June 30, 1953 M. D. HERCEG 2,643,469

SHOE CONSTRUCTION WITH DIAGONAL LACING

Filed March 17, 1951

Fig. 1

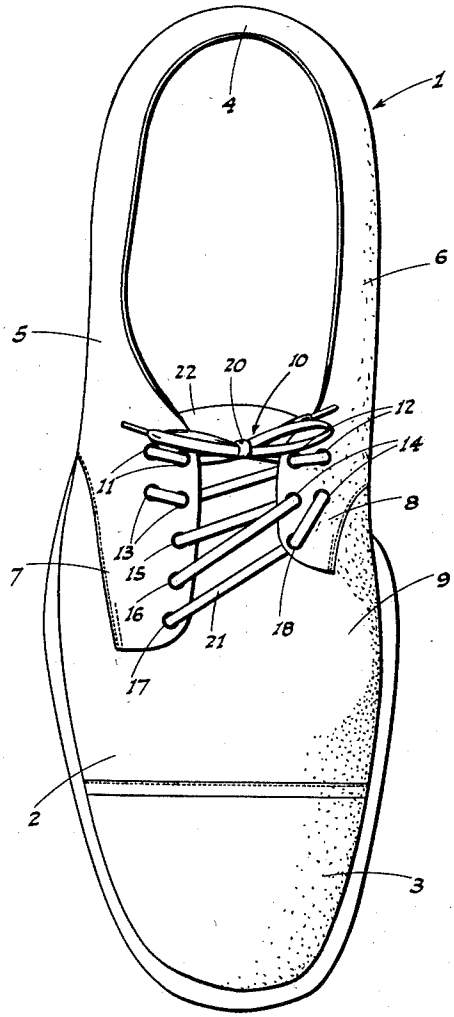


Fig. 3

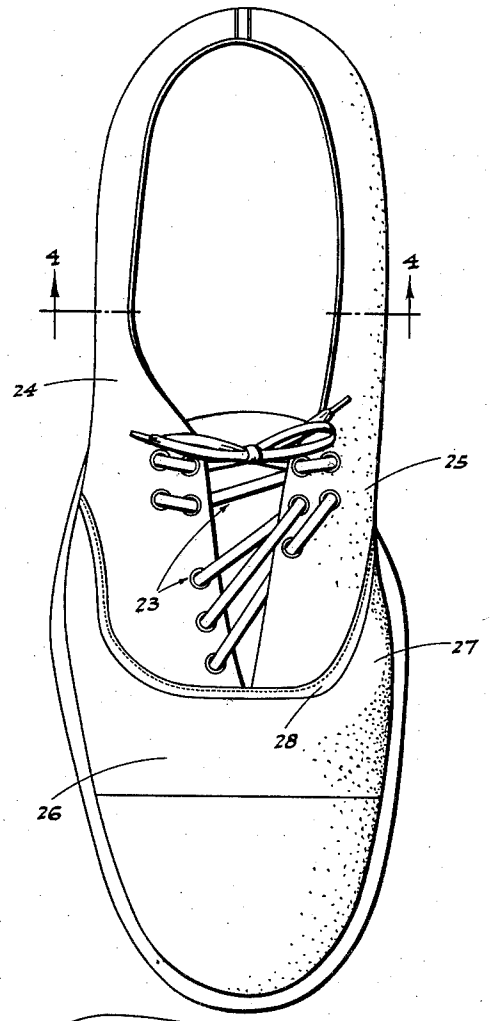


Fig. 2

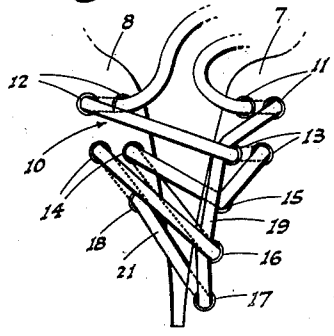
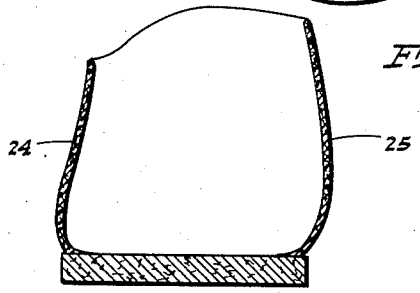


Fig. 4



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SHOE CONSTRUCTION WITH DIAGONAL LACING

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2 Claims. (Cl. 36—8.5)

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This invention relates in general to shoe construction.

