensive to manufacture than the usual athletic shoe of this type; to provide
 10 a novel method of making such shoes so as to eliminate a number of steps necessary in the usual process heretofore used; and also to provide a stronger shoe with a smoother bottom, and a shoe in which a minimum amount of upper stock is used.

15 In the usual method of making vulcanized athletic shoes, in general use, an upper of fabric is made, and placed in a machine which puts two string laces in the lacing eyelets of the upper which strings are used to retain
 20 a last in the upper. The inside of the bottom edge of the upper is then coated for a width of about $\frac{1}{8}$ of an inch with cement, and then the upper is pulled over a last upon the bottom of which has been placed an in-
 25 sole, the bottom of which has previously been cemented. The lower edge of the upper is then stuck down upon the exposed face of the insole by hand and by pounding and rolling it down. The canvas upper however
 30 bunches around the bottom of the insole making it necessary to skive all pieces of canvas where it bunches together, and then to put in a filler in order to even up the bottom as the canvas on the outside of the insole
 35 leaves an uneven edge. The shoe is then sent to a cementer where the outside of the lower edge of the upper is cemented about $\frac{3}{4}$ of an inch high; and this cement is then allowed
 40 to dry. A rubber foxing about one inch wide is then applied all around the shoe and the excess foxing over the width of the cement is bent under and pressed down. The outsole is then applied and the whole shoe, with the last inside, is placed in a vulcanizer.

45 My novel process consists in making an upper such as heretofore made, except that no allowance for turning in under the insole is made, and stitching it directly to an insole, without applying any cement to the
 50 inside of the upper, as above explained in

the old method. A last is then placed inside of the shoe, which completes the process of lasting. The insole and outside of the lower edge of the upper is then cemented in one
 55 operation and allowed to dry and the rubber foxing and outer sole is then applied. This method saves the operation of lacing with the two strings as above explained in the old method, and obviates the necessity of cementing the inside of the bottom edge of
 60 the uppers and bottom of the insole by separate operations as previously explained. My method of lasting also eliminates the pressing, pounding and rolling of the upper to make same adhere firmly to the cemented
 65 insole, and it eliminates skiving the upper after the shoe is lasted, for there are no rough surfaces when the insole is applied to the upper by sewing. My novel method also
 70 saves the entire sole filler and the operation of cementing and placing the filler sole on the shoe. It also saves approximately 15% of the upper stock used in the shoe by eliminating the entire lasting allowance, will result
 75 in a much stronger shoe, as the stitches as well as the rubber foxing will hold the upper to the insole; also the shoe will have a much smoother bottom, as there is no filler and there are no rough edges of canvas to apply
 80 the outsole to.

I will explain the invention with reference to the accompanying drawing to enable others familiar with the art to adopt and use the same; and will summarize in the claims the novel features of construction, and novel
 85 combinations of parts, for which protection is desired.

In said drawings:

Fig. 1 is a perspective view of an athletic shoe having a vulcanized sole applied by my
 90 novel method.

Fig. 2 is a perspective view of the shoe (inverted) showing the outsole partly broken away and showing the upper stitched to the
 95 cemented insole.

Fig. 3 is a transverse section through the ball of the shoe on line 3—3 Fig. 1.

As shown in the drawing, the shoe upper 1 is preferably made of canvas, but may be made of other suitable fabric or material, and
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may be provided with lacing strips 2, ankle patches 3, and ankle strips 4 sewed or otherwise secured to the upper 1, and with the usual heel counter stiffener 5, and with a combined toe and tongue 6 and toe cap 7, the same being assembled in the usual manner to form the upper of a vulcanized athletic shoe. The lacing strips 2, ankle patches 3, ankle strips 4, and toe cap 7 may be made of vulcanized rubber, or of leather, or any other suitable material.

The insole 8 is cut or preformed to desired shape, and the upper is also preformed or trimmed so that the lower edge of the upper will neatly fit the periphery of the insole 8, entirely around the sole and heel portions of the insole, as shown in Fig. 2. The lower edge of the upper is then stitched directly to the periphery of the insole 8, such as by over-and-over stitches 9 or the like extending entirely around the insole, no portion of the insole extending outside the upper thus stitched, and no portion of the upper extending below and turned under the insole 8. The insole 8 is of suitable frictioned material or cemented material which will unite with the rubber outsole 14 upon vulcanization; and if desired a fabric sock sole 8^a may be incorporated with the insole 8.

A last 10 is then placed inside of the shoe, which directly completes the process of lasting. This method saves the operation of lacing with the two strings as above explained in connection with the usual method; saves the cementing of the uppers to the insole; also it eliminates the pressing, pounding, and rolling of the upper to make it adhere to a cemented insole, and eliminates skiving the upper after the shoe is lasted, since there are no rough surfaces when the insole is applied to the upper by sewing, as in my method shown in Fig. 2. My new method saves the entire sole filler customarily used heretofore and the operation of cementing and placing the filler sole on the shoe. My method also saves approximately 15% of the upper stock used in the shoe by eliminating the entire lasting allowance.

The lasting operation being thus completed the bottom of the insole 8 is then coated with cement 11, and in the same operation the lower edge of the lasted upper is also coated as at 12 with cement, about $\frac{3}{4}$ of an inch high, and the cement is then allowed to dry. A rubber foxing 13 about one inch wide is applied all around the upper and the excess foxing over the width of the cement 12 is bent under the insole 8 as at 13^a as shown in Fig. 3.

