

G. L. PIERCE.

SEWED SHOE.

APPLICATION FILED DEC. 8, 1906.

Patented Nov. 9, 1909.

2 SHEETS—SHEET 1.

939,624.

Fig. 1

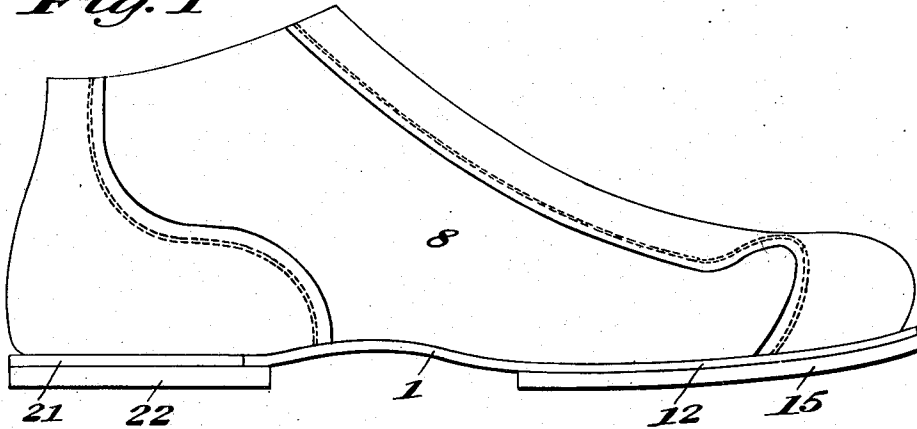


Fig. 2

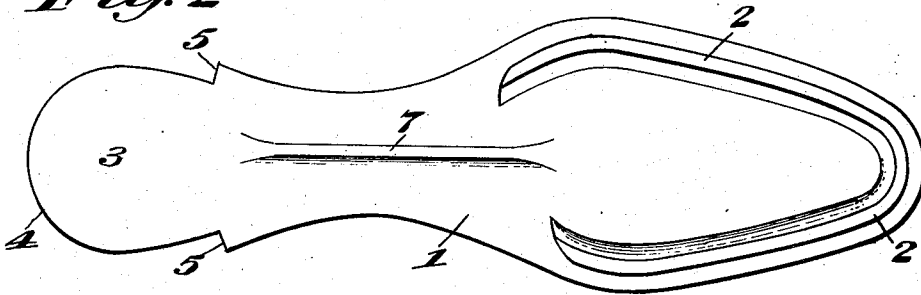


Fig. 3

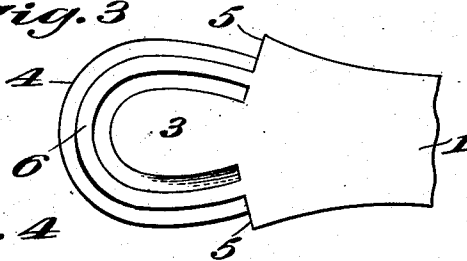
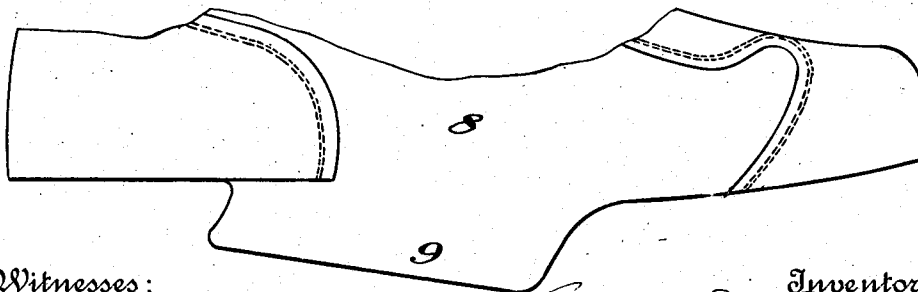


Fig. 4



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2 SHEETS—SHEET 2.

939,624.

Fig. 5

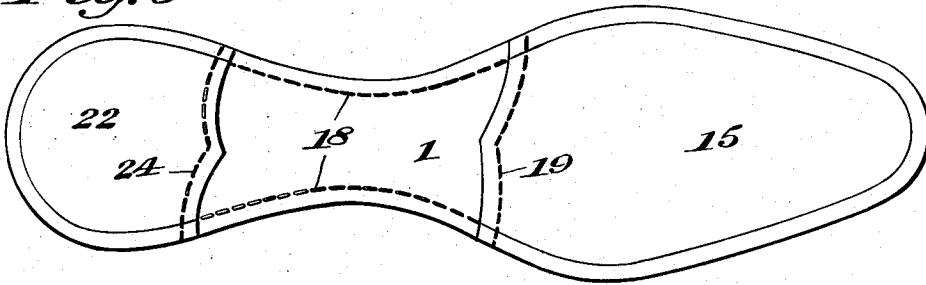


Fig. 6

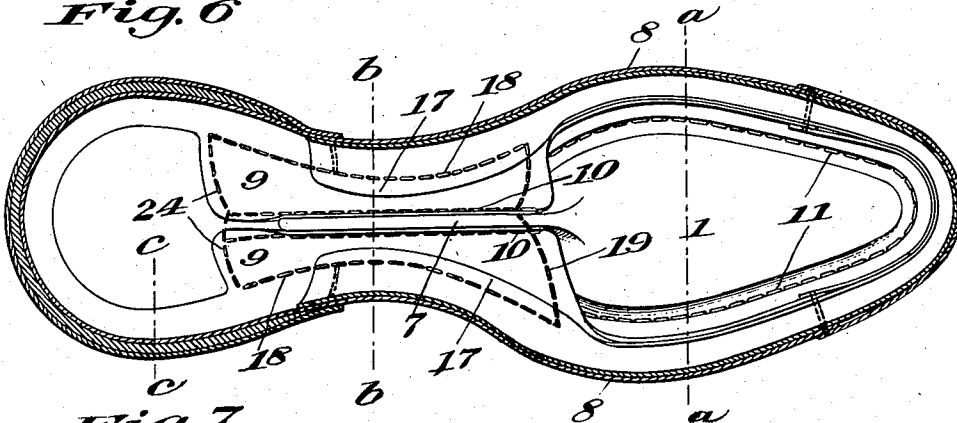


Fig. 7

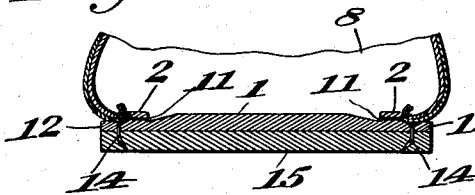


Fig. 8

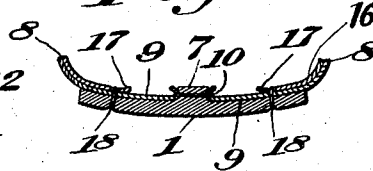


Fig. 9

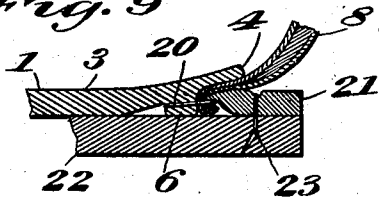
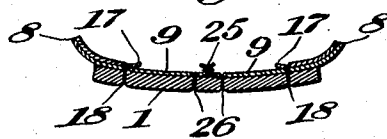


Fig. 10



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UNITED STATES PATENT OFFICE.

GEORGE L. PIERCE, OF NEW YORK, N. Y.

SEWED SHOE.

939,624.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed December 8, 1906. Serial No. 346,918.

To all whom it may concern:

Be it known that I, GEORGE L. PIERCE, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings, in the city and State of New York, have invented certain new and useful Improvements in Sewed Shoes, of which the following is a specification.

This invention relates to certain improvements in shoes, and more particularly in such shoes as are especially fitted for wear by athletes, and the object of the invention is to provide a shoe of this general character of a simple and comparatively inexpensive nature which shall be possessed of the advantages of extreme lightness and flexibility while having at the same time, sufficient strength and durability to adapt it for withstanding the excessive strains to which shoes of this character are subjected during use.

The invention consists, in part, in a shoe of this general character wherein the forward portion of the upper is secured upon the top surface of the main sole or bottom of the shoe by means of direct stitching after the fashion of a "turn" shoe, while the heel part of the upper is stitched upon the underside of the said main sole or bottom and is provided with a welt extended outwardly around its edges and adapted to serve as a means of attachment for the heel of the shoe.

The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts of the improved shoe, whereby certain important advantages are attained, and the shoe is rendered lighter, more flexible, stronger, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings which serve to illustrate my invention: Figure 1 is a side elevation showing a shoe embodying my improvements; Fig. 2 is a view showing the top surface of the main sole or bottom of the shoe, detached; Fig. 3 is a fragmentary view showing a part of the under or lower surface of the said main sole or bottom of the shoe at the heel end thereof. Fig. 4 is a fragmentary detail view showing the conformation of the lower

edges of the upper at the shank portion of the improved shoe; Fig. 5 is an underside view of the shoe; Fig. 6 is a sectional view taken lengthwise and transversely through the improved shoe and showing certain features of the connection of the upper with the main sole or bottom thereof; Fig. 7 is a sectional view taken transversely through the forward or toe portion of the shoe, in the plane indicated by the line *a-a* in Fig. 6, and showing the connection of the lower edges of the upper with the main sole or bottom of the shoe; Fig. 8 is a sectional view taken through the shank portion of the shoe in the plane indicated by the line *b-b* in Fig. 6, and showing the connection of the upper with the main sole or bottom of the shoe at this point; Fig. 9 is a sectional view taken through the heel part of the shoe in the plane indicated by the line *c-c* in Fig. 6, and showing the connection of the upper with the sole at this part of the shoe, and Fig. 10 is a view similar to Fig. 8, but showing a modified formation of the shank portion of the shoe.

In these views 1 represents the flexible main sole or bottom which is extended throughout the entire length of the shoe, and has its top surface made substantially smooth except at its edge and shank portions as will be hereinafter explained, so that such top surface may, if desired, be left exposed at its toe and heel portions and upon the inner side of the shoe, whereby the employment of an additional inner sole may be dispensed with.

The forward part of the main sole or bottom 1 is channeled upon its top surface to produce a feather 2 extended around its lateral side and toe portions and adjacent to its edges, and the rear ends of said feather are extended along the opposite edges of the said main sole 1, but are discontinued at the forward end of the shank portion of said main sole. 3 represents the heel portion of the said main sole, arranged at the rear of and of less width than the adjacent end of the shank part of said main sole, being cut away or notched out around its edges as seen at 4, to produce shoulders 5, 5, adjacent to the rear end of said shank part of the main sole.

At the heel part of the main sole or bottom 1, the underside thereof is channeled to produce a feather 6, extended around said heel part inside of and closely adjacent to the notched out or cut away marginal por-

tion 4 thereof, said feather 6 at the underside of said main sole 1 forming substantially a continuation of, but being arranged at the opposite side of the main sole to the feather 2 upon the top surface thereof.

The top surface of the main sole or bottom 1 of the improved shoe is also provided with a feather 7 extended lengthwise along the central part of the shank part thereof, being positioned substantially midway between the opposite margins or edges of the said shank part. The opposite forward and rear ends of this centrally arranged feather 7 terminate at the junctures of the shank part with the forward and heel portions of the main sole, so that such unevenness as may be present upon the top surface of said main sole due to said feather 7 is confined to the shank part of the improved shoe, and will therefore cause no material discomfort to the wearer.

8 represents the upper which is herein shown as reinforced at its toe and heel parts, and as being provided along the lower edges of its shank part with projections 9, extended downwardly and adapted to be lapped over the top surface of the main sole or bottom 1 at the shank part thereof, the edges of said projections 9, 9, at opposite sides of the shank part of the upper being extended, in the finished shoe, along opposite sides of the central feather 7 at the top surface of the main sole and being sewed fast thereto and to each other by means of stitches passed transversely through the said edges of the projections 9, 9, of the upper and through the interposed feather 7 as indicated at 10 in Fig. 8.

The lower edge portion of the upper at the forward or toe part of the shoe is stitched securely to the lateral side and toe portions of the feather 2 along the margin of the forward part of the main sole 1 at the top surface thereof, as seen at 11, and the edge portions 12 of said main sole, outside of the said feather 2, are extended outwardly beyond the point of attachment of the upper with the main sole and are adapted to receive stitching, as seen at 14, whereby an outer sole 15 is secured along its edges to the underside of the main sole at the said forward or toe part thereof to reinforce and stiffen the tread portion of the shoe. The upper is herein shown as provided with a lining 16 the forward or toe part of which is held at its lower edges by means of the stitches at 11, but at the shank part of the shoe, the said lining is unprovided with projections similar to the projections 9, 9 of the upper, so that the said lower edges of the lining at the shank part of the shoe are not permitted to extend toward each other across the top of the shank part of the main sole 1, being stopped as seen at 17 along the opposite edges of the said shank part. In this way

unnecessary stiffness or unevenness of the inner surface of the shank part of the shoe is avoided.

18, 18 represent rows of stitching extended along the opposite edges of the shank part of the main sole and which are passed through said sole and through the superposed projections 9, 9 of the upper in such a manner as to securely hold the edges of the main sole at its shank part against the underside of the said projections 9, 9 of the upper, whereby separation of these parts is effectively prevented when strains are imposed upon the shoe during use. The said rows 18, 18 of stitching are also utilized to hold the lower edges 17 of the lining in place at opposite sides of the shank part of the shoe, and at the forward end of the shank there is provided a transverse row of stitching, as seen at 19, serving to hold the forward edges of the projections 9, 9 of the upper flush upon the top surface of the shank part of the main sole and also serving to secure the rear edge portion of the outer sole 15, which is stopped at the forward end of the shank of the shoe, upon the outer or under surface of the main sole 1.

At the heel part of the shoe, the lower edges of the upper are carried down through the notched or cut out portion 4 of the main sole and are lapped beneath the margin thereof against the feather 6 around the underside of the heel part of said main sole, being held to said feather by means of stitching as shown at 20, and a welt 21 is extended around said cut away or notched out portion 4 of the main sole 1, being held in place by means of the stitching at 20 and having its ends abutting against the shoulders 5, 5 at the forward end of said cut away portion 4 of the main sole. Said welt 21 is preferably made of a thickness approximating that of the exposed portion 12 along the shank and forward part of the main sole, so as to form, in the finished shoe, a substantial continuation thereof around the heel, as seen in Fig. 1.

22 is a heel reinforce or lift arranged beneath the heel part of the main sole 1, being held thereto around its edge portions by means of stitching passed through the welt 21, as shown at 23 in the drawings, and at its forward edge by means of transverse stitching as seen at 24, such stitching being passed up through the main sole 1 at the rear end of the shank and serving also for the attachment of the rear edges of the projections 9, 9 of the upper upon the top surface of the shank part of said main sole.

The peculiar formation of the shank part of the improved shoe is such as to afford a maximum degree of flexibility at this point, while permitting the shoe to be drawn tightly around and beneath the foot of the wearer without undue liability of the upper

being torn loose from the shank of the main sole or bottom, and without requiring extra thickness of the shoe shank.

The improved shoe constructed according to my invention is of a comparatively simple and inexpensive nature and is particularly well adapted for use by reason of its lightness and flexibility as well as on account of the nicety with which it accommodates itself to the foot of the wearer when laced and of the strength and durability of its construction, which enables it to better withstand the strains to which such shoes are exposed during wear, and it will also be obvious from the above description of my improvements, that the improved shoe is susceptible of some change without material departure from the principles and spirit of my invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts herein set forth in carrying out my invention in practice. For example, in Fig. 10 I have shown a modified arrangement wherein the central feather 7 of the shank part of the main sole 1 is omitted, the projections 9, 9 of the upper having their edge portions lapped one upon the other and stitched together as shown at 25, while at opposite sides of said lapped edge portions and closely adjacent thereto there are provided rows 26, 26 of stitching extended through the main sole 1 and projections 9, 9 to securely unite said parts.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A shoe comprising a main sole having a feather extended around the edges of its forward part upon its top surface, and provided with a similar feather extended around the edges of its heel part upon its lower surface, an upper having the lower edges of its forward part stitched to the main sole along the feather at the top surface of the forward part of said sole, whereby the edge portions of the forward part of said main sole are permitted to project outside of said upper, the lower edges of the rear part of the upper being carried beneath the heel part of said main sole and stitched thereto along the feather at the underside thereof, a welt secured along said feather at the underside of the heel part of the main sole and extended around said heel part in line with the projecting edge portion of the forward part of the main sole, and a lift arranged beneath the heel part of the main sole and secured around its edges to said welt.

2. A shoe comprising a main sole, an upper having its forward edge portions secured to the main sole, said main sole having its edge portions extended outside the upper at its forward and shank parts but notched out around its heel part and pro-

vided with shoulders at the forward ends of said notched out part, a welt connected with and extended around the heel part of the upper and directed outwardly therefrom within the notched out part of the main sole with ends abutting upon the shoulders at the forward ends of the notched out part, and a lift secured to the welt and arranged beneath the heel part of the main sole.

3. A shoe comprising a main sole having a feather extended centrally along the top surface of its shank part, and an upper having the edges of its forward and rear parts secured along the edge portions of the forward and heel parts of said main sole, and having the opposite edges of its shank part provided with projections which are lapped across the top surface of the shank part of the main sole and are stitched at their adjacent edges to said centrally arranged feather.

4. A shoe comprising a main sole, an upper having the edges of its forward and rear parts secured along the edges of the forward and heel parts of said main sole, and having the opposite edges of its shank portion provided with projections which are extended across and secured to the top surface of the shank part of the main sole, and secured to each other adjacent to the center of said shank part of the main sole, an outer sole extended beneath the forward part of the main sole, a lift arranged beneath the heel part of the main sole, and stitching extended transversely across the shank part of the main sole adjacent to the forward and heel parts thereof, and passed through the outer sole, heel lift and through the forward and rear edges of the inwardly extended projections of the shank part of the upper.

5. A shoe having a main sole, and an upper the forward part of which has its lower edges secured along the forward part of said main sole, and the shank part of which has its opposite edges provided with projections which are lapped across the top surface of the shank part of the main sole, the shank part of said main sole being channeled adjacent to the central portion of its top surface, and the inner edges of the projections of the shank part of the upper being secured to the shank part of the main sole along such channeled central portion thereof.

6. A shoe having a main sole, an upper the forward part of which has its lower edges secured along the forward part of said main sole, and the shank part of which has its opposite edges provided with projections which are lapped across the top surface of the shank part of the main sole, the said shank part of the main sole being channeled adjacent to the central portion of its top surface, the inner edges of the projections of the shank part of the upper being

secured to the shank part of the main sole along such channeled central portion thereof, and stitches extended along the opposite edge portions of the shank part of the main sole at opposite sides of the central channeled portion thereof, and affording connection between said shank part of the main sole, and the shank parts of the upper.

7. A shoe having a main sole the shank part of which is channeled along the central portion of its upper surface, the forward part of said sole having a channel extended along its edge portions, the terminations of said channel of the forward part of the sole being spaced outside of the forward end of the channeled central portion of the shank part at the juncture of said shank part with the forward part of the sole.

8. A shoe having a main sole the shank part of which is channeled along the central portion of its upper surface, the forward part of said sole having a channel extended along its edge portions, the terminations of said channel of the forward part of the sole being spaced outside of the forward end of the channeled central portion of the shank part at the juncture of said shank part with the forward part of the sole, and the heel part of said sole having a channel extended along the edge portions of its under surface, the terminations of said channel of the heel part of the sole being spaced outside of the rear end of the channeled central portion of the shank part at the juncture of said shank part with the heel part of the sole.

9. A shoe having a main sole provided with a shank part channeled along the central portion of its upper surface, and an upper having the edges of its forward part

secured along the edge portions of the forward part of said main sole and having the opposite edges of its shank part provided with projections which are lapped across the top surface of the shank part of the main sole and are stitched to the shank part of said sole along the central channeled portion thereof, and stitches extended along the opposite edge portions of the shank part of the main sole at opposite sides of the central channeled portion thereof, and affording connection between said shank part of the sole and the shank parts of the upper.

10. A shoe having a main sole provided with a shank part channeled along the central portion of its upper surface, an upper having the edges of its forward part secured along the edge portion of the forward part of the main sole and having the opposite edges of its shank part provided with projections, which are lapped across the top surface of the shank part of the main sole and are stitched thereto along the central channeled portion thereof, an outer sole extended beneath the forward part of the main sole and terminating at the forward end of the shank part thereof, and stitches extended across the rear end of said outer sole and affording connection between the same, the main sole, and forward edges of the projections of the shank parts of the upper.

In witness whereof I have hereunto signed my name this 6th day of Dec. 1906, in the presence of two subscribing witnesses.

GEORGE L. PIERCE.

Witnesses:

H. G. ROSE,
WILLIAM J. FIRTH.