The major object of the present invention is to provide a shoe construction wherein the upper of the shoe, particularly in the quarter thereof, is designed so that an effective portion of the lacing, or like connecting means, extends at a diagonal to the last. The lacing, except at the top—which is straight across—diagonals from the outside rearwardly toward the inside.

The advantages of diagonaled lacing, as above, are that the foot is permitted greater freedom of motion in the shoe; binding or chafing of the shoe over the instep is avoided; foot motion is equalized as is weight distribution; and pressure on the great toe—which produces bunions—is eliminated.

Another important object of the invention is to provide a shoe construction, and lacing therefor, which permits the wearer to effectively regulate the pressure of the shoe over the instep, and to the extent necessary for utmost foot comfort.

A further object of the invention is to provide a shoe construction, and lacing therefor, which prevents undue tiring of the feet; this being especially desirable for persons who, in the course of their work, stand or walk long hours.

It is also an object of the invention to provide a shoe construction and lacing which is simple and capable of ready and economical manufacture.

Still another object of the invention is to provide a shoe construction with diagonal lacing which is practical and reliable, and yet exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a plan view of a man's oxford, of blucher type, embodying the invention.

Fig. 2 is a bottom plan view of the lacing, as in Fig. 1.

Fig. 3 is a plan view of a man's oxford, of bal type, embodying the invention.

Fig. 4 is a cross section on line 4—4 of Fig. 3.

Referring now more particularly to the characters of reference on the drawings, the invention is here embodied in an oxford, indicated generally at 1, of the blucher type; such oxford including—in the upper—a vamp 2 extending into the toe 3, a heel 4, and a quarter between the vamp 2 and heel 4 which comprises an outside quarter portion 5 and an inside quarter portion 6.

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In a blucher type oxford the outside quarter portion 5 and inside quarter portion 6 embody, at the forward part thereof, the overlaps; the outside overlap being indicated at 7 and the inside overlap at 8.

Conventionally, the overlaps of a blucher type oxford are of the same length, but in the present shoe construction the inside overlap 8 is of substantially lesser length; i. e. has less forward projection than the outside overlap 7. This feature is clearly shown in Fig. 1, and the purpose is to assure of unrestriction and freedom from pressure on the transverse arch rearwardly of the great toe and in that zone, of the vamp 2, indicated at 9, and which zone is deformed outwardly or swelled slightly in the present shoe construction.

It is also desired that the lacing, indicated generally at 10, extend diagonally—except at the immediate top portion—between the outside overlap 7 and the inside overlap 8; the diagonal being rearwardly and inwardly from said overlap 7 to the overlap 8.

The preferred form or arrangement of the lacing 10 is as follows:

Each of the overlaps 7 and 8 is formed with an upper pair of transversely spaced eyelets, indicated at 11 and 12, respectively, and therebelow with an intermediate pair of transversely spaced eyelets, indicated at 13 and 14, respectively. Below the pair of eyelets 13 the overlap 7 is formed with a longitudinal row of eyelets 15, 16, and 17, while a single eyelet 18 is formed on the overlap 8 below the pair of eyelets 14.

The threading of the lacing 10 through the above described assembly of eyelets is as follows; the threading from the top side being shown in Fig. 1 and from the bottom side in Fig. 2.

One reach 19 of the lacing 10 extends from the eyelet 17 under the overlap 7 to and passes through the upper pair of eyelets 11, being above said overlap between such eyelets. From the eyelets 11 the reach 19 runs into the bow 20.