A rubber whole outsole 14 is then applied as shown in Figs. 2 and 3, the same being cemented to the insole 8 and to the lower edge of the rubber foxing 13, covering the stitches 9. If desired the rubber foxings 13 could be formed integral with the sole 14. Also an extra heavy foxing 15 of rubber may be ce-

mented around the front portion of the shoe as shown in Fig. 1, embracing the outer edge of the outsole 14 and the foxing 13. The whole shoe thus assembled with the last inside is then placed in a vulcanizer and the foxing 13 and outsole 14 will upon vulcanization adhere firmly together and to the lower edge of the fabric upper and to the insole 8 and will form a unitary structure with the upper.

My method will produce a much stronger shoe than the ordinary athletic shoe of this type, for the reason that the combination of vulcanized foxings and stitches, which secures the upper to the insole, is much stronger than a connection in which the stitches are omitted. Moreover the shoe has a much smoother bottom as there are no fillers or rough edges of canvas to lay the outsole on. My method also obviates the necessity of cementing the bottom of the insole and the outside of the bottom of the upper in separate operations.

I do not limit my invention to the exact form shown in the drawing for obviously changes may be made therein within the scope of the claims.

I claim:

1. The herein described method of making vulcanized shoes, comprising attaching the lower edge of an upper to the periphery of an insole with the edge face of the upper terminating in the plane of the lower face of the insole; placing the parts thus formed upon a last; applying a vulcanizable outsole to the insole and over the lower edge of the upper; and vulcanizing the shoe.

2. The herein described method of making vulcanized shoes, comprising stitching the lower edge of an upper to an insole; placing the parts thus formed upon a last; placing a vulcanizable foxing over the stitching around the lower edge of the upper; applying a vulcanizable outsole to the insole and to the lower edge of the foxing; and then vulcanizing the shoe.

3. The herein described method of making vulcanized shoes, comprising forming an upper to suit the contour of an insole; stitching the lower edge of the upper to the periphery of the insole with the edge face of the upper terminating in the plane of the lower face of the insole; placing a last in the parts thus formed; cementing a vulcanizable outsole to the insole and over the stitching at the lower edge of the upper; and vulcanizing the shoe.

4. The herein described method of making vulcanized shoes, comprising forming an upper to suit the contour of an insole; stitching the lower edge of the upper to the periphery of the insole; placing a last in the parts thus formed; cementing a vulcanizable foxing over the stitching around the lower edge of the upper; cementing a vulcanizable out-

sole to the insole and to the lower edge of the foxing; and vulcanizing the shoe.

5. The herein described method of making vulcanized shoes, comprising forming an upper to suit the contour of an insole; securing the lower edge of the upper to the periphery of the insole by stitching; placing a last in the parts thus formed; applying cement to the insole and to the outside of the lower edge of the upper in one operation; applying a vulcanizable foxing over the stitching around the cemented lower edge of the upper; applying a vulcanizable outsole to the cemented insole and to the lower edge of the foxing; and vulcanizing the shoe.

6. The herein described method of making vulcanized shoes, comprising forming an upper to suit the contour of an insole; stitching the lower edge of the upper to the periphery of the insole; placing a last in the parts thus formed; cementing a vulcanizable foxing over the stitching around the entire lower edge of the upper; bending an excess lower edge of the foxing under against the insole; cementing a vulcanizable outsole to the insole and to the lower edge of the foxing; and vulcanizing the shoe.

7. The herein described method of making vulcanized shoes, comprising forming an upper to suit the contour of an insole; securing the lower edge of the upper by stitching to the periphery of the cemented insole; placing a last in the parts thus formed; applying cement to the insole and to the outside of the lower edge of the upper in one operation; applying a vulcanizable foxing over the stitching around the cemented lower edge of the upper; bending any excess lower edge of the foxing under against the cemented insole; applying a vulcanizable outsole to the cemented insole and to the lower edge of the foxing; and vulcanizing the shoe.

8. An athletic shoe comprising an upper; an insole; the edge face of the upper terminating in the plane of the lower face of the insole; a foxing covering the meeting edges of the insole and upper and vulcanized to the upper; and an outsole vulcanized to the insole and to the lower edge of the foxing.

9. A shoe of the character specified comprising an upper; an insole; means connecting the lower edge of the upper to the periphery of the insole; the edge face of the upper terminating in the plane of the lower face of the insole; and an outsole vulcanized to the insole and to the lower edge of the upper and covering the connecting means.

10. An athletic shoe comprising an upper; an insole; means connecting the lower edge of the upper to the periphery of the insole; the edge face of the upper terminating in the plane of the lower face of the insole; a foxing covering the connecting means and vulcanized to the upper; and an outsole vulcanized

to the insole and to the lower edge of the foxing.

11. An athletic shoe comprising an upper; an insole; stitches connecting the lower edge of the upper to the insole; the edge face of the upper terminating in the plane of the lower face of the insole; a foxing covering the stitches and extending around the lower edge of the upper and vulcanized thereto; and an outsole vulcanized to the insole and to the lower edge of the foxing.

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