

June 26, 1962

J. M. TOPPER ET AL
SHOE WITH ELASTIC GORING

3,040,454

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2 Sheets-Sheet 1

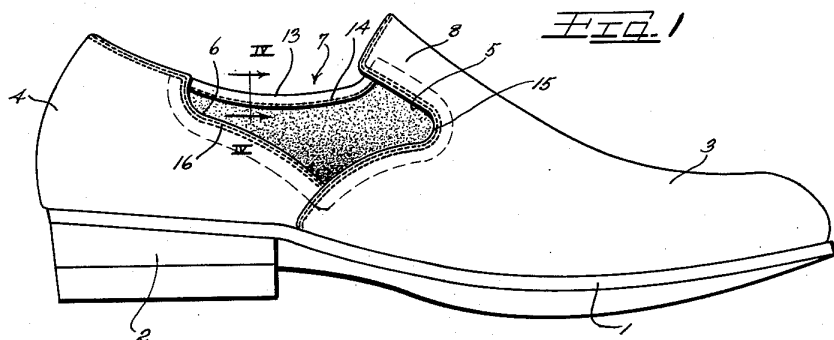


Fig. 2

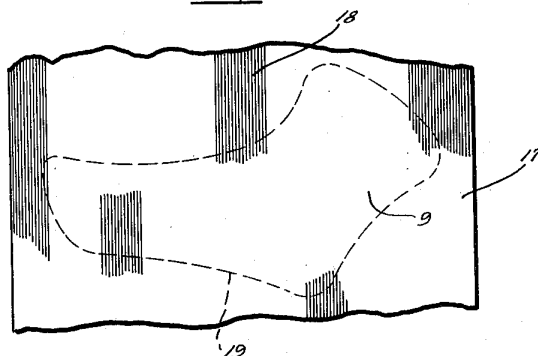


Fig. 3

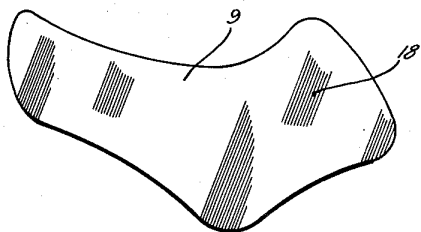
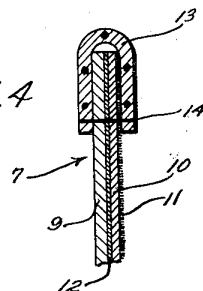