The other reach 21 is threaded in the following order:

From the eyelet 17 said other reach 21 runs to the eyelet 18, passing through it from below, then extends to the outermost one of the eyelets 14, passing through it from above. From said outermost eyelet 14 the reach 21 extends to the eyelet 16, passing likewise through it from above. The reach 21 then diagonals to the innermost one of the eyelets 14, passing through it from above,

and returns to the eyelet 15, likewise passing through the latter from above. From the eyelet 15, the reach 21 extends under the outside overlap 7 to the outermost one of the eyelets 13, passing through it from above, and thence extends to and passes downwardly through the other of said eyelets 13. From said other eyelet 13 the reach 21 diagonals to the outermost one of the eyelets 12, passing through it from below, thence extending to and passing downwardly through the innermost one of said eyelets 12. Thus, from the pairs of eyelets 11 and 12 the free ends of the lacing 10 extend for tying of the bow 20.

With the overlaps 7 and 8 formed as described, with diagonal lacing 10 threaded as above, the shoe can be tied with the pressures applied by the lacing other than in the swelled zone 9 of the vamp 2. This is an advantageous feature as it assures against binding or pinching on the instep directly to the rear of the great toe, and further, pressure is not imposed on such toe, and which pressure otherwise tends to produce bunions.

The tongue of the shoe is indicated at 22, and if desired such tongue may have a soft or cushioned inner facing.

The invention is shown in Fig. 3 as embodied in a bal type shoe, and here the eyelets and lacing assembly, indicated generally at 23, is exactly the same as in Fig. 1, except that here the eyelets are directly in the outside quarter portion 24 and inside quarter portion 25, respectively; there being no overlaps as in the blucher type of Fig. 1. However, the same effect or relief in the vamp 26 in the zone 27 rearwardly of the great toe and ahead of the inside quarter portion 25 is attained. This is accomplished by slightly outwardly swelling the zone 27, and also by providing a rolled portion 28 immediately adjacent the stitched connection of the vamp 26 with the quarter portions 24 and 25 of the shoe.

As an additional aid, providing greater support along the inner side of the ankle of the wearer, the inside quarter portion 25 may be formed of greater height than the outside quarter portion 24, in the manner shown in Fig. 4.

A shoe provided with diagonal lacing and with an inside quarter portion of greater height than the outside quarter portion provides great comfort to the wearer without undue restriction or binding of the foot, particularly on the instep, and especially directly to the rear of the great toe; i. e., at the juncture of the first metatarsal and inner cuneiform. Better weight distribution and balance of the foot in the shoe is attained, and this is most important to prevent undue tiring of the feet and undesirable mal-positioning of the parts thereof.

By spanning the lacing between the eyelets of the pairs 11, 12, and 13, and between the outermost one of the eyelets 14 and the eyelet 18, there is a definite tendency to prevent the lacing assembly from exerting downward pressure on the overlaps 7 and 8, this being an additional feature of the invention which enhances foot comfort.

Although the lacing and quarter arrangement here shown and described gives the best results, such arrangement can be reversed and still provide improved comfort over what is obtainable with conventional construction.

From the foregoing description it will be readily seen that there has been produced such an article of manufacture as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the article of manufacture, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. In a shoe which includes inside and outside quarter portions, rows of eyelets along the adjacent edges of said portions, and lacing threaded between said rows of eyelets with substantially all of the cross-overs diagonaling rearwardly from the outside quarter portion to the inside quarter portion; each row including a pair of transversely spaced eyelets, and the adjacent part of the lacing spanning between and extending down through said pairs of eyelets.

2. In a shoe which includes inside and outside quarter portions, eyelets formed in each quarter portion with lengthwise spacing and lacing threaded between said eyelets in a manner such that substantially all the cross-overs of the lacing diagonal rearwardly from one quarter portion to the other quarter portion.

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