Fig. 4



Inventors
JOHN M. TOPPER
STANLEY H. SILVER

By *Kill, Sherman, Merri, Cline & Simpson Attys.*

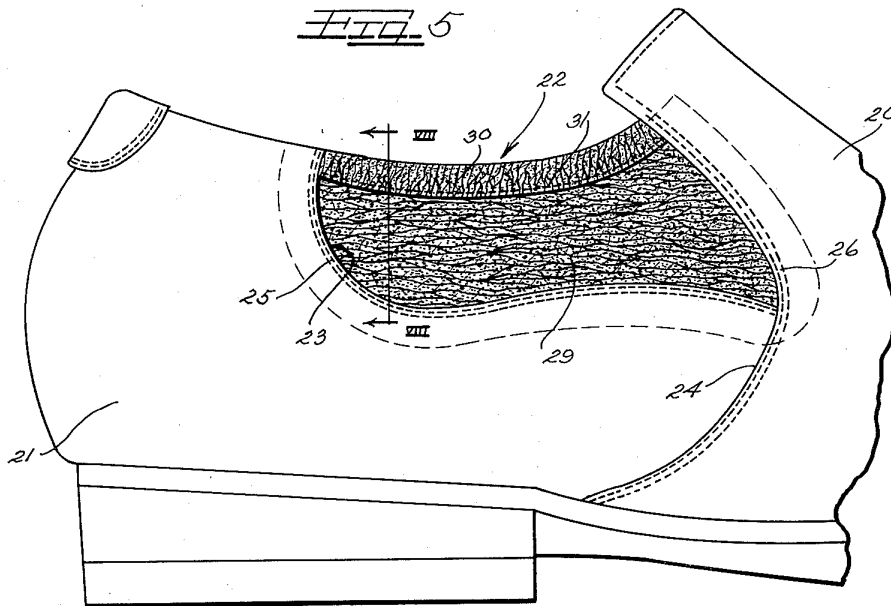
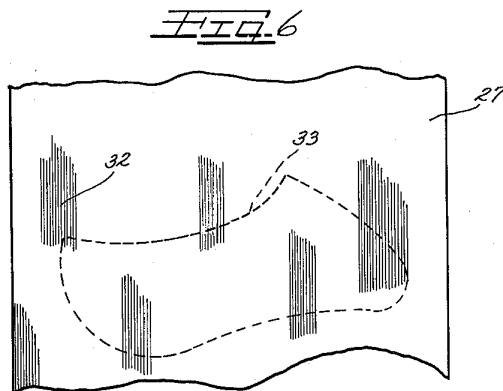
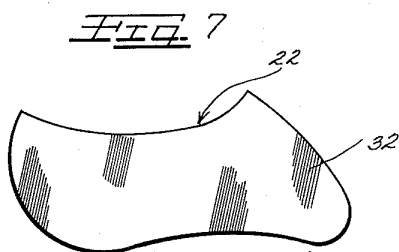
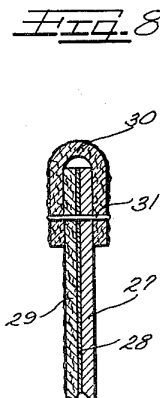
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INVENTOR.
JOHN M. TOPPER
STANLEY H. SILVER

BY

Hill, Sherman, Merri, Chase & Smith
ATTORNEYS

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SHOE WITH ELASTIC GORING

John M. Topper, Northbrook, and Stanley H. Silver, Chicago, Ill., assignors to International Shoe Company, Chicago, Ill., a corporation of Delaware
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2 Claims. (Cl. 36—51)

This invention relates to improvements in a shoe with elastic goring, and more particularly to a slip-on type of oxford having goring on each side thereof connecting or partially connecting the vamp with the respective quarter, the goring being elastic so as to maintain the shoe on the foot of the user without the aid of lacing or any other holding means, although the invention might have other uses and purposes as will be apparent to one skilled in the art.

In the past, many and various types of articles of footwear having stretchable gores or the like therein have been developed. However, in each instance of which we are aware, the stretch of the gores was in a direction parallel with the axis of the shoe, that is in a line from toe to heel of the shoe, and if the gore could be stretched in any other direction as well, it still could be stretched to its full extent in the direction longitudinally of the shoe. Such stretchability of the gores most frequently resulted in a slipping of the shoe at the heel during walking, after relatively short usage of the shoes. Articles of footwear with goring therein as heretofore made were also objectionable in that the goring too frequently lost a goodly portion of its elasticity in an objectionably short time and the shoe did not fit the foot comfortably and snugly but slipped at the heel during walking, by virtue of the fact that there was nothing to limit the stretch of the goring. Such previously made devices have also proven objectionable in that the goring proved unsightly in the finished product and inhibited purchase of the product, particularly purchase of a shoe to be utilized as a dress shoe, rather than a house slipper or the like. Further, if the goring was of sufficient width to retain its effectiveness throughout the life of the shoe, it could not be covered at least externally with leather or equivalent material and present a pleasing appearance.

With the foregoing in mind, it is an important object of the instant invention to provide a shoe or other article of footwear having goring in the upper thereof, and so constructed as to overcome the aforesaid disadvantages and objections.

Another object of the instant invention is the provision of a shoe or the like having a gore in each side of the upper between the vamp and the respective quarter with means to limit the stretch of the gore and thus add to its effective life.

Also a feature of the instant invention is the provision of a shoe or the like having a gore on each side of the upper joining the vamp with the respective quarter, which gore is extremely pleasing in appearance and enhances the overall appearance of the shoe.

A further object of this invention is the provision of an article of footwear having a gore on each of the upper which may be of various shapes and sizes for different types and styles of footwear and which is made of stretchable material and be externally covered with stretchable material, including leather, contrasting or blending with, or matching the remainder of the shoe upper.

It is a further and highly important object of the instant invention to provide a shoe or the like having a gore in each side of the upper joining the vamp with the respective quarter, the gore being one-way stretchable, and the direction of stretch being such as to urge the

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vamp into intimate contact with the instep of the foot of the user.

Still another object of the instant invention is the provision of an upper for a shoe or the like embodying a vamp having a relatively high central portion to overlie the instep of the user's foot, this portion being continuous, and a gore joining each side of the vamp with the respective quarter, the gore being stretchable in one direction only, and the direction of stretch being obliquely downwardly and rearwardly from the side of the central portion of the vamp toward the heel, whereby the vamp is held intimately against the instep of the foot during use and regardless of the type of shoe the upper is incorporated in, slipping of the heel while walking will not develop throughout an extremely long life.

It is also a feature of this invention to provide an article of footwear having a gore joining each side of the vamp with the respective quarter, which gore is laminated including a layer of one-way stretchable material, and a layer of a decorative material to enhance the appearance of the article of footwear, and which may, if so desired, be constructed to limit the stretch of the gore.

While some of the more salient features, characteristics and advantages of the instant invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a side elevational view of a shoe with goring therein, and embodying principles of the instant invention;

FIGURE 2 is a fragmentary diagrammatic illustration, indicating the cutting of a gore from a piece of elastic fabric;

FIGURE 3 is a plan view of a finished gore for the right-hand side of a shoe upper, showing the same in position for use;

FIGURE 4 is a greatly enlarged fragmentary vertical sectional view taken substantially as indicated by the line IV—IV of FIGURE 1, looking in the direction of the arrows;

FIGURE 5 is an enlarged fragmentary side elevational view illustrating a gore embodying principles of the instant invention but of a slightly different construction and shape;

FIGURE 6 is a fragmentary diagrammatic illustration, of the same character as FIGURE 2, illustrating the cutting of the gore of FIGURE 5 from a stock sheet of material;

FIGURE 7 is a plan view of the finished gore used in the structure of FIGURE 5, showing the same in position for use; and

FIGURE 8 is a greatly enlarged fragmentary transverse vertical sectional view taken substantially as indicated by the line VIII—VIII of FIGURE 5.

As shown on the drawings:

It will be understood, of course, that the instant invention may be incorporated in various types of articles of footwear including high top shoes, slippers, sandals, etc., but by way of example and not by way of limitation we have illustrated a dress shoe of the oxford type as a means of disclosing the instant invention.

The illustrated embodiment of the instant invention is shown incorporated in a shoe having an outer sole 1 and a heel 2 of any desirable construction. Secured in any suitable manner to the sole 1 is an upper comprising a vamp 3, an outer quarter 4, and an inner quarter, not visible in the drawing, but which is complementary to the quarter 4. The confronting edges of the vamp and quarter are preferably cut away in the upper portion as indicated at 5 on the vamp and 6 on the quarter to provide a relatively wide space between the vamp and quarter. This space is occupied by a gore, generally indicated by

numeral 7, and there is an allochiral gore on the other side of the shoe, both gores being of the same construction and performing like functions.

In the illustrated shoe, the vamp 3 is preferably provided with a high and continuous central portion 8; that is, the vamp is not split in this region to accommodate a tongue and lacing, but is continuous throughout and overlies the instep of the foot in the same manner the foot is covered by a tongue and lacing in other types of shoes.

With reference now to the magnified showing of FIGURE 4, it will be seen that the gore 7 is preferably laminated, comprising an inner layer 9 of elastic fabric and an outer layer 10 preferably of a thermoplastic material, and which may be napped on its outer face as indicated at 11 to give the appearance of suede, or decorated in some other desirable manner. The two laminations are preferably cemented together as indicated at 12. Over the upper edge of the laminated gore between the vamp and respective quarter of the shoe is a strip of piping 13, stitched to the gore as indicated at 14, and which may satisfactorily be a folded strip of nylon elastic, or the equivalent.

The forward edge of the gore 7 is connected to the vamp 3 by a line of stitching 15 which continues below the lower edge of the gore and joins the vamp to the respective quarter. The rear edge or margin of the gore is secured to the quarter by means of a line stitching 16 which preferably terminates approximately where it meets the stitching 15 at a point above the sole 1.

For the inner lamination or layer 9 of the gore, one-way stretchable cotton elastic braid is satisfactory, although some other one-way stretchable material might be utilized, if so desired. For the outer layer or lamination 10 a thermoplastic fabric having an inherent stretchability is preferable, nylon fabric being satisfactory. The inherent stretchability of the outer lamination is less than the stretchability of the inner lamination whereby the outer lamination limits the stretch of the inner lamination and preserves the elasticity of the inner lamination so that the gore is extremely long lived. As a result, the gores of the shoe stretch sufficiently to permit adequate entrance of the foot into the shoe, but, in normal handling of the shoe, cannot be overstretched.

In the instant invention, each gore is stretchable only in a predetermined direction, in order to insure not only a better and more comfortable fit of the shoe from the outset, but to insure that same better and comfortable fit of the shoe throughout an extremely long life. To this end, the inner lamination 9 of the gore is preferably severed from a piece of elastic fabric 17 as seen in FIGURE 2, the lines 18 indicating the direction of stretch of the fabric. The gore is preferably cut along the dotted line 19, and after cutting, the gore is turned to the position seen in FIGURE 3 before being incorporated in the shoe. In the position of FIGURE 3, it will be noted that the stretch of the gore has been changed so that the lines 18 are now in a direction obliquely downwardly and rearwardly. When the gore is mounted in the shoe upper in the same position seen in FIGURE 3, it will be noted that the stretch of the gore is downwardly and rearwardly from the side of the central portion 8 of the vamp toward the heel of the shoe. Thus, the gores at all times tend to draw the central portion of the vamp into intimate contact with the instep or dorsal surface of the foot of the user giving an extremely comfortable, yet snug fit to the shoe and the direction of stretch is such that the heel portion and counters of the shoe will embrace the rear of the foot snugly throughout the life of the shoe and not tend to slip while walking during use.

If so desired, the elastic fabric 17 may be laminated to the outer layer 10 prior to the cutting of the gore, and this is perhaps the most economical manufacturing procedure.

To illustrate the fact that the instant invention may be

varied both as to shape and material, in FIGURES 5, 6, 7 and 8 we have illustrated a gore covered with different material and of a different shape than the gores previously described. In this instance the article embodying the gore is also a dress shoe of the oxford type comprising a vamp 20 of the same character as the vamp 8 previously described and outer and inner quarters, of which the outer quarter 21 is visible. A gore generally indicated by numeral 22 connects the quarter and vamp at the top portion of the shoe upper. This gore is shaped somewhat differently than the gore 7 previously described.

In this instance, the quarter is cut deeper at the rear and then extends generally forwardly as indicated at 23, while the vamp is cut along a concave arc 24 rather than an ogee shown in FIGURE 1. The gore is secured to the quarter by a line of stitching 25 which terminates intermediately of a line of stitching 26 securing the gore to the vamp and also joining the vamp and quarter below the gore.

From the magnified showing in FIGURE 8, it will be seen that the gore 22 comprises an inner lamination 27 of the same character as the lamination 9 previously described, to which is laminated by means of adhesive 28 or in any other suitable manner a sheet 29 of creped leather or equivalent material, stretchable by virtue of its creping. However, the creped layer 29 is not as stretchable as the cotton elastic braid or equivalent material forming the layer 27, and so limits the stretch of the layer 27, thereby prolonging the life of the gore.

The creped leather layer 29 may, of course, have a color matching that of the shoe upper, or contrasting or blending with it so as to give a very pleasing appearance. This gore may be given a piping or French binding along the top thereof the same as the previously described embodiment, but it may also be provided with a French binding 30 comprising a folded strip of creped leather alone, secured to the laminated portion of the gore by a line of stretchable stitching 31, such as loose nylon stitching, so that the stitching will stretch along with the French binding.

As in the case of the previous embodiment, each gore is preferably cut from a laminated stock sheet including the layers 27 and 29, and in FIGURES 6 and 7 we have illustrated the side of the laminated sheets with the layer 27 facing outwardly. The vertical lines 32 diagrammatically indicate the direction of stretch of the laminated material, and it will be seen that the gore is severed along the dotted line 33, wherein the gore is slightly turned from its position of use. After severance, the gore 22 as seen in FIGURE 7 in its correct position for incorporation in the shoe has the direction of stretch, shown by the lines 32, offset from that of the stock sheet of FIGURE 6. Accordingly, when the gore is incorporated in the shoe, the direction of stretch will be in the main downwardly and rearwardly from the high central portion of the vamp toward the heel of the shoe so as to hold the vamp against the dorsal surface of the foot providing an extremely comfortable and snug fit.

In both illustrated embodiments of the instant invention, it will be noted that the gore is preferably more than one-third the height of the upper in width, and in many cases the gore will preferably be a little less than half the height of the upper in width. With goring of that size, and the stretch of the under layer being limited by the outer layer the goring will last through the life of the shoe and retain its original effectiveness to a very high degree during that time.

From the foregoing, it is apparent that we have provided a shoe having gores therein that are pleasing in appearance and enhance the overall appearance of the shoe, the stretch of the gores is limited so that overstretching and premature loss of elasticity is prevented, and the direction of stretch is predetermined so that the

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shoe throughout its life will present a comfortable fit to the user and slippage of the heel portion during walking is avoided. Moreover, the instant invention is economical to manufacture and highly economical to use by virtue of its long life.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

We claim as our invention:

1. In an article of footwear, an upper of shoe leather including opposed quarters and a vamp, stretchable means connecting at least a portion of each quarter with the vamp, said stretchable means comprising an inner layer of one-way stretchable material and an outer layer of finely creped leather laminated to said inner layer throughout its inner surface, and said creped leather presenting a finely grained external appearance blending with the comparatively smooth appearance of the shoe leather of the rest of the upper.

2. In an article of footwear, an upper of shoe leather including opposed quarters and a vamp, a stretchable

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gore on each side of said upper connecting the upper part of the respective quarter to the vamp, and said gore comprising an inner layer of one-way stretchable fabric and an outer layer of finely creped leather cemented to the inner layer throughout its inner face, said creped leather presenting a finely grained external appearance contrasting somewhat but blending with the comparatively smooth appearance of the shoe leather of the rest of the upper.

References Cited in the file of this patent

UNITED STATES PATENTS

1,841	Hyatt et al. -----	Oct. 30, 1840
354,968	Cushing -----	Dec. 28, 1886
2,059,747	Roberts -----	Nov. 3, 1936
2,138,385	Miller -----	Nov. 29, 1938
2,184,082	Roberts -----	Dec. 19, 1939
2,184,261	Vamos -----	Dec. 19, 1939
2,598,090	Yung et al. -----	May 27, 1952
2,875,115	Lott et al. -----	Feb. 24, 